Terminal Evaluation

Asia

1. Outline of the Project

Country:
Indonesia

Project title:
Forest Tree Improvement Project (Phase 2)

Issue/Sector:
Forestry/Forest Preservation

Cooperation scheme:
Project-Type Technical Cooperation

Division in charge:
Forestry and Environment Division, Forestry and Natural Environment Department

Total cost:
380 million yen

Period of Cooperation
1 December 1997 - 30 November 2002

Partner Country's Implementing Organization:
Biotechnology and Forest Tree Improvement Research and Development Center (BFTIRDC)

Supporting Organization in Japan:
Forestry Agency , Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Related Cooperation:
Grant Aid; "Project for the Construction of the Forest Tree Improvement development Center"
Project-Type Technical Cooperation; "Forest Tree Improvement Project (Phase 1) in the Republic of Indonesia" (based on summery of project-type technical cooperation)

1-1 Background of the Project

Indonesia has one of the vastest forest areas in the world. However, in recent years, the forest resources have greatly decreased. Based on the estimate of U.N. Food and Agricultural Organization (FOA), the forested area in Indonesia has decreased by an average of 1.30 million hectares every year between 1982 and 1990. To cope with this situation, the Ministry of Forestry has been working on the issue of industrial afforestation and social forestry* since the 1980s, aiming to increase wood production and to protect its natural forests.

The Indonesian government has depended on imports from overseas such as Australia for improved seeds for industrial afforestation. Therefore, it was necessary to develop the production of trees which were suited for the natural environment of the afforestation areas in Indonesia. For these reasons, the government of Japan implemented a technical cooperation entitled, "Forest Tree Improvement Project (Phase 1) in the Republic of Indonesia" from June 1992 to May 1997, which was continued after the procurement of facilities by the grant aid.

Under these circumstances, the government of Indonesia requested to the government of Japan for a technical cooperation in the field of forest preservation in order to utilize the above effects, as well as to produce improved seeds in Indonesia, and to establish a production and supply system of original seeds.
*Social Forestry: Afforestation, forest management and utilization activities that farmers or local people implement by themselves for their own living stability and welfare improvement, in areas such as home fuel, livestock feeding and leaf shade assurance.

1-2 Project Overview

In order to foster improved seeds in Indonesia and to establish a production and supply system of original species, the project implemented such activities as developing breeding techniques and establishing database for researchers and engineers in the field of forest tree breeding.

(1) Overall Goal

To help the Forest Plantation (HT) program to become capable of utilizing seed sources, the information and tree improvement techniques provided by BFTIRDC.

(2) Project Purpose

To enhance the function of BFTIRDC in terms of providing information and techniques related to tree improvement and seed sources to the HT program.

(3) Outputs

1) Tree improvement techniques to move on to an advanced generation of fast growing species are provided.
2) The seed for the production of genetically improved stock, and managing and providing system of seed sources and their information are provided.
3) Basic information and research techniques for tree improvement of indigenous species are provided.
4) Information on forest tree improvement activities of BFTIRDC is shared among relevant organizations.

(4) Inputs

Japanese side:

Long-term Experts	4	Equipment	85 million yen
Short-term Experts	14	Trainees received	10

Indonesian Side:

Counterparts	51
Land and Facilities	
Local Cost	11,650 million rupee (approximately 157 million yen)

2. Evaluation Team

Members of Evaluation Team

Team Leader/General: Shinji YOSHIURA, Director, Forestry and Environment Division, Forestry and Natural Environment Department, JICA
Tree Improvement: Teiji KONDO, Independent Administrative Institution Forest Tree Breeding Center
Information Management: Kazutaka KATO, Independent Administrative Institution Forest Tree Breeding Center
Planning Evaluation: Motonori TANAKA, Forestry and Environment Division, Forestry and Natural Environment Department, JICA
Evaluation Analysis: Hideki HIGASHINO, RECS International Inc.

Period of Evaluation 19 May 2002 - 8 June 2002

Type of Evaluation:
Terminal Evaluation

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

Forestry is the most important industry in Indonesia. Currently, there is a huge gap between supply and demand of forest-related products. The government of Indonesia has announced a policy toward decreasing the supply produced from natural forest resources, in view of environmental sustainability. Therefore, future supply of timber will be more dependent on forest plantation, and the project aimed to improve the productivity of forest plantation and develop high yield and quantity of timber from the

limited plantation area. Therefore, the project is consistent with the national forest conservation policy of the Indonesian government. The project was also important for BFTIRDC, the implementing organization, in view of technical transfer and human resource development.

(2) Effectiveness

Effectiveness of the project was high, as the project purpose is described below.
1) As for the cycle of breeding (creation of land, screening and selection), according to interviews with the experts and the counterparts, although there were some differences among individuals, technical transfer was smoothly implemented, and the counterparts were determined to be able to implement standardized tasks by themselves. Strictly speaking, only five counterparts were able to implement the full range of the cycle perfectly. But by deciding to make those five counterparts the core of future activities, a foundation to implement those activities was established.
2) The number and the area of Seedling Seed Orchards (SSOs) developed through project activities was 23 and 33.53ha respectively, which were appropriate.
3) As a core person has been fostered in each research group, if the management policy is appropriately adopted for the whole laboratory, each counterpart should be able to implement research activities by themselves.
4) Forest Tree Improvement Association was established in September 2001, and 9 companies joined the association. Seminars, workshops and training courses were conducted for those companies. Generally, the techniques and information were offered by BFTIRDC, and land and data for SSOs were offered by the forestry companies. Therefore, collaboration among them was promoted.

(3) Efficiency

All the inputs from Japan, such as the training in Japan for Indonesian counterparts and equipment provision, were appropriate in terms of their quantity, quality and timing. In the first half of Phase 2, although three long-term experts covered five different fields, the inputs were not sufficient compared with the personnel allocation in other projects or in actual works. However, at the mid-term evaluation, this was pointed out, and as a result, one more long-term expert was promptly dispatched for the latter half of the project. Therefore, the four long-term experts were able to contribute to the improvement of the accomplishment of the project effects. The inputs from the Indonesian side were mostly relevant, despite the condition after the economic crisis in 1998. The number of the counterparts was 49 at the time of the evaluation, and this was evaluated to be enough. As the BFTIRDC was promoted to be an echelon II research and development institute, the counterparts with bachelor's and master's degrees were allocated. However, as for the budget for the activities, there was a delay in disbursement from the Indonesian side, which hampered the activities at the beginning of the fiscal year.

(4) Impact

It may take time to accomplish the overall goal because there were many uncertain factors, such as the future forestry policy of the Indonesian government and failing business of private forest companies. However, the basis for the accomplishment were developed such that the techniques were smoothly transferred and the Forest Tree Improvement Association was established. Also, there were other positive impacts. BFTIRDC was promoted from echelon III to echelon II. This established its status as a research institute, as well as improved its social image. Furthermore, with the approach that the project introduced, the Ministry of Forestry began collaboration with forest plantation companies in other projects.

(5) Sustainability

Sustainability of the project was between high and medium levels. As BFTIRDC was promoted from echelon III to echelon II, its organizational sustainability was enhanced such that its organizational status was improved and allocation of the counterparts was fulfilled. However, as for the financial sustainability, the budget allocation was not on schedule, and there remained many uncertain factors. The strategy that decides the direction of BFTIRDC activities and a management that assures the acquisition of financial resources for research must be improved. The capabilities of respective counterparts were improved through technical transfers, training in Japan, and overseas study. While there were some sectors that needed further cooperation from the Japanese experts, in the standardized sectors, BFTIRDC is able to continue the activities independently.

3-2 Factors that Promoted the Realization of Effects

(1) Factors Concerning the Planning

1) BFTIRDC is located in Jogjakarta, which is conveniently located in terms of public transportation. This was favorable in enhancing its collaboration with forestry plantation companies and in extending the project effect throughout the country. The Gadjah Mada University is located in Jogjakarta as well. The university is famous for its seed breeding division, whose level is the highest in Indonesia. Therefore, it was the appropriate institution to communicate technically with other research institutions.
2) The facilities (buildings) of BFTIRDC were constructed with the Grand Aid from the Japanese government in 1992, and therefore, the necessary fundamental infrastructure for the project activities had already been developed. This was a factor that helped the smooth implementation of the activities in Phase 2, as a continuation of Phase 1.

(2) Factors concerning the Implementation Process

1) Based on the result of consultation team dispatched in 1999, the shortage of inputs (long-term experts) from the Japanese side was pointed out. After the survey, one more long-term expert was promptly dispatched, which contributed to the smooth promotion of the activities in the latter half of the project.
2) Realistic and flexible project management, such as cooperation with private forestry plantation companies and sharing the cost for technical information and seed source, contributed to the realization of the project effects in the area of technical dissemination. It also contributed as countermeasures against the economy's prolonged stagnation.

3-3 Factors that Impeded the Realization of Effects

(1) Factors Concerning the Planning

N/A

(2) Factors concerning the Implementation Process

1) It was found that for the equipment for water filter provided by Japan, it was difficult to obtain spare parts in Indonesia, and the experiment was interrupted for a while to wait for the arrival of the spare parts.
2) The Asian economic crisis, triggered by the crash of the Thai Baht in 1997, brought on a serious economic situation in Indonesia in 1998, which resulted in social turmoil and the resignation of the Suharto administration. Because of the social uncertainty that existed for a while, the experts had to either stay in Japan, or temporarily leave Indonesia. Because of the prolonged Indonesian economic stagnation, BFTIRDC, the implementing organization, could not sufficiently obtain the necessary governmental budget and the disbursement was often delayed. Therefore, some activities, which involved business trips to remote areas and experiments utilizing analytical instruments, were delayed.
3) In Kalimantan, there was social disorder for a while, as racial and cultural clash between the local people and immigrants (from Madura) became serious and resulted in a riot. Because of this turmoil, one of the SSOs was destroyed.
4) Hardware, such as the database in BFTIRDC and the LAN system were developed to some degree. However, the information offered from researchers was scarce, and its usage was not wide spread. This might have been because of the insufficient understanding regarding the disclosure and common use of information, or resistance to such information due to the Indonesian cultural climate.
5) Because LAN handsets were damaged in September 2001, part of the data stored was lost, and the construction of database was interrupted for a while.

3-4 Conclusion

The project accomplished high effects from the technical, organizational and personal development aspects, and the project purpose ("To enhance the function of BFTIRDC in terms of providing information and techniques of tree improvement and seed sources to the HT program") will be accomplished sufficiently. However, it is necessary to carry out the research activities in a smooth manner, and to allocate the budget for management without delay.

3-5 Recommendations

(1) In order to achieve the overall goal, the continuation and deepening of the collaboration with forest companies are necessary.

(2) For maintaining and expanding the function of BFTIRDC and for the development of forest tree improvement techniques, appropriate allocation of budget for the maintenance of facilities, renovation of equipment and procurement of expendable items such as chemicals for research activities is required. It is also recommended that BFTIRDC tries to get contracted researches with private forestry plantation companies and to find ways to implement collaborated research with private and public organizations, in order to strengthen its financial foundation.

(3) It is necessary to share information and utilize LAN/database system in order to carry out the research activities of BFTIRDC effectively. Similarly, efforts should be made to disseminate information to a broader range of users, by such means as using the BFTIRDC website.

(4) The Japan-Indonesia Joint Evaluation Team recommended to continue the Japanese cooperation in order to further promote the technical transfer to private forestry plantation companies and develop research strategies for BFTIRDC, by dispatching one long-term expert to provide technical assistance in establishing the 2nd generation SSOs for major fast growing species other than Acacia mangium. For cooperation with private forestry plantation companies, it is recommended that several short-term experts be dispatched in the field of SSOs planning, DNA analysis and other necessary fields.

3-6 Lessons Learned

(1) The project was successfully implemented because the project purpose was in keeping with the forestry policy of the Indonesian government. Therefore, it is important to develop a project purpose that meets the policy of the beneficiary countries.

(2) For forestry and timber projects, with the aims of breeding improved species for timbers or ancestry sorting, production of young trees need to be provided through long-term cooperation. Considering the above-mentioned point, it is necessary to establish a plan or develop facilities.

(3) The project could make aid effects develop in a sustainable manner by enhancing the implementing organization of the beneficiary country and contributing to upgrade its status.

3-7 Follow-up Situation

In order to transfer techniques to private forestry plantation companies, as well as to a develop research strategy of BFTIRDC, the project dispatched one long-term expert to provide technical assistance to establish 2nd generation SSOs for major fast growing species other than Acacia mangium, and to provide cooperation to private forestry plantation companies. Also, short-term experts in the field of SSOs planning, DNA analysis and other necessary fields have been dispatched.