

Terminal Evaluation

Asia

I. Outline of the Project

- Country : Viet Nam
- Project title : Forest Fire Rehabilitation
- Issue/Sector : Forestry/ Rural Development
- Cooperation scheme : Technical Cooperation
- Division in charge : Global Environment Department
- Total Cost : 270 million JPY (as of October 2006)
- Period of Cooperation : February 2004 ~ November 2006
- Partner Country's Implementing Organization:
Ministry of Agriculture and Rural Development; Ca Mau Provincial People's Committee (Department of Agriculture and Rural Development).
- Supporting Organizations in Japan :
- Related Cooperation : N/A

1-1 Background of the Project

In April 2002, a forest fire occurred in the U Minh District, Ca Mau Province in the southern part of Vietnam and destroyed forests occupying an area of approximately 4,000 ha. It caused tremendous damage to peat soil and farmland. The area of forest in Vietnam almost halved in the fifty years leading up to the beginning of the 1990s. The National Reforestation Plan aims to reforest 5 million ha and has been implemented since 1998. The Vietnamese government takes any situation which would severely affect the national plan very seriously. It therefore launched the Forest Fire Rehabilitation Project in the district under a special financial measure in July 2002.

The rehabilitation plan consists of measures to restore the burned area of approximately 4,000 ha, qualitatively improve the existing forests extending 30,000 ha, including the area surrounding the burned-out area, and raise the living standard of local people. It is planned to rehabilitate degraded forests by 2010. Along with quantitative forest restoration, the key to success in this plan is how to improve livelihood in the district, particularly in view of the problem of poverty in the district complicating the effective implementation of fire prevention countermeasures and reforestation methods.

1-2 Project Overview

[Overall Goal]

Techniques developed by the project are utilized by people and Forestry Enterprises in some areas of Mekong Delta.

[Project Purpose]

Necessary techniques for implementation of the rehabilitation and forest fire prevention program of U Minh Ha area are developed and disseminated.

[Output of the Project]

- a. Appropriate techniques of silviculture activities in U Minh Ha area are established and expanded.
- b. Knowledge and techniques related to market research and the wider-use and processing of Melaleuca timber are improved among those who engaged in silviculture activities.
- c. Fire prevention situation is improved.

[Activities of the Project]

- a.1 To establish applied techniques from "Afforestation Technology Development Project on Acid Sulfate Soil in the Mekong Delta"
- a.2 To establish demonstration farm(agroforestry model for local people, industrial plantation model for Forest Enterprises) in order to expand applied techniques as described a.1
- a.3 To implement training of the plantation techniques for local people in target area and Forest Enterprise staffs(technical lecture, on-the-job training in the demonstration farm)
- a.4 To provide technical supports for plantation activities by Forest Enterprise.
- b.1 To implement market research of Melaleuca timber and provide staff related to the project with training on the market research.
- b.2 To make the promotion plan on wider-use of Melaleuca timber.
- b.3 To conduct trail to implement the promotion plan on wide-use of Melaleuca timber..
- c.1 To review and recommend forest fire prevention system and measures respectively in U Minh Ha.
- c.2 To implement training and publicity activities related to forest fire prevention.
- c.3 To implement training on the livelihood improvement of local people.

II. Evaluation Team

Members of the Evaluation Team:

Japanese Members

- (1) Mr. TOJO Yasuhiro, Senior Deputy Resident Representative, Japan International Cooperation Agency, Vietnam Office, (Leader)
- (2) Mr. MIZUNO Akira, Section Chief, International Forestry Cooperation Office, Forestry Agency, Ministry of Agriculture, Forestry and Fisheries
- (3) Mr. TSUJI Shinichiro, Environmental Science and Engineering Department, Nippon Koei Corporation Limited
- (4) Mr. NISHIMIYA Koji, Senior Project Formulation Advisor, Japan International Cooperation Agency Vietnam Office.

Period of Evaluation:

1 October 2006 ~ 16 October 2006

Type of Evaluation:

Terminal Evaluation

III. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

1.1. Relevance to policies and programs of Vietnam Government:

The Project was found to be relevant to the policies of Vietnamese Government. The current Socio-economic 5 Year Development Plan stresses the importance of environment protection for sustainable development. The forestry policies in the country emphasize: 1) Acceleration of reforestation, 2) Sustainable forest management and utilization, 3) Promotion of social forestry (participation of local people and their benefits) and 4) Market-oriented forestry.

For the reforestation, the Vietnam Government aimed at the restoration of 5 million ha of forests by Year 2010. The new Melaleuca plantation establishment technologies promoted by the Project would contribute to the achievement of the goal.

The Project was also relevant to the provincial forestry policy. After the large forest fire that shattered more than 4,000 ha of forests in Ca Mau between 2001 and 2002, DARD and the local governments decided to rehabilitate the area and have launched a rehabilitation program. The Project would provide the technologies for the initiatives.

The Project also focused on the wider-use of Melaleuca woods, including the production of high-quality charcoal and wood vinegar using Melaleuca. It would promote the sustainable use of forest resources and social forestry (benefit to the local population) stressed by the forestry policy in the country. The Project also enhanced the capability of concerned agencies to carry out the market research and to establish a link between producers (i.e. FFEs) and investors.

However, the creation of favorable environment for investing forestry, such as the promotion of better forestry financing system, reform of FFE and the establishment of joint stock companies with the contributions from various FFEs for wood processing which had been already contemplated by DARD, was in need, and the Project could have contributed to the reinforcement of the market-driven forestry policy in the country if it was able to make policy suggestions in this regard.

1.2. Relevance to Japanese aid policy:

Japan's Official Development Assistance (ODA) Charter was revised and approved by the Cabinet in 2003. The basic policies of Japanese ODA are: 1) Supporting self-help effort of developing country, 2) Perspective of "Human Security", 3) Assurance of fairness, 4) Utilization of Japan's experience and expertise, and 5) Partnership and collaboration with the international community. According to the Charter, the priority issues for Japanese ODA are: 1) Poverty reduction, 2) Sustainable growth, 3) Addressing global issues such as environmental problems, and 4) Peace building. The Project was in line with the basic policies and priority issues stated in the Charter.

According to the Japan's Country Assistance Program for Vietnam (2004), Japan provides assistance for promotion of growth and enhancement of competitiveness through the promotion of market economy, improvement of the investment environment and development of economic infrastructure. Japan provides assistance for improving lifestyle and social aspects including poverty reduction and environmental restoration. The program also emphasizes the assistance to institutional building, including the development of the legal system and administrative reforms (civil service and financial reform).

The Project was in line with the Japanese ODA Charter and Country Assistance Program for Vietnam.

1.3. Relevance to the needs of interventions:

The Ca Mau province had been affected by a series forest fires in its recent history because of its geological, meteorological and social conditions. The rehabilitation of approximately 30,000 ha of forest-fire affected area and other degraded forests was deemed necessary by the local government. Between November 2001 and May 2002 only, 66 cases of forest fire occurred, and 4,423 ha of forests were burned. The needs for a project to rehabilitate the fire-affected areas were high and urgent, especially after the large fire in April 2002, which burned nearly 2,000 ha of forests in U Minh 3.

Japan had technical advantage to support Ca Mau because it had the experience in developing the reforestation technologies through the assistance to "The Afforestation Technology Development Project on Acid Sulfate Soil in the Mekong Delta" in Long An, where the soil conditions were similar. Therefore, it was rational to extend the Japanese assistance to the Project.

While the province of Ca Mau strived to develop its economic potential and alleviate poverty through the enhancement of economic value of Melaleuca timber, the Project properly addressed the issue by providing various capacity development activities for officers and farmers in wood processing, including the training, study tour and market research activities.

While the needs in the aspect of wood processing and marketing were high, the project areas did not have an adequate grounding to absorb significant inputs and investment at the beginning of the Project. For instance, a master plan for wider-use of Melaleuca or feasibility study on various Melaleuca products did not exist. Therefore, the project inputs towards it were rationalized to make suggestions on the general direction of wood processing technology development and marketing in the province. The Project decided to undertake a trial on the production of high-quality charcoal and wood vinegar for this purpose and assigned Japanese experts for wood processing and marketing (total of 5.77 MM) and organized the number of training sessions (2 training sessions and 6 study tours).

(2) Effectiveness

2.1 Model development:

The Project introduced a new model for Melaleuca plantation establishment, of which the construction of embankment and canal was featured. The new technology adopted for the plantation establishment would enhance the productivity. According to the acceptance check conducted by DARD, the survival rate of Melaleuca seedlings using this technology at the demonstration farm (120 ha for individual farmers, 100 ha for an industrial plantation directly managed by FFE U Minh 1) was above 90%, which was higher than the survival rate of conventional plantation establishment methods. The Final Evaluation Team was also informed that the growth and shape of trees have been improved. In addition, the new technology would mitigate the risk of forest fire because of the embankment and canal surrounding the plantation areas.

The Project also supported the capacity development of concerned offices, officers and farmers in fire prevention. It also introduced a model for livelihood improvement of local people through agroforestry/integrated farming system, wood processing (charcoal and wood vinegar making) and participatory approach through which the farmers would reinforce their sense of ownership over the Projects. The improved livelihood options and participation of local people would enable the farmers to protect and utilize their forest resources appropriately.

The model developed by the Project could have been more appropriate if the time for social preparation was sufficiently allocated in the project design. For instance, the social preparation such as Participatory Rural Appraisal (PRA) and community planning were either hurried or skipped at the beginning stage of the Project at Village 10, U Minh I, Ca Mau. Despite that, the effectiveness of Project should be rated high in the model development at the demonstration farm because of the strengths of pilot activities organized by the Project.

2.2 Capacity development (training):

The technologies were effectively transferred to concerned officers and farmers through a series of training, field visits and on-the-job training. The demonstration farm and model plantation had functioned as a venue for effective training and technology transfer. The training activities were based on the requests of trainees, and project staff members, including the Japanese experts, local consultants, CP and Vietnamese resource persons had designed, planned and executed the training activities thoroughly. The document review, questionnaire survey and a series of interviews revealed the effectiveness of capacity development activities undertaken under the Project. The questionnaire survey to CP revealed that they are confident their levels of skills and knowledge in the 72% of what they have learned.

2.3 Manuals and guidelines:

The Project produced a number of manuals and guidelines, which would be used for the application of technologies. The Final Evaluation Mission reviewed the manuals and evaluated them from the technical viewpoint. The qualities of those manuals and guidelines were satisfactory in general.

Only after the completion of manuals and guidelines by the Project, the requirements and procedures of environmental assessment for forestry were stipulated by the Vietnam Government in the Decree on Detailed Guideline for Implementation of Some Articles of Law on Environmental Protection (Decree 80/2006/NĐ-CP, August 9, 2006). Since the environmental risks in the construction of embankment and canal for Melaleuca plantation was inevitable, it is recommended that the manual be revised in future to include the Environmental Impact Assessment (EIA) element if the plantation technologies developed by the project would be expanded to other areas in a larger scale.

2.4 Model promotion:

The Project aimed not only at the model development and training but also at the promotion of the project accomplishment to other areas within Mekong Delta. The Project exhibited a satisfactory outcome in this regard as well. A number of trainees from different FFE and offices started applying skills and knowledge that were learned during the training without further assistance from the Project. Some farmers in the villages adjacent to the pilot village started to undertake some of the activities introduced by the Project. The farmer-to-farmer extension had been encouraged since the beginning of the Project, and the system of farmer-to-farmer extension was incorporated into the Project. It contributed to the spreading effect of the Project activities

(3) Efficiency

3.1 Japanese experts:

JICA contracted out the project management and implementation to a Japanese contractor (JOFCA/JIFPRO). A group of consultants (Japanese experts) deployed to design, plan, implement, monitor and evaluate the project activities based on the Record of Discussions (R/D) agreed both by JICA and the Vietnam Government. In general, the qualities of Japanese experts were satisfactory.

The man-months of Japanese experts increased as compare to the original contract after a careful review on the necessary inputs of Japanese experts to the Project in order to meet the project requirement, and the inputs of Japanese experts were utilized at a maximum level.

During project formulation, it is important to examine the scope and requirement of a project. For instance, adequate man-months of Japanese experts should be determined before starting a project so that the assignment of Japanese experts could be properly planned. It is necessary to spare sufficient time for sharing same understanding on the roles and responsibilities of Japanese experts.

3.2 Equipments and materials:

The equipments and materials provided by the Project had been utilized by the concerned agencies and beneficiaries utmost. The equipments appeared to be well maintained, and the materials were used for the productive activities, some of which were already producing tangible benefits in pig farming, paddy production, charcoal production, etc.

The delivery of a part of heavy equipments was delayed due to logistical and procedural reasons. The delay affected the annual progress of the Project in the first year but did not affect the project outcomes.

3.3 Inputs from the Vietnam side:

The Vietnam Government provided appropriate CP, counter budget, necessary office facilities and site for demonstration farm and nursery improvement to the Project with no significant delay or shortfalls. The unit costs of construction works, training, management cost and other expenses were at reasonable rates. For instance, the rate of hiring resource persons for training adopted the government cost norms. For this, it could be concluded that the project funds availed both by the Japanese and Vietnamese Governments were used efficiently.

(4) Impact

4.1 Replicability of models and outcomes:

The technologies introduced by the Project were tested in the field and reviewed by the concerned agencies and personnel. CP and trainees gave comments pertaining to the skills and knowledge introduced by the Project for further improvement, and the Project established an effective feedback system. As a result, the models and outcomes of the Project were technically sound and could be applied to other areas. Even though the model developed by the Project involved the use of heavy equipments, the embankment and canal could be constructed manually. The technologies have already been replicated in areas outside demonstration farm within U Minh Ha, which indicated its replicability to other areas in the Mekong Delta in future.

“Training of Trainers (ToT)” was emphasized throughout the Project, and it was revealed during the interview survey that many former trainees and farmers were willing to share their skills, knowledge and documents with other officers and farmers.

4.2 Standardization of a guideline on silvicultural technologies for Melaleuca:

At the time of Final Evaluation, MARD was in the process of standardization of an official guideline on silvicultural technologies for one variety of Melaleuca. In preparation, MARD had asked DARD Ca Mau to provide MARD with the documents; guideline and manual produced by the Project and reviewed them. MARD had also requested DARD Ca Mau to review the draft guideline for comments. The outputs and experience of JICA Project had been used at the national level, and it was likely to have a wider impact on the improvement of silvicultural technologies for Melaleuca.

4.3 Environmental impact:

Because of the geological and meteorological features, the water and soil in the province of Ca Mau were susceptible to acid contamination caused by the exposure of sulfate contents in a pyrite layer. A physical work that involves the excavation of earth, such as the construction of embankment and canal, could result in the exposure of sulfate to the ground surface, which would pollute the water and soil.

The Project introduced a scientific selection method for plantation area to mitigate the environmental risks. The Project also promoted guidelines for the evaluation of geological conditions at specific areas and excavation techniques not to expose the pyrite layer to the surface.

However, the heavy equipments for the construction of embankment and canal should be used with special care and consideration to the negative environmental impact. In fact, the physical work by the Project at the initial stage was alleged to have contributed to the increase in water acidity in the demonstration farm. As unintentionally proven by the Project, the environmental risk of new technology was inevitable. Therefore, the model development should have paid more attention to the prevention of negative environmental impact.

4.4 Socio-economic impact:

During the field visit, it was confirmed that the project activities and inputs were effective for the Melaleuca plantation development and livelihood improvement of farmers at the demonstration farm. For the evaluation of project impact, one must look at the project impact not only on the demonstration farm development but also on the poverty alleviation in wider areas.

It was found out that the project beneficiaries were eager to implement the Project at the beginning and carried through their enthusiasm until the end. Even though the household-level financial analysis of Project had not been done, the actual

accomplishment of local farmers indicated the financial viability of project activities at a micro level. It suggested the potential expansion of model and poverty alleviation effect in the province of Ca Mau and beyond.

(5) Sustainability

5.1 Preparedness of the Vietnam side to take over the Project:

In Ca Mau, the provincial annual plan for Year 2007 was being prepared at the time of Final Evaluation. DARD had submitted a budget proposal for: 1) Operation of Committee for Agriculture and Forestry Activities Support, 2) Operation of farmer's extension club, and 3) 3,000 ha of reforestation in next four (4) years. This proposal was directly related to the Project, and the technologies and models introduced by the Project would be adopted by the proposed activities if the national and provincial government approves the proposal. The manuals and other documents prepared by the Project will be utilized for the implementation of programs, and the personnel trained through the Project would be mobilized.

The Provincial People's Committee (PPC) expressed their commitment to the sustainability of the Project, and the accomplishment of Project appeared to be sustained and expanded after the Project. DARD also prepared a utilization plan for the equipments provided by the Project, which also showed their preparedness for the termination of JICA's assistance.

5.2 Institutional and organizational foundation:

The interview survey during the Final Evaluation revealed DARD's strong commitment to the Project and self-initiatives in the implementation of the Project, signified as the adoption of reimbursement method for the project fund, wherein DARD temporarily used its budget for project implementation and reimbursed the expense later. It indicated that the organizational foundation to sustain the Project was in place.

The Project supported the establishment of various multi-sectored and multi-stakeholder committees, including Committee for Agriculture and Forestry Activities Support and Environmental Monitoring Committee. These institutions would ensure the further development of forestry sector and rural development after the Project.

The Project also assisted the establishment of farmers' extension club at the demonstration farm in association with the existing program of Agricultural Extension Center (AEC). Farmers' extension club would be a venue for further training, information dissemination, lobbying and agricultural/forestry development in the village. This model demonstrated the potential for project sustainability and future expansion of technical assistance to other areas.

While the Project suggested a future direction of institutional improvement in Ca Mau, the institutional strengthening started towards the later stage of Project. The establishment of Agricultural and Forestry Committee was approved by the PPC, but it did not have a bylaw or action plan yet. The Environmental Monitoring Committee was yet to be approved by PPC at the time of Final Evaluation, and farmers' extension club was established a few weeks before the dispatch of the Final Evaluation Mission. The club did not have its action plan or long-term strategy yet. It was therefore too early to determine whether or not the institutional capabilities and sustainability of those institutions were adequate to take over the project activities.

5.3 Economic viability of the Project:

A Melaleuca plantation has not only financial but also economic values, including the development of forestry-related industries, creation of employment, prevention of forest fire, stabilization of micro-climate, control of water quality and biodiversity conservation. In order for the project outcomes to continue and expanded, the economic feasibility of Project would have to be ensured so that the public financing to the project activities would continue. The economic viability of Melaleuca plantation had not been examined before the Project. It is recommended that the Vietnam Government should undertake the feasibility study at a national level.

3-2 Factors that promoted realization of effects

(1) Factors concerning Planning

N/A

(2) Factors concerning the Implementation Process

N/A

3-3 Factors that impeded realization of effects

(1) Factors concerning Planning

N/A

(2) Factors concerning the Implementation Process

N/A

3-4 Conclusion

According to the result of 5-Item Evaluation, the progress of Project was generally smooth. Most project objectives were expected to be achieved by February 2007, and the Project could be completed as planned. The staff members of counterpart agencies, namely DARD, FSSIV and FFE acquired plantation establishment technologies at acid soil, and their capabilities in forest fire prevention, livelihood support and project monitoring were enhanced.

In addition to the effort by the Japanese experts, the success of Project was attributed to strong self-initiatives of the Vietnam side (including the beneficiaries at a community level) and their sense of ownership over the Project. To achieve the Overall Goal of the project, it was important to continue: 1) Promoting the livelihood improvement at the village level, 2) Mitigating the risk of further price fall of Melaleuca by promoting its wider-use and reforestation, 3) Strengthening the institutional mechanisms and organizations. All these efforts require adequate budget allocation by the Vietnam Government after the Project, and it is expected that the concerned offices would take necessary actions to secure the budget.

3-5 Recommendations

(1) Execution of proper Ex-Ante Project Evaluation

The Ex-Ante Project Evaluation for this Project was executed rapidly, and the Project could have been designed more properly to incorporate the risks and uncertainty. As a result, the concerned personnel had to spend significant time to re-plan the Project at the beginning stage and to put effort for sharing the same understanding on the Project design. It is important to gather adequate information during the Ex-Ante Project Evaluation within the limited resources and formulate a project based on sufficient information. A detailed scope of project and required inputs should be thoroughly examined and determined with the same understanding of both donor and recipient countries. It is essential to undertake appropriate preparation for smooth and efficient project implementation.

(2) Environmental risk mitigation

The construction of embankment and canal at a area with acid sulfate soil, which was the center of new technology developed by the Project, would expose the pyrite layer to the ground surface and increase water acidity, if the construction would be done without proper attentions and care to the acid soil. The technology should be promoted through the compliance with guidelines and manuals produced by the Project, which illustrate the methods to mitigate the negative environmental impact. Also, the Environmental Impact Assessment (EIA) should be undertaken in accordance with the guidelines stipulated in the revised law on environmental protection and decree (80/2006/NĐ-CP) when promoting the technology to other areas at a large scale.

(3) Economic feasibility study

The low price of Melaleuca timber in Mekong Delta is the reflection of market to date, and it is unlikely that the price will increase in near future. Under the circumstance, it is important to promote long-term wider-uses of Melaleuca to stimulate the demand. The Vietnam side had realized this and expecting to undertake programs or projects. However, it is important to study the economic feasibilities of various options for Melaleuca processing before starting a program or project. The feasibility study should cover not only the province of Ca Mau but also other areas in Mekong Delta where Melaleuca timber is being produced. The study should consider the relationship between the promotions of Melaleuca processing and national development scenario, as well as the potential economic impact at the community level.

(4) Strengthening of farmers' activities and institutional support mechanisms

A farmers' extension club was established at the demonstration farm under the program of Agricultural Extension Center (AEC). Also, the establishment of Committee for Agricultural and Forestry Activities Support was approved by PPC. However, they were created recently, and the continuing support to the activities of those organizations, including proper budget allocation, was uncertain. The functions and roles of those organizations are critical for achieving overall goal of the Project, and it is important that PPC and other concerned agencies will extend their full support to the organizations. It is also critical to create a legal environment for the organizations to function effectively. The necessary decisions, administrative orders, circulars and other official guidelines should be prepared by authorized agencies.

3-6 Lessons learned

40 households at the demonstration farm were the pioneers at the New Economic Zone settlements with certain restriction on their land use (at least 70% of their lots would have to be kept as forests according to a regulation). Because they were pioneers, their willingness to develop their reclaimed lands was strong when the Project started in the area. Under the circumstance, the project objectives and the demand of local farmers were in accord from the beginning of the Project. Usually

the creation of this circumstance would require proper process, time and effort. The Project was able to take advantage of attitude of local farmers and to ensure their strong commitment and high contributions to project activities. This was observed in the successful “farmer to farmer extension” and “learning by doing”. The success of Project suggested that a project would achieve its goals and objectives with beneficiaries’ dedication and their strong sense of ownership over the project.

3-7 Follow-up situation

To fully achieve the overall goal of the Project, it is important to continue extending support to the dissemination of models developed by the Project to wider areas. The Vietnam side should take full responsibilities and initiatives to ensure the sustainability of Project. While the Vietnam side has its limitation, it would explore the possibility of accessing external resources for its initiatives on enhancing commercial value of Melaleuca and community development.