

*Full Length Research Paper*

# Tea industry development and land utilization along the China-Laos border: A case study of Komen Village in Laos

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Accepted 16 December, 2010

Existing problems in the developing countries include not only the lagging economic development but also those social instability and environmental degradation problems, such as the phenomenon of poppy cultivation and deforestation in the Golden Triangle region due to economic backwardness. It is of great research significance if the local natural resources can be effectively and efficiently employed in order to change their status of poverty. In the Southeast Asia, Laos belongs to developing country but with very affluent wild tea resources. This paper presents a tea development model based on the cooperation between China and Laos. By employing a case study in the Komen Village between Laos and China, an in-depth investigation has been conducted by starting the practical tea production project. By comparing the differences of the results, it is obvious to find out that significant changes occurred after the implementation of the tea development project and the changes in tea garden areas and the living standards of local residents. Finally, an improved economic model upon tea garden land utilization in Laos was summarized and the future challenges are analyzed on the basis. It is identified that through the cooperation and exchange activities between the developing region and developed region, benefits for a “win-win” situation can be achieved accordingly. The findings can provide useful reference to the economic development of similar areas of Laos and other developing countries.

**Keywords:** Tea garden land utilization, tea industry mode, developing country, China-Laos' border.

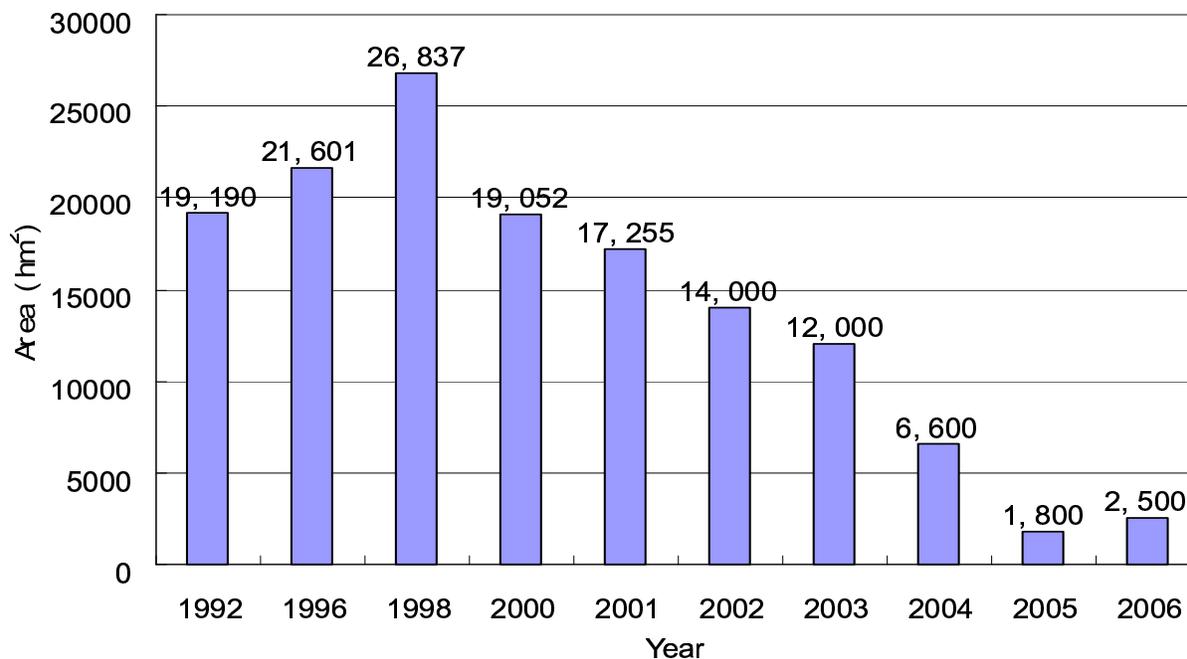
## INTRODUCTION

Laos (officially the Lao People's Democratic Republic), is a landlocked country in Southeast Asia, bordered by Burma and People's Republic of China to the northwest, Vietnam to the east, Cambodia to the south and Thailand to the west. The total land area is 236,800 km<sup>2</sup>, and the population is 6.32 million in 2009 (United Nations, 2010). The Lao economy is heavily dependent on investment and trade with its neighbors, Thailand, Vietnam, and, especially in the north, China. In Laos, the per capita GNI in 2009 was only 880 U.S. dollars (World Bank, 2010). Subsistence agriculture still accounts for half of the GDP and provides 80% of employment. Only 4.01% of the country is arable land, and 0.34% are used as permanent

crop land (CIA, 2006), the lowest percentage in the Greater Mekong Subregion. All of these statistics has demonstrated that Laos is a relatively poor country. Because of its poverty, opium poppy cultivation and the original “Fire tillage” land use have brought about many social and environmental problems.

It is reported by the United Nations Office on Drugs and Crime (UNODC) (2007) that poppy cultivation declined by 87% over the last decade in the Golden Triangle. Between 2005 and 2006, poppy cultivation in South-East Asian declined from 35,000 hm<sup>2</sup> to 24,000 hm<sup>2</sup>. However, the Golden Triangle's opium and the drug problem still remains a serious problem. As one of the “corner” of Golden Triangle, opium poppy cultivation in Laos, has been effectively controlled since 1998, reducing from 26837 hm<sup>2</sup> in 1998 to 2500hm<sup>2</sup> in 2006 (Figure 1). According to UNODC (2007), in 2006, about 5,800 households cultivate opium poppy plants, which are mainly distributed

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**Figure1.** The Planting area for opium poppy from 1992 to 2006.

in 7 provinces in the northern part of Laos.

Since the 1980s, the forest area in Laos is declining, which is closely correlated with the original “Fire tillage” land use approach. For example, Komen village, located in the northern part of Phongsaly Province (at the junction of Yunnan, China), 80% of the population is still engaged in slash-agriculture. According to the survey of Department of the Lao national forest, the proportion of forest area of Phongsaly province in 1982 account for 43.8%, while the proportion dropped sharply to 23.75% in 2002, which is mainly due to the original land use approach (Anonth, 2004).

In order to solve the existing land use problems, the Lao Government try to increase the income of farmers. And the approach is expected to change the situation fundamentally. In fact, the tea is considered as goods via the Tea-Horse Trail extended neighboring countries of China 100 years ago (Liu, 2007).

In 1999, as the tea prices in the Chinese tea market keep increasing, the Chinese merchants started to have the intention to invest in the Komen village of the Phongsaly province. It is also expected by the Laos government that the local economic, social and environmental problems can be resolved through the tea economic development projects.

This study aims to study the local tea industry and their tea garden land utilization in developing regions, and to find out an improved model for developing tea industry. A typical case is employed to illustrate how the improved model can be implemented by involving field survey data and interview discussions among the local regions.

## CASE STUDY

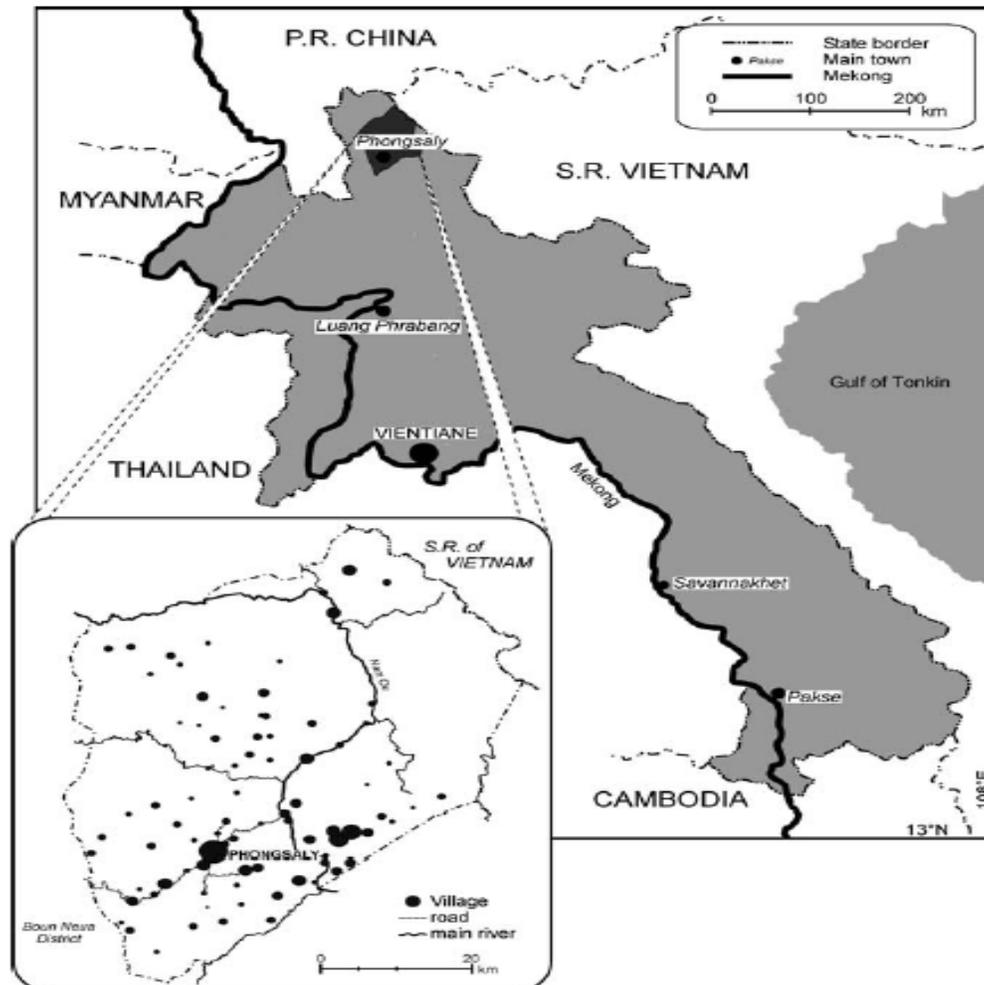
The total land area of Phongsaly Province is 16,300 km<sup>2</sup>, including seven county-level administrative regions, 607 villages and 28,480 households. As there are 28 nationalities in the Phongsaly Province, it is difficult for local government to manage this multi-cultural region. All these issues have caused economic backwardness in this Province. In addition, Phongsaly Province has a rich tea culture, which is similar with the Blang and Hani nationality in Yunnan, China.

The Komen Village, with a total area of 1701 km<sup>2</sup>, is 10 km away from the capital of Phongsaly Province and 270 km from the Chinese border (Figure 2). The average annual rainfall is 1500 to 2000 mm, between 450 to 1800 m above sea level. The Local villagers are Puyoid family, which starts to plant tea from very early start, and there are 80 families in the village, the total population is 313, and an average of 6 persons per household, with the population density of 18 person / km<sup>2</sup>.

## IMPACT OF TEA GARDEN LAND UTILIZATION UPON LOCAL ECONOMIC DEVELOPMENT

### The tea development project in Phongsaly Province

The average household cash income of opium poppy cultivation in Laos in 2005 is 139 U.S. dollars, while the income of non-poppy planting family is 231 U.S. dollars. In order to improve the income of local residents, the



**Figure 2.** The location of Komen Village in the Phongsaly Province.

Phongsaly government is trying to develop new non-poppy cultivation project. According to the report on Phongsaly's Provincial Government Programs and Investment Authority, 80% of the Phongsaly province's budget depends on the central government. In the period of 1998 to 2005, there is a total budget of 136,900 U.S. dollars for Phongsaly province, while only 7.9% (about 10,800 U.S. dollars) of the total was used to support agriculture development, and the average annual budget of the agricultural sector is only 150 U.S. dollars. Therefore, to attract foreign capital for new agricultural project development has become an inevitable choice for Phongsaly province.

Tea industry have been playing significant role in regional economy in some counties of China (Xu, 2008). For example, more than half of the rural populations have worked on tea industry in Simao City, Yunnan province (OTIDS, 2006). In 1999, a Chinese tea factory visited the Komen village in Phongsaly province and they negotiated with local people and signed a tea cooperation project

contract.

They can develop tea plantations and establish tea production bases. The tea production base can provide technical support to the local tea farmers and sell the tea cultivation tools. Besides, the fresh leaves and primary tea picked by local farmers are purchased by the tea production base. Figure 3 shows the comparison between the implementation of tea development project (before and after).

### Rises in purchase price of tea

Since 2005, Pu'er tea has become increasingly popular in China. In particular, those Pu'er tea made from the ancient tea become more favorable than that made from tea cultivation. The price of wild ancient tea increased rapidly in China (Figure 4). The Purchase price of tea has increased dramatically year by year, from 1.96 U.S. dollars per kilogram of dry tea in 2002 to 31.39 U.S.

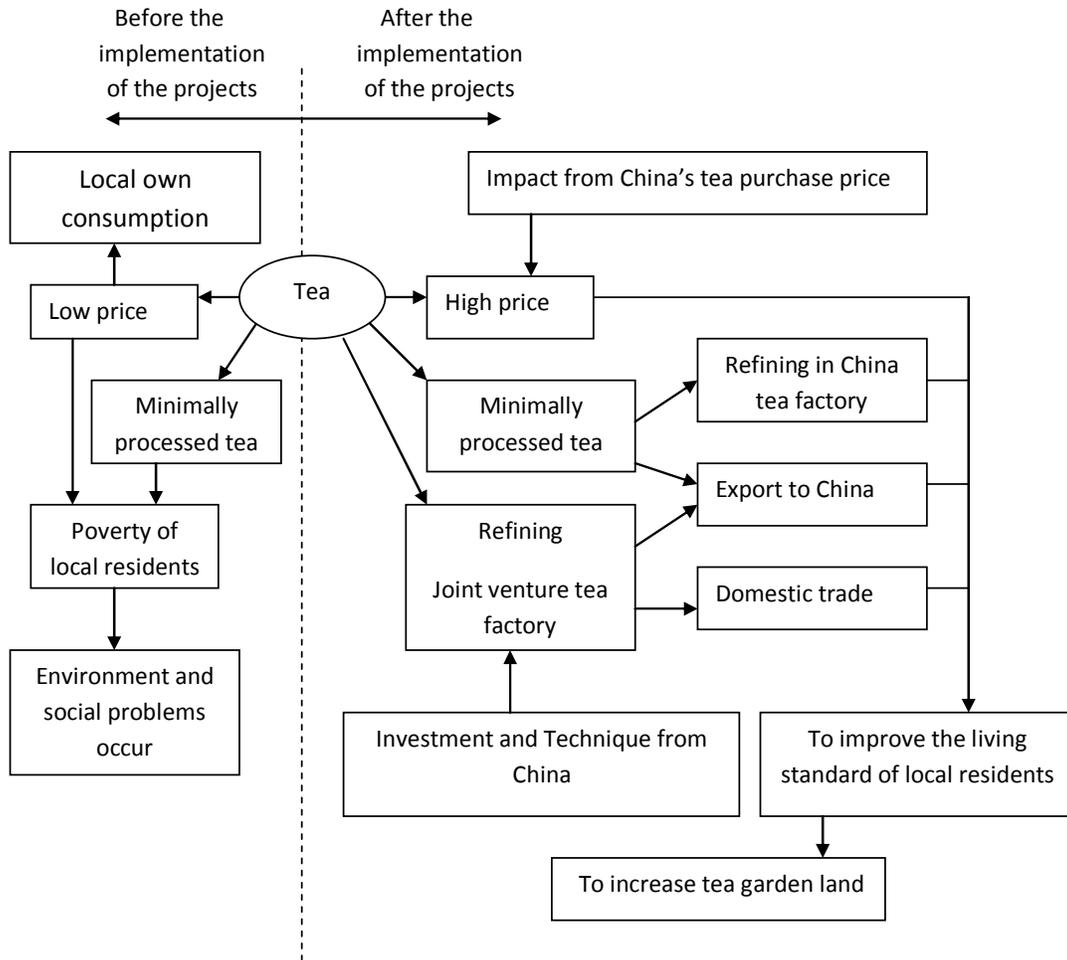


Figure 3. Comparison between the implementation of tea development project (before and after).

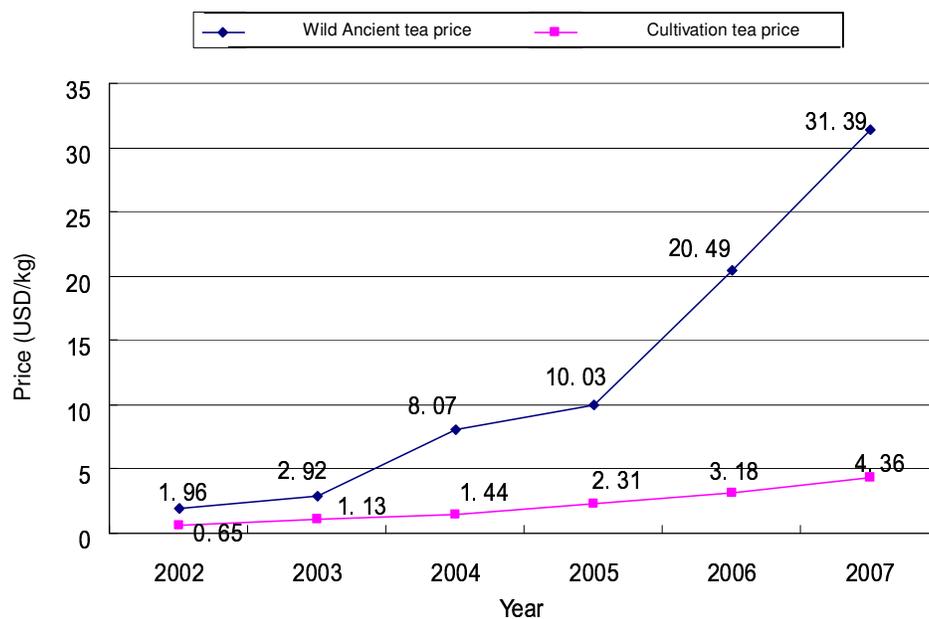


Figure 4. The purchase price of Yunnan dry tea.

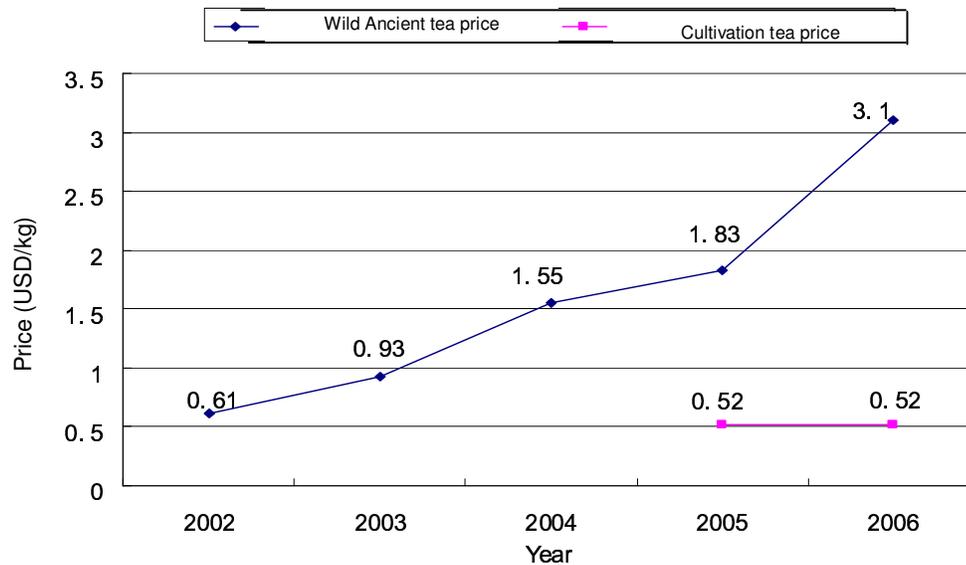


Figure 5. The purchase price of Phongsaly dry tea.



Figure 6. Traditional grass house in Komen.

dollars per kilogram in 2007.

Since most of those tea buyers come from Yunnan, China. Therefore, the purchase price for tea in Yunnan began to affect the Komen tea prices. This is particularly found in the growing price of the wild ancient tea plants. Meanwhile, Villagers in Komen start to develop cultivation tea since 2002. After 2005, cultivation tea appears in the market (Figure 5).

### Improves the local living levels

Before 1999, there is no tea factory in Phongsaly, and tea development has not been developed a lot. Though the tea was sold in the market, there was actually very little

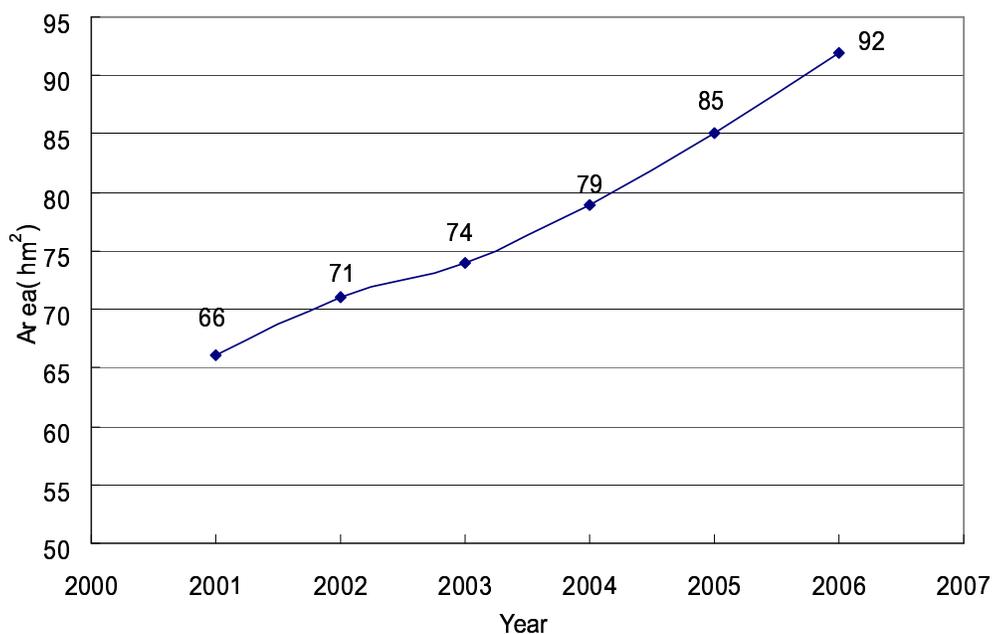
commercial value for the tea in local market. Local people produced tea as their own consumption of substances or give to their friends as gifts.

The lives of local people mainly depend on agricultural farming fire before 1999. They planted rice and other crops in the fired arable land to make a living. Before the tea development project, there is not any trunk road and the local roads are narrow and uneven. The backward traffic in Komen Village has made the local communication with external environment very difficult. Therefore, the local economy is backward, and most farmers lived in the house made of grass layer (Figure 6). Generally, the roofs of the grass houses have to be repaired every three years.

It can be identified that the Komen villagers engaged in



**Figure 7.** The improved houses after tea development project in Komen (reinforced concrete).



**Figure 8.** The Tea Plantation area in the Komen Village.

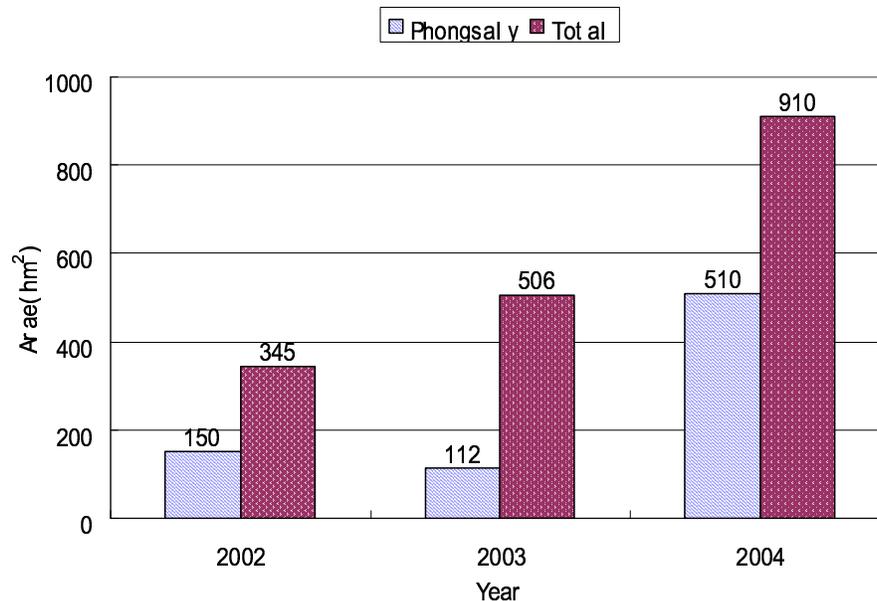
slash-agriculture before the Tea Development Project; while most of the villagers began to engage in tea production after tea development project, with an average income of about 300 U.S. dollars per annual household. The living standard of local residents has been significantly improved. They can not only afford to buy sufficient food, but can also afford to pay cost of their house construction (Figure 7).

#### **Increases in the tea plantation areas**

After the implementation of the tea development project,

the tea plantation area in Komen village increased from 66 ha in 2001 to 92 ha in 2006 (Figure 8). In addition, tea plantation grew not only in the Komen Village, but also in other 33 villages of Phongsaly Province.

As the income of local residents has been greatly raised by tea cultivation, some residents started to move from making a living by deforestation to picking wild tea leaves or tea cultivation. Some other residents started to participate in working in the joint venture factories, and their major job is roughing or finishing the tea plantation. Some of the residents who intend to get engaged to the opium cultivation also show strong interests in the tea industry. In this context, the rapid development of tea



**Figure 9.** The changes of tea plantation area in Laos.

developing country. In order to avoid the market risks and capital risks, it is suggested that multi-funds investment are needed on one hand, the full consideration of various investors' interests have to be guaranteed on the other hand. Therefore, in order to maintain a stable market supply, the government should not only focus on tea industry policy making, but also the tea plantation planning in the long run.

In addition, it is also very important to realize the significance of foreign experts on tea industry. If the tea industry experts know how to open up the tea product market through its cooperation with the external market, the living standard for local residents will be gradually increased, and the poverty and social problems will be gradually reduced. For example, the corporation with China's tea business has helped significantly improved the local residents' living conditions. On the other hand, cooperation with other countries cannot solve the industry has greatly improved the local economic development, which therefore plays an increasingly important role in the ecological protection and in addressing poverty, drugs and other social problems.

## EXPERIENCE SHARING ON THE TEA DEVELOPMENT PROJECTS IN KOMEN VILLAGE

### A shift in the conception

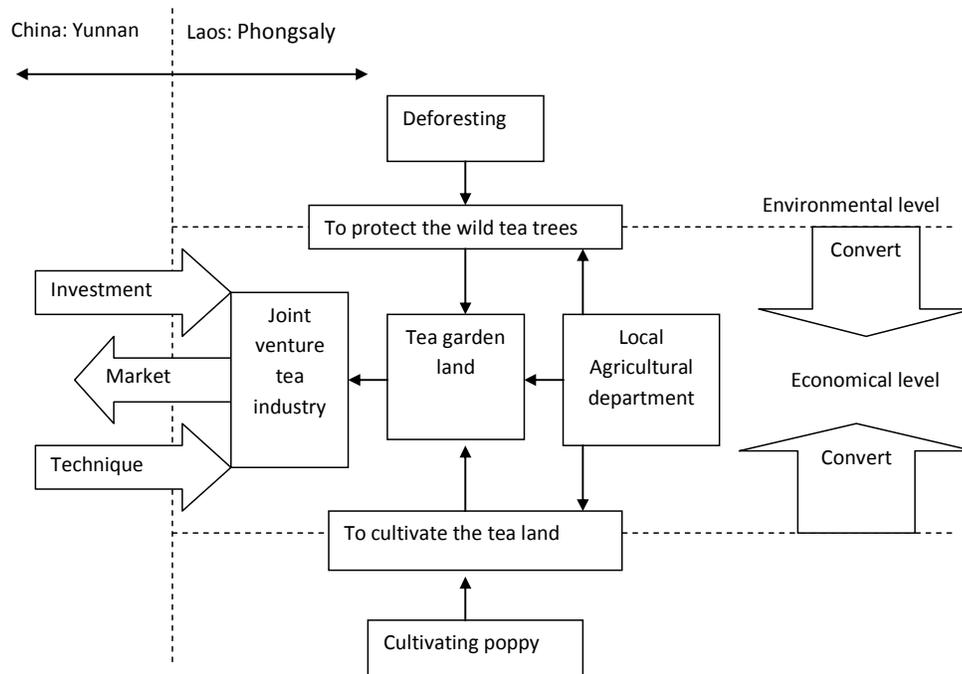
The successful establishment of Komen village started from the significant shift of the local residents' conception. In the developing countries, it is obvious that the local

industry have to open wider, invigorate the economy and not be restricted by conventional thinking. The more they are restricted by conventional way of thinking, the more severe social and environmental problems will occur. As a result of the tea plantation, according to the statistics of Laos' Agriculture Department, the tea plantation development has been gradually expanded in recent years. The tea plantation area has increased from 345 hm<sup>2</sup> in 2002 to 910 hm<sup>2</sup> in 2004. The Phongsaly province has developed the largest tea plantation area, with 510 hectares in 2004, accounting for 56% of the total area (Figure 9). It is reported by consumer survey in Laos that the Engel coefficient of Lao family is 55%, and the food consumption of beverages such as coffee and tea amounted to only 1.5%.

Generally speaking, there are more affluent resources and labor but very few capital and technology in the problems fundamentally. As it is obvious that local government and residents have to occupy their own local market and explore foreign market by relying on the assistance of foreign industry. Only in this way, the problem can be resolved.

### Improved development model for tea industry

The Phongsaly tea industry is still in its early stages, the tea industry development planning becomes a critical step for the further development of tea industry. By summarizing the experiences and findings above, a tea industry development mode should be improved as follows (Figure 10):



**Figure 10.** Improved economic model for tea garden land utilization in Laos

Step 1: In order to develop the local tea industry in Laos, it is very important to rely on foreign technology and capital, particularly from China. China has a long history of tea production and has shown the leading role in the tea processing technology. In the meantime, China and Laos are neighboring countries, whilst there are many similarities in the natural resources, society level between the two Countries. In this way, tea development technology in China can be easily adapt or improved by Laos. Since the 1990s, China has experienced a rapid economic take-off and has accumulated sufficient capital, and has made many successful investment experiences in the Southeast Asian countries. On the one hand, the sales of tea in Laos have to rely on the Chinese market. However, people in Laos has not cultivated the habit of drinking tea, and tea consumption is currently very low, with the expenditure of 0.9 U.S. dollars per capita in 2004 in beverages such as coffee and tea consumption. It is obvious that the tea industry has to rely on Chinese market to make great development and gain sufficient revenues in the future.

Step 2: The establishment of the joint venture will not only help bring about effective technology and capital flows from developed areas. At the same time, it can better guarantee the tea sales in the future. The establishment of joint ventures has to rely on the full support from the local agricultural department to enhance the enthusiasm of investors, and to encourage the proactive participation of local residents. This can help achieve a win-win situation between investors and local residents.

Step 3: Through the development of tea industry, the living conditions of the local residents has been greatly improved. As the investors consider operating the local enterprises, they will often do assistance to improve the local infrastructure such as roads, drainage and electricity, thereby improving the local living environment. Meanwhile, the tea plantation will help improve the income of local residents; therefore the residents will no longer engage in deforestation or the planting of opium, so as to protect the wild tea trees effectively and opened manual tea plantations.

Step 4: The most important steps of all, is to transfer the environmental problems and social problems to the economic problems by developing tea industry. Furthermore, it is rather significant to solve the local residents' poverty problems by development tea industry, which will therefore make economic, social and environmental benefits achieve better integration and optimization.

### Challenges for tea industry development in Laos

According to the survey in the Komen village, it is obvious that local residents and government cannot develop their tea industry successfully if there is no other financial and technical assistance from other countries. The main reasons are as follows:

(1) There is no specified planning to develop tea industry. Local government should pay significant attention to the

strategy development. It is highly suggested that the local government should first assess their tea trees resources and those wild tea to be cultivated. At the same time, they should forecast the possibility of the attracting investments (from overseas) by investigating the local production habits and therefore make rational tea industry planning on the basis.

(2) There are no experts in tea industry. It is the talents that determine the changes of conceptions. Professional knowledge is lacking in the local tea economy, tea cultivation science, tea ecological environment and tea culture. It is highly recommended that the local residents can set up the joint-venture factories to attract foreign experts in the relevant disciplines in the near future and the local government should also pay more attention on training tea talents, for example, the best local students can be sent to other colleges and universities in China to learn more advanced knowledge.

(3) The tea industry in Laos is a new business, which needs more investment, while local government does not have sufficient investment funds. It is proposed that more channels should be adopted to attract sufficient funds, either by joint-venture enterprises, or by encouraging sole production. On the other hand, those funds from China should not only be considered as the only option, those funds from other East Asian or Southeast Asian countries should also be considered.

(4) The domestic tea techniques application in Laos is still in its infancy stage. The tea production in Laos still stays in the original production process. This approach cannot guarantee the quality of tea, but also makes the production efficiency very low. By operating the joint ventures' factories, the advanced tea production technology can be introduced successfully. The local residents can gradually grasp these tea techniques by way of seminars.

(5) Many people do not cultivate their tea drinking habit, thus the tea market in Laos is very limited and there is an urgent need to develop foreign market. Therefore, the tea cultivation in Laos should cultivate their own brand, and develop their tea industry from the low end of resource-based type to the high-end development.

## CONCLUSION

The Poppy cultivation and primitive slash-economic of Laos has not only led to the backwardness of economic development, but caused a range of social and ecological problems. By conducting a practical investigation and survey on the tea plantation utilization of China-Laos' border, the impact of the tea plantation development upon

the Lao economy has been examined. The economic development has provided fundamental guarantee for controlling the opium poppy cultivation and transferring primitive land use. It is important to establish the co-operation between the Phongsaly Province in the primitive border of Laos and the Yunnan Province of China. The improved mode is proposed, which the capital and technology in China can be employed by Laos, while the sufficient tea resources can be used by China. Through the cooperation and exchange activities between the two partners, benefits for a "win-win" situation can be achieved accordingly.

## ACKNOWLEDGEMENT

The authors would like to acknowledge the kind help and suggestions of anonymous reviewers and data provision from the National Land Management Authority of the Prime Minister's Office, Lao PDR.

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