

## CHAPTER 3

### STRATEGIES BEHIND EUCALYPTUS PLANTATIONS

This chapter focuses on three agencies which take principal roles in the eucalyptus planting in northeastern Thailand, and discusses their strategies and implementation of their eucalyptus promotions. They are the Royal Forest Department (RFD), Japan International Cooperation Agency (JICA), and Japanese Pulp and Paper industries.

#### 3.1. Policies/Strategies

##### 3.1.1. The Royal Forest Department (RFD)

As mentioned in the first chapter, deforestation is one of the serious problems in Thailand. Regarding reforestation activities, it was 1906 when the RFD commenced activities. However it was only in the late 1970s when it became more active. It was when the deforestation in Thailand had become noticeable. It was also when the Thai government mentioned forestry aspects in their National Economic and Social Development Plan for the first time. However, the forest cover has decreased year by year and has never been regained.

Although the RFD's efforts on reforestation have been continued, they are very limited in budget and personnel. This condition was the reason the private sector joined reforestation activities. As a result of the National Forest Policy which the government formulated in December,

1985, the private sector was encouraged to join reforestation activities.

The National Forest Policy set its goal of raising the forest cover to 40% of the total land of the country (15% preserved forests and 25% economic forests). Since then, using the environmental umbrella, eucalyptus plantations have been encouraged as a part of the government's reforestation policy to raise forest cover. To carry out the target of 25% economic forests, plantations by the private sector were very much emphasized and encouraged. The statements of the policy include the establishment of integrated wood-based industries, which includes Pulp and Paper industries, to both meet domestic needs and resolve the international trade deficit. Moreover, it announced the use of wood as a source of energy to reduce imports, and to give the private sector incentives to take a leading role in reforestation activities.

In the late 1980s, the RFD announced that they let out lands in the national forests<sup>\*</sup> to the private sector to plant eucalyptus. The areas of eucalyptus plantations by the private sector in the northeastern region was increased by 10 thousand hectares per year from 1986 to 1992 (REX 1997). However, in May of 1990, the RFD prohibited the private sector from planting eucalyptus in the national forests. This was a result of a number of demonstrations by farmers who were evicted from the land as a result of private sector eucalyptus plantations, and the criticism by the public against the revealed corruption in eucalyptus plantation promotion. In 1991, the army implemented the "Green Isan Project". In the project, the army evicted farmers who illegally resided in the national forests from the

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\* Including the land where there is no trees or are used as farmland actually.

land to promote eucalyptus plantations there. Because of the conflicts with farmers and democratization after the 1992 coup, the project was called off in 1992.\*

Additionally, regarding private sector reforestation activities in the national forests, the Cabinet council announced in August 1992 that: 1) trees planted in the national forests have to be indigenous to Thailand, 2) only residents who have lived on the land for more than 5 years are allowed to plant, and 3) the area for plantations have to be smaller than 50 rai (8 hectares) per family. Furthermore, based on research by the Department of Agricultural Cooperative Association\*\*, the National Forest Policy Committee announced that "Eucalyptus should be promoted only on land, such as degraded soils, sandy soils, soils with smaller rain fall, and soils, which can not expect adequate profits from agriculture. Planting eucalyptus on fertile land which can be better used to grow other crops should not be encouraged."\*\*\* The RFD's attitude toward eucalyptus plantations is considered to have its base in this statement. Therefore, eucalyptus plantations by the private sector have not been implemented on a national forests, in the legal basis, since May, 1990.

However, withdrawing from eucalyptus planting activities in the national forests does not mean the end of eucalyptus planting in the northeastern region. Outside of the national forests, individuals are

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\* The project was officially canceled in May, 1993. As a result, the project had implemented in only 4 places.

\*\* They had implemented a comparative study of cassava and eucalyptus since 1990.

\*\*\* This statement was admitted by the Committee Council in August 1992.

allowed to plant eucalyptus on their lands, and the RFD started to support farmers to plant eucalyptus on their lands soon after they stopped encouraging the plantations by the private sector in the national forests. Their support often takes the form of reforestation projects.

In 1991, interest in a big reforestation project in the northeastern region was aroused by a request by RFD to the Japanese government. To produce better quality seedlings and to improve the villagers' life and environment through reforestation activities, the RFD requested the Japanese government to cooperate with them in establishing four large-scale nursery centers in the northeastern region. To meet the request, in December 1991, the Reforestation and Extension Project in the Northeast of Thailand (REX)\* was initiated between the RFD and the Japanese Government. JICA was sent to Thailand to give technical and economic cooperation to the project.

### 3.1.2. Japan International Cooperation Agency (JICA)

#### 3.1.2.1. JICA as an agency

Before going into its policy, it is necessary to look through the history of the agency to know its characteristics.

JICA, formerly Overseas Technical Cooperation Agency (OTCA), which is

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\* The cooperation was initially planned for a period of five years (1992-1996); however, at the end of that time, the period of cooperation was extended for two more years. It will be extended again for another one year at the end of this second.

a Japanese governmental organization to provide government-to-government assistance, was established in August 1, 1974 to implement technical cooperation in other countries.

In Japan, government-to-government assistance, which is Official Development Assistance (ODA), is provided through Overseas Economic Cooperation Fund (OECF) and JICA. While the former mainly deals with ODA loans, JICA, principally provides technical cooperation and grant-aid to help developing countries.\*

Briefly Japanese assistance was started to compensate Asian countries for loss and damage brought by the Japanese army during World War II, in the late 1940s. Such compensation took two forms. One was the compensation to the four countries of Burma, Indonesia, the Philippines and South Vietnam who claimed against the Japanese government for loss and damages in the war. The other was the compensation to other Asian countries who also had been troubled by the Japanese army during the war but abandoned their rights to claim against the Japanese government. This

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\* The Ministry of Foreign Affairs in Japan states that *developing countries seek assistance on various levels according to their social and economic structures, stages of development, climate, customs and other characteristics. Their needs can be broadly divided into the "hardware" aspects, such as the improvement of economic and social infrastructure, and "software" aspects such as the development of the human resources necessary for national development* (Ministry of Foreign Affairs 1995, pp.131). Assistance covers a wide range of fields, from basic human needs such as public health and medical services, to computer science and other areas of advanced technology.

latter compensation takes the forms of grant-aid and technical cooperation.

Such compensation was a heavy burden for the postwar Japanese government: the government tried to pay the compensation while they tried to recover the Japanese economy. Their main strategy to regain economic power was to increase their exports to other countries. As a result, while they paid compensation to other countries or gave assistance to counterpart countries, they made efforts to increase exports to these countries. In this way, compensation and assistance were used as a way to increase Japanese exports to the concerned countries. In short, compensation and assistance by the Japanese government increased the benefits for Japan in addition to their original purpose to support other countries.

Assistance by JICA took the form of technical assistance including the acceptance of trainees, the dispatch of experts, the supply of equipment, project-type cooperation, contributions to development studies, and sending the Japan Overseas Cooperation Volunteers (JOCV) members to the concerned countries (Ministry of Foreign Affairs 1995).

In the case of Thailand, for instance, JICA sent experts and 44 Japanese volunteers to Thailand in 1994. It also continues to accept more than 500 trainees from Thailand every year to receive technical training in Japan (JICA 1994). Since the electrical training center at the King Mongkut Institute of Technology was established in 1960 as the first project by JICA, 69 projects had been implemented in Thailand by 1993 (Sugishita 1995). Thus, JICA and its predecessor offered the technical cooperation valued at 100 billion yen (25 billion baht), from 1954 when the Japanese government first started their assistance to Thailand. This amount does not include the grant-aids (JICA 1994).



While they give the technical cooperation to foreign countries, they also support Japanese enterprises which expand into these foreign countries. This aspect of JICA is not well-known, however. JICA often supports these Japanese enterprises by offering them low-interest loans with long repayment periods (Sumi 1995).<sup>\*</sup> These loans are called Development Investment Loans.

The Development Investment Loans are divided into two types. One is a loan and debt assurance to consolidate related facilities, such as infrastructures. JICA offers loans to Japanese enterprises to consolidate facilities in related projects of governmental institutions such as OECF and the Bank of Import and Export.<sup>\*\*</sup> A typical example of this loan is the Asahan Aluminium Project in Indonesia; following the difficulties in producing aluminium domestically in the 1970s, the Japanese aluminium industry planned to move their factories to Indonesia. In 1994, with the approval of the Japanese government, five Japanese manufacturers and the Indonesian government signed the first agreement to construct a big industrial complex in Indonesia. After the Japanese enterprises<sup>\*\*\*</sup> established a new consortium and come to a final agreement on the project with the Indonesian government, they requested the Japanese government to

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\* However, because of privacy, borrowers name are not identified.

\*\* When they offer loans, applicants have to meet their requirements. These loans can be used only for consolidating and constructing facilities including the infrastructures which contribute to improve local peoples' lives and welfare.

\*\*\* In addition to five Japanese manufacturers, seven Japanese trading companies joined the consortium.

supply money for the infrastructure around the complex. As a result, when the project was started, JICA offered the consortium a loan of 15.3 billion yen to consolidate the infrastructures such as roads, bridges and ports. Needless to say, these infrastructures were consolidated for Japanese enterprises to extend their business easily, rather than for the benefit of local people (Sumi 1995).

Another type of loan is a loan and debt assurance, and investment for experimentations. JICA provides money to private enterprises to support experiments related to development projects. Sumi (1995) explains it as follows: it is a loan, a debt assurance, and an investment for the venture business which will be difficult to accomplish unless the technology is improved or developed. Regarding this type of loan, the typical case was seen in Brazil: the loan for experimental activities is offered to support agricultural plantation, livestock farming, and afforestation. In 1987, a Japanese leading trading company announced a plan for a big eucalyptus plantation project and to construct a wood industry complex in Brazil. The company joined with a local company and planned to buy a land of 5,000 hectares in Brazil to plant eucalyptus. Therefore, JICA offered the loan of 0.9 billion yen to the company (Sumi 1995). Consequently, such loans supports Japanese enterprises more to extend their businesses abroad, even though they should be used to improve the life of local people. This is why JICA is often suspected of having special connections with Japanese enterprises.

#### 3.1.2.2. JICA's policy on Eucalyptus Plantations

In 1991, JICA was sent to Thailand to commence their planting



activities. As mentioned at the very beginning of this chapter, the RFD requested assistance of the Japanese government for their reforestation project, and in response, the Japanese government sent JICA to set up a five-year cooperative reforestation project in 1991. This was when the Reforestation and Extension Project in the Northeast of Thailand (REX) was born.

Officially, there are no announcements by JICA about their eucalyptus plantation policies. They insist there is no emphasis on planting eucalyptus. However, practically speaking, they have made great contributions to the expansion of eucalyptus growing areas in the northeastern region through the project. Nearly 60% of seedlings which they produce and distribute in the project are eucalyptus, and the areas of eucalyptus plantations had been increased to more than 40 thousand hectares (25,000 rai) by 1996 (REX 1997).

Even though JICA denies that the project has a special relationship with Japanese enterprises, the project commenced just after Japanese paper and pulp industries enhanced their businesses in Thailand.\* These Japanese paper and pulp industries generally set up joint ventures with Thai or other foreign enterprises. For example, one of the Japanese big-three paper and pulp companies, OJI Paper Co. Ltd., joined Phoenix Paper and Pulp Co. Ltd., and one of the biggest Thai paper and pulp enterprises, Suan Kittipaper and Pulp Co. Ltd., is a Thai-Japanese-Taiwanese joint venture. These big Japanese joint-venture companies are currently the main buyers for grown eucalyptus from the northeastern farmers. Furthermore, huge amounts of pulp and chipwood have been exported to Japan from Thailand

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10. See 3.1.3.

every year (Figure 2).

With conditions such as these, can we still think that JICA has no intention to promote eucalyptus plantations?

### 3.1.3. Japanese Pulp-Paper Industries

Japan imports large amounts of pulp from other countries. According to data, Japan imported 9.63 million tons of pulp in 1989, 10.21 million tons in 1991, and 11.76 million tons in 1992 (REX, 1997). Imports were from all over the world. The amount of the pulp imported from Thailand was 45 thousand tons (0.47% of total imported pulp) in 1989, 32 thousand tons (0.30% of total imported pulp) in 1990, and 37 thousand tons (0.32% of total imported pulp) in 1991. On the other hand, it is worth mentioning that the pulp to Japan from Thailand occupies about 70% of the total amount of exported pulp in Thailand. On the other hand, this same amount of pulp occupies only less than 10% of the total pulp imported to Japan. This shows that the Japanese pulp and paper industries have a high demand for imported pulp. However, because worldwide demand for pulp has increased, it is more difficult for the industries to import enough pulp to meet their demand. This is why they started to deal with eucalyptus planting in the other countries.\*

According to Morimoto (1987, 1991)\*\* , it was only in 1986 when the

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\* The most famous case is in Brazil.

\*\* The vice-president of the Federation of Japanese Pulp and Paper Industries and the author of the reports "Farmers and Eucalyptus in Thailand"(1991) and "Eucalyptus Plantations in Thailand"(1987).

Japanese pulp and paper industries noticed the possibility of eucalyptus plantations in Thailand. This was when the director, Pirat Nakarin, and a few staff members of the Tree Farmers Association of Thailand (TFAT) visited the Federation of Japanese Paper Industry, the South Afforestation Association, JICA and several leading pulp and paper companies in Japan, to show a blueprint of Thai chipwood exports to Japan. Their project plan was as follows: 1) offer eucalyptus seedlings to the farmers and promote the plantations, 2) buy up the growing trees from the farmers after five years, 3) produce chipwood and export it to Japan. Therefore, they planned to establish Thai-Japan Reforestation and Wood Industry Co., Ltd. (TJR). Their purpose in visiting Japan was to get support from the Japanese side for technology, funds, and market (Morimoto 1987, 1991).

After that, in January 1987, the Federation of Japanese Pulp and Paper Industries sent a mission to Thailand to study the possibility and conditions of eucalyptus plantations. It is noticeable that not the TFAT but the Thai government was the main host for the mission. The Vice-Minister of Agriculture, promised the Japanese mission that the Thai government would take all responsibility for the project, including eucalyptus plantations, chipwood producing, and export to Japan. At that time, he requested support for the project by the Japanese pulp and paper industries.

In response, Thai Eucalyptus Resources (TER) was established by 15 Japanese paper companies in 1988, and TJR was also established at the same time. Thus, the Thai chipwood export to Japan was planned and started in the late 1980s. It was also the time when JICA came to support the reforestation project which had been originally planned by the RFD.

### 3.2. Implementation

The Reforestation and Extension Project in the Northeast of Thailand is a large-scale reforestation project under the RFD with JICA, to improve the villagers' lives and the environment in the region. In this project, eucalyptus is the species mainly planted.\*

As mentioned in the early part of this chapter, the project was born by the RFD request for assistance from the Japanese government. Following the request, the project was initiated in December, 1991. As a result, JICA was sent to Thailand to give technical and financial support to the project during the period of 1992 - 1996.

The project has four objectives; *1. to prevent natural disasters, to improve the environment, and to upgrade the living standard of local populations by reforestation extension activities using a social forestry approach, 2. To increase production and supply of quality seedlings to meet the demands of the government and local communities, 3. to establish model community forests to accelerate reforestation by the hands of the local people, 4. To improve reforestation techniques by providing training to male and female government officials, local leaders, and active villagers* (Royal Forest Department and Japan International Cooperation Agency 1992). In short, the objectives of the project, which they officially announced,

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13. According to the data on project seedling production in 1994, eucalyptus occupied 56.47% of total seedlings. This means more than half of the seedlings produced in the project are eucalyptus. Apart from Eucalyptus, Pterocarps shares 6.64%, A.Mangium shares 5.36%, Afzelia shares 3.63% and 53 other species share 27.9% (Yoshida 1995)

are to improve the villagers' lives and the environment through the reforestation activity with social forestry approach.

To maintain such objectives, they carry out several activities as follows: seedling production and distribution, establishment of community forests, and training.

### Seedling production and distribution

Seedling production and distribution is one of their leading activities.

The project called for the production of approximately 100 million seedlings during the period of 1992 - 1996. These seedlings were mainly distributed to farmers who lived in 2,668 villages in the project site, which were so called "target villages", for free. These target villages, which were selected according to the data of the Ministry of Interior, were scattered all over the northeastern region. They were identified as having insufficient forest resources.\* During the period of the project, they picked around 500 villages each year as target villages, and then moved to another 500 villages in the following year.

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\* When choosing target villages, the RFD and JICA find out and choose villages where the fuel wood is in short supply, according to the database of the Ministry of Interior. The Ministry of Interior carries out a survey on the conditions of each village all over Thailand. Based on the survey, the RFD and JICA make maps to show the patterns of fuel supply (Yoshida 1995).

All the seedlings which are distributed to the villages are produced at their nurseries. They have one large-scale nursery center in each of Mahasarakhame, Udontani, Yasothon, and Nakhon Ratchasima.\* In addition to establishing these four large-scale nurseries, they established a small-scale, mobile, knock-down nursery per each 10 - 15 target villages, to distribute the seedlings to as many villages as possible. Through these nurseries, they distribute 40 thousand seedlings to each target village annually, and the annual production of seedlings in the project is estimated at 20 million per year. Farmers in the neighbouring villages are employed to work in the nurseries. Each nursery has from 40 to 50 workers, depending on the nursery's size and the seasons. Those workers can earn for 80 baht a day in the nursery.\*\*

According to production data in 1994, 56.47% of seedlings were eucalyptus. The remaining species were Pterocarps (6.64%), Acacia Mangium (5.36%), Afzelia (3.63%) and 53 others species (27.9%). According to JICA and the RFD, the proportion of these seedlings was based on the survey of villagers' needs. Actually, their 1994 survey on seedling demand in some

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\* Mahasarakham Center serves the four provinces of Mahasarakham, Khon Kaen, Kalasin and Roi-et. Udonthani Center serves the seven provinces of Udonthani, Nong Bua Lampu, Loei, Nong Khai, Sakon Nakhon, Nakhon Phanom, and Mukdahan. Yasothorn Center serves the five provinces of Yasothorn, Ubon Ratchathani, Amnat Charoen, Surin, and Si Saket. Nakhon Ratchasima Center serves the three provinces of Nakhon Ratchasima, Burirum, and Chaiyapum. Therefore, they cover the whole northeastern region.

\*\* In the case of that the villagers go to work in the town such as Khon Kaen, male worker is paid 130 baht a day and female workers is paid less than 130 baht in average (interviewed with JICA expert).



target villages in Mahasarakham showed considerable preference for eucalyptus (Yoshida 1995).\*

### Establishing Community Forests

Not only do the RFD and JICA produce and distribute the seedlings, they also establish community forests. Although the word "community forest" has many meanings and connotations, their community forests are established with the following objectives: cash income, conservation of environment, educational purposes, local use including fuel wood or construction, compliance with the government's policy, the king's concern, strengthening community unity and motivation to cooperate. Because of these objectives, they establish plantations on public land in villages, at schools and at temples.\*\*

The standard size of these community forests is 10 to 20 rai. They established 56 forests during the three years since 1992. Their sources of information to choose the villages to establish community forests were the villagers. They learned of villagers' demands and needs for community forests through seedling distributing activities at the knock-down nurseries, as well as at their villagers training courses. After the

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\* This survey was carried out by distributing a questionnaire sheet to every household in some selected target villages through village headmen. It shows villagers preferences concerning eucalyptus as follows: Fast-growing trees (eucalyptus) - 75%, Fast-growing trees (others) - 3%, Economic trees - 10%, Fruits - 10%, Ornamental trees - 2% (Yoshida 1995).

\*\* Their community forest activity does not include the management of existing natural forests. Therefore, they plant seedlings on bare land.

discussions with villagers, they implement land preparation, following a land survey in the village. After land preparation, they provide seedlings, expenses for planting ceremonies and materials such as fencing and fertilizer. The budget for the first year is about 20,000 baht per forest, and in following years, villagers are be given additional seedlings and materials support.

Even in these community forests, eucalyptus is the leading species to be planted. Especially for the community forests on school land, there is a strong preference for eucalyptus.\* This is because the usual objective of community forests on school land is to help students financially and supplement students' lunches. Therefore, they prefer to plant trees which bring higher cash income. As stated in Chapter 2, eucalyptus is the best species for this because it is a fast-growing and highly promising economic plant.

In addition, there is another reason for the high popularity of eucalyptus. Villagers' motivation remains higher and longer with eucalyptus because they can see results earlier and easily.

#### Training for Rural people

To promote reforestation by rural people themselves, training is given. The main targets of training are leading farmers and school teachers (especially primary school teachers) because they can take an

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\* According to their survey, nearly 70% of total planted trees at schools are eucalyptus, while nearly 60% on public lands and more than 30% at temples are also eucalyptus (Yoshida 1995).

important role in promoting activities to a large number of people in the village.

The training sessions are implemented in the four centers of Mahasarakham, Udon Thani, Yasothon, Nakhon Ratchasima.\* Each center has a training section chief. These chiefs are RFD officials and the counterparts of JICA experts who are stationed at Mahasarakham Center. In each center, the training section has two to three trainers. Each training chief carries out training based on the recommendations or suggestions of JICA experts.

The six-day trainings, with 40 trainees per course, improves the local people's knowledge, skills, techniques, and attitudes about reforestation. These training courses are planned according to the villagers' needs.

As was mentioned in the earlier part of this chapter, the RFD and JICA's targets are divided into two categories: villagers and government officials. The word "villager" here indicates leading farmers, such as village leaders and committee members. "Government officials" here means school teachers, mainly primary school teachers. For these two target groups, the centers offer different levels of training\*\* about Nursery and

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\* Each center has four main sections: seedling production, demonstration plantation, extension and training.

\*\* This is because, according to the training needs survey, educational backgrounds of the trainees are different. Most villagers are not highly educated (the majority of them finished only primary school). The survey showed that around 80% are primary school graduates. On the other hand,

Plantation, and Agroforestry. Training consists of lectures, practice and study tours.

The survey<sup>\*</sup> shows that most of the trainees try to do Extension of reforestation activities after they have finished the training, and nearly half of them (40% of villagers and 61% of government officials) do them more than once a month. 27% of villagers and 54% of government officials use some teaching techniques such as visual aids and demonstrations. Furthermore, 35% of villagers and 60% of government officials start the seedling production. Most of nurseries run by government officials are small-scale nurseries in which less than 5,000 seedlings are produced a year, and seedlings are for their own use. Villagers' nurseries are bigger and produce more than 5,000 seedlings a year. Moreover, the survey shows 45% of villagers produce seedlings to sell. Indeed, seedling production is the quickest way of making money (Katsuragawa 1995).

Among the trainees, 93% of villagers and 75% of government officials started planting activities. Among them, 52% of villagers and 53% of government officials planted forests to sell the trees after sufficient growth. These forests usually consist of eucalyptus; therefore, the planters sell trees as a raw materials for pulp chips, logs and making

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most government officials, who are school teachers, are high school graduates or more educated.

\* JICA and RFD implemented a training needs survey of villagers in 1994, with 730 villagers. The results include the needs of villagers as follows: most villagers want to learn about nurseries and plantations, and Agroforestry, for 4 to 6 days in the dry season (January to May) and after harvesting rice (Katsuragawa 1995).

charcoal.\*

### Others

Apart from the above main activities, the RFD and JICA implement extension activities including the publication, distribution of printed matters, exhibitions, painting contests, and commendations for successful forests.

Regarding publications and their distribution, six kinds of leaflets are published about major and recommended species. Additionally, the RFD and JICA make notebooks, stickers and posters. These materials are distributed to school children and villagers at planting ceremonies and other events.

### Budget

Costs for all of these activities are covered by both the RFD and JICA. Per RFD's request, JICA offered grant-aid of 2.98 billion yen to

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\* On the other hand, Katsuragawa makes an important statement concerning the forest conservation tendency of rural people: *we found that 92% of villagers have protected forests of their own (maybe, those are not official "conservation forest"; but those are protected by villagers actually). 57% of villagers and 69% of government officers told us that those protected forests are natural forest or almost natural forest. This fact shows that "protected forest" often means "natural forest"; and we should remember that plantation forest is often made for sale. There is quite clear contrast between these two kinds of forest (Katsuragawa 1995).*

construct offices, workshops, and large-scale nurseries in the four project centers.

Annual expenses are covered by both the Thai side and the Japanese side. The Japanese side, JICA, expends 50 million yen per year. The Thai side, the RFD, expends 200 million yen per year.



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