

Shifting Cultivation, Livelihood and Food Security

New and Old Challenges for
Indigenous Peoples in Asia

Editor
Christian Erni

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Table of Contents

	<i>Page</i>
Executive Summary	vii
Contributors	xiii
 Part I: Introduction	
Shifting cultivation, livelihood and food security: New and old challenges for indigenous peoples in Asia <i>Christian Erni</i>	3
 Part II: Case Studies	
Chapter 1 Shrinking <i>Jum</i> and changing livelihoods in the Chittagong Hill Tracts of Bangladesh <i>Sudibya Kanti Khisa and Mohammad Mohiuddin</i>	41
Chapter 2 The changing face of swidden agriculture: a case study of two villages in Ratanakiri Province, Cambodia <i>Jeremy Ironside</i>	97
Chapter 3 Shifting options: a case study of shifting cultivation in Mokokchung District in Nagaland, India <i>Amba Jamir</i>	159
Chapter 4 Food security in the farming system of the <i>Dayak Jalai</i> in Ketapang District, West Kalimantan, Indonesia <i>Institut Dayakologi</i>	203
Chapter 5 An alternative approach to land and forest management in Northern Lao PDR <i>Satomi Higashi</i>	253

Table of Contents (*continued*)

	<i>Page</i>
Chapter 6	
‘Post-shifting cultivation’: struggles for livelihood and food security among Tharu people displaced by the Chitwan National Park in Nepal	
<i>Krishna B. Bhattachan</i>	291
Chapter 7	
The lizard on the tree and the Tailor Bird village: 21 st Century livelihood challenges among Karen swidden farmers in Thailand	
<i>Christian Erni and Prawit Nikornuaychai</i>	327

Chapter 5

An alternative approach to land and forest management in northern Lao PDR

Satomi Higashi



Acronyms and glossary

ADB	Asian Development Bank
DAFO	District Agriculture and Forestry Office
DOE	Department of Environment
FAO	Food and Agriculture Organization of the United Nations
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit/German Technical Cooperation
LFA	Land and Forest Allocation (Programme)
Lao PDR	Lao People's Democratic Republic
MAF	Ministry of Agriculture and Forestry
MSG	Monosodium Glutamate
NGO	Non-governmental organization
NTFP	Non-timber forest product
REDD	Reducing Emissions from Deforestation and forest Degradation
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNDP	United Nations Development Programme
WREA	Water Resource and Environment Agency
Kmhmu'	An ethnic group belonging to the Mon-Khmer sub-branch of the Austro-Asiatic language family. Alternative spellings are Khmu, Kammu, Khmou, Khamou, and Khımu.
Khoum	Hamlet (small unit in a village)

Title page photo: Harvesting swidden rice, Pak Beng District. Photo: Satomi Higashi.

An alternative approach to land and forest management in northern Lao PDR

Satomi Higashi

In the Lao People's Democratic Republic (Lao PDR), where approximately 80 percent of the population lives in rural areas, rice production through shifting cultivation¹ remains an important means of rural livelihood. However, since the mid-1980s, the Lao PDR government has deemed shifting cultivation as a major cause of deforestation and adopted the Shifting Cultivation Eradication Policy (Souvanthong 1995). To promote the policy, the government has also implemented the Land and Forest Allocation (LFA) Programme throughout the country beginning in 1996. The LFA programme has contributed to preserving forests and promoting stationary agriculture in some areas. However, in other areas, the programme has led to no practical improvement in land and forest use, but rather it has caused damage to forest resources in the Lao PDR. Some researchers (e.g., Kitamura 2003: 227; Chamberlain 2001) observed that the LFA programme has aggravated poverty in the Lao PDR, especially in the northern part of the country, where shifting cultivation is the main livelihood of the local people.

One notable group of people who have been particularly affected by the LFA programme is the Kmhmu² people, the focus of this case study. Traditionally, Kmhmu' people have made their living on agricultural production in swidden cultivation, hunting, fishing and non-timber forest product (NTFP) collection. Their life, culture and religion have close connections with shifting cultivation. However, the LFA programme has made the life of Kmhmu' difficult. In Pak Beng District, Oudomxay Province in northern Lao PDR, where the Kmhmu' is the majority, the LFA has been implemented in a top-down manner to limit shifting cultivation. This has confused land use among the local Kmhmu' villagers who depend on shifting cultivation, as will be discussed in more detail later. The decrease of agricultural land has led to food shortages and higher rental prices for farmland in neighbouring villages. Moreover, forest management has become disorderly because villagers have started 'illegal' cultivation in watershed forests due to insufficient land. This was neither what the district government hoped for nor what the central government tried to achieve in relation to land and forest management through the LFA.

I came to work in Pak Beng District, particularly with the local Kmhmu' communities, in 2005 as a programme coordinator of Mekong Watch³, a Japanese non-governmental organization (NGO). Mekong Watch was already aware of the mixed results of the LFA programme and hypothesized that two types of gaps were exacerbating the impacts of the programme. One was a communication gap between regional government officials and local residents; and the other was related to the state policy implementation—between policies formulated at the central and local government levels. Mekong Watch thought that we could fill these gaps by conducting research to clearly identify the gaps and provide training for local government officers as well as villagers on management and use of watershed forests. A number of activities were carried out in close cooperation with the Faculty of Forestry, the National University of Laos and the Pak Beng District Agriculture and Forestry Office (DAFO). The following case study is based on my experiences and the lessons that I learned while working under such circumstances.

This chapter aims to illustrate the land use and livelihoods of Kmhmu' upland farmers in Pak Beng, identify the key challenges facing the local communities and make suggestions on the roles of international NGOs working with the Lao PDR government to solve problems caused by forest management policies and improve the forest management system. I will describe the following:

1. Lao PDR government policies related to shifting cultivation
2. The livelihoods and food security factors of swidden farmers, especially Kmhmu' people
3. The impacts of the government policies on the livelihood of swidden farmers
4. Alternative approaches to land-use planning based on my experiences working with the local government and communities

I. State policies affecting shifting cultivation

1. Shifting cultivation in the Lao PDR

The state statistics (MAF 1999) indicate that about 25 percent of the rural population were still practicing shifting cultivation. When fallow land was included, shifting cultivation accounted for more than 80 percent of the agricultural land use (Roder 2001: 1). Although the area and the number of households involved in shifting cultivation decreased from 176 605 hectares (ha) and 186 265 households in 1996 to 118 900 hectares and 174 036 households in 2000 (Kitamura 2004: 122), shifting cultivation continued to be an important factor for food security for many villagers in the Lao PDR.

Village relocation policy

The first Lao state policy that substantially impacted shifting cultivation was village relocation. Village relocation has a long history in the Lao PDR. Between the 1960s and the early 1970s, especially during the peak of the Indochina War, resettlement was commonplace; much of it was related to the war and US bombing. In 1975, when the new Lao PDR government was formed, it again began to move rural villages out of mountainous and remote areas due to security concerns about armed rebel activities (Baird and Shoemaker 2005: 6).

However, even after the socialist regime had stabilized control, the Lao PDR government continued with village relocation. In addition, the government increased village relocation by formalizing it into a state policy. The government justified the village relocation with the following five goals:

1. Eradicate or reduce shifting cultivation
2. Suppress opium cultivation
3. Weaken rebel and other anti-government movements
4. Improve access to remote areas for better service delivery
5. Strengthen the administrative and cultural integration as well as national identity (Baird and Shoemaker 2005: 6-11)

While the earlier concern, i.e., state security, continued to be one of the reasons for the relocation, other political, economic and social justifications were added. Eradication of shifting cultivation emerged to be the major justification for village relocation. The government moved highland communities to lowland areas, and in some areas, the process replaced swidden fields with monoculture industrial plantations and commercial cash-crop fields (Baird and Shoemaker 2005: 6-11). This often led to deforestation and loss of food security, contrary to the policy's initial objectives – forest conservation and poverty alleviation.

Health conditions in resettlement sites raised concerns of international agencies. A study conducted in 1997 by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the United Nations Development Programme (UNDP) found mortality rates of up to 30 percent in resettled upland communities (Goudineau 1997, cited in Baird and Shoemaker 2005: 16).

In many cases, village relocation also led to increasing pressure on land resources in new settlement areas and often resulted in land conflicts between old and new communities (Soulivanh et al. 2004:22). As a result of village relocations, more people were concentrated in lowland areas, especially along major roads, thereby increasing

the competition over resources (Baird and Shoemaker 2005; Evrard and Goudineau 2004; Fujita and Phengsopha 2008: 119).

Concerns over conflicts across communities and over natural resources mounted so much that some donors tried to urge the Lao PDR government to review its village relocation policy. For instance, a study by the German Technical Cooperation (GTZ) agency recommended the following:

- Newly arrived migrant families needed to be integrated in the land-use planning process
- Land-use zoning should not take place in villages awaiting resettled migrants
- Organized displacement and resettlement of highland communities should be stopped (Soulivanh et al. 2004: 23)

However, village relocation continued to be a major state policy (this will be discussed in detail later in the article). The policy subsequently became more severe by a top-down land-use planning and caused even more land conflicts and destructive land and forest use in the Lao PDR, which continues to this day. It might be important to note here, as Baird and Shoemaker (2005: 2-3) point out, that many international development agencies and donor governments working in the Lao PDR failed to recognize or understand the devastating impacts of the Lao PDR government's village relocation practices. Some of these agencies even provided the government with active or uncritical support to village relocation.

Lack of alternative livelihoods after the LFA programme and the loss of food security forced some upland villages to leave their resettlement sites and move elsewhere (Evrard and Goudineau 2004; Baird and Shoemaker 2005; Fujita & Phengsopha 2008). Inappropriate land-use planning is one cause for the lack of agricultural land and has increased internal migration. Therefore, social and environmental impacts of village relocation and interferences between village resettlement and the livelihood of the local people should be carefully considered in the process of land-use planning.

Shifting cultivation eradication policy

Despite the detrimental impacts of the village relocation policy, it has not only continued but has actually increased in some cases. The way the Lao PDR government achieved this was to promote the eradication of shifting cultivation as one of the major advantages of village relocation. To stigmatize shifting cultivation, the Lao PDR government made a clear link between shifting cultivation and one of the country's critical national issues: deforestation.

It is true that deforestation has long been a burning issue for the Lao PDR government. The forest coverage rate in the Lao PDR⁴ plummeted astonishingly from 70 percent to 40.3 percent between 1940 and 2010⁵. The causes for deforestation have changed over time. During the Second Indochina War (1959 to 1973), US aerial bombing of the North Vietnamese Army's transportation route, which cut through Lao PDR, destroyed large areas of forest. After 1975, the socialist administration promoted forest clearing to cultivate rice to achieve self-sufficiency in rice. Also, broad areas of land were cleared for a large number of internally displaced people, some of whom were affected by American airstrikes. Moreover, the finances of many provinces in the Lao PDR had been highly dependent on income from logging. This means cutting trees on a large scale, which causes excessive deforestation (Matsumoto & Hirsch 2003: 135). Fujita (2012) points out that the main cause of the recent deforestation was land conversion for cash cropping and industrial plantations, as well as logging for large-scale infrastructure development, such as hydroelectric dams, mining projects, etc.

However, the Lao PDR government singles out shifting cultivation as the main culprit of deforestation in the country. The Council of Ministers' Instruction No. 47 on Forest Protection in 1979, suggested banning shifting cultivation in watershed forests and the promotion of reforestation. The Second Socio-Economic Development Plan (1986-1990) highlighted a programme to curb and eventually stabilize shifting cultivation, according to a government account that claimed "300 000 hectares of forests were destroyed annually by shifting cultivation causing serious environmental problems" (DoF-MAF 2005:3). In 1989, the National Forest Conference agreed on steps to reverse deforestation and resolved that forest cover should be returned to 70 percent by 2020 making it a goal to provide alternative employment to 60 percent of the 1.5 million people involved in shifting cultivation by 2000. To support the government's policy, the Tropical Forestry Action Plan was unveiled the following year by the Food and Agriculture Organization (FAO) of the United Nations and the UNDP. The plan targeted 90 000 people a year from 1990 to 2000 with the intention to eradicate swidden agriculture by intensifying other types of agriculture, commercial logging, industrial fast growing tree plantations, and by promoting land tenure reform (GoL 1990; Goudineau 1997:14, cited in Baird and Shoemaker 2005: 8).

In its Fifth Socio-Economic Development Plan (2001-2006), the Lao PDR government set a target that "shifting cultivation is to be basically stabilized by 2005 and completely stabilized (eradicated)⁶ by 2010" (DoF-MAF 2005:6).

The Land and Forest Allocation (LFA) programme

Among the various state policies in the Lao PDR, the LFA programme most directly aimed to eradicate shifting cultivation (Hyakumura 2005:80; Kenney-Lazar

2013:14). In 1990, the Lao PDR government designated Xayaburi Province in the north as a pilot site for the LFA programme and classified the provincial land into agricultural and forest land. However, during classification, provincial officials were alleged to have made personal gains by securing rights over uncultivated land and growing cash crops there (Akasaka 1996).

The LFA was first implemented throughout the Lao PDR in 1996. In this programme, first the villagers' rights to land, including the rights to use, inherit and sell designated land, were recognized. Secondly, a forest used for agricultural purposes was distributed to the villagers. Villages were also allowed to use a forest as a communal property, as long as they performed the obligation to manage it (Oya 1998: 272).

A fundamental problem with the LFA is that it has mutually contradictory goals. The decree of the Ministry of Agriculture and Forestry, No. 822/1996, states that the goals of the LFA programme include: 1) preserving the natural environment; 2) improving people's lives; 3) controlling shifting cultivation; 4) increasing food production; and 5) promoting commercial crops. However, it became apparent, that protecting the natural environment could conflict with promoting commercial crops. At a more abstract level, the programme was not only an agricultural policy but also a forestry policy. The multi-faceted nature of the programme reflected the vested interests among various actors, including the central government, development agencies, donors and private companies.

Being a socialist country, all land in the Lao PDR officially belongs to the state. The 2003 Land Law defined land ownership as follows:

“Land Ownership: Land of the Lao PDR is under the ownership of the national community as prescribed in Article 17 of the Constitution in which the State is charged with the centralized and uniform management (of land) throughout the country and with the allocation (of land) to individuals, families and economic organisations for use, lease or concession, (the allocation) to army units, State organisations, political organisations, the Lao Front for National Construction, (and) mass organisations for use, (and the allocation) to aliens, apatriids, foreign individuals and organisations of such persons for lease or concession.” (Article 3, Land Law 2003)

In the early 1990s the government adopted a market-based economy and recognized the rights of individuals and legal bodies to use land. Donor governments and international development organizations welcomed and accelerated this historic policy shift. They demanded that the Lao PDR government should classify land and forests. Donors and international organizations, which had just re-started pumping massive development aid to the Mekong region after the 1991 Paris Peace Accords, needed a land titling system to build infrastructure and help repatriated refugees more

easily (Matsumoto 2004). Foreign corporations, which wanted to invest in reforestation and infrastructure development, also requested clear land classification in order to facilitate their business in the Lao PDR. The motivations of both internal, i.e., the government's move towards a market-based economy, and external, i.e., outside actors' development agenda, matched the goals of the LFA and strongly drove the programme forward.

There was another complicating factor. The policy was drafted and approved by the central government. However, when it was implemented at the provincial level, provincial officials found interest, intention and interpretation based on their own, often very personal benefits. In conclusion, different proponents of the LFA had different incentives to support the programme, which created often contradictory dynamics in its implementation. This in turn affected the local communities.

2. Environmental changes and shifting cultivation

Before moving on to the case study, I would like to highlight a few other factors that have contributed to the various impacts that the LFA programme has had on local indigenous communities. The first is a strong drive towards monoculture cash crop production. Recently, similar to other parts of Southeast Asia, monoculture cash cropping, such as rubber, oil palm, eucalyptus and acacia for producing paper; and cassava, sugarcane, and corn for animal feed, has been expanding in the Lao PDR. Shifting-cultivation fields were rapidly converted into permanent upland fields to grow cash crops. Repeated harvesting of monoculture crops resulted in soil depletion and there was also an increase in the use of pesticides. Expansion of monoculture, especially when coupled with population increase, reduced the land area that could be used for shifting cultivation. Hence, fallow land had to be used for shifting cultivation before it was sufficiently regenerated. This placed unsustainable demands on the environment. All these factors accelerated soil depletion (Dwyer 2007; Baird 2010; Higashi 2013).

The second factor is related to global concerns over climate change. In the Lao PDR, when international climate change policy schemes, such as REDD (Reducing Emissions from Deforestation and Forest Degradation), were debated, shifting cultivation tended to be treated as one factor contributing to deforestation (DOE-WREA 2010). The National Steering Committee on Climate Change was set up in May 2008 and the government approved a "Strategy on Climate Change of the Lao PDR" in March 2010. The strategy states that "the onsite burning of forests for slash and burn cultivation" was the largest emitter of CO₂ (DOE-WREA 2010: 5) and "(s)top(ing) 'slash and burn' agriculture by forest management, afforestation of degraded forest and reforestation to increase the forest cover" was one of the mitigation priorities (DOE-WREA 2010: 11).

However, specialists and organizations well versed on this topic have pointed out that in Asia, the primary factor driving deforestation and CO₂ emissions is not the expansion of shifting cultivation, but rather the conversion of forest directly into industrial plantations or agricultural land (FAO *et al.* 2008). Research has also shown that when shifting cultivation is accompanied by an adequate fallow period, it absorbs far more CO₂ than industrial plantations or land on which the same crops are grown seasonally (Erni 2009). If climate change schemes are introduced with no consideration for the land-use practices of local people, then this may not only lead to impoverishment of local people, but it could also result in the loss of biodiversity in secondary forests and turn out to be more destructive.

II. Research location and methods

1. Research methods

Mekong Watch started the Community-based Watershed Management Project in Pak Beng District, Oudomxay Province in June 2005. As a programme coordinator, my task was to conduct research on management and use of watershed forests and give advice to the local government officials and villagers in cooperation with the Faculty of Forestry, National University of Laos and the Pak Beng District Forestry Office (DAFO). The project ended in March 2013.

The data and information below were collected mainly in the process of implementing the project in Pak Beng. Additionally, I visited DAFO and three villages out of the seven target villages of the project in February 2014 and interviewed DAFO staff, village heads, elders and Watershed Management Committee of the three villages. I also held a discussion meeting with 21 villagers in one of the three villages to discuss the future of shifting cultivation and food security.

2. Research location

Data collection was conducted mainly in Phou Hong Theung Village in Pak Beng District, Oudomxay Province in the northern part of the Lao PDR. Information was also collected in Chom Leng Gnai Village in the same district. Pak Beng District is located in the southwest of Oudomxay Province. The district covers 817.12 square kilometres, including a forest area of 554.02 square kilometres. In Pak Beng, agricultural production from shifting cultivation is the main source for food among the villagers because there is little land suitable for paddy fields. Recently, swidden lands are being converted into permanent farmlands for cash crops, such as corn for animal feed. In terms of the ethnic composition of the district's population, 85.79 percent of the people are Kmhmu⁷, 10.33 percent are Lao and Lue, and 3.88 percent are Hmong⁸.

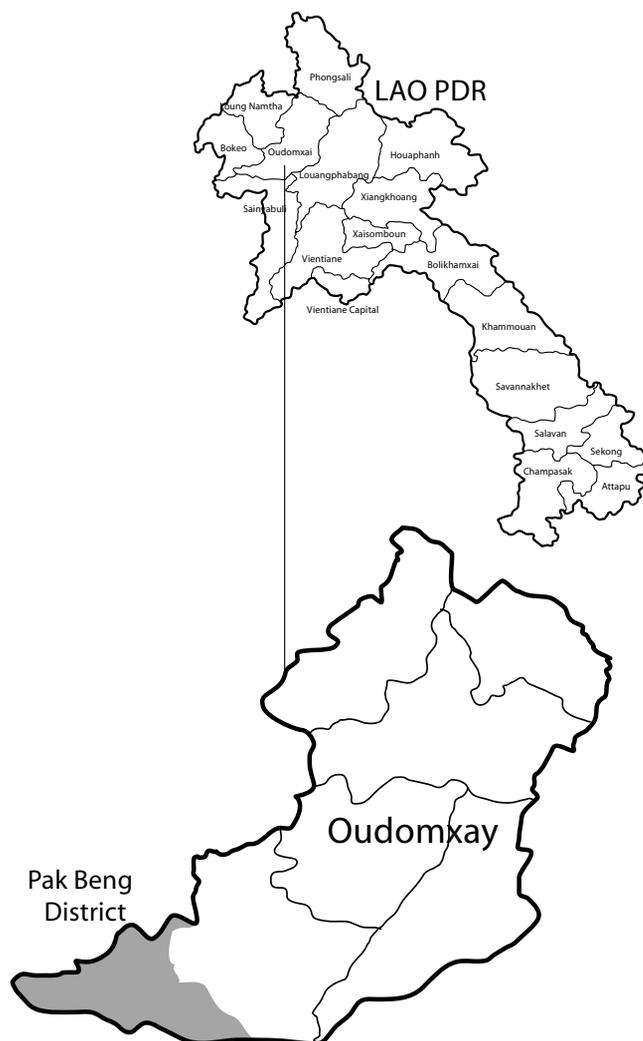


Figure 1. Research Location. Source: National Agricultural and Forestry Research Institute (2007)

In the late 1990s, the district government started to follow the state policy to relocate ethnic minorities living in mountainous areas to lowlands and areas along the main roads. They also merged villages with less than 50 households. As a result, the number of villages in Pak Beng District decreased from 69 in 2004 to 55 in 2008.

A significant event relating to land and forest use in the district took place in 1996, when the district government made a decision to build a small-scale hydroelectric dam with the power generation capacity of 155 kilowatts on the Houay Kasaen river. The purpose of the project was to supply electricity to the central part

of the district. A Chinese company was contracted to build the facility. Based on the decision of the district, approximately 5 000 hectares of the catchment of Houay Kasaen river were classified as a watershed forest. Shifting cultivation was banned in the area in 1997. At that time, 10 villages⁹ with the combined population of about 3 500 people in 600 households¹⁰ was customarily utilizing the land in the watershed area. After the establishment of the protected watershed forest, six villages continued to practice shifting cultivation in the area.

Phou Hong Theung and Chom Leng Noy Village

Phu Hong Theung Village is currently located in a mountainous area, approximately 13-15 kilometres from the centre of Pak Beng District. The village has been moved and merged with Chom Leng Noy Village into New Chom Leng Noy Village¹¹. As of March 2012, 380 Kmhmú' (Kmhmu'-Rok-Kroong) villagers lived in 56 families¹² in 38 households in Phou Hong Theung Village¹³. No paddy fields were seen in the village. All the households depended on shifting cultivation; the main crops were upland rice and Job's tear.

Phou Hong Theung Village was originally located in the centre of the watershed area for about 120 years up until 1999. The initiative of the district to prohibit agricultural cultivation in the watershed was triggered in 1997 when the decision to implement a hydropower project was taken. This decision seriously affected the community. When the hydropower project was approved, the land occupied by Phou Hong Theung villagers (the area enclosed by the dotted line in Figure 2) considerably overlapped with the watershed protection forest (the area enclosed by the bold line in Figure 2). In 1998, district authorities ordered the village to move to the roadside to prevent shifting cultivation inside the watershed area, and thus protect the watershed forest. The relocation of the village was also intended to follow the central government policy to move ethnic minorities from mountainous areas to lowland areas and along the major roads, as well as to merge small villages. Many Phou Hong Theung villagers disagreed with the order, but they had no choice but to resettle. However, in 1999, a year after they had finally decided to move to the roadside, as designated by the district government, Chom Leng Noy Village contested the move. They did not want Phou Hong Theung Village to move to the area, where they had long enjoyed the customary ownership to the land. In other words, Chom Leng Noy villagers did not want to share the land with Phou Hong Theung villagers. Consequently, Phou Hong Theung Village decided to settle on the land a little away from the main road.

After long negotiations between the two villages and with the intervention of the district government, Chom Leng Noy Village finally, though reluctantly, consented to allow the resettlement of Phou Hong Theung Village closer to them. In 2005, Phou Hong Theung Village moved to its current location.

While the two villages were disputing the relocation of Phou Hong Theung Village, the district implemented the LFA programme separately in both villages in 2000. This reinforced the boundary of the area of watershed forest. It was drawn on maps. Signs were put up in the areas to warn that they were watershed forests and that anyone practicing shifting cultivation in the areas would be charged with penalties. For Phou Hong Theung Village, a little land was left categorized as agricultural land (the shaded area on Figure 2). It was located near the old village and was too far from the current village location. What made all this worse was that there was not enough land available around the village for all the families. In addition, the soil of the land classified as ‘agricultural land’ was not good for agriculture.

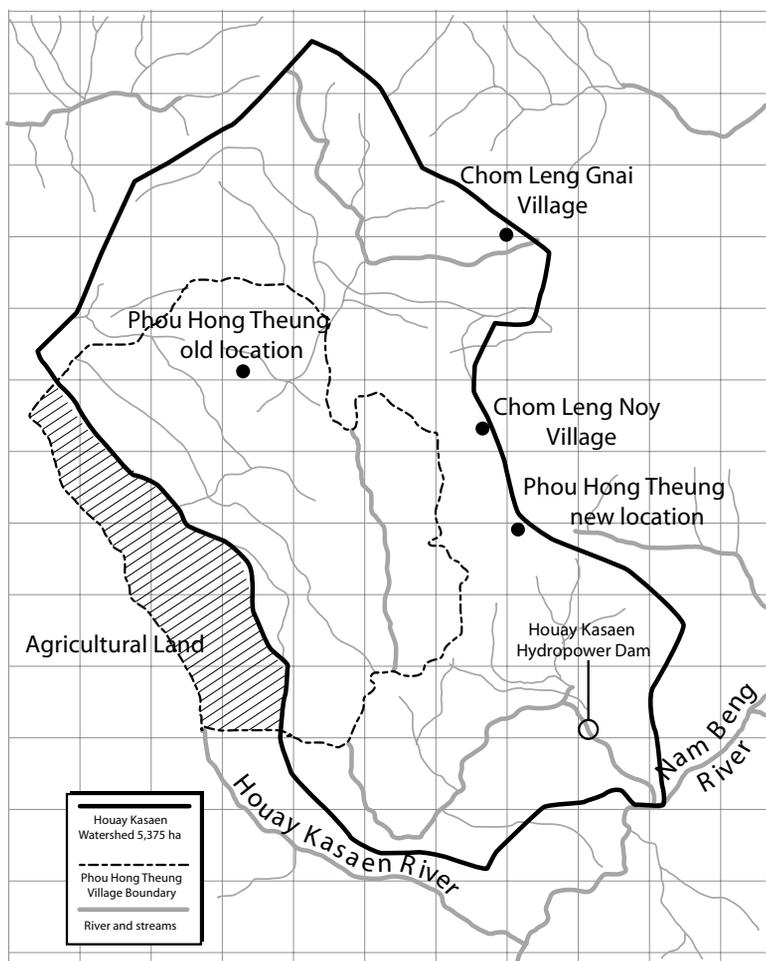


Figure 2: Map of the Houay Kasaen Watershed and target villages (2007)
Source: Pak Beng District's Forestry Office (adapted by the author)

Chom Leng Gnai Village

Chom Leng Gnai Village is located next to Chom Leng Noy Village. Chom Leng Gnai Village started in 1998 as a result of merging Chom Oy and Chom Leng Gnai Villagers. Some families from Mok Jon and Mok Khan Villages also moved to Chom Leng Gnai Village. As of February 2013, 516 Kmhamu' villagers lived in 82 families in 75 households in the village. Out of the 82 families, 79 families practiced shifting cultivation, while three families made their living by running a small business. In 2000 the district implemented the first LFA programme.

Major events at target villages

1996	Construction of the Houay Kasaen Hydropower Dam (155 KW) began.
1997	The district government banned shifting cultivation in the dam's watershed.
1998	The district ordered Phou Hong Theung Village to move outside the watershed area. Chom Leng Gnai Village was consolidated with other villages and the current Chom Leng Gnai Village was built.
1999	Phou Hong Theung Village was moved to the eastern end of the watershed area.
2000	Chom Leng Noy Village was moved to the roadside. The first LFA was conducted separately in three villages.
2005	Phou Hong Theung Village was moved again to the current location.
2006	Phou Hong Theung and Chom Leng Noy Villages were merged into New Chom Leng Noy Village.
2008	Mekong Watch facilitated participatory re-zoning of land and forest in New Chom Leng Noy Village
2009	Mekong Watch facilitated participatory re-zoning of land and forest in Chom Leng Gnai Village

III. The Kmhmu' people and shifting cultivation

1. Kmhmu' – 'farmers of forest'

The Kmhmu'¹⁴ consider themselves to be the indigenous people of the northern part of Indochina (Simana and Preisig 2003: 1; Simana and Preisig 2006: 79). Linguistically, the Kmhmu' belong to the Mon-Khmer sub-branch of the Austro-Asiatic language family. The Kmhmu' currently have the population of around 700 000 and live in Lao PDR, northern Vietnam, Xichuang Panna (Sipsong Panna) in China and in the border region of Thailand (Simana and Preisig 2006: 1).

The Lao PDR government officially recognizes 49 distinctive ethnic groups¹⁵. The biggest group is the ethnic Lao, but they constitute only 55 percent of the country's total population (DoS-MPI 2005). The Kmhmu' is one of the original, old indigenous people of Lao PDR. The population of Kmhmu' in Lao PDR is estimated to be about 610 000, which equals 11 percent of the total population of the country (DoS-MPI 2005).

The Kmhmu' depend mainly on agriculture, especially shifting cultivation, and supplementary hunting, fishing, and collecting NTFPs from forests and rivers. They prefer a cool and humid climate, rich forests and pastures and settlement locations near water sources. To the Kmhmu' people, forests are where they live and obtain food as well as the base of culture and religion (Simana and Preisig 1998; 2006). The Kmhmu' have long histories of conducting shifting cultivation and have a rich knowledge about forests. They have long collected NTFPs (Yokoyama 2004b: 19) and utilized them in various ways, including for subsistence and for generating income.

The Kmhmu' believe that the world can be divided into human and spirit spheres and that people belong to both (Simana and Preisig 1998: 7). Animism also plays an important role in their practice of shifting cultivation. Villagers dedicate alcohol to guardian spirits at their houses before going out to find agricultural land to be cleared, and offer food to land spirits on the first day of land clearing in the hope of safety of agricultural practices and a good harvest. Kmhmu' villagers in Chom Leng Gnai Village offer the following prayer to land spirits before they start clearing lands¹⁶:

Please lend us your land and forest.

We vow to return them after harvest.

We are asking for your permission in conformity with the traditional ritual.

Please give us a good crop of rice.

May we have enough to eat our fill.

Oh forest spirits! Oh mountain spirits!

Please help us celebrate a great harvest.

As showed in the prayer, for the Kmhmu', spirits are the 'owners' of forests or agricultural lands. Human beings merely borrow land from them for food production and so must return it to the owners after harvesting. Cultivated agricultural land then returns into forests again.

Crops planted in swidden

The main crop planted by the Kmhmu' in shifting cultivation is upland glutinous rice. It is categorized into early-ripening, mid-season and late-growing varieties. Seeds are handed down from one generation to another. In Chom Leng Gnai Village, at least three varieties of the early-ripening rice, three varieties of the mid-season rice and more than 12 varieties of the late-growing rice varieties were in use. Planting rice at different or staggered harvest periods was a way to hedge against the risk of poor harvests caused by, for instance, weather fluctuations.

Rice seeds cannot be preserved for extended periods of time. Therefore, all varieties of rice must be planted each year to keep seeds for cultivation the following year. Kmhmu' villagers explain that the variety of rice that grows the best in one year will not necessarily be the best variety the next year due to change in agricultural land or weather. Without a variety of rice seeds, they run the risk of not being able to handle the varying environmental conditions that each year brings. This way, the wealth of multiple generations of experiences with shifting cultivation has taught young Kmhmu' how to minimize risks and maximize the stability of crop production.

Along with upland rice, the Kmhmu' villagers planted an array of crops in the shifting cultivation fields. They include corn, taro, cassava, sweet potato, chilli, eggplant, pumpkin, sesame and beans. However, according to the elderly villagers, the number of crop varieties has decreased. For example, millet, which is traditionally used for making alcohol, is now rarely planted.

Biological diversity of secondary forests

When land is used for shifting cultivation, after harvest, it is left fallow for a few years. After a year, the land becomes home to tall grasses and ultimately it turns into a secondary forest, producing NTFPs such as bamboo shoots and mushrooms. Later, several years after the initial harvest, when vegetation has regenerated to a sufficient level, the land is selected for cultivation again.

Secondary forests resulting from shifting cultivation become home to a variety of wild flora and fauna, depending on the location and conditions. Secondary forests offer various products, which help to support the lives and livelihoods of Kmhmu' villagers. They can sometimes serve as substitutes for rice and can also be used as a means of generating cash income. Roots and tubers collected from a secondary forest (e.g., yam,

taro and cassava) are considered good substitutes during emergencies or for poorer households (Stoeber et al. 2013: 28). It is important to understand that fallow land in shifting cultivation is still productive and supports the lives of upland farmers.

Food availability and shifting cultivation

As mentioned above, both agricultural production in swidden and wild plants collected in secondary forests are an integral part of the food security among Kmhmu' villagers living in upland areas in Lao PDR. This was clearly the case with the three villages I studied. Below are examples of menus of the villagers' dinner tables in Chom Leng Gnai Village.

Example 1: The Bounthans' dinner on 20 November 2011



Figure 3. The Bounthan family's dinner on 20 November 2011.

Photo: Satomi Higashi

Menu and ingredient	How to obtain ingredient
1. Gourd vine soup <ul style="list-style-type: none"> • Gourd vine • Ginger • Spring onion • Salt and MSG 	<ul style="list-style-type: none"> • Planted in an upland rice field • Bought at a small village shop
2. Charcoal-grilled bamboo rat <ul style="list-style-type: none"> • Bamboo rat • Salt and MSG 	<ul style="list-style-type: none"> • Caught with traps on an upland rice field • Bought at a small village shop
3. Baked sweet potato <ul style="list-style-type: none"> • Sweet potato 	<ul style="list-style-type: none"> • Planted in an upland rice field
4. Steamed sticky rice <ul style="list-style-type: none"> • Sticky rice 	<ul style="list-style-type: none"> • Planted in an upland rice field

This is a typical dinner menu of families living in Chom Leng Gnai Village. Bamboo rats are one of the major vermin that caused damage to upland rice and other crops. However, they are also a protein source for Kmhmu' villagers. Other ingredients, except for salt and MSG, were harvested from the family's upland rice field.

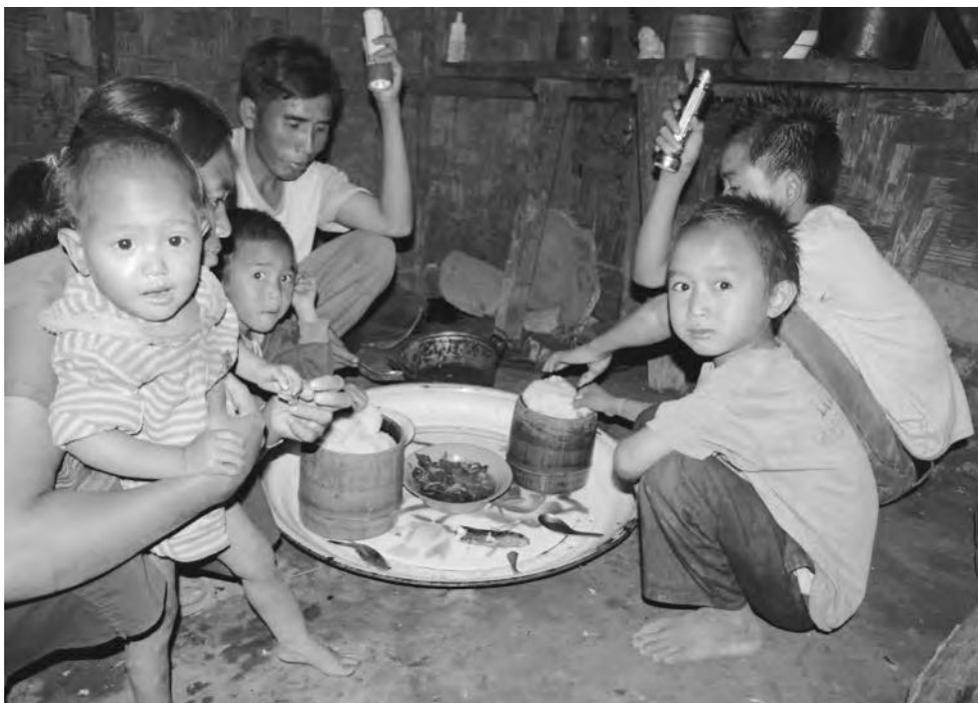


Figure 4. The Bounthan family at dinner. Photo: Satomi Higashi

Example 2: The Bounserms' treat for neighbours on 19 November 2011



Figure 5. The Bounserm family's treat for neighbours helping with the rice harvest.
Photo: Satomi Higashi

Menu and Ingredient	How to obtain ingredient
1. Beef stew <ul style="list-style-type: none"> • Beef • Rice crumb • Vegetables (<i>mak fat</i> and kidney bean) • Chili • <i>Mak khaen</i> (Sichuan pepper) • Salt and MSG 	<ul style="list-style-type: none"> • Bought from a villager • Collected from rice husking • Planted in an upland rice field • Planted in the family's kitchen garden • Collected in a secondary forest • Bought at a small village shop
2. Vegetable soup <ul style="list-style-type: none"> • <i>Mak thuung</i>, kidney bean • Lemongrass and ginger • Green vegetable • Salt and MSG 	<ul style="list-style-type: none"> • Planted in an upland rice field • Planted in the family's kitchen garden • Bought at a small village shop
5. Steamed sticky rice <ul style="list-style-type: none"> • Sticky rice 	<ul style="list-style-type: none"> • Planted in an upland rice field

The second example is a treat for the neighbours who came to help the family in harvesting rice. In the three villages, as well as in most of the villages in Pak Beng, villagers still had the custom of exchanging labour with each other for agricultural practices, such as planting and harvesting rice together. Host families usually provide meals and rice wine for helpers in return. On one particular day, the host family prepared lunch for 16 families who helped them harvest rice on a field located a 30-minute walk away from the village. Though the family bought beef for a special treat from another family in the village, the rest of the ingredients, except for salt and MSG, were harvested from their swidden fields or collected from the forest.



Figure 6. The Bounserms' rice harvest. Photo: Satomi Higashi

In both cases, most of the ingredients came from the family's upland rice fields, kitchen gardens and secondary forests. These examples illustrate how shifting cultivation ensures food security to the local Kmhmu' villagers.

Land use in Phou Hong Theung Village

In Phou Hong Theung Village, one cycle of shifting cultivation usually takes six to eight years. Swidden rice production starts with land selection in February and continues until rice harvest in December. After the rice is harvested, the land is left

fallow. In secondary forests, NTFPs such as bamboo shoots, mushrooms and small animals are collected. The same land is used for swidden again after leaving it fallow for six to eight years—when grasses have disappeared from the land and it again holds sufficient nutrients to support cultivation.

In Phou Hong Theung Village, instead of letting individuals choose their swidden, villagers every year ask respected people in the village, such as elders and knowledgeable authorities to select one to three plots of land for cultivation. Selection is based on how long the land was left fallow; conditions of the land, e.g., the size of trees and the soil quality and the experience of these respected people. Once patches of land are chosen, village authorities and elders distribute them to each household according to the workforce available at each household. If a family has cultivated any part of the selected land in the past, they could claim priority right to cultivate the part over other villagers.

Land is thus distributed to individual families, but it does not mean it is ‘privately owned’ by them in the usual sense of the word. Villagers could claim the right to cultivate a certain area during land distribution processes. They are also allowed to transfer distributed land to their relatives. However, they are strictly prohibited from transferring the land to people outside the village, even if they are relatives. However, villagers can transfer their rights to use the land to other villagers or to another family in the village for reasons such as the lack of workforce, but without charging any rent.

Among the Kmhmu’ people studied, the customary ownership of land is a mix between common property, i.e. a resource communally managed, and private property, i.e. the exclusive right to use or dispose a certain piece of land. This system of land use made it possible for the Kmhmu’ to have a steady harvest every year and to flexibly adjust use of and access to land to social and environmental changes such as population fluctuations.

The meaning of ‘forest’ and ‘land’ for swidden farmers

The Kmhmu’ do not make a categorical distinction between ‘forest’, where trees grow, and ‘agricultural land’, where farming is practiced. They differentiate forest and land according to stages in the shifting cultivation cycle. In Kmhmu’ language, swidden land is called *hre’* and fallow fields *hre’ reeng*. If *hre’ reeng* is abandoned for many years, it becomes *hre’ nong* (‘regenerated forest’) and then *bri’ nong* (‘old forest’). And then, in due time, Kmhmu’ villagers clear *bri’* (‘forest’) and develop *hre’* (‘agricultural land’). In short, this year’s land becomes next year’s forest. Until a land is selected for swidden, it remains part of the ‘forest’. When asked where their agricultural land is, a Kmhmu’ villager may point to where they practice swidden. However, if the same villager is asked the same question again in the following year,

she/he may point to another area, which was a forest in the previous year, and their previous year's agricultural land has become a forest.

However, this does not mean that Kmhmu' villagers have no concept of 'territory' or 'border'. In Phou Hong Theung Village, villagers have been maintaining a spirit-protected forest before the district conducted the LFA programme. Villagers may not know the area of the conservation area in hectares but they could recognize it as the designated space by using landmarks such as 'between that stream and that hill'. When the soil of the forest was not suitable for rice cultivation, the villagers left it untouched for the collection of NTFPs, such as bamboo shoots, by prohibiting burning and logging. The villagers also have a strong reverence for a cemetery forest where collecting NTFPs and firewood is strictly prohibited.

IV. The impact of the LFA programme on relocated swidden farmers' livelihood

The LFA programme was usually implemented in the following eight stages¹⁷:

1. Preparation
2. Decisions on village borders and land-use classification
3. Data collection and analysis
4. Land and forest distribution
5. Agricultural land survey
6. Agreement over forest and land use with villagers and transfer of rights to villagers
7. Promotion of land management
8. Monitoring and evaluation (MAF and NLMA 2010).

When the LFA programme was implemented in Phou Hong Theung Village in 2000, six district officials were in charge. They followed a management plan and classified the village territory into residential areas, agricultural land, protection forest (for preserving water sources), conservation forest (for preserving biodiversity), production forest (for timber production), and reforestation areas (for recovery of natural forests). However, they spent only seven days at the land and forest classification stage due to financial and technological constraints. Rights to use agricultural land were not transferred to households. No projects were carried out to promote agriculture and no monitoring took place. This hasty land and forest classification caused a significant lack of agricultural land, and consequently rice, in Phou Hong Theung village. Since most of the village land was classified into protection forest, shifting cultivation was banned there.

Table 2 compares land and forest categorization of Phou Hong Theung Village with three other villages. The LFA programme was conducted in the four villages at about the same time, i.e., between 1999 and 2000. Statistics on the shortage of agricultural land were based on the assumption that each family used 1.5 hectares of land per year for shifting cultivation, and that villagers kept a seven-year cycle, which villagers said was needed to maintain the soil quality. The shortage of agricultural land in Phou Hong Theung Village amounted to 416.4 hectares and was more serious than in the other villages (see Table 2 below). Villagers were not able to access much of the agricultural land that was designated to them in the LFA programme because it was very far from their current place of residence.

Village name	Number of households	Agricultural land			Forest		
		Necessary	LFA classification	Shortage	Protection	Conservation	Production
Phou Hong Theung	58	609.0	192.6	416.4	1 030.0	0	0
Chom Leng Gnai	54	567.0	312.2	254.8	316.8	94.0	0
Chom Leng Noy	48	504.0	223.5	280.5	281.1	100.0	108.0
Long Saen ¹⁸	47	493.5	93.9	399.6	859.6	76.7	0

*1: Data from 2000, when the LFA programme was conducted.

*2: Based on the assumption that each family uses 1.5 ha of land per year¹⁹ with a seven year cycle of shifting cultivation.

Source: LFA documents (DAFO 2000) and the author's interviews with villagers.

A series of events in Phou Hong Theung Village over the past decade showed that many land use policies were implemented in conjunction with the LFA programme. For instance, electricity development was pushed forward because of the Lao PDR government's policy to raise the country's electrification rate to 90 percent by 2020. District authorities tried to protect the watershed forest to produce electricity for urban areas in the district. On the other hand, people in the rural area, including Phou Hong Theung Village, who were affected by the watershed management policy did not receive any benefit from the hydropower dam²⁰.

1. Responses and resistance to the forced policy

Phou Hong Theung villagers did not remain passive. They made efforts to cope with the situation and used four main strategies to survive the hardship that had been imposed on them by the LFA programme. Firstly, some villagers moved back to where they used to live before the relocation. Some families chose to go back even though returning to their former residence was against the policy of the district government. As of January 2007, seven households, including four who had refused to move from the beginning, lived at the original location of the village inside the protected watershed. Secondly, some villagers decided to rely on their relatives in other villages and moved and rented land there with their help. In my interview with the Phou Hong Theung Village head in 2007, four households moved out in one year due to the lack of agricultural land. In other words, shortcomings in land and forest zoning resulted in further internal migration. Thirdly, some villagers chose to stay in the new village location and rent land in neighbouring villages. These villagers had to pay rent in the form of cash, alcoholic drinks, goats, pigs and tobacco because land was a common property only among people living in the same village. This is how they continued to practice swidden cultivation. However, rental costs placed a great burden on them. These three strategies which the Phou Hong Theung villagers had to resort to clearly shows that the implementation of the LFA programme reduced the amount of agricultural land available to the villagers.

As a fourth strategy, those villagers who were not able to find agricultural land outside the watershed forests tried to resist the state-imposed LFA programme. One form of resistance was to ignore the official system of land and forest classification. This was not a viable means when seen in the context of the political and social condition of Lao PDR, where it was next to impossible for the villagers to openly speak out against district officials. Therefore, many Phou Hong Theung villagers started to cultivate swidden 'illegally' in the forests without telling district officials. Villagers cultivated land the same way as before the implementation of the LFA programme, when cultivation was not illegal. The following statement made by one Phou Hong Theung villager clearly indicated the desperation out of which the villagers decided to re-start shifting cultivation in the protected watershed forests:

"We haven't had a place to cultivate swidden after forests were designated as watershed forests. We do not have enough rice. We just had to make swidden in watershed forests again despite a ban in order to survive"²¹.

As most villagers ignored the rules to preserve the watershed forests and chose to observe the customary land ownership rather than the new land allocation, it was difficult for local authorities to locate, let alone crack down upon, all illegal swidden cultivation. In the case of the Phou Hong Theung Village, the LFA Programme not

only led to problems such as agricultural land and rice shortages among Kmhmu' villagers, but also led to destruction of watershed forests. Thus, the LFA programme achieved neither forest preservation nor greater agricultural production even though that was originally promised.

In some places, villagers took a more audacious approach. When asked whether swidden (*bre'* in Kmhmu' or *hai* in Lao) were being cultivated, villagers in one of these places answered no. However, smoke from burning slashed trees and plants were clearly visible on mountainsides. When asked again about the smoke, they said, "That is just cultivating rice fields (*souan khao* in Lao)." Whether they used the negative sounding word (in the ears of government officials), 'swidden (*hai*)', or a more 'positive' counterpart, 'field (*souan*)', what they were doing was the same: They were practicing shifting cultivation in protected watershed area. Thus, substituting the word 'swidden (*hai*)' with 'rice field' (*souan khao*) was another tactic used by the Phou Hong Theung villagers to resist the system forced upon them. Changing the words gave more ambiguity within which they were able to manipulate. District officials knew only too well that shifting cultivation could not be easily taken away from the villagers. Changing an explanation from 'swidden' to 'fields' made it possible for the district officials to overlook the villagers' shifting cultivation without being blamed for doing so. The lexical play of the villagers also gave the officials space to balance between their duties in the fragmented bureaucratic system on the one hand and the reality of the impacts of banning shifting cultivation on the other hand.

While arbitrary definitions of 'swidden' caused confusion in the land policy of Lao PDR in some domains, it left room for district officials and villagers to exercise their own power to interpret the rules and settle local conflicts peacefully. It also became clear that even if swidden was defined better and rules strictly enforced, confused land use and shifting cultivation controls would not be easily resolved (Higashi 2009: 55-56). It was apparent that resolving these issues permanently required informed participation by all stakeholders.

V. Alternative approaches for land and forest use planning

1. Rapid changes in land and forest use in Lao PDR

Land and forests are going through rapid changes in Lao PDR. A mere suspension of the LFA programme and recovery of 'traditional' land use will not be enough to defend the right of the villagers over land and forests and to their sustainable management. As the population increases and integration into a global market economy accelerates, land, including agricultural land, is becoming increasingly

scarce in Lao PDR. Shortage of agricultural land is becoming a serious issue, too. Therefore, forest preservation is not the foremost concern of the villagers when they use land. When the population of a village grows and more land is needed, villagers may start cultivating traditionally protected areas, such as areas around water sources or riverbanks. Cultivation of protected areas will increase the burden on the environment. In addition to these changes, development projects, industrial plantations and cash crop cultivation are expanding in rural parts of the Lao PDR at a great speed. Village borders need to be determined and the law must support the land rights of villagers. This will ensure the protection of the rights of villagers from foreign companies and development projects ensuring sustainable livelihoods for the communities and enabling the villagers to manage forests on their own.

2. Challenges in seeking alternative approaches

Some international NGOs and bilateral aid agencies are trying new approaches to protect the rights of villagers from land grabs by large-scale development and investment projects in Lao PDR. Rather than opposing the LFA programme, they are trying to improve the method of implementing the programme because they respect the way the villagers use land.

The way Mekong Watch responded to the situation in Phou Hong Theung Village, which represented the situation in Pak Beng, could offer an example of an alternative approach to watershed forest management. When I found out what was transpiring in Phou Hong Theung Village, I realized that first of all the actual land use by villagers must be studied and understood. And based on such understanding, a system must be established to let the villagers participate in local land use and forest preservation in meaningful ways. Through discussions with and advice from my colleagues, I drafted a plan to carry out the following activities:

- Advising local officials on land and forest policies in Lao PDR
- Conducting research on villagers' land and forest use near watershed forests
- Monitoring the environment around watershed forests
- Helping local authorities and villagers to set up a multi-party watershed forest management committee
- Facilitating changes in the LFA under coordination and supervision of a management committee
- Providing training to villagers on environmental protection.

After talking several times with both the district officials and villagers, they agreed to participate in the evaluation of the LFA programme, especially the impact of the programme on local land use. On 27 February 2007, the 'Pak Beng District LFA

Evaluation Meeting' was held at Pak Beng DAFO. Six representatives from three villages, including Phou Hong Theung Village, and eleven local officials from forestry-related offices, including the Forestry Office, the Land Management Bureau, the Environment Bureau and the Planning Bureau came to attend the meeting. Prior to the evaluation meeting, villagers in each village held a preparatory meeting to share their experiences regarding the problem of land and land use. At the end of the meeting, district officials and villagers worked together on a chart to map out the problems of land use, their cause and how to solve them. In short, the chart represented the understanding of the district authorities and villagers about what was happening to local land use in and around the three villages. Figure 7 below recaptures the chart created by the district officials and villagers.

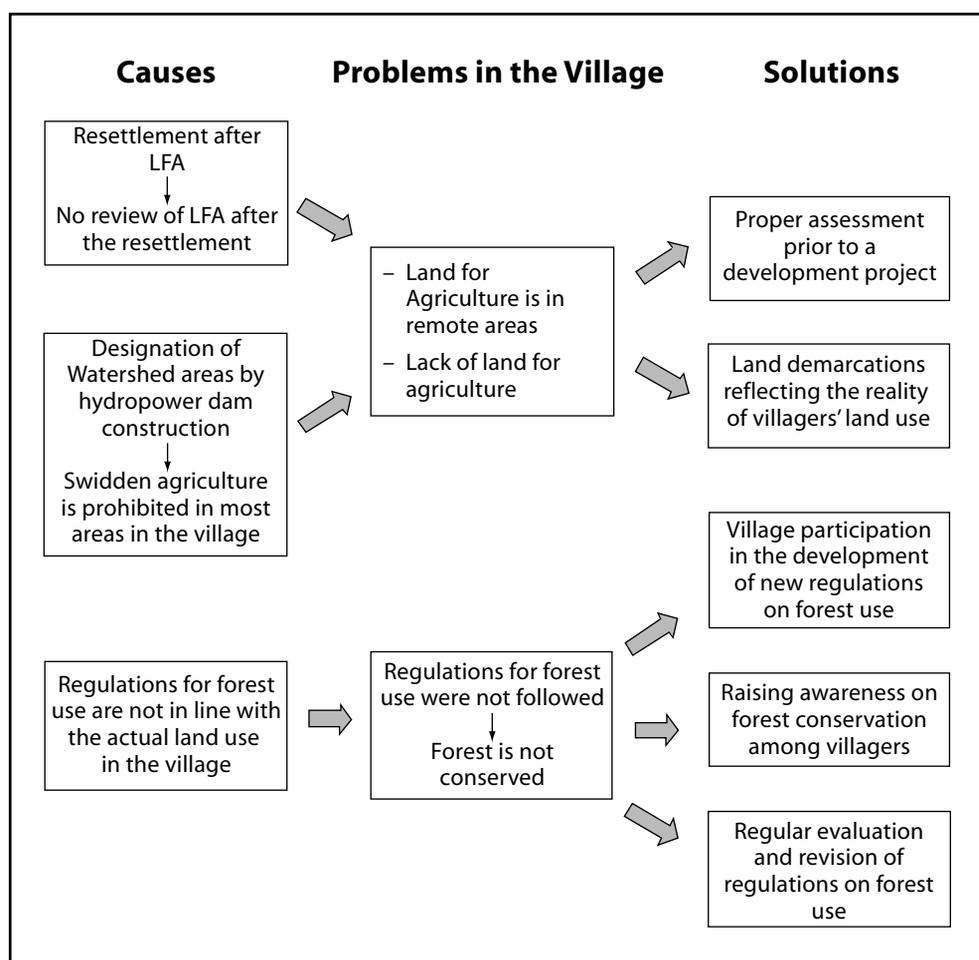


Figure 7. Problems in land use, their causes and solutions

Source: Mekong Watch (2007); edited and translated by the author

Figure 3 indicates that both villagers and officials in Pak Beng District understood that the district policies on dam construction and village relocation had resulted in the lack of agricultural land. Figure 3 also shows that top-down rules on forest use were not in line with actual land use. That was the reason why these rules were disregarded by the villagers and failed to protect the environment around the watershed area.

Based on this agreed-upon analysis, I proposed to the district authorities to consider establishing a participatory watershed management system. On 7 July 2007, Mekong Watch invited two government officials to Pak Beng and organized a workshop on 'Land Use Planning' at the Pak Beng Agriculture and Forestry Office. One was a central government official from the Forest Inventory and Planning Division, Department of Forestry; and the other was a local official from the Huaphan Provincial Agricultural Forestry Office, who had participated in the 'Shifting Cultivation Stabilization Project' of the Asian Development Bank (ADB). In the workshop, the central government official gave explanations on what was being discussed at the central administration level with regard to shifting cultivation and clearly stated, "A debate is going on about sustainable shifting cultivation. It is not realistic to ban all types of shifting cultivation. Shifting cultivation should be permitted within areas designated as agricultural land"²². The Huaphan Province official, based on his experiences with ADB's watershed management project, suggested that regulations for sustainable watershed management should be established. He was particularly talking about the idea of organizing a management committee involving stakeholders such as local villagers based on a case analysis at Huaphan Province.

After having encouraged district officials and villagers into coming up with a mutual analysis on the current situation on land and land use in Pak Beng, as well as enhancing the understanding of district authorities over state policies relating to land use, watershed management and shifting cultivation, I decided to move to the next stage. In October 2007, with Mekong Watch's support, district officials and villagers agreed to establish a watershed management committee. Drawing Huaphan Province's experiences, a committee came to have a multi-stakeholder structure. It comprised representatives from eight villages that owned land in the watershed forests and local officials from offices in charge of watershed forest management. Establishment a committee opened a channel to improve local land use. First, it created space for communications and dialogues between local authorities and villagers. Until then, there was no opportunity for villagers and officials to come together to discuss land and forest use with each other. Using the committee as a platform, they were now able to consult with each other on annual plans for forest preservation and land use, and deal with land-related troubles, which may occur between villages or between villages and administrative offices. Secondly, with regard to shifting cultivation, if a village needed to secure swidden in watershed forests, it became possible now for villagers to submit

a land-use plan to the committee. It became possible to cultivate swidden in some parts of the watershed forests if all the other villages and district authorities approved the land-use plan at a committee meeting in reference to the rules enacted by the committee. Villagers no longer had to illegally make swidden as long as they followed the rules set by villages and the district for the preservation of forests near rivers and water sources.

Then as a critical development, in 2008, Pak Beng District agreed to reclassify land and forests in five villages, including New Chom Leng Noy and Chom Leng Gnai villages²³, where the LFA programme had been implemented without much consideration for the actual land use. Through the reclassification, the district made efforts to secure agricultural land required to maintain a healthy shifting cultivation cycle, particularly a sufficient fallow period. Figure 8 below is a map to illustrate the first LFA programme, which was conducted in 2000. In this map, the village's land on the west side (to the left on the map) on the major road was designated as a conservation forest and agricultural practices were allowed only in the village's agricultural land on the east side (to the right on the map). It is easy to assume that villagers could not maintain sustainable fallow periods of shifting cultivation because the area is too small to meet the requirements of the entire village.

Figure 9 is a map illustrating the results of the second LFA programme conducted in 2008 under the supervision of a watershed management committee and with the support of Mekong Watch. The second LFA programme produced completely different results. First, a conservation forest was designated along the river and streams, where water sources were abundant. The designation was kept in the most critical spot and so the area was kept relatively small. The rest of the land on the west side of the river was re-assigned as agricultural land. An important result was that shifting cultivation was permitted. As the area was large enough, sustainable shifting cultivation was made possible. Secondly, a protection forest was also assigned around the road. However, as compared with the first LFA programme in Figure 8, the area of protected forest was considerably reduced and concentrated around the spot that was environmentally critical. A large amount of land along the road was left for agricultural practices, including shifting cultivation.

The second LFA programme also aimed to recognize legal rights of the villages to manage land so that the villagers could manage forests in accordance with conditions that were unique and variable at each forest. Changes in the village population and land use were factored in and land was classified in flexible ways to accommodate unforeseen changes. As some parts of watershed forests, which were needed for swidden to allow a sufficiently long fallow period, were classified as 'agricultural land' (for instance, on the left side of the river in Figure 9), villagers are

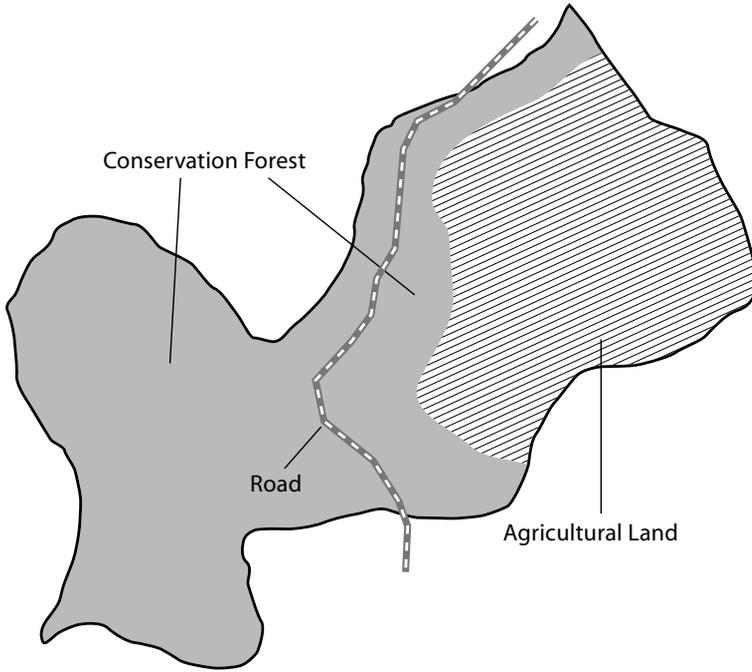


Figure 8: Land and forest allocation map of Chom Leng Gnai Village (2000)
Source: Phengsopha and Morimoto (2003: 9)

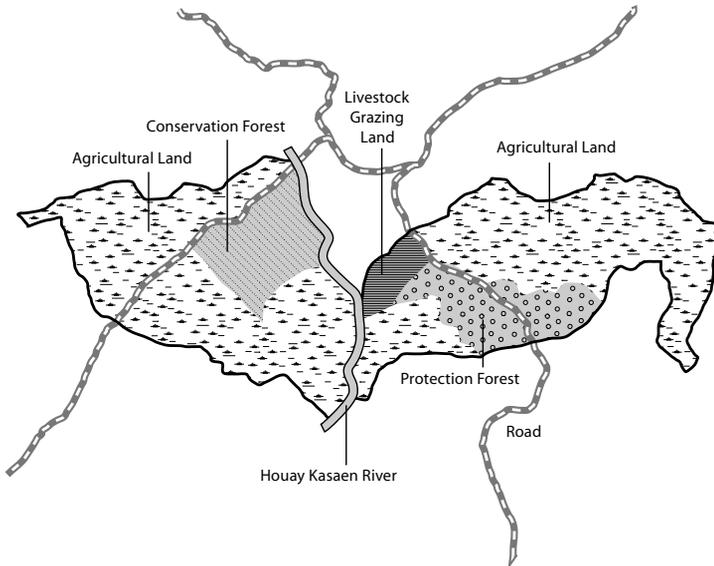


Figure 9: Land and forest allocation map of Chom Leng Gnai Village (2008)
Source: Pak Beng District's Forestry Office (adapted by the author)

able to use the land legally to practice shifting cultivation. Moreover, to make land use more flexible, the district placed the responsibility of land use upon the villages so that they could decide how to use agricultural land. At the same time, the parts of the watershed forests which should be protected as either protection forests or conservation forests were appropriately classified to increase the possibility of protecting the local environment, which was supposed to be one of the main goals of the LFA programme. To sustain the outcomes of the second LFA villages and district officials agreed to meet annually to discuss issues around land use designated under the second LFA so that the district could also continue to perform their administrative and management obligations.

In the case of Mekong Watch's Watershed Management Project, by establishing a watershed management committee and reviewing land-use categories, a forum for the local administrative officials and villagers to work together to resolve land use and forest preservation issues was created. The project set a precedent for integrating the traditional land-use system of the swidden farmers into the legal framework and established a system in which local people could participate. The Mekong Watch project is also trying to deliver the actual land-use information of the local people to decision-makers at the national level by producing a documentary film on the life of swidden farmers in the mountainous area of Lao PDR. In order to improve the autonomy and sustainability of a series of interventions relating to local land and agriculture, there are still some challenges, such as heightening villagers' understanding and appreciation of forest-use rules and watershed management activities and securing a budget for the district to continue its activities that need to be resolved. However, this case shows the potential of external actors such as NGOs to play a role in improving land and forest management systems and upholding the land rights of local communities.

In Lao PDR, where political power of civil society is weak, external actors, such as NGOs, have the potential to balance the power relationship between the government and the local communities. On the other hand, more confusion in regard to land and forest use can result if these external actors impose their way of doing things. Inappropriate intervention can also widen political imbalance and worsen problems. Funding from external actors can also be used by government officials or local communities for activities that are unrelated to or undermine conservation objectives. Moreover, continuing projects may become an end in themselves, regardless of whether the projects are meeting their objectives or not. To make use of NGO expertise to implement integrated approaches and improve the forest management system, such organizations must carefully consider the consequences of any intervention.

3. Emerging issues

After the Mekong Watch project ended and I had stopped visiting Pak Beng regularly, in March 2013, New Chom Leng Noy and Chom Leng Gnai villages faced a new challenge, a change of land use associated with the expansion of the villagers' investment in cash-crop cultivation. Since 2010, the cultivation of job's tears under a contract with a Chinese company started to expand in Pak Beng. In 2012, in Chom Leng Gnai Village, 70 out of the total of 82 families started to plant job's tears on 34 hectares of land. A recent survey (Pak Beng District and Mekong Watch 2014) found that 37 out of 42 interviewed households cultivated job's tears in Chom Leng Noy Village. Some villagers also grew corn for animal consumption to earn cash income. In my interviews with villagers and Pak Beng DAFO in February 2014, both villagers and district officials said that the introduction of *mak nam man khoua* (*Plukenetia volubilis*), a plant to be processed into health foods and cosmetics, was also being considered for cultivation.

In Oudomxay Province, planting corn for animal feed became a boom in 2004, followed by rubber plantations. Large areas of shifting cultivation land were converted into cash-crop farms and industrial plantations. In 2012-2013, Chinese-funded contract farming of bananas and watermelons started expanding, too. In areas where these crops are planted, there are growing concerns about soil degradation and land erosion caused by continuous cropping and heavy use of chemical fertilizers. If land productivity decreases or market prices drops, villagers may want to give up cash crop cultivation. However, it might be difficult to turn back to the production of former crops, such as rice, due to serious soil degradation.

A land and forest re-zoning conducted through the support of Mekong Watch aimed to maintain at least a seven-year fallow cycle of shifting cultivation. However, if villagers continue to use the same area of agricultural land for upland rice cultivation and use additional land for cash-crop cultivation, the fallow cycle will have to be shortened, which will cause land degradation and yield reduction.

VI. Recommendations: The future of shifting cultivation in Lao PDR

Shifting cultivation, when practiced with a sufficient fallow period allowing adequate return of vegetation, has historically been a sustainable method that also works to protect forests and contribute to the conservation of biodiversity. As such, shifting cultivation has played a significant role to ensure food security for residents living in the Mekong region. It has also fostered biodiversity in secondary forests. The values of shifting cultivation should be re-evaluated on these merits, rather than simply

stigmatizing it as a cause of environmental destruction, e.g., climate change. In addition, conservation of local crop varieties is an urgent issue, to which shifting cultivation can make a critical contribution.

At the same time, land suitable for shifting cultivation has become scarce in recent years in both absolute and relative terms due to shortening cultivation cycles across the region. In Lao PDR, these developments are driven by both internal factors, such as population growth and a shift to cash crop cultivation by more local residents; as well as by external factors, such as the village relocation projects, the Lao PDR government policy to restrict shifting cultivation, large-scale infrastructure development, and the creation of industrial plantations. When the government and business sector make or change policies related to land and forest or design and implement development projects, it is also essential to take the land and forest use practices of the local people into account and involve them in decision-making. Introduction of climate change schemes, such as REDD, must be premised on considerations of land use by local people, including shifting cultivation.

In addition, the Lao PDR government has been promoting a shift to cash crop cultivation, especially among local communities engaged in shifting cultivation. However, risk-related information, such as fluctuations in market prices and negative environmental impacts, are not properly communicated to growers. A rapid shift towards cash-crop cultivation without addressing these risks threatens the food security of the local people. On the other hand, with an increase in the demand for cash among the villagers and pressure and opportunities from government and investors, cash crop cultivation has also expanded. The introduction of cash crops should have been well designed both at the district and village levels and should have been based on careful consideration about how to achieve a balance between income generation and food security of the villagers²⁴. What is of paramount importance, whether shifting cultivation is continued or other land-use methods are adopted, is that the local people should be able to select methods of land use that they deem most suitable for themselves and local needs. On that basis, when villagers introduce cash crop cultivation, it is advisable to select forms of agriculture, which leave opportunities to turn back to food production, when they cannot gain enough benefit, and/or maintain some land for shifting cultivation to ensure local food security.

References

- Akasaka, M. 1996. *Jibuntachi no Mirai ha Jibuntachi de kimetai* (We Want to Decide Our Own Future). Japan International Volunteer Center. Tokyo.
- Baird, I.G. & B. Shoemaker. 2005. *Aiding or Abetting?: Internal Resettlement and International Aid Agencies in the Lao PDR*. Probe International. Toronto.
- Baird, I.G. (2010). Quotas, powers, patronage and illegal rent-seeking: The political economy of logging and the timber trade in southern Laos. *Forest Trends*. Washington, DC. Trends.
- Chamberlain, J. 2001. *Participatory Poverty Assessment, the Lao PDR*. ADB, SPC, National Statistics Center. Vientiane.
- Department of Environment (DOE), Water Resource and Environment Agency (WREA) of the Lao PDR. 2010. *Strategy on Climate Change of the Lao PDR*. Vientiane.
- Department of Forestry, Ministry of Agriculture and Forestry of the Lao PDR (DoF-MAF). 2005. *Forest Strategy to the Year 2020 of the Lao PDR*. Vientiane.
- Department of Statistics, Ministry of Planning and Investment (DoS-MPI). 2005. *Census of Population and Housing 2005*. Vientiane.
- Dwyer, M. 2007. *Turning Land into Capital: A Review of Recent Research on Land Concessions for Investment in Lao PDR*. Land Issues Working Group. Vientiane.
- Erni, C. 2009. *Shifting Cultivation and Climate Change*. International Work Group for Indigenous Affairs (IWGIA). Bangkok.
- Evrard, O and Y. Goudineau. 2004. "Planned Resettlement, Unexpected Migrations and Cultural Trauma in Laos." *Development and Change* 35(5): 937-962.
- UN Food and Agriculture Organization (FAO), United Nations Development Programme (UNDP), and United Nations Environment Programme (UNEP). 2008. *UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD): Framework Document 20 June 2008*. <http://www.cbd.int/doc/meetings/tk/redd-ilc-01/other/redd-ilc-01-un-en.pdf>
- Fujita, S. 2012. "Raosu niokeru Shinrin Hozen oyobi Jizoku Kanou na Shigen Riyou ni kansuru Kakushu Seisaku." ("Policies related to Forest Conservation and Sustainable Resource Management in Lao PDR"). Japan Forest Technology Association. *Shinrin Gijyutsu* (Forest Technology). No. 848, pp. 34-48. Tokyo.

- Fujita, Yayoi, and K. Phengsopha. 2008. "The Gap between Policy and Practice in Lao PDR". C. Colfer, G.R. Dahl, and D. Capistrano. *Lessons from Forest Decentralization: Money Justice and the Quest for Good Governance in Asia-Pacific*, pp. 117-131. Earthscan. London.
- Goudineau, Y. (Eds.). 1997. *Resettlement and Social Characteristics of New Villages, Basic needs for resettled communities in the Lao PDR, An OSTOM Survey. Vol. 1 and 2.* Supported by UNESCO and UNDP.
- Government of Lao (GoL). 1990. *Lao People's Democratic Republic Tropical Forestry Action Plan (First Phase).* Ministry of Agriculture and Forestry, Vientiane.
- Higashi, S. 2009. "Mori to Tochi wo Bundan suru Hakari" ("Measures' dividing Forest and Land"). Mekong Watch ed. 'Hakaru' Koto ga Kurashi ni Ataeru Eikyo (The Impacts of Quantification on Life). Mekong Watch. Tokyo.
- _____. 2013. "Shifting Cultivation and Upland Life in Northern Laos". Mekong Watch ed. *Nature and Our Future: The Mekong Basin and Japan.* Mekong Watch, Tokyo.
- Hyakumura, K. 2005. "Laosu no Tochi Bumpai Jigyo ni taisuru Chiiki Jumin no Taiou: Savahnakheth Ken no Kyuryo Chiiki niokeru Jirei" ("Local People's Reaction against the Land and Forest Allocation Programme in Laos: A Case Study in the Hilly Area in Savahnakheth Province"). *Ringyo Keizai Kenkyu (Studies on Forestry Economy)*. Society for Forestry Economy, 51(1), pp. 79-88.
- Japan International Volunteer Center. 2006-2007. *JVC Case Studies.* Tokyo.
- Kenney-Lazar, M. 2013. *Shifting Cultivation in Laos: Transitions in Policy and Perspective.* The Secretariat of the Sector Working Group for Agriculture and Rural Development (SWG-ARD), Vientiane.
- Kitamura, N. 2003. "Sinrin no Riyo to Hozen" ("Utilization and Protection of Forests"). Nishizawa, N., Furukawa, H., and Kiuchi, Y. eds. *Raosu no Kaihatsu to Kokusai-kyouryoku (Development and International Cooperation in Laos)*. pp. 209-235. Mekong Publishers, Tokyo.
- _____. 2004. "Forest Policy Development in Laos", Inoue, M., and Isozaki, H. eds. *People and Forest – Policy and Local Reality in Southeast Asia, the Russian Far East and Japan*, pp. 113-116. Kluwer Academic Publishers. Dordrecht.
- Lao-Swedish Forestry Programmeme. 2001. *Land Use Planning and Land Allocation.* Vientiane.

- Matsumoto, S. and P. Hirsch. 2003. "Mekong Gawa Ryuiki Koku no Shinrin Shoshitsu to sono Genin" ("Loss of Forests in the Mekong Region and its Causes"). Inoue, M. ed. *Ajia ni okeru Shinrin no Shoshitsu to Hozen*. (Loss of Forests and Forest Conservation in Asia), pp. 132-148. Chuo Hoki. Tokyo.
- Ministry of Agriculture and Forestry (MAF). 1999. The Government's strategic vision for the agricultural sector. Vientiane.
- Ministry of Agriculture and Forestry (MAF) and National Land Management Authority (NLMA). 2010. *Manual: Participatory Agriculture and Forest Land Use Planning at Village and Village Cluster Levels*. Vientiane: Ministry of Agriculture and Forestry and National Land Management Authority. Vientiane.
- Oya, K. 1998. "Sinrin-Rinya no Chiikishakai Kanri: Laos niokeru Tochi Ringyou Bunpai Jigyo no Kanousei to Kada" ("Forest Management by Local Communities: Possibilities and Challenges of the Land and Forest Allocation Programme in Laos"). Society for Environmental Economics and Policy Studies eds. *Ajia no Kankyou Mondai* (Environmental Problems in Asia), pp. 265-278. Toyo Keizai Sinposha. Tokyo.
- Phengsopha, K and T. Morimoto. 2003. "Local Forest Management and Strategies in Northern Laos Following Government Intervention". Institute for Global Environmental Strategies. *Towards Participatory Forest Management in Laos: Laos Country Report 2003*, pp. 1-11.
- Roder, W. 2001. *Slash-and-Burn Rice System in the Hills of Northern Lao PDR: Description, Challenges and Opportunities*. Vientiane, Lao PDR: International Rice Research Institute (IRRI). Manila.
- Simana, Suksavang. and E. Preisig. 1998. *Kmhmu' Livelihood: Farming the Forest*. Institute for Cultural Research. Vientiane.
- _____. 2006. "Rice-Based Traditions and Rituals of the Kmhmu". Schiller, J.M. et al. eds. *Rice in Laos*, pp. 79-106. International Rice Research Institute. Makati City.
- Soulivanh, B., et al. 2004. *Study on Land Allocation to Individual Households in Rural Areas of Lao PDR*. German Technical Cooperation (GTZ). Vientiane.
- Souvanthong, P. 1995. *Shifting Cultivation in Lao PDR; An Overview of Land Use and Policy Initiatives*. International Institute for Environment and Development (IIED). London.

Stoeber, Silke, E. Sisomphone, and C. Han. 2013. *Women, Food and Land: Understanding the Impact of Gender on Nutrition, Food Security and Community Resilience in Lao PDR*. Care International in Lao PDR. Vientiane.

Endnotes

- ¹ Shifting cultivation is known as *hai* in Lao, as ‘slash-and-burn agriculture’, ‘swidden cultivation’ or ‘swidden’ in English.
- ² Alternative spellings are Khmu, Kammu, Khmou, Khamou, and Khimu (Simana and Preisig 2006: 79). The Lao government does not recognize them or any other ethnic groups as indigenous peoples, but refers to them simply as ethnic groups, stating that they all are equal before the law.
- ³ Mekong Watch is an environmental NGO. It has its headquarters in Tokyo, Japan and has carried out various research and other activities in Lao PDR since 2004.
- ⁴ The Lao government does not follow the widely adopted UN Food and Agriculture Organization’s (FAO) definition of ‘forest’ as “lands of more than 0.5 hectares, with a tree canopy cover of more than 10 percent” and accepts lands with a tree canopy cover of more than 20 percent as ‘forest’. This makes it difficult to compare forest cover in the Lao PDR with that in other countries.
- ⁵ Ministry of Agricultural and Forestry, the Lao PDR (http://www.maf.gov.la/index.php?option=com_content&view=article&id=1942:nations-forests-under-threat-&catid=29)
- ⁶ There is confusion between English and Lao versions of the same text regarding the terms ‘stabilization’ and ‘eradication’. While documents in English often use the term ‘stabilization’ in discussing shifting cultivation, Lao versions often continue to use ‘eradication’ (*kan yutthi kan thang pa het hai*) (Kenney-Lazar 2013: 23). ‘Yutthi’ in Lao Language means ‘stop’ or ‘eradicate’. In the Forest Strategy 2020 and many other documents on shifting cultivation, however, ‘stabilization’ is used as a translation of *yutthi*.
- ⁷ There are many sub-groups of Kmhmu’ in the Lao PDR. Most of the Kmhmu’ people in Pak Beng are Kmhmu’-Rok-Kroong.
- ⁸ Source: data from Pak Beng DAFO (February 2013)
- ⁹ Some of these ten villages have been consolidated. Seven villages have land in the watershed area now (in 2014).
- ¹⁰ Source: data of Pak Beng DAFO (December 2008).
- ¹¹ Therefore, administratively, Phou Hong Theung is no longer a village (*ban*), and has been demoted to a hamlet (*khoum*). However, ‘Phou Hong Theung village’ is still commonly used among local villagers to refer to the original Phou Hong Theung community. This is similar to Chom Leng Noy village. When local villagers speak about Chom Leng Noy village, they mean either the administrative Chom Leng Noy Hamlet or Chong Leng Noy village. I follow local villagers and use ‘Phou Hong Theung village’ to refer to Phou Hong Theung Hamlet and ‘Chom Leng Noy village’ to Chom Leng Noy Hamlet. To avoid confusion, I call the merged village ‘New Chom Leng Noy village’.

- ¹² In this chapter, *khopkhu* defined by an official family book (*peum sammanorkhoua*) is translated into 'family'. Similarly, a unit living in a house (*langkha heuan*) is translated as 'household'. A household often accommodates two to three families.
- ¹³ As of March 2012, 351 Kmuhu' people lived in 74 families in 43 household in Chom Leng Noy village. The total Kmhmu' population at New Chom Leng Noy village was 731 villagers in 130 families in 81 households.
- ¹⁴ The Kmhmu' call themselves *Kam-hmu*, *Kwm-hmu*, *K-mu* or *Kam-mu*, depending on the speakers' dialect. The word *kmhmu*' means 'person' or 'people' and is used by the Kmhmu' to refer to themselves. Many Lao and Thai people used to call the Kmhmu' *Kboom* or *Kha*. *Kha* means 'to kill' or 'slave' and has a derogatory connotation. Kmhmu' people do not like to be called *Kha* (Simana 1998: 1).
- ¹⁵ Resolution No. 213/NA of the National Assembly on the Adoption of the 49 Ethnic Groups Classified in four Language Group of the Lao PDR (24 November 2008).
- ¹⁶ Source: "The Value of Forest, the Value of People: The Kmhmu of Laos and Shifting Cultivation", a documentary film produced by Mekong Watch in 2010 (<http://www.youtube.com/watch?v=JTIVxMMg0eM>).
- ¹⁷ The current "Participatory Land Use Planning and Land-Forest Allocation Manual" was issued in June 2009. Some NGOs and international organizations are trying to apply the new manual to land-use planning in their project sites. However, in other areas, local authorities are still using the old manual.
- ¹⁸ In Long Saen Village, the cycle of shifting cultivation has actually decreased to about three years since the LFA was implemented.
- ¹⁹ Villagers tell government officials or outside researchers that they are using one hectare of land for shifting cultivation every year. However, Takeda 2008: 274-275) points out that in reality the average area of shifting cultivation land per household is around 1.5 hectares.
- ²⁰ The village was eventually electrified in 2011. But electricity did not come from a hydropower dam on the Houay Kasaen River.
- ²¹ Interview with a villager from Phou Hong Theung Village, 14 May 2009.
- ²² Minutes of the meeting on Land and Forest Allocation in Pak Beng, 4 July 2007.
- ²³ These two villages were particularly troubled by the new land use imposed by the district through the LFA programme. Classification of the entire area had to be reviewed for these two villages. In three other villages, only the area in watershed forests was reclassified.
- ²⁴ According to an interview with staff of the Pak Beng DAFO on 25 February 2014, the district is suggesting research on soil quality to make detailed land-use planning, in parallel with measures to soil improvement and more efficient livestock-raising.