Forest Creators, Forest Destroyers: Akha Land Use in Xishuangbanna

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High above Jinghong[1], on a ridge at 1600 m that separates China from Burma, lies the administrative village of Mengsong, home to 11 Akha[2] hamlets. From the ridge, Akha villagers can look out over the Xishuangbanna valley to the north, as well as down into the scattered villages in the vastness of Burma to the south. Akha have lived in this spectacular site for at least 250 years, based on their genealogies and oral histories. For much of that time their livelihoods have centered around shifting cultivation, the ritual center of a mosaic of land uses.

This paper focuses on Akha strategies for land use and livelihood in this upland, forested region. Akha engage in a mix of activities to bring in sufficient food and income, and to cover their bets should one activity not pan out. These strategies are risk-averse and flexible, based on a knowledge of the plasticity of the landscape, to be described below, that has allowed Akha to endure in a challenging mountain environment through vastly different political economic conditions. The context and meaning of these strategies has been reworked several times since the 1930s. What has persisted is engagement in multiple land uses and/or numerous different income-earning activities, and an ability to respond quickly to prevent calamities or grasp new opportunities.

In recent decades, the Chinese state has implemented policies that undermine Akha use of their environmental knowledge. Since shifting cultivation involves both the production of food crops and forests, it has drawn the attention of both forestry and agriculture departments in the

[1] Jinghong is the capital of Xishuangbanna Prefecture, located at the southern end of Yunnan Province, China.
[2] Akha are subsumed under the Hani as an official minority nationality in China. Since villagers in Mengsong call themselves and their language Akha, that is the term used here.

government. Over the past 20 some years, policies for forestry and agriculture have tended to separate out these two functions into different spaces. Neither department wants shifting cultivation to continue, although for different reasons. State agents in agriculture, participating in a globalized insistence on increasing outputs of monocrops, consider shifting cultivation to be inefficient in producing grain. State foresters, meanwhile, have been persuaded by international organizations such as FAO to think that shifting cultivation destroys the environment. Policies for agriculture promote using wet rice for grain, and producing cash crops for the market. Policies for forests have mostly kept trees as subsistence resources for villagers, while also encouraging forest protection.

Policies that separate agriculture from forestry, and then specify permanent land uses on mapped plots reflect the need of administrators to create what Jim Scott calls "legible" landscapes (Scott 1998). By this he means, among other things, the imposition of property rights on bounded and mapped parcels of land, under state regulations for their use. This mapped and quantifiable grid of land use gives state planners, with limited local knowledge, increased ability to administer and control the management and productivity of land under their purview. In Scott's argument, "legible" landscapes are a product of high modernity. In China, property rights represent both a "modern" tool that aids in increasing national-scale agricultural production, and an aspect of the more recent emphasis on "development," or encouraging households to produce for the market. Maps and other knowledge forms that are legible to state agents, however, may also obscure the abundance of local resources and the complexities of local land use (Li 1999). In fact, new property regimes, far from simplifying land use, may only increase local possibilities for manipulation:

> The embeddedness of land-holding in ecological, social, cultural, and political life means that one tenure regime can seldom be legislated away in

> favour of another. To try to do this is to add layers of procedures or regulations on to others unlikely to disappear, and to add possibilities of manipulation and confusion between the multiple opportunities, and conflicting constraints, of older and newer land-holding regimes (Shipton and Goheen 1992:316).

In China, the allocation of property rights and establishment of land use regulations have played out differently from most other parts of the world. To the extent that property rights are sedentarizing land use, as they have in other countries, property rights and regulations are countering Akha use of their knowledge of landscape plasticity. In this clash of knowledge forms, Akha adaptability and long-range strategies enable them to skirt around many rules, although the trajectory is toward more settled and in some cases simpler cultivation forms, and toward the sale of more products.

In the first section of this paper, I describe Akha land use and the underlying knowledge form on which it is based. In the second section I show how Akha land uses and strategies incorporated producing tea and opium for traders in the late 19th and early 20th centuries. I also briefly examine land use and labor when two KMT battalions took over Mengsong from 1937 to 1950. In the third section, I trace changes in land use and labor allocation during the collective period (1958-1982), when Akha were required to produce grain for the state. In the fourth section, I discuss the response of various individuals and households to the era of economic reforms (1982-1997[3]). In the conclusion I lay out the current state of play for the clash of knowledge forms between Akha villagers and agents of the state over land use and forest management in this upland site.

I. Akha land use under the ancestors

By its nature, shifting cultivation entails fairly rapid changes in the landscape as villagers clear forests for fields, cultivate fields for one or two years, and then allow forests to regenerate.

[3] My field research ended in 1997, but the reform period is ongoing.

In this sense, Akha are both the "forest creators" and "forest destroyers" of my title. Farmers may plant separate rice varieties in fields at different elevations, and intercrop distinct combinations of vegetables with the grain. Depending on available labor, changes in weather, and infestations of pests, Akha can open fields of varying size in different micro sites. Villagers can also alter the length of fallows, depending on the natural fertility of the site as well as changing production demands. Over time, the successive use of a number of sites for somewhat different purposes enables Akha to envision the landscape as an extensive setting with multiple possible trajectories for future use.

In addition to cultivating upland rice in swiddens, Akha in Mengsong also manage wet rice fields, raise large numbers of livestock, hunt wild game, and collect myriad kinds of wild fruits, vegetables, and herbs in nearby fields and forests. Their livelihoods are based on a composite of activities (Dove 1996; Rambo 1995) that allow them to shift labor allocation as needed for putting food on the table. This flexibility also enables them to adapt to changing demands for products flowing out of Mengsong. Scholars of shifting cultivation have argued that farmers' adoption of new forms of land use reflect long-term planning and knowledge of local environments (Padoch et al. 1998). Shifting cultivators typically combine numerous different livelihood activities as a risk-averse strategy in locations that are peripheral to central governments (Dove 1996; Rambo 1995). Rambo refers to this land use pattern as "composite swiddening" (Rambo 1995).

Here I want to emphasize the knowledge form, or conceptual understanding of the landscape that underlies risk-averse, composite land uses with long time horizons. In addition to an intimate knowledge of micro sites across the landscape (spatial knowledge), Akha have an understanding of the plasticity of land cover over time (temporal knowledge). These two

aspects, spatial and temporal, enable Akha to adapt quickly to changes as well as strategize into the distant future. Strategies involve the ability to imagine how the current landscape could be otherwise. Not only can forests become fields, but fields can become pastures, and then revert to forest at a later date. In villagers' thinking, even wet rice fields could revert to forests, given enough time.

This understanding of the plastic quality of land cover was in the past underscored by Akha connection to their ancestors. For Akha before the Revolution, the ancestors legitimated land use, particularly the opening, cultivation, and harvesting of upland rice, through protecting fertility and sanctioning customary rules of access and use. Akha used to hold 12 annual rituals related to the agricultural cycle that linked the ancestors to fertility and survival. The immediate ancestors had taught villagers how to manage upland forests and fields by rotating their use and attending to signs of soil fertility. The knowledge form of plasticity, together with sanctions from the ancestors, took a long-term view of landscape mutability and potential.

Akha customary rules allowed for both flexible and set rules of access and use. On shifting cultivation lands, any household could open a field on a regenerated swidden, provided the previous user had not planted perennials. Access rights might shift from one rotation to the next. In other forest areas, however, there were enduring rules prohibiting cutting trees. Akha kept a ring of protected forest around the hamlet to keep out malevolent spirits. Rules also forbade cutting any trees in a cemetery forest and a watershed protection forest. Before the Revolution (1949), those who broke the rules were punished by hamlet elders, under the watchful eye of ancestors who were believed to be keeping account.

Also before 1949, Akha in Mengsong cleared swiddens on an extensive site at 1000 m that they had used successively over the previous 200 years. In those days, the ancestors also

prohibited clearing areas of primary forest. While villagers could cut a large tree or two to build a house, the ancestors would punish severely anyone who opened a swidden in primary forest.

The impression gained from interviews with numerous older Akha men and women, not only in Mengsong but also in 14 other Akha villages throughout Xishuangbanna, is that before the Revolution villagers took the rules and sanctions from the ancestors very seriously, particularly in relation to producing upland rice and protecting specific areas of forest. The fact that there were customary fines for people who broke these rules indicates that the discourse of ancestral wrath was not totalizing: people cut trees in protected sites, and sometimes opened new swiddens in places where someone else had planted perennials—practices forbidden by customary rules. Furthermore, the ancestors had little say over the cultivation of products for the market, as the next section will show.

II. Early 20th century production for trade

Akha in Mengsong have participated in trade networks for centuries. Since at least the 14th century, villagers in Xishuangbanna have cultivated tea (Hill 1998). Han Chinese caravan traders transported much of this tea from Xishuangbanna up through Yunnan to Tibet. In the early 20th century, the trade route to Tibet became choked with many new trade levies, and Tibetans hostile to China preyed on the trade caravans. In response, Han Chinese tea merchants moved from Simao (north of Xishuangbanna) to Menghai, a town in western Xishuangbanna, and sold their tea to caravan traders heading south to Burma and Southeast Asia (Hill 1998:74). By the 1910s, Akha in Mengsong were participating in this increased trade by planting more and more tea in the understory of the forest.

Beginning either in the late 1800s or the early 1900s, villagers also planted opium in natural gaps in the forest. During this period the demand for opium was increasing throughout

China, both for consumption and for use as currency (Baumler 1998; Cameron 1931). Villagers say that poppies grew very well in Mengsong, and that until the late 1930s they sold the opium to Dai traders who took it to the "interior," as the rest of China is called in Mengsong.

In the 1930s, new Akha moved into Mengsong from Menghai and Burma. These newcomers were traders themselves, some of them in opium. With their arrival local planting and consumption of opium increased, as did money lending. The newly arrived Akha would lend money to other villagers with their wet rice fields as collateral. When they were unable to repay, older residents had to forfeit their wet rice land to the new Akha. As a result of this practice, an informal market in wet rice fields evolved, whereby rich Akha could buy wet rice fields instead of having to build terraces themselves. These Akha traders who arrived in the 1930s formed their own hamlet, now called Dongfanghong. To this day, Dongfanghong has more wet rice fields per person than any other hamlet in Mengsong, as a result of transactions in the 1930s and 1940s (Sturgeon 2000; Xu 1990).

In 1937, two battalions of guomindang (KMT) troops took over Mengsong and held Akha villagers as forced laborers to produce grain and opium for them, and to serve as their porters. In 1942, villagers in Mengsong staged an uprising and then fled to the forest, where they lived in hiding until 1945. During this time they tried to live on wild vegetables and fruits, tree bark, and small animals they could trap, but many people starved to death. In 1950, two communist battalions converged on Mengsong and forced the KMT to flee to Burma.

In the first half of the 20th century, in relation to resource tenure, the planting of tea for sale to traders meant that each tea bush belonged to the household that had planted it. Planting tea did not alter either protection or customary use of the forest in which it was planted. Production of opium, however, together with the arrival of traders in opium who were also

money lenders, served to commodify wet rice land. Newcomers with money could now buy wet rice land, or collect wet rice fields when other villagers defaulted on loans. Participation in the opium market therefore changed the terms and meaning of access and production, especially for wet rice fields. Concurrently, however, villagers continued to open swiddens for upland rice, and to observe the 12 annual rituals surrounding upland rice and the ancestors. Their land uses, in toto, fell under multiple meanings and legitimations, some commercial and others subsistence. During this era, the ancestors were by no means the sole arbiters for villagers' livelihoods, but the ancestors held sway over swidden fields and protected forests, while traders and the market influenced the meanings of wet rice and opium.

Life under Chiang Kai-shek's troops amounted to slavery, and pushed many people to starvation. Their land use remained much the same, but under coercive production relations that did not allow Akha much room to strategize or make choices, except to flee.

III. The Socialist Regime: Producing Grain for the State

Akha in Mengsong welcomed the communist soldiers in 1950 as liberators from the hated KMT. The communist troops brought in an era of security, as well as new tools for cutting trees and opening fields. There was no land reform in Mengsong in the early 1950s, since there were no landlords. For a time, farmers resumed their previous complex land uses and rituals under the new regime.

The era of collectivization began in 1958. Cadres from Damenglong, the commune to which Mengsong now belonged, arrived to arrange hamlets into production teams within the Mengsong production brigade. This was the beginning of state reorganization of labor and land use, as well as state legitimation for appropriate work and productivity. This reformulation of daily labor and production was one the primary state means of "modernizing" the rural

population. Minority nationalities, such as Akha, were judged to be even more backward than Han Chinese farmers, and needing the help of state cadres to become "modern" and socialist. The production team in Xianfeng, the hamlet of my study, sent groups of villagers off to open swiddens on a larger scale than any of them had ever seen before. Each production team had to meet an annual grain quota for the state.

At the same time, cadres told Akha that they had to take down and burn the altar to the ancestors in each house, and give up their backward, superstitious practices. The new ideology promoted reliance on modern "science" and "rationality" in managing people's lives and organizing agricultural production. In place of 12 annual rituals that linked the forest, the production of upland rice, and the ancestors, villagers were now to rely on ideological instruction and commands from a government administration that stretched beyond Damenglong to the county, the prefecture of Xishuangbanna, the province of Yunnan, and ultimately to the communist party leaders in Beijing.

During the collective period, there was a chronic shortage of grain available locally for a variety of reasons. One reason was the heavy toll of state grain procurement, especially during the late 1960s and late 1970s, during campaigns demanding both increased grain production and local self-sufficiency (Xu 1993). Another reason for low grain production was the small number of people allocated to upland rice teams, a decision that came from the commune. During the early years of the Cultural Revolution (1966-1976), moreover, villagers had to attend political struggle meetings every night until midnight, a practice that took its toll on their energy during the day and reduced their ability to produce grain.

From 1958 until 1982, villagers in Xianfeng all labored to earn work points, as elsewhere in China during this period. Villagers earned between 6 to 8 work points per day, depending on

how hard the labor was thought to be, and turned in their work points to the hamlet accountant at the end of each month. At the end of the year, each person's total work points were tallied, and exchanged for an allotment of grain based on that total.

The alterations in the management of grain production transformed villagers' relationship to upland rice, the ceremonial grain that before had connected them to their ancestors. Instead of a ritual crop that represented the protection of the ancestors and their own adherence to customary rules, grain now became the product of state procurement and the payment for their labor. Villagers' productivity was now measured according to government standards, and legitimated according to government rewards.

The ancestors, however, turned out to be hard to kill. An event in forest management in the 1960s shows that the ancestors were still potent. During the Cultural Revolution (1966-1976), policy directives declared that forests were an inefficient use of land. Forested sites were to be replaced by "economic" crops such as fruit trees and perennials. Accordingly, cadres in Damenglong told Yah Teh, the Akha security person in Xianfeng, to organize villagers to open a stretch of primary forest extending from the hamlet out to the closest shifting cultivation fields. The cleared area was then planted in pear, apple, and walnut trees. According to villagers during my field research, this particular forest had held the largest trees, since it was sited on moist, gently sloping land. Although villagers acknowledge that Yah Teh was following orders from "above,"[4] they still blame him for the loss of this forest. When recounting this event, in the next breath several informants told me that one day when Yah Teh himself opened a swidden in primary forest, there was thunder and lightening. When Yah Teh returned home that evening, he didn't feel well. It turned out that Yah Teh had stomach cancer, a disease that later killed him. In villagers' juxtaposition of the stories, telling of Yah Teh forcing them to cut primary forest,

[4] In Chinese, "shangmian" refers to the layers of administration above oneself.

and Yah Teh getting sick, it's clear that they see a cause and effect relationship. Before the Revolution, the ancestors had forbidden clearing areas of primary forest on pain of serious punishment. In the retelling of events from the 1960s, it seems that the ancestors judged that cutting the nearby primary forest should be punished by Yah Teh's death. In this instance, there was a direct conflict between the directive from the socialist state and forest protection rules sanctioned by the ancestors. The story may represent the moment when villagers realized the full extent of state intrusion into their land use practices, and their unhappiness with this unavoidable change. It's also evident from this incident that the ancestors did not disappear when the altars were burned. Practices of access and protection supported by the ancestors had been overlaid but not displaced by a state-sponsored land use regime.

After this initial dramatic clearing of primary forest, however, other customary rules held somewhat less force. Although villagers continued for the most part to protect an area of forest around the hamlet, some people began to collect dead trees there, a practice forbidden in the past.

The collective period lasted until 1982. During the collective period, the various forms of land use, aside from opium production, stayed the same as before the Revolution: villagers opened swiddens as well as wet rice fields; they herded livestock; they cultivated tea for local use. While the ecological plasticity of the landscape remained largely in place, as swiddens regenerated slowly into forests, villagers' choice about where to put their energy was heavily constrained by government directives. Any risks involved in planting upland rice were supposedly borne by the state, although state grain reserves were often woefully short in times of dearth. In 24 years of producing according to state plans, the daily practice of grain production was transformed from cultivating upland rice in conformance with customary rituals to producing grain for state procurement and earning grain in payment for work. State-organized

production had been inserted into the landscape, although not completely replacing the meaning of fields and forests as legitimated by the ancestors.

IV. The Period of Economic Reforms: Commoditizing Resources and Reallocating Labor

In the beginning of the economic reform period, state attention shifted from labor to land as the significant factor of production. In 1982, communes were dismantled, and land was allocated to households as the primary production unit. The purpose for this transformation was to increase national grain production, an ongoing modernist and singularly socialist state concern, since Chinese policy makers wanted China to be self-sufficient in grain. In 1984, commune forest land was allocated to villages and households in similar fashion, to encourage both better protection and productivity. Accordingly, the designation of property rights in various kinds of land became a priority state-led activity. During this period, the mapping and measuring to redistribute land reflected the need for landscapes "legible" for state administrators.

To make landscapes legible, or knowable, state administrators delineate bounded areas of land that can be mapped and coded. With maps of the landscape, together with regulations for land use, state administrators can control, predict, and measure production, or at least that's the driving desire. But "legible" landscapes are simplified, as all maps are. Maps and "legible" property rights refer only to the current property regime, obscuring previous regimes that are still present in people's practices and memories, and embedded in the landscape.

In Xianfeng, representatives from Damenglong, the former commune, joined a team of villagers in measuring and distributing wet rice fields. Each household received 1.2 *mu* (15 *mu* = 1 ha) per household member at the time of allocation. Each household also received shifting cultivation land amounting to 9 *mu* for every household member. The teams also allocated livestock, clumps of bamboo, and tea fields to households.

In 1984, when forest land was reallocated, an official from the Damenglong Forestry Station led a team with members from each hamlet in Mengsong. The team decided on an area of state forest, a collective forest for each hamlet, and stretches of freehold forest land to be divided among households. Xianfeng received 500 *mu* of collective forest, where villagers could cut trees to build houses. Each household in Xianfeng got 4 or 5 *mu* of freehold forest land where they could collect fuel wood.

A set of policies in the 1980s transferred to administrative villages and hamlets the responsibility of paying for local infrastructure. Additionally, households were now to pick up the tab for schooling and medical care[5]. Alongside the opening of markets, these policies forced villagers to sell their products and engage in wage labor. As in the past, Akha households responded by adopting a mix of land use practices and deploying labor in multiple directions. The legitimation now came from a socialist market economy. The ability to devise flexible strategies for meeting household needs could be revived from practices before 1958, or refashioned by younger Akha in a new context. Akha villagers' relationship to each other, as recent members of production teams, was not identical to the 1950s, however. Nor was villagers' relationship with agents of the state. Until recently, state agents had organized rural production. Now they were encouraging villagers to participate in a gradually increasing market economy, one with socialist characteristics.

Soon after land had been distributed to households, those households with shifting cultivation fields at lower elevations began to transform them into wet rice fields. According to villagers, wet rice requires peak periods of labor for planting, weeding, and harvesting, but at other times allows people to engage full time in other pursuits. Swidden fields, by contrast, require some labor almost year round. Once households switched to wet rice, women spent more

[5] For a more detailed account of these policy shifts, see Park et al. (1994).

time tending vegetables to sell, as well as collecting mushrooms, medicinal plants, and wild fruits and vegetables prized by Dai traders. Men engaged in mining the tin discovered in one area of wet rice fields, or in wage labor in Damenglong or Jinghong. Switching to wet rice enabled men and women to increase their incomes in a variety of ways.

Another response to the opening of markets has been the production of more livestock. With changing policies toward minority nationalities allowing them to practice their "unique cultures," both Akha and Dai households have resumed using cattle and water buffalo in ritual feasts. Additionally, more Akha are eating meat from domestic animals in place of the wild game they used to prefer. By 1996, Mensong as a whole supported three times the livestock it did in 1982[6], and sale of livestock was a major source of household income, second only to tin[7].

By 1989, most households had stopped opening swiddens in their shifting cultivation fields. With the gradual increase in numbers of livestock, younger Xianfeng farmers, both men and women, began to burn larger and larger stretches of their upper elevation shifting cultivation fields each year to provide sweet new grasses for grazing animals. By 1996, almost all of the higher elevation swiddens had effectively reverted to collective use, in spite of their earlier allocation to households. This was a reversion not only to practices from the collective period, but also to modes of herding from before 1949. Again, new property regimes had failed to completely displace the old, and villagers could call on former practices within new contexts, such as explicitly producing livestock for sale.

While mostly younger men and women made the land use changes mentioned above, numerous older women made different adjustments to both emerging new policies, and to other people's changed land uses. Many older women were worried about villagers' increasing

[6] Data from accountant in Mengsong administrative village.
[7] Based on a survey I carried out in February 1997.

reliance on tin for the bulk of household income. They were also concerned about the move away from upland rice and toward simpler, more permanent production systems. Women I interviewed feared that dependence on one product, or one crop, was too risky. Throughout their lives they had relied on shifting cultivation and a host of other land uses to spread their bets across the landscape. If one field or one crop failed, all was not lost. In response to recent changes in land use, older women had started opening swiddens again, but in a new area. Their explanation for this move was that on swiddens they could produce rice and corn. Rice could pay taxes, and corn would feed livestock. On other plots closer to home, meanwhile, older women were planting vegetables and fruits to sell, responding to markets. They were not worried about selling things in the market, but rather about monocrop cultivation and heavy reliance on tin. The price of tin could change, or the supply could be mined out. Insect pests could destroy wet rice fields, as had happened in recent years. Older women held up each of these examples as reasons to return to shifting cultivation, which can produce more than one grain and many vegetables, and which pests can rarely decimate.

By focusing on wet rice and livestock, younger villagers have been able to shift labor into other activities, ranging from raising vegetables to mining tin, that bring in cash income. Although policies encourage farmers to switch from upland rice to wet rice, other changes in Xianfeng were not planned or anticipated by state agents. These changes, while they involved manipulating land use regulations and disregarding state-allocated property lines, all respond to government requirement that villagers participate in markets.

In talking with farmers, it's clear that in their minds fields can become forests, and pastures can revert to cultivated fields, as needed, in spite of state-allocated property rights intended to sedentarize land use. Correspondingly, rules of access can shift depending on land

use, such as when household shifting cultivation lands evolve into collective pastures. For Akha villagers, the landscape has the potential to be used in different ways at different times. This understanding of landscape plasticity comes into increasing conflict with state land use regulations, which seek to set and quantify how parcels of land will be managed. For example, forestry personnel in Damenglong informed me that the shifting cultivation fields that were burned every year for pasture would be reclassified as collective forest. Land that is not used as designated by the Forestry Station will have to revert to woods. The forest will still belong to Xianfeng, but return to a state-designated use. In Forestry Station parlance, Xianfeng villagers had shown how "backward" and "uncontrolled" they were by burning stretches of land each year. Development, whether in agriculture or forestry, is supposed to make rural people "progressive" and "controlled."

In other areas of their forest, villagers' uses have manipulated state regulations in a variety of other ways. In the collective forest, which was designated as woods to be used for house construction, villagers responded enthusiastically. During the 1980s, every household in Xianfeng built a new house, but now made out of wood in place of the bamboo and thatch houses of the past. While these houses are undoubtedly more durable than bamboo structures, their construction took most of the large trees in the collective forest. Additionally, the administrative village of Mengsong relied on Xianfeng's collective forest for timber needed for the school and military barracks, since the Xianfeng collective forest straddles a road, while the collective forests of other hamlets in Mengsong are accessible only on foot. Since trees for construction won't be available in the collective forest for some time, villagers in Xianfeng have begun to protect favored species, such as chestnut, in their household freehold forest land. They will be able to use these trees for future house repairs.

As far as protected areas go, the wooded area surrounding the hamlet is still protected, although the legitimation no longer comes from warding off malevolent spirits. This area has been designated as "scenic forest" in state rubric, and both rules for protection and fines for breaking those rules are meted out by the Forestry Station in Damenglong, instead of by village elders as in the past. The same is true for the watershed forest, where forestry officials claimed the customary protected forest as a *shuiyuanlin* (water source forest), co-opting villagers' protected site for state purposes. In this case, too, punishment of infractions comes from officials in Damenglong. When a few villagers cut trees to sell for fuel wood, as sometimes happens, the village head turns to the Forestry Station to curb this activity.

State agents in agriculture and forestry offices in Xishuangbanna have a mixed reaction to this array of villagers' responses to changes in policies and state objectives. On the one hand, state administrators say Akha are "the most developed" among hill shifting cultivators. By this they mean that Akha farmers have become entrepreneurs, willingly switching to cash crops and participating in markets. In other words, Akha have become "progressive" through state development efforts. On the other hand, especially foresters are apt to call Akha "backward" and "uncontrolled" in their use of forested areas. Overall, it seems, Akha have managed to become "progressive" but "uncontrolled," in relation to state expectations.

During the years since 1984, the overall policies for both forestry and agriculture departments are converging in gradually bringing shifting cultivation to an end. At the same time, these moves are separating agricultural lands from forest lands. Instead of the rotating landscape where fields become forests and then fields again, the state has directed production to more settled areas that produce the same things year after year.

Owing to the influence of international organizations such as FAO and UNDP in the early 1980s, Chinese foresters came to believe that shifting cultivation was destructive to the environment. Previously they had thought of shifting cultivation as an unproductive way to produce rice. Upland farmers have been encouraged to open wet rice terraces, where appropriate, and to plant perennials and cash crops in their shifting cultivation lands. The goal was to increase the efficiency of grain production, and to encourage farmers to produce cash crops. To the extent that farmers have conspired in these changes, the trend is toward simpler production systems as well as simpler, less diverse ecosystems.

In wet rice fields and areas planted in cash crops, the state or market legitimation of production practices has largely replaced customary cultivation under the watchful eye of ancestors. These were the sites of limited ancestral concern even in the 1930s, however. Villagers remember past uses of each site, though, and which household had access to it at various times. Even in plots with "modern" agricultural production, the memory of the past and its associated meanings have not been erased. In forested sites, or formerly wooded areas, villagers' memory of previous land cover constitutes part of current practice. The story of Yah Teh and the forced cutting of their best forest, for instance, is now drawn on to exemplify Akha wanting to protect old growth forests and biodiversity in an era when these values have political salience.

In some parts of the landscape, in fact, the ancestors still hold sway. Spirits of the ancestors are believed to reside in the cemetery forest. Villagers enter the cemetery forest only to bury the dead and clean the graves. Also in relation to the dead, the hamlet head informed me that if someone dies before the harvest, part of a swidden will be left unharvested to provide grain for that person on the journey to the ancestors. If a person dies after the harvest, part of the

harvested grain will be set aside for that person. In ways that are invisible to state foresters, or perhaps "illegible" to them, the ancestors watch over the rituals surrounding death, and the spirit's journey to the land of the ancestors. Although the ancestors no longer oversee the rules for land use, or not on commercial crops, they are still present for villagers' transition to the next world.

Conclusions

In the course of almost a century, Akha in Mengsong have participated in dramatically different political economies and ideologies in relation to land use. While I would not argue that Akha knowledge and practice are "the same" as sixty years ago, it is possible to draw out "knowledge forms" based on many years of experience living in the mountains that have enabled them to survive and indeed endure arduous times.

I argue here that risk-averse strategies based on the diversity of micro sites and the plasticity of potential land use have been reworked and used under very different regimes. Akha in Mengsong were able to trade in tea and opium, and even withstand the predations of KMT soldiers who lived off them. They have also generated grain for the state under collectivized agriculture. More recently, in the period of economic reforms, villagers' strategies for manipulating state-imposed property rights and land use regulations have enabled them to produce goods for growing markets, a goal encouraged by state policies. Even in the late 1990s, Akha knowledge of the landscape and its possibilities allows them to devise multiple ways to feed themselves and increase incomes. These strategies are formulated in some cases by individuals, sometimes by households, and sometimes by larger groupings within the hamlet. This complexity suggests that "the household" is not the only, or even predominant, unit of production, or "natural" holder of property rights.

State knowledge forms that require maps, bounded property rights, and quantifiable agricultural production run counter to the Akha knowledge form of flexibility and plasticity. The trajectory of future policies is toward simplifying production in favor of cash crops and perennials and increasing the productivity of these few crops. State agents see the variety of Akha activities and breaking of land use rules as "uncontrolled" and "backward" behavior, now showing a lack of environmental knowledge. They want Akha farmers to work within mapped landscapes that administrators can understand and control. The role of development, echoing claims from socialist modernization or even from "civilizing" projects of Imperial China (Harrell 1995), is not only to increase production for the state, but to bring rural people under control.

This sedentarization of land use directly undermines the flexible nature of the mix of land uses surrounding shifting cultivation that Akha have used until recently. Under changing conditions, villagers consciously invest in multiple activities and produce diverse crops to maintain the flexibility and risk-averse strategies, well aware that similar strategies have carried them through difficult times in the past. They see state extension agents, or at least most of them, as simple-minded and somewhat ignorant about upland environments and the complex livelihoods needed to survive in them.

For this reason, I feature this contradiction as a clash of knowledge forms. While state agents have the weight of policy formulations and government plans on their side, they also have an imperfect knowledge of the micro sites and multiple uses of them engaged in by Akha villagers. Villagers continue to adapt their knowledge and practice to current demands to forge their own upland "development."

The multiplicity of their activities and their flexible adoption of new crops and land uses continues to confound, to a certain extent, state plans for increased sedentarization and

simplicity. Villagers of differing age and gender use different and sometimes conflicting strategies to retain risk-averse livelihoods, adding to the complexity of overall land use. Since the market is the driving force behind villagers' various manipulations of state-designed property allocations, it is likely that villagers will continue to produce multiple commodities on many micro sites. The rotating landscape and biodiversity created by shifting cultivation, however, will soon disappear.

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