‘Organic Farming is Coming to Our Valley’:

The Development of Pumi Eco-Agriculture and the Indigenisation of Modernity in Sino-Myanmar Borderlands

Master’s Thesis in Global Environmental History
Abstract


How do indigenous people perceive and practice eco-agriculture, especially when it was introduced as a development project? This thesis aims to delve into this question by focusing on a policy-induced agrarian transition for Pumi community in Sino-Myanmar borderlands. Using ethnographic methods, I intend to offer an intimate account of a provincial programme to facilitate eco-agriculture in this ethnic region. With the conceptual framework presented, the current research starts with the introduction of Pumi agricultural history and indigenous farming knowledge, with a focus on Pumi biocultural heritage. Then, I will examine how the process of ‘indigenisation of modernity’ (Sahlins 2000) has occurred against the backdrop of Pumi eco-agriculture programme. The insights will be distilled from three different aspects, which are agricultural land use, technical practices, and governance issues. For each aspect, I will scrutinise to what degree the government is following an industrial model to design the eco-agriculture agenda which corresponds to the ‘conventionalisation hypothesis’ of organic production (Buck 1997) and is thus in alignment with their long-term strategic goals to ‘modernise’ this borderland region through agricultural transformations, whereas the local Pumi farmers are actively coping with the government’s external interventions, meanwhile searching for the ‘alternative pathway’ towards agricultural modernisation. In the final chapter, I will interpret the motives of the both actors in the programme. For the government, the post-development theory will be employed to provide a critique of the ‘development discourse’ embedded in the agenda. For local farmers, the concept of ‘environmentality’ (Agrawal 2005) will be focused to interpret the Pumi farmers’ motives to indigenise, which ultimately questioning the transforming powers of modernity and globalisation on Pumi agrarian society. Basically, this thesis aims to trace the socio-political processes which drive the ‘agrarian transition’ in a Southeast Asian frontier, and further demonstrate how the resource abundance in the borderlands can underpin intense processes of commodification and dispossession (Nevins and Peluso 2008; Ishikawa 2010; see also Milne and Mahanty, 2015), the implications of which crystallised in an ethnographic context. To a larger extent, this research aims to shed lights on the interactions between social structure and individual agency — although the Pumi farmers are struggling to survive with the adaptation to modern inputs, they are still marginalised by the structured inequality of the market economy, which limited the farmers’ opportunities to improve their own livelihoods. Furthermore, this research also has significant policy implications as it addresses the issues such as agricultural policy and ethnic relations in the borderland regions. By reflecting upon the overlapping implications of highland livelihoods, agencies, and the transforming powers of social change, the current study aims to build a locally rooted understanding of Pumi eco-agriculture programme, and provide lessons for sustainable planning and future policy-making for rural development in developing countries such as China.

Keywords: eco-agriculture; indigenisation of modernity; environmentality; traditional ecological knowledge; agricultural land use; technical practices; governance; Pumi ethnicity; rural development; highland livelihoods; borderland; post-development theory; political ecology; contemporary history; agricultural policy

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<td>IFOAM</td>
<td>International Federal of Organic Agriculture Movement</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>masl</td>
<td>meters above the sea level</td>
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<tr>
<td>TEK</td>
<td>Traditional Ecological Knowledge</td>
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<td>HRS</td>
<td>Household Responsibility System</td>
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<tr>
<td>CTGC</td>
<td>China Three Gorges Corporation</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>ELN-FAB</td>
<td>European Learning Network on Functional AgroBiodiversity</td>
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<td>SLCP</td>
<td>Slope Land Conversion Program</td>
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<td>FLO International</td>
<td>Fairtrade International</td>
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Ze Gao,

Uppsala

June 1, 2019
Across the vast fields, we see the remote mountains, however, the walkers are freely wandering, in somewhere the mountains can never reach.¹

¹ Ou Yangxiu (1007-1072), Ancient Chinese Poet. Translation from Chinese by the author
1. Introduction

Various indigenisations of modernity undertaken by people who have escaped the death sentence imposed by world capitalism now offer a whole new manifold of cultural variations for a renewed comparative anthropology. 2

Culture in Practice (Sahlins 2000: 271)

Encountering ‘modernity’

In the context of globalisation and commodity economy, the encounters of indigenous people with ‘modernity’ has posed a significant impact on groups possessing customary traditions. Admittedly, this process is associated with the complexities of the indigenous peoples’ shifting experiences and identities (Hall et al. 2011), displaying the multiple pathways in the contemporary world capitalism. In the mountainous region of Sino-Myanmar borderlands, Pumi people 3, a Tibetan-Burman speaking ethnic group, are also facing the influences of modernisation. Similar to many other marginalised groups, they have shown their quests for identity, practices of traditions and knowledge, and community benefits, which involve persistent negotiations with the nation-state and development agencies, in the wake of resistance, hybridity, and agency (cf. Scott 1990; Bhabha 1994; Ortner 2006; Merry 2006; see also Yü & Michaud 2017).

Against this backdrop, the current research aims to situate the ‘Pumi encounter with modernity’ within the context of ‘eco-agriculture programme’, focusing on how modernisation is manifested in the ‘green’ agrarian transition in the Pumi community. Being an integral part of the authority’s initiatives to modernise, the ‘Pumi eco-agriculture programme’ narrates the story about compliance and incompliance, adaptations and refutations, and the global challenges and local responses occurring across these borderland regions 4.

Particularly, in this thesis, I underline a concern that, too often, people talk about the ‘modernisation of indigenous community’, which is taken for granted. However, scholars such as Sahlins (2000) have suggested us to think in a dialectical approach, which is to view the indigenous people as the

---


3 The Pumi ethnic group, according to the government, is an ethnic minority group which mostly reside in Yunnan Province. This ethnic group is a marginalised group in contemporary China, both politically and culturally. In recent decades, the influence of state integration and globalisation on Pumi people have gradually raised concern from both the academics and the public, where it is believed that the rapid social change is transforming both livelihoods and the identity of the Pumi people.

4 In the Pumi region, the eco-agriculture programme has triggered significant social and political consequences. The development of eco-agriculture has also reflected how the ‘agricultural commodification’ has reached the geographical margins where some of these regions are ecologically fragile (Sanders 2000). According to my observation, in the development of eco-agriculture, the Pumi indigenous people are expressing their voices about the agrarian transition. In particular, the Pumi farmers are concerned with the rights as the indigenous people to sustain an agricultural system which is ecologically sound, meanwhile, they also claim for their rights to define their own agricultural systems with cultural significance.
agents in social change, and to interrogate their experiences, motives, and strategies vis-à-vis the modernising programmes and external interference. This way of thinking can provide us with a more nuanced understanding of the local realities which were previously monopolied by colonial authorities, bureaucrats, or development specialists (McKinnon 2011).

When ‘eco-agriculture’ meets ‘Zomia’

Zomia is an upland region in mainland Southeast Asia that consists of portions of seven Asian countries (Figure 1). Historically, distance has helped indigenous people to shield from some dramatic social and political changes. However, in recent decades, as these upland agrarian communities are experiencing intensive pressure from the state integration and globalisation, the responses to ‘modernity’ among the residents of the highland societies in ‘Southeast Asia massif’ have attracted wide academic concerns (cf. Michaud 2013, 2016).

Specifically, as the upland agrarian communities, the major challenge from ‘modernity’ in this region is conceived as the ‘agrarian transition’, where the rural life centred on subsistence agriculture steadily gives way to commodity agriculture (Kelly 2011). Although extant literatures (see Laungaramsri 2012; Sturgeon 2012; Turner 2017) have extensively discussed the agricultural commodification in Zomia to capture this transition, a specific type of commodity agriculture burgeoning in recent years, which is the eco-agriculture, has provoked less academic attention. Thus, it is reasonable to quest, when ‘eco-agriculture programmes’ come to Zomia, what social responses has it triggered? Especially, considering eco-agriculture in China has become a state strategy for rural development, and the agricultural transitions often address strong political contingencies (Scott, Schumilas & Chen 2014), it strongly prompts us to investigate the agrarian transition within the complex webs of social and cultural meanings.

Particularly, the intertwined relationship between ‘eco-agriculture’ and ‘modernity’ has nourished the current debate: different from the studies which dichotomise the ‘traditional’ and the ‘modern’, which viewing the indigenous people as the ‘victims’ or ‘passive audiences’ of modernisation, the insights of the current research stem from the ‘duality’ of eco-agriculture — to categorise eco-agriculture in terms of ‘modernity’ is dependant on how the actors perceive and practice it — eco-agriculture can be perceived and practiced as a pathway to modernisation, because a ‘conventionalisation process’ of organic farming (Buck 1997) has been observed in China and elsewhere, arguing the business and industrial model of organic production have reduced its social-movement components of sustainability and replaced them with an industrial approach, manifesting the process of modernisation (Oelofse et al. 2011). However, eco-agriculture can also be perceived and practiced as an endeavor for indigenous norms, as local traditions and customary farming skills can be integrated into this enterprise, thus crafting the eco-agriculture at the local level, especially in Zomia where the farming traditions are proved to be strong. Thus, in Zomia, eco-agriculture has been the conjuncture where the ‘indigenous’ and the ‘exogenous’ collide, providing us with a standpoint to observe how the blends, conflicts, and negotiations between different stakeholders have occurred within the programme. Besides, as an agriculture highlighting sustainability, the study of eco-agriculture can also inform the cultural significance, landscape and identity, and the changing perceptions of human-nature relationships of the Zomia dwellers, which could display significant historical bearings.
Overall, the study of Pumi eco-agriculture programme aims to delineate that, through the process of ‘indigenisation’, the local farmers can adapt to external influences, and display the plural expressions and multiple pathways to engage in the ‘new agriculture’ in the contemporary era. Following this approach, this research intends to grasp this kind of adaptability by putting the vibrant local community under the spotlight, and to trace the road taken by the Pumi farmers in their ‘indigenous way’ to the ‘modern’ world. To take a further step, impressed by Tania Li’s research (2014)\textsuperscript{5}, this thesis also aims to address the conflicts that individuals need to face on the path to ‘development’, and to express the concern that, although the Pumi farmers can enact their agency to adapt to eco-agriculture programme, the farmers may still be dispossessed by the investors and agricultural companies, which continue to impoverish them. It subsequently brings lights to larger issues such as structured economic inequality and the untold resource extractions, as well as the concerns for fairness for the farmers in market. With these points, the current research aims to trace the lived experiences of Pumi farmers in the context of globalisation, and to capture their endeavors in the era of burgeoning commodity agriculture in the Chinese part of Zomia.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Map of Zomia\textsuperscript{6}}
\end{figure}

\textsuperscript{5} In Tania Li’s \textit{Land’s End}, she offered insights to the emergence of capitalist relations in indigenous societies in highland Indonesia.

\textsuperscript{6} Source: \url{http://understandingsociety.blogspot.sg/2010/03/zomia-james-scott-on-highland-peoples.html}
1.1 Aims and Objectives

As explained above, the aim of this research is to scrutinise the implementation of ‘Pumi eco-agriculture agenda’, focusing on the farmers’ responses to the external interventions. The eco-agriculture agenda is a development project initiated by Yunnan provincial government in around the year of 2000. In recent years, the agenda has been widely promoted in the rural areas by setting up economic incentives, encouraging new agro-technologies, and investing for green farming companies.

Basically, the objectives of the current research are multiple. First, although this thesis is informed by empirical field research, it also has a strong theoretical ambition because admittedly, an in-depth analysis of Pumi eco-agriculture programme necessitates the engagement with social theory, where there is a need to question the concept of modernisation and development from a local perspective. Specifically, the empirical materials from the field will be interpreted with the framework of ‘indigenisation of modernity’ (Sahlins 2000), post-development theory (Escobar 1995), and ‘environmentality’ (Agrawal 2005)\(^7\). The current research will be an instructive attempt because in extant literature, few researchers have tested these frameworks in the context of the marginalised regions of Southwest China.

Second, from a practical perspective, the study also aims to provide lessons for the agricultural policy-making in China, especially for the planning of organic farming and sustainable resource management. Currently, the Chinese government has set up a development project for diverse ‘ethnic regions’, aiming to improve the livelihoods and eliminate absolute poverty in these regions by 2020. However, considering the significant geographic and ethnic diversity in China, a context-specific study of Pumi will be meaningful to help guide policy makers in their future work of poverty reduction in this region. Besides, the study also touches the challenges pertaining to the preservation of minority cultures against the backdrop of globalisation, and the livelihoods under the structured inequalities in market-oriented economic development. These challenges can translate into the social matters as forms of political negotiations, economic disparities, and ethnic conflicts. Thus, by addressing the intertwined relationships between ethnicity and development, I intend to provide an example of learnt experiences for developing countries such as China to promote the sustainable development in the rural areas of ethnic regions.

Moreover, an additional purpose of this study is to draw attention to the Pumi community, which is a marginalised ethnic group in the frontiers. To date, very few scholars (but see Harrell 1996; Wellens 2010) have paid attention to Pumi, because of their geographical remoteness and disadvantaged position. The Pumi people seem to have been underrepresented in extant literature — unlike their ethnic relatives of Lisu people, which is a trans-border ethnic group that has attracted bulk of academic concerns (Bradley 2003; Leepreecha 2005) — Pumi people only reside in remote corners of borderland China, and are therefore seen as isolated from the ‘mainstream society’. Thus, this research intends to extend the academic research for Pumi, by focusing on their agricultural systems and its commodification, and the ethnic identity and highland livelihoods in a broader sense.

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\(^7\) This research is also inspired by James Scott’s studies of peasants in Southeast Asia (1990, 2008, 2010), as well as Tania Li’s studies in development issues and capitalist relations (2014).
1.2 Defining Research Questions

The primary research question of this thesis is to interrogate how and to what degree the ‘indigenisation of modernity’ has occurred in the context of Pumi eco-agriculture programme. However, it is necessary to first specify the reason why I anticipate there could be such a process. To start with, in the studies of organic production, there has been a conventionalisation hypothesis which sparked growing interests in the academics (Borsotto 2012; Schewe 2014). It warns the expansion of a more industrial model of organic production which partially contradicts its supposed social values of sustainability (Leifeld 2012), and the contradiction occurred when eco-farming displays a stronger business model of organisation that essentially replicates the characteristics of conventional agriculture (Reed 2009). Previous studies of eco-agriculture in China have revealed that the eco-agriculture has developed from grassroot movements to a state-coordinated market strategy (Thiers 2002). Thus, the Pumi eco-agriculture agenda, which is driven by the Yunnan provincial government, is liable to follow a market strategy and a business model. From this approach, the government’s interests in eco-agriculture are in alignment with its long-term strategic goal to ‘modernise’ this borderland region through agricultural transition and commodification, at the same time, the eco-agriculture agenda also becomes a potential means of reinforcing the forms of governance in this region.

However, in previous studies of farmers in Zomia, scholars such as Scott (1990) delineated how local farmers have successfully resisted external influences, excelling the ‘art of not being governed’ (in the words of Scott). Perhaps more importantly, many of the indigenous groups in Zomia maintain living practices of traditional ecological knowledge (TEK)⁸, and these local wisdoms could have been integrated into their practices when adopting modern eco-agriculture enterprise. In this way, the farmers may challenge the industrial and business model nested in the government’s design, and indigenise these external interventions with a hybrid practice.

Clearly, there are various ways to observe how this process of indigenisation has occurred, however, in the current study, with the reference to previous literatures, and my research experiences in the field, I will focus on three aspects which will be further developed as below:

The first aspect relates to the shifts in agricultural land use, which is a basic element for agrarian studies. To a large extent, the Pumi eco-agriculture agenda touches upon the management of farmlands, and concurrently involves issues regarding the landscape planning, agrobiodiversity, land commodification, and cultural significance. Regarding land issues, previous studies have aptly analysed the policy conflicts pertaining to land commodification for indigenous people in the ‘commodity frontiers’ of Southeast Asia (Milne 2013). The second aspect connects to the shifts in technical practices, which are correlated with the ways through which knowledge is accessed, especially regarding the negotiations between the customary practices of local farming and the policy-induced technology transfer within the programme. Third, there is also an aspect which is derived from the concerns regarding governance and the responses to governance, which is linked to the management of the farmers and the governance of the upland agrarian communities. Notably,

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⁸ Traditional ecological knowledge (TEK) relates to the indigenous forms of knowledge regarding the sustainability of local resources. As a study topic in anthropology, TEK refers to ‘a cumulative body of knowledge, belief, and practice, evolving by accumulation of TEK and handed down through generations through traditional songs, stories and beliefs’ (Berkes 1993).
Chapter One Introduction

the Yunnan provincial government and the farmers generally have divergent ways of understanding eco-agriculture, which subsequently resulted in different ways of fulfilling the agenda and the changes in relations to it. Thus, it has led to a comparative approach of the current study.

In a deeper sense, this thesis also aims to offer an in-depth interpretation of the officials’ and the farmers’ motives under this agenda, which constitute Research Question 2 and 3. Following the discussions above, I summarise the research questions as follows (see also Figure 2):

1. **Has the ‘indigenisation of modernity’ occurred in the Pumi eco-agriculture programme?**
   a. shifts/modifications in agricultural land use?
   b. shifts/modifications in technical practices?
   c. responses/resistance to governance?

2. **How should we interpret the government’s motives in this agenda?**
   a. Especially, as a development project, to what degree it contains the development discourse, thus risks the critiques from the perspective of post-development theory?

3. **How should we interpret local Pumi farmers’ motives in this agenda?**
   a. Especially, what drives the Pumi farmers to indigenise these external interventions?

![Figure 2. Operationalisation of the research topics](image-url)
1.3 Introducing the Study Area and Landscape

Prior to the elaboration of the thesis layout, I will first need to give a more detailed introduction of the study area.

The research area is located in Lanping County, Nujiang Lisu Autonomous Prefecture (in Chinese: nu jiang lisuzu zi zhi zhou). The Nujiang Prefecture is in the China-Myanmar borderland, where Lanping County being the eastern part of this prefecture. It is an autonomous prefecture of Northwestern Yunnan Province, People’s Republic of China. The Province is China’s gateway to mainland Southeast Asia, where ‘the two lands are linked by the same mountains and rivers’ (Yunnan Post 2008). Notably, Lanping County is geographically separated from the rest of the prefecture, because it is located in Lancang-Mekong River Valley, instead of Nu-Salween River Valley where most part of this prefecture is located in (see Figure 3). In the current research, I have carried out ethnographic work in five different villages, all of them belong to Lanping County.

The upper stream of Lancang-Mekong River flows through the Lanping County, which makes the study site a valley region. Geographically, Lancang-Mekong River is a trans-boundary river in Southwest China and Southeast Asia. From the Tibetan Plateau, the river flows through China’s Yunnan Province, Myanmar, Laos, Thailand, Cambodia, Vietnam, and finally into the Pacific Ocean. The extreme seasonal variations in flow and the presence of rapids in this river make navigation of the river very hard. Even so, the river is still a major trade route between Western China and Southeast Asia (Yunnan Post 2012). Notably, to facilitate the trans-boundary cooperations for the countries in the river basin, the Greater Mekong Subregion Cooperation (GMS) was established in 1992 by the Asian Development Bank.

Another geographic feature of this region that deserves further attention is that the study site is located in the borderland regions between China and Myanmar. For many years, the shared borders have been a source of tension, especially in the Myanmar side where sub-national conflicts among ethnic armed groups are triggering instability in the border regions. As the borderlands are inhabited by ethnic groups sharing cultural affinities and ethnic linkages, a critical concern for China is the potential of armed conflicts spilling over the borders (Yhome 2019).

Moreover, as the river valley is trans-boundary, concerns have been widely raised upon the development issues, as it involves intricate trans-national environmental governance and political disputes (Grumbine 2010) ⁹. In political ecology, frontiers are considered as the places of spatial and temporal transition with the contestations and tensions therein (Hirsch 2009). The studies of the borderland regions will be instructive because they are critical to the resource circulations and the assertions of state powers (Ishikawa 2010; see also Milne & Mahanty 2015). Thus, the studies of frontier regions in Southeast Asia have been a well-debated topic, witnessing a growing body of academic literatures in recent years (see Gellner 2013; Mahanty & Milne 2016; Yü & Michaud 2017; Mahanty 2019).

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⁹ In Grumbine’s discussion, he has discussed the power relations embedded in the development projects in the Nujiang Prefecture.
Chapter One Introduction

Figure 3. Geographic location of Yunnan Province and Nujiang Prefecture
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Figure 4. Lanping County town\textsuperscript{11}

Figure 5. The landscape of the County Town\textsuperscript{12}

\textsuperscript{11} Photo taken by the author

\textsuperscript{12} Screenshoted by the author from Google Earth
To explore the cultural landscape of this region, the current study site holds a cultural attraction for its reputation as part of the Shangri-La, meaning the place of ‘forever peace’. Although Shangri-La is actually a fictional place delineated in the 1933 novel *Lost Horizon* by British author James Hilton, the Lancang Valley was believed to be the prototype of the author’s descriptions. Considering its unique history within the larger Shangri-La cultural landscape, the government has renamed a neighbouring county in this region as Shangri-La, some scholars have scrutinised the renaming process and termed it as the ‘shangrilalisation’ of these borderland regions which have been formulated as state-led projects and the forms of governance where cultural economies are reconfigured for tourism-based development (Coggins and Yeh 2014). In addition, Hillman (2003) also studied this region by depicting ‘the poor in the paradise’, where he delved into local tourism development and rural poverty in the region of Shangri-La.

![Joseph Rock with his local escorts in Northwestern Yunnan](image_url)

*Figure 6. Joseph Rock with his local escorts in Northwestern Yunnan*  

For the historical narratives of Langcang River Valley and the Shangri-La, there is an Austrian-American adventurer, Joseph Rock (1884 – 1962), that is worth to mention. As a botanist, photographer and ethnographer, Rock was designated by the US Department of Agriculture to Yunnan Province in the 1920s to search for a blight-resistant strain of chestnut that was believed to exist in this province. During his exploration, Rock wrote lots of articles for *National Geographic* which made this region famous all over the world. During his time in China, Rock explored much of Northwestern Yunnan, where his diary of exploration has provided valuable materials for the studies of the ethnic groups during the 1920s-1940s.

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13 Cited by the author from Yunnan Online Archives
Chapter One Introduction

The Shangri-La region is multi-ethnic, which is populated by Tibetan, Pumi, Lisu, and Bai People etc. The Pumi people (also known as Primi) are one of the 56 officially-recognised ethnic groups in China. They are an ethnicity that unique to Yunnan Province\(^{14}\), with a population of approximately 30,000. The Pumi communities are often located at elevations above 2,700 m (Ding 2003). The language of Pumi people is Primi, it belongs to the Qiangic branch of the Tibeto-Burman language family (Lanping County Archive 2008).\(^{15}\) Historically Pumi people had an intense contact with the Tibetans. Many Pumi have been recognised as a sub-branch of the Tibetan ethnic group, termed Primi-Tibetan (Wellens 2010). In terms of religion, the Pumi were also deeply influenced by Tibetan Buddhism. However, certain forms of ancestor worship unique to Pumi are still practiced (Dictionary of Ethnic Groups in Yunnan 2006).

1.4 The Layout of the Thesis

The current thesis consists of eight chapters:

In Chapter 1, the introduction, it aims to provide a brief and general description about the research topics, objectives, and questions, as well as the backgrounds of the study area and the Pumi ethnic group.

Chapter 2 will introduce the conceptual framework of this thesis.

In Chapter 3, I will specify the research design and methodology of this study, including a detailed description of the procedures employed during the field work.

Chapter 4 offers an environmental history of Pumi agriculture, with a focus on Pumi biocultural heritage and the policy-induced agrarian transition in recent 50 years. It aims to illustrate the Pumi farming systems and its transformations before the implementation of the eco-agriculture programme.

Chapter 5 and 6 serve as the empirical chapters, where the empirical materials from the field are presented to trace the design and the implementation of the programme. Among them, Chapter 5 will display the government’s actions and designs of the eco-agriculture agenda, whereas Chapter 6 illustrates the local Pumi farmers’ actions and experiences within this programme.

Chapter 7 and 8 are both the discussion chapters. In Chapter 7, I will conduct an in-depth analysis of the government and the farmers in this programme, with reference to current academic debates. This chapter follows a comparative approach.

\(^{14}\) In fact, certain groups of Primi people also recognise themselves as Primi, especially in the nearby Sichuan Province. However, the authority defines the Primi in Sichuan as a sub-branch of Tibetan ethnic group. Therefore, the Primi in Sichuan is also known as the Primi-Tibetan people. To view in this way, the Pumi ethnic group is unique to Yunnan by definition.

In Chapter 8, I aim to contribute a further debate. The chapter is structured into three parts. First, I start with a post-development critique of the authority’s ‘development discourse’ nested in the eco-agriculture agenda. Then, for the Pumi farmers, I will employ Agrawal’s (2005) framework of ‘environmentality’ to examine their environmental subjectivity, which could be related to their agency to indigenise the external interventions. In the last part, I will analyse certain exceptional cases during my field research, which serves as an extended debate to reveal the complexities of the local world.

With these chapters, I intend to capture the local dynamics of eco-agriculture development, and to situate eco-agriculture enterprise within the intricate network of social and political meanings, where this study could provide us with a locally rooted understanding of agrarian transition in developing countries in the context of globalisation and commodity agriculture in a deeper sense.
2. Conceptual Framework

The engagement with social theory is necessary for the researchers to make sense of the contemporary development of Pumi eco-agriculture. The current research has theoretical references to several analytical frameworks, including but not limited to the indigenisation of modernity (Sahlins 1999), environmentality (Agrawal 2005), and post-development theory (Escobar 1995). These concepts are key in explaining the design of the research project and the process of conceptualisations that have inspired the research questions.

2.1 Indigenisation of Modernity

For the studies of inter-cultural systems, Marshall Sahlins has proposed a framework termed ‘indigenisation of modernity’ (Sahlins 1999). As he has aptly expressed in his book Culture in Practice, he reminds us to note how indigenous people are capable of escaping from the ‘death sentence imposed by world capitalism’ through indigenisation. According to Sahlins (idem.), the ‘indigenisation of modernity’ directly contradicts the constructions of a dichotomy between ‘the traditional’ and ‘the modern’, and it reflects the complex interactions of localities and local actors within wider processes. As some scholars asserted, ‘people actively engage with the outside world to produce an intriguing set of political, economic, and social characteristics, shaped and reshaped by the process of development’ (Bialostok 2006).

Notably, even before Sahlins, scholars have argued that the divide between ‘traditional’ and ‘modern’ can be transcended — much of the world has already mixed the ‘indigenous’ with the ‘exogenous’, even before the anthropologists arrived to study the ‘indigenous’ people (Wolf 1982). Also, many researchers (see review in Jolly 1992) have questioned the long-existing discrimination in this ‘dichotomy’, that is, changes in the developed world are viewed as ‘progress’, but changes within indigenous cultures, when they try to adopt certain ‘modern’ features, is understood as a ‘loss of culture’. Sahlins delineated this discrimination with an analogy, through which he suggests us to notice the historical hegemony:

In the fifteenth and sixteenth centuries, a bunch of indigenous intellectuals and artists in Europe got together […] they created a self-conscious tradition of fixed and essentialized canons […] All this came to be called the Renaissance in European history, because it gave birth to ‘modern civilization’, […] a genuine cultural rebirth, the beginnings of a progressive future. When the indigenous peoples do it, it is a sign of cultural decadence […] which can only bring forth the simulacra of a dead past.16 (Sahlins 2000)

With the attempts to reveal this historical hegemony, Sahlins (1999) also pointed out the survival of indigenous peoples is often not the result of isolation. Instead, their subsistence depends upon modern means of production, transportation, and communication. For instance, in a research of the local community in Yukon of North America, Jorgensen (1990) discovered that technologies have deeply transformed the daily routines of local residents, and the indigenous people have taken whatever technology if it works, and shapes it to their own purposes. Obviously, it would bother the people who want ‘the pristine people’ to remain pristine (idem.). Another research of the Bushmen in the Kalahari Desert also reported that the Bushmen have made use of the new digital technology to re-invent a sustainable hunter-gatherer lifestyle (Robins 2003). Therefore, in the various inter-cultural systems, the culture is not disappearing, instead, there is a trend that the global homogeneity and local differentiation can develop together (cf. Sahlins 1999).

It is believed this understanding can lead us to make sense of the practices in many inter-cultural systems in a deeper sense, as it strongly suggests that for indigenous people who engage in modern means of production, it does not necessarily indicate the forces of modernity and globalisation will swallow them: indigenous people are capable to recast their dependencies upon modern technology as a means to reconstitute their own cultural ideas and practices. In fact, it is this ‘local modernisation’ that helped indigenous people to guard against the homogenising effects of the winner-take-all nature of global capitalism (Sahlins 2000).

Inspired by Sahlins’ framework, some scholars have analysed various inter-cultural systems as case studies. For instance, Robins (2003) examined the ‘indigenous modernities’ and land claims after apartheid in South Africa, Bialostok (2006) discussed the literacy campaigns with the framework of ‘indigenisation of modernity’. However, few extant studies have employed this framework in the Zomia or Southwest China context: considering the encounters between the Pumi farmers and the external development practitioners have already constituted such an inter-cultural system, it will be reasonable to examine this framework in the Pumi context, which could offer particular insights to how the Pumi farmers have been adapting and re-inventing their practices in response to the external interferences from the provincial authority.

2.2 Alternative Modernity

According to Whitten (2008), the process of ‘indigenisation of modernity’ can lead to an ‘alternative modernity’ as a result. In general, the idea of ‘alternative modernity’ has raised wide concerns in scholarly debates over the last decades. Through this process, the indigenous people created their own ‘niche’ in the modern nation as an ‘alternative’ to global capitalism (idem.), and this ‘indigenous pathway’ may benefit the local community for self management, economic opportunities, and the preservations of traditions. However, if one wants to address this ‘indigenous pathway’ in a more nuanced approach, it will be meaningful to delve into the concepts of ‘pre-modern’, ‘modern’ and ‘post-modern’, which according to Kaltoft (2001), can be understood from two different perspectives: first, it can be understood as terms of historical periods, second, it may also be understood as ‘different kinds of perceptions’.

If we view these concepts from a historical perspective, industrialisation brought out the rise of modern societies, which transforms the ‘subsistence economy’ to the ‘economy of labour and consumption’ (Kristensen 1997), and the contemporary society is witnessing the shift from the ‘industrial society’ to ‘post-industrial, information society’ (Beck 1997; see also Kaltoft 2001).
However, for some scholars, these concepts can also be understood in a different approach, say, as ‘different kinds of perceptions’\(^\text{17}\), where the pre-modern perceptions denote the notions with no given separations between subject and object, culture and nature. By comparison, the perceptions of ‘modernity’ refer to the separation of nature and culture, and notably, one key aspect of ‘modern thinking’ is the establishment of science as the privileged form to access knowledge, particularly the knowledge about nature (Kaltoft 2001). In comparison, ‘post-modernity’ represents another way of perceiving the world. According to Bauman (2007), post modernism is the passage from ‘solid’ times to ‘liquid’ times. It represents a loss of faith in the idea of ‘progress’, and it challenges the ‘one true pathway’ towards certain universal goals such as science, truth and justice. At the same time, there is an emphasis on multiple pathways, plurality, diversity and differences; it also underscores the partiality of all sort of knowledge, and claims that all knowledge is biased, including the scientific knowledge. Thus, from this view, the alternative modernity echoes the perception of post-modernity in many aspects.

The current research follows the track to approach ‘modernity’ as a way of perception, because, as discussed above, both the government and the local Pumi farmers are enrolled in eco-agriculture programme in the contemporary era, however, their perceptions and understandings of this enterprise may vary, and their divergent understandings can influence their strategies and actions in this programme. For instance, in the Pumi community, some of the local farmers hold no special favour for modern technologies, and are willing to practice multiple knowledge systems, which indicates that they do not regard science as the only form of access to ‘true’ knowledge. Instead, they have the practices of knowledge on a flexible basis, including their indigenous farming traditions, it corresponds to the ‘post-modern’ ways of perception, and addresses the pathway for diversity and plurality.

In general, the ‘alternative modernity’ challenges the conceptualisations of modernity, where the historical experiences of indigenous societies suggest that there is no such thing as a universal form of modernity, there is instead, a ‘range’ (Yü & Michaud 2017), where the search for ‘alternatives’ has widely occurred as the responses to challenges, where the ‘alternative pathway’ to modernity demonstrates significant counter-hegemonic cultural implications (Dirlik 2013). This is why some anthropologists (Sahlins 1999; Knauft 2014) argue that instead of soaking up modernity submissively, local cultures worldwide ingeniously twist it to fit to their own worldviews (cf. Yü & Michaud 2017).

Overall, the intertwining of modernity and its indigenisation have contributed to the emergence of alternative modernities which are present in various intercultural systems (Whitten 2008). Cultures are continuously reshaped in the interactions between global challenge and local responses, where ‘a heterogeneous image and unequal encounters can lead to new arrangements of culture and power’ (Tsing 2005: 4). In the Pumi case, the search for alternative modernity can obviously safeguard the indigenous farmers and help them to find their own positions in the world system of capitalism, through which the local Pumi farmers endeavor to appropriate modern equipments of life through the counter-hegemonic systems with ‘indigenous meanings’.

\(^{17}\) In Kaltoft’s research of organic agriculture in Denmark (2001), his analysis was following this kind of reflections.
2.3. Environmentality

The framework of ‘environmentality’ was proposed by Arun Agrawal (2005), with strong references to Foucault’s governmentality. The core thinking of ‘environmentality’ is developed from the critical reflections on the relationships between local communities and external implementers in development projects (Funder et al. 2013). For instance, Agrawal employed the framework of environmentality in the context of a forest conservation project in Kumaon of India (Agrawal 2005). His analysis is based on the reflections of an externally designed conservation programme previously implemented in this region, which, as he argues, has been dominated by the worldviews of external experts, and inevitably imposed a ‘regulatory regime’ upon the locals (idem.).

In the context, Agrawal suggested to interrogate how the engagement with environmental projects can facilitate new ways to understand the environment by the local residents\(^\text{18}\), where he contends that the ‘joint consideration of the technologies of power and self’ is responsible for the emergence of the new political subjects with an increased level of environmental awareness. As Agrawal articulated:

> What is perhaps the most important and underexplored question in relation to environmental regulation? When and for what reason do socially situated actors come to care about, act in relation to, and think about their actions in terms of something they identify as ‘the environment’? (Agrawal 2005)

Agrawal answers his own question by referring to Foucault’s governmentality, where he asserts the long-lasting forest management regimes in Kumaon from the colonial era to the contemporary have significantly transformed local people’s practices and consciousness of care for forests, and more importantly, have triggered the emergence of the new political subjects: after ‘decades of imposed conservation regimes’, the local participants of the project can reflect upon these external interventions, thereby framing a particular environmental subjectivity as a response to the conservation programme. The new subjectivities can result in a critical perspective towards the collaborative projects for socio-ecological transformations (Agrawal 2005, see also Cepek 2011). Therefore, Agrawal is not only evaluating how the institutional regimes have played its role in terms of forest management and local development, instead, he is more concerned with the way in which the practices under the forms of governance have created a new political awareness and involvement. As Agrawal himself explained, the widespread involvement in certain regulatory practices is closely linked with the emergence of a greater concern for the environment and the creation of ‘environmental subjects’, that is, the people who care about the environment (Agrawal 2005).

Focusing on this point, Agrawal exemplified a local farmer named Singh, who initially thought it was futile to protect the local forests with the conservation projects. A few years later, however, Singh has become a member of the Forest Council: Singh started to think that the villagers could manage the forests better than the authority, and also strongly advocated that they need to do like this. According to Agrawal’s interpretation, Singh has been motivated for reasons beyond immediate self-interests, as Singh refers to wider ecological stability and the national good. Thus, Agrawal argues that Singh’s conversion is not simply because of a pre-existing innate ecological

\(^{18}\) In Agrawal’s case study (2005), he analysed the development project for forest conservation in India.
consciousness, in a broader sense, it is the result of his experiences towards the authority’s regulatory regimes (Agrawal 2005; see also discussion in Mawdsley 2009). Therefore, based on his study of Kumaon, Agrawal suggests that the involvement of individuals within specific regulatory regime is likely to correlate with their enhanced environmental subjectivity (Agrawal 2005).

To date, Agrawal’s framework of environmentality has prompted a number of other studies which have found this to be a valuable framework to investigate local resource management regimes and shifts in environmental subjectivities (Haggerty 2007). Following this framework, it can also provide us with a more complex view of the local realities which were previously controlled by bureaucrats or development practitioners (see discussion in McKinnon 2011). Indeed, considering the engagement with regulatory practices can profoundly shape environmental subjectivities, this framework has enabled us to delve into how citizens can adopt the role of stakeholders and partners with the state in the era of global neoliberal paradigm of decentralised governance regimes (cf. Mawdsley 2009), and illuminate how the emerging environmental subjectivity correlates with the empowerment of the indigenous groups and their traditional knowledge.

However, it is necessary to acknowledge that, Agrawal’s framework of environmentality is not without controversies, as some scholars have cast doubt on his use of Foucaultian ideas of governmentality as inappropriate (Gupta 2005). There are also critiques on his ignorance of the historical embeddedness in Kumaon in his analysis of forest politics and cultures (Narotzky 2005; Sundar 2005). Regardless of these critiques, and considering there are similarities between the indigenous people in Kumaon and the Pumi people in Southwest China, both of whom have been involved in the imposed development projects for decades, it will be intriguing to evaluate if and how a new political subject could have also been forged among the Pumi farmers, where, in a deeper sense, the debate of ‘environmentality’ in the Pumi context can help interpret the local farmers’ actions, motives, and agencies within the eco-agriculture programme.

2.4 Post-development Theory

Post-development theory was proposed by scholars such as Arturo Escobar, Gustavo Esteva, and Majid Rahnema in the 1980s and 1990s. To trace the origins of this thought, the ideas are considered to arise out of criticisms against development theory. Proponents of the post-development school argue that ‘development was always unjust, never worked, and at this point has clearly failed’ (Sachs 1992). In a more analytical sense, they regard the modern development theory as a creation of academia in tandem with an underlying political and economic ideology, which is used as a tool to justify the external interventions upon the disadvantaged groups (Escobar 2011).

To be specific, post-development scholars have pointed out how the concept of ‘development’ has resulted in the hierarchy of the ‘developed nations’ and ‘underdeveloped nations’, where the developed nations are conceived as ‘superior’ to those underdeveloped. As a consequence, the underdeveloped nations are in need of help from the developed, and desiring to model the same track of ‘development’. With the same logic, scholars from post-development school have claimed that the concept of development is often ethnocentric, and is based on the models of industrialisation that are unsustainable in the world where the resources are limited (idem.). In addition, the development discourse is ineffective also for its ignorance of the local, cultural and historical contexts of the peoples to which they are trying to apply for. In essence, the critiques from post-development school on development discourse have revealed that ‘development’ actually
represents an imbalance of domination by the developed nations. Thus, to fight against this ‘imbalance of influence’, scholars advocate more pluralism of ideas about development, by drawing particular attention to the local contexts. Following this reasoning, scholars have proposed a vision of the society removed from the ‘development discourse’, and the ‘political, cultural and economic influences from the developed countries’.

While the post-development school strictly criticises the concept of ‘development’, they also hope to bring up positive changes through ‘alternative methods’. Notably, Arturo Escobar has outlined the aims of post-development thought. According to Escobar, the post-development school aims to search for an ‘alternative’ to development, where the local culture and knowledge are in focus, to hold a critical stance towards scientific discourses, and to distrust the organised politics or development establishment (Escobar 2018). Thus, Escobar (idem.) advocates for the practices of the traditional knowledge systems, or at least a hybridity of modern and traditional knowledge. There are also many of the post-development scholars that advocate for structural changes, and believe the economy must be built upon solidarity and reciprocity, meanwhile, the policy must focus on direct democracy.

In the current research, the analysis of the Pumi context is inspired also by the post-development school, where the eco-agriculture agenda, as a development project itself, will be scrutinised under the spotlight of the post-development ideas. Accordingly, the ‘development discourse’ towards the marginalised Pumi ethnic group will be examined. In this sense, employing this framework to the China context will be both alluring and challenging, because although the unequal power relations in the development projects are prevalent, including the Pumi case, this research aims to examine the hegemonic social discourse within a multi-ethnic country which involves intricate ethnic relations which clearly deserve a more nuanced scrutiny.

19 However, there is also a large body of works which are critical of the post-development theory and its proponents. For instance, it has been noted that post-development theory sees all development as imposed upon the developing world by the West, where this dualist perspective of development may be unrealistic.
3. Research Design and Methodology

To investigate Pumi eco-agriculture, the conceptual frameworks should be combined with the methodology that fits to the research questions and the local context. Considering this research is primarily an ethnographic study exploring how the political and social processes are impacting local Pumi farmers and the experiences of the individuals participating in the eco-agriculture programme, the semi-structured interviews and participant observations were accordingly employed as they are considered as the best techniques to inspect the lived experiences of the farmers and to delve into the ways in which they make sense of farming work, social change, and their own identities.

3.1. Research Design

3.1.1 Ethnographic Research

The ethnographic work has enabled me to better comprehend the experiences of local Pumi farmers and also to make sense of their ways of thinking. Given the fieldwork practices of previous peasant studies, it has been a long-established agreement among scholars that ethnography can effectively capture the peasant’s actions and strategies (Roncoli 2006; Dunlap & Johnson 2010; Kuehne 2016). In addition, the ethnographic approach can also illuminate the relativist ontologies in which multiple realities vary by time and settings (Denzin & Lincoln 2005; Li 2013), particularly for the studies which aim to trace the experiences and perceptions of a culture-sharing group (Wolcott 1994), such as the current Pumi farmers. Thus, by analysing the interactions between the social structure and agency, ethnography has allowed me to scrutinise the implementation of the eco-agriculture agenda, and to investigate how the local development of eco-agriculture is deeply rooted within the local economy, politics, and beliefs.

Participant observation is a key component of the ethnographic research. Through participant observation, the researcher takes part in daily activities, rituals, interactions, or the like in order to better understand the experiences of their informants (Musante and DeWalt 2010). During the field research, I visited five different villages of Lanping County, to observe how local farmers enact their agencies vis-à-vis the external agricultural agenda. The field visits occurred primarily from December 2018 to March 2019. During the visits, I observed the process of farming from various locations in these chosen villages. I followed the farmers to their fields and watched how they were doing their farm works. Very often, I was sitting with the farmers when they were having a short break during farm work. This experience provided me with good opportunities to communicate with them about things or actions I was not clear over. Besides, participant observation also allows for the researchers to uncover some aspects of their informant’s experiences, which are not always mentioned or revealed during the interviews (idem.). Thus, these points of observations enabled me to observe the strategies which the local farmers have employed but did not explicitly express during the interviews. In most of the situations, the farmers are friendly and easy-going, and were supportive towards me as a researcher following them in the fields, but there
were also a small number of cautious farmers who suspected me to be a surveyor from the local government, therefore only allowed me to stay with them for a while. This is not a common situation but it happened most likely in the villages where there are disputes or conflicts of interests regarding the development of the eco-agriculture programme.

As I got acquainted with an agricultural specialist working in this region with the help of friends, I was also following him to gain access to the farmlands, it was proved to be a wise choice because the specialist offered some key information, helping me to make sense of the local agricultural transformations, especially regarding how the new technologies have been absorbed in a localised way. Overall, the participant observations served as a suitable method to investigate how local agricultural adaptations seep into the day-to-day farming practices and consciousness of local Pumi farmers. Thus, it backs up the argument that it is helpful for scholars to conduct participant observations when they encounter the social situation which they are unfamiliar with (Bogdan & Biklen 2003). Notably, my observations of the farmers’ actions also allowed me to develop new questions revolving around the development of local eco-agriculture, and enabled me to approach the informants’ real life worlds, to discover various coping strategies they implicitly employed, to improve the interview protocols, and to confirm or refute the informant’s responses during the interviews.

3.1.2 Design of Interviews

In the interviews, I built a personal relationship with participants by showing up in the same context, which helped me to explore their lived experiences of the eco-agriculture programme. As some scholars have noted, interviews can achieve more direct and reliable access to the inner world of the informants, about their perceptions, attitudes, feelings, and plans (Strauss & Corbin 1998). Questions on farmers’ memories and attitudes towards the eco-agriculture agenda were included in this research to illuminate the complicated and meaningful explanations of their understandings towards this enterprise. Interviews also worked as a supplementary research technique in evaluating the modes of interaction between local farmers and the provincial government especially. I mainly conducted semi-structured interviews, using an interview guide around which the interview questions are proposed (see Appendix 1). This allows for the interviewers to ensure that the interview is on topic, without limiting the informant’s responses (Evans & Lewis 2018). Accordingly, I conducted the interviews by following a natural conversational flow, and the content of the conversation did not move further than the topics of everyday experiences (Kaltoft 2001).

During the interviews, I soon realised that certain questions should be refined to better fit to the local situations. In this way, the pre-formulated questions served as a guide for me to formulate new questions or to revise them in a clearer and more accurate way for local farmers to better comprehend my questions. For instance, there used to be a question as how many employees are there in the eco-agriculture enterprise you work for, however, during the field research, I noticed that this question often confused the informants, because in some eco-agriculture enterprises, production task is designated to different villages, and the agricultural produces are collected by the company on a regular basis. Thus, farmers working for the company could be loosely organised, instead of working directly as formal ‘employees’. Therefore, in my interviews, I reformulated the former question as how many farmers do you know have signed the contracts, or selling their agricultural produces to the eco-agriculture company you are working for?
In practice, the on-site interviews were conducted at various locations in the five different study villages, including the company office, the farmers’ homes, or in their farmlands. I recorded the interviews with an audio recorder and transcribed them. If the interviewees did not allow the audio recording, or asked to stop the recording during the interview, I respected these requests. Furthermore, to follow up with the informants, I also kept communication with some of them through a popular social media in China called WeChat.

Besides the interviews with the local farmers, I also made a survey of local cadres and agricultural specialists. This was done often through phone interviews, as sometimes officials only accepted this form of interview. In China, to directly interview the officials could be hard. Therefore, to mitigate this situation, I made efforts to gain contact to officials through the introduction of my friends, or through government websites. I also contacted several agricultural specialists, who generally hold a more open attitude towards the interviews: actually, the voices of the agricultural specialists will be valuable to be included, because in eco-agriculture programme, these agricultural specialists often work on-site as the ‘technocrats’, and directly represent the government in the villages, thus, they can be regarded as the local-level implementers who guide the agenda into practice.

In total, I conducted 23 on-site interviews with 15 different informants in 5 villages, as well as phone interviews and communications through social media such as WeChat. All of the interviews were conducted in Chinese, although some of the informants communicate with me through a local Chinese dialect, in this case, I will turn to the locals for help. I then had the responses of the informants transcribed, without disclosing the informant’s names or addresses etc. in order to protect their privacy.

3.1.3 Archival Studies

During the field study, I also searched for the published materials about the development of Pumi eco-agriculture, especially the documents pertaining to the implementation of this programme, such as newspapers, archives, and work reports. The collection of these materials was made possible by having several visits to Lanping County Archive and the Library of Yunnan Province. All these published materials are copied with the authorisation of the Provincial Library or the County Archives.

In addition, I also searched for the demographic materials of the research region, as will be shown below. This document is indicative of the Pumi population in the county and has been an essential reference in the process of choosing the informants. The published materials also helped me to trace the historical roots of the current Pumi eco-agriculture agenda, which is important for the researchers to make sense of the farming practices, strategies, and attitudes at the present day. Especially, the documents offered some key information about the Pumi traditional ecological knowledge, which has a significant research value for the understanding of biocultural heritage. Considering the rapid social change in recent years, and the drastically diminishing of the local knowledge practices, it will be of practical significance to study and preserve these locally rooted norms.
3.2. Gaining Access to the Fields

In retrospect, I was inspired to dedicate my time and energy to the research topic of agriculture in Southwest China from the experiences of a two-month fieldwork summer school one year ago. During that summer school in the rural areas of Southwest China, I saw a completely different world, isolated from the thriving urban areas in eastern part of the country. That experience prompted me to return to this region for my master study to explore more. In a practical sense, the Pumi farmers are very little known by the outside world, most people in China have never heard of this ethnic group or the places they have resided in for generations. However, what really attracted me to this topic is that, although the Pumi people are largely ignored by the ‘mainstream society’, and the external interventions are drastically eroding the local society, this group of people has impressed me with their hospitality to the guests and their assiduousness to their farming life. The experiences of working with the farmers and Pumi people intensified my long-term interests in devoting scholarly and practical efforts to this ethnic group, questioning the intertwined relationship between local agricultural system and the transforming powers of modernity in this frontier region.

The previous experiences not only excited me, but also facilitated the actual process of gaining access to the field for the current research. With the connections I had established during the summer school, I received support and help from my summer school mentor and friends, who introduced me to an agricultural specialist working in Lanping County. This contact has provided the gateway for me to enter the field.

In December 2018, I arrived at Lanping County. I was granted the permission to get access to the villages in this county, and was welcomed by many of the local farmers. In practice, the easygoing personality of the local farmers clearly contributed to the field research — some of them are very outgoing, and are willing to share their ideas to me; some farmers actively approached me and enjoyed the conversations on different topics of interests. Many of the farmers are also curious about outsiders, this is especially the case in certain remote villages, as few travellers arrive there. Yet, there were also certain farmers who positioned me as merely a short-term visitor, therefore showing certain aloofness. In light of this, the difficulty of establishing trustful relationship between me and the farmers soon emerged.

Though I experienced a relative ease of access to the field with the help of many, I also met some problems when I was asking for access to certain villages due to the cautious village officials. For instance, in my contact with a village head, he expressed concerns over my overseas study background and the sensitive nature of policy issues in ethnic borderland regions, he therefore refused the access to his village. It shows that without a reliable institution in China, some of the officials may be suspicious of my purpose to do the fieldwork. Thus, even in the villages where the farmers warmly welcomed my field visit, I have explained carefully that the study would only be used for academic purposes. This was to dispel their doubts to perceive me as a surveyor from the government or provincial authority.
3.3. Choosing the Informants

The current research targets at the Pumi farmers, accordingly, the informants have been chosen based on two conditions: first, the informants should be categorised as having the ‘Pumi ethnicity’, which means the informant is a descendant of Pumi, and more importantly, recognise him/herself as a Pumi. Second, the informant should be an organic farmer, which means he/she should devote a bulk of time working for eco-agriculture production. Below, I will specify how the informants defined as ‘Pumi farmers’ had been chosen during the field research in a practical sense.

According to previous study of Pumi, this ethnic group has a long history of migration, which thus formed various sub-branches of Pumi across a vast region (Harrell 1996), and the identification of certain groups is not without controversy. But considering the current research focuses on the Pumi people in Lanping County, they all belong to the same Pumi sub-branch. However, another problem soon arose as the Lanping county is a Bai and Pumi Autonomous region, which means it is multi-ethnic thereby entails the necessity to specifically choose to work in the villages defined as the ‘Pumi villages’.

The selection of these villages is primarily based on the proportion of Pumi people in the villages of different township (Table 1)\(^{20}\). Actually, the reason to choose Lanping County as the study area is precisely because of its relatively higher proportion of Pumi population across the Province. In the selection, I excluded some villages in extreme remote locations, where the mountainous terrain and the dangerous steep hills made these villages quite inaccessible. Specifically, I have employed two conditions to determine the villages to visit: first, over 50% of the village residents should be Pumi. Second, there should be significant activities for eco-agriculture production in the village. However, following these conditions, some practical problems arose, for instance, in some villages, although the demographic data indicates that over half of the residents are recognised as Pumi, many young villagers have moved to cities as migrant workers under a supportive skill-training programme which is exclusively open for the Pumi youth, thereby excluding some Pumi villagers from other ethnic groups and thus altered the ‘actual’ proportion of Pumi population in those villages.

Moreover, the validity of the demographic data should also be contemplated, as the township-level data has not been refreshed for the year of 2018. This may be a problem because the urbanisation and population mobility are significant throughout the year. To capture the latest demographic features of the local Pumi community, I visited the relevant website and tried to contact the officials to request the up-to-date information of the population of ‘actual residents’ in the rural areas.

\(^{20}\) Considering Lanping County is a multi-ethnic region, and there are inter-ethnic marriages, the important standard to identify a Pumi resident is that they identify him/herself as a Pumi.
After careful selection, 12 villages have fulfilled the requirement. I then tried to contact the local village heads, or directly go to the village office to request the permissions to conduct field research of the village and to interview the farmers. Among the 12 villages, seven villages were hard to access due to various reasons. Finally I gained access to five villages in Lanping County which are included for the current study. As adhering to the ethical concerns of this study, and considering there are potentially some controversial issues between the farmers and the officials, I have decided to protect the privacy of the interviewees and local officials. Thus, the real names of the villages will not be disclosed here. Instead, I have picked up an alternate name for each of the village. Below I will describe these villages with more details under their alternate names.

**High Field Village**

This village has an average elevation of 2800 masl, the local terrain is suitable to grow maize, oil peony, and kidney beans. I have made frequent visits to this village because my driver, who is also a local farmer, came from this village. All the residents identify themselves as of the Pumi ethnicity. Most of the villagers’ incomes are from agricultural production. In the future, the villagers aim to further develop the organic cultivation of kidney beans and medicinal herbs, meanwhile increasing their livestock keeping of yellow goats.

**Bomboo Village**

The average elevation of this village is 2800 masl, the farmlands in this village are particularly suitable for the cultivation of kidney beans, potatoes, oil peony, *Chonglou*, and barleys. Most of the residents in this village recognise themselves as belonging to the Pumi, whereas there are also a small number of them belong to Yi ethnic groups. The eco-agriculture enterprise in this village is

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21 Data cited from Nujiang Prefecture Archive. Table 1 is generated by the author.
targeting at the cultivation of medicinal herbs, meanwhile, the farmlands for organic kidney beans and high-quality potatoes are also widespread. The villagers also keep livestocks such as goats and cows. In the future, the village aims to enlarge the scale of commodity agriculture, especially for the cultivation of medicinal herbs.

Green Pine Village

Land in this village is suitable for the cultivation of maize, kidney beans, and potatoes. Due to the poor conditions for transportation, this village is poverty-stricken. However, this village is considered to have strong potential for the cultivation of kidney bean, garlic, Chonglou, and oil peony, and according to the official’s blueprint, the agricultural products can be sold to the entire county. In this village, many of the youth have moved to cities to be migrant workers. The infrastructure of this village is underdeveloped, and the electricity supply is poor.

Red Water Village

The road to this village is paved by silt, and the transportation to this village is dangerous, especially when in bad weathers. The average elevation is 2810 masl. Local farmlands are suitable for maizes, potatoes, and kidney beans. The residents in this village identify themselves as belonging to the Pumi and Yi ethnic group. The irrigation system in this village is weak which makes the farmlands vulnerable to drought. Due to the limited agricultural yields, some of the local youths have moved to cities. Thus, certain farmlands in the village have been abandoned. Notably, this village has been a major site for the Slope Land Conversion Program (SLCP)\(^\text{22}\), which is a national scheme to improve the forest cover rate. The local farmers are active for eco-agriculture productions, where they are eager to attract more external investments and supports from the government to facilitate the cultivation of medicinal herbs for the purpose of poverty reduction.

White Cloud Village

This village has the average elevation of 2900 masl. The residents are primarily farmers, their livelihoods are dependent on the agriculture and livestock keeping, the local farmlands are suitable for barleys, potatoes, Chonglou, and kidney beans. Most of the villagers identify themselves as Pumi.

\(^{22}\)Slope Land Conversion Program (SLCP) is the largest land reforestation programme in the developing world, having the goal of converting 14.67 million hectares of cropland to forests (Bennett 2008).
Chapter Three Research Design and Methodology

Figure 7. A view of the snow mountain from Green Pine Village

Figure 8. A view of High Field Village

23 Photo taken by the author
24 Photo taken by the author
3.3.1. Choosing Farmer Informants

After deciding to conduct fieldwork in these five villages, I started to recruit the farmer informants for my interview. During this process, I started with a preliminary survey and based on it, I set up two conditions to choose the farmer informants: first, the informant must be a resident of the village for over 9 months in each calendar year, and devote most of the time to the farm work. Second, over 50% of the informant’s income should come from the activities of eco-farming. By setting up these two conditions, I aim to ensure that all the informants in my study are the ‘actual participants’ of eco-agriculture. In the initial stage of the selection, I once considered to refer to the village-level demographic data to find the informants, however, the data at this level was proved to be inaccurate or incomplete. Therefore, to tackle this problem, I tried to gain a more detailed list of the village residents. Then, with the assistance of the village officials and villagers, I excluded the residents who did not fulfill the selection standards, for instance, those who had moved out of the village as migrant workers, or those who were not engaged in the activities of eco-agriculture. After this process, I will have a shorter list of candidates at hand. From this list, I randomly select 6-7 farmers in each village, with a consideration of gender balance.

In practice, I was always adjusting the selection procedures to fit to the local context, for instance, the farmers who temporarily work as migrant workers have significantly blurred the categories on what is a ‘regular Pumi farmer’. Besides, some farmers run a small restaurant or other enterprises, but also work in the farmlands. Likewise, there are also certain farmers that have seasonal employment in nearby rural factories. In these cases, although their primary work is for agriculture, they are not qualified for the current study. To better tackle this problem, I always double-checked the farmers’ actual situation with an additional questionnaire survey before my formal interview. Another issue to mention is that, I did not intentionally recruit farmers with the selection of any particular eco-agriculture company, or of a similar socio-economic status for further analysis. However, as much as possible, I kept searching for participants who could contribute to diversify the demographic picture, for instance by incorporating farmers from eco-agriculture companies of various scales, or with different types of cultivations. In addition, I also had a local driver, Ping, who himself is a Pumi farmer, the conversations with him have also broadened my scope to make sense of the local eco-agriculture with a more nuanced understanding.

Overall, after the selection round, 15 Pumi farmers from 5 villages have been selected as the research informants. A detailed list of the 15 informants can be found in Appendix 2. For the selected Pumi farmer participants, most of them can speak Chinese, although with strong local dialect. In practice, the dialect caused some barriers in the very beginning of my field research. But with some language talent, I tackled this accent problem with some self-training over three weeks. The efforts to adapt to local language environment had clearly paid off as the conversation in the local dialect reduced the distance between me and the farmers, thus helped me to better comprehend their ideas, and to some extent improved the quality of the field research.

3.3.2. Government Officials and Agricultural Specialists

In order to investigate the eco-agriculture agenda also from the perspective of the authority, besides the extensive reading of the official documents to understand their design of Pumi eco-agriculture, interviews with seven officials were included in my research as well. The informants identified as
‘officials’ are all from a relatively higher social class, and their work and roles are related to the Pumi eco-agriculture programme, such as the agricultural specialists, the development experts, and the officials from Agricultural Bureau. A detailed list of the seven informants can be found in Appendix 2. Among the seven officials, three of them are agricultural specialists who are responsible for the on-site technical assistance. None of them directly do the farm work themselves or depend on the income from eco-farming company (their salaries are paid by the government), thus, they can be categorised as a different study group in contrast to the group of ‘local farmers’. In my survey of the officials, I started with the assistance of my summer school mentor and friends, who introduced me to an agricultural specialist working in Lanping County. Then, the specialist introduced me to his leaders and colleagues, therefore, the method of snowball sampling has been employed, which worked well in my study of the officials.

3.4 Data Preparation and Analysis

The data analysis was conducted to interpret the interviews and the field notes. Specifically, I conducted the data analysis with the approaches such as qualitative content analysis for the current study. The purpose of the data analysis is to organise and elicit meanings from the data collected, it allows the researchers to identify patterns within their data sets. The procedure for data analysis is not rigidly defined, and thus most researchers adapt specific methods that fit to their research purposes and design (Braun and Clarke 2008). In the current research, I transcribed the informants’ responses immediately after the interview, meanwhile writing my field notes with the reflections and the summary of observations. This on-site analysis of the empirical materials has helped me to refine the follow-up interview questions, and guided the focus of subsequent observations.

For qualitative data analysis, a coding process has been employed to analyse the interviews. Notably, this coding stage has significantly facilitated my understanding of the empirical materials. I read through all coded logs several times to get an overall view of the data, and simultaneously recorded my thoughts and reflections. For each developed category, I wrote down a brief summary of its meaning for future analysis.

Moreover, I paid a particular attention to search for the data elements with high frequency, and also noticed the exceptional cases that obviously deviate from major categories (Weis & Fine 2004). These cases can provide evidences which are needed to confirm or disconfirm a claimed pattern, in this way, they allow for an alternative interpretation which may be proposed and tested. Besides, it is especially meaningful when I was reflecting on to what extent the coding categories can be related to my research questions, and when comparing relevant responses or putting similar responses together. To go further in the analysis of the data, I repeatedly read the interviews I had transcribed, especially focusing on the responses regarding the topics such as ‘land use change’, or ‘technical practices’. By reading the data repeatedly, I have condensed the broad categories by grouping and combining them, to better frame the understanding of the data (Ely et al. 2004). Data analysis ceases when researchers are satisfied and can provide evidence that their interpretations meaningfully characterise the data analysed in light of the research questions.
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3.5 Ethical Considerations and Confidentiality

There are several ethical issues that should be noted in this study. First, I have interviewed Pumi farmers about their subjective feelings or attitudes towards the external interventions which may result in some sensitive information being revealed. The informants were also asked if they had strictly followed the regulations or procedures of eco-agriculture, and if they had ever diverged from these regulations in their agricultural production. Examples are the unreported use of pesticides or chemical fertilisers in the organic farmlands without prior authorisation. This sort of questions may challenge the farmers’ integrity and honesty, and could possibly get them into trouble, this is why I have decided to keep both the interviewees and their villages anonymous by only displaying in forms of abbreviations or alternate names, where their true names will not be disclosed.

In addition, previous experiences have impressed me that some issues can be examined through observing the participants’ behaviors, which works better than forcing them to talk about their feelings directly. Therefore, to observe the farmers’ deviations from the rules in this enterprise, I have relied more on participant observations to delve into this tricky issue.

3.6 Limitations

One limitation of the current research is that, although I had plenty of research experiences in this region, it is necessary to acknowledge that to some extent I still lack the shared life experiences with local Pumi farmers. This lack of experience sometimes hindered my survey. Another limitation was my difficulty in understanding certain local farming vocabulary, and the ‘jargons’ for local activities, which seem to have a shared meaning for the farmers as the ‘insiders’.

Another concern is to what degree my current data can be representative — in the selection of the farmer informants, I have included 3-4 farmers in each village, however, it only represents the viewpoints of themselves, which may not be valid to represent other farmers’ ideas in these villages. Thus, I suggest further interviews on more farmers in future research, which could hopefully lead us to a deeper understanding of the various local voices. Moreover, in the selection round, I have excluded some of the remote villages which are quite inaccessible, but in those villages, there are also farmers engaging in organic farming activities, where their viewpoints and experiences of eco-agriculture could be different from those I have interviewed.

An additional point to mention is that, although I have compared the views of local farmers and officials, the actual divide between the two groups may not be absolute, actually in my field research, there are also some exceptional cases found in both groups, which will be discussed in Chapter 8.3 to offer a glimpse of the complexities of the local worlds.
To scrutinise the Pumi farmers’ transition towards ‘eco-agriculture’, we need to first wonder, how does the Pumi agrarian society work before the government’s eco-farming programme? Especially, what constitutes the Pumi indigenous farming knowledge? And, how has the Pumi agricultural system been reshaped by socio-political processes in the past? Considering the rich historical legacy of Pumi agriculture, a revisit of its history will be conducive for readers to understand its current development. Thus, this chapter provides the social and historical backgrounds of the current research, drawing on academic literature, archive sources and my field survey, through which I intend to show that the historical legacy of Pumi farming has a discernible consequence for the present-day development of Pumi eco-agriculture.

For the structure of this chapter, I will first introduce the origins of the Pumi agrarian society. Subsequently, I will shift the spotlight to the Pumi traditional ecological knowledge, especially regarding indigenous farming skills and Pumi agricultural calendar, the study could be instructive to help document Pumi farmers’ biocultural heritage and ecological knowledge. Then, I move on to discuss the environmental history of Pumi agriculture, situating the transformations of Pumi agricultural systems within the changing political backgrounds of Southwest China. This background is vital for researchers to demonstrate the troubled history of the officials’ initiatives to ‘develop’ the local agriculture. In the last part, I will illustrate the recent picture of local agricultural production, manifested as the development of eco-agriculture in the very recent decades.

4.1 From Nomads to Farmers: The Origins of Pumi Agrarian Society

The Pumi have a long history, and the migrations of their ancestors can be traced back to thousand years ago. Evidences from archaeology, history and linguistics have shown that the Pumi ancestors are associated with the ancient Qiang people, a nomadic tribe on the Tibetan Plateau (Victor 2011). In around the 4th century AD, the Qiang moved along the valleys to the warmer areas in the South (idem.). In the 12th century, the military expansions of the Mongols spread across the whole Eurasian world, also influencing these marginal regions of the Tibetan Plateau (Book of Yunnan History 2001). The Mongols’ war against the Dali State in Yunnan forced the ancestors of Pumi people to migrate further to the South, during this process, many of these Qiangic people settled down to become farmers, including those who are later named as ‘Pumi’ (Figure 9). Generally speaking, similar to many other parts of Zomia, from the 12th to 19th century, the Pumi community successfully resisted the incorporation of the area into any state entities, although the imperial Chinese state such as Qing Dynasty (AD 1616 — 1912) had attempted to integrate this region under direct rule several times in history: due to the mountainous terrain, the remoteness of the central authority, and a certain attitude of anarchy, the interferences of the state rarely came into play. Instead, the Pumi region was controlled under smaller local chiefs, and only sometimes under the indirect custody of the authority.
Before the 1950s, the Pumi society was economically dominated by local landlords, the system can be seen as a feudal farming economy, where the local landlords are the elites of the Pumi community who generally have a dominant position and higher social rank. With the establishment of the People’s Republic in 1949 (see more details in Chapter 4.3), the powers of the landlords were severely weakened, and the feudal economy was transformed to a socialist economy. Before discussing the impact of these political shifts on Pumi agricultural system, I will first introduce the Pumi farming culture which has a high research value for the studies of traditional ecological knowledge.

4.2 Locating Pumi Indigenous Farming Knowledge

As an upland agrarian society, the Pumi have displayed their local wisdom in farming. The combination of traditional management, practices, and knowledge with the diverse agricultural landscape have been recognised here as the Pumi ‘biocultural heritage’. By definition, biocultural heritage is the understanding of cultural landscapes as the result of long-term biological and social relationships, shaping the biological and material features of the landscape and also memory, knowledge, and experiences (Maffi 2005; Davidson-Hunt et al. 2012; see also Lindholm & Ekblom 2019). Biocultural heritage includes biological resources, from the genetic level to the landscape level, and long-standing traditions, practices and knowledge for adaptation to environmental change and the sustainable use of biodiversity.

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25 Cited by the author from *The Portraits of 56 Ethnic Groups in China*
4.2.1 Pumi Agrobiodiversity

Agrobiodiversity is an essential subset of biodiversity, it is also known as agricultural biodiversity (FAO 1999). It is the result of the interaction between the environment, genetic resources and management practices used by culturally diverse peoples (Figure 10). Thus, agrobiodiversity encompasses the variety of animals, plants and micro-organisms that are necessary for sustaining key functions of the agroecosystem, including its structure and processes for, and in support of, food production and security (idem.). In a practical sense, agrobiodiversity can provide natural insurance to risk-averse farmers by reducing the variance of crop yield (Baumgärtner & Quaas 2010).

![Figure 10. Conceptual diagram showing the relationships between functional agrobiodiversity and ecosystem services with benefits to agriculture and society as a whole](image)

Especially, local knowledge and culture constitute an integral part of agrobiodiversity, as the agricultural practices function to shape and conserve this biodiversity. In the Pumi region, local agricultural resources are rich (see Figure 11), displayed by the various indigenous breeds of potatoes, oats, barleys, and medicinal herbs, which are the results of the interactions between the local genetic resources and the Pumi farmers’ agricultural practices in a long-term basis to sustain the diversity of local agricultural resources. For instance, maize in local farmlands,

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26 Cited from European Learning Network on Functional AgroBiodiversity (www.eln-fab.eu) and the Millennium Ecosystem Assessment 2005
according to the farmers I have interviewed, include two different breeds, the white maize and the yellow maize. Both breeds are sown in March, and will be harvested in September or October. The white maize is a local breed that was introduced to this region hundred years ago, and has adapted to the local climate and terrain. According to local farmers, this kind of maize has a better taste. Although the yield of this breed is relatively low, some farmers still cultivate them, as its seeds can be stored for the next year. By contrast, the yellow maize is an imported hybrid breed, it was imported in recent years and its yield is comparably high. However, the seeds cannot be stored and must be bought every year (information from the survey with local farmers in Green Pine Village, see also Chapter 6).

![Figure 11. The rich local agrobiodiversity](image)

Notably, the local resources for highland medicinal herbs are rich, such as *Maca*, medicinal peony herbs, and a kind of herbal rhizoma named *Chonglou*. Particularly, the local climate and terrain are suitable for the growth of medicinal herbs, thus, many of the farmers participate in the commercial cultivation of herbs. Besides, in this region, kidney bean is an important cash crop, which can be sold at a relatively higher price in the market (see Chapter 5). Moreover, barleys, oats, garlics, and buckwheats are all breeds suitable for the local terrain where the altitude is relatively high, some of the barleys are indigenous or have been cultivated in this region for hundreds of years. These breeds are resistant to cold weather and drought. However, due to the low yields and cheap price in the market, nowadays only some of the farmers persist to grow local buckwheats and oats.

Similar to practices in nearby regions (Yang 2014), the Pumi farmers use their home gardens to grow vegetables and crops for self-consumption. In practice, the home garden is often the best place to witness a high level of agrobiodiversity. In these gardens, cabbage, garlics, soybeans, and cucumbers are common, often mixed with some indigenous crops. To conserve the local

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27 Photo taken by the author
breeds and improve the productivity, the farmers have a local network for seed exchange. Choosing the right breeds is important for local farmers, which is perhaps reflected in the Pumi agricultural proverb: ‘More fertilisers with the wrong seeds are vain efforts’ 28. As some farmers remembered in the interviews, the seeds of local highland barley were widely exchanged in the past; after harvest, the farmers would pick up the full-grained seeds to exchange with others or to be sown next year. There was also an active network to exchange indigenous seeds of large-grain oats. However, after the introduction of the high-yield external breeds in this region, some of these indigenous breeds are no longer favoured by local farmers, as their yields are low if compared to the introduced ones.

4.2.2 Pumi Barnyard Manure

Barnyard manure is an organic compost used as organic fertiliser for the farmlands, mostly derived from animal feces. Barnyard manure can be found in many parts of the rural areas in China. However, the local Pumi barnyard manure has a special component, where the pine needles are added to the dung (Figure 12). It exemplifies how indigenous ecological knowledge can help local farmers to make a good use of the local natural resources to keep the productivity of the soils. As will be discussed in the coming chapter, barnyard manure is now also used to improve the cultivation of introduced breeds.

Figure 12. The Pumi barnyard manure in the farmland 29

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28 Translated by the author from local archives, some farmers also mentioned this old saying during the interviews.
29 Photo taken by the author
In the Pumi agricultural calendar (Table 2), the making of the barnyard manure takes place in spring when the farmers collect the pine needles dropping from pine trees in nearby mountains. Then, they will put them in the cage or pasture of the livestock. Keep it there for months, the pine needles are mixed with the animal feces over time. According to local farmers, this kind of rural fertilisers works especially well for the Maca and Chonglou cultivation, because it provides the nutrition similar to the soils in the mountains.

4.2.3 Pumi Farmland Rotation and Intercropping

The intercropping and rotation practices amongst Pumi farmers show their talent in managing local agricultural landscapes. With land rotation, Pumi farmers grow crops on the same farmlands in different years. This kind of farmland arrangements can help balance the fertility of the soils, transform the soil composition, and improve the agricultural yields. In assessing which land to cultivate and for what crop, Pumi farmers generally draw on the agricultural calendar and certain norms of practices. For instance, the rotation usually takes place as follows: for the first year, the farmers will grow wheat, the second year they turn to maize, the third year back to wheat, and the fourth year to grow barley or maize. Another common rotation procedure is the first year for kidney beans, the second year for maize, the third year back for kidney beans, and the fourth year for barley or wheat.

Farmland rotation clearly has benefitted the Pumi farmers from many aspects. For instance, the straws of the harvested crops will be remained in the fields, during winter, the farmland will be used as pastures, where the straws become animal feeds. This process in turn brings the Pumi farmers another benefit where the animal wastes during the winter can be used as the manures for the farming in next spring. In this way, the farmers have a double gain based on their local wisdom in the seasonal farmland-pasture shift.

Moreover, the Pumi practice of intercropping also constitutes another key part of Pumi indigenous knowledge about farmland management. Intercropping is a multiple cropping practice involving growing two or more crops in proximity to each other. In a recent research, scholars have argued that the intercropping will be an important approach to sustainable agriculture from the agroecological perspective (see Figure 13 by Altieri, Nicholls & Montalba 2017). Obviously, the most common goal of intercropping is to produce a greater yield on a given piece of farmland by making use of resources or ecological processes that would otherwise not be effectively utilised by a single crop (Ouma & Jeruto 2010). For instance, the Pumi farmers may intercrop the maize with sunflowers, which, according to their experiences, can produce better yields; they may also intercrop some vegetables with beans. The practice of intercropping also has strong ecological meanings for local agricultural ecosystems — the intercropping in the

30 From the interview in High Field Village

31 It is the case in some of the villages, however, in other villages, according to farmers, details of the local agricultural calendar have been forgotten by many local farmers.

32 Conventionally, this farmland rotation system is associated with the traditional agricultural calendar. However, as in recent years the agricultural calendar has been gradually eroded, the practices of farmland rotation are dimming out as well (according to the interviews in Bomboo Village).
same fields can increase the cover area of the farmlands, thereby refraining the water loss and soil erosion.

**Figure 13. Socio-ecological outcomes of intercropping system, as presented by Altieri, Nicholls, and Montalba 2017.**

For the landscape management, in my research, I also paid a particular attention to the memory of landscape. By definition, landscape memory represents the tangible materialised human practice and semi-intangible ways of organising landscapes (Lindholm & Ekblom 2019). In the Pumi case, the landscape memory is significant, which addresses the Pumi farmers’ ability to manage their farmlands. For instance, according to the survey in High Field Village, in the vocabulary of Pumi farming, ‘Lang Rang Kia’ indicates the place where there used to be a harvest of turnip according to local oral history, now this word has been used to represent the places that are suitable for the cultivation of vegetables. Likewise, in Pumi language, ‘Sa Khi’ was the name of a place where the yield of crops is satisfactory, now this word is widely used by local farmers to indicate the places where the soil is suitable for crops. Moreover, the word ‘Dam Ma’ denotes a place where the bamboo is lush, or the places where the shepherds choose to be pastures during the winter. Now in Pumi language, it literally means the places that are suitable for sheep herding.

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4.2.4 Pumi Farming Calendar: A Biocultural Heritage for Agricultural Arrangements

The agricultural calendar can be recognised as a key part of Pumi biocultural heritage. As part of a folk culture, it has been transmitted through generations, and has a high research value because it contains phenological knowledges about the local patterns of natural events, especially the seasonal variations of weather or the lifecycles of the animals and plants, which can be used as the reference to arrange their agricultural activities.

As previous literature has indicated (Lanping County Yearbook 2006), the Pumi people follow a lunar calendar, displayed in their ways to name the month. In their language, many names of the month correlate with the status of the moon. According to the traditional agricultural calendar, the May and June are the busiest months for local farm work, while January to March have relatively lower agricultural workload. The calendar has served as the local clock for farming activities for at least hundreds of years. However, in recent decades, due to the transformations of the agricultural systems and changes in means of production, many farmers cease to follow this traditional agricultural calendar. As the Pumi agricultural calendar has been abandoned by many farmers, I only managed to trace certain part of it in the field research. However, in my readings of the local archives, I have found a recording of the local agricultural calendar, based on a previous survey conducted by Yunnan University around 20 years ago\textsuperscript{34}. Considering its importance for the understanding of the seasonal patterns of local agricultural activities, and its value for the preservation of Pumi traditional knowledge, I have translated it here (see Table 2)\textsuperscript{35}:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|}
\hline
Month & Traditional Name & Modern Equivalent \\
\hline
January & \textit{Shên ê Month} & Winter Month \\
February & \textit{Chê Month} & Spring Month \\
March & \textit{Chêng ê Month} & Summer Month \\
April & \textit{Qióng ê Month} & Autumn Month \\
May & \textit{Chên ê Month} & Sambar Month \\
June & \textit{Chêng ê Month} & Sambar Month \\
July & \textit{Chê Month} & Winter Month \\
August & \textit{Gê Month} & Spring Month \\
September & \textit{Gê Month} & Summer Month \\
October & \textit{Qióng ê Month} & Autumn Month \\
November & \textit{Shên ê Month} & Winter Month \\
December & \textit{Qióng ê Month} & Autumn Month \\
\hline
\end{tabular}
\caption{Pumi Agricultural Calendar}
\end{table}

\textsuperscript{34} According to Lanping Archive 1995

\textsuperscript{35} Due to the few attentions paid to Pumi people, among the extant literature, no English literature was found to introduce this Pumi traditional agricultural calendar.
**Table 2. Pumi Agricultural Calendar**

<table>
<thead>
<tr>
<th>Month</th>
<th>Pumi Word(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Wai khi</td>
<td>the month of the new year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will start to plough, if it is the fallow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>farmland from last year, the farmers need to clear the weeds, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>collect the fire woods. They also go to the mountains to collect the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pine needles. Traditionally, they also go hunting in the mountains in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>this month, although it has been forbidden since 1980s.</td>
</tr>
<tr>
<td>February</td>
<td>Ri Wang khi</td>
<td>the month to visit the friends and relatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will host the guests, meanwhile arranging</td>
</tr>
<tr>
<td></td>
<td></td>
<td>for their farm work. They need to plough their farmlands, and this</td>
</tr>
<tr>
<td></td>
<td></td>
<td>month is suitable to sow the potatoes, the month is also considered to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>be suitable for the repair of their houses because for the suitable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>weather.</td>
</tr>
<tr>
<td>March</td>
<td>Sha Wang khi</td>
<td>the month to visit the tombs of their ancestors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will focus on the making of the barnyard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>manures, and plough. Also, many farmers will start to grow maize and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>barley, and sow certain crops and kidney beans by intercropping. This</td>
</tr>
<tr>
<td></td>
<td></td>
<td>month is also considered to be auspicious to visit the tombs of their</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ancestors.</td>
</tr>
<tr>
<td>April</td>
<td>La Ri Chen khi</td>
<td>the month when the crops are liable to suffer from the rust disease</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will harvest the wheat which was sown</td>
</tr>
<tr>
<td></td>
<td></td>
<td>last winter. It is also suitable to start the sowing of the maize.</td>
</tr>
<tr>
<td>May</td>
<td>Ri khi</td>
<td>the month when the moon is similar to that in September</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will continue to harvest the wheat, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>plough the farmlands for maize.</td>
</tr>
<tr>
<td>June</td>
<td>Ko Kie Ri</td>
<td>the month when the moon is similar to that in November</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will harvest the barley, and plough the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>farmlands for maize.</td>
</tr>
<tr>
<td>July</td>
<td>A Wang khi</td>
<td>the month when the moon is similar to that in December</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will harvest buckwheat, clear the weeds, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>transport fertiliser to the fields.</td>
</tr>
<tr>
<td>August</td>
<td>Ga Lie khi</td>
<td>meanings for the name are controversial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will continue to harvest buckwheat, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pay attention to protect the farmlands from birds and animals. This</td>
</tr>
<tr>
<td></td>
<td></td>
<td>month is also suitable to sow barley, wheat, oats and other crops.</td>
</tr>
<tr>
<td>September</td>
<td>Ga Song Ri</td>
<td>meanings for the name are controversial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will continue to harvest the buckwheat.</td>
</tr>
<tr>
<td>October</td>
<td>Liang Cuo khi</td>
<td>meanings for the name are controversial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will harvest the turnip, sorting and stacking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a local breed of cabbage, threshed and store the maize, beans, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>buckwheat.</td>
</tr>
<tr>
<td>November</td>
<td>Cu Hua khi</td>
<td>meanings for the name are controversial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will threshed and store the crops.</td>
</tr>
<tr>
<td>December</td>
<td>Wha Ri Chen khi</td>
<td>the month of wind and snow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this month, the farmers will have the winter sow, and collect the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pine needles for barnyard manures, meanwhile collect the firewoods.</td>
</tr>
</tbody>
</table>

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36 Translated by the author from the local agricultural archive. All the Pumi words are translated by the author from Chinese to Roman letters. The translation work follows the pronunciations of the words but may not completely precise because the Pumi do not have their own writing system. The information in this table is cited from the County Archive.
4.3 Historicising Pumi Agriculture in Political Contexts

How is Pumi agricultural system shaped and reshaped by the social and political context? As discussed already in this chapter, the Pumi agriculture has strong historical embeddedness and cultural legacy, which serve as the bridge to link the Pumi agricultural system in the past with its transformations in the present and the future. In this section, I will offer an environmental history of Pumi agriculture, with a particular reference to the ‘rise and fall’ of the agricultural policies in (Southwest) China since the 1950s. Notably, the second half of the 20th century had witnessed a changing political and social discourse and regime in People’s Republic of China. We can resemble these political changes as throwing pebbles in a lake, each time, it makes a ripple on the surface that spreads out influencing the whole lake. Thus, the historical research of Pumi agriculture can shed lights on how the shifting political discourse can reshape agricultural practices at the local level. Basically, the changes of Pumi agricultural system can be divided into three different phases: first, before the 1950s, when the indigenous agricultural system was operating at the local level. Second, the period between the 1950s-1980s, when agriculture was collectivised, and the subsequent movement, known as Great Leap Forward (1958–60) has drastically altered the local organisations for agricultural production. Third, after the 1980s, the era of political and economic reform, which signified greater reliance on markets, prices, and incentives to boost production and to diversify agricultural outputs, where the development of commodity agriculture such as the eco-agriculture enterprise is such a case. Here I will discuss these periods in more details based on their impacts on the Pumi region.

4.3.1 Before 1950s

Historically, the ‘Zomia’ are the upland regions of Southwest China and Southeast Asia which have remained outside the sphere of direct influence of the large central empires in history. As discussed already in Chapter 1, due to the relatively geographical remoteness from the authority, the Pumi indigenous farming system has maintained its independent status before the 1950s. The mountainous and rugged terrains have safeguarded the Pumi people from being absorbed. In this era, the local agricultural system was operating under the guidance of customary rules and norms.

Similar to many other farmers in Zomia, Pumi farmers also practiced shifting agriculture. This kind of agricultural practices have previously been regarded by the authority as ecologically damaging to both soil and forest ecology, and it is also seen as economically inefficient because of the need for long fallow terms (Conklin 1957). Recent studies have re-evaluated shifting agriculture as a viable practice and are now more concerned with the changes occurring in the communities who engage in shifting agriculture, as they are gradually influenced by and integrated into larger socio-political systems in the contemporary era (Denevan 1992; Heckenberger 2006).

For the procedures of Pumi shifting cultivation, to take the yams as example. Yam is a mountainous high-yield crop in this region. For the Pumi farmers, it can be the staple food, or used as the feeds for the livestock. For the cultivation of yam, as farmers say, it starts by ‘firing the mountains’. In their words this process is known as 

37 The Great Leap Forward of the People’s Republic of China was a social campaign from 1958 to 1960. The campaign was targeted at rapidly transforming the country from agrarian economy into socialist industrial society through rapid industrialisation.
farmlands gained from firing the mountains’). *Huoshao*di is particularly suitable for yam cultivation and the yield is generally satisfactory for the first year, because this kind of land has a thick layer of humus and ashes which improve the fertility of the soils. In practice, the *Huoshao*di land can be cultivated for 3-5 years, as the fertility drops, the shifting cultivators will move somewhere else to replicate this cycle.

**Figure 14. The farmers in Nujiang Prefecture, 1950s**

Historically, the Pumi traditional practices of shifting cultivation were regulated by a set of local farming procedures and agricultural calendars. For instance, their shifting areas have been demarcated by kinships without any interference from external authority (Lanping Archive 2000), thus, local social structure underpinned the traditional practices and also mediated local conflicts regarding land use. Generally, different ethnic and kin groups in this region have their own territories dispersed over open space, in this approach, the land use system follows the patterns of community-based management of natural resources (idem.).

Local shifting cultivation was also associated with cultural and religious norms. For instance, *Shibi* is a powerful religious chief responsible for local ceremonies and celebrations, including those related to farming. As mentioned in Chapter 1.3, Pumi people have both worships of natural deities and ancestral spirits. To pray for a good weather for farming and avoid drought, they venerate the ‘gods of the dragon pool’ (*long tan chong hai*) to ask for a good agricultural yield. In general, one or several families own the same ‘dragon pool’, and the entire village has a bigger ‘dragon pool’. Every community will carry out a village-level veneration in January or February. However, if there is unusual natural disaster such as a drought in that year, people may arrange extra veneration rituals to expect the ‘god of the dragon pool’ to dispel the misfortunes of the village, and guard the agricultural production.

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38 Cited by the author from local archives
The local shifting cultivation system is not always devoid of external influence. Considering shifting cultivation has posed a symbolic threat to the ‘mainstream’ agricultural system in China which favours the sedentary and intensified farming, in the imperial era\textsuperscript{40}, the authority had always attempted to control the shifting cultivation by privatizing the farmland resources, this process was associated with a larger political scheme known as the ‘bringing aboriginal chieftains under the jurisdiction of the central government’ (\textit{gai tu gui liu}), this scheme divided the indigenous people as the ‘raw’ and the ‘cooked’, where the authority aims to integrate the ‘raw barbarians’ into the political fabric of the empire (Fiskesjö 1999). Thus, some scholars argue this historical process denotes a ‘frontier history’, where the ‘ecological frontiers’ were gradually integrated into the empire through history (Schmitt 2014).

However, as the new regime is coming, this situation did not last for long. According to the County Archive, the county seat was liberalised in May of 1949, and the working committee of Lanping was established in July of the same year. Since then, the history of this Pumi region stepped into a new era.

\textsuperscript{39} Cited by the author from local archives

\textsuperscript{40} The influence of the state on Pumi local agriculture was intense especially during the late Qing Dynasty in the 1800s-1900s
4.3.2 1950s-1980s

Similar to many other parts of China, during the 1950s-1980s, the Pumi region has also witnessed significant political and social complexities, where the external influences have largely transformed this region. The state influences were enforced in movements such as the agricultural collectivisation in the early 1950s, the Great Leap Forward in the late 1950s, and the Cultural Revolution during the 1960s-1970s.

Since the 1950s, the state had been integrating this peripheral region into the planned agrarian economy, which resulted in rapid changes to local agricultural system. The political leaders launched a variety of large-scale social movements to boost local agricultural production, the first scheme being collectivisation. Through a radical land reform programme the class of landlords and wealthy peasants were eliminated by confiscating their lands and distributing them to local farmers, with the ambition to eliminate the ‘exploitive feudal regime’ (Lanping County Yearbook 1993). Once agricultural collectivisation was in place, the leadership embarked on the ambitious programme of the Great Leap Forward in 1958. It became imperative for all in the villages to join the nationwide system of production. Scholars such as James Scott (1998) have discussed this movement in his works, where he pointed out the authority’s attempt is primarily to establish an agriculture of ‘legibility’.

Figure 16. A poster during the Great Leap Forward


42 Cited by the author from an online art collection sale website
As an ambitious social movement, the Great Leap Forward attempted to transform the traditional ways of agricultural production into ‘modern’ ones, it substituted the traditional practices with the intensified agriculture to pursue a higher yield. The agricultural transition towards intensification was actually expressed as a political call. As shown in the poster (Figure 16), people from different ethnic groups, dressing ethnic clothes, are shown to hold hands, and dancing around the tall crop stack, which represents the ‘harvest with the planned economy and the new intensified agriculture’. The text on the stack says: ‘People’s Communes are like paradise.’ However, as the local society holds strong local custom, the agricultural collectivisation and the Great Leap Forward were not always going smoothly. For instance, in December of 1956, some farmers agitated the masses ‘not to sell the crops to the officials’, instead, they illicitly transported the crops to another village across the Bilo Snow Mountain for sales. Unfortunately, on their way back from the illicit sale, seven farmers were killed by the low temperature in the snow mountains (cf. Lanping Annuals 2000).

Obviously, the Great Leap Forward and the related agricultural development programmes have set up high production goals for agriculture. However, because of the inefficiency and overambitious campaigns, combined with the frequent natural disasters in those years, the Great Leap Forward soon ran into difficulties. The result was a famine – the agricultural production declined sharply and there was a disruption of agricultural activity which produced food shortages. During these years of crises, the crop yields were unstable. Due to starvation, there was a steady decrease in total population of the township (Lanping Annuals 2000). Thus, these movements have been depicted by some scholars (Shapiro 2001) as a war against nature, where she employed the perspectives of environmental history to explicitly address the intertwined relationships between the impact of movements and the environment in crisis during those years. It is clear from the interviews I have carried out and also from other conversations with Pumi residents that the period of 1950s-1980s is a special memory for the local Pumi farmers.

In a cultural sense, the traditions of indigenous people such as Pumi could suffer from ignorance during the Great Leap Forward. There was a disempowerment of Pumi indigenous farming skills, where the agricultural experts promoted the belief that the traditional farming ways are economically ineffective and ecologically unstable. To a larger extent, as some scholars have noted (MacKerras 2003; Mullaney 2011), many parts of the Southeast Asian highlands are situated within geographical margins, where the political integration enforced by the officials tends to categorise the ‘ethnic minorities’ according to their economic activities, which justify the needs to bring them up to the national levels of ‘scientific modern economy’, which also aims to ‘mainstream’ the indigenous farmers (Salemink 2003; see also Yu & Michaud 2017), and thereby signifies the ‘frontier land use change’ driven by socio-political transformations (Rindfuss 2007). Obviously, for the Pumi farmers during this era, they were encouraged to accept the agricultural transformation in public, however, as Scott has suggested (1990), to understand the change of rural communities entails the necessity to consture what lies beneath the surface of public behaviors, which worked as a ‘hidden transcript’ (idem.).

4.3.3 1980s-Present

Since the 1980s, the cult for radical social change gradually dimmed out, and political and economic reforms were launched to revitalise the national economy with economic incentives and market measures. However, regional disparities soon emerged: in East China, the re-
introduction of the market and the re-open to the outside world have brought rapid economic growth. However, in West China including the Pumi frontier regions, the lack of external investments brought no significant economic boom. Still and by comparison, the political reform was perhaps more discernible in this region than the economic one, as the decentralisation reform has to some extent empowered the indigenous people and triggered the revival of the indigenous norms, knowledge, and even social hierarchy. In this way, the ethnic, cultural or religious revivals during the reform era have attracted bulk of academic concerns, for instance, McKinnon (2011) describes how Hani people in Yunnan have employed the ‘moral and cultural stuff’ of the past to enhance their confidence to run their own affairs at present. McCarthy (2011) investigated the cultural revival of ethnic minorities in Yunnan province where she termed the revival as a ‘communist multiculturalism’.

In terms of agricultural sector, since the 1980s, the government has initiated a reform for land rights. As Ash (2001) notes, the purpose of this institutional reform was two-tiered: first, to provide state support and subsidies for the collective production. Second, to provide incentives at the household-level to emphasise the benefits of decentralised agricultural production. Based on my reading, the reform in agriculture can be described from three aspects: first, the re-introduction of the market, second, the strengthened scientific agricultural input, and third, the new farmland ownership systems. Beginning with the re-introduction of the market, in the reform era, the rural marketing system has been resumed. Reforms in the early 1980s swept away previous policies and administrative rules restricting business activity, and the farmers could now sell a growing share of their agricultural produces in free markets. This liberalisation thus encouraged the Pumi farmers to raise their own income through hard work, good management, and reduction of costs.

The reforms also witnessed the enhanced input of modern agro-technology. Actually the rapid modernisation of agricultural economy has been an outstanding feature for the rural development in China after the 1980s. As will be discussed in Chapter 8, the state proposed the guiding principle ‘Modernisations for Four Pillar Industries’, one being the agriculture. The focus on agriculture continued to guide the agricultural development in the reform era as a political legacy of Mao, through which modern agro-technologies have been continously introduced into the valley for Pumi farmers. Especially after the 1990s where the local level of agricultural mechanisation was improving rapidly, and the agricultural specialists played a significant role in promoting modern agro-technologies to the rural areas.

The last part of the reforms was a new land ownership system. After 1978, the agricultural land reforms were introduced to the Pumi region through the policy termed the Household Responsibility System (HRS). Under this system, farmers no longer devoted most of their efforts to collective agricultural production as before. Instead, they were assigned specific plots of farmlands for up to 15 years where the farmers could plan their farming work at their own discretion, it facilitated the agricultural commodification in this region. Simultaneously, the new system encouraged some Pumi farmers to develop the high-added value agriculture, such as the farm-based tourism and eco-agriculture enterprise that will be discussed here in detail in the coming chapters.

Before we go on to the discussion on how provincial authority defines the Pumi eco-agriculture programme since the 1990s, I will first give a brief background of the programme.
4.4 Pumi Eco-Agriculture since 1990s: Linking the Past with the Future

Similar to the transformations of Pumi agricultural system in the past decades, the current development of Pumi eco-agriculture enterprise is also the result of constant negotiations between local farmers and the policy-makers. In a broader sense, in recent decades, the global trends of eco-agriculture have been booming. According to International Federation of Organic Agriculture Movements (IFOAM), organic agriculture aims to combine tradition, innovation and science to benefit the shared environment and promote a good quality of life for all involved (IFOAM 2005), and the central philosophy of many organic farming movements centred on the ideas of care for nature (Kølster 1989). The trend has also been reified in China where market economy is growing rapidly, and the thriving eco-agriculture enterprise has provided farmers with new opportunities to earn extra incomes by producing green agricultural products, meanwhile reinforcing eco-friendly practices for sustainable rural development (Sanders 2006). To date, various academic studies have discussed different aspects of eco-agriculture in China. For instance, Paull (2008) has examined the greening of China’s agriculture and the eco-labelling systems while Giovannucci et al. (2005) investigated the relationship between organic agriculture and poverty reduction, based on a comparison between China and India.

In retrospect, the first initiative for eco-agriculture production in Lanping County emerged in the 1990s, and the early enterprises were mainly for the cultivation of organic kidney beans. Realising its great potential for rural economy, Yunnan Provincial government soon initiated an agenda to promote this agriculture in rural areas of the province, which is known as the ‘Eco-agriculture Agenda’. Under this agenda, eco-agriculture companies were established, from small-scale private firms with 5-10 farmers, to large-scale state-owned green food company. Besides, as a key step, the government also subsidises the farmers who use the modern organic agrotechnology. As reported by the provincial authority (Yunnan Yearbook 2015), the agenda has changed the previously inefficient agricultural systems with the up-to-date and eco-friendly technology, which brought significant economic benefits such as the doubled or even tripled incomes for the farmers in recent years (Yunnan Post 2010).

Notably, although eco-agriculture seems to be a global movement, its development in the specific context is varied, especially in countries such as China where a discernible geographic heterogeneity can apply. To be specific, in the core regions of China, the intensified agriculture has a long history (Paull 2011). Thus, the emergence of eco-agriculture is triggered primarily by green activism, as well as the rising demands for green products through which can be termed as ‘green consumerism’. However, in Pumi regions, the development of eco-agriculture seems to follow a different track, where the authority’s agenda is more market-driven, and at the same time, the local farmers hold strong traditional farming knowledges to be integrated with new technologies. Thus, it is of interest to examine how these indigenous knowledges are ‘defined’ under external influences, and how such negotiations of knowledge practices have occurred under the programme, which ultimately questioning the transforming powers of commodity agriculture and global capitalism on Pumi agrarian society.

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43 Since 2010, it has been implemented as an economic incentive to ‘promote the farmers to respond to the call of eco-agriculture’. It is also combined with the SLCP (Slope land conversion program) which is to substitute the farmlands on the slope back into forests.
Thus, in a broader sense, the eco-agriculture programme in Pumi region functions as a bridge to link the Pumi community’s past with the future — on the one hand, in the era of ethnic revival, many farmers regard traditional farming skills, norms and knowledges as an integral part of eco-agriculture programme, on the other hand, the officials aim to promote commodity agriculture with a shared standard under the powers of the investment and the new technologies — the collisions of the two trends will trigger constant negotiations and contestations which steers the contemporary Pumi eco-agriculture to proceed. Thus, the history of Pumi agriculture as delineated above has portrayed a farming system in constant transformations, and the contemporary emergence and development of Pumi eco-agriculture are the physical manifestations of local agricultural history. From the perspective of historical ecology, the Pumi agricultural landscape is actually the palimpsests of successive disturbances over time, with the development of eco-agriculture being a recent print. Thus, just as what the American writer William Faulkner said, ‘The past is not dead, it is not even passed’, a glimpse of how Pumi agricultural system used to work will facilitate our investigation of the present development of eco-agriculture since the 1990s, which will be the topic of the following chapters where the Pumi eco-agriculture programme in recent decades will be scrutinised in an ethnographic context.
5. The Agenda of the Provincial Government

How does the provincial officials perceive and promote ‘eco-agriculture’? Through the interviews and field research of the officials and agricultural specialists, the provincial government’s blueprint for Pumi eco-agriculture will be depicted. This section will provide an ethnographic research of the provincial officials in the agenda, focusing on their designs and actions in the development of eco-agriculture to illustrate what the officials ‘persuade’ or ‘expect’ the farmers to do in the programme, which will be presented in terms of the official’s designs in agricultural land use, technical practices, and the governance upon the Pumi farmers.

5.1 Agricultural Land Use

According to the Work Report of Yunnan Province (2015), one essential goal of the agricultural development in this province is to facilitate the standard management of local farmlands:

For the eco-agriculture development during 2015-2020, the government at each level should pay efforts to build a better farmland management system, in order to promote the commodification of agricultural production […]

Make the agricultural system cater to the market economy, this is the principle that the cadres should base their work on.44


From the published documents, we can detect that the standardisation of local agricultural system has been an oft-stated goal for the provincial government. The officials believe that through this process, they will make local agricultural production safer and more efficient. In a practical sense, according to some scholars (Thiers 2002), eco-agriculture in China has been used as a state-coordinated market strategy. Likewise, in the Pumi case, as the Work Report has denoted, the officials’ primary goal of eco-agriculture is not merely about the construction of a sustainable agricultural system, it also matters to build a market-oriented enterprise which is to ‘upgrade’ local agricultural system and seek higher economic profits.

To achieve this goal, the government has targeted at certain aspects of local farming system, among them, land use is given a particular attention, as it is the basic element of agricultural production. Specifically, in their expectation for the transition of agricultural land use, the large-scale standard farming company should be promoted, which is the enterprise with the large monocropping farmlands and the standardised farming procedures, as well as modern inputs for land management, with the guidance of the agricultural specialists (Figure 17). For instance, in one of the interviews with a local agricultural specialist by the name of Han, he explained:

44 Cited and translated by the author, materials collected from Lanping County Archive.
I am responsible to promote the standard farming base in this region, it is a vital task. In such a farming base, the training for modern land management is more accessible for the farmers, and [in the farming base], it is easier for them [the farmers] to cooperate with each other.\(^{45}\)

Figure 17. A meeting of the Agricultural Bureau\(^ {46}\)

The emphasis of the benefits for large-scale standard land use is also reflected in another document from the government. In the *Guidebook for Agricultural Development, Lanping County 2017* (Lanping County 2017), the authority states that, by improving a more effective agricultural land use, and by regulating farmland management practices of local farmers, they can better plan the eco-agriculture, and contribute to the task of poverty reduction:

To transform the household-based agricultural production and smallholder farming to the large-scale agricultural cooperatives or enterprises, the cadres and agricultural experts should be devoted to this transformation […] it is crucial to guide the farmers with ‘scientific, effective, good-quality, and safe’ ways to manage their farmlands, by doing so, we can deliver a more standard farming procedures to the farmers.\(^ {47}\)

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\(^{45}\) Interview with Han, Feb 14, 2019

\(^{46}\) An agricultural specialist from the Agricultural Bureau has just finished his inspection, and is giving feedbacks on agricultural production to the village officials. Photo cited from the Website of Agricultural Bureau of Yunnan Province.

\(^{47}\) Cited and translated by the author, documents collected from Lanping County Archive.
Reviewing the published documents, the government’s initiatives to transform local farmland use from household-based farming to large-scale agriculture company is framed upon two principles. First, a large-scale standard patterns for agricultural land use will improve the farmers’ efficiency in commodity agriculture; by setting up eco-labelling qualification systems, by deploying technical specialists, and by providing training courses for the local farmers, the rich local agricultural resources can be better utilised, thereby contributing to a high added-value agriculture (see Yunnan Agricultural Yearbook 2010-2015). Second, from the government’s perspective, a large-scale standard agricultural land use will make the farmers more competitive in the market with their coordinated efforts, it is supposed that through the standardisation of land use, the farmers will be enabled to have more contact with market, thereby transforming the self-dependent farmers to commodity providers.

From the interviews I had carried out, the two principles explained above have been the compass for local officials to navigate their work in the fields. For instance, during one of the interviews, I had a conversation with one official from Agricultural Bureau of Lanping County. To protect his privacy I hereby give him the pseudonym name of ‘Wang’.

Wang: I have some knowledges about how the outside market works, the agricultural products selling for a good price are those qualified products, especially those from the qualified farmlands.

GZ: What do you mean by qualified farmlands?

Wang: In our county it is generally the bigger farming companies, they have made good efforts to apply for the ‘organic’ label, and their production is definitely, uh... how to say, more standard.

Wang’s explanation reveals the provincial officials’ ambition to facilitate the standardised farming company. And notably in my interview, at least certain officials have linked the household-based agriculture to the causes of poverty. One example comes from a memoir published in Yunnan Daily, where an agricultural specialist, Feng, from the Provincial Agricultural Office, described his experiences working in Lanping County in the past 10 years:

As I remember, the local agricultural resources are rich, but the local farmers fail to make a good use of it, [...] farmers are not well organised in land use, it hinders the agricultural development, what a pity! My work is to help local farmers to manage their farmlands in a more regulated and disciplined way, especially to build the large-scale company for standardised cultivation, thereby developing [eco-agriculture] enterprise and enrich them.

(Feng’s Memoir from Yunnan Daily)

Similar to Feng, in order to facilitate the eco-agriculture agenda, many agricultural specialists and development experts have been deployed to the rural areas to provide ‘guidance’ for the farmland management. To some extent, their mission is to ‘declare a war’ against the disordered and unregulated local farming practices, and facilitate a more ordered and efficient use of farmlands. For instance, they do not encourage the local farmers to practice the customary patterns such as farmland rotation, or the farmland-pasture shift, because there are scientific solutions for land use

48 As requested by the respondent, his/her real name will not be disclosed.

49 Cited and translated by the author from Yunnan Daily, material collected in Yunnan Provincial Library.
which need to be modelled in this region, through which the officials believe the farmers will develop the profitable eco-agriculture agrobusiness ‘in a correct direction’.

To exemplify this, a conversation with a development officer, ‘Sang’ (also a given name) in Bomboo Village may help us to better make sense of how the ‘war against customary land use patterns’ has come into reality. In the interview, after having my research aims explained, Sang showed me a manual by the name Guidebook for High-Quality Agricultural Production in Lanping. According to Sang, almost every development officer working in rural areas hold such a guidebook, its content is compiled by the Bureau of Agriculture in Lanping County. When showing me the manual, he explained the role of the manual and how he used it:

GZ: What is this guidebook about?
Sang: It is about how to manage the farmland for a qualified farming base.
GZ: Do you always refer to it when you are in the farmlands to provide guidance?
Sang: Yes, it is my bible in the field. I will refer to it when I inspect the farmer’s work, if they are doing any unauthorised steps, or any misconducts in the farmlands for eco-farming, I will warn them, and correct their [farming] practices.

Sang then opened the manual, and read to me the words on one of the pages:

To guarantee the effective use of farmlands, the specialists should encourage and persuade the farmers to join the farming company, and accept the joint management — the modern farmland management will facilitate the development of the enterprise, and benefit the farmers.

Similarly, a local cadre, named Min, also told me:

Most of the local farmers received only limited education, very often they ignore the potentials of the enterprise in the long run, I think that is why they are not active to join the farming company […] They manage their own farmlands based on their own understandings and local norms, that is not effective, and their farmlands are distributed in different locations, it makes the [joint] management hard to achieve, and also makes the application for eco-label less likely to be successful.

From the two officials’ remarks, we note that although the provincial officials attempt to introduce a more disciplined farmland management pattern, the local actors may not necessarily voice a positive response. Continuing the conversation along these lines, Min also added [with a bit of anger]:

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50 The interviewee used the word hong bao shu (meaning: a useful guidebook), the author translated as such, according to the meaning instead of the word itself.
51 Interview with Sang, Feb 15, 2019
52 Interview with Sang, Feb 15, 2019
53 Interview with Min, Jan 28, 2019
I think this is why the external investors do not like to come. Local farmers are lack of discipline in their farmland management, they tend to ignore the opportunities that the government has created for them, and sometimes they lay some of their fields fallow for several years, which they call as rotation. Their farmings are hard to coordinate [with the plan]. Thus, we have to repeatedly emphasise that a good eco-agriculture requires coordinated efforts, and they need to follow the standards and disciplines, or there will be no good outcomes for its development.54

Here, Sang exemplified a common discourse practice from the side of the provincial government, which is to dichotomise the land use as ‘small-scale’ and ‘large-scale’: in their definition, the large-scale land use, which is simply a synonym to the standard farming company, represents the ‘new trends for modern agriculture’. In the company, the farmers can ‘upgrade’ their agricultural planning and land use. In contrast, if the farmers persist their ways of traditional smallholder farming, they could be labelled as ‘standing in the opposite side for progress’. The same way of thinking is apparent by observing the slogans on the walls in the villages. Slogans can best express the official’s ideas in China, some scholars have scrutinised China’s systems for ‘mass persuasion’ (Cull, Culbert & Welch 2003), where the slogans being a good lens. In the Pumi villages, the slogans as visual symbols have also been a focus for my observation. On the way to visit a standard farming company of eco-agriculture in Green Pine Village, a board at the entrance of the village proclaims the slogan as follows (Figure 18): ‘Respond to the Party’s call, build the large-scale eco-farming company.’

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54 Interview with Min, Jan 28, 2019
55 Photo taken by the author
Looking at the landscape around the advertising board, I realised there is no reason to cast doubt on the effects of this slogan — right behind the board, a large-scale greenhouse company for organic vegetable cultivation had been built, a construction which appears as a spectacular ‘artificial landscape’ in this valley otherwise surrounded by forests. In the same organic farming company, I interviewed a manager, Kong (also an alternate name), who proudly introduced his company to me:

Our farm is very famous in nearby regions, so you came to the right place if you want to know something [saying with a sincere smile] […] everyone here knows this company, because we have almost the biggest greenhouse farming base here, and we follow the international standards. Every time the township leaders go to Kunming [the provincial city] to report the progress of local agricultural development, they will mention us. That is why we won a provincial-level medal for standard farming last year.\(^\text{56}\)

Conspicuously, the officials and agricultural specialists see the integration of smallholder farmers into large-scale farming company as a short-cut to facilitate eco-agriculture which in their eyes could bring prosperity to the local farmers. As will be discussed later, the provincial official’s ideas clearly echo the *conventionalisation hypothesis* of organic production, which follows an industrial model for eco-agriculture and involves the process of agricultural commodification. In this process, the indigenous ways to manage local farmlands such as rotation, intercropping, or the farmland-pasture shifts are refrained as the officials regard them as ‘backward’. At the same time, local farmers are also admonished for their reluctance to cater to the modern commodity agriculture, which is actually the ‘inner core’ of the authority’s ‘eco-agriculture agenda’.

However, it is worth to mention that, in planning the Pumi eco-agriculture agenda, some different ideas among the officials have been voiced. For instance, as I searched the newspapers and reports about eco-agriculture agenda, an archive in Yunnan Agricultural Post (2009) impressed me as it documented an interview with an official who expressed concerns based on, as he claimed, his long-term observations of local realities:

[...] the terrain of our province is mountainous. Considering this point, it is not wise to set up large-scale agriculture companies [...] but it [the terrain] is very suitable to develop the cultivation of mountain herbs such as *Chonglou* [...] Thus, I think there is no need to invest so much for large-scale farming company, instead, the government can prompt the farmers to grow medicinal herbs on a flexible basis and smallholder manner. What the province should do is just to establish companies in the cities and towns, and regularly go to the villages to collect the products by paying a reasonable price to the cultivators. It better fits the reality of our province, and avoid the risks of the management problems troubling many large-scale farming companies.\(^\text{57}\)

However, this kind of voices are clearly not the mainstream. Thus, the county has witnessed a surge of land acquisition by large-scale agro-buisness in the past few years, where many farmers are

\(^{56}\) Interview with Kong, Mar 2, 2019

\(^{57}\) Cited and translated by the author, materials collected from Yunnan Agricultural Post 2009 from Yunnan Provincial Library.
recruited to work for them. As a consequence, these standard farming companies have transformed the local agricultural landscape, as well as the farmers’ everyday practices and their perceived relationships with the farmlands. Especially, some of the farmlands in the village were abandoned because they are too small or too isolated from the company’s reach. Besides, some farmers who were previously practicing the farmland rotation have had to cease their traditional land use patterns due to their new employment in the farming enterprise where the agricultural plans are designated ‘from above’ and thus are out of their own control (from the observations in Green Pine Village). Overall, driven by the official’s design, the burgeoning standard farming companies have offered a particular insight on the policy-induced land use change in these villages, which deeply transformed the agricultural landscape in this mountainous frontier region.

5.2 Technical Practices

In line with the authority’s design of eco-agriculture programme, there are also a number of new visions with respect to technical practices which have been imposed upon the local Pumi farmers. Through the interviews with the officials, it is clear that the government has regarded the input of modern agro-technology as a key step in their agenda. Following this principle, the technical assistance team, consisting of agricultural specialists and development experts, have played a crucial role in promoting new technologies into the rural areas (Figure 19). In general, among the officials, there is a strong belief in technology as a means to stimulate rural development, as one local cadre, ‘Li’ (also an alternate name), has explained to me:

The local farmers are poor because they are not fully equipped with modern technology, if they are, I believe they will employ the technology as a tool to get rich soon.58

58 Interview with Li, Feb 9, 2019

59 An agricultural specialist is teaching how to use the mulch film in a training meeting. On the desk of the first row, the words in white denotes ‘technical trainings and solution meetings for borderland people’. Photo cited by the author from the website of Agricultural Bureau of Nujiang Prefecture.
In my field research, many officials have expressed similar ideas with Li. Admittedly, there have been scholars who noticed the technocratic approach in contemporary China, presenting in almost every aspect of the official’s strategies (Zang 1993). Specifically, in Pumi eco-agriculture, a technocratic strategy has been demonstrated as a strong will from the officials to introduce advanced organic technology as the premiere, sometimes even ‘the only’ solution, to agricultural problems. Following this logic, the preservation of traditional farming skills is unsurprisingly not on the list of key issues. For instance, during one of my interviews, a local official, named ‘Min’, addressed this issue by saying that:

I think we, as the cadres, should help the local farmers to avoid the short-sighted views and the suspicion on external techniques [...] you see, the state is now caring for the borderland people, and providing technical assistance, therefore, the local villagers should try to accept them in their farming work.60

In the words of the official, the farmers who refuse the new technology are labelled as ‘short-sighted’. Admittedly, the officials often consciously or unconsciously link the ‘traditional skills’ with ‘poverty’, or simply ‘less effective’. By doing this, some officials claim the farmers are impoverished due to their ‘obsolescent’ farming approach. At the same time, the officials relate ‘modern technologies’ with ‘richness’, ‘progress’, and ‘solutions’, through the use of which a ‘bright new future’ is waiting ahead. Likewise, this kind of tropes can also be found as published reports such as China Agricultural Net, an online website widely considered as the ‘window’ of the state and provincial authority for the agricultural sector. Notably, a report in 2015 under the heading Composing the New Song for Eco-agriculture stated:

[...] Previously in Shaping Village [a village in Lanping County], local farmers were growing maizes and potatoes in local farming ways, they had low yields, the income was never satisfactory year after year. However, in recent years, under the guidance of the village head, they [the local farmers] received the investments from Provincial Development Office, meanwhile, the agricultural specialists brought the advanced techniques and modern ideas to cultivate Maca [a mountain herb]. Now, after only two years, farmers’ income has already been doubled.61

From this report, we can note how the government’s narratives on China Agricultural Net is encouraging the farmers to change their ‘old ways of farming’ which are inefficient if compared with the ‘new ones’, and through the new techniques, the potentials of the local farmlands and the agricultural resources can be utilised to generate immediate benefits for local farmers. Clearly, with the new scientific and commodity cultivation of the crops and medicinal herbs which otherwise only serve for self-consumption, the officials who see the benefits from agrarian transition has portrayed a pathway to market-oriented agriculture for the Pumi farmers. Similar narratives can also be identified in a document named Government Report of Lanping County 2015:

In Lanping County, the progress of eco-agriculture is amazing, the local cadres have used various ways to promote new technologies, e.g. the technique training, the radio broadcasting for farming technologies, free courses with

60 Interview with Min, Jan 28, 2019
61 Cited and translated by the author
local-level agricultural specialists, the tech-training caravan etc. From 2010-2015, they have trained 2923 farmers, with the visits to 32 villages. […] For example, Chang is a team leader of Huasong Village. When the reporter visited his home, he led us to the barn and said with joy: 5 years ago, we were growing maize in the farmland, but the yield is very poor with the weak tools. After using the mulch film techniques, now we get a better yield. [pointing to the grain stack] Look, this is what we just harvested this year, there are in total 15000 Jin. […] he continued to say: after joining the enterprise, I earn 40000 yuan per year. The income is good, I really thank the specialists from the Agricultural Bureau, they gave us trainings and help.

——Government Report of Lanping County

As can be seen, the two reports have portrayed the local farmers as the beneficiaries of the new technologies and they are grateful to the programme. The officials also assume that the willingness of the farmers to adopt new techniques positively correlates with their possibility to enrich themselves. At the same time, the reports also implicitly despised the traditional farming skills which the officials think have been proved to be ‘economically inefficient’, thus entails the necessity of external technical inputs from the specialists and cadres to the local farmers.

Moreover, as displayed in the interviews with officials, the government not only regards the input of new technology as an effective solution for poverty reduction, it is also hoped that the new organic agro-technologies can restrain the environmental degradation which has troubled this region for decades: since the 1980s, the booming economy, especially the mining industry in this region has triggered environmental problems and forced the government to seriously face the challenge. Thus, the officials regard the organic technologies as a panacea for environmental control. For instance, in my conversation with a development officer, Sang:

GZ: I heard the government emphasises much on technology introduction.
Sang: Exactly.
GZ: What technology does the government aim to promote under the eco-agriculture agenda?
Sang: The government aims to promote the modern and advanced technologies.
GZ: Can you specify them?
Sang: Uh…you know, for the chemical fertilisers or pesticides, they have magic effects to improve the [agricultural] yields, but some farmers seem to overuse them, and the technologies have caused environmental problems, and it poses threats to the environment […] In the eco-agriculture agenda, we regulate the use of these things, and at the same time encourage organic techniques such as biological pest control, and new hybrid fertilisers.

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62 According to the exchange rate, 40,000 yuan equals 7,000 US dollars.
63 Cited and translated by the author
64 Interview with Sang, Feb 15, 2019
From this conversation, we can note that, the local officials, especially those who are directly responsible for the technical introduction such as Sang have realised that technologies may not always be a positive thing, and the non-green techniques such as chemical fertilisers may seriously trigger negative side-effects if overused. In practice, the agricultural experts have underscored the practical needs to choose the technical solutions with discretion. However, even the organic technology is prioritised in the eco-agriculture programme, it seems that certain new problems still arose according to some villagers. For instance, to develop eco-agriculture, some farmers living in the mountain slopes were recruited and resettled to the lower valleys, where the farmlands and pastures on the slopes have been abandoned (Figure 20). In the past, the farmers burned the weeds regularly, and their livestocks grazed the grass on the slope, both helping to control the pests. However, as they have now moved away, pest problems emerged again on the hills in recent years (according to my interviews with several farmers in Red Water Village). Therefore, even the officials seem to promote the organic agro-technology which is supposed to be well-rounded and eco-friendly, there are still new problems associated with it, which goes beyond the anticipations of the provincial authority. In fact, it has reflected the farmers’ important role in sustaining the local farmland system, where the external interference such as the resettlement may bring up unexpected consequences to local agrarian systems.

Figure 20. The abandoned lands and houses on the slope due to resettlement 65

Overall, my observation of the government’s design in terms of technical practices has demonstrated that, at least for the officials I have interviewed, they tend to prioritise ‘modern science’ as the official vocabulary to develop eco-agriculture, where they have set up various channels to introduce these new agro-technologies into the programme (Figure 21). Similar to earlier development projects in this region in the past decades (see Chapter 4), local officials are

65 Photo taken by the author
now still trying to judge the local norms and farming skills within the category of ‘modern agroscience’. In this way, they have been underestimating the local people’s knowledge, agency, and voices.

5.3 Governance Issues

As a social enterprise, the Pumi eco-agriculture involves the disciplines and regulations to manage the farmers and the upland agrarian community. Thus, eco-agriculture agenda has potentially provided the officials with the platform to explore new forms of governance in this region. Here I will examine if and to what degree the provincial government has established a new governing apparatus amongst the local farmers. From interviews and the readings of official reports, it is obvious that certain new channels to surveil the local farmers in the eco-agriculture company have been established. To be specific, the local officials have deployed the surveyors, agricultural specialists, and development experts to conduct agricultural surveys in the rural areas under the flag of ‘eco-agriculture planning’.

My visit to Red Water Village has provided the clues to observe this point: when I was visiting a local woman farmer, Liang, after hearing that I came to study local eco-agriculture project, she

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66 Information collected from the *Lanping County Archives*, the figure is generated by the author.
immediately showed me a big package, with various types of documents and dossiers inside. Opening the package she then said:

These are all documents, contracts, or survey reports of eco-agriculture about my farmlands, and about our village67.

I spent two hours talking with Liang, and reading these documents with a great interest. During the interview, Liang’s husband joined the conversation as well, saying:

After the village head decided to join the eco-agriculture to grow oil peony, they [the survey team from the county] had come to my home and farmlands over ten times, now they know me better than my wife!68

These documents offered insights into how often and frequent the agricultural specialists and development experts sent by the provincial government have been visiting this village to conduct surveys. During some of the other interviews I carried out, there were also certain local farmers talked to me about the officials’ survey, and they even humorously renamed the ‘eco-agriculture’ to the ‘document agriculture’. In the administration of eco-agriculture, this process is known as ‘setting up a dossier’, which is considered as a necessary process for the overall planning of eco-agriculture. With the survey named after agricultural planning, the local officials clearly have produced detailed knowledge about the local agricultural resources, as well as a more thorough scanning of the farmers. To take a further step, for the observation of this point, I am intellectually indebted to Foucault, where he believed that knowledge is always a form of power, and ‘knowledge, once used to regulate the conduct of others, entails constraint, regulation and the disciplining of practice’ (Foucault 1977: 27)69.

Thus, to understand Pumi eco-agriculture programme in a Foucaultian approach, it will be instructive to observe how the new channels for ‘surveillance’ have been generated, and how new knowledges about local farmers are produced, which hold the potential to be used to regulate the conduct of the farmers.

Another linked process of administrating the local worlds is the nationwide rural campaign named ‘Poverty reduction with targeted measures’. It is a state-level ambition to remove absolute poverty by the year of 2020, some scholars argue that the poverty reduction has been part of the everyday politics in contemporary rural China (Ang 2016). Obviously, the eco-agriculture programme in the Pumi villages is an integral part of the ‘targeted measures’ for poverty reduction, and has been employed to bring positive changes ‘from above’ to the local community and consequently become a form of governance (Figure 22). In this way, the eco-agriculture in the Pumi villages is not merely driven by green activism or the economic profits. To a larger extent, it functions as a tool for poverty reduction as a governing apparatus. Thus, in light of the cadres’ discourse, if you resist the eco-agriculture programme, you could be criticised for your obduracy in seeing the progress (according to the interview with a farmer in White Cloud Village).

67 Interview with Liang, Mar 5, 2019
68 Interview with Liang’s husband, Ming, Mar 5, 2019
Thus, the development of Pumi eco-agriculture has narrated a story about the local officials’ intentions to reinforce the governance and promote economic development through agrarian transition, where the worldviews of the officials and development practitioners are often employed. This worldview is not only concerned for agriculture but also relates to the forms of governance. A bulletin board right outside the office of a village can further reveal this point (see Figure 23 and the figure text), as it proclaims:

Gain prosperity through commodity agriculture  
Gain picturesque environment through conservation  
Gain respect through education  
Gain orders through good governance  
Gain richness through development

—— Agricultural Office of Lanping County

(Texts on a bulletin board in a village)

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70 The word on the wall means: ‘All cadres join, All people enroll, devote every effort to the victory of poverty reduction.’ Photo taken by the author

71 Translated by the author
The bulletin board has clearly displayed the official’s mindset to plan the future for the Pumi people in the right ways. And obviously, in light of the government’s blueprint for eco-agriculture, the enterprise can contribute to the achievement of several goals addressed on the bulletin board, such as the prosperity and good governance.

Furthermore, according to my field research, the officials also use the development of eco-agriculture to facilitate the state presence — by developing this enterprise, the state influence is seeping into the lives of the Pumi farmers. This influence comes into play often through the economic ties, where the state-owned companies will invest the local eco-farming business. For instance, in White Cloud Village, the village cadres have a close partnership with the provincial development office and the China Three Gorges Corporation (CTGC), which is a state-owned company that is planning to generously provide the financial support for eco-agriculture company in this village.74

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72 Photo taken by the author
73 The China Three Gorges Corporation (CTGC) is a Chinese state-owned power company, established on 27 September 1993. The company was responsible for construction of the Three Gorges Dam-project, the world largest hydroelectric power plant, that went into operation in 2008.
By investing eco-agriculture enterprise through the state-owned company, the officials have extended their reach in the local world. Moreover, by designating the cadres as the managerial personnel in the company, the officials can easily maneuver the enterprises to assert powers through bureaucratic institutions embedded in the eco-agriculture companies. For instance, we can take a glimpse of this point by observing a bulletin board of an eco-agriculture company, where one of the leaders is used as the spokesman for their company. The company presents the leader’s ideas as the source of inspiration to their aims and practices, where the bulletin board quotes the leader’s remarks:

The leader has indicated that, it is never too much to emphasise on the food safety, and it is never too much to guard the health of the people. 75

I think the quote of the leader’s remarks have vividly depicted its influences associated with the eco-agriculture agenda in the China’s side of Zomia.

To further make sense of how the local people perceive this increased level of state presence, I asked one farmer, Hong, in Bomboo Village:

GZ: What do you think of the current policy, especially the agricultural policy for this region? Do you feel these policies and agendas are influencing your life in a more discernible way?

Hong: I think so. We are the borderland people, the state is coming to develop our region, the assistance from the officials is changing our life, … in a good way.76

His remark is impressive because he recognises himself as a ‘dweller of the borderland’, to some extent it has indicated that he acknowledged himself as a citizen, although residing in a marginalised region. In a deeper sense, his remarks also imply how the state influence, through various development projects including the eco-agriculture agenda, has exerted an impact on the identity of the Zomia residents in a gradual but constant manner, where his remarks correspond to the government’s ‘development discourse’ through which an ‘underdeveloped’ borderland is depicted and recognised, thus requires the assistance from the officials.

Overall, in terms of governance, we can note the eco-agriculture agenda is not merely a plan for agriculture, instead, it brought up issues which are beyond the scope of agricultural production and intertwine with the forms of governance (Figure 24), where the provincial government can wield the powers on local community. It thus serves as a governing apparatus on the local farmers, and invites the state influences into the local worlds, which displayed the official’s capacity to integrate the borderland regions into its political fabric.

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75 Translated by the author
76 Interview with Hong, Feb 23, 2019
Figure 24. The levels of governance in eco-agriculture development[^77]

[^77]: Figure generated by the author according to the official documents
6. Negotiating Eco-Agriculture: Local Farmers

How do the Pumi farmers perceive and practice ‘eco-agriculture’? Although the provincial officials intend to steer the development of eco-agriculture by installing a crafted design to manipulate the agrarian transition, as previous studies have delineated, farmers in Zomia are famous for their anarchist tradition, and there are no exceptions for Pumi farmers in the current case. For the eco-agriculture programme, the local farmers are not strict followers of the official’s influences. Following this approach, this section aims to provide an ethnographic research of the local farmers in the programme, focusing on their strategies in dealing with the official’s agenda, which I believe can offer insights to the farmers’ lived experiences of organic farming, and perhaps more importantly, their search of the indigenous meanings for modernity. In other words, it will illustrate how the Pumi farmers actually behave in the eco-agriculture programme, presented with respect to agricultural land use, technical practices, and governance issues.

6.1 Agricultural Land Use

A major question perplexing me during the field research is that, what are the policy-induced changes in agricultural land use for the Pumi farmers in the programme? Obviously, it is a key issue to investigate how the official’s intervention has affected the Pumi farmers in the planning and management of their farmlands. Besides, if we consider the intertwined relationship between landscape and identity, the land use patterns also hold strong cultural significance where the changes can be linked to how the farmers (re)interpret their relationship with their farmlands. Therefore, in my research, I have paid particular attention to how the land use change has been perceived and cognised by local farmers. Admittedly, in the interviews of farmers from the five villages, although some of them responded to the government’s call to work in the large-scale standard farming company, it is obvious that there are still many of them who engage in the programme on a smallholder basis. This indicates that the individual farmers may continue to work in their own farmlands, and have a contractual relationship with the company. On the one hand, this contractual relationship has forced them to follow certain regulations of ‘scientific’ land management, on the other hand, it also granted the farmers certain levels of flexibility to arrange their own farm work, especially in some of the remote villages where the specialists can rarely visit due to the problems of transportation.

To exemplify this point, I use the conversation I had with one farmer, Yin, in White Cloud Village:

Yin: They [the agricultural specialists] rarely come to our village, because the transportation from the county town to our place is in poor condition.
GZ: If so, how did you get the guidance to manage your farmland for the eco-agriculture?
Yin: I learned from my working partner for free, he is from another village where eco-agriculture developed very well. Besides, there is a
development officer responsible for our village, he regularly comes to check our work in the farmlands, sometimes he provides some guidances in our work.

GZ: Do you think the guidances are helpful?
Yin: Not always. I often need to depend on myself to find out the best solutions.  

For the Pumi farmers I have interviewed, around half of them reported that the guidance from the agricultural specialists are weak, at the same time, the farmers tend to have no clear idea of what constitutes a ‘sustainable farmland management’, and do not hold an accurate definition about what ‘sustainability’ is. When asked about these concepts, many farmers responded that they have never been offered any ‘theoretical learning’ of eco-agriculture, as they say. But this does not mean they are unable to manage their farmlands in a proper way — local farmers actually have much knowledge about the local landscape, which is based upon their long-term practices, experiences, and cross-generational transmissions of knowledge as discussed in Chapter 4. Therefore, when asked of how they have been managing their farmlands, most of the farmers can give ‘confident’ answers based on their own lived experiences (according to the interviews in Green Pine Village and High Field Village).

Actually, different from what the local officials have addressed, in my field research, many farmers expressed their willingness to work in their own household farmlands, or the rural cooperatives which generally bring together several families as a work unit, and the farmers do not favour to work in the ‘standard farming company’ because as they claimed, that is something they are unfamiliar with, and there are too many rules to follow (according to my interview with a farmer from High Field Village). Likewise, one farmer, Cheng, in Green Pine Village, also told me that:

To join the new farming company is not a good choice, because they do not follow the local ways of management such as farmland rotation, and, I think the officials and experts also chose the wrong location, […] to find a larger land plot for the construction of the farming base, they choose to build it in the lower valley, where the sunshine is weak […] it is inappropriate for cultivation. Besides, that location is vulnerable to land slide. As you can see [pointing to his house and family garden], our farmlands are generally located in the half valley. Although the land is fragmented, they are less vulnerable to land slide, and have better sunshine. Another issue [to not join the farming company] is that, the farming base is a bit far, I do not want to be an employed labour or something, that disturbs my daily life.  

In light of Cheng’s expressions, we can note that, different from the local official’s standard approach in farmland management, the farmers’ stewardship of the smallholder farming systems rely very much on the farmers’ own knowledges and experiences, thus generating an increased level of flexibility in planning agricultural activities: it activates the indigenous practices of land rotation or farmland-pasture shift which will otherwise be confined by the standard eco-farming company. Thus, the persistence of traditional landscape management in the smallholder farmlands can help

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78 Interview with Yin, Feb 25, 2019
79 Interview with Cheng, Jan 20, 2019
the farmers to integrate the indigenous knowledge into their practices and enable them to actively adjust to the policy-induced changes to fit into local conditions. In a practical sense, considering local terrain is highly mountainous, external procedures for landscape management may no longer be applicable. Thus, referring to the local wisdom in farmland stewardship could be conducive. This point was supported by the remarks of Cong, a female farmer in High Field Village:

Yes, we have some knowledges about how to manage the local land [use]...for example, we have the sacred woods which we will never allow anyone to cut them, and by tradition, we have certain areas which should never be used for agricultural cultivation, especially the lands around the ‘Dragon Pool’ which are very important for the fortune of a village, thus, no matter what happens, these sacred land plots should not be disturbed.  

Actually, the interview with Cong had triggered my interests to trace the indigenous knowledge about landscape management in a deeper sense. According to my field research, local knowledge system at work for landscape management can be divided into two major categories: First, some of the knowledges are derived from the traditional religion or norms which have been transmitted for generations, the knowldges about farmland rotation or intercropping fall into this category which highlight the cultural ties. The sacred lands which belong to the ‘mountain god’ or the ‘dragon god’ are also such examples. Considering its sacredness, the agricultural cultivation or deforestation on these lands are strictly prohibited. Second, there are also some ‘newly designated norms’ which took effects to confine the farmers’ conducts from very recent decades. To be specific, these knowledges could be those introduced by the ‘scientific’ survey of this region in the past decades,

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80 Interview with Cong, Jan 25, 2019
81 Photo taken by the author
which are now absorbed by the Pumi people, and have been granted with new local meanings, for instance the ‘erosion-vulnerable lands’ or ‘watershed slopes’. From the agricultural specialists, the local farmers know these lands are not suitable for agricultural activities, but they tend to interpret them in light of the local religious or customary meanings, instead of understanding these lands in a ‘scientific’ way which the agricultural specialists have encouraged them to do.

As discussed in previous chapter, to facilitate eco-agriculture, the government has a design to standardise farmland management, however, on the local level, things turned out to be more complex than the officials have anticipated, especially in the Pumi region where the practices of traditional knowledges are very strong, and the mastery of the farmland are intimately linked with the Pumi identity and the pride of the local farmers. To be clear, I was impressed by observing that there are a small number of local farmers who think the eco-agriculture is merely a modern expression of their traditional Pumi farming, therefore, it is convinced that their loyalty to this enterprise will be best displayed if they follow the local wisdom to manage their farmlands. For instance, a local farmer, Kai, in White Cloud Village, explained to me:

[said confidently] I think the eco-agriculture is nothing new. When I heard it for the first time, I think it is very similar to our Pumi traditional farming, there is no big difference.\(^{82}\)

Kai’s remarks addressed the idea that eco-agriculture is ‘nothing new under the sun’, and it actually captures the ways of thinking for some Pumi farmers who are very proud of their own farming culture. In my field study, this group of people are often very confident with their own talent for the farmland stewardship, and show limited trust and respect to the agricultural specialists, as one farmer, Ming has claimed:

The Pumi people have a good farming culture, it is indeed eco-friendly. We are confident to develop the [eco-agriculture] enterprise according to our own culture and experiences.\(^{83}\)

In practice, there are many pathways to delve into the Pumi talent for farmland management. Notably, as mentioned in Chapter 4, during the field research, I have kept an interest in Pumi agricultural calendar which is rarely mentioned in the academic literature written by English. Considering it to be an important indigenous knowledge for landscape management based on seasonal and monthly variations, I have attempted to investigate if the Pumi farmers still refer to it for present agricultural arrangements. In the interview with a local farmer, Cheng, I found his words informative:

Well, I should say, the traditional Pumi agricultural calendar has been forgotten by many … but it still shows some effects […] For instance, it is January now, as you can see, almost every farmer is collecting the pine needles from the nearby mountains to make the barnyard manures, no one teaches us to do so, and it is not seriously written in somewhere. I think it is the [invisible] power of the traditional calendar […] anyway, we are no stranger to our own

\(^{82}\) Interview with Kai, Feb 12, 2019

\(^{83}\) Interview with Ming, Mar 5, 2019
farmlands, isn’t it? We Pumi farmers are able to do the right [farming] things at the right [farming] time. 84

From Cheng’s words, we can have a glimpse of the ‘experienced landscape’, and about how the indigenous knowledge has been internalised into the farmers’ everyday practices. Although some farmers acknowledged that the Pumi traditional agricultural calendar has been gradually eroded by time, some of the elements still take effects, though often in an implicit approach. In this sense, the internalised knowledge of farmland management also informed the cultural significance as it works to sustain the farmers’ relationship with their farmlands (Figure 26).

In my field research, another key finding for agricultural land use is that, some of the risk-aversive Pumi farmers tend to display a high level of flexibility towards land use. As shown in Figure 27, in the land of a young farmer, named Hai-Ke in Bomboo Village, part of his farmland has been covered by plastic-film greenhouse, where the farmer has stored the barnyard manure. According to the farmer, this part of land will be used to grow Chonglou, a medicinal herb. For the rest of the farmlands, it will be used to grow organic kidney beans. Obviously, different from the large-scale farming company which aims to reduce the production cost by large-scale monocropping, the smallholder farmers adhere to the decentralised patterns of land use, it could help the local Pumi farmers to moderate the risks of misguided decision-making, which is a common problem besetting many large-scale farming companies (as reported by some farmers in High Field Village). This point was consolidated by Hai-Ke’s remarks, where he asserts that considering the fluctuating price of organic kidney bean in local market, he is conservative towards its cultivation, and this is why he divided his farmland (according to interview with the farmer Hai-Ke on Feb 24, 2019). This

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84 Interview with Cheng, Jan 20, 2019

85 Photo taken by the author, use of his portait approved by the person
example illustrated how the household-based farmland has enabled the farmers to actively respond to the fluctuations of the market by the flexible planning of land use.

Similarly, in an interview with another farmer, Nan, in Green Pine Village, her words also convinced me with this point, as she told me:

Three years ago, in a standard farming base, the boss decided to grow Maca, because it had a soaring price in the market, and he [the boss] persuaded most of the farmers in his company to grow that plant. However, my family did not take part due to the lack of relevant experiences and skills […] Quite unexpectedly, in the harvest season, the price for Maca dropped, what is worse is that the farmers in the company failed to gain a good yield, it caused huge loss for the farmers. In comparison, as my family was instead growing organic garlic in that year, the price and yield were both satisfactory.87

From the interviews with Nan, I realised that at least for the Pumi farmers I interviewed in the study, they are cautious and rational, and are actively weighing their options in land use planning to wisely avoid possible economic loss in their smallholder farming. What is equally impressive is that in White Cloud Village, there were even some farmers who cast doubt on the official’s competence to guide them in the era of commodity agriculture, because the farmers think the officials focus too much on the scale of this enterprise, however, as these farmers expressed, in the market, when a thing is rare, it becomes precious (according to the interview with a farmer in Red Water Village).

86 Photo taken by the author
87 Interview with Nan, Feb 21, 2019
However, it is also worth to mention that, although the local farmers are wise actors to deal with the official’s design, there are also negative sides associated with this local flexibility on land use, especially in the organic household-based farmlands which lack strict inspections. To be clear, the lack of adherence to certain regulations has caused problems perplexing the development of this enterprise, one of them being the ‘cheating problem’. For instance, a report from the Lanping County Work Report proclaims that one major problem in the eco-agriculture is that certain farmers use excessive pesticides in their eco-farmlands in a hidden way. Similarly, the relatively lack of inspection in these smallholder farmlands also enabled some of the farmers to ‘fish in the muddy waters’: seeing eco-farming profitable, certain farmers directly buy the label papers of eco-food from the Internet. However, to explicitly ask local farmers if they had ever deviated from the rules or infringed the regulations will not help to reveal the truth (see also discussion on ethics in Chapter 3.5). Thus, besides the archival studies of reports for this issue, I have also approached this problem in a rather indirect way. To be specific, in my visits I got particularly familiar with Uncle Zhang, a friendly local farmer. As I felt he is more open-minded and frank to any of my previous questions, I asked him tentatively:

GZ: How strictly are you following the procedures to manage your farmland? I know you engage with the programme with your own farmlands, if you use excessive pesticides without notifying the manager, will they find it and punish you?

Uncle Zhang: I shall say punishing someone is not common in our village, but in a nearby village, I heard that two years ago the license of an eco-agriculture company has been suspended due to their misconducts.

GZ: Are the inspections very strict?

Uncle Zhang: Kind of, but the official not often deploys the checkers to the village. 88

From my view, this conversation has reflected the difficulties of the authority to actually monitor and regulate the local farming practices. This difficulty also explained why the government has seriously felt the needs to set up a stricter checking system for the agricultural products cultivated outside the standard farming company.

Overall, when it comes to the era of eco-agriculture, the Pumi farmers still own a large flexibility in the smallholder farming (see Figure 28). This has enabled at least some of them to build on their indigenous knowledge for landscape management. However, the individualised way and the lack of regulations may also trigger the negative effects for this enterprise which may cripple the confidence of the consumers in the outside market towards the eco-food cultivated in these Pumi regions.

88 Interview with Uncle Zhang, Feb 2, 2019
6.2 Technical Practices

According to my field research, many of the local Pumi farmers are open to multiple knowledge systems, without a specific preference for modern agro-technology. Actually most farmers do not resist any technical skills if it works for them. This point of view is supported through many of the interviews. To exemplify one local farmer, Nan, in Green Pine Village, she explained to me:

The organic technology from outside is good, but our traditional [farming] skills also deserve enough attention, actually you can find both of them being practiced in our farmlands. \(^90\)

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\(^89\) Figure is generated by the author

\(^90\) Interview with Nan, Feb 21, 2019
My own field observations have confirmed Nan’s remarks. For instance, an external breed of maize has been introduced into this region in recent years, as it has a higher yield. However, after having a try, the local farmers realised that in certain areas where the terrains are steep this external breed is more vulnerable to be damaged by the wind. Therefore, in these areas, they resumed their farming of indigenous breeds, which is the white maize, although its yield is relatively lower. Another farmer, Hong, also described to me how he had replaced most of the indigenous breeds with the imported high-yield breeds, and how he grows Chonglou as a cash crop. But even so, he still has left certain spaces for indigenous breeds to grow, primarily in his home garden, and in places where the non-indigenous breeds do not grow so well.91

In a practical sense, the hybrid approach of farming techniques as described by Hong is widely accepted amongst the Pumi farmers I have interviewed. For instance, in my visit to a local company specialising in the cultivation of the medicinal herb Chonglou, the company transplant the sprouts of Chonglou coming from an external bio-tech company, which is their commercial partner. However, they grow this modified variety of Chonglou with barnyard manure which is a local rural fertiliser. One farmer of this company, Uncle Liu, who was farming during my visit, had a conversation with me to explain why they had decided to use traditional fertilisers:

Uncle Liu: The Chonglou sprouts we imported from outside are in good quality, the breeds are disease-resistant, […] with a high yield. In the past, we use external fertilisers to grow them, but we found the external fertilisers disturb the soils, which makes it less suitable for the cultivation of Chonglou, therefore, we turn back to our rural fertilisers.

GZ: So, you think the external techniques may not always be effective for local cultivation, right?

Uncle Liu [smiling proudly]: Yes, just as what I am doing here, we use external sprouts, but local manures […] Chonglou is a mountain herb, and the Pumi manure seems to work better than external fertilisers.92

Uncle Liu’s remarks represent the ideas of some local farmers who have a pragmatic attitude towards technical input, and the farmers’ flexible strategies to customise modern technical equipments to fit to their interests have been impressive — if external techniques work for them, they will not hesitate to hybridise the local farming skills with the external solutions. As a consequence, there are many farmlands in these villages which the farmers mixed new techniques with traditional skills in a talented way. As shown in Figure 29, both external techniques and local farming methods have been practiced in one farmland: the land-film is an imported technique to grow organic garlic, but in the same farmland, the cultivators grow kidney beans in a local and traditional way using sticks to support the beans.

91 Interview with Hong, Feb 23, 2019
92 Interview with Uncle Liu, Jan 15, 2019
Likewise, in the site shown in Figure 30, the greenhouse serves as an external technology. It has a sprinkling irrigation system, which is established by an external agro-tech company, inside it, different indigenous vegetables are intercropped following the traditional Pumi farming manner.

Admittedly, local farmers use whatever technologies that work for them. It seems that at the local level, the practices of traditional farming and modern agricultural input can develop in parallel.

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93 Photo taken by the author
94 Photo taken by the author
However, it is not to say that the encounters of traditional farming and the modern agroscience are always harmonious and going smoothly. For instance, during my visit to High Field Village, the driver, Ping, who himself is a Pumi farmer, has suspected me as a surveyor from the officials, thus, he repeatedly tried to persuade me to introduce more external investors to his village. Seeing his eagerness to attract investment, I posed a tricky question regarding technical practices to him in our conversation:

**GZ:** What if an investor is coming to your village to invest, but it is not eco-agriculture, instead, it is intensified commercial agriculture, which may use excessive chemical fertilisers and damage the farmlands. Will you welcome such an investor of commodity agriculture?

**Ping:** If they pay, we will consider. We know chemical fertilisers may affect local soils. But it is merely temporary. After the cooperation, we can again use Pumi rural fertilisers to enrich the soils.\(^{95}\)

Ping’s reply to my tentative question represents a shared notion among many Pumi farmers facing the arrival of new technologies and the external investments carrying the technologies — they do not resist external solutions as they are worried about being ignored in the contemporary economic rush, and they regard the technology as a ‘gateway’ to improve their livelihoods. However, different from the officials and experts from the government which portrayed the technical solutions as the panacea, local Pumi farmers do not cling to any specific knowledge systems, meanwhile, they draw no clear-cut boundaries between ‘the modern’ and ‘the traditional’, at least for some of the informants, both ‘the modern technology’ and ‘the indigenous farming skills’ serve as a tool, instead of a goal.

My conversation with a farmer, Hong, in Bomboo Village could further illuminate this point, where he stressed how the market demands could influence his technical practices:

**GZ:** What do you think of the Pumi traditional farming skills?

**Hong:** I know some. However, growing the indigenous breeds, or using the traditional farming ways, uh….it sometimes costs much time, thus [they are] not efficient […] you know, the people outside, they like to consume green foods and indigenous crops […] So when we use it [the traditional farming skills], it is because they have a better price in the market.\(^{96}\)

In this way, it seems that the traditional farming ways in the Pumi case serve as a selling point for the market in the era of commodity agriculture, where the customary farming of the indigenous people become an *exotic* attraction for the consumers to linger on or to pay for. By marketing the agricultural products from traditional farming to outside consumers, its economic potential can be underscored, where the process has reflected how the technical practices of the Pumi farmers are also dependent on the needs of the markets in a practical sense. To better capture this point, I interviewed a local farmer, Mak, in Red Water Village, I directly asked him for my concern about to what degree they will adapt their choices of technical practices to the market needs:

**GZ:** You know, there are different standards for technical practices in eco-agriculture, set up by different institutions or organisations, so which

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\(^{95}\) Interview with Ping, Mar 19, 2019

\(^{96}\) Interview with Hong, Feb 23, 2019
standards are you and your company following?
Mak: It depends, and it changes with the specific deal. We also need to hear the words of our partners in the outside market, and adjust our technical practices accordingly.

GZ: Can you give me an example for that?
Mak: As I remembered, last year, when we were growing Maca, the external investors required the farmers to supply the products which fulfil the national standards [first level]. It means no pesticides, and to use the organic fertilisers such as barnyard manures, and if the farmers fail to do so, they reserve the rights to terminate the contract. Therefore, five farmers, including me, were chosen by the company to undertake this task, because we are familiar with the using of local manures [saying proudly], and how to manage the farmland in a more ‘natural’ way. However, this year, as there’s a new investor coming here to develop the cultivation of organic kidney beans, he [the boss] is more concerned with the yields, and only limited the use of pesticides, with no requirements about the fertilisers.

Figure 31. A farmer working in a farmland where the produces will be sold in the market

Thus, the field research has revealed that many of the Pumi farmers are able to customise their technical practices to fit to the needs of their investors, which constitutes a strategy that facilitates their competitiveness in the market. And in a practical sense, the farmers often equip themselves with the technologies where appropriate, and sometimes hybridise it with the indigenous ones to

97 The interviewee used this word, and I translated accordingly.
98 Interview with Mak, Mar 6, 2019
99 Photo taken by the author, use of the portait approved by the person
maximise the positive effects, which means they are by no means conservative towards the new changes in technical practices. Considering many farmers are very pragmatic when it comes to the use of agricultural technologies, it is comprehensible that they are tailoring their choices of technical solution to cater to the market demands, immediate interests, and local needs.

6.3 Governance Issues

In James Scott’s book *The Art of not Being Governed*, Scott aptly described the anarchist history of upland Southeast Asia. In the same context to study the highland agrarian community of Pumi, the current research also intends to conduct a nuanced observation of the local farmers. From the government’s side, the officials attempt to manipulate the eco-agriculture agenda as a form of governance, where it serves as a platform to establish a new governing apparatus for Pumi agrarian society, where agricultural surveyors and specialists are deployed to villages, documenting information about the local community, and producing the knowledge which holds the potential to regulate the farmers’ conduct.

However, if we shift our view to the farmers’ side, the story could be told in a rather different way. For instance, previous studies of Northern Thailand (Parnwell 2007) have revealed that the political and social reforms in recent years have provided opportunities for the marginalised groups to rebuild their social network, a process Parnwell termed as ‘neo-localism’. In the current study, I also intend to examine the Pumi farmers’ strategies to cope with the external political pressures embedded in the eco-agriculture agenda. Accordingly, a relevant question is, to what degree the local farmers have maneuvered the eco-agriculture programme as a nexus to generate the renascent social network. In a practical sense, based on the interviews, it seems that the development of eco-agriculture has brought out a positive ‘by-product’ for the local community — recent years’ implementation of the programme has remained some young Pumi farmers to stay in the village who will otherwise migrate to the urban areas for employment — maintaining a stable Pumi population is a prerequisite for a cohesive and vigorous local community. For instance, in the interview, one middle-aged woman, Liang, in Red Water Village, expressed her ideas:

> Before the building of eco-agriculture companies, many Pumi young people moved to nearby cities to work for factories. Now, some of them no longer need to go that far for an income, they can just stay in the village [to work for eco-agriculture company] for a good salary.\(^{100}\)

Besides, there seems to be increasing contacts among the Pumi farmers in the career for eco-agriculture, for instance, the owner of a small-scale eco-agriculture company, Kai, voiced his experiences in the business:

> I persuaded my relatives to invest my company, because it needs some money to start such an agro-business. Some of them support me, and joined my company. […] By doing this enterprise, I have more contacts with them than before.\(^{101}\)

\(^{100}\) Interview with Liang, Mar 5, 2019

\(^{101}\) Interview with Kai, Feb 12, 2019
In this interview, Kai talked about how the eco-agriculture enterprise has brought up a growing local reciprocal network, which is primarily derived from the local lineage networks. Besides, I also heard that in the village level, managers of eco-agriculture company have regular meetings, which aims to foster the communications and improve the shared interests. In this sense, eco-agriculture has made farmers organise themselves for a common concern which to some extent promote the cohesiveness of the Pumi community, and make the Pumi farmers less vulnerable to the external influences. Usually, the farmers engaged with the same company are mostly coming from the same village, which implies the fact that they could be relatives with each other. It makes the external intervention sometimes hard to seep into these family-based companies, as the decision-making process often occurred ‘within the family’. An example was found in my conversation with a young female farmer, Tong:

GZ: How does the company you belong to make decisions about what to grow, when to grow, and how many to grow?
Tong: The manager will decide. But the manager is my uncle, so we generally have a family meeting with other relatives in the village, then it is decided.
GZ: Are there any officials taking part in the process of decision-making?
Tong: The development officer comes here sometimes. But more generally, he will come after we had reached a decision. Basically, what the officers do is to approve our decisions, and sign the official documents.\[102\]

Here, we can find that, although the officials have a strong will to interfere with the local affairs of eco-agriculture enterprise in the village, the patrimonial traditions which build upon the lineage-based forms of social organisations have obstructed the authority’s direct administration over this region, which proves the attempted influences to be a hard task. In other words, the pursuit for self-management of the Pumi community have weakened the official’s capacity to integrate the indigenous community into the political fabric.

In addition, the development of Pumi eco-agriculture may also result in the consolidation of the Pumi identity. To take an example, when my driver, Ping, was driving me to one of the study villages, he suddenly stopped in the half way. Pointing at a sign (Figure 32), he said to me [with an excited voice]:

See that sign! It says, the ‘village of credits’. It is granted by the provincial government, because the people in this village are Pumi, and the Pumi people are trustworthy, we never break contracts, therefore, the investors for eco-agriculture company praise us and believe the Pumi people can always keep the promise.\[103\]

The sense of pride expressed by Ping was also echoed by some other farmers. From my view, it clearly shows how the development of eco-agriculture enterprise has consolidated the Pumi identity in recent years. In the interviews, many farmers have pointed out to me how ‘there are many good virtues for the Pumi people’, and the eco-agriculture enterprise seems to have provided local farmers with a platform to display these ‘good Pumi virtues’.

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102 Interview with Tong, Feb 11, 2019
103 From a talk with Ping
Figure 32. A sign for ‘Village of Credits’ 104

Notably, another clue to observe the revival of the Pumi identity may come from the changes of the house styles in the village. According to my field research, some Pumi farmers use the money gained from eco-agriculture enterprise to build new houses, many of the new houses are decorated using the Pumi ethnic style (Figure 33). Although the development of eco-agriculture may not be the only reason to explain such a change, I think it at least economically enabled some Pumi farmers to claim for their ethnic distinctiveness through the Pumi-style houses.

Figure 33. A village with growing numbers of Pumi style houses 105

104 Photo taken by the author
105 Photo taken by the author
To take a further step, during the field research, I also aimed to investigate, if the development of eco-agriculture is directly linked to the Pumi ethnic revival. However, in the interviews, the inquiry of the ethnic revival issue is always proved to be sensitive, as it unavoidably involves the ethnic relations which most of the informants would rather not to say much. During one of the interviews with a village head, Hou, he responded to my question regarding Pumi ethnic revival with a rather stern tone:

The traditional Pumi agricultural festivals and religion are almost dimmed out, anyway, they are not encouraged by current policy. I heard of some old festivals in the past, or in the nearby Sichuan province, but now, we have the same festivals as most of the other people in this country do.\(^{106}\)

While I was having the interview with Hou, a local villager came to Hou’s office. The villager listened to our conversation, after feeling the tense atmosphere, he added in a more accommodating tone:

Our village head’s words are very precise! For the old agricultural festivals, it is no longer celebrated, but for the shepherds in our village, they seem to have kept more traditional rituals, if you are interested, maybe you can ask them. And, this village is surrounded by the villages of Bai people, so the Pumi people in this village are also influenced by the Bai culture.\(^{107}\)

The attitude of the village head and his stern tone at my question show the sensitivity of this question. As an official, he has been vigilant towards the topics relating to the ethnic relations or local religions because it is still a controversial issue. Thus, to find a more straightforward response, I turned to a manager of a company, Kong, who I thought would be less cautious in regard to this issue. After hearing my question, Kong responded:

Yes, we are doing the eco-agriculture with ethnic characteristics, but it is not related to other things. I have heard of some traditional Pumi farming rituals, but they are practiced no more, for some cadres, it is defined as ‘superstition’, therefore, although it is not forbidden, it is at least not encouraged.\(^{108}\)

Although most local farmers and managers claim eco-agriculture is merely a business, without any attachment to ethnic relations or political issues, my observations in the field have revealed a more complex reality than their assertions. To be clear, in Lanping County, there are three major ethnic groups, the Pumi, the Lisu, and the Bai. Several years ago, certain officials who are recognised as of Pumi ethnic origin became the leaders of the county, and during this period, the county officials signed up more projects for Pumi people to develop eco-agriculture than ever before, this action was believed to have benefitted the Pumi community, and could have to some extent undervalued the interests of the other groups. During the talk with a young woman from Bai ethnic group, she said to me:

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\(^{106}\) Interview with Hou, Feb 17, 2019

\(^{107}\) From a talk with an anonymous farmer in the village office

\(^{108}\) Interview with Kong, Mar 2, 2019
The county leaders who are of Pumi apparently favours their own community, instead, our Bai people are gradually forgotten in recent years.109

Indeed, in this county, I witnessed some phenomena that tend to support her words. For instance, right near the hotel I was living in, a new Pumi Culture Center had been built (Figure 34). During the days of my field research, they were having a Pumi poem competition in this center.

![Pumi Culture Center](image)

*Figure 34. The Pumi Culture Center* 110

Overall, although the officials intend to improve their influences in this region through eco-agriculture agenda, the local farmers are actively adjusting to the new ‘governing apparatus’ associated with the agenda. Besides, we can observe a strengthening Pumi social network. This includes but are not limited to an increased level of local reciprocality, the favoured considerations for eco-agriculture investment in the Pumi villages, and the cultural revival of the Pumi ethnic group. These clues, if combined, could portray a vibrant but hidden local network which steers the development of eco-agriculture through a pathway which is ‘alternative’ to the government’s official plan.

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109 A talk with a young Bai woman, as requested, her name will not be disclosed.

110 Photo taken by the author
7. Searching for Modernity or Beyond? —— Discussions and Conclusions

How should we relate the eco-agriculture programme to the ‘indigenisation of modernity’ in the Pumi region? With both the government’s and the farmers’ perceptions and strategies presented, it is time to view the programme through the lens of indigenisation, and to contemplate, to what degree the provincial government has been following a modernist approach towards eco-agriculture development, which makes their agenda basically a project for ‘modernisation’. And, to what degree the local Pumi farmers have been able to indigenise these external interventions and to cope with the forms of governance. Below, I will offer an interpretation of the eco-agriculture programme by focusing on the negotiations of the officials and the farmers, presented with respect to land use, technical practices, and governance.

7.1 Land Use: Can Global Homogeneity and Local Differentiation Develop Together?

Recent debates over land use change in agrarian transition have sparked a body of academic work such as Li’s recent work *Land’s End* (2014), where she discussed the emergence of capitalist relations on an indigenous frontier in Indonesia where the highlanders privatised their common land for the cultivation of cacao in the hope to end their poverty. However, for those who failed and thus become landless, the land’s end will be a dead end (idem.). By comparison, in the Pumi case, the enclosure of land is initiated by the agricultural experts from the provincial authority, where they regard the eco-agriculture business primarily as a commodity agriculture. For the officials I have interviewed, green agrarian transition represents a way to steer local farmers into larger and better regulated agrobusiness or rural collectives, which they deem as a strategy to ‘win by the coordinated efforts’. Following this approach, the Pumi eco-agriculture agenda can be regarded as a process of agricultural commodification where the land enclosure is initiated through encouraging or persuading the farmers to transform from self-dependant smallholder farmers to large-scale agrobusiness labours.

In terms of agricultural land use, large-scale farming is a means to homogenise the indigenous agricultural system for a standard production system. Under the flag of food safety or farming efficiency, it is also claimed that the standard farming company can reduce the costs and improve the agricultural profits. Through this process, the government can facilitate the commodification of local agricultural system, and also draw Pumi farmers into market economy. Referring to Giddens (1991), ‘modernity opens up the project of the self, but under conditions strongly influenced by standardising effects of commodity capitalism’. Thus, the government’s design for Pumi eco-agriculture echoes the *conventionalisation hypothesis* of organic production, a concept widely tested in the literature with growing numbers of case studies conducted in Europe, Australia (Lockie and Halpin 2005; Salvioni, Aguglia, and Borsotto 2012) and also in developing countries such as China (Oelofse *et al.* 2011). These case studies have shown how the expansion of organic production has
triggered an industrial model for organic farming, which partially contradicts its supposed social values for sustainability (Leifeld 2012; Tankam and Choumert 2013). Through this process, the business model and the organisation of eco-farming resembles the regular agriculture (Reed 2009; Rigby and Bown 2003).

The Pumi eco-agriculture agenda corresponds to the process of conventionalisation, especially when to observe from the official’s design and actions. Obviously, the process of conventionalisation can bring about the homogenising effects of commodity agriculture, which transformed the Pumi agricultural landscape: it facilitates the ‘professional procedures’ to produce the safe and qualified green food for the market, often with the large-scale monocropping of cash crops such as organic garlic or medicinal herbs. As scholars have proposed, professionalism and commercialisation have been a significant tendency in contemporary organic production (Kristensen and Nielsen 1997). Accordingly, in the Pumi case, the authority is conceiving of the eco-agriculture mostly as a professional business, which means the farmers engaged with this enterprise should get trained and follow the scientific ways to manage their lands. In other words, a new commodity agriculture in the name of ‘eco-agriculture’ is guiding the authority’s blueprint for this enterprise, and it has affected the way through which Pumi farmers relate themselves to their agricultural landscape, and demonstrated the standardising powers of commodity agriculture which have spread all over the world and threatened many indigenous agricultural systems.

However, as the interview with some local farmers has revealed, the Pumi farmers are by no means passive actors in this agrarian transition. In practice, the farmers are negotiating the official’s design and the industrial model to develop eco-agriculture. In terms of land use, it is reflected by their disfavour of the local official’s call for large-scale standard farming company, where the farmers regard the agro-company as a land grabber. In practice, local farmers engage in eco-agriculture programme in a rather flexible way, such as the contractual relationships with the companies through which they are enabled to manage their farmlands at their own discretion. This alternative pathway also ignited the local farmers’ vigor to integrate their indigenous knowledge into their everyday practices of agricultural land use and planning, thereby gaining space for the traditional practices such as rotation, intercropping, as well as the cultivation of indigenous breeds which otherwise have been discarded in the large-scale farming company. In this sense, the strategies of the farmers also function to conserve local agrobiodiversity. Perhaps more importantly, the persistence of the household-based land use can inform cultural identity, where the traditional practices of farmland management have sustained the identity as ‘Pumi farmers’.

Admittedly, the divergent understandings of land use between the officials and local farmers actually reflected an ever-lasting negotiation in agricultural development where the potential homogenising effects of commodity agriculture may crash against the local reality or traditions, which subsequently resulted in a local differentiation. From a historical perspective, the disputes between the government and local farmers in the matters of land use have revealed the constant negotiations of power for the Pumi community. With the same logic, in the contemporary, the ambition of provincial authority to standardise agricultural land use of the Pumi farmers also addresses a historic bearing, where the establishment of the large-scale farming company is the continued effort to increase the ‘legibility’ (in the words of James Scott) of the agricultural system to promote the forms of governance. To a larger extent, the agricultural standardisation with
political bearings has occurred not only in Pumi eco-agriculture, but also in other agricultural systems of this region. For instance, studies of rubber plantations in Sipsong Panna of Yunnan Province have displayed how the commercial rubber enterprise facilitated the standardisation of land use, where the author examined the transformations of rural space from an institutional perspective (Wehner 2011). Another study of a Tibetan community in Southwest China also revealed the official’s intention to standardise local farmland system as a long-term effort (Schmitt 2014). In nearby countries in Southeast Asia, scholars (Mahanty & Milne 2016) noted how the boom in industrial cassava has served as a ‘gateway’ to intensify capitalist relations in Cambodia’s northeastern borderland.

Although the authority’s will to increase the ‘legibility’ of the farmland systems is intimidating, farmers of Zomia generally have tactics to cope with these interferences. This encourages us to scrutinise local farmers’ reactions and responses to the official’s projects. In the Pumi eco-agriculture, the farmers have displayed this incompliance by maintaining the smallholder farming which may help them to control the risks of poor planning and to buffer the market fluctuations: it displayed how their traditional patterns of land use is actually not anachronistic in the era of market economy, instead, this indigenous wisdom of flexible land use and the household-based farmland planning can protect the farmers and offset the possible losses in the fluctuating market.

The situation thereby offers some practical implications for agricultural land policy as well. Decision makers must avoid to overcentralise in the agricultural planning, and it is also crucial to include indigenous people’s values, voices and preferences, especially to concern for the values of the farmlands in providing the social goods such as strengthened identities, social networks, or aesthetic beauty. In addition, the persistance of traditional land use in Pumi eco-agriculture also highlights another concern for future policy-making, that is, in the era of rapid social change which tends to threaten the indigenous agricultural systems all over the world, how should we conserve the indigenous agricultural system, meanwhile improving the agricultural efficiency and the local livelihoods? Is there an ‘alternative’ approach that can avoid the radical replacing of local knowledge with ‘modern’ legibility and standards? (cf. Scott 1998) The question is meaningful considering the conservation of the indigenous farming system can contribute to the preservation of biocultural heritage, and such a system can also support agrobiodiversity. The traditional patterns of farmland management also have ecological functions as the intercropping and rotation can help maintain the soil fertility and prompt the practices of sustainable farming. Moreover, the conservation of the indigenous farming system is especially vital considering the landscape and the identity is closely related for many indigenous communities such as Pumi, where the connections force us to rethink the relationship between the Pumi farmers and their farmlands in a deeper sense.

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111 Swidden agriculture was previously widespread in Zomia region, as refer to Yin (2001) and Cairns (2015), it is also known as slash-and-burn agriculture, or shifting agriculture. In recent decades, there is a discernible trend of de-swiddening, which is a process to eliminate the practices of slash-and-burn agriculture by political interventions or economic incentives (Schmitt 2014).
7.2 Technocracy or Anything Goes?

Through Pumi eco-agriculture agenda, the officials have enacted a technocratic approach to agricultural and environmental issues. These technical solutions are seen as a panacea to ameliorate environmental degradation, as well as a key tactic to facilitate poverty reduction, where the officials considered technology to be beneficial for both the local people and the local environment. This guiding principle also explains why the officials are willing to set ‘modern agro-science’ as the privileged form to access knowledge in eco-agriculture enterprise.

By definition, ‘technocracy’ is a proposed system of governance in which decision-makers are selected on the basis of expertise in a given area of responsibility, particularly with regard to scientific or technical knowledge (Saha & Schmalzer 2016). In this approach, the scientific methods to solve social problems are favoured (Wilsdon 2007). The technocratic approach is prevalent in modern China, scholars have documented a transition from ‘Party cadres’ to ‘Party technocrats’ in China (Brødsgaard 2017), where the approach can be traced back to the Mao era which advocated the slogan ‘Man must conquer nature’, and is persistent until today with its contemporary manifestations as the ‘development discourse’ in the reform era. Various case studies, informed by disciplines such as political ecology, have been conducted in the China context to discuss the technocrats and their roles in various development projects. For instance, Wang has discussed the decision-making process in South-to-North Water Transfer Project, a national water transfer scheme in China, arguing that technocracy, asymmetric political power, and neo-liberalisation of water governance have jointly facilitated the implementation of the project which has triggered significant social and environmental consequences (2015).

Accordingly, in the Pumi case, the official’s design of eco-agriculture is obviously in tandem with the principles of ‘technocracy’. Admittedly, the technocrats play a crucial role in this agenda, under the name of agricultural specialists, development experts, or rural surveyors. In terms of technical practices, these agricultural technocrats are in the dominant position to facilitate the policy-induced technology transfer, whereas local farmers are positioned to a peripheral standing. Although some scholars have argued the importance of knowledge co-production (cf. Jasanoff 2004) in the development projects, it is not explicitly designated in the current Pumi agenda. In other words, the authority tends to regard ‘science’ as the norm in disputes between modern agro-technologies and local farming skills. In this way, the authority could have underestimated the value of the existing local knowledge, agency, and voices of Pumi people. Accordingly, the officials and technocrats depicted a dichotomy between ‘scientific’ and ‘indigenous’, ‘modern’ and ‘traditional’, which corresponds to the official’s long-term strategies to ‘mainstream’ the indigenous people. As the authority’s documents have displayed, an oft-repeated goal of organic farming is to utilise the experts’ rational and objective scientific knowledge to build an economical food production system (cf. Kaltoft 2001). Thus, the expert’s knowledge has obviously served as the dominant approach to access knowledge according to the authority’s pre-set procedures for eco-agriculture.

In a more analytical sense, however, a debate of technocratic approach in Pumi eco-agriculture will be instructive when focusing on the structured economic inequality, as it will inform how politics, economics and technologies are interlinked in patterns of agricultural resource allocation, discourses, and changes of livelihoods. As Rankin has observed in highland Sulawesi, a century of intervention in this region ended up servicing capitalism by producing cheap labour and
dispossessing people of their lands (2003). Clearly, we should never neglect the asymmetric powers behind these ‘development projects’, including the Pumi eco-agriculture programme. In this way, the agricultural experts and external investors, along with the new technical solutions they carried can risk merely serving as a more effective way to extract local agricultural resources. Ultimately, with the use of local farmers’ cheap labour, it will benefit the agricultural agencies, as well as the external agricultural investors which receive huge benefits from the large-scale agricultural projects. Thus, instead of improving local livelihoods, the introduction of modern technology for eco-agriculture may also enlarge the economic inequalities, and intensify the social ruptures. However, as the field research has revealed, the Pumi farmers are never passive followers of the officials, in terms of technical practices, they rarely adhere solely to modern agro-technology, instead, many of them actually hold a pragmatic attitude towards the technical solutions from any possible sources. Farmers show a willingness to embrace multiple knowledge systems if it works, meanwhile also persist to use traditional methods or combine the ‘indigenous’ and the ‘exogenous’ to equip themselves and maximise their immediate interests. Through this process, they have created a hybridity of modern technologies and indigenous farming skills. And perhaps more importantly, it has strengthened their identity as the ‘Pumi farmers’, instead of a ‘cheap labour’ in the global rush of commodity agriculture.

By taking onboard contemporary techniques and symbols, the Pumi farmers clearly absorbed the useful tools for them to gain a position in the modern society. In this process, the technical hybridity emerges as a form of indigenous engagement with modern science in a local manner. It thus reminds me of the concept ‘intentional hybridity’ from the post-colonial discourse. As I have discussed, Pumi farmers are never too conservative to hybridise. Likewise, in many inter-cultural systems in other parts of the world, hybridity is common as well. It thus echoes Sahlins’ argument (2000) that the indigenisation may guard against the potentially disabling effects and the winner-take-all nature of the global capitalism. Admittedly, the selective absorption of modern agro-technology can improve the adaptability of the Pumi community, meanwhile safeguard the Pumi farmers from the exploitative powers of the new technology carried by commodity agriculture: if the farmers gave up all the local technical practices and entirely accepted the modern farming ways, their fate may be completely grasped by the technocrats and the external investors. Instead, in the current situation, their persistence of certain local farming skills could moderate the risks of being controlled: it reduces the ‘legibility’ of local agricultural system, thus weakening the exploitative powers associated with the external technologies. Thus, in terms of technical practices, the view to regard ‘modern technology’ as ‘progressive’, ‘traditional farming skills’ as ‘backward’ actually reflects the unequal power relations and the systematic disempowerment of the disadvantaged groups such as Pumi farmers, where, for the farmers themselves, the practices of traditional skills clearly have a practical meaning, where the ‘farming culture of Pumi’ is always changing and absorbing new elements to be revitalised, instead of being static to be eroded.

In a broader sense, the attempt to ‘modernise’ the technical practices in Pumi eco-agriculture cannot be simply ascribed to the intentions of individual planners or certain agricultural bureaucrats, instead, it originates from, and is an integral part of local agricultural history. The authority’s intention to ‘mainstream’ the local agricultural system clearly has a historical bearing, where the authority’s efforts are nested within a historical continuity to ‘upgrade’ the local farming practices. Thus, modern organic technology serves as a socially contextualised method to transform the
‘backward’ practices of Pumi farmers into those accepted by a modern science-driven nation-state. However, in practice, the Pumi farmers recast their dependencies upon modern technology as a means to reconstitute their own cultural ideas and practices, which corresponds to the post-modern perceptions that denote the practices of multiple knowledge systems without setting ‘science’ as the prioritised approach to guide their practices. It thus indicated that science as the ‘only true pathway’ to progress is challenged, and the partiality of scientific knowledge is emphasised, especially considering the existence of the strong historical and social ties associated with the traditional Pumi farming skills. Therefore, although the government’s agenda aims to facilitate the introduction of ‘scientific’ agriculture and the gradual dissolution of traditional farming ways, local Pumi farmers are apparently aloof to the technocrats’ call. In such a context, the hybrid technical practices of Pumi agriculture are not confined simply to technology but highlights the relationship between technical practices and social, political and cultural meanings.

7.3 Compliance, or the Art of not Being Governed?

The anarchist tradition of the farmers in Zomia has been a well-debated topic, however, the situation in contemporary China in reform era deserves more nuanced understandings and interpretations. From the authority’s view, the eco-agriculture agenda can be employed as a means to reinforce the forms of governance at the local level. From the perspectives of governmentality (in terms of Foucault), the eco-agriculture agenda can be regarded as a ‘regulatory regime’ imposed upon the local communities. This is done by setting up regulations, surveillance, and a governing apparatus over the farmers’ activities, through which the officials can assert powers and facilitate the integration of this frontier region. The analysis of this point has largely proceeded on Foucaultian premises where he argues knowledge is always a form of power:

Knowledge, once used to regulate the conduct of others, entails constraint, regulation and the disciplining of practice. Thus, there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time, power relations (Foucault 1977: 27).112

In Chapter 5, I have illustrated how the local official is generating new channels to surveil the local farmers through eco-agriculture agenda, where the knowledge produced through these new channels can be utilised to administrate the conducts of Pumi farmers. In recent years, the provincial government clearly has employed this strategy to reinforce the forms of governance in these borderland regions, because, as some scholars have argued, the borderland regions are critical to the assertion of state powers, and the resource abundance at frontiers can underpin intense processes of commodification, dispossession and class formation, making it the ‘frontiers of change’ (Nevins and Peluso 2008; Ishikawa 2010; see also Milne and Mahanty, 2015). Against this backdrop, the government has set up various development projects in these borderland regions (McCarthy 2011). Accordingly, as scholars have indicated, the development projects required a form of discipline which can effectively normalise related policies in everyday practice (Trac 2011). In the current

the Pumi case, the authority’s design to manage the eco-agriculture enterprise, and their ways to regulate the farmers, have displayed this discipline as the normative guidelines.

However, in the era of political and economic reform, some scholars argue that a significant cultural, ethnic, and religious revival have been taking place among the ethnic minorities in China since the 1980s. Following this, some scholars deem the burgeoning of the enterprises operated by ethnic minorities in China as an endeavor for ethnic revival as well. However, other scholars argue these businesses merely embody a reviving ethnicity that has been reduced to ‘benign exotic characteristics’ for economic purposes and is devoid of any political potency (Forsyth & Michaud 2011). For instance, the case study on Bai ethnic tourism (Yang & Smith 2008) and Yi ethnic enterprunership in nearby Sichuan province (Heberer 2008) demonstrate the presence of such a banal exotism rather than an ethnic revival. However, from my observations of Pumi eco-agriculture, although at the moment Pumi farmers are focusing on the economic benefits, we can still detect the evidences which imply a growing local social network. Similar to the rise of neo-localism observed in the mainland Southeast Asia (cf. Parnwell 2007), I contend that in the face of external influences, the Pumi farmers are also availing themselves of the official’s agenda as a nexus to reframe their ethnic identity, and build the resascent social capital in the era of political decentralisation.

It thus leads us to a deeper concern: how can the Pumi farmers express their incompliance vis-à-vis the external influences, meanwhile extending the local social reach and the cohesiveness of the community? I am inspired here by Scott’s idea (1985) where he argues that historically, farmers have always been influenced and regulated by the elites, therefore, the key issue is not to cast doubt on if this dispossession occurred, but to interrogate how it has occurred? And perhaps more importantly, why would the farmers accept such an administration? From my reading, Scott answers this question by addressing the ‘everyday forms of peasant resistance’ (idem.), which offers insights for how to understand the Pumi context. In correspondence with Scott’s elaborations (idem.), I argue that the Pumi farmers’ mindsets are not controlled by the advantaged class, instead, they are fully aware of the situation they are in. Rather than going against the current establishment which could bring them to a worse standing, the Pumi farmers participate in what is referred to by Scott as ‘partial compliance’, which means that the direct resistance to the local officials and experts rarely happens, instead, farmers choose to weaken the external interference through their local social network, or claim for their benefits of stage. Similar to Scott’s idea, in the Pumi case, this sort of ‘partial compliance’ requires little or no planning, instead, it functions as a form of self-help facing the external influences, where the Pumi farmers avoid the direct symbolic confrontation with the elite’s norms but owns an alternative hidden network which reinforces their shared benefits in the development of eco-agriculture, such as the emerging reciprocal relations and the hidden alliance of the eco-agriculture companies which is hard for the local officials to surveil or to interfere with, and sometimes the farmers also weaken the authority’s influence by tailoring the plans to benefit themselves.

However, it is worth to inform that, although the reviving local social network can help the farmers to cope with the authority’s new forms of governance, and provide the farmers with opportunities to manage their own affairs, it can also trigger internal economic inequality, and the revival of ‘old’ social hierarchy. To be clear, some scholars (Oyono 2004) have asserted that, during the
decentralisation reform in many developing countries, delegating natural resource management from the state to the local communities may not necessarily lead to an improved level of social equity, instead, the reviving local social hierarchy may enable the local elites to manipulate the programmes and to direct the benefits to flow to themselves. For instance, Bettinger (2014) has discovered that, in the road politics at a National Park in Sumatra of Indonesia, formal powers may be hired by local elites for informal or illegal activities, and sometimes the local social hierarchy works as an unofficial network for extraction, running in a public or hidden way.

Admittedly, as Escobar (1998) has argued, the contestations over control and access to resources have been a constant topic of everyday politics, which serves as the constant sources of ‘friction’ (Tappe 2015). Even in my research area with the reputation to be Shangri-La, the place of ‘forever peace’, Escobar’s above-mentioned principle still applies. In a deeper sense, although the authoritarian approach in resource management may detach from the groups which the officials intends to provide aid to, and possibly lead to the underestimation of the local realities, nevertheless, the decentralised reform of resource management regime may also trigger social inequality, and as the agrarian transitions often involve new forms of governance, the resources are always valued in new ways which triggers the contestation as a new round (Li 2007; Rigg 2015; see also Yü & Michaud 2017).

Thus, considering a reviving Pumi social network associated with the eco-agriculture development, there is no reason for us to assert that the authority’s design in forms of governance has successfully integrated the Pumi community into the political fabric. Instead, what we are witnessing is an ongoing political negotiation where ‘partial compliance’ can be very much observed, and the control and access to agricultural resources have involved constant contestations. Situated in this backdrop, some scholars have argued that to support the truly sustainable livelihoods and the durable life projects for the indigenous people requires the approaches that are built upon locally rooted understandings of livelihoods and agencies, while being acceptable to the authority (cf. Yü & Michaud 2017).

To a larger extent, it is clear that the administration of Pumi farmers is not merely the management of an agro-business, instead, it intertwines with the governance of a highland agrarian community in transition, and involves the issues embedded in the complex webs of social and cultural meanings, where the Pumi farmers manipulated the local social and historical stuffs to cope with the external influences. In this approach, the Pumi farmers’ actions and strategies bring to light the ways through which the multiple pathways to the ‘modern society’ are pursued with the emphasis on plurality, diversity and differences.

7.4 The Pumi ‘Indigenous Modernity’ Framed?

Based on the discussions in this chapter, I argue that, the process of ‘indigenisation of modernity’ has occurred in all the three different aspects I have observed: most of the officials I have interviewed during the field research have followed a modernist approach in eco-agriculture development which represents the power to facilitate the reach of modernity into this marginalised region, where they claimed for the large-scale standard solution for agricultural land use, a technocratic approach in farming practices, and a new governing apparatus to regulate the farmers’
conducts and reinforce the forms of governance. All these elements are in correspondence with the modernist stance of development that is now being imposed through the eco-agriculture programme. In comparison, many local Pumi farmers I have interviewed favour the flexible patterns of farmland management based on local customary norms, hold a pragmatic attitude towards modern agro-technology while opening up to multiple knowledge practices, and they also build the strengthening social networks and ethnic identities in the process which they have maintained a ‘prosaic but constant struggle’ (cf. Scott 1985) to search for differences and plurality. All these efforts demonstrated their pursuits for the ‘indigenous modernity’.

However, it is reasonable to point out that, as this research itself refuses any ‘pure categories’, I have documented certain exceptional cases among each study group during the field research as well. To be clear, in reality, not all the officials are upholding a modernist view, likewise, not all the Pumi farmers are pursuing ‘indigenous modernity’. However, I think these exceptional cases in the field research do not detract from the current research findings, instead, their existence offers particular insights into the complexities of the local social contexts which is highly vibrant and complex. These exceptional cases will be further debated in Chapter 8.3.

Things are rapidly changing here, and I do not know where they [the officials] are leading us to. To be honest, life is getting better, but a rich life is still far away. Many old things have disappeared. That’s why the authority calls us ‘the new Pumi in the new era’.

—— a farmer from White Cloud Village,

From field notes, March 12, 2019

The encounters with modernity and its indigenisation have been a theme for the Pumi community in recent decades. Admittedly, in the context of state integration and globalisation, the Pumi community is experiencing rapid social, cultural and political change, where the experiences, motives and intentions in this social change deserve further contemplations. This chapter aims to offer an extended debate of the officials and the Pumi farmers in the programme, with a special focus to interpret their motives within this programme. Based on the discussions so far, I argue that a nuanced interpretation of the stakeholders’ motives requires us to trace back to the local history, because to a large extent the contemporary development of Pumi eco-agriculture is historically contextualised.

Thus, based on the reflections upon the local ‘development’ of recent 50 years\textsuperscript{113}, I will employ the framework of ‘post-development theory’ and ‘environmentality’, both emphasise on the dialectical relations between the past and the present, to offer a further debate. And I argue, the burgeoning of local eco-agriculture enterprise in recent years functions as a bridge to link the Pumi community’s past with the future, in both cultural and political sense.

For the layout, this section has been fragmented into three parts. First, I will interpret the government’s motive in this agenda, as in Chapter 8.1. Then, I will examine if and how the Pumi environmental subjectivity has been framed after ‘decades of imposed development projects’, as of Chapter 8.2. In the final part, I will offer an in-depth analysis of certain exceptional cases of the interviewees who had expressed the ideas or hold the understandings of eco-agriculture that deviate from the research groups he/she belongs to, which may inform the complexities of local contexts.

\textsuperscript{113} For the analysis of the historical campaigns, also refer to Chapter 4.3
8.1 The Will to Modernise: A Critique from Post-development Theory

The government’s eco-agriculture agenda, which was introduced as a development project for modernisation, can be framed upon ‘development discourse’. In this section, I intend to interpret the provincial official’s motives in this agenda, with the reference to post-development theory.

According to post-development thinking, the way we understand ‘development’ is rooted in the earlier development discourse that depicts the developed countries as ‘advanced’ and ‘progressive’, and the underdeveloped countries as ‘backward’ and ‘primitive’. Some scholars (cf. Bhabha 1990) have argued that the objective of development discourse is to construe the indigenous people as less progressive, to justify the external influences and establish the forms of instruction.

In the Pumi case, the officials’ development discourse is also observed. In Chapter 5, I gave several examples from published documents, interviews and slogans on how eco-agriculture is seen as intimately linked with ‘economic growth’ and ‘progress’, and local customs by contrast are portrayed as ‘economically inefficient’. An example which is very telling is a slogan found on a bulletin board in the county town, which says: ‘Change the old customs, and facilitate the new ones, the winds of the new era will blow to us.’ From this bulletin board, we can note how ‘an underdeveloped borderland’ has been produced under the practice of discourse, which attempted to change the local norms, although often implicitly. Admittedly, this kind of discourse practices has a historical root — it embodies the disempowerment of certain groups to justify the external solutions for the marginalised regions.

Figure 35. A bulletin board in Lanping County

114 Photo taken by the author
According to Escobar (2011), the development discourse is exercised to set the prevailing form of development practices, which has created an efficient apparatus for producing knowledge about and the exercise of power over the ‘marginalised groups’. Escobar’s reflection on development discourse has offered insights to scrutinise the Pumi case: under its recent name as ‘modernisation’, the development practitioners have produced the development discourse which labelled the borderland region as ‘underdeveloped’, which at the same time cannot solve their own ‘problems’ by themselves, and as a consequence, they need the external assistances and solutions to tackle the local troubles from the local officials or the development agencies.

From my view, the discourse practice in the current Pumi case resembles Escobar’s argument of how the ‘problematic’ regions are actually produced in light of the development discourse, for instance, as Figure 36 has displayed, there is a slogan which is prevalent in this region, saying that ‘We cannot let any ethnic minority group to fall behind’. In a sense, this slogan tends to imply that there is a ‘standard line’ for the indigenous groups to catch, and the way to growth and progress has been paved by the development agencies through development programmes such as eco-agriculture — it actually reflected the worldviews and designs of the officials and experts, whose understandings will be imposed upon the local community, instead of respecting the needs of the locals. The ignorance of the local voices has witnessed its negative consequences in the practices of poverty reduction in recent years, where some of the officials are reported to do the poverty reduction as a ‘task’ designated by their leaders, or regard it as merely a ‘political posturing’, instead of sincerely caring for the local people’s livelihoods (China Daily 2012).

Figure 36. A slogan widespread in this region

To a further step, for some theorists such as Escobar (1995), the purpose of post-development theory is to facilitate the work on ‘the task of imagining alternatives’. According to his ideas, the development discourse should be debated in a deeper sense, as in this discourse, the underdeveloped regions are portrayed as ‘backward’ because it has not advanced along the ‘path of development’ to

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115 Photo taken by the author
the proper and universal goal (idem.). In the China context, the ‘path of development’ has modelled the patterns of the developed regions in this country, in this way, the local contexts in the borderlands may be underevaluated, but actually the indigenous people have displayed their clear local customs and cultural identity. In previous literature, some scholars have employed post-development perspective to examine the authority’s policy on the Southwest borderlands (Koefoed 2013). In these development projects, the officials and experts tend to construe the local people as the groups which require external assistances, through which the government aims to bring positive changes to the local community. These initiatives may be well intended, however, these development projects which intrinsically modelling the development track of the ‘mainstream’ regions of China could influence the cultural identity of the indigenous people in the geographical fringes, meanwhile weakening the local people’s ‘indigenous pathways’ towards modernisation.

To exemplify this point, in the field research, I have found that there is a poster in this region, which shows a recent visit of the provincial leaders to the Nujiang Prefecture and inspect the local works, where the leader is commenting on a local farmer’ agricultural work. The poster has metaphorically portrayed the needs of the indigenous people for external guidance. Clearly, this kind of poster has justified the external solutions, which is also captured by Gros’ research (2011) where he observed how the local officials’ discourse claim that the Dulong people of Yunnan province are hard to ‘properly’ manage their natural resources, thus deserving assistance and guidance from the development agencies. These various practices of development discourse also echo Harrell’s arguments regarding Southwest China, where, in his words, these projects resemble the ‘civilising projects’ which can be dated back even to hundreds years ago, where the indigenous people are considered to be ‘underdeveloped’, thus require the input of ‘development’ or ‘technology’ (cf. Harrell 1995). In the current case study of the Pumi eco-agriculture programme, it also addresses the processes where the local agricultural system is transformed by the shifting discourse in a similar way.

To a more general approach, my reflections towards the eco-agriculture agenda as a development project also stem from the concern for the outcome of these ‘development projects’. If we refer to Escobar (1995: 4):

> Instead of the kingdom of abundance promised by theorists and politicians in the 1950s, the discourse and strategy of development produced its opposite: massive underdevelopment and impoverishment [...].

From this perspective, we can also observe the Pumi eco-agriculture programme, where the structured economic inequality of the market economy should be addressed to interrogate why the development projects are sometimes hard to achieve its pre-set goals. Previous studies of development projects in the Southeast Asia context such as Li’s The Will to Improve116 (2010) has aptly captured the troubled history of ‘development’ at the local level, where the external guidance from officials, development experts, and local government in Sulawesi in the past centuries had never ‘solved’ the local problems such as the poverty and the extractions of the natural resources. From my observation of Pumi eco-agriculture, although the eco-agriculture agenda has offered certain economic benefits for local Pumi farmers, at the same time it is liable to trigger the investors’ dispossession of the farmers, the untold extraction of natural

116 For more comments and reviews on Li’s work (2010), refer to Silvey, R. (2010). Rethinking power and development: A review forum on Tania Murray Li’s The Will to Improve.
resources, a higher vulnerability to market fluctuations, and the discontinuity of the farming traditions and cultural identity, where the gains are largely offset by the losses associated with the social consequences triggered by the project in this frontier region.

Thus, the green agrarian transition in the Pumi region has implied that the potential consequences of this agenda could bring up questions beyond the agricultural production itself — the outcomes of this agenda is linked to larger issues such as the preservation of minority cultures and livelihoods against the backdrop of globalisation, as well as the structured inequalities in the development of market-oriented economy. Thus, the consequences triggered by the agenda need to be reappraised with a locally rooted understanding of livelihood for indigenous groups. Overall, throughout the Southeast Asian Massif, the various programmes proceeding towards economic growth and progress will unavoidably engage with the general issues of ethnicity and development. Obviously, the ‘alternative pathways’ for development should be addressed among the indigenous community, where the material benefits associated with these programmes should be measured along with the potential drawbacks and cultural costs of the agrarian transition on the long term.

8.2 Pumi Farmers’ Agency: A Perspective from Environmentality

Following the debates of the authority’s development discourse, it is worth to investigate local farmers’ responses to these development discourse which has been imposed upon them for decades. Thus, in this section, I will address the local Pumi farmers’ motives to indigenise the external interventions embedded in the development projects. By referring to Agrawal’s framework of ‘environmentality’ (2005), I aim to interpret the Pumi farmers’ agency in the eco-agriculture programme.

In retrospect, the Pumi community has experienced decades of imposed ‘development projects’, which shows their similarity with the Kumaon people in India. For the Pumi, the national schemes during 1950s-1980s such as the agricultural collectivisation and the Great Leap Forward have forced them to ‘progress’ from the ‘backward’ farming practices to the ‘modern ones’. Subsequently in the era of political reform after the 1980s, the government replaced its previous approach by the political decentralisation, meanwhile setting up various programmes such as ‘West Development Project’ to boost the local economy.

However, all these projects have been dominated by the worldviews of the development experts, specialists, and bureaucrats, where the imported approaches and norms will be enforced to the local communities. Although in recent decades the ‘participatory approach’ has been introduced into the development work in China by the international development agencies, some scholars have pointed out the limitations of this approach in development projects (Cleaver 1999), arguing that in participatory process the community members are actually ‘lured’ into the development projects, and their engagement with the projects are sometimes even ‘arranged’ in advance (Selfa & Endter-Wada 2008). Thus, some scholars link the ‘participatory approach of development’ to Foucault’s metaphor of ‘Panopticon’ (cf. Foucault 1995), where the local participants seem to be invited into the projects but are
actually still manipulated by the development practitioners. As reflected in the Pumi case, although the officials claim the importance to ‘co-work’ with local farmers, the agricultural specialists are still given the overwhelming powers in decision-making, as some farmers have told me, ‘the officials have the plan, what they require us to do is simply to follow up’ (according to the interviews in Green Pine Village).

Seeing the limitations of current debates, Agrawal seeks to situate the local community in the core positions of development projects, where he argues that after decades of imposed development regimes, a new political subject could have emerged (Agrawal 2005), which he termed as ‘environmentality’ to grasp this emerging political subjectivities towards the environment. It means that by experiencing decades of external interventions, the local community members have forged a critical and self-aware perspective on the socio-ecological transformations associated with the development projects (cf. Cepek 2011).

In my research, I was also attempting to search for the empirical evidences which could support the emergence of a self-aware subject in the Pumi context. As shown in Chapter 6, there are some examples amongst the Pumi farmers I had interviewed. One can see the social networking and linkages made between Pumi identity, where the self-pride and confidence for eco-agriculture can actually be culturally framed. Other examples are the hybridisation of farming methods and manipulations of rules and practices to serve the farmers’ own needs and desires. More direct indications to show the formation of a political subject in relation to eco-agriculture was given in one interview with an elder farmer from High Field Village, who had experienced the political disturbance and the excessive extractions of natural resources during the 1950s-1980s such as the Great Leap Forward\(^{117}\). In the interview, the elder farmer said to me:

> The past is not pleasant, people were misled. Now we are back, and I think things are going towards the right direction.\(^ {118}\)

It clearly shows how the local people have been reflecting upon the ‘regulatory regime’ in the past, as well as the ongoing development projects. In this way, a self-aware perspective could have been forged, which can be related to the Pumi farmers’ confidence in arranging the local affairs by themselves, and internalise the interventions into their everyday practices with their own agencies.

Another evidence to show an emerging Pumi environmental subjectivity comes from my reading of the local archives. In a nearby Pumi village in the 1980s\(^ {119}\), a timber company planned to invest the village to build a wood farm, as well as a new road for the transportation of the harvested timbers. However, to resist this construction, twenty local farmers had armed conflicts with the wood cutters, and destroyed the timbers they just harvested. All these actions are organised by the farmers themselves, and they were even reported as ‘a village which says no to the lure of money’ (Yunnan Post 1980s). Besides, in 2003, a new road was planned to be constructed in Lanping County, it raised concerns from the public, and some

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\(^{117}\) For details of this historical period, refer to Chan’s monograph *Mao’s crusade: politics and policy implementation in China’s Great Leap Forward* (2001), and Dikötter & Bauckham’s *Mao’s Great Famine* (2012).

\(^{118}\) From the interview with an elder farmer from High Field Village

\(^{119}\) The village is known as Yushichang
social activists seriously cast doubt on this project and linked the road construction to the deforestation which they think will be unavoidable. However, after the construction of the road, the local forests were proved to be untouched, and the local Pumi farmers even organised themselves to prompt the protests and fight against the illegal logging. The farmers’ actions as such were apparently different from how they were behaving before the 1980s when the Pumi people were the believers of the promoted notion ‘Man must conquer nature’.

Therefore, it clearly shows how a conversion towards the ways to make sense of the environment has occurred for the Pumi farmers, where the Pumi environmental subjectivity has been framed by their experiences of the development projects in the past decades. In a broader sense, although there have been environmentally sustainable practices among Pumi farmers which are based on Pumi traditional ecological knowledge or new/hybrid knowledges, Agrawal’s concept of environmentality has encouraged us to think this issue in a political meaning, where the Pumi farmers could have cultivated an environmental subjectivity which is political, and thus follows the ways which Agrawal has suggested to have made Pumi farmers more self-aware of their responsibility to the environment with the reflective ideas towards the development agenda. Accordingly, in the context of the eco-agriculture programme, this political subjectivity seems to be further stimulated as shown in the farmers’ reflections and practices to doubt the authority’s arrangement and to pursue the indigenous meanings of their way towards development.

Therefore, by employing Agrawal’s framework, the current research has sought to understand how the Pumi farmers’ agency to indigenise the eco-agriculture agenda may be constituted in relation to their strengthening environmental subjectivity at the local level, which helps them to reflect upon the ‘abuse of nature’ in the past, and to cast doubt on the development official and agricultural expert’s design of eco-agriculture which may merely work as a commodity agriculture for the extraction of local labour and natural resources. With this thinking, the Pumi farmers have organised themselves to enhance their confidence to avail themselves of the eco-agriculture programme, and to care for their shared environment with their responsibilities.

8.3 Local Worlds with Complexities: An Extended Debate

It is worth to acknowledge that, although in this research I have underscored the agency of local Pumi farmers, and positively evaluated their active adaptations and achievements in coping with the authority’s external agenda, it does not necessarily mean that the authority’s design of eco-agriculture has achieved none of its pre-set goals. Instead, based on my observations, most of the authority’s design has come into play, although often in a compromised way.

Therefore, while I am primarily employing the framework of ‘indigenisation of modernity’ to interpret the current case, there is a need to mention that, the process of ‘indigenisation’ may not have occurred in every aspect of this programme. For instance, the marketing process of Pumi eco-agriculture enterprise may completely follow the tactics of modern market economy, as the government has the resources such as the TV channels to advertise the
agricultural products from the Pumi regions to the consumers, where the local farmers rarely take part in the marketing process because they have no relevant social resources.

Another issue to note is that, we should also avoid viewing the officials’ ideas as alike. Instead, the analysis shall be conducted on a case-by-case basis to generate a nuanced understanding, and to avoid the over-generalisation of the officials’ notions in practice, especially considering the complexities of the local realities. For instance, in my survey, one official in the field told me:

[...] I think the local farmers are full of wisdom, sometimes I feel the government is regulating the farmers for too much. 120

Therefore, at least for this local officer, he agrees to empower the local communities and dignify the indigenous farming experiences.

Furthermore, it is intriguing to mention that, based on my field research of the five villages, the process of ‘indigenisation’ took place to different degrees: some farmers are more likely to take onboard the modern equipments into their practices than other farmers, and some villages are more active to indigenise than other villages. This clearly deserves further academic investigations because it addresses the ‘complexity/heterogeneity of the local worlds’, where the ability to adapt and the willingness to negotiate the external interventions could be different. In other words, the farmers’ capacity to avail themselves of the programme to gain immediate interests can vary significantly. From my view, this point echoes Li’s study of highland farmers in Sulawesi (2014) where she argues that ‘development projects’ embody neither the empowering and uplifting forces that the development agencies are so obsessed with, nor the negative powers that are critised by many researchers, instead, as Li herself has depicted, both the winners and the losers amongst the farmers in the agricultural commodification are by no means strangers with each other, they were relatives or neighbours, and the programmes have clearly benefitted some whereas hindering others, it implies that the impact of development projects on the farmers could be individualised and is dependent on the individual farmer’s specific strategies and actions. Thus, it has addressed the necessity to view the local worlds in a more nuanced approach, where further empirical studies of the Pumi farmers may help us to interpret this local complexity in a deeper sense.

For instance, in my field research, there is one village (Red Water Village) which seems to show high loyalty to the government’s agenda, and in their practices of eco-agriculture, the process of indigenisation is less likely to be observed than other villages — some farmers in this village have built a large-scale farming company for standard organic production, and many of them are willing to introduce modern technologies into their farming life. Moreover, the local cadres dominate the decision-making process of the enterprise in this village. However, due to the limited research pool, it is hard to make any generalised assertions from this case, but according to my observations, this village has a close affinity with the provincial and county government, and was nominated as the ‘pioneers for eco-agriculture’, it means that the local cadres are active for the development of commodity agriculture. Besides, as I have surveyed, this village has a relatively higher proportion of Party members, which means many of the farmers have displayed a pro-state political stance, the loyalty to the Party, or

120 The interview with an anonymous official
simply the trust to the official’s leadership\textsuperscript{121}, which may thus reinforce their willingness to follow the authority’s agenda whereas blunt their motives to indigenise. All these factors may contribute to the implementation of the authority’s eco-agriculture agenda in a ‘less indigenised’ way.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{portrait_of_chairman_mao.jpg}
\caption{The portrait of Chairman Mao that could imply a certain level of political loyalty in some villages\textsuperscript{122}}
\end{figure}

Overall, thinking of the exceptional cases in the field research, it has addressed the necessity to conduct the analysis in a context-specific approach, and to take into account the historical and political complexities of the local society. Further researches on the Pumi community, especially through the lens of eco-agriculture development will be encouraged, because the nuanced understandings of the policy-induced agrarian transition will show implications for

\begin{paracol}{raggedright}
\footnotesize
\textsuperscript{121} An intriguing thing during the field research is that in the interview with a local farmer in Green Pine Village, I noticed that a portrait of Chairman Mao was placed in a conspicuous place of his living room, which is a layout hard to find in the developed regions of China, but is still quite popular in the borderland regions. Actually, the portrait of Chairman Mao has a special meaning in the Post-Mao reform era, as discussed by Barmé (2016) in his monograph \textit{Shades of Mao}, where he discussed the posthumous cult of Mao’s leadership. Besides, Hubbert’s discussion of memory and fetish of Mao in contemporary China also delineated the rich meanings of the fever for Mao (2006). This observation can serve as a clue to make sense of the local life world, as the portrait of Mao represents a visual symbol which embodies the farmers’ pro-state political position or the loyalty to the Party.

\textsuperscript{122} Photo taken by the author
\end{paracol}
sustainable rural development of, not only the ethnic regions in Southwest China, but also many other developing countries around the world.
Epilogue

On March 2019, when I have finished my field research and will fly back to Sweden, I received a message from Uncle Liu, one of the farmer who had become my friend after the field visit, saying that ‘good luck with your future, and welcome back anytime!’ Immediately, those unforgettable experiences during my field research flowed into my mind. Deeply attracted by the local natural scenes and the hospitality of the local people, I have always been keen to trace the ‘fate’ of the local Pumi farmers, even after my field work.

Indeed, as I have experienced in the field, ethnic regions in China are going through rapid changes, for not only Pumi, but also other ethnic groups. In April, when I was revising my thesis draft in the University Library, I received a news reporting that the Dulong People in Yunnan, which is a close ethnic relative of Pumi, have achieved an epic progress – after two years’ intensive efforts, they have been the first ethnic group in China which has eliminated absolute poverty for the entire group – of course this is also because of the small population of this ethnic group, which is only 7,000. Later in that month, another news titled One step to cross thousands of years – the last desert tribe goes to new homeland with satisfaction, describing how the Keriya people, previously living in the oasis of Taklamakan Desert in West China, have recently moved to their new homelands, as the officials deem their former oasis settlement as vulnerable to environmental degradation, and the barren desert also seriously impoverishing those ‘poor’ people.

In practice, the Chinese Government has defined goals to build a ‘well-off society’ before 2020. This, means that the government intends to eliminate absolute poverty for all ethnic groups in China by that year. As a consequence, these borderland regions which are primarily populated by ethnic minorities have been the major targets to be developed – from the Pumi in subtropical uplands, to the Keriya in the desert oasis of Inner Asia, a nationwide scheme is under progress, where the Pumi eco-agriculture agenda is apparently an integral part of this national ambition.

Admittedly, in the era of radical social change, although Sahlins has argued that the culture of the indigenous people is in constant change, and the lament for the loss of ‘pristine culture’ is gratuitous. Still, we should hold a cautious stance towards the radical transformations and the fast social change, because it could involve the unanticipated consequences such as the impact on cultural significance or the shift of identity. Therefore, after going back to Sweden, I have continued to track the changes of the Lanping County by following photos posted online by the informants, or reading the local news — these follow-up observations have supported what some Pumi farmers said to me: ‘every year, changes are happening, next time you come here, you will definitely be surprised’. Indeed, the county is experiencing a series of tremendous changes: a new airport will soon be built, that is why Uncle Liu, who I mentioned before, told me that next
time I come back, there is no need to take the bus for 10 hours from Kunming\textsuperscript{123}, flying here merely takes 50 mins. Also in April, a new investment project for lacquer tree plantation has been launched. These projects show how the local development of eco-agriculture is still proceeding vigorously, and there is no clue for it to slow down: although the officials continue to deem it as an effective way for poverty reduction, some farmers have viewed it seriously for the ignorance of the farmers’ immediate interests, and are discontented with certain officials’ tolerance of the avaricious external investors, where the investors’ chase after profit is intrinsically at odds with the principles of fairness and equity. It echoes some other scholars’ observations in Southeast Asia such as Turner (2017) who reported that the commoditised plantation of black cardamom in Sino-Vietnamese borderlands has involved the trade which includes complex webs of social relationships, uneven power structures, and different economic returns for different actors competing to access key resources.

In practice, we can witness, after realising the slight chance to improve livelihoods through eco-agriculture programme, some farmers discard the ‘opportunities’ to engage with it, and instead choose to be migrant workers in urban areas, as they say, if they can gain a fair income by working in their own village, why bother to go out and suffer so much? However, according to my field research in Red Water Village, some farmers told me, when the villagers go to the cities for employment, they often lack the knowledge and skills needed to survive in the highly competitive major cities in China, and their arrival and subsequent frustrating experiences in cities have brought certain problems to urban management, such as the rising rates of crimes and the drug abuse, as described by Liu (2011). On the other hand, their emmigration from the rural areas also brought problems to their villages of origin, because their absence of the rural life has weakened their hometown due to the loss of labour and the collapsing social network.

Scholars have warned that leaving these issues unsolved is actually quite precarious. To tackle this problem the state launched the ‘rural rejuvenation project’ in 2018, a nationwide project which aims to revitalise the rural areas in China, with farm-based tourism or eco-agriculture as the key measures. However, as this thesis has revealed, captured by the unequal economic structure of the market economy, the Pumi villagers are depressed either to join eco-agriculture at home or work for factory in cities, in other words, it has been a dilemma for Pumi farmers.

In Tania Li’s \textit{Land’s End}, she told a similar story about rural farmers at the margins as well, although in Li’s case, the capitalism is brought up by the actions of the smallholder farmers themselves, instead of a decisive land grab or ‘development scheme’ as we have witnessed in the Pumi case, but quite similarly, she also depicted those who failed in the enterprise and struggled to sustain their life, similar to the Pumi farmers, it represents the conflicts that individuals need to face on the path to ‘development’, and highlights the importance to draw attention to the fates of the highland societies. Thus, although the Pumi farmers can enact their agency to indigenise those external interventions of the government, and develop an eco-agriculture enterprise with their own characteristics, in a deeper sense, this adaptability may not necessarily bring up a positive change or a reasonable economic guarantee, instead, due to the deep-rooted structured inequality, the

\textsuperscript{123} Kunming is the provincial capital of Yunnan
development of this enterprise may even deepen the social gap by dispossessing the farmers and
driving the untold extractions of local agricultural resources. Therefore, the current research would
courage an increased concern to issues such as rural development and agricultural policy in this
marginalised region, where the concern bears the hopes to facilitate an increased level of social
equality in policy-making.
Moreover, the current research also forces me to render, how shall we intervene as observers,
researchers, or development practitioners in the field? Clearly, to a certain extent, nobody can
completely escape from being captured by social structure, and very often, we learn to avail
ourselves of the social establishments to maximise our own benefits. However, we still have to
reflect on the justice and legitimacy of these social rules. Only when the policymakers, development
experts and local farmers started to concern for more about the shared benefits and the social
responsibility, things can begin to ameliorate.
In the contemporary, the Chinese society is witnessing a dramatic social transformation. In this
social change, the disadvantaged groups, including certain ethnic minority such as Pumi, may hold
limited economic opportunities to enrich themselves. These problems will not be solved in a short
run, but some improvements can be on the way. For instance, in some European countries, there has
been a labelling system for fair trade[^124], which aims to protect the rights of the farmers and improve
their livelihoods in the Global South. In China, the Bureau of Agriculture has also realised the
necessity to protect the farmers’ legitimate interests in trade. Considering the disadvantaged
position of the farmers in market, the government is trying to set up a system of ‘guaranteed price’.
They also aim to offer a better loan plan for the farmers, thus they are enabled to establish their own
small-scale agro-business instead of relying too much on external investments. Another measure is
to train the farmers with internet skills which allow them to directly market their products online.
But, the problem still remains: clearly, these measures only address the symptoms of the economic
impoverishment, rather than the cause. We cannot neglect the invisible and covert problems
embedded in the depth of the institutional arrangements of commodity agriculture.
Overall, the objective of this thesis is to explore and debate the eco-agriculture agenda and the lived
experiences of local Pumi farmers in the context of rising market economy in China, with a focus
on the agency of the farmers in the face of external influences. In uncovering these problems, this
study offers a unique chance to reflect upon the dialectical relation of social forces and individual
endeavours. Additionally, the current research also intends to call attention to the Pumi farmers’
future, and doing so can push the provincial authority to improve the agricultural policy with an
increased level of social equity. Considering how the contemporary development of Pumi eco-
agriculture is historically contextualised, it reminds me of William Shakespeare’s words in *The
Tempest*, ‘What’s past is prologue’. By scrutinising the historical embeddedness of Pumi eco-
agriculture, we can better capture the transformations of Pumi agricultural systems, and perhaps
more importantly, to understand its social and cultural bearings when planning for the future.

[^124]: Fair trade certification is a product certification system within the market-based movement for fair trade. The
most widely used fair trade certification is from FLO International, which is widely used in Europe, Africa, Asia,
Australia and New Zealand. As of January 2011, there were over 1000 companies certified to the FLO
International’s certification around the world (FLO International 2011).
'All history is contemporary history’, the Italian philosopher and historian Benedetto Croce once said, meaning, no doubt, that all history was written from the view of contemporary preoccupations. Meanwhile, this quote to me also symbolises the necessity to interrogate how history, social structures, and experienced lives can shape, reveal, and refract the conditions in our study of the present day. I believe the studies of this kind may help us to reflect on the past, rethink the present, and reimagine the future of, not merely Pumi, but also various cultures and communities in the world which are under transformations.

125 Cited from Italian historian Benedetto Croce (1866–1952), see also Bogdanor’s article in 2009
References


Appendices

Appendix 1. Interview Guide

For local Pumi Farmers

The selection of the farmer interviewees has been specified in Chapter 3.3.1, all my informants fulfil the following three conditions to be included as a Pumi farmer for organic production:

1. the informant is a descendant of Pumi, and recognise him/herself as a Pumi.
2. the informant must be a resident of the village for over 9 months in each calendar year
3. devote most of the time to the farm work, over 50% of the informant’s income should come from the activities of eco-farming.

Before the formal interviews, I generally have some basic information to ask the interviewees, such as:

How and when did you know the organic farming enterprise in your village for the first time? Which organic farming company do you belong to? How many years have you been working for the organic agriculture here? How much do you earn each year from the organic agriculture company? Do you recognise yourself as a traditional cultivator to some extent? or you also use a certain amount of pesticides or fertilisers in your farmlands? What do you think about your agricultural products? Do you know who buy them? Do you consume the products from your own farmlands?

Prompts for the interviews of Agricultural Land Use:

1. Ask about the farmland management of the farmer. Can you describe your farmland management? Do you feel there are significant changes to the agricultural land use after engaged in the eco-agriculture company? Do you engage in the eco-agriculture with your own farmland? How many farmers do you know have signed the contracts, or selling their agricultural produces to the eco-agriculture company you are working for?
2. Can you describe the traditional norms about land use? Do you still remember the Pumi farmland intercropping? Do you still practice farmland intercropping? Do you still practice Pumi farmland
rotation? What do you intercrop? What do you think of these traditional ways of land use? Do you still remember the Pumi agricultural calendar?

3. Do you work for any large-scale farming company? What do you think of the large-scale farming base? Do you think the large-scale farming base has brought you more benefits than before? Do you think the large-scale farming base is the proper way to develop Pumi eco-agriculture enterprise?

Prompts for the interviews of Technical Practices:

1. How do you work for eco-agriculture? Can you describe the techniques and skills you employed in Pumi eco-agriculture? Are you satisfied with the current technical solutions for your farm work? What do you think of the technical regulations of the eco-agriculture company?

2. Do you remember Pumi traditional farming skills? Do you know how to use the barnyard manures? Do you cultivate any indigenous breeds? Have you ever taken part in any seed exchange in the past to get better yields? Do you recognise yourself as a traditional cultivator? What do you think of the relationship of the traditional farming skills and the eco-agriculture enterprise?

3. What do you think of the new technologies for eco-agriculture? Do you employ any organic agro-technologies in your farm work? Do you use the greenhouse cultivation? Do you use chemical fertilisers or pesticides? Can you describe the ways you use the chemical fertilisers? Do you think the external technical solutions are important for the development of eco-agriculture?

Prompts for Governance Issues:

1. What do you think of the agricultural policy of the authority? Do you feel the government’s influence is more apparent in your everyday life? What do you think of the provincial government’s survey in this region? What do you think of the poverty reduction campaign in this region? Do you think the Pumi traditions and norms have been challenged in recent years? In the eco-agriculture company you work for, do the cadres or officials have more rights to manage the company?

2. Do you recognise yourself as a Pumi? What does it mean to be a Pumi? Can you describe the activities for Pumi rituals or festivals in recent years? Do you have any friends or colleagues from other ethnic groups such as Bai or Han ethnic group? Do you still remember the Pumi traditional religions? In the eco-agriculture company you work for, are there any of your relatives in the same company? Who is the leader of the eco-agriculture company? In the company, who has more rights in decision-making of agricultural production?
For officials and agricultural specialists

The selection of the officials and agricultural specialists has been based on the process described in Chapter 3.3.2, all the informants fulfil the following conditions to be included as an official or agricultural specialist:

1. The informants’ work is related to the Pumi eco-agriculture programme, such as the village head, the officials from Agricultural Bureau, and development experts.
2. They conduct the on-site technical assistance, or the planning or inspection work for Pumi eco-agriculture programme.
3. None of them directly do the farm work themselves or depend on the incomes from agricultural production.

Thus, this group of interviewees can be categorised as a different study group in contrast to the group of ‘local farmers’.

Prompts for the interviews of Agricultural Land Use:

1. Do you participate in the work about the planning of agricultural land use? What is your role in this work? What do you think of the traditional agricultural land use in the Pumi villages? Do you think the traditional land management is a cause for local poverty? How do you guide the farmers in the fields? Do you think the farmers are willing to change their patterns of farmland management? Do you encourage the farmers to work in the large-scale farming base?

2. What do you promote for the local land use? Can you describe what is a scientific way to manage the farmland? Do you think the modern agro-technologies can work better in the farmlands? Where do you get the knowledge about eco-agriculture and the agricultural land use?

Prompts for the interviews of Technical Practices:

1. What do you think of the Pumi farmers’ practices of eco-agriculture? How do you think the farmers should arrange their technical solutions according to the government’s design? Do you think the current technologies employed by the farmers can contribute to the development of eco-agriculture enterprise? What will you do if you think the farmers’ technical practices are not appropriate or inefficient?

2. What do you think of the traditional farming skills of the Pumi farmers? Do you think the farmers need to improve their farming skills in the contemporary era? Do you think there is a need to integrate the indigenous knowledge into the government’s work plan? What do you think of the traditional farming skills such as the barnyard manure or intercropping? Do you think they have a market potential as well?
3. What do you think of the modern agro-technology? Do you think the government’s design of technical introduction is appropriate? What do you do to promote the modern technologies? Do you think the modern technologies can work better than the traditional farming skills?

Prompts for Governance Issues:

1. What do you think of the Pumi farmers? Do you think they have followed the government’s administration? Did you have any conflicts with the farmers? What do you think of the Pumi traditional rituals and festivals? What do you think of the Pumi traditional religion? What do you think of the Pumi identity?

2. Do you think there should be more modernisation projects in the ethnic regions? Do you think the local community should be more open to the social change? How do you feel the local farmers’ attitude towards the development projects in this region? Do you think the policy from the government fit to the local situation? Do you think the state has a stronger influence in the Pumi region than before?
Appendix 2. List of the Informants

List of Pumi Farmer informants

High Field Village
Bo —— Jan 28, 2019

Bo is a farmer primarily for kidney beans, but in recent years she also started to grow the mountain herbs which is more profitable, she has been working for the enterprise for 10 years, and has a training experiences in the county town. She invited me to her farmland for a visit, and I conducted the interview with her in Chinese.

Cong —— Jan 25, 2019

Cong is a Pumi farmer who is very familiar with local religions and traditions. She joined the eco-agriculture company 5 years ago. During the interview, she offered much information about the local transformations of the agricultural production. We talked in her home.

Ping —— Mar 19, 2019

Ping is a middle-aged male, he has two children. His farmlands were used to participate in the cultivation of organic garlics, 3 years ago he benefitted from the eco-agriculture agenda and used the money to buy a private car. In his spare time, he works as a driver to gain some extra income. In my field research he has been my driver. He knows agricultural technology very much. We had interesting conversations during the drive and a more formal interview on the 19th of March.

Bomboo Village
Hai-Ke —— Feb 24, 2019

He is a young Pumi farmer. Previously he was a migrant worker to Zhuhai. But 3 years ago he came back to his village and joined the eco-agriculture enterprise.

Hong —— Feb 23, 2019

He is a cultivator of Chonglou. He works for the eco-agriculture company for many years. I interviewed him in his farmland and his home.

Uncle Zhang —— Feb 2, 2019

He works in an eco-agriculture company primarily for the cultivation of Maca. He has been working for the eco-agriculture company for over 6 years. I had the interview with him in the farming base of the eco-agriculture company.

Green Pine Village
Cheng —— Jan 20, 2019

126 All the dates indicate the dates that I had one of the interviews with the informants.
He is a farmer who joined the eco-agriculture under a contract with a company. He engaged in the eco-agriculture with his own farmlands, but the agricultural products will be collected by the company. I had the interview with him in his home.

Nan —— Feb 21, 2019
She is a local farmer who is familiar with the cultivation of organic garlic. She is middle-aged and holds some experiences of commodity agriculture and the market fluctuations.

Uncle Liu —— Jan 15, 2019
He is a middle-aged cultivator for Chonglou and Maca, during my field research, he has been very friendly and always tried to answer my questions as much as he knows. He has been working for eco-agriculture for over 10 years, which means he holds much experiences and know some detailed information of the eco-agriculture development in this region. I had interviews with him, both in his farmland and in his home.

Red Water Village
Liang —— Mar 5, 2019
Liang is a female Pumi farmer. Her family joined the eco-agriculture company 3 years ago, which is to grow Maca and Chonglou. I had the interview with her in her home.

Liang’s husband, Ming —— Mar 5, 2019
Ming is Liang’s husband. At the time I visited his home, he was preparing to go to the farmland. I had the interview with him in the farmland where he talked with me about his experiences in recent years to participate in the eco-agriculture programme. He has a strong local dialect which makes the conversation a bit difficult.

Mak —— Mar 6, 2019
Mak is a Pumi farmer who is familiar with the traditional farming skills. I had the interview with him in his farmland, where he provided many useful information about the local farmland rotation and intercropping.

White Cloud Village
Kai —— Feb 12, 2019
Kai is a local farmer who organised a small rural cooperative for eco-farming, his company is primarily for the cultivation of kidney beans.

Tong —— Feb 11, 2019
Tong is a young farmer. She is also a novice in organic farming. She works in a family business for eco-agriculture in the village.

Yin —— Feb 25, 2019
He is relatively an experienced farmer in this region, where he often attended the technical trainings and to communicate with his working partners. His major farming work is to grow mountain herbs.
List of local officials and agricultural specialists

Agricultural specialists

Han —— Feb 14, 2019
A specialist who is primarily responsible for technical promotion and the introduction of hybrid fertilisers.

Wang —— Jan 9, 2019
A specialist who is primarily responsible for the agricultural survey, and the promotion of greenhouse and agricultural mechanisation.

Mengping —— Mar 1, 2019
She works for a bio-tech company but also has an appointment by the government to engage in the planning of the eco-agriculture agenda.

Development officer

Sang —— Feb 15, 2019
He is responsible for the agricultural planning and the strategies of the local agricultural development.

Local cadres

Li —— Feb 9, 2019
He is a secretary of the village office who is responsible for the agricultural investment and the economic planning of the village.

Min —— Jan 28, 2019
He is a local cadre who has been responsible for the inspection of the local agriculture enterprise, he is also the consultant of several local agro-companies.

Hou —— Feb 17, 2019
He is a village head, and has taken part in the implementation of the eco-agriculture programme in his village.

Manager

Kong —— Mar 2, 2019
An executive manager of an eco-agriculture company in Green Pine Village, the company is very famous in the region. Kong has been working for the company for seven years.
Appendix 3. Glossary

民族自治区 — ethnic autonomous prefecture
少小民族 — marginalised people
绝不让任何一个民族掉队 — we cannot let any ethnic group to fall behind
扶贫 — poverty reduction
精准扶贫 — poverty reduction with targeted measures
全面小康社会 — well-off society
普米族 — Pumi ethnic group
农民工 — migrant workers
易地扶贫 — poverty reduction by resettlement
刀耕火种 — swidden agriculture
改土归流 — bringing aboriginal chieftains under the jurisdiction of the central government
龙潭崇拜 — veneration of the Dragon Pool
西部大开发 — West Development Project
普米农田间作 — Pumi intercropping
技术统治论 — technocracy
现代化 — Modernisation
大型农业基地 — large-scale farming base
家庭联产承包责任制 — Household Responsibility System
改革开放 — Reform and Opening up
普米农家肥 — Pumi barnyard manure
农业集体化 — agricultural collectivisation
施好肥不如选好种 — more fertilisers with wrong seeds are vain efforts
普米农业历 — Pumi agricultural calendar
退耕还林 — Slope Land Conversion Program
乡村振兴战略规划 — Rural Rejuvenation Project
Appendix 4. Operationalisation of the Research Questions

Agricultural Land Use

Technical Practices

Governance Issues

How the process of indigenisation has occurred in the Pumi eco-agriculture context?