

## **Forest Owners' Association and Small-scale Forestry Management in Japan**

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### **Introduction**

From 1950 to about 1970, reforestation have been promoted throughout Japan and executed by the small-scale forest management. Usually forestry was managed together with farming, and the tasks were relied mainly on family labors. The scale of the forestry management was small, and only a limited amount of time could be spent on to the forestry due to the fact that it was a sort of side business for the farmers. As a result of this type of reforestation, artificial forests have now occupied 41% of all the forests in Japan. The standard planting density is 3,000 seedlings per hectare. The stand density decreases, but the number of trees must be adjusted artificially by hand. When the trees are 15 to 20 years old, the first thinning is carried out by the forest owner. Then 'thinning' is to be done several times between the tree ages of 20 and 40 years old.

### **Problems peculiar to 'thinning' in Japan**

Since the end of the World War II, as the Japanese economy has been on the way of recovering, the rapid growth of the economy pushed the demand of lumber up, especially that of the thinned small logs. Therefore, reforestation has been promoted. Until the mid-1970s, for the small-scale forestry management, the sales of the thinned small logs were regarded as an important income source to be attained within a relatively short period.

However, from the latter half of the 1960s, the import of foreign logs has increased markedly. The log price had been rising, but the great amount of logs imported from America, Canada and the Southeast Asian countries made the log price rather stable. Furthermore, the use of timber declined with the development of the substitute products replacing the timber. Consequently, the price of the thinned logs dropped, and the income of the forest owner was no longer so big as it had been expected. Furthermore, the Japanese industrial structure changed from the primary industry to the secondary or tertiary one. The small-scale forestry management lost its labor force, due to the fact that laborers moved to the large cities to become factory workers. Reforestation which relied mainly on family labor could no longer be carried out. As a result, the small-scale forest owner no longer performed the necessary thinning. When he wanted to thin the forest, he had to entrust the working to the forest owners' association, which would hire hands necessary to do the thinning.

Fifteen to 20 year-old trees occupied 77% of the artificial forests, which meant that a large part of the artificial forests needed thinning. However, only 3 to 5% of the forests that required thinning were actually thinned, that is 100-150 thousand hectares per year in the

1970s. Without thinning, damages by storms and snow would be inevitable to the forests. Fig.1 shows the wholesale prices of small logs. In 1980, prices of small logs were about 40,000 yen per cubic meter, but since 1981 the prices have been on the down way. Fig.2 shows the average daily cash earnings of the forest workers. The cash earnings were about 2,000 yen per day in 1970. In 1992, however those were more than 11,000 yen per day. There was a steep rising. Therefore, thinning was put out of question both due to the low prices of the small logs caused by the import of logs, and to the rising of the expense of log production caused by the rising in labor wages. As it was extremely difficult for the individual forest owners to perform thinning, the government decided to subsidize thinning.

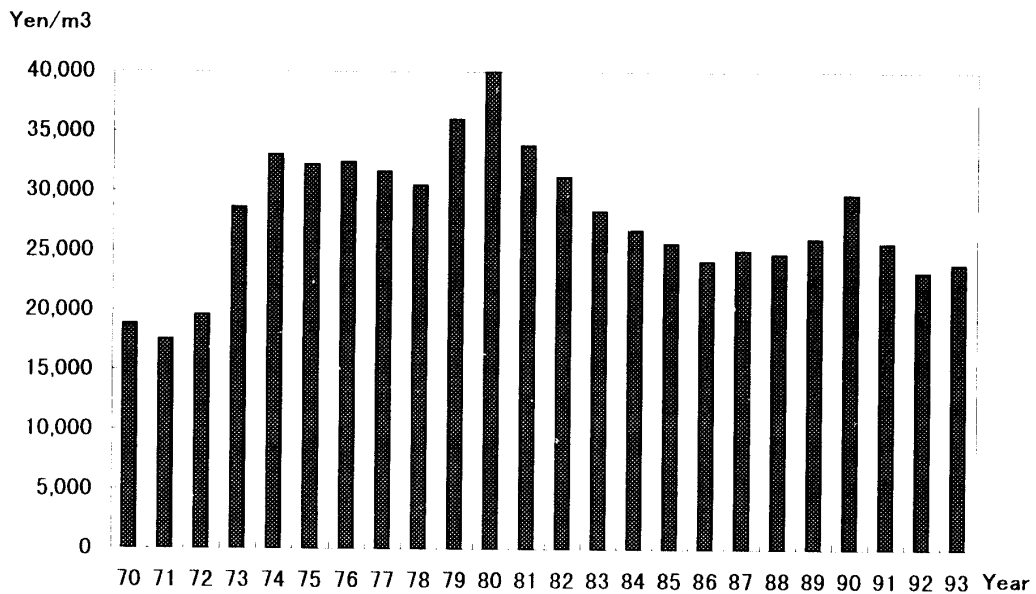


Fig.1. Wholesale prices of logs  
(*Cryptomeria japonica*, diameters 14-22cm, lengths 3.65-4m).  
Source; Report on demand and supply of timber

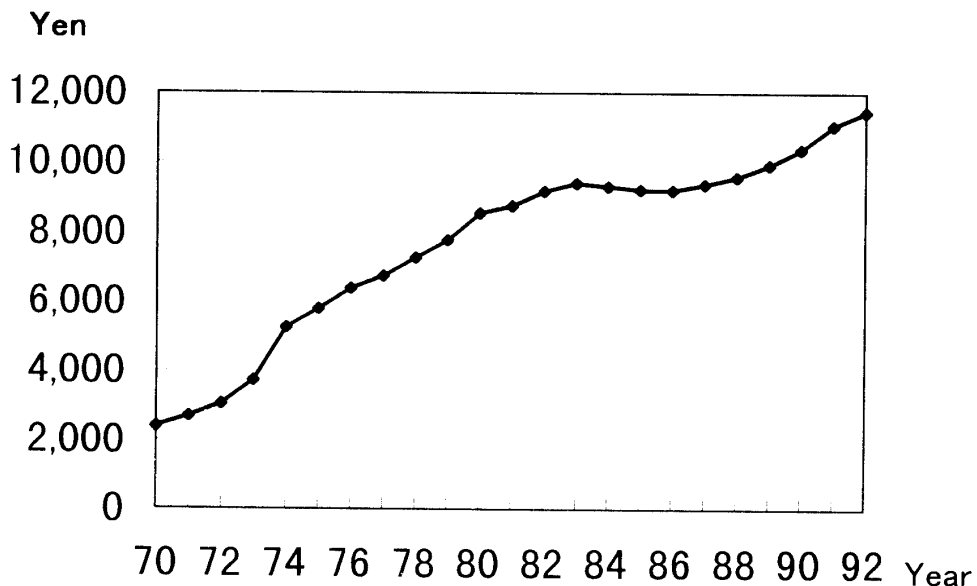


Fig.2. Average daily cash earnings of forest workers.  
Source; Survey of prices in rural areas

## Discussion

### 1. Japanese government subsidies for thinning

As already mentioned above, forest management has been confronted by the bottleneck of thinning. Therefore, the Japanese government decided to subsidize thinning in the 1970s. The government had three policies for subsidizing thinning.

Firstly, in order to secure the demand for thinned wood, to increase the demand for thinned wood and to raise the price the government supported a market researching and the development of new uses for the thinned wood.

Secondly, in order to improve the conditions at the thinning site, the government subsidized the construction of forest working roads. Generally, the efficiency of thinning turns to be lower, in accordance with the decreasing in timber production for a certain area of the forest. Furthermore, usually the forest area is situated on a steep hill side. Therefore, cutting the trees and hauling the logs requires big amount of cost. By constructing a forest working road, the distance of moving the logs may be shortened, making the hauling cost be as much as possible lowered. It is quit important to lower the production costs because of the low price of thinned logs. Therefore, the government has been subsidizing the construction of forest working roads to improve the conditions at the thinning site.

Thirdly, the government has been subsidizing the actual thinning work, as well as the artificial forest raising program. In the 1980s, the government launched the Comprehensive Project for the Promotion of Thinning. This was the first time when the government financially supported thinning. The cutting and hauling of thinned woods were quite expensive. And, this fund was to be given to the forests requiring thinning in an area of about 5 hectares in a small valley, jointly owned by several owners. Practically, this thinning was put on the launch by the forest owners' association under the contract acknowledged by the forest owners.

What the first and the second policies aimed at was to find the demand and market for the thinned wood. And what the third policy aimed at was to establish the resources of the artificial forest.

### 2. Present state of forest owners' association

The forest owners' association is a sort of cooperative association the members of which are the forest owners. There are 1,627 forest owners' associations having concerns with all of the forests in Japan. The jurisdiction areas are city, town or village or some areas larger than these. The forests owned by the members of the forest owners' association accounted for 69% of all the private forests. It was the function of the forest owners' association to hire labors for planting and nursery work, including log production (cutting and thinning), and sales of logs and processing of wood. Eighty two percent of the allotted share of work is for planting business and 13% of it is for log production by the private forests (non-national forest) and 68% of the allotted share of work is for thinning.

### 3. Relationships among the government subsidies, the forest owners' association and the small-scale forestry management in the thinning practice

In 1981, when the first government subsidies were actually granted, the thinning area was

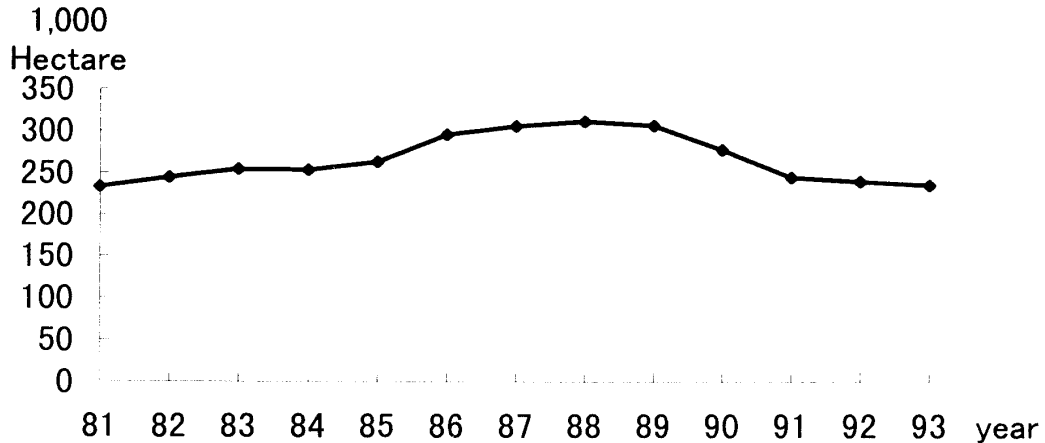


Fig.3. Thinning area per year.

Source; Rinya-jihou, 2. 1995

enlarged from 230 thousand to 310 thousand hectares. (Fig.3) This was roughly twice the thinning performed in 1970s. The government decided the thinning size, and the fixed subsidy was expended according to the annual budget. The city, town or village offices executed the thinning in accordance with the 5-year plan. This subsidy was to be expended for the private forests. However, as a rule, the forest owner did not perform the thinning personally, but entrusted it to the forest owners' association, which hired labor to perform the thinning. In the case of the subsidy expended to the planting, the forest owners' association hired the labors under the contract acknowledged by the owner as in case of the thinning. The forest owners' association charged the forest owners the cost of the thinning after the deduction of the subsidy.

The scale of the forests owned by the respective owners in Japan is very small, and the each regional business-size is even smaller. Therefore, the government can not help distributing the subsidies for the practice of 'group thinning' to make them more efficient. The forest owners' association makes arrangements for the thinning per small valley.

After the thinning area to be subsidized has been decided, the forest owners' association inquires whether the owners in the tentative thinning-area request thinning or not. The forest owners' association calls at the forest owners to begin thinning at the occasion when it installs a forest road adjacent to the tentative thinning area.

Fig.4, 5 are supplied as an example to illustrate this matter. The area, Kosukesawa at shimonita-cho in Gunmaprefecture, illustrated in fig.4, is 45.6 hectares, and its inside 33 hectares are artificial forest. As it is a place where the portion of the shadow needs thinning, the actual area is 23 hectares. The thinning forest is owned by 10 owners, and one division of forest stand is split into 51. Fig.5 shows the place where thinning is to be executed actually. Forest road has been opened since 1983 to 1987. Its length is 1,348 m. In its result, the forest owners' association managed group-thinning-portion of the shadow.

The government decides the amount of subsidy according to the respective areas. The amount is fixed to be about 40,000 yen per hectare. In a case when the forest owner trusts the forest to the forest owners' association, the cost of thinning is higher than the amount of the subsidy. Therefore, the forest owner must pay the remaining cost for the thinning. If the logs



Fig.4. Required thinning areas in the Kosukesawa.

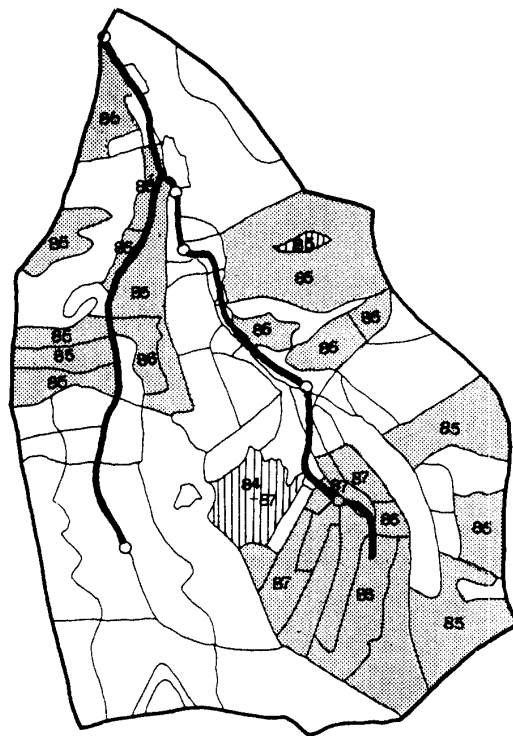


Fig.5. Actual thinning areas in the Kosukesawa.

may be hauled out easily, they can be sold with profit, and the payment can be used to pay the remaining cost of the thinning, and the owner can be exempt from losing money. However, in a case when hauling the logs out is more expensive, they will be left in the forest. About half of the thinned wood is now being left in the forest.

### Conclusion

As mentioned above, the Japanese government has been subsidizing thinning. This is a policy which is not only industrial, but scheming, a policy extended to preserve the artificial forests as a resource. Without thinning, the forest will be easily damaged by storms and snow. Big damages were brought about by typhoons several years ago. By thinning the forest, the growth of the trees is to be promoted, and the future resources will be increased. The forest owners' association plays a part as an intermediary body for thinning, providing a system to support the small-scale forestry management.

### Summary

In this paper, the author tried to explain as concisely as possible the 'thinning-management' in Japan.

Firstly, he has intended to report about the present state of 'thinning' which, he considers, is nothing but one of the biggest bottlenecks in the small scale forestry management practiced in Japan.

Secondly, the author has described about the government subsidies originally established to surmount this bottleneck.

Thirdly, he has considered about the forest owners' association which has been deeply concerned with the government subsidies.

Fourthly, the inter-relationships among the government subsidies, small-scale forestry management and the forest owners' association have been put under inquiries.

In a nutshell, what is aimed at here is

(1) to clarify the fact that the government subsidies for 'thinning' are indispensable for establishing the Japanese forest resources;

(2) to assert that the forest owners' association should play a part as an intermediary body to let the government distribute the subsidies most effectively for the 'thinning' in the small scale forestry management.

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