

Case studies on enterprise types of processing and sales of planted teak timbers

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Abstract

To examine the processing and sales of planted teak timber in Thailand, we analyzed the behavior of the Lop Buri Private Forest Plantation Cooperative Limited (PFPC) and Tha Sao Sawmill LTD., Partnership (Tha Sao Sawmill) as excellent examples, and the Nong Bua Lam Phu PFPC as an example targeting efforts to strengthen and stabilize future management. It was clear that the Lop Buri PFPC had received economic support, largely from an influential member of the cooperative and had many customers to match the supplies around Lop Buri city, hence its management was stable. It was also clear that most of the teak furniture materials consumed in Tha Sao Sawmill's factory were delivered from the companies' own planted forests and used specific techniques for the coating process, which gave it a sales advantage over other companies. Conversely, the Nong Bua Lam Phu PFPC, located in northeastern Thailand, lacked such advantages. Accordingly, recapitalization of the latter cooperative was considered inevitable to strengthen and stabilize its management.

Keywords: teak plantation, forest plantation, Cooperative Limited, teak furniture

Introduction

The Royal Forest Department (RFD) has widely developed teak plantations in Thailand from 1994 to 2001 because of the severity of the loss of natural teak forests (Yokota et al. 2009). The teak forests which were planted during this period have matured and some have already been harvested and utilized. In the meantime, several Private Forest Plantation Cooperatives Limited (PFPCs) were founded under the guidance of RFD for the development of forest management by private forest owners (Himmapan et al. 2010). A large part of their main businesses involved the harvesting and processing of teak trees (Furuya et al. 2012)

As previously stated, the majority of sales of wood

products derived from natural teak forests occurred before the 1990's in Thailand. The management of teak plantations and the utilization of teak wood derived from plantations is major concern because of the decline in natural teak resources in the last 16 years. Therefore, objective of this study is to grasp the actual situation of 3 cases which product and sale teak wood products. We analyzed the behavior of the Tha Sao Sawmill LTD., Partnership and Lop Buri PFPC as excellent examples. Tha Sao Sawmill has developed teak plantation in private comparatively since 1980's. Lop Buri PFPC has managed own teak wood saw mill. We analyzed the Nong Bua Lam Phu PFPC as an example targeting efforts to strengthen and stabilize future management (Fig.1).

A report by Furuya et al. (2012) described the current

functions and expected roles of some PFPCs, including Lop Buri PFPC and Nong Bua Lam Phu PFPC. In another study, Himmaman et al. (2010) described the current situation and management solutions implemented at Nong Bua Lam Phu PFPC. The present study aims to clarify the point of improvement on Nong Bua Lam Phu PFPC more sharply, comparing with advantage of Tha Sao Sawmill and Lop Buri PFPC.

Method and materials

In July 2012, the President of Tha Sao Sawmill in Uttaradit Province, the President of Lop Buri PFPC in Lop Buri Province, and the leading committee member of Nong Bua Lam Phu PFPC in Nong Bua Lam Phu Province were interviewed. The excellent function and successful practices of the Lop Buri PFPC and Tha Sao Sawmill were analyzed, and the function and practices of Nong Bua Lam Phu PFPC were analyzed as an example in targeting efforts to strengthen and stabilize future management.

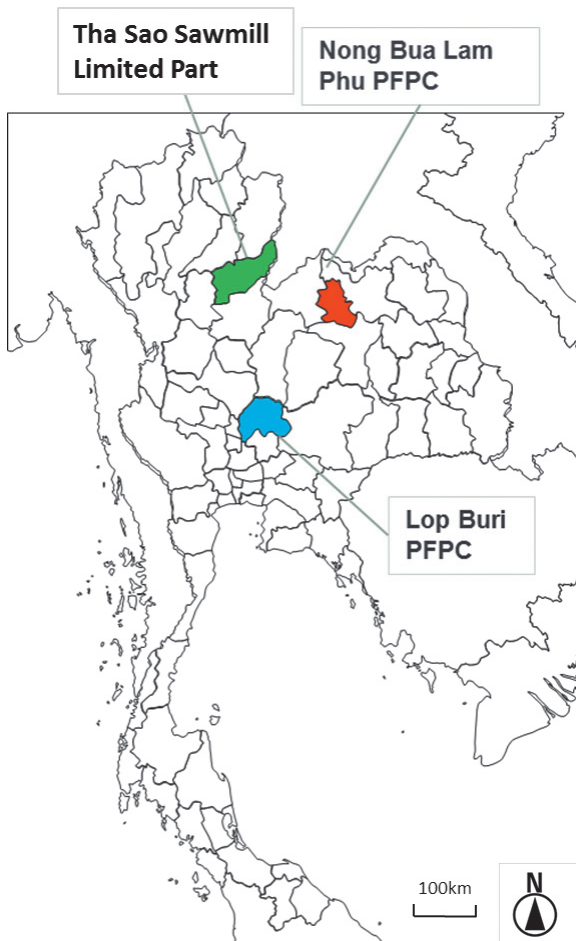


Fig. 1. Location of investigation examples

Results

Tha Sao Sawmill

In 1979, the father of the current President established the Tha Sao Sawmill Limited Partnership, and in 1984, he began to plant teak creating a small-sized plantation. A large-scale plantation was developed in 2002, and the size of the plantation was approximately 600 ha (3,500 rai) in 2012.

The planted teak trees have just matured in recent years, and material supplied from its own teak plantation is handled. The whole of the teak plantation area is located in Uttaradit Province; therefore, the cost of unprocessed teak transportation to the saw mill was relatively low.

One successful characteristic of the company was that they had set up integrated production systems through felling, sawing, and furniture making. They regularly used approximately 4,000 m3 of logs/month, and most of the products were made to suit the Western culture. Consequently, their products created a different demand from that of traditional Thai.

One of their unique technical characteristics was the use of an anti-UV treatment coating on their wood products. The technique produced a luster on the wood products and improved durability. Tha Sao Sawmill was the only company to use this technique in Thailand at the time of research in 2012, and therefore produced superior wood products when compared with other teak manufacturers. Furthermore, the company used an important sales strategy whereby they only sell their products to their directly managed shops. The company had a nationwide sales network in Thailand; shops are located in Bangkok (Fig.2), Chiang Mai, Phuket, Chon Buri, and Surat Thani.



Fig. 2. Tha Sao Sawmill's shop in Bangkok.

Tha Sao Sawmill is located in Uttaradit Province in the Northern part of Thailand where teak trees grow naturally. This brings an important advantage on Tha Sao Sawmill's products because teak wood products made in this area are considered to be of excellent quality. Therefore, this background research confirmed that the products had a reputation as an excellent local brand, namely "TS-teak", and the company sold their products nationwide.

Lop Buri PFPC

Lop Buri PFPC was established in 2000 with 110 members, but the number of members has gradually increased through invitation by existing members. Consequently, there were 193 members in PFPC, with an average age of over 60 years in 2012.

Almost half of the members lived in Bangkok or around Bangkok. The main business of most of the members was not forestry, and although their main business interests varied, most of the members chose teak plantation as a secondary business, which was less labor-intensive, and converted their land use from cash crops to teak plantation. The members owned 30–1,000 rai of land, including individual farms, and manage 20–400 rai of teak plantation. Over time, the members whose main business was farming have decreased. Although some members live in Lop Buri Province and their main business was farming, they only managed a relatively small area of plantation, which was approximately 50 rai.

Important services offered by Lop Buri PFPC were the management of a teak wood saw mill, the provision of information to members concerning business and technical advice, and conducting a study tour. The committee, which consisted of 7 members, met every 3 months and made important decisions about Lop Buri PFPC's activities.

Lop Buri PFPC was well managed and made a profit from a teak wood saw mill (Fig.3). The provision of good management allowed the members to receive dividends amounting to 10% of their annual contribution.

The cooperative's teak wood saw mill is located in the suburbs of Lop Buri City. One of the influential members owned the saw mill site and machines, and it was rented to the cooperative at a relatively low amount, thus saving the cooperative's money. Although the management of the cooperative's teak wood saw mill depended on an influential member, the merit of management based on a cooperative system was the steady capability to procure teak wood from a plantation belonging to many members.

In total, 21 people living in the neighboring area were



Fig. 3. Furniture factory managed by Lop Buri PFPC

employed at the teak wood saw mill. Of these employees, 4 work in the saw mill section, 7 work in the transportation section, and 10 work in the furniture making section, in which 3 of these employees were veterans and skilled engineers. The remaining 7 employees were apprentices in the furniture making section and had only been employed for a short time. It was anticipated that these 7 apprentices would be skilled furniture makers in the future, but this might not be the case and was dependent on their disposition. The apprentices were paid a daily wage, which encouraged them to come to work every day. By motivating employees in this way reduced the issue of managing difficulties at the saw mill.

A variety of different types of teak timber were used at the saw mill. Long and straight teak woods were used for flooring, walls, or ornaments, whereas short and uneven teak wood was used for furniture, such as chairs.

The majority of purchasers of the custom-made teak furniture were ≥ 40 years old and were residents of the neighboring areas who had obtained retail information by mouth to mouth communication. Although 90% of purchasers bought teak furniture from Lop Buri PFPC for themselves, 10% of purchasers own furniture shops and bought teak furniture to sell at their shops. Teak timber was also sold to local carpenters; 80% of carpenters lived in Lop Buri city and 20% resided in suburbs of Lop Buri city. Customers from Bangkok seldom came to buy their products.

Lop Buri PFPC was selling 60% of their total products as timber and 40% was sold as furniture. Total profits from timber sales were approximately 80% and from furniture sales were approximately 20% in 2011. Thus, more profit was gained from timber production than from furniture making.

The unprocessed teak wood used at the PFPC's saw mill was transported from the cooperative member's teak forest to the saw mill's wood yard after the members had cut the teak timber. The timber prices paid to members were based on the prices which the Forestry Industry Organization (FIO) has regulated at that time. In some cases, the PFPC's saw mill bought unprocessed teak wood from members at a higher price than the current price in the neighborhood. The saw mill manager considered that such cases could motivate the member's own teak forest management.

The manager of the saw mill believed that improvement of product quality and furniture design, adding a higher value on the products, and diversification of products were required for the future.

Nong Bua Lam Phu PFPC

Nong Bua Lam Phu PFPC was established in 2000 with 70 members and has expanded to 303 members in 2012, as a result of active invitation by PFPC's leading members.

In 2002, a saw mill and factory were set up adjacent to the PFPC office. But the land of saw mill and factory were not belong to PFPC. The function of the PFPC was limited to business consultations and guidance for members in 2012.

The committee consists of 13 members who met twice a month and made important decisions about Nong Bua Lam Phu PFPC's activities. The PFPC provided information through regional representative members to the local members. As mentioned above, the current service of the PFPC was limited to business consultations and guidance for members; therefore, the committee considered that it was very important to build a good relationship of trust between the PFPC and each member.

Nong Bua Lam Phu PFPC was established at the time when teak plantation had been highly promoted by the government, resulting in many farmers being interested in planting teak trees on their farm land. The government promotion has now ceased; therefore, farmers rarely planted new teak plantations. Most of the teak trees planted were not yet mature and were at the stage for thinning, and it was rare for any farmer to conduct clear-cutting at this point. However, once a farmer had conducted clear-cutting of the teak forest, the farmer tended to change to plant other species.

On an average, teak forest plantation of 30 rai (approximately 5 ha) was managed by each member, and

in most cases only teak trees were planted on their forestry land. They also owned an average of 30 rai of farm land, and in many cases they rotated cash crops.

Farmer members planted teak trees intending to use the wood to build their houses in the near future or to supply a source of revenue for the next generation. Hence, they did not expect a yearly income from their forestry and looked forward to mature teak trees for clear-cutting with proper thinning.

Members obtained technical information about teak plantation from RFD through the PFPC, and most of them decided the timing for thinning individually. The majority of thinned teak wood was transported to the saw mill adjacent to the PFPC office.

There were two ways in which some members cut and sold teak trees. One was by cutting the trees themselves and the other was the sale of standing trees. When members cut trees and transported them to the PFPC factory by themselves, they got paid for the timber at the time of their arrival. Conversely, when members chose to sell standing trees, they were paid cash after subtracting the felling cost from the total teak wood price at the time of felling. It was estimated that the ratio of felling of trees by members was approximately 60%, and the sale of standing trees was approximately 40%.

Usually, when some members conducted clear-cutting of 15 years old trees on their teak plantation, they obtained approximately 30 tons (approximately 60 m³) of teak wood/rai. In this case, it was proposed that the total teak wood price would be 300,000 Baht and the felling cost would be 100,000 Baht. The actual teak wood price was revised every 2 years and was determined by referring to the price stated by FIO or from information from RFD. The PFPC mediated between its members and the felling company, and the intermediary fee was an important source of income for the PFPC.

There was no rule that members had to sell their teak wood to the PFPC factory, but in fact most of the members did sell their teak wood to the factory. There were some members who conducted clear-cutting and sold their teak woods intending to convert the plantation species.

The business of the PFPC was not only limited to the presentation of information to the members and mediation between its members and the felling company but also the source of income was limited. Therefore, the PFPC was planning to set up its own saw mill and factory in 2012 so that the profit could be returned to its members. To execute this plan, the PFPC needed to receive additional capital because of insufficient original funds.

Discussion

Table 1 shows the features of the 3 cases which were interviewed and mentioned above. It can be seen that most of the material used to manufacture teak furniture in Tha Sao Sawmill's factory was produced by the companies' own teak forests and that used specific techniques for the furniture coating process, which gave it a sales advantage over other companies. It has also been shown, that Lop Buri PFPC had received economic support, largely from an influential member of the cooperative, and supplied to many customers around Lop Buri City; therefore, it can be concluded that its management is stable.

Conversely, Nong Bua Lam Phu PFPC, which was located in the North-Eastern region of Thailand, lacks such advantages. The fact that Nong Bua Lam Phu PFPC did not manage not only its own saw mill and factory but also its own land meant that the recapitalization of Nong Bua Lam Phu PFPC was considered inevitable to strengthen and stabilize its management and capital.

The management of Lop Buri PFPC paid an annual dividend to the members, supposedly to ensure that the

members were motivated by that profit to keep their teak forest plantations. Conversely, it was not so easy for Nong Bua Lam Phu PFPC's members to keep up their motivation to manage their teak plantations for the future. Therefore, it may be expected that some members are inclined to change the plantation tree species to another more profitable one. Although the acquisition of new capital and the setting up of a new factory are difficult tasks for Nong Bua Lam Phu PFPC, these operations were expected to be promptly conducted considering these situations.

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Table 1. Comparison of investigation example

	Tha Sao Sawmill	Lop Buri PFPC	Nong Bua Lam Phu PFPC
Year of the establishment	1979	2000	2000
Business content	Management of teak plantation	Processing of teak wood products	Advising for teak plantation
	Processing of teak wood products	Advising for teak plantation	Arrangement for the buying and selling teak woods
	House building		
Product	Teak furniture, Flooring material, House	Teak wood products, Teak furniture	
Sales contact and marketing area	5 directly managed shop in Thailand	Lop Buri city and neighborhood area	
Characteristic of the products, sales and organization	Integrated production systems through felling, sawing, and furniture making	High demand in Lop Buri city and neighborhood area	
	Products are made to suit the Western culture	Strong support from one of the influential members	
	Specific techniques for the furniture coating process	Dividends to the members	

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