

# Building a Sustainable Rural Livelihood in Banmai Nongbua: A Chinese Diaspora Community in Northern Thailand\*

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This paper examines members of the Chinese diaspora who exited China in 1949 (or shortly thereafter) when the Communists swept over the mainland. Having settling in northern Thailand's Golden Triangle around 1964, these Yunnan Chinese established viable communities in the mountains drawing on traditional cultural knowledge about hill farming and diverse crops, as well as extensive ethnic networks based on their multi-layered Chinese identity. By focusing on production of cash crops such as lychees, tangerines, ginger root, and bamboo shoots, they developed a sustainable rural livelihood that can be described as environmentally friendly, economically profitable, and socio-culturally self-renewing. This study examines issues related to sustainable agriculture or livelihoods and the ambiguous meanings of "development." My ethnographic fieldwork was conducted in Banmai Nongbua Village, Chaiprakarn Ampore, Chiang Mai Province in December 2002 and in the summers of 2003, 2004, and 2005.

**Keywords:** sustainable agriculture, Golden Triangle, Thailand, Yunnan Chinese, development

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## Posing the Problem

This project investigates the sustainability of agricultural systems established by Chinese émigrés in the Golden Triangle of northern Thailand. Several interrelated issues or controversies embedded in the concepts of “sustainability,” “sustainable agriculture,” and “sustainable development” must be addressed in the context of northern Thailand. First, scholars have debated whether slash-and-burn agriculture is a viable and environmentally friendly agriculture in the tropical rainforest (Fox 2001; Hansen 1994; Reed 1990; Young 1998). While most anthropologists view this practice positively for maintaining tropical agro-ecological systems and biodiversity as well as for the survival of marginal tribal cultures (Anderson 1993; Bates 2001; Fox 2001; Geertz 1963; Young 1998), others disagree, pointing out its negative effects—soil erosion, destruction of vegetation, and its waste of natural resources. An example of this view once appeared in *Sierra Club* magazine: “As in much of the tropics, the people living in the Ranomafana rainforest of southeastern Madagascar are the forest’s worst enemy, slashing and burning huge swaths of trees to clear land for crops” (Knox 1989:81). So this issue remains one of who defines the terms and criteria of sustainability.

Second, is the practice of farming in a tropical rainforest permissible? Such a determination must be made balancing conflicting demands such as environmental preservation and biodiversity, population pressures, and long- and short-term economic development planning (Anderson 1993; Fox 2001; Young 1998). Alarm about disappearing rainforests in Madagascar can be seen in the following:

With 90 percent of the forest gone, uncounted species have lost their habitats and become extinct, and most of the soil cover has been lost to erosion. . . .

This destruction is largely due to slash-and-burn agriculture. People are constantly burning the rain forests for agricultural purposes—it is the way they make a living. [Wright 1993:451]

A related question is: Who should have the decision-making power to formulate these policies—land-hungry farmers, conservationists, or the state’s economic development officials?

This last issue is rooted in the problem of defining sustainability. While the concepts of sustainable agriculture, sustainable livelihood, or sustainable development sound idealistic and have broad appeal to a wide spectrum of audiences, there seems to be little consensus about what constitutes the necessary and objective criteria by which to measure the success or failure of a

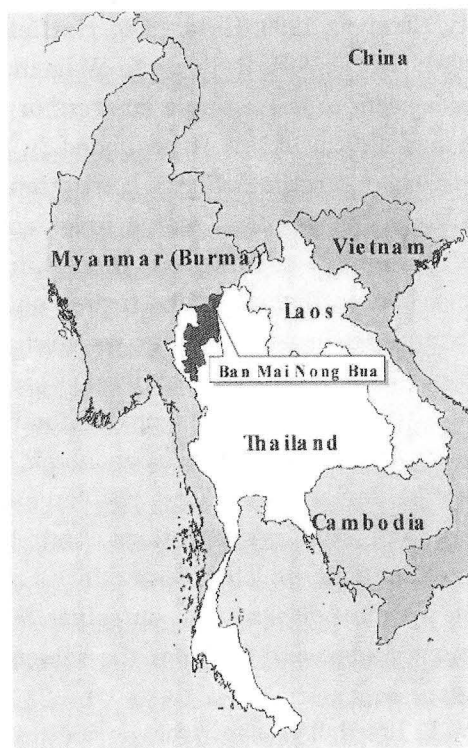
system's sustainability (Francis 1990; Gold 1999; Hatfield and Keeney 1994; Helmore and Singh 2001; OECD 1995; Roling and Wagemakers 2000).

These controversies seem to defy simple answers or uniform criteria for objective assessment, and this problem is grounded in the perspectives researchers bring to their field: our disciplinary convictions about social problems and proper solutions, our personal value judgments when evaluating practical actions, and our moral commitment to certain ethical tenets and perceived justice. Hence the problem must be turned on its head: Instead of evaluating the actions and performance of our research subjects, we should begin by reflecting on our own motivations and value judgments in designing and carrying out such a project. Are we advocates for the interests of marginal peoples in the hills? Are we promoters of economic development of specific orientations? Are we environmentalists who have a vested interest in preserving biodiversity and land conservation? And, finally, are we implementers of government policies on land use and forest management? At this level of self-reflection, we may disassociate ourselves temporarily from the practical problems engaged here and consider the subjective implications of their basic terminology.

As defined by John E. Ikerd, "A sustainable agriculture is one that is capable of providing everlasting value to society. A sustainable agriculture, so defined, must be ecologically sound, economically viable, and socially just" (Ikerd 1992). In other words, the chief concern of our study is the "society"—an aggregate of people with certain shared cultural traits and identity—and our goal is to find out how they (members of the society) realize the "everlasting values" of environmental soundness, adequate material benefit for life sustenance, and justice for the involved parties. Here, again, soundness, adequacy, and justice are subjective terms with explicit value judgments. Their content and meanings change when we shift from one level of analysis to another.

## **The Chinese Diaspora in the Golden Triangle**

The Golden Triangle is a geographic region bordering the three nation-states of Thailand, Myanmar (formerly Burma), and Laos, covering approximately 200,000 square kilometers. This area encompasses dramatic topographic features, including major rivers, rugged mountains, and lowland basins and river valleys (Anderson 1993; Geddes 1983; Kunstadter 1983; Lewis and Lewis 1984; Young 1962). This fragmented landscape is diverse—ethnically and biologically. Its stratified human adaptation pattern or vertical ethnic hierarchy consists of the Thais and Shans in the lowest basins, who construct rice paddies



**FIGURE 1.** Map showing location of Banmai Nongbua. (Source: Pong-In Rakariyatham, 2004)

for subsistence living, and the Karens inhabiting the valleys above them, who also construct terraces as their paddy fields.

Farther up the slopes are the Lisu, Wa, Miao (also called Hmong or Meo), and Yao (or Mien) who occupy the middle girdle of the hills where they plant seasonal crops such as dry rice, yams, corn, and sweet potatoes. Using simple agricultural technologies, they practice short-term fallow cycles that maintain stable yields. Opium growth requires high elevation, about 1,000 meters above sea level, and historically this was one reason some of these groups cultivated poppy fields at high elevations. Higher up still are slash-and-burn agriculturalists (Akha and Lahu) who additionally rely on hunting to supplement their farming. Relying on relatively simple agricultural technologies, they plant hill rice and other subsistence crops (Anderson 1993; Geddes 1983; Kunstadter 1983; Lewis and Lewis 1984; Young 1962).

The Golden Triangle covers the rugged hills of three provinces, Chiang Mai, Chiang Rai, and Mae Hong Son. Beside the rice-terracing Thais and Karens, the slash-and-burn agriculturalists in the hills are considered extractive in nature, and their agricultural practices are deemed detrimental to the environment by officials in the Royal Forestry Department (Anderson

1993). Because the low productivity levels contribute to general poverty, growing opium is an attractive economic alternative (Feingold 2000). To counter the problems of poverty, environmental degradation, and opium production, many agencies and organizations, both Thai and international, have established experimental stations and extension services in this region, hoping to find substitute cultivars that are economically viable, environmentally sustainable, and locally acceptable. Newly introduced crops include wheat, buckwheat, barley and potatoes (as cash crops), and hedge-grass (vertiver) to prevent soil erosion. These investments have had limited success, and the dual problems of poverty and environmental degradation persist (Geddes 1983).

Amid these efforts to ameliorate difficult conditions in the mountains, a new element was introduced in the mid 1960s that might have further complicated the human-environmental interface patterns—the arrival of émigré Chinese (Chang 2001, 2002; Forbes and Henley 1997; Hsieh 1997; Maxwell-Hill 1983, 1998; Mote 1967; Young 1962). Most of these Chinese were hill farmers from Yunnan Province in southwest China, immediately north of the Golden Triangle.<sup>1</sup> Driven off by the Chinese Communists beginning in 1949, the Yunnan Chinese joined the local militias organized and supplied by the Nationalist government in Taiwan as part of its “Recover the Mainland” (*guangfu dalu* 光復大陸) campaign. To supplement their military expenditures, they became heavily involved in opium production and trafficking. In 1964 they were driven out of Burma, and settled permanently in northern Thailand. Like other hill tribes, the Yunnan Chinese initially engaged in slash-and-burn agriculture, cutting down natural forests to grow seasonal cash crops. Their market knowledge and networks brought them short-term wealth, but environmentally speaking, their agricultural practices seemed as detrimental as those of other hill tribes, from the perspective of the Royal Forestry Department, because they contributed to the general deforestation, soil erosion, and soil and water pollution of the hill region.

The military capability of these armed settlers, however, was fully recognized by the Thai government. They were called upon by the Thai military to engage in two campaigns to eradicate local communist insurgents in northern Thailand in 1970 and 1981. After the successful campaign in 1981, the Thai government granted citizenship to these Chinese military personnel and their families.

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<sup>1</sup> Yunnan Chinese in northern Thailand are called Haw, Ho, Chin, or Chin Ho by the Thais. However, since these terms have historically been closely associated with Muslim caravan traders from Yunnan, they are not really adequate ethnic labels for the current diaspora (Chang 2001, 2002; Forbes and Henley 1997; Hsieh 1997; LeBar et al. 1964; Lewis and Lewis 1984; Maxwell-Hill 1983, 1998; Young 1962).



**FIGURE 2.** Hill farms near Banmai Nongbua: Mature lychee trees on the right, and tangerine trees on the left. An irrigation pond in the middle. (Photo by the author, 2003)

Being awarded Thai citizenship in the early 1980s seems to have triggered a completely new *modus operandi* among these Chinese. As naturalized citizens, they now had the legal right to possess land in perpetuity. They purchased a large number of mountain slopes from the neighboring Lisu, Karen, and Thais—who generally considered such slopes to be of low agricultural value. Conscious efforts were made to increase land productivity through investing in farming technology as well as experimenting with new cultivars. Equally important were efforts to preserve their newly acquired property through land management and new farming techniques. In only two short decades, the Chinese have introduced the appearance of prosperity to the region with their colorfully refurbished houses and neatly planted hill farms.

From an ecological point of view, we might ask how successful this new hill farming system has been in establishing a sustainable rural livelihood. A *sustainable rural livelihood* can be defined as a holistic, systematic, and participatory approach that brings together issues of poverty reduction, along with environmental and social sustainability. The yardstick of this approach is to look at, simultaneously, the people's ability "to effectively address needs for food and income, cope with and recover from shocks and stresses, and

maintain and enhance capabilities and assets while not undermining the natural resource base” (ISU Sustainable Rural Livelihood Website; See also Helmore and Singh 2001).

For this Chinese diaspora community, this means establishing a new mode of hill farming that combines consideration of environmental conservation, profit maximization, and sociocultural renewal. In the monsoon region of northern Thailand, the torrential rains from May through November mean that proper conservation methods are necessary to prevent soil erosion. Conversely, the six-month-long dry season from December through April requires sufficient irrigation to ensure continued plant growth and health. Farm operators need to hire long- or short-term farmhands to supplement familial labor for these projects. A sustainable rural livelihood thus requires proper agricultural knowledge, adequate investment capital for technology acquisitions, the risk-taking capacity to experiment with new crops, and the managerial skill to organize labor.

### **The Village of Banmai Nongbua**

The village of Banmai Nongbua was built immediately below the rugged mountains that mark the Burmese-Thai border where the Chinese Nationalists’ Third Field Army had their bases before 1964.<sup>2</sup> Originally a small trading post occupied by local Thais and Karens and surrounded by virgin forest, this foothill community sits above the rice terraces that are the dominant agricultural feature of the Fang-Chiaprakarn basin, about 140 kilometers north of Chiang Mai.

When Australian anthropologist F. W. Mote and his wife visited this village in the 1960s, the area had just been turned over to the Nationalist Third Field Army as their permanent residence; it no longer had any Thai or Karen inhabitants. Mote reported the village population at 680 and predicted that transnational immigrants from China and Myanmar to this village would be unlikely to stay on in the foreseeable future. Mote and his wife were perceptive in pointing out that this village had been very successful in agricultural production, with a well-run village government and good Chinese education programs (Mote 1967).

Today the village population is more than 10,000 in about 1,200 households, and a continuous flow of immigrants from China and Myanmar still

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<sup>2</sup> Banmai in Thai means new village; Nongbua means lotus on a pond, the name of a Thai village immediately to the east of this village. The Chinese call it *Resuitang Xinchun* 熱水塘新村, meaning Hot Spring Pond New Village, for the hot springs above the village.

cross the steep mountains to take refuge here. The village's former *puyaiban* (the village chief appointed through the Thai system of local autonomy for tribal areas and responsible for all administrative affairs) estimated that one-third of the current village residents are the original settlers and their offspring who came in 1964. One-third is middle-aged immigrants who settled here in the 1970s and 1980s, mainly escapees from China's Cultural Revolution and their offspring. The last third is made up of new immigrants who arrived within the last 10 years, including Chinese who came through Myanmar in pursuit of a better life, and Burmese hill tribes (Burmans, Lisus, Karens, and Shans) who fled Myanmar's incessant civil wars (Feingold 2000).

The initial impression of the village is that it is well organized, with rectangular residential blocks, paved streets, and well-built, well-maintained houses, a clean environment, well-illuminated streets, and well-stocked retail stores along the main thoroughfares. It also appears to be peaceful and tranquil: old retired Yunnanese soldiers greet one another in the street to chitchat about daily events, and children play freely in small groups, running up and down the streets.

The former *puyaiban*'s estimates indicate how prosperous the village has become: more than 75 percent of village families own automobiles, and 100 percent own motorcycles. Even middle school children go to school on motorcycles or mopeds. This village is the envy of the surrounding Thai and Karen communities, whose members are gradually selling or leasing their lowland rice terraces to the Chinese and slowly turning to long- or short-term employment here, either in factories or as farm hands in the orchards along the mountain slopes.

## General Findings

After three extended fieldwork periods in Banmai Nongbua in late 2002 and the summers of 2003 and 2004, my research has provided preliminary findings that may shed light on problems related to building a sustainable rural livelihood. I divide the discussion into four primary areas: (1) the Chinese émigré's traditional knowledge of agriculture; (2) the introduction of new crop varieties; (3) investment and conservation practices in hill farming; and (4) labor and hill-farm management.

### *Yunnan Chinese and Their Agricultural Expertise*

The Yunnan Chinese brought with them a large number of new cultivars as well as new cropping technology. Before they escaped from China, most had been farmers in the mountainous western region of Yunnan Province. They



were familiar with intensive farming in river valleys and basins where rice is grown in lowland wet fields, as well as with hillside farming using terraces. In other words, they had rich knowledge about crop varieties and cultivation before they arrived here.

Once in northern Thailand, the Chinese introduced an interesting alternative to the hill tribes' slash-and-burn technique. Their introduction of vegetables and tropical fruits expanded the subsistence-based agriculture and extended the number of cash-cropping varieties. Furthermore, as Gordon Young observed early on:

They [i.e., the Yunnan Chinese] . . . demonstrate a type of mountain living that has never before been seen among Thailand's hill tribes. Their example is important, even should they not remain, in terms of what might be shown the other hill tribes in future. They brought ploughshares from Yunnan and used these to advantage in their agricultural practices, using oxen to pull them. In addition, they have shown the importance of buckwheat as a staple and as livestock feed. Their vigor in animal husbandry has also been a source of great admiration by the Lahu and Lisu tribesmen living around them. [Young 1962:84]

Villagers in Banmai Nongbua claimed that when they first settled here, the neighboring Thai and Karen farmers only grew paddy, and cultivated some fruit trees such as mangoes and longan. The Yunnanese brought with them new vegetables, such as cabbage, Chinese lettuce, potatoes, water kale, turnip, string beans, and various gourds. For instance, Chinese lettuce (called *woju* 莴苣) was a crop the Thais had never seen before. Today, the Thais also call it *woju*, a direct borrowing of the Chinese term. Villagers also claimed that Thai farmers did not know about grafting as a technique for growing trees. Only after working for the Yunnan Chinese for several years did they learn this technique.

Besides knowing more about crop varieties and cultivation techniques, the Chinese were also knowledgeable about other aspects of agricultural production. They pointed out the necessity of using chemical fertilizer as an essential ingredient in modern agricultural productivity, but they also acknowledged that continuous use of chemical fertilizer hardens the topsoil and changes soil quality. Organic nutrients are still needed, and Chinese farmers purchase bags of cow dung from Chiang Mai for this purpose.

To ensure adequate water supply during the dry season, farmers searched the limestone hills behind the village for natural springs. Once located, they built cement storage tanks around the water sources at high elevations. Using natural gravitation, they connected plastic pipes to feed the slopes below. This availability of water rapidly expanded hill farm cultivation.

### *Introduction of New Crops*

In addition to their facility with crop varieties and animal domestication, Chinese financial management skills (Young 1962:32) and ability to build ethnic marketing networks (Maxwell-Hill 1998:98; Auansakul 1995:33) have also made the development of a cash crop economy in the hills viable. In recent years lychee (or *litchi* 荔枝) and tangerine production have become the two most successful economic activities, and both have relied heavily on Chinese ethnic networks.

Lychee was introduced to this region in the early 1980s by ethnically Chinese Banmai Nongbua villagers. Lychee was barely mentioned in Edward Anderson's authoritative work on plants in northern Thailand (1993). Villagers claimed that they acquired lychee saplings from Teochiu (or Chaozhou 潮州 in eastern Guangdong Province), whose émigrés comprise the largest ethnic Chinese group in Thailand. These immigrants brought the seeds from southern China and established lychee orchards around the village of Wanyang, about 10 kilometers to the northeast, in the early 1970s.

The success of Teochiu merchants in establishing lychee orchards in the Wanyang area that earned them lucrative profits motivated Banmai Nongbua villagers to follow suit. In 1981 two of the village's skilled farmers, Mr. Yue and Mr. Li, began to plant lychee on their hill slopes. They purchased most of their lychee saplings from a Teochiu merchant in Wanyang who operated a large trucking company there. With 20 lychee plants per *rai* (a Thai land unit, about 40 x 40 meters), Mr. Yue planted 400 saplings on his 20 *rai*, and Mr. Li, 3,000 on his 150 *rai*. There are four lychee varieties: three are early ripening (*jingzhong* 金鐘, *japaka* 糯米糍, and *ohe* 藕黑), and the fourth is a late-ripening one called *fenghua* 豐花. They also reported that whenever this Teochiu merchant developed new lychee varieties, he would give them free saplings to experiment with. The Teochiu merchant used his trucking facility to transport harvested lychee to markets in Chiang Mai and Bangkok.

Similarly, the honey tangerine (蜜橘) was brought to Banmai Nongbua in 1998 in the same manner as lychee in the 1980s, i.e., it was first introduced by the Teochiu Chinese in Wanyang who acquired seed in southern China and successfully established the tangerine orchards there. The Yunnan Chinese acquired seeds and saplings from the Teochiu people (tangerines were not even mentioned in Anderson's book) and successfully planted them in the surrounding hills.

Compared to lychee, honey tangerines are more capital intensive. While each *rai* of land can sustain 20 lychee plants, it supports four times more tangerines—up to 80 plants. While lychee orchards require monthly irrigation during the drought season, the tangerine orchards require weekly watering.

Lychee need fertilization twice a year, once before flowering and again immediately after the fruits emerge. Tangerines require monthly fertilization with both chemical fertilizer and cow dung. In addition, the tangerine trees need more regular trimming, grass removal, and pest control than the lychee. In other words, while one *rai* of lychee takes about a 20,000 baht investment per year, the same tangerine field requires 250,000 baht.

Lychee and tangerine have different growth rates. Lychee can be harvested after the fifth year, initially with small yields. The trees mature and reach their peak at about 12 years of age. It is not unusual to see a full-grown lychee tree produce 400 to 500 kilos of fruit each year. The quality declines after the tree reaches 25 years. Tangerine trees can yield fruit from the second year of growth and reach maturity in the fifth year. In average, a mature tangerine tree can produce between 50 to 60 kilos of fruit each year.

In recent years, many Banmai Nongbua villagers have replaced their lychee trees with tangerines. They gave three reasons for this change. First, lychees are now being overproduced in Thailand. With rapid expansion of lychee operations in other parts of northern Thailand, the market prices for lychee have become greatly depressed in the past three to four years. Most villagers claimed that they could not break even with lychees in recent years. Second, tangerine production can be timed to maximize market prices. The tangerine flowers in early January and this period lasts for 45 days. After that, the fruit will grow for 10 months until harvest time in November, December, and January. Many village farmers deliberately postpone fruiting by picking off the first flowers so the harvest period is pushed into February. The tangerines will then mature one month past the regular peak season and command better prices. The villagers claimed that there is no comparable technique for manipulating lychee growth and harvest, which falls during May and June. Additionally, villagers pointed out that tangerines that have been waxed can be preserved for up to 10 days. This longer duration permits the fruit to be shipped to distant markets. Ripened lychee, however, can be kept for no more than a week, so the market region is necessarily much smaller.

The rapid expansion of honey tangerine orchards in Banmai Nongbua and its vicinity has worried many villagers. They fear that the continuation of this expansion may lead to overproduction like that of the lychee a few years ago. Preemptive strategies were already under discussion among several villagers in summer 2004. One proposal made by a young entrepreneur was to build a tangerine factory to produce orange juice concentrate and canned fruit for export. Another proposal I heard advanced in summer 2004 by at least two villagers, Mr. Mei and Mr. Peng, involved introducing Sunkist oranges from Taiwan to replace the honey tangerines. Mr. Peng's daughter-in-law, who

lives in Taiwan, actually brought five kilos of Sunkist orange seeds that summer and asked me whether grafting is needed to grow them. This kind of foresight indicates that the Yunnan Chinese are not subsistence farmers, but rather farm business investors who want maximum profit.

### *Investment and Conservation Practices in Hill Farming*

When the Chinese first settled in the Banmai Nongbua area in 1964, small numbers of Thai and Karen paddy farmers still worked the foothills and Lisu slash-and-burn agriculturalists farmed in the surrounding hills. Many villagers purchased hill slots from the Lisus and paddy fields from neighboring Thais and Karens. Old Mr. Peng, who purchased 120 *rai* of land from a Lisu hill farmer in a nearby valley for 20,000 baht 25 years ago when he received legal residency, now claimed that he could sell the land for 1,200,000 baht, even though he had no legal title to it. With the expansion of hill farms among Banmai Nongbua villagers, most Lisus have moved farther into the deep hills, away from the Chinese settlers.

Before the Thai government established the Royal Forestry Department and strictly enforced restrictions on opening up forestland in the early 1990s, villagers could simply select mountain slopes for planting, chop down the vegetation, and establish temporary usufruct rights. Such rights are recognized by other villagers and can be transacted and bequeathed in the same manner as any other commercial commodities or property. In identifying proper hill farms, Mr. Yue, a skilled farmer, said that the gradient of the slopes must not be too steep to allow cultivation and human movement. Another condition is the availability of water for irrigation. Even if the slope is not too steep and if water is available, it may not be suitable for agriculture if it faces north. A northern exposure means insufficient sunshine, especially in winter months, and hence poor yields. Similarly, mountain slopes facing west are considered better than those facing east. East-facing mountain slopes receive sunshine before noon—insufficient radiation and heat in the morning yields poor crops, he said. Needless to say, a southern exposure is ideal for farm plots.

In the early 1990s the Thai government began to enforce the ban on creating new farmland in the national forest through its Royal Forestry Department. All existing hill farms are measured and recorded, but the Forestry Department does not grant land titles to the existing owners. This creates anxiety among the many villagers who own hill slopes. Lands without title in the hills are worth about 10,000 baht per *rai*, or only about one-tenth of the value of farmland in the foothills with legal documents; these can be sold at 100,000 baht per *rai*.

The lucrative profits from fruit trees in the hills have dramatically increased land values in Banmai Nongbua and its vicinity. The villagers not only expanded fruit production on hill slopes, but also purchased lowland paddy fields from neighboring Thai farmers and converted them into fruit orchards as well. Mr. Wang, a young village businessman who has made a fortune in the wholesale potato trade and potato chip business, recently purchased more than 100 *rai* of farmland around the village, mostly in the lowland areas, and hired over 40 workers to run his tangerine orchards. With capital investment of over 100,000 baht per *rai* for the land, and another 20,000 baht per *rai* for the saplings and the installation of a sprinkler system, Mr. Wang's orchard operation, at \$12,000,000 baht (or about US\$300,000), is anything but a low-cost peasant enterprise.

As the investment in fruit production increases, conservation practices have become critical for preserving valuable property. One common practice is building terraces along mountain slopes to improve crop production and prevent erosion. Several farmers have also built cement waterways or channels to guide runoff to lower ground or into nearby brooks. Grass and underbrush is regularly cut around fruit trees but not removed. This allows the root systems of the grass and underbrush to help hold the topsoil. When herbicides became available, village hill farmers experimented with them to see if they could save human labor and, in the meantime, preserve topsoil by not destroying the root systems. When applied properly, herbicides stun grass growth and turn the grass blades golden yellow in color without killing the roots. The grass coverage absorbs direct impact of the land surface from raindrops, while the root systems grasp the topsoil to prevent erosion.

Another common conservation practice involves digging shallow basins or pits around fruit plants to preserve soil and water. This way, fertilizers applied around fruit trees, including both chemical fertilizer and cow dung, cannot be easily washed away by runoff water. Newly developed hill farming practices with environmentally sustainable features are becoming more common throughout the hills of northern Thailand.

### ***Labor and Hill Farm Management***

The farm business management and use of credit introduced by the Yunnan Chinese has had an even more significant impact in this region. The villagers are extremely careful in calculating investments, expenditures, market prices for their produce, and the profitability of their work. Investment in lychee and tangerines both required large sums of capital for the initial purchase of land, tree saplings, fertilizer (chemical and manure), irrigation facilities, and labor. Because of the two-to-five years it takes for lychees and tangerines to begin

producing fruit, villagers growing these crops had to wait for several seasons without incomes.

One key ingredient in a hill farm operation is labor. As Banmai Nongbua villagers grow old and their children migrate to Taiwan and to big cities in Thailand, they must find replacement laborers to fill the void. The incessant political turbulence and wars in northeast Burma over the past four decades created a seemingly inexhaustible supply of laborers to meet the developmental needs in northern Thailand (Feingold 2000). Steady streams of Burmese hill tribes people, including Wa, Shan, Karen, and Mons have crossed the borders to take refuge in Thailand. With its proximity to the Thai-Burmese border, Banmai Nongbua is often the first stop of these border-crossing refugees.

Banmai Nongbua villagers had extensive knowledge about various minority groups and hill tribes even before they left China, as Ann Maxwell-Hill eloquently points out: "The Yunnanese lived in the midst of cultural and linguistic diversity in their native province, and northern Thailand is not much different in this respect" (1983:131). They used this knowledge as the basis for hiring farm hands. They tended to prefer hiring what they call "Baiyi 擺夷" people as farm hands. The term Baiyi, admittedly derogatory, is used generally by ethnic Chinese to refer to the Dai 傣 people in Yunnan, or the Shan 掸 in northeast Burma, both distant cousins of the Thai.

Villagers claim that Shan people have mild temperaments and are not as feisty as the Burmans or Wa. They work hard and learn fast. Village farmers taught their Shan farmhands basic skills for mixing and applying chemical pesticides or herbicides, timing the irrigation and trimming of fruit trees, detecting and diagnosing plant diseases, and entrusting the entire farm operation responsibility to them with periodic supervision.

Since many Shan farmhands entered Thailand illegally, they could not live in the village. Village farmers built simple houses or sheds for them in the hills and provided them with monthly wages of about 3,000 baht (or US\$75). It is still common for the employers to hold their farmhands' earnings, and give them the accumulated sum when they want to go home and visit their families across the border. Villagers claim that the best Shan farmhands are young couples who are willing to work hard to save up or to help their kin on the other side of the border. Having a wife makes a male laborer less restive. If a male worker spends too much money drinking or gambling, the employer need only tell the wife and the problem will be quickly righted. Employer-employee relationships are often long lasting, and the Shan farmhands are treated like family members. Whenever the Thai government announces amnesty pro-

grams for illegal immigrants, employers apply for legal status for their farmhands to secure their long-term service.

The official record in Chaiprakarn Amphor indicates that 1,788 hill tribe members (974 males and 814 females) resided in Banmai Nongbua in July 2004. I believe this figure is relatively reliable, although I do not know exactly what percentage of them is Shan as opposed to Burman or Wa.

## Conclusions

The Chinese settlers of Banmai Nongbua have established a prosperous rural livelihood, characterized by a mode of hill farming that is, at least superficially, environmentally friendly, economically profitable, and socio-culturally self-renewing. Much of their success depends on the cultural knowledge they brought with them when they entered the Golden Triangle: extensive knowledge about cultivars, terracing, irrigation, soil conservation, and crop growth. Still another level of cultural knowledge that has also played a crucial role in their success in the hills is their pecuniary acumen in saving and investment, as well as their social skills in building ethnically based networks with other Chinese immigrants, especially the powerful Teochiu people, and in interacting with other hill groups, such as the Shan.

Several issues can be raised as a result of this study. First, is this hill farming system in Banmai Nongbua truly sustainable? This question is certainly more complicated than simply holding the yardstick of “sustainability” against the Yunnan Chinese and their hill farming practices. This ethnic mosaic involves not only the Yunnanese but also other groups who are either displaced by them (such as the Thais, Lisus, or Karens) or employed by them (such as the Shans). The success of the Chinese is clearly built at the expense of the other groups. In this context, both the winners and the losers must equally be assessed, and the issue of sustainability will have very different implications for each of the different groups.

A related problem is whether this hill farming system can be used as a model for development, to be imitated by other hill groups to improve their livelihood. The technical aspect of this hill farming system may be easily transferred and acquired—as the Baiyi farmhands hired by Banmai Nongbua villagers have clearly demonstrated. But the other aspects of production, such as the long-term planning and investment, as well as the willingness to experiment with new crop varieties and technologies, may require another level of cultural configuration that may not be easily transmitted. Similarly, the ethnic networks used by the Yunnan Chinese to engage in technology transfer when

developing or even investigating new cash crops may not be easily duplicated by other hill tribes.

There is yet another aspect of this system that may render it difficult to duplicate: its reliance on refugees from Burma who have illegally entered Thailand and who provide cheap labor for farm operations. In other words, the success of the Yunnanese in Banmai Nongbua are, to some extent, built upon their ability to exploit other disadvantaged groups. Neo-liberal economists may argue that any such contractual agreements between the two parties are established through mutual agreements that benefit both. Without such employment opportunities, the border-crossing Shans would probably face even more difficulties making ends meet. So the question returns to the problem raised at the beginning of this paper: What is our level of analysis? Are we dealing with the Yunnan Chinese in Banmai Nongbua, or are we dealing with the ethnic mosaic in this region that includes not only the Chinese, but also other groups who interact with them on a daily basis for their livelihood? When we use the term "sustainable livelihood," are we referring to the perspective of the Yunnan Chinese, the Shan, or the Thai development officials?

Another issue that requires consideration, based on findings of this project, is the current restriction placed on clearing forestland for hill farming by the Thai Royal Forestry Department. How to improve the living standards of the hill tribes has been a major concern of the Thai government. The twin goals of eliminating both opium growing and poverty from the Golden Triangle can be best achieved by providing alternative modes of living. Replacing tropical rainforest with perennial tree crops is considered a viable and sustainable alternative (Fox 2001; Young 1998). The prosperity generated by the Yunnanese hill orchards might be significantly expanded if current restrictions are modified. If legal titles or deeds were provided for these hill farms, the Thai government could generate land taxes and property transaction taxes to augment its treasury. At the same time, legalized titles and deeds will encourage the Yunnanese to invest more in their hill farms. The locomotive effect of these hill farms will be seen not only in expanded employment among the impoverished hill tribes, but also in higher production values for cash crops and processed produce that enter the international trade stream.

A counter-argument, raised by conservationists, points out the importance of preserving tropical rainforest to reduce carbon dioxide emissions into the atmosphere, maintaining biodiversity, and reducing hillside soil erosion. Any tinkering with this fragile biosphere, shared by the Golden Triangle, is an invitation to social and natural disaster. Both land-hungry Thai peasants and the slash-and-burn hill tribes should be restricted to minimize potential damage. The twin issues of "whether slash-and-burn agriculture should be permit-



ted” and “whether hill farming is beneficial in tropical areas” can only be answered on the basis of considerations embracing and balancing the interests of environmental conservation, the needs of land-hungry farmers, economic development, preserving biodiversity, and so on.

Finally, at the epistemological level, we may question whether sustainable agriculture or sustainable livelihoods are the ideal and/or ultimate goal of development in rural areas. The concept of sustainability in these contexts has been developed in the past two decades as a countermovement to the dominant capital-intensive, industrialized agribusiness in the West; it is complementary to the push toward organic farming, intermediary technologies, and community food self-sufficiency. Pitting environmental conservation and preserving rural livelihoods as a viable cultural heritage against the damage caused by the continuous use of chemical fertilizer, pesticides, and herbicides in industrial agriculture has attracted tremendous scholarly interest (Francis 1990; Gold 1999; Hatfield and Keeney 1994; Helmore and Singh 2001; Ikerd 1992; Young 1998). But while this idealistic notion of “sustainable development” may have contributed in an important way to new research directions in Western academies and to alternative lifestyles for rural practitioners in Europe and North America, it still falls within the goal-oriented social blueprint of “development”—a highly contested concept in this post-modern and post-colonial era.

Academic challenges to the notion of development as a blueprint for societal change derive from diverse sources. On one end of this spectrum is the political argument that developmental projects, especially those under the auspices of world capitalist hegemony, are not the solution but the cause of third world poverty (Ferguson 1994; Harper 2002). Projects sponsored by donor agencies such as the World Bank or USAID are actually the causes of and not the solutions to perennial world hunger and poverty problems. On the theoretical side of the spectrum is the view espoused by James Scott, who argues that agricultural development projects orchestrated by the modernist-oriented states, including both capitalist and socialist ones, are merely attempting to destroy natural complexity, cultural diversity, and local resistance to the hegemonic nation-state that is only interested in the issue of legibility (Scott 1998).

A middle-of-the-road view of development accepts the possibility of external agencies engaging in “organized intervention in collective affairs according to a standard of improvement,” although both the notions of improvement and intervention may “vary according to class, culture, historical context, and relations of power” (Pieterse 2001:3). This moderate approach to development allows Pieterse to acknowledge that even among the poorest of the poor coun-

tries around the world, the general conditions of health and education have improved in the last century (*ibid.*).

Development is a value-laden concept. To deny the poor around the world an opportunity to improve their less-than-desirable livelihood because of this concept's value connotations is commensurate to throwing the baby out with the bath water. A counter question then is: if we do not want to condemn the poor to such conditions permanently, what will be acceptable methods, generated either internally or externally, to improve either the standard of living or sustainability? If we accept the possibility that certain production methods may lead to the improved material living conditions and alleviate hardship in daily life, while preserving the natural environment and sociocultural autonomy and dignity, we may cautiously agree that the Yunnan Chinese mode of living in the Golden Triangle is a close approximation to what researchers suggest has become a sustainable rural livelihood.

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# 建立永續性的農村生活： 解析一個泰北雲南華人的農業社區

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本文以民族誌的方式，記述一個泰北雲南華人村落的改變。這個村落由原國民黨部隊及其家屬，加上依附於部隊的馬幫於 1964 年所建立。早年村民從事毒品生產及販賣，也在山區兼做刀耕火耨農業。自 1981 年許多村民取得泰國公民身分後，這種掠奪式的生產模式便有所改變。基於他們豐富的山田耕作知識，這些雲南華人成功地開發出山地果園經營模式，大規模地種植荔枝、芒果、龍眼和柑橘。這種山地農業經營模式，不但有效地達到水土保持的效益，並造就經濟繁華的生活面貌。

這個成功的個案是否可做為典範，以回答幾個迫切且具有實際意義的問題？——例如，借此做為有效取代毒品生產的經濟作物？或依此做為開發山地的經營模式，以改善其他山地部落民族的生活？本文的分析指出，要能回答這些問題，並非簡單的將本村經驗套用到其他地區或社會即可達成。這個成功的個案，背後其實還牽涉到複雜的社會文化條件，包括村民如何僱用從緬甸逃亡至泰國的擺夷人充當農業長工，以及憑借華人社群間的多重人際關係網絡，打開市場行銷網絡等。

本文再進一步地分析，更指出我們近時常使用的一些概念，如「永續性農業」、「永續性農村生活」、「永續性發展」，甚至「發展」等理念，都有其時間和空間的侷限性，且隨著研究者主觀角度的不同，而產生不同的含義。從此角度來說，當人類學家在使用這些名詞時，要能清楚界定其意義，並明白指出其衡量標準，才有可能跳脫出本質化的限制。

**關鍵詞：**永續性農業，金三角，泰國，雲南華人，發展

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