

Summary Table

Summary Table for Results of Ex-post Evaluation

Evaluated and deployed by: Chinese Office

1. Outline of Project		
Country: People's Republic of China		Project Title: Project for Studies on Chinese Plantation Wood
Issue/Sector: Forestry industry		Cooperation Scheme: Technical Cooperation
Division in Charge: Development of Social Development		Total Cost: About JPY 1,280,418,000 ¹
Period of Cooperation	(R/D): 2000.3.31—2005.3	Partner Country's Implementing Organization: Research Institute of Wood Industry, Chinese Academy of Forestry Sciences
	(F/U Ex-post Evaluation): No	
Other Related Cooperation		
1-1 Background of the Project		
<p>Along with rapid development of economy, China's demand for wood is also growing rapidly. For the need to protect ecological environment, the government takes the measure to ban felling natural forests and to make wood utilization shift from natural forest to plantation wood gradually. Since there're mainly rapid growing trees with the age of 5 to 10 years in Chinese plantation wood that are not rigid and have small diameters, it is generally regarded that it's hard to conduct wood processing. What's more, the research capacity of China to plantation wood is inadequate. Thus, research capacity that can improve China's plantation wood processing and utilization rapidly is badly needed. Therefore, Chinese government and Japanese government signed summary of discussion (R/D) on Jan. 14th, 2000 and JECA started the project in March of the same year, hoping to promote China's studies on plantation wood by reinforcing the capability of Chinese Academy of Forestry Sciences (CAFS in short) to carry out basic studies independently about plantation wood. The project had a period of 5 years. Final evaluation and investigation would be finished in Sept., 2004, while the project will be finished in March, 2005.</p>		
1-2 Project Overview		
<p>The project helps C/P accumulate basic knowledge about "plantation wood property", "chemical disposal" and "physical disposal" to improve its basic research capacity in plantation wood processing by having C/P go to Japan for research and study, sending Japanese experts to China for guidance, assisting with necessary equipments for research and so on.</p>		
<p>(1) Overall Goal</p> <p style="padding-left: 40px;">To promote China's studies on plantation wood.</p>		
<p>(2) Project Purpose</p> <p style="padding-left: 40px;">To reinforce the capability of Chinese Academy of Forestry Sciences to carry out basic studies independently about plantation wood.</p>		

¹ Japanese investment was calculated according to final evaluation report. After confirmation with wood office, from final evaluation till the end of the project, no new expenditure had ever occurred.

<p>(3) Outputs</p> <ol style="list-style-type: none"> 1) Accumulate basic knowledge about plantation wood property 2) Accumulate basic knowledge about chemical disposal of plantation wood 3) Accumulate basic knowledge about physical disposal of plantation wood <p>(4) Inputs</p> <p>Japanese side:</p> <p style="padding-left: 40px;">Long term experts: 9; short term experts: 23</p> <p style="padding-left: 40px;">c/p for training in Japan received: 21</p> <p style="padding-left: 40px;">Equipment provided: JPY 535,226,000</p> <p style="padding-left: 40px;">Expenses burdened: JPY 515,142,000(Except Equipment provided Inputs)</p> <p>Chinese side:</p> <p style="padding-left: 40px;">Personnel deployed: 30 (C/P 24)</p> <p style="padding-left: 40px;">Expenses burdened: RMB 16,540,000², which is about 230,050,000 Japanese Yen</p> <p style="padding-left: 40px;">Provision of land and necessary facilities</p>			
2. Evaluation Team			
Members of Evaluation Team	Li Wei (Vice president of Beijing Manyo Consultation Co., Ltd.) Deng Jun (Investigator of Beijing Manyo Consultation Co., Ltd.)		
Period of Evaluation	Jan. 14 th , 2008 to Feb. 20 th , 2008	Type of Evaluation	Ex-post Evaluation
3. Results of Evaluation			
<p>3—1 Achievement of Project Goal</p> <p>Final evaluation report of the project says that the project goes smoothly according to the plan and has obtained its anticipated results. “Realization of project goal is going smoothly according to the plan”. From the completion of the project till now, the capability of Chinese Academy of Forestry Sciences (forestry academy in short hereinafter), especially its subordinate, the Research Institute of Wood Industry (wood institute in short hereinafter), to carry out basic studies on plantation wood independently has been improved and strengthened greatly. And the project goal is realized.</p> <p>3—2 Achievement of Overall Goal</p> <p>After the completion of the project, the number of China’s dissertations about plantation wood research increased by 20% and it is also growing. Meanwhile, the research team is growing continually. After three years of accumulation, China already has the capability to organize and implement large research subject in the field of plantation wood research, and the overall goal to “promote China’s plantation wood research” has already been realized primarily.</p> <p>3—3 Implementation of Suggestions in Final Evaluation Report</p> <p>All the four suggestions in the final evaluation report of the project obtained good progress.</p> <p>① to popularize the project result throughout the country by holding proseminars and lectures, going outside to give lectures, training and practice and so on.</p> <p>② improve research level and depth, stick to the research on basic properties of plantation wood and property changing techniques and theories, and carry out the research on wood-based composite</p>			

² The data of Chinese investment is obtained from this investigation. Final evaluation report was 189,600,000 Japanese Yen (till May, 2004).

materials, such as expanding the skill for hardening soft plantation wood to LVL hardening and bamboo hardening. Meanwhile, strengthen assistant work for research to expand researches on immaculate samples to researches on dynamic properties of full-size samples.

③ carry out China's project of "Research on Techniques for Directional Plantation and Efficient Utilization of Merchandise Wood" and integrated research in value-added utilization of plantation wood and resource utilization;

④ communicate and cooperate with other companies and open lab equipments. Organize 342 scientific research talents from 67 units of the country to carry out research on plantation wood. Most C/P keep close contact with Japanese experts from Forestry and Forest Products Research Institute and often consult or discuss together with Japanese experts for technical problems. After the retirement of long-term experts from Japan, they still pay attention to further research of the wood institute. C/P benefited a lot from continuous communication after that.

4. Summary of Evaluation Result

4-1 Evaluation Result

(1) Influence

Anticipated project of final report has positive influence on aspects like system, environment and technology.

- System

System reform is in the midterm of project implementation. "Forestry New Technology Institute" was established. The research content involved in the project became the core problem for research of the new organization. And its present director is the deputy director of wood institute. It is operating normally according to the setting at the end of the project.

- Environment

Achievements of the project provide technical support for efficient utilization of plantation wood and create conditions for practical application. Gradual institution of natural forest with plantation wood not only broadens the source of wood materials but also does good to sustainable development of wood and the circulation and utilization of resources, relieves the conflict of resource and environment, protects natural forest and maintains biological balance of the forest. Meanwhile, the growth of plantation area reduces the discharge of greenhouse gases and has positive and indirect influence on global warming.

- Technology

Due to the implementation of the project, wood institute has not only a group of experts and excellent talents in this field, but also top research condition, playing a leading role in the country. After the completion of the project, wood institute has 11 prize-winning dissertations and 6 volumes of monographs in the field of plantation wood research. It undertook 91 key subjects of the country with 1 winning state prize and 11 winning the prize of ministries and commissions. It cooperated with other departments for 3 key projects of the country with 1 winning the prize.

Besides the influence above, it also has other influence unexpected in the following final evaluation report after the completion of the project.

- Policy

Project implementation makes participants for establishment of forestry policy realize the value to

make use of plantation wood and the urgency to construct processing industry of plantation wood. After the completion of the project, research subjects about efficient utilization of plantation wood are listed into the scheme of “11th Five-Year” state technological support.

Wood institute is drafting relevant standard and criterion for spec of plantation fir. As an industrial standard recommended by the country, it will provide important reference to reasonable and scientific utilization of plantation fir resources.

- Economy

Through overall systematic research about wood property, processing and utilization of plantation fir and poplar, the project provides processing technique and technical parameter for integrated utilization of plantation fir and poplar. The achievements of the project have functioned indirectly in economic construction. In the “11th Five-Year” state technological support project implemented after the completion of the project, many techniques for efficient processing and utilization of plantation wood are mentioned. It is expected that new achievements will be obtained for application to economic construction.

- Society

Processing and application of plantation wood can broaden the channel for income increase of farmers in barren mountainous area. It is expected not only to increase the income of farmers returning farmland to forest, but also to improve agricultural productivity by establishing small processing factories. The shifts of resource structure from natural forest to plantation does good for farmers to be employed and to get rid of poverty. As renewable materials, the entry of indexes like security, energy conservation, emission reduction and health into the research of plantation wood has positive effect on the society.

- International

At present, 4 international cooperative projects are being implemented. Recently, wood institute puts forward 17 subjects for mutual studies and recruits cooperators all over the world.

From the above, the implementation of the project has positive effect on Chinese plantation wood research and utilization.

(2) Self-dependent Development

- Policy

Along with the implementation of China’s natural forest protection project and recognition of construction of forestry ecology, the importance of plantation wood research is more obvious and the government will attach greater importance to it.

Wood institute retains the nature of original research organization in the process of system reformation. It is estimated that wood institute will not undertake system shift in a certain period in the future.

- Organization Guarantee

Wood institute is one of the research organizations of forest academy with largest scale. The organization has sound structure and complete midterm development plan (2006 to 2010) and long-term development plan (2011 to 2020). According to research field, the institute is equipped with executive experts, experts and assistants. Each field has at least 5 people, which can meet the demand of research. Except the redeployment of three C/P in project implementation, no staff

left their original research work after the completion of the project. In recent years, research team is expanded by recruitment, introduction and doctor training.

- Technology

Project implementation has improved the research capability of C/P and testing means of experiment. The equipments introduced in project are operated and managed reasonably. After the completion of the project, wood institute continues to carry out the research of plantation wood with the achievements used in follow-up researches.

- Finance

Wood institute has smooth outlay channels mainly from funds for basic construction, scientific research and scientific research welfare. With the support of forestry academy, operational funds are guaranteed and sufficient. After the completion of the project, average investment in scientific research in each year is over 10 million yuan and the yearly expenses on equipments are up to several million yuan.

To summarize, after the completion of the project, organizations of implementation units are guaranteed and supported in talents, funds and equipments by relevant departments of the country. Outlay for research was adequate and equipments are timely supplemented and improved. There organization setting and personnel deployment are scientific and rational, which can basically meet the need of current research.

4-3 Accelerating Factor of the Project

(1) Factors Accelerating the Occurrence of Influence

Implementation of six forestry key projects of the country accelerated the research, development and utilization of plantation wood. Departments like forest bureau, MOST, SDPC and MOC increased their investment in research of plantation wood, which helps the continuance and popularization of project effect.

After the completion of the project, external conditions imagined are fully met. Chinese policy in plantation wood is developing toward the director for better realization of overall goal, and research budget and system of wood institute can meet the demand for continuance of project achievements.

(2) Factors Accelerating Self-dependent Development

Wood institute was established 50 years ago and has accumulated a group of excellent talents with research potentials. Content of subject for cooperative research meets highly with the direction and capability of research and development prospect. Forestry academy attaches importance to development and construction of wood institute, pays attention to the implementation and follow-up research of the project and gives sustainable support in aspects like declare of research subject, allocation of funds and policies for introduction of talents, which helps the independent development after the completion of the project.

Forestry and Forest Products Research Institute of Japan sent groups of top experts for guidance of C/P, pays attention to wood institute after the completion of the project, keeps long-term communication and carries out follow-up interview. C/P benefited a lot in continuous communication afterwards.

4-3 Blocking Factors of the Project

(1) Factors Blocking the Occurrence of Influence

No factors that block the realization and influence occurrence of the project's total goal have been found in the investigation.

(2) Factors Blocking Self-dependent Development

Spares of some equipments introduced in the project need to be changed or renewed. Since these factories only provide after services to purchase companies of the equipments, some equipments cannot receive corresponding services, which is bad for promotion of research achievements and follow-up research.

4-4 Conclusion

The project has positive influences. Wood institute has already listed plantation wood research into mid- and long-term development scheme. At present, research personnel have clear research directions and follow-up research activities are carried out orderly. Along with the depth of state key subjects undertaken by wood institute, project achievements will spread to application fields like paper making, fiber, house decoration and architecture. From these, we can say that project effect has good sustainability.

After the completion of the project, organization institution of implementation department is guaranteed in aspects like organization, talents, funds and equipments. C/P and research personnel are reasonable deployed according to research field. And research activity is carried out scientifically and orderly. From these we can say that the project is full of life with strong capability for self-dependent development.

4-5 Suggestions

Wood institute is preparing for new research. Because of the strong relation with pre-phase project and Japanese advantage in research field, wood institute has strong desire to cooperate with JICA for new projects. It is suggested for JICA to pay attention to this wish and possibility.

Wood institute is suggested to keep close relation with Forestry and Forest Products Research Institute of Japan continuously, make full use of the existing resources and carry out technical cooperation actively, especially the cooperation and communication between organizations to carry out the project. Meanwhile, it is suggested to expand international cooperation channel for wider international cooperation.

Wood institute is suggested to clear equipments that are temporarily unrepairable and ask for spare support of suppliers through Forestry and Forest Products Research Institute of Japan or organizations for project equipment purchasing.

Wood institute is suggested to contact industrial enterprises for faster application of research results in production and economic construction.

4-6 Experience

Through JICA project, wood institute not only improved its capability in scientific research, but also learned Japanese methods for project management for utilization into future key projects of the country. It is suggested to train project managers about project management during the pre-phase of project implementation for projects with long period and many (or complicated) executive contents to strengthen communication of Chinese side and Japanese side and the

operation and control capability of the project.

During project implementation, some fine for delaying payment of customs duties was incurred in introduction of equipments. In equipment cooperation project in the future, we should pay more attention to timeliness to avoid unnecessary losses. If possible, it's better to purchase equipments in local places or Japan. The method of third-party purchase by Japanese side will bring much inconvenience to equipment maintenance after the completion of the project.

4-7 Follow-up Assistance

No