

# Present Situation of Timber Harvesting in Thailand

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## INTRODUCTION

Thailand has long been famed for the abundance of her forest. The Northern part of the country in particular is rich in teak. This valuable wood is commercially very attractive. In the past, the government granted concessions to private logging companies, mostly foreign ones who wished to engage in logging industry. The processing of timber was also in the hands of foreigners. The large part of logging was actually for the purpose of export, either in raw or processed form. During the 1970s and 1980s, Thailand's forests were cut down to meet growing foreign demand for tropical hardwoods and wood furniture; teak was especially prized. Most deforestation was the result however of land use changes. Between 1965 and 1989, Thai forests and woodlands were reduced at an annual rate of 2.6 percent, by 1989, Thailand was left with 28 percent forest coverage. Following a massive international and national campaign to stop forest clearing, coupled with disastrous floods linked to the forest loss. The disastrous floods in Southern part of Thailand in November of 1988 caused 350 people died and there was \$120 million in property losses. Soil erosion caused by deforestation exacerbated the floods, thereby making the damage and loss of live much worse. The connections between deforestation and erosion, flood and drought had become very clear to everyone. Therefore, the Thai government banned all logging of natural forests in 1989. The government quickly formulated a series of policies to reforest the open tracts of land. Because of the reforestation program, Thailand's reforestation area had been increased to 347,700 hectares in 2000. Some of the forest plantations are now ready for harvesting. Although the logging ban is in force, some areas of forest are still allowed to be utilized for timber production. These are areas which have been designated for development by national schemes. For example, where dam projects involve the inundation of large forest areas, the Royal Forest Department(RFD) can grant permissions to allow exploitation of the timber prior to flooding. Also, many forest plantations managed by the RFD require periodic thinning; the trees removed are not discarded but are utilized for timber production. The logging operations are considerably more important issue now. Therefore, the Code of Practice for Forest Harvesting in Asia-pacific can be applied in Thailand.

## FOREST PLANTATION IN THAILAND

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The reforestation project which was first launched in 1967 in Thailand is the main method to conserve forest resources. The reforestation project not only increase the supplies for the forest production industry but also improves the forest condition, reduces damage to forest by preventing shifting cultivations from further land clearance, provide work for villagers, help social development in the form of better standard of living, and delays the migration of workers from rural areas into the city. The reforestation project has gained recognition from other state enterprise and private companies involved in forestry. In the future, products from the plantations will be the significant foundation of forest industry's business. Forest plantations in Thailand can be classified into 3 types as follows;

- Teak Plantation
- Other Reserved Species Plantation such as eucalyptus and non-teak
- Rubber tree Plantation

Since the launching of the reforestation plan, the Forest Industry Organization(FIO) which is the only forestry state enterprise has occupied a total area of 160,000 hectares planted with valuable timber such as teak, eucalyptus, rubber trees and non-teak, which grow very well in the appropriate surrounding and climate of each region.

## **TEAK PLANTATION HARVESTING IN THAILAND**

Teak is one of the most valuable kinds of timber. It has long been one of Thailand's important exports. However, the yield is diminishing when the concession has been banned in 1989. Because of heavy loggings by big foreigner companies last century the government is now trying hardly to restore the teak woods by planting new trees everywhere possible. The FIO, a state enterprise for the utilization of forest resource, has many reforestation projects throughout the country. The FIO controls total area of teak plantation 80,000 hectares. On the basis of the silvicultural system adopted by FIO, the teak rotation cycle last between 20-35 years.

In July 2001, FIO received "sustainable management" certification of two teak plantations from the Forest Stewardship Council (FSC). The FIO has plans to obtain certification for all its 134 tree plantations. The FSC-approved certification of the FIO's plantations would provide a lifeline to the struggling agency by assisting the sales of "certified" timber to markets in Europe and North America seeking timber from "sustainable" and "well-managed" sources. The certification would also support the ongoing efforts of the agency to remake its image as a "sustainable" forest management agency. Therefore, when FSC provided 'certification', it undermined the whole of Thailand's environmental movement and the ongoing local processes for increased community control over forests. It renews the commercial influence on Thailand's forests so that these agencies can resume their logging practices.

## **TIMBER HARVESTING TECHNIQUES**

In 1939, the Thai government established Timber Harvesting Division under the Royal Forest Department. This agency was responsible for manufacturing of wood for sale, the training of employees to monitor private logging companies and to control wood prices. The agency changed to a state

enterprise for forest conservation and utilization by the name of Forest Industry Organization(FIO) in 1956. Since the establishment of the FIO, the logging of teak and non-teak has been the main task of the organization. The harvesting techniques have undergone development as result of advances in technology. These developments take account of the geological, social, and natural environment. Specialized logging equipment, cables logging used with the working elephants, are employed in mountain harvesting areas. As a result of the logging equipment, there is no need to build roads into the forest. Consequently, forest conservation is progressing and the villagers' encroachment into the forest is also hindered.

### **Timbers Harvesting Operation Permission Sought**

- Mark the trees to be cut and run serial number
- Submit the report to the chief of the regional Forestry Office.
- Regional Forestry Office then sends an official to check the accuracy of the report by sampling of 5%
- Send the report to the Royal Forestry Department(RFD) with an explanation why Thinning/Harvesting Operation needs to be done.
- Thinning/Harvesting operation starts after the permission has been granted.

### **Timber Harvesting Operations**

#### **Tree Cutting**

- Workers are hired from its own village who might have already power saws. A crew consists of 3-4 men.
- All of the saws are power saw.
- Trees are felled, delimbed and crosscut up to 3" of the log diameter. Log lengths range from 3-12 m.
- Working hours are from 08:00-17:30

### **Skidding can be done by elephants, farm tractors and skidders**

#### **Skidding by elephants**

- elephants are employed to skid logs from the stump to the road side on contract basis.
- 8-10 logs are individually dragged to form a bundle of 8-10 stems before being further skidded to the roadside. Average skidding distance is 150 m.
- Working hours are from 06:00-12:00 or 15:00 depending on the weather condition.



**Figure 1.** Teak logging in Thailand skidding by elephant

### Farm Tractor Skidding

- 52-60HP farm tractor equipped with self loading arch
- maximum load is 2 tons
- 2-man crew, one driver and one assistant
- Working hours are from 08:00-16:00
- average skidding distance is 30 meters
- terrain slope not exceed 25 %



**Figure 2.** Teak logging in Thailand skidding by farm tractor

### **Skidding by skidders**

Before the logging ban, skidders were used to skid large-diameter timber in concession natural forest but at present they are seldom used in forest plantations. However, FIO still uses some of the left-over skidders from the previous logging operations to skid bundles of logs from road-side to the landing.



**Figure 3.** Teak logging in Thailand skidding by skidder

After “in-forest” operation, logs of superior quality are transferred either by truck, train, or raft to central depots. Some of these logs are sold to the private sector by auction while the remaining logs are set for processing at sawmills.

### **APPLICATION OF CODE OF PRACTICE FOR FOREST HARVESTING IN THAILAND**

In the past, timber harvesting techniques were introduced by foreign logging companies since 1896. Those techniques have been continuously developed to meet the requirements of the forest terrain, forest type, and new logging technology. The techniques have become the traditional guide lines of timber harvesting practice in Thailand. After the logging was banned in the natural forest, the logging activities subsided, but still active in forest plantation and special national project areas such as power dam project. The Department of National Park, Wildlife and Plant Conservation and RFD are responsible for monitoring the logging operations activities throughout the country. Therefore, it would be very important to develop the existing timber harvesting guide line into national codes of practice for forest harvesting in near future.

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