

## (5) 運営指導調査団（中間評価）との協議議事録

MINUTES OF MEETINGS  
BETWEEN  
JAPANESE PROJECT CONSULTATION TEAM AND AUTHORITIES CONCERNED  
OF THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
ON  
JAPANESE TECHNICAL COOPERATION PROJECT  
FOR FOREST FIRE REHABILITATION

Japanese Project Consultation Team (hereinafter referred to as "the Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), headed by Mr. Yoshiharu YAMADA, visited the Socialist Republic of Vietnam and stayed in Ca Mau from 17 to 20 October, 2005 for the following purpose; to have consultations on the implementation of Japanese Technical Cooperation Project for Forest Fire Rehabilitation (hereinafter referred to as "the Project") with the project personnel and other relevant parties and to provide recommendations for the improved implementation of the Project.

As a result of a series of surveys and discussions, both sides came to the understanding concerning the matters referred to in the following pages.

Ca Mau, Vietnam, 20 October, 2005



Mr. Yoshiharu YAMADA  
Leader, The Project Consultation Team,  
Japan International Cooperation Agency



Mr. Ngo Chi Dung  
Director, Agriculture and Rural  
Development Department,  
Ca Mau Province, Vietnam



**1. Background**

The Project started in March 2004, and has been in implementation with the continuous efforts by both Japanese and Vietnamese sides. One and a half years have passed since the commencement of the Project, and it is in the phase of the experiment and dissemination of applied techniques developed in demonstration farm in U Minh Ha area from "Afforestation Technology Development Project on Acid Sulphate Soil in the Mekong Delta". In order to achieve the Project Purpose, it is required to implement future activities effectively and efficiently until the end of the Project. Thus, JICA decided to dispatch the Team to provide recommendations for the more effective implementation and sustainability of the Project.

**2. Objectives of the Team**

The objectives of the Team are to evaluate the Project jointly with Vietnamese side in the middle of its cooperation period, namely such as to (1) review the past progress and implementation process of the Project, (2) examine the Project activities from the perspective of five evaluation criteria, namely relevance, effectiveness, efficiency, impact and sustainability with emphasis on future impacts and sustainability of the Project, and (3) make recommendations on future project activities for a better project implementation.

The Team collected relevant information, visited the project site, and had a series of the interviews in addition to the discussions with the Vietnamese side.

**3. Progress of the Project**

The both sides reviewed the progress and implementation process of the Project, and found that most of the Project activities have been implemented according to the Plan of Operation. Vietnamese side did not only develop Melaleuca plantation techniques for the Project site and the capacity of project management but also transferred the Melaleuca plantation and agroforestry techniques to the farmers. The farmers learned the knowledge and the techniques from the training courses conducted by Vietnamese side and they actually apply those techniques to their farms.

Regarding forest fire prevention, a series of activities has been conducted, such as training on initial forest fire fighting and Campaign activities on forest fire prevention for farmers and Forestry Fishery Enterprise (hereinafter referred to as "FFE") personnel.

However, the both sides identified some delays in some of the activities, such as construction of demonstration farm, which was expected to be completed by Vietnamese side by the year of 2004. In the whole process of the procurement of machinery and

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equipment for construction of the farm, irregularities and lack of preparedness of the both sides were found, and the delivery was delayed. The demonstration farm is expected to be completed by counterpart organization. Though the delayed construction provided the Project with sufficient time for the farmers to participate in the process of the construction at the planning stage, the delay shortened the time for demonstration to the farmers. The both sides discussed the improved implementation and management of the Project, and confirmed that the delay can be recovered.

#### 4. Evaluation from the perspective of five evaluation criteria

As mentioned above, the both sides jointly evaluated the Project implementation from the perspective of five evaluation criteria, namely relevance, effectiveness, efficiency, impact and sustainability. In order to make recommendations on future project activities, the Team emphasized the criteria of impacts and sustainability.

##### 4-1.Relevance

Firstly, regarding relevance, the both sides concluded that the Project Purpose was relevant to the needs of Vietnam and the national policy, since there is no change in the Policy of the Government of Vietnam which is a base for the establishment of the Project Purpose.

##### 4-2.Effectiveness

In terms of effectiveness, the both sides found that the implementation of the Project was producing outcomes as expected by now owing to efforts made by both Vietnamese and Japanese sides. From the results of field surveys, it is revealed that FFE and farmers have obtained the applied techniques and practiced the techniques to their land plots. In addition, training for farmers contributes to the diversification of their income sources, and this means that the capacities of the Counterpart organizations have been improved.

Based on the observations, the both sides concluded that it is highly possible to achieve the Project purpose by the end of the Project cooperation period.

##### 4-3.Efficiency

As for efficiency, the both sides found that there was some shortage in the Project input, in other words, the duration of assignment of the experts, but the counterpart organizations improved their capacity, as mentioned above. They have acquired technologies in the plantation by introducing applied techniques and the provision of related trainings.

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On the other hand, due to the delay in introducing the machinery and equipment, some of them were underutilized within the scope of the Project implementation. However, they are in effective use for the purpose of achievement of the Overall Goal.

The both sides found that there is some technical limitations in practical use of the charcoal kiln which was introduced by the Project.

Despite these, the both sides conclude that the project activities were efficient in general.

#### 4-4. Impact

Regarding impact, the both sides found the positive impact accrued by the implementation of the Project. It is found that the training for farmers living in demonstration farms by the counterpart organizations has a significant impact, and stimulates the farmers to improve their livelihoods. They have become much interested in further practice for improvement of their production activities.

#### 4-5. Sustainability

Finally, in terms of sustainability, there is the mutual understanding that it is important to sustain the positive impact mentioned above.

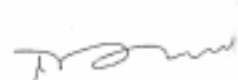
The Vietnamese side is currently developing the clear vision or the strategy in ensuring the budget and building institutions by themselves for sustainability of the Project after the cooperation period. It is highly likely that the clear vision or the strategy will be developed in the project period. This is one of the concerns affecting the achievement of the Overall Goal as well as the Project Purpose in the view of dissemination of the outcomes.

### 5. Future Strategy

#### 5.1 Future Strategy of the Project

The Government of Vietnam has plans for rehabilitation of forest, and Melaleuca may be the only possibility for the reforestation in some part of the country including the Project site due to potential acidity. The Government is taking the following measures to encourage plantation of Melaleuca in some of the identified areas, namely, to assign the land use right of approximately 7ha for each household on condition that Melaleuca be planted in the 70% of the assigned land with the remaining 30% that can be used for various productive activities.

In order for the Government to facilitate in taking the measure in Ca Mau, it is necessary to design the measure so as to improve the livelihoods of the farmers with the land



use right. For that purpose the following measures will be taken;

- (1) to develop a demonstration farm with comprehensive support system,
- (2) to make mechanism that contains the measures addressed in (1) above to provide the farmers with the Best Mix (refer to 5.2) with efforts by the farmers
- (3) to develop methods to raise income by providing materials made of or from Melaleuca trees.

Since the beginning, the Project has, as discussed, achieved some results, it is highly possible that the Project will develop a system to bring more financial benefit to the farmers.

At the same time, introduction of wider-use of Melaleuca trees will add some financial benefits to the farmers. Thus, the Project has developed the techniques for charcoal and wood vinegar to realize the wider-use. During the development process, various techniques have been introduced to the Vietnamese side, such as analysis of the market and methodology for technical adoption. This process of introduction also provided the Vietnamese side with capacity to identify and/or, to some extent, develop potential use of Melaleuca trees by themselves. Still, the Vietnamese side needs further capacity to bring something that is proved on a trial scale into the market by themselves. Making full use of those provided and capacity to be developed for commercialization, the Vietnamese side is in the process of developing or adopting other techniques for the wider-use. In order to achieve the successful results for the attempts, further detailed policy would be necessary to be developed as well as the results of analysis of household economy.

## 5.2 Demonstration Farm

In order to achieve the Project Purpose, the establishment of the demonstration farm is the crucial issue of the Project. The both sides confirmed that the demonstration farm had the function of extension and enhancement of capacity building for Vietnamese side to disseminate the results, which were continuously improving, of the farmers' activities.

In this point of view, the establishment of the demonstration farm is in progress and most farmers have already conducted agroforestry activities and started gaining income by diversifying generation sources, such as Melaleuca trees, rice, fruit-trees, crops, livestock, fish and others. This leads to an appropriate combination of generation sources for the individual farmer to optimize his/her income (hereinafter referred to as "the Best Mix").

The both sides have found several potential activities on the demonstration farm. Farmers have obtained the ability of making community action plan and fulfilling it. There are cost sharing between the authority and the farmers for land preparation, information exchange among them, and application of techniques for their livelihood improvement.

On the other hand, there is a constraint for the establishment of the demonstration

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farm, which is the decreased price of Melaleuca trees. It causes reducing the attractiveness of the plantation of Melaleuca trees.

From the consideration mentioned above, in order to achieve the Project Objective, the potential activities in the demonstration farm should be strengthened and civilized by comprehensive support from organizations concerned (hereinafter referred to as "the Supporting Framework") in a positive way to maintain farmers' incentive.

The Supporting Framework requires to build the capacity to understand the needs of farmers, to provide suitable materials and trainings for them and to promote the cooperation among them as well as their self-reliance.

The Supporting Framework is the appropriate combination of supporting items consisted of technical materials, training, seminar, criteria, stakeholders, and others.

The Supporting Framework should be necessary in order to enhance not only the attractiveness of Melaleuca plantation, but also secure the sustainability of farmers' activities as a model to expand to other areas.

## 6. Recommendations

- (1) Based on the discussions and their results, it is recommended that the PDM and the PO be modified to reflect future activities and the direction of the Project as necessary.
- (2) Based on the field survey, it is recommended that DARD should make a comprehensive management plan for full utilization of all procured equipment by JICA after the Project completion.
- (3) Based on overall evaluation result, it is recommended that the Counterpart organization develop strategy and action plans by the time of final evaluation to achieve the Overall Goal of the Project.
- (4) Based on the evaluation results, the charcoal kiln should be improved for practical use in order to disseminate it to the farmers.
- (5) Based on overall evaluation result, Environmental monitoring is also important for the facilitation of the Melaleuca plantation and for protection of the environment. The experience obtained during the construction of the demonstration farm will provide the basis for water and soil monitoring. It is necessary to continue the monitoring, and the Project will compile and analyze the results for the prevention of the adverse impacts and/or their mitigation.
- (6) Based on the idea that the function of the demonstration farm is important, it is recommended that the budget and the allocation of potential staff should be prepared

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for establishing the Supporting Framework.

7. Final Evaluation

It is agreed that both sides would jointly conduct the final evaluation in the most appropriate timing such as third quarter of the year 2006 to inspect the achievement of the project purpose. Based on the results of the evaluation, decisions and/or recommendations will be made on the Project and relevant matters.

Annex I Participants for M/M discussion meeting



## Participants for M/M discussion meeting

Vietnamese Side			
No	Name	Organization	Title & Position
1	Nguyen Quoc Viet	Ca mau PC	Vice Chairman
2	Ngo Chi Dung	DARD Ca Mau	- Director of DARD Ca Mau - Chairman of PIC
3	Nguyen Thanh Vinh	DARD Ca Mau	Vice Chairman of PIC
4	Le Viet Binh	DARD Ca Mau	- Head of Technical Division of Sub-Department of Forestry (SDF) - Coordinator for Vietnamese side
5	Le Hoang Vu	FFE U Minh I	Director of FFE
6	Nguyen Thanh Thuan	DARD Ca Mau	- Staff of SDF - Head of WG1-3
7	Nguyen Ba Luc	Sub-Department of Forest Protection Ca Mau	- Head of Forest Protection Division - Head of WG4
8	Nguyen Tuyet Giao	DARD Ca Mau	- Staff of Planning Division-DARD - Head of WG5
9	Nguyen Truong Thanh	DOF	- Specialist of Silviculture Division
10	Tran Thanh Cao	FSSIV	- Head of socio-economic section
Project Office			
1	MIYAZAKI Nobumitsu	JICA Project "FOREST FIRE REHABILITATION"	JP Expert of the Project
2	Le Minh Loc	Project Office	Coordinator for JP side
3	Le Yen Anh	Project Office	Translator
4	Tran Ngoc Hoang	Project Office	Translator
Japanese Side			
1	YAMADA Yoshiharu	JICA Mission	Team Leader, Forest Conservation Team I, Group I, Global Environment
2	UCHIKAWA Tomomi	JICA Mission	Forest Conservation Team I, Group I, Global Environment
3	MORISAKI Shin	JICA Mission	Section Chief for Training, International Forestry Cooperation Office
4	NISHIMIYA Koji	JICA Mission	Project Coordinator, JICA Viet Nam Office
5	SAKONJU Naoto	JICA Viet Nam Office	Staff, JICA Viet Nam Office
6	Hoang Thu Thuy	JICA Viet Nam Office	Staff, JICA Viet Nam Office
7	ODA Kensei	JICA	JP Expert for MARD
8	Pham Quynh Sam		Translator

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(6) 第一回実施委員会記録 (2004年8月24日)

**Meeting Note of the Implementation Committee Meeting**

The meeting began at 8:30 am and ended at 11:25 am on 24/8/2004 .

**1. Participants:**

Mr Miyazaki: Team Leader of JICA DARD	Mr Vinh: Vice-Director of
Dr Hoang Chuong: VIFA	Mr Binh: Co-ordinator
Mr Loc: JICA Project Co-ordinator	Mr Quang: Accountant
Mr Hoang: Interpreter	Ms Tam: Administration
Mr Tien Anh: Interpreter	Mr Giao: Planning Officer
Ms Nhu Y: JICA Secretary	Mr Thuan: Technical Officer
	Mr Luc: Forest Fire Protection Officer
	Mr Vu: Director of FE U Minh 1
	Mr Long: Technical Officer FE

**2. Content:**

- Mr Vinh: stated the opening remarks (reasons to hold this meeting): mainly divide working group and activities.
- Mr Miyazaki: + Introduced the staff of Japanese Expert Team.

There are 2 groups of experts: (1) work for Melaleuca in HCM this year, and (2) will come Ca Mau.

+ Explained about the Project structure based on the hand outs. Objectives: expand the Melaleuca forest. How to do: 4 main activities: (1) Modify from Thanh Hoa Project, (2) Demonstration farm establishment, (3) invitation to farmers and (4) Forest Fire Prevention.

+ Divided working groups for: Applied Techniques Development, Demonstration Farm Establishment, Timber Processing and Wood Use and Forest Fire Prevention.

+ Emphasized that the Project IS NOT Japanese Project but Co-operation Project. Japanese Experts mainly assist but not do so much. The Project's objectives is for the FUTURE not only in Project time (3years).

**3. Suggestions:**

- Mr Vinh:

+ Need to adjust the working groups provided from the list because the counterparts now are not enough for Project implementation ⇒ Combination not independence. For example: Demonstration farm establishment and heavy equipments use are belong to the FE 1 duties.

+ Want to employ some more staff to involve to the Project for assistance by JICA fund.

+ Need to get fixed fund table for training, workshop,... from Japanese side.

- Mr Miyazaki:

+ Employing staff is belong to Vietnamese side, we cannot use JICA fund for this.

+ Request working group work together to finalize the cost for each activity to meet the PO and JICA fund ⇒ Which group will need more staff to involve.

+ Request to get unit price for inviting teachers, professors... for training.

+ Mr Vinh should consider who will join to Thanh Hoa Study Tour.

- Dr Chuong:

+ We need to study carefully how to diversify Melaleuca kinds in U Minh Ha: Melaleuca cajuputi, Melaleuca leucadendra, Melaleuca alternifolia.

+ We need to think about how to produce papers from Melaleuca Wood.

+ The methods of planting Melaleuca need to be concerned carefully, ie in some cases, we need to make embankment.

+ For plantation preparation, we need to check the seeds source very carefully.

Mr Vinh divide the working groups:

- Group 1: Develop Applied Techniques
  - Team Leader: Mr Thuan.
- Group 2: Establish Demonstration Farm:
  - Team Leader: Mr Vu
- Group 3: Expand Wood Use:
  - Team Leader: Mr Giao
- Group 4: Forest Fire Prevention:
  - Team Leader: Mr Luc

*Date : 24 August 2004*

(7) 第二回実施委員会記録(2004年10月8日)

**MINUTES OF MEETING  
BETWEEN  
JAPANESE SHORT TERM EXPERT TEAM AND THE PROJECT IMPLEMENTATION  
COMMITTEE MEMBERS OF DARD CA MAU  
ON  
A PROGRESS REPORT FOR THE IMPLEMENTATION OF FOREST FIRE  
REHABILITATION PROJECT IN CA MAU  
(August-September)**

The project implementation committee of the Forest Fire Rehabilitation Project, Ca Mau had held on 7th October 2002. Each working group presented the progress of the project activities, and summarized on the attach -1 here to.

The project implement committee had decided to submit this table as the project progress report to Ca Mau People's Committee and MARD Ha Noi.

The project implementation committee monitored about the machineries and equipments will be granted from JICA. And summarized the latest situation on the attach-2 here to.

The team leader of the Japanese short term expert team requested to confirm the transfer of the machineries and equipments from JICA to DARD arriving by the end of September mentioned on the attach-2. The MARD confirmed the transformation of said machineries and equipments.

The committee assured to carry out the needed procedures for purchasing of LCD projector, Generator, Compass boat with engine, Personal computer (Laptop and Desktop), Printer (BW Laser printer), Digital Camera (listed on attach -2, within October 2004. The team leader of the Japanese expert team also assured to prepare necessary budget for the purchasing carried by the DARD.

Ca Mau 8th October 2004

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Mr. Nobumitsu Miyazaki  
Team leader of the Japanese short term  
Expert team    Agriculture and Rural

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Mr. Nguyen Thanh Vinh  
Deputy Director  
Development Department Ca Mau

## Attach -2

**Machinery and Equipment Granted by JICA for the Project**  
**On**  
**Forest Fire Rehabilitation Project, Ca Mau Vietnam**

Following Machine and Equipment are transferred or will transfer from JICA to MARD Ca Mau by the end of March 2005 (by the end of Japanese fiscal year).

Name of Machinery / Equipment	Number	Received/A rrived month	Remarks
Bulldozer Komatsu D41P-6C	2	August	Staying on DARD Ca Mau
Bulldozer Caterpillar D3G LGP/CAT	2	September	Going to FE U Minh 1 (September 24)
Hydraulic excavator CAT 312C	1	September	Going to FE U Minh 1 (September 24)
Hydraulic excavator CAT 315C	1	September	Going to FE U Minh 1 (September 24)
Farm tractor	4	August	FE U Minh 1
Cage wheel of tractor	4	August	FE U Minh 1
8 discs plough	2	August	- do -
Trailer	2	August	- do -
Pontoon & engine	2	Not yet	Ordered to purchase by JICA
Embankment plough	2	Not yet	Under the Specification change arrangement
Speed boat and engine	1	Not yet	Under consideration
LCD projector	2	Not yet	On going purchasing procedure
Generator	2	Not yet	- do -
Compass boat with engine	4	Not yet	- do -
Personal computer (Laptop)	2	Not yet	- do -
Personal computer (Disk top)	2	Not yet	- do -
Printer (BW Laser printer)	1	Not yet	- do -
Digital Camera	1	Not yet	- do -
A0 size Map Printer	1	Not yet	Will be purchase at December
Printing Machine	1	Not yet	- do -
Copy machine	1	August	Set in Project office
Personal computer (Laptop)	1	August	- do -
Personal computer (Disk top)	2	August	- do -
Printer (BW Laser printer)	1	August	- do -
Printer (Inkjet color	1	August	- do -

## Attachment

printer)			
Tel/Fax	1	August	- do -
Handy GPS	4	September	Kept in project office (4)
Data from satellite	1	August	- do -
Soil survey tool set	4	September	DARD project office (3) FSSIV HCM (1)
PH meter	4	September	- do-

(8) 第三回実施委員快記録(2005年3月14日)

**MINUTES OF MEETING BETWEEN  
JAPANESE SHORT TERM EXPERT TEAM AND THE PROJECT IMPLEMENTATION  
COMMITTEE MEMBERS OF DARD CA MAU ON A PROGRESS REPORT FOR THE  
IMPLEMENTATION OF FOREST FIRE REHABILITATION PROJECT IN CA MAU  
(August 2004-March 2005)**

The project implementation committee of the Forest Fire Rehabilitation Project, Ca Mau had held on 14th March 2005. Each working group presented the progress of the project activities, and summarized on the attach -1 here to.

The project implement committee had decided to submit this table as the project progress report to Ca Mau People's Committee and MARD Ha Noi.

The working Group 1 presented a technical manual on Melaleuca Afforestation to the implementation committee. The committee approved the manual and to report the manual to the Director of DARD Ca Mau for authorizing as an official extension material to all districts in Ca Mau province. And same time the committee requested to remake the Manual into simple and easy understandable version for farmers (simple and illustrated version) by the end of next year term.

The working group 2 reported the progress of L letter water channel for farmer's land of the demonstration farm that the work had not fully completed. The JICA local cost supported fund for fiscal year of 2004 did not transferred to DARD. DARD requested to the JICA Expert team to conduct refund when the work has finished and pass the inspection within next fiscal year of Japan. The Japanese Expert team assured to convey the request to JICA to consider the fund should be prepared in the contract between JICA and JOFCA for 2005.

The committee also discussed the activities implementation plan for fiscal year 2005 (April to March), and both sides agreed to submit a table here to as attach-2 to the authorities concerned of both sides. DARD requested to Japanese experts team to support the needed fund as local cost supporting fund in same principle as the year 2004. The Japanese Expert team assured to convey the request to JICA to consider the fund based on the implementation plan of 2005 should be prepared in the contract between JICA and JOFCA for 2005.

Vietnam side emphasized the importance of the Melaleuca wood processing and utilization for encouraging the farmers to participate Melaleuca tree planting, and request to strengthen/improve the project activities in b category (wood processing and utilization) listed on PDM and PO should

add the topics to conduct training for wood processing for wood block making with simple equipments and dispatch/expand Japanese short term experts to guide these trainings. The Japanese short term expert assured to convey the Vietnamese request to JICA.

*Ca Mau 14th March 2005*

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**Mr. Nobumitsu Miyazaki**

Team leader of the Japanese short term

Expert team

Rural

**Mr. Nguyen Thanh Vinh**

Deputy Director Agriculture and

Development Department

Ca Mau Province Vietnam



(9) 第一回合同運営委員会記録(2005年3月17日)

**Procedures Agenda and Discussions of JCC**  
**on**  
**Forest fire rehabilitation Project Ca Mau**  
**The Socialist Republic of Viet Nam Independence - Freedom – Happiness**

**Chair Person**

Mr. Nishimiya and Mr. Nguyen Quang Duong, Vice Director of the Department of Forestry jointly preside over the Joint Coordinating Committee's Meeting in Ha Noi

**Opening remarks**

Mr. Nguyen Quang Duong delivers the opening speech to welcome all the representatives from the Ministry of Agriculture and Rural Development, Ministry of Planning and Investment, Department of Forestry, Department of Finance, VIFA, FFISV, DARD Ca Mau, JICA and other related organizations and also announces the agenda of the meeting with the main contents focusing on the progress report and the evaluation of implementation of the Forest Fire Rehabilitation Project in Ca Mau from August 2004 to March 2005.

**I. Project progress in 2004**

Mr. Nguyen Quang Vinh (Vice Director of the Project from DARD CaMau on behalf of Vietnamese counterpart), reported on progress of the implementation of the Project from August 2004 to March 2005. The report consists of five components, which are presented from one to another. The contents of his report are as follows:

The technical cooperation project between the Government of Vietnam and JICA “ The Forest Fire Rehabilitation Project in Ca Mau – the Socialist Republic of Vietnam” is implemented on the basis of the Record of Discussions ( R / D ) signed in February 2004.

In mid- week of July 2004, DARD Ca Mau and JICA discussed and came to the agreement on the Project Design Matrix (PDM) and the Plan of Operation (P. O) of the Project. After that JICA (JOFCA)'s experts and Vietnamese counterparts (the Implementation Committee) discussed and construct the Plan of Operation for each component and each working group and at the same time define supporting fund from JICA and the corresponding fund from Vietnam for the activities of working groups.

## **1. Implementation Results until 14 March 2005**

### **1. Component : Develop the application of afforestation techniques.**

The main objective of this component is to improve the knowledge of the afforestation techniques on Acid Sulphate Soil.

**a.1** Construct techniques developed from “ The Afforestation Technology Development on Acid Sulphate Soil in Mekong Delta” .

*i. Study tour and Seminar in Thanh Hoa , Long An Province .*

There were 15 members from Ca Mau who took part in the study tour and the seminar from 7-10 September 2004. Afforestation technique materials and the “ Technical Manual ” of the preceding project were handed out to the fifteen participated members.

*ii. Grasp the natural conditions of FFE U Minh 1 area by the Satellite images (Land Sat 12/2 2003) and other related materials.*

The target areas of the Project at FFE U Minh 1 were surveyed and the distribution of the vegetation was analyzed by Mr. Miyazaki and Vietnamese counterpart officers.

*iii. Compile the technical manual for U Minh Ha*

The Project will compile two technical manuals, the first for technical officers and the second for farmers.

The first technical manual outline was agreed upon in September 2004, only one month after the Project came into official operation and Dr Hoang Chuong has been the main writer. The technical manual outline , which consisted of nine chapters , was written by other member writers from November 2004 and the first draft of this manual was completed at the end of December 2004. The first draft was made into 60 copies at the end of the first week of January and it was sent to local experts and production units in order to get their feedback and opinion on 15 January 2005.

-The first draft was sent to 15 experts in order to get their feedback and opinion and received 12 contributing ideas in which 06 was from local experts and the other six from DARD Long An and Southern Sub- Institute of Forestry Science.

- The first draft and letters of invitation to take part in the seminar to contribute constructive ideas for the technical manual were also sent to 7 Melaleuca forest management units, each unit received from 2 to 3 drafts.

- Department of Agriculture and Rural Development, Department of Science and Technology, Department of Forestry, Department of Natural Resources and Environment, Minh Hai Centre for Research and Application of Afforestation Techniques on Wetland also received the draft and invitation for participation in seminar.

- Seminar was held on 19 and 20 January 2005. There were 15 invited guests participated and contributed enthusiastically their ideas for the manuals.
- Until now the draft has been modified and officially printed. This manual will be sent to the Department of Agriculture and Rural Development for approval and it will be considered as the official material for extension for districts in the province.

*iv. Implement afforestation technique training for local people in target areas and officers of forestry enterprises*

- *Acid Sulphate Soil Investigation Method.*

Technical trainings for officers of FFE U Minh 1 on using simple tools for Soil analysis and evaluation, Acid Sulphate Soil investigation method were conducted twice, the first from 29 to 31 October and the second from 17 to 19 December 2004.

- *Train participatory forest management activities.*

Two seminars were held with the participation of farmers to construct Land Use Plan and Cultivation Plan on 14 and 16 October and 4 November 2004, officers of Vietnamese counterpart have grasped the method of organizing seminars.

- *Conduct training on planning method of forest plantation project.*
- *Conduct forest plantation technical training for officers.*
- Training on land preparation and forest plantation techniques.

The theoretical part of the forest plantation technique training class for officers of FFE U Minh 1 was completed in three days from 7 and 9 October 2004. There were 18 people taking part in this class among whom 4 people were technical officers of DARD Ca Mau and the rest were officers of FFE U Minh 1 (officers of technical department and sub – areas) 9 special subjects were presented by lecturers who are scientists from VIFA, Minh Hai Centre for Research and Application of Afforestation Technique on Wetland and other experts from DARD Ca Mau.

- Technical training on stand and nursery construction.

The theoretical part of technical training on stand and Melaleuca nursery for officers of FFE U Minh 1 was completed in three days from 11 and 13 November 2004. There ere 15 people taking part in, 2 technical officers of DARD Ca Mau, 13 technical officers of FFE U Minh 1 (officers of technical department and sub – areas)

7 special subjects were presented by lecturers who are scientists of VIFA, Minh Hai Centre for Research and Application of Afforestation Technique on Wetland.

- Training on Acid Sulphate Soil Investigation Method

Conduct Acid Sulphate Soil Investigation Method the first time for officers of FFE U Minh 1 in three days 29 to 31 October 2004. There were 10 people taking part in, 2 technical officers

of DARD Ca Mau , 8 technical officers of FFE U Minh 1. The special subject , which consisted of both theory and field practice , was implemented by Associate Professor , Doctor Le Quang Tri .

Conduct Acid Sulphate Soil Investigation Method the second time for officers of FFE U Minh 1 in three days from 17 and 19 December 2004. This time all learners principally practise the skills of Acid Sulphate Soil survey in fields , know how to recognize Acid Sulphate Soil , investigation methods to get soil samples and define the main soil layers and the thickness of each soil layer. And also other technical trainings , the problems were guided to discuss by lectures such as the advantages and disadvantages of Acid Sulphate Soil forms in the area , some proposals to improve soil... etc and some remaining difficulties when cultivating on those Acid Sulphate Soil forms to serve for production activities . Some important problems were also discussed , for example , knew how to have a good cultivable soil layer when digging L letter channel , the potential Acid Sulphate Soil layer was not brought up to the surface after heaping dike to reduce oxygenation of alum – producing matters. There were 10 people taking part in this class , 3 of them from DARD CaMau , 7 technical officers of FFE U Minh 1 . This special subject was implemented by Associate Professor , Doctor Le Quang Tri .

- Technical training on operation , maintenance heavy machines granted by JICA  
Technical training class on operation and maintenance heavy machines granted by JICA was implemented from 6 to 9 December 2005 . There were 12 people from FFE U Minh 1 taking part in this class . The training was implemented by engineers of Southern Sub- Institute of Forestry Science and Minh Chuc Company Limited , Tien Giang Province.
- Technical training on using GIS  
It was implemented from 14 to 17 December 2005 . Two participated learners were officers of DARD CaMau and the lecturer was Mr. Miyazaki.
- Study tour in Hau Giang  
Study tour was implemented at Phuong Ninh Forestry Enterprise ( and now Luu Ngoc Hoang Natural Sanctuary ) and Hoa An Experimental Unit – Can Tho University from 12 to 15 December 2005. There were 10 people taking part in this study tour , 3 of them were officers of DARD Ca Mau an the rest were technical officers and typical farmers of Group 10 ( group constructs Demonstration Farm )

## 2. Component : Demonstration Farm Construction.

- i. *Melaleuca Forest plantation* : Forest plantation plan in Demonstration Farm is 300ha in which 100 ha for industrial plantation and 200ha for forest plantation of farmers.

In 2004 , Design plan for industrial plantation was established with 47 ha , and it was

implemented with 20,5 ha . And now planted forest is growing well and forest maintenance will be implemented in 2005.

ii. *L letter channel digging:*

Plan for digging L letter channel for 40 households with the estimated total length of all channel lines is 51 km . L letter channel digging started at the end of January 2005 , and up to now we have finished digging for 6 households with nearly 7 km in length.

\* Demonstration farm construction progress has not achieved as planned for many different causes which also include the cause of machinery , equipment , initial planning , the preparation for procedures and corresponding fund from households.

**3. Component : Training for farmers to develop agro – forestry.**

i. *Confirm the expectation and wishes of farmers when participating in Demonstration farm.*

A seminar was held from 14 to 16 October 2004 , confirming the expectations and wishes of farmers through the community action plan proposed by them.

ii. *Conduct a survey for collecting data to supplement demands in agro – forestry field.*

It was implemented in October . Subjects , officers and materials for training were proposed .

iii. *Implement a basic survey to farmers around Demonstration farm.*

vi. *Conduct seminars for farmers who take part in the Demonstration farm , determine the tree species for agro – forestry and carry out a fact- finding tour to the demands of agro – forestry cultivation.*

– Many seminars for 40 households taking part in Demonstration farm construction were conducted such as the seminar on Land use plan for farmers , a study tour was organized at FFEs U Minh Ha and agro- forestry working groups for farmers were established.

v. *Discuss to plan agro- forestry training . Decide lectures for agro- forestry training.*

*Subjects needed for the trainings:*

- Training on using and improving Acid Sulphate Soil .
- Training on raising poultry and livestock.
- Technical training on raising fresh water fish.
- Technical training on planting fruit trees and subsidiary crops.
- Technical training on rice cultivation.
- Technical training on Melaleuca forest plantation and maintenance.

c. 3.12. Conduct training for farmers.

- Training on using and improving Acid Sulphate Soil.

Training on the methods of identifying , using and improving Acid Sulphate Soil for farmers which was conducted in three days from 25 to 27 January 2005. There were 40 households taking part in the training . This special subject is implemented by Associate Professor , Doctor Le Quang Tri and his assistants.

Lectures for training include :

- Acid Sulphate Soil : Identification and Classification .
- Acid sulphate Soil Identification and Description.
- Methods for surveying and identifying Acid Sulphate Soil in fields.
- Adversity of Acid Sulphate Soil.
- Tendency to use and improve Acid Sulphate Soil.
- Training on raising poultry and livestock .

It was implemented for 40 households by officers of Agricultural Breed Centre , DARD Ca Mau on 15 to 16 February .

- Technical training on raising fresh water fish.

It was implemented for farmers taking part in Demonstration farm construction by Ca Mau Fishery Extension Centre .

- Technical training on planting fruit trees and subsidiary crops.

It was implemented for households of farmers by Ca Mau Agricultural Extension Centre from 2 to 3 March .

- Technical training on rice cultivation.

It was implemented for households of farmers by Ca Mau Agricultural Extension Centre from 4 to 5 March .

#### **4 . Component : Develop Forest Fire Prevention Techniques**

*i. Summarize and propose a system of forest fire prevention measures which are suitable for U Minh Ha area.*

In September 2004 , Mr. Hajime Naganawa along with counterpart officers developed to carry out this working group.

Conduct surveys , discussions and analyses the system of forest fire prevention which is being implemented in U Minh Ha area and also define the action plan.

Compile a technical manual for forest fire prevention : the outline was discussed in October and completed in November 2004. This manual is being developed and it will be completed in March 2005.

*ii. Training and implementing community activities for forest fire prevention.*

In September and October 2004 community activities were conducted in the target area ( 40 households at U Minh 1 ) to raise the awareness of the community about forest fire prevention.

Conduct a contest of making slogan for propaganda on forest fire prevention for households of farmers.

Organize 4 forest fire prevention classes for farmers and 4 contests of painting pictures on forest fire prevention for primary school pupils at FFE U Minh 1 , FFE U Minh 2 , FFE Tran Van Thoi and the Implementation Committee of Vo Doi Special Use Forest. There were 164 farmers , 35

staffs of FFE – Implementation Committee and 223 pupils taking part in.

#### **5. Component : Melaleuca Wood Wide Use Promotion and Market Research.**

FFSIV is responsible for this component and it is estimated to transfer to Ca Mau in June 2005.

For the past time , JIFPRO 's experts and counterpart officers in Ca Mau has implemented the following contents :

- In September and October 2004 , Mr. Nagatsuka and counterpart experts implemented two trips to grasp the basic information about market , technological situation and Melaleuca use in the project area.
- The situation of Melaleuca wood supply , consumption and use was surveyed and data was conducted from December 2004 to January 2005 and the inception report was developed as a basis for the following activities of the project.
- Two study trips to the charcoal kiln in Thanh Hoa for officers and farmers were organized
- The site for charcoal kiln construction was surveyed and decided and materials are being prepared for charcoal kiln construction at Forest product Company in March 2005.

#### **6. Construct the system of seedlings supply (Nursery).**

A nursery with the area of 7,5 ha at 041 sub- area – FFE U Minh 1 was constructed.

At present, land preparation and weed germ treatment are being completed, seeds are going to be sowed in order to produce about 6 million Melaleuca bare-root seedlings on the area of 4,27 ha serving for forest plantation in 2005 . It is estimated that seedlings will be exported in September 2005.

Potted – seedling production is estimated to implement on the area of 3700 square meters will be conducted in 2006.

#### **7. Training Officers in Japan.**

Two officers dispatched for training in Japan from 3 November to 2 December 2004 are:

- 1 forest plantation technical officer.
- 1 forest product processing official.

#### **8. Invested fund and machinery.**

The fund was granted for the Project from the Government of Japan is 1,79 million USD and the corresponding fund from Vietnam's Budget is 2,6 billion VND.

Up to 15/3 / 2005 the following contents have been implemented:

- Heavy machines and equipment were defined in the Project's documents which were transferred.
- Invested fund was implemented as follows :

1. Fund from the Government of Japan. 1.246.954 USD

Money for buying equipment : 676.304 USD

Expenditures for experts : 454. 482 USD

Expenditures for regular activities : 118. 159 USD

2. Corresponding fund of Vietnam : 404 million VND

From Central Budget ( 661 ) : 37 million VND

From Provincial Budget : 166 million VND

Corresponding fund of FFE : 184 million VND

Corresponding fund of farmers : 17 million VND

## **II. Remaining difficulties and proposals .**

### **1. Remaining difficulties:**

The import of some machines and equipment is delayed and some types of machines are not really compatible ; therefore , it has influenced the progress of Demonstration farm construction such as land preparation for forest plantation and L letter channel digging.

- Counterpart officers to implement working groups are limited and work in semi – responsible manner.
- Time for implementing official working trips to the Project of Japanese experts is rather short so the expected result has not achieved.
- Households taking part in the Project are poor , the ability to correspond fund is limited.
- File approval and license grant for constructing the items of Demonstration farm are delayed and prolonged.
- The coordination to implement the Melaleuca Use Promotion Component and market research are inadequate.

### **2. Proposals**

- It is necessary to widen not only the scale but also the time for Melaleuca wood processing and use and at the same time attention should be paid to the investment in wood processing equipment.
- The time for official working trips of Japanese experts should be extended especially the experts in such fields as participatory forest management , agro – forestry model construction , wood use and processing.
- It is expected the Ministry of agriculture and Rural Development , Department of Forestry and other related organizations to support Melaleuca wider use and processing in order to improve the standards of living of the people in the area.



### **III Activities Plan for 2005**

Mr. Duong thanks Mr. Vinh for his report of the Project implementation progress. After that Mr. Duong introduces Mr. Miyazaki – Team leader of Japanese experts team on behalf of Japanese counterpart will present the report of progress and plan for 2005.

#### **1 Mr. Miyazaki's report of progress and plan for 2005.**

Mr. Miyazaki , Leader of Japanese expert team on behalf of Japanese counter part thanks all the representatives and participants at the meeting for giving a chance to present the progress report of the Project implementation and the plan for 2005 . First of all , he would like to send his thanks to the cooperation of DARD Ca Mau and officers of FFE U Minh 1 and especially to Dr Chuong ( VIFA) for his support in training Melaleuca plantation techniques and compiling the technical manual for Melaleuca plantation. However , Mr. Miyazaki says the time he is dispatched to Vietnam is rather short , usually one month with the main tasks are to evaluate and plan . When he comes to Ca Mau , the evaluation usually takes him one week and a half . After evaluating and finding the remaining difficulties , he has to plan to find out the measures to tackle them and it also takes him another one week and a half . One remaining week is spent on preparing for reporting the progress of the Project , field activities which have been implemented by the Project's officers as presented in Mr. Vinh's report .

In 2004, we implemented some following activities. The contents of his presentation are as follows :

#### **1. Activities which the Project conducted in 2004.**

We conducted :

- 5 trainings for FEE staff: two trainings on soil, one training class on seedling, one training class on planting and the other on machine.
- 5 trainings for farmers: one training on soil, one training on poultry and livestock, one training on fruits and other subsidiary crops, one training on fish and the other on rice and 4 campaigns and trainings on forest fire prevention.

We presented:

- GIS Manual.
- Participatory forest management plan.
- Melaleuca planting technical Manual.
- Forest Fire Prevention Manual.
- Melaleuca wood use promotion plan.

These outputs are realized during 8 month (from August 2004 to March 2005). The above-

mentioned results probably exceed the expectations of both JICA and MARD. However; the Project cannot realize 100% targets. The project had not completed construction of Demonstration farms.

## **2. planned activities in 2005.**

The Project is now discussing the plan for five working groups in 2005.

### **a. Working group 1 : Technical support on Malaleuca planting.**

- To make revised technical Manual on plantation for farmers (using illustrations and pictures)
- To conduct technical trainings on Melaleuca planting techniques for FFEs / officers of districts who will act as extension officers.

### **b. Working group 2 : Demonstration farm Construction.**

- To construct FFE's Demonstration farm ( roughly 80 ha )
- To produce seedlings
- To finalize L letter channel digging ( before rainy season in May )
- To conduct embanking for land preparation and guide farmers to plant Melaleuca.

### **c. Working group 3 : Support farmers in forest management and agro – forestry.**

- To conduct supporting activities , technical trainings for farmers who participated in the Demonstration farm.

### **d. Working group 4 : Forest Fire Prevention .**

- To conduct forest fire prevention trainings and campaigns for villagers.
- To complete the forest fire prevention Manual.

### **e. Working group 5 : Wood Processing**

- To continue the survey for Melaleuca wood marketability in Ca Mau area.
- To evaluate technical aspects for Melaleuca wood use to find Melaleuca wood using promotion strategy.
- Demonstration facility for charcoal making and wood vinegar production to introduce the new techniques to local people and FFE people.
- To discuss Melaleuca biomass promotion plan .

For the training in Japan , I have not received formal information from JICA but tentatively JICA approved his request . 5 officers will attend training in Japan.

1 officer for general management of the Project .

2 officers for afforestation plan management and techniques.

2 officers for wood processing techniques .

Total budget supported from JICA is now under discussion within JICA and other related authorities , therefore , I cannot say about this matter.

Mr. Miyazaki finishes his report by saying thank to all the representatives and participants at the meeting for listening.

Mr. Duong thanks all the representatives for listening attentively to the remaining difficulties of the fiscal year 2004 and proposals for fiscal year 2005. He proposed time for discussions and contributing ideas from representatives and participants at the meeting after the break time

10.00 – 10.10 : Tea Break.

### **Discussion and proposals**

#### ***Mr. Hiep – FSSIV:***

- As a member of the project, be responsible for the wood-processing component, I agree with the report on the progress of the project. Within only 8 months, project has done so many things and achieved good results, following the activities mentioned in the PDM of the project. The report mentioned that the heavy machinery and equipments granted by JICA arrived at the site late but comparing with the previous project in Long An, they arrived much more quickly. At the initial time of the project, FSSIV used to be proposed to be in charge of the Sivilculture component but FSSIV thought that staffs in Ca Mau had enough ability to conduct those activities so we proposed to transfer this component to Ca Mau and FSSIV would still participate in this component but not bare the main responsibility.
- For the soil survey activities, we used to and will continue to cooperate and participate in as requested by Dr.Osumi.
- To be responsible mainly for the wood processing component, we have an experimental wood processing station in Bình Dương and Charcoal making kilns in Thạnh Hoá. We used to have a relation and cooperation with Tokyo University and when JIFPRO was assigned by JICA to participate in the project, they also cooperate with Tokyo University to set up a proto-type of an efficient charcoal kiln in Thạnh Hoá
- Long An. We were transferred the technology of wood processing and charcoal making by good professors and doctors of Tokyo University. The very impressive thing is that we can get wood vinegar from the procedures of making charcoal.

- Other research on charcoal utilization in Long An is that in dry season, the pH is only 3.2 and fish can not survived; but with advices from professors of Tokyo University, we purified the water using Melaleuca charcoal and bamboo charcoal, then the pH increased up to 4.2 and we could use the water for raising fish and for irrigation. Furthermore, Melaleuca charcoal was also used for a study about soil treatment and surprisingly, the crops got an increase in yield of more than 4.5% and the soil could remain the organic matter well with good nutrient reserve. For the above study results of Melaleuca charcoal utilizations, our farmers now are very interested in using Melaleuca charcoal for soil treatment. The traditional method of applying lime is good for soil improvement only whereas using charcoal can be used for both soil and water treatment. In 2004 China stopped exporting charcoal to Japan and this encourage our farmers to produce charcoal for exportation.
  - + Unfortunately, the charcoal kiln of the project can only produce small size charcoal and more than 100 kg each time. Therefore, in the future, the charcoal kiln of project should be improved to produce the quantity and quality of charcoal that can meet with the market demand.
  - + Now the market demand for blocks is very high but people can only produce chip-boards. FSSIV studied to produce the Melaleuca wood blocks and some wood processing companies offered to pay a high price for that kind of products.
- We have helped Song Trem FFE to process and produce Melaleuca wood blocks. If this project invests in to Song Trem FFE adequately, a Melaleuca wood blocks making zone will be developed there.
- An urgent thing that project needs to do now relating to the environment and the digging to make embankments for plantation. A policy issued by the Ministry of Agriculture and Rural Development regulates that the digging to make canals and embankments should never exceed 60cm in depth; but now FFEs have dug more than 1m deep for hundreds of hectares and the Head of the Minh Hai Wet Land Research Centre objected strongly. In a lately meeting he criticized me strongly about my support for the project. He said that fish in that area and even in the U Minh 1 area have run away; farmers themselves also object it. Facing these reactions, I have to reconsider. In the previous project in Thanh Hoa-Long An, we only dug 60cm deep and that was agreed by JICA. In Long An it is lower than in Ca Mau so in flood season, the flooding water wash and dissolve all the acidity, therefore there is not much affect.

I have a request to the project is that:

- + The operator of the heavy machine should be trained carefully. Mr. Vinh requested FSSIV to conduct this training but we refused because I think our staffs don't have enough background and skill and suggested that project should request the heavy machine supplier to send mechanics for guiding and teaching project staffs.

**Mr. Nishimiya :**

Thanked Mr. Hiep for contributing his view and reminded him that due to the limited time of the meeting, he should focus on the objective of this meeting that is to listen to participants' opinions so as to establish the working plan for 2005 of the project aiming to those things:

- + Concentrate on establishing the two demonstration farms.
- + Find out the countermeasures for the remaining difficulties to implement the activities of the project successfully.
- + Farmers in the project area are still poor with limited knowledge so project should help them with techniques so as to improve their living standard. The aim of this project is to develop the applied techniques and the implementation and extension should be done by Vietnamese side.

**Dr Chuong(VIFA):**

- Assigned to participate in the project by VIFA, so far I have contribute my knowledge as well as my experience for the implementation of the project. During the implementation of the project, I found some following issues that should be noticed and settled off:

- + The aim of this project "Forest Fire Rehabilitation Project in Ca Mau" signed between Vietnamese government and Japanese government is not only to rehabilitate the burn down forest and the ecosystem but also to establish a stable development of the forest. In order to develop stably, farmers need to get benefit from the forest and at the same time they can maintain the environment.
- + Beside the production of Melaleuca poles and logs for domestic market and for export, forests should be managed stably and diversified. At present, the government has closed the natural forests gate but the demand for big size logs is still very high.

*In order to achieve the above aims, we should focus on those things:*

- + So far the local people only produce Melaleuca poles with short planting rotation and small size timber applying the traditional custom of forest business therefore they get low economic benefit and limited effect of improving the environment. In the seminar in Ca Mau recently, I suggested stopping the business of Melaleuca poles producing with short rotation and small size timber and change into long rotation business and diversified Melaleuca forest products.
- + Establish stable forest so that the environment can be saved (with the short rotation, after clear cut, the soil will be exposed to the air and it is dangerous; with long rotation, the vegetation cover can play the role of improving the soil as good as the method of using charcoal that Mr.Hiep mentioned above).

**Mr. Tiến-Ministry of plan and investment:**

Through the project progress reports presented by Vietnamese counter part and Japanese expert, I am

very surprised by the progress of the project implementation. In a very short time, the project has done so many activities and got good results comparing with the same project granted by JICA in Long An. However, project counter parts should keep in mind the proportion of a technical cooperation; we can not compare this project with other project as each project is different. Any technical cooperation projects using ODA fund is to help with improving the environment, improving the local people's living standard; not to help for bringing in commercial benefit.

- We should follow the activities mentioned in the PDM to implement the project. That is also the main aim of the JCC meeting of this year as well as next year.
- For this project or for any other technical cooperation projects, the sponsors of the project only establish demonstration, not provide all the expectation of the local people.
- About Mr. Vinh's requests, I think the two sides of the project can sit up to discuss for an agreement and I think it is not so difficult for both sides to deal with. About the time and the period of the Japanese expert dispatch, and the number of counter parts to send to Japan for training, I think the both sides can also sit up and discuss to agree upon.

I think, as a staff responsible for monitoring the ODA projects, we should focus into 3 main component of every technical cooperation projects as follow:

- ❖ Sending experts.
- ❖ Training in Vietnam and in Japan
- ❖ Supplying equipments and machinery

***Mr. Vinh:***

Agreed with Mr. Tien's comments. Explained further about the granted money from JICA for the digging L letter ditch in the demonstration farm for farmers. The digging started and now in progress but because of the very limited time, the digging has not completed as the initial plan, so DARD requested to transfer this amount of money into the plan for 2005 and JOFCA has already convey this request to JICA for getting approval.

***Mr. Miyazaki:***

I am very anxious about the progress of the demonstration farms construction, especially the construction of the demonstration farm for farmers. We expect that each household will plant 4 ha in one planting season. It is not a small area and at the same time farmers have to carry farming; therefore, we have to consider the existed labor forth, possible size of investment of each household to make a suitable planting plan.

We should also consider how to encourage farmers to plant Melaleuca because if farmers are not

interested in plantation, they will widen the area of agriculture and in this case it is not suitable to meet forestry policy of the government.

Staffs of FFEs have planting techniques. Only limited experiences for embankment for plantation. Farmers need help with techniques of plantation with good benefit. When the Project formulated the PDM, we did not focus so much on the wood processing, only wanted to introduce the charcoal making techniques. If, the people surrounding areas of the project have already succeeded to produce wood blocks, local residents will be interested in and have a good motivation to participate in the planting Melaleuca. So I sincerely request that when the joint study team of DARD/JICA come to Ca Mau, they will discuss with DARD Ca Mau about the feasibility of widening the activities of the wood processing component.

***Mr. Nishimiya:***

- JICA will consider the time and the period of sending experts relating to the agroforestry and participatory forest management to Vietnam for the implementation of the project.
- Agree to amend the PDM of the project to meet the present situation. Officially request both sides DARD Ca Mau and Japanese expert relating to these components to discuss and make a detail plan.
- In 2004, Dr Seki still remains 15 days of the dispatch to Vietnam and because of his illness, these days will be transfer to the plan of 2005. Increase the time and period of dispatch to Vietnam for Mr. Miyazaki and the expert relating to agroforestry.
- In the passed time of the cooperation between JICA and Vietnamese side for the implementation of the project, both sides faced so many difficulties but in the end we all overcame the difficulties and implemented the activities of the project with good results. I know that this project comes from the basis of the project implemented in Thanh Hoa-Long An, and we can consider this project as the second phase of the previous project to continue to develop the applied techniques. However, we should apply suitable techniques to match with the real situation in Ca Mau; not only apply exactly the applied techniques in Long An.
- DARD Ca Mau requested JICA to support with wood processing equipments but the project has been in implementation for only 8 months and still remained so many incomplete activities so that this request can not be accepted right now, it is a potential and should be considered later.
- The project should focus on the aim of constructing the demonstration farms, not only to construct them but also to establish them. We can support to construct the demonstration farms fully but we would like the farmers to participate in the project and to improve themselves as well as their living standard. We request both sides to have policies to encourage farmers to participate in the project.
- The project is in a short time so that we cannot send experts to Vietnam for a long period; there

should be a close cooperation of the two sides. The year 2005 is considered as the key year of the project so I really expect that both Japanese experts and Vietnamese counter parts will cooperate tightly and closely to overcome all the difficulties to implement the project with good outputs.

- For the previous year, Mr. Vinh has done a good job.

**Mr. Duong:** summarized the meeting

Although the project was implemented in a short time, there was a very good cooperation between the two sides, as presented by Mr. Vinh-on be half of Vietnamese counter part and Mr. Miyazaki-Leader of Japanese short term expert team. All the achievements of the project are based on the objective outputs agreed and signed by the two sides. However, U Minh Hạ is a sensitive area for both natural condition and history, therefore there should be a good cooperation between the project and the local people to implement the activities of the project or to compile the technical manual so as to preserve the natural condition as well as the local history. In addition, trainings should be conducted to improve the knowledge for staffs of FFEs and the local people and also improve the forest fire prevention system.

- We request JICA and Ministry of Plan and Investment to allow project to widen the activities of wood processing component and the time and period of sending Japanese experts to Viet Nam. We also request DARD Ca Mau and Japanese expert to amend the PDM of the project to meet the requests. A bout the request of providing equipments for wood processing component, we suggest to transfer this request into next year.
- Beside the policies on wood processing development of government, I think we should also encourage private enterprises to cooperate investing in the wood processing research and wood processing development.
- On be half of the JCC, I would like to wish the project a successful year and participants a good health and the JCC meeting ends here.

**Mr. Vinh:**

On be half of the Implementation Committee, DARD Ca Mau and Japanese experts, I would like to thank for the care and help of JICA, MARD, and other related organizations. Through this meeting we have listened to instructions from MARD, Ministry of Plan and Investment, and JICA, we will put those instructions in practice in the next fiscal year.

Thank you very much for attending this JCC meeting.

The JCC meeting ended at 11:30 on 17 March, 2005.



## (10) 第四回実施委員会記録(2005年10月6日)

**MINUTES OF MEETING  
BETWEEN  
JAPANESE SHORT TERM EXPERT TEAM AND THE PROJECT IMPLEMENTATION  
COMMITTEE MEMBERS OF DARD CA MAU  
ON  
A PROGRESS REPORT FOR THE IMPLEMENTATION OF FOREST FIRE  
REHABILITATION PROJECT IN CA MAU  
(April-September 2005)**

The project implementation committee of the Forest Fire Rehabilitation Project, Ca Mau held on 6th October 2005. Each working group presented the progress of the project activities, and summarized on the attach -1 here to.

The project implementation committee monitored about the machineries and equipments granted from JICA, and summarized the latest situation on a table attach-2 here to.

The project implementation committee decided to submit these tables as the project progress report to Ca Mau People's Committee and MARD Ha Noi.

The working group 2 reported the progress of L letter water channel and embankment for farmer's land of the demonstration farm that the work had fully completed. The JICA local cost supported fund for fiscal year of 2005 had transferred to DARD Ca Mau.

Ca Mau 6th October 2005

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**Mr. Nobumitsu Miyazaki**

Team leader of the Japanese short term

Expert team

Committee

**Mr. Nguyen Thanh Vinh**

Deputy Director of

Project Implementation

(11) 第五回実施委員快記録(2006年2月14日)

**MINUTES OF MEETING**  
**BETWEEN JAPANESE SHORT TERM EXPERT TEAM AND THE PROJECT**  
**IMPLEMENTATION COMMITTEE MEMBERS OF DARD CA MAU**  
**ON**  
**A PROGRESS REPORT**  
**FOR**  
**THE IMPLEMENTATION OF FOREST FIRE REHABILITATION PROJECT IN CA MAU**  
**(April 2005 - February 2006)**

The project implementation committee of the Forest Fire Rehabilitation Project, Ca Mau (hereinafter referred to as “the Committee”) had held on 14<sup>th</sup> February 2006. Each working group presented the progress of the project activities, and summarized on the attach -1 here to.

The Committee had decided to submit this table as the project progress report to Ca Mau People’s Committee and MARD Ha Noi.

The working Group 1 compiled and published a technical manual on Melaleuca Afforestation for farmers which had simplified explanation and added illustrations into the technical manual of Melaleuca Afforestation for technical staffs to the Committee. The Committee approved the manual and submitted the manual to the Director of DARD Ca Mau and got approval of the manual as an official material for farmers in all districts in Ca Mau province in implementing Melaleuca plantation work.

The working group 2 reported that the construction demonstration farm for industrial plantation and for farmers had completed. In addition, JICA Exert team and the Committee had conducted joint inspection survey for the L letter ditch and embankment construction for plantation on the demonstration farms with total area of 183.7 ha (71.4ha for FFE, 112.3 ha for farmers). As the result of the joint inspection survey, both sides confirmed the completion of the work. And JICA expert team transferred the JICA project supporting local fund to DARD Ca Mau.

The working group 3 reported that 17 progressive farmers for establishing agro forestry farming model had been selected and the cooperative farmer’s committee for supporting agro forestry activities had also been established. The purposes of the committee are to promote exchanges of information between farmers and farmers, to make support system of agro forestry activities between farmers and related organizations, professional officers, and etC/Project will maintain to support this

committee in the next year.

The working group 4 published the forest fire prevention manual and distributed it to related organizations. In addition, it was reported that the forest fire prevention campaigns are conducted in 2 villages until March.

The working group 5 reported that 10 simple charcoal kilns for farmer were constructed in the demonstration farm and this simple charcoal kiln is expected to disseminate widely into demonstration farmer in the next year. In addition, it was reported that study tours for development of Melaleuca timber utilization were conducted. As a result, C/P participated in the study tour had new and clearer ideas of utilization of Melaleuca timber utilization in Ca Mau

The committee also mentioned about the training for C/P in Japan in 2006 as well as discussed the activities implementation plan for fiscal year 2006 (April to March), and both sides agreed to submit a table here to as attach-2 to the authorities concerned of both sides for further consideration. Seeing that still there is a big amount of project work, and especially assuring the sustainability of project after termination is very important, DARD requested to Japanese experts to support the needed fund as local cost supporting in same principle as the year 2005.

*Ca Mau 14<sup>th</sup> February 2006*

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**Mr. Nobumitsu Miyazaki**  
Team leader of the Japanese short term  
Expert team  
Committee

**Mr. Nguyen Thanh Vinh**  
Deputy Director of  
Project Implementation

(12) 第二回合同運営委員会記録(2006年2月21日)

**MINUTES OF  
JOINT COORDINATION COMMITTEE MEETING ON  
THE PROGRESS REPORT FOR THE IMPLEMENTATION OF  
FOREST FIRE REHABILITATION PROJECT IN CA MAU  
(Result in 2005 and plan for 2006)**

The project Joint Coordination Committee (hereinafter referred to as "JCC") of the Forest Fire Rehabilitation Project, Ca Mau was held on 21st February 2006 and it was chaired by Mr. Nguyen Ngoc Binh, Director General of Forestry Development Department of MARD. Aim of this JCC meeting is that to evaluate the progress of project implementation and to pass through the project implementation plan 2006. The JCC (participants are listed in the attach – 2 hereto) listened the project implementation results conducted from April 2005 to February 2006 and the expected project implementation plan for year 2006 (from April to December 2006) presented by Mr. Vinh, Vice Director of the Project Implementation Committee DARD Ca Mau, as summarized in the attach -1 here to. After the presentation, JCC discussed following matters and made comments as follows:

1. Vietnamese side mentioned three remaining difficulties and counter measures that relate to the project activities,

a) Embankment for afforestation will have effects on soil and water quality changes; therefore, some measures for monitoring on environmental changes are expected. For the plan 2006, the project will conduct workshops in order to seek suitable measures in collaboration with related organizations in Ca Mau.

b) To expand Melaleuca plantation and agroforestry activities, the process, which aims at involving the farmers, is important; therefore, capacity building of the extension officers in participatory workshop management is needed. The project will conduct trainings and trials for the participatory workshops with extension officers and farmers.

c) Wood processing on Melaleuca timber for diversification of the wood use rather than the pole is important to maintain the benefits for farmers who plant the Melaleuca. The project will conduct further market research activities to improve knowledge of counterparts for finding the way to formulate a strategy of diversifying Melaleuca wood use in the future.

2. DARD Ca Mau has emphasized that the Melaleuca wood processing is the most important aspect for promoting afforestation which uses new technologies introduced by the project; therefore,

DARD Ca Mau has requested to expand the project term and strengthen the activities that relate to the promotion of the Melaleuca wood use.

3. The representative of JICA Vietnam office made comments about the above 1 and 2:

a) To find measures of the environmental change monitoring, workshops with related organizations are understandable ways for the activities 2006. At the same time, to involve the related agencies in real monitoring activities after the cooperation project terminates, DARD and PPC Ca Mau are requested to assure the necessary budget preparation for conducting the monitoring works on continuous bases after the project terminates.

b) To strengthen the capacity of the extension officers to conduct participatory workshops with farmers, the presented ways for 2006 are also understandable. Simultaneously, DARD and PCC Ca Mau are requested to secure suitable financial support for conducting the workshops and follow up the workshop results after the project terminates.

c) To enforce wood processing, while the needs and expectations of this category could not be denied, the necessary fields covering the expected project that DARD Ca Mau pointed have to include broad areas of the activities, regions, and institutions such as policy formulation of the Vietnam Government on wood processing industry development, international trade, financial institutions, private companies, and covering full Mekong Regions, etc. and not fits as a technical cooperation scheme. Therefore, MARD has to consider within these fields, what items/activities are suitable for the Japanese support. If we JICA can support the part of this area in technical aspects, we need to study together with MARD for another cooperation program rather than this project (Forest Fire Rehabilitation Project), nevertheless, the new program has to be considered not only in Ca Mau but also in more suitable places for covering the total areas on Melaleuca wood processing.

4. The Chair person suggested that the project should focus on the new technology for charcoal and wood vinegar matter in 2006 for extend the techniques to the demonstration farm farmers, because the limited project term.

5. Dr. Chuong, a VIFA expert, mentioned 2 points for the future Melaleuca man - made forest expansion and management:

a.) To consider future wood use, the management principle should be changed to focus rather big diameter log production, It means yielding age should be expanded from 8-10 to 15-20. Furthermore, it is necessary to consider reinforcement of R&D for technical development on selecting cutting and coppices regeneration system.

b) To prepare good seeds and seedling standards and supply system on Melaleuca seeds with clearly-defined provenance are key elements for expanding the Melaleuca afforestation for wood use

diversification. . In this aspect, MARD should add Melaleuca in the "National Main Afforestation Species List".

6. MARD requested to the Project Implementation Committee and DARD Ca Mau to prepare detailed financial records for implementing activities of the project from both JICA local cost supporting funds and counterpart funds for final evaluation that will be conducted in 2006.

7. A representative of JICA VN office also requested DARD Ca Mau to show the operation records and secure future using plan on heavy equipments granted by JICA. The heavy equipments are the big inputs for the project; therefore, JICA requests that DARD Ca Mau shall use these equipments for the project's long - term objectives, extension and expansion for rehabilitating forest in U Minh Ha area continuously after the termination of the project.

8. The Vietnam side mentioned about the training for C/P in Japan, and requested to implement the training for 3 persons in 2006. Japanese side explained that the JICA VN office couldn't make a clear answer now without the formal approval, which comes from the JICA headquarters.

. After the series of discussions, on behalf of MARD Vietnam, the General Director of FD, chairperson, finalized JCC and approved the implementation results, the contents and principles of the tentative implementation plan for 2006.

The General Director also gave some comments as follows:

- There should be collaboration between Sub-Department of Forest Development Ca Mau and Project to disseminate project materials widely to other areas than project area.
- There should be an overall evaluation of the project quality and detail report of project implementation expenditure until project termination.
- There should be collaboration among related organizations to conduct environmental change monitoring..
- Results of agroforestry demonstration farm, such as quality, expenditure, should be evaluated and publicized widely.
- Vietnamese Side should prepare necessary fund for project machinery maintenance.
- Outputs for Melaleuca wood should be put in consideration diply to generate farmer motivation of Melaleuca plantation.

*Ha Noi 21st February 2006*

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**Mr. Nobumitsu Miyazaki**  
 Team Leader of the Japanese Short -term  
 Experts team  
 Department

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**Mr. Nguyen Ngoc Binh**  
 Director General  
 Forestry Development

Attach-1 Contents of the Progress reported by the Project Implementation Committee

Ca Mau 18 February, 2006

**REPORT**  
**ON**  
**PROGRESS OF PROJECT IMPLEMENTATION**

---

**I. Project Introduction:**

After the severe forest fire in U Minh Ha in 2002; to meet the appeal from Vietnamese government and Ca Mau People Committee (through MARD), government of Japan (through JICA) agreed to support to implement a technical cooperation project;

- 1. Project name :** “Forest Fire Rehabilitation Project in Ca Mau”
- 2. Governing body :** Ministry of Agriculture and Rural Development of Viet Nam.
- 3. Implementing body:** Implementation Committee of Forest Fire Rehabilitation Project in Ca Mau.
- 4. The project agreement became effective:** as from 16 February, 2004.
- 5. Duration of project implementation:** 03 years.
  - According to project agreement: From 16 February, 2004 to 16 February, 2007;
  - Real implementation: From June 2004 to 25 February, 2007;
- 6. Type of project:** Non-refundable aid
- 7. Local Financial mechanism:** being granted
- 8. Total capital investment : 31 billion VND**
  - From government of Japan : 1.79 million USD
  - Equivalent to : 28.4 billion VND**
  - Counter part fund : 2.6 billion VND

*Unit of account: Million VND*

	<b>Plan for until end of 2005</b>	<b>Implementation until end of 2005</b>	<b>Plan for 2006</b>

	Total	OD A	C/P Fund	Total	ODA	C/P Fund	Total	ODA	C/P Fund
<b>Main Items</b>									
Demonstration Farms construction				1,707	620	1,150			870
Machineries, equipments				10,740	10,740				
Technical support, Others				15,350	15,130	220			200
<b>Grand Total</b>				<b>27,860</b>	<b>26,490</b>	<b>1,370</b>			<b>1,070</b>

Note: - Plan for 2006 will be decided after the meeting between JICA and MARD in March, 2006; no available official data now.

- Exchange rate VND-USD: 15.890

## II. Main activities of project:

This is a technical cooperation project with main project objectives as follows:

- To develop and extend necessary techniques for effective Melaleuca forest rehabilitation and forest fire prevention in U Minh Ha, Ca Mau;
- Capability building and knowledge improvement on Melaleuca timber processing and utilization and marketing for counterpart staffs and for farmers in project site to proceed the wider-use of Melaleuca timber;
- To conduct technical trainings and improve knowledge on sustainable agroforestry production for farmers in order to improve and increase livelihood of farmers.
- To establish demonstration farms for technical dissemination.

**There are 5 project components as follows:**

1. *Afforestation Technique Development*
2. Demonstration farm construction
3. Agroforestry training
4. Development of Forest fire prevention measures
5. Wider use of Melaleuca timber and market study

## III. Project Achievements until end of 2005:

### 3.2. Results of main activities:

#### 3.2.1. Component 1: Applied afforestation techniques development



- \* A study tour and workshop was conducted in Long An province, where the project "*Afforestation Technology Development Project on Acid Sulphate Soil in the Mekong Delta*" was implemented (as 1<sup>st</sup> phase), to grasp local characteristics, natural condition, and achievements of the 1<sup>st</sup> phase; to discuss and agree upon the implementation plan for project in Ca Mau.
- \* To grasp the natural condition of project area in U Minh Ha through site observation, vegetation cover interpretation and analysis and related materials collection.
- \* Technical guidelines on Melaleuca plantation, tending and maintenance for U Minh Ha area was compiled including
  - Technical guideline for technicians: 1,000 copies were printed and distributed; and other 1,000 copies will be printed and distributed in February, 2006.
  - Technical guideline for farmers: 1,500 copies were printed and will be distributed soon.
- \* 12 batches of technical trainings on afforestation techniques were implemented for farmers, technicians in project site and staffs of Forest Fishery Enterprises (FFE) in U Minh Ha area with total participants of 125.

**Subjects of trainings:**

- *Acid sulphate soil survey method*
- *Participatory forest management*
- *Making afforestation project plan*
- *Land preparation and plantation techniques*
- *Techniques on Melaleuca seed stand and nursery*
- *Machinery operation and maintenance*
- *Use of GIS and Silviculture Data Processing soft wares.*

**3.2.2. Component 2: Demonstration farm construction**

To construct demonstration farms on:

- Industrial plantation
- Farmer household plantation
- Nursery system
- Agriculture – forestry and fishery model for farmers

***Results:***

- *Industrial plantation* : 94 ha has been planted
- *Household plantation*: 129 ha were planted in which 113 ha has been qualified through inspection.
- *Planted forest tending* : 21.5 ha

- *L ditch construction* : for 40 farmer households
- *Nursery construction* : Total area : 7.5ha

In 2005: 4.27 ha was been sowed with more than 3 million qualified Meleleuca seedlings were exported for State – owned FFE plantation and household plantation in 2005.

### **3.2.3. Component 3: Technical trainings on agroforestry**

- Surveys on Farmers' need, expectation and agroforestry production condition were conducted by VIFA and experts in November, 2004.
- Training on agroforestry for farmers:  
17 batches of technical trainings on agroforestry and workshops were implemented for 40 households in project site.
- Technical support to farmers (Agroforestry Activities Implementation Cooperation Committee):  
Farmer supporting committee was established with participation of Project Implementation Committee and staffs from DARD Ca Mau, Agriculture Extension Center, Fishery Extension Center, Breeding Center, Agriculture Division of U Minh District, staffs of FFE U Minh 1. Total members of the committee are 20.

### **3.2.4. Component 4: Forest Fire prevention Technique Improvement**

- *To review and recommend forest fire prevention system and measures respectively in U Minh Ha:*  
Japanese experts and counterpart staffs conducted those activities in September + October, 2004.
- *Compile and distribute manual for forest fire prevention:*
  - 15,000 forest fire prevention pamphlets were printed and distributed to farmers to promote forest fire prevention campaigns.
  - 1,000 manuals for forest fire prevention were printed and distributed to related organizations and farmers in Melaleuca forest area.
- *Implement training and public activities related to forest fire prevention:*
  - 01 forest fire prevention slogan making contest was conducted for 40 households.
  - 04 forest fire prevention poster drawing contests were conducted for 223 pupils of local primary schools in U Minh Ha area.
  - 10 forest fire prevention and forest fire fighting training courses for 392 farmers and staffs of FFEs in U Minh Ha.

### **3.2.5 Component 5: Promotion on Wider Use of Melaleuca Timber and Market Research**

- *To promote market research and support capacity for counterpart staffs*
  - To organize, grasp situation of Melaleuca wood consumption, processing and utilization in Ca Mau
    - To implement three times of investigation, study tour and evaluation of market and processed products from small timber in Hanoi, Ho Chi Minh City and other localities. On that basis, initial orientation of outputs and promotion of wider use for Melaleuca wood have been formed such as pole, charcoal, wood vinegar, joint block board, chip board, MDF and wood pulp ...etc.
    - To organize two training classes on wider use of Melaleuca wood for 24 officers and farmers.
- *To conduct trial and planning for promotion on wider use of Melaleuca wood:*
  - Construct prototype charcoal kilns:
    - + Household charcoal kiln: construct 10 charcoal kilns for 10 households in the project area.
    - + Large-scale charcoal kiln : construct 01 improved charcoal kiln at Thuan Phat Enterprise, charcoal production has been conducted 4 times using charcoal kiln introduced by the project.
  - Trial the use of wood vinegar and charcoal ash in agricultural production; wood vinegar application in agricultural production for 03 households in FFE U Minh I has been conducted on the trial basis.

### **3.2.6 . Training in Japan for counterpart staffs:**

07 counterpart staffs and officers were sent to Japan for training on silviculture techniques, wood processing, marketing and project management.

## **I.V. Evaluation**

\* In mid – October, JICA evaluation team along with other Vietnamese organizations conducted mid – term evaluation of the project. The project’s achieved results have ensured the stipulated criteria.

### **\* Some remaining difficulties and proposals**

The remarkable reduction in the price and consumption capacity of Melaleuca wood has impacted the psychology of forest planters in the past year, partly influencing the overall objective of the project. Proposals of encouragement policies should be made to the provincial People’s Committee in order to develop processing and market expansion for Melaleuca wood. Along with the project, it is necessary to have care and coordination of agencies in authority.

Changes in soil and water condition in the area have not been basically observed and

evaluated. Proposals should be made to environmental agencies in authority to have more active and concrete solutions for evaluation and control of environment in U Minh Ha.

Construction of demonstration farms of the project must have FFE and farmer households' capital source while their financial capacity is limited, especially farmer household's, there should have more support from the Government.

#### **V . Plan for activities in 2006**

In fiscal year 2006, the Project will implement the plan with the following contents:

- Activities in afforestation techniques, forest fire prevention, agro- forestry trainings will be expanded to FFEs in U Minh Ha.
- To complete demonstration farms on afforestation , nursery , agro- forestry farming and improved charcoal production
- To continue to construct and develop Agro – forestry support group ( support framework ) and expand to other members as well as to 04 districts ( 03 districts in U Minh Ha : U Minh , Thoi Binh and Tran Van Thoi and An Bien district in U Minh Thuong ) and 06 FFEs in U Minh Ha .
- Training for 03 officers in Japan
- To conduct tending for more than 200ha of newly – planted forest in the demonstration farm in 2004 and 2005.
- To promote activities in capacity building on marketing and Melaleuca wood processing for counterpart officers and inhabitants in the project area.
- To evaluate, summarize demonstration farms and complete materials for wide dissemination.
- To prepare for the end – of – term evaluation of the project and make plans to propose for continuity of activities that the project has implemented after the project will have terminated.

Mr. Nguyen Thanh Vinh,  
Vice Director  
Project Implementation  
Committee  
Forest Fire Rehabilitation Project  
in Ca Mau

## Attach 2: List of participants

## 1 MARD

Mr. Nguyen Ngoc Binh, Chairman, Director General Forestry Department, Ministry of Agriculture and Rural Development

Madam Nguyen Thi Be, Head of Forestry Department's Solicitude Office

Mr. Tran Dinh Tung, Specialist of Department of Planning and Investment, Ministry of Agriculture and Rural Development

Mr. Nguyen Phuc Tho, Specialist of Forest Protection Department

Mr. Nguyen Truong Thanh, Specialist of Forestry Department

Mr. Vuong Dinh Tuan, Vice Director of FSSIV

## 2 DARD and PCC Ca Mau

Mr. Tran Van Thuc, Vice Director, Department of Agriculture and Rural Development Ca Mau

Mr. Nguyen Van Quan, Specialist Provincial People's Committee, Ca Mau

## Project Implementation Committee (DARD Ca Mau)

Mr. Nguyen Thanh Vinh, Vice Director of the Project's Implementation Committee

Mr. Le Viet Binh, Project's Coordinator

Mr. Nguyen Ba Luc, Leader of Working Group 4

Mr. Nguyen Thanh Thuan, Leader of Working Group 1 and 3

Mr. Nguyen Tuyet Giao, Leader of Working Group 5

Mrs. Phuong Thu Tam, Administrative officer of Ca Mau DARD Ca Mau

## 3 Japanese side

Mr. Nishimiya Koji, Representative, JICA Vietnam Office

Mr. Oda Kensei, JICA Expert Ministry of Agriculture and Rural Development

Ms. Hoang Thu Thuy, Assistant, JICA Vietnam Office

## 4 Japanese Experts Office

Mr. Miyazaki Nobumitsu, Leader of the Japanese Short term Experts Team

Mr. Ako Masayuki, Short term Expert

Dr. Hoang Chuong, VIFA's expert

Mr. Le Minh Loc, Coordinator

Mrs. Le Nhu Y, Secretary

Mr. Tran Ngoc Hoang, Interpreter

Attachment

Mr. Anh Ngoc,

Interpreter

**(13) Sixth implementation committee held 5<sup>th</sup> October 2006**

**(April-September 2006)**

The Project Implementation Committee of the Forest Fire Rehabilitation Project, Ca Mau held a meeting on 05 October, 2006. Each working group presented the implementation progress of the project activities, and summarized on the table attach -1 here to.

The working group 1, 3 and 4 conducted a inner evaluation. The results of evaluation were summarized in the reports which were submitted to and accepted by the Project Implementation Committee.

The working group 3 conducted a W/S for leaders of FFE and communes having Melaleuca forest in U Minh Ha area on how to disseminate the agroforestry model established by the project to other villages in the area, and supported conducting Participatory W/Ss on community action plan making in 4 villages.

The Working Group 5 conducted 3 times of study tours for observing wood processing technology and marketing situation. The final marketing, wood processing and utilization seminar was conducted from 14<sup>th</sup> to 15<sup>th</sup>, September, 2006.

The Project Implementation Committee decided to submit the project progress report to Ca Mau People's Committee, and JCC.

Ca Mau 5th October, 2006

-----  
**Mr. Nobumitsu Miyazaki**

Team leader of the Japanese short term

Expert team

-----  
**Mr. Tran Van Thuc**

Deputy Director of

Project Implementation Committee

**(14) JCC meeting record on 13 October 2006**

(The original paper with signatures is kept by JICA. Following is same as signed one. Some attachments same as listed on other part of this report are omitted)

MINUTES OF MEETINGS  
BETWEEN  
JAPANESE FINAL EVALUATION TEAM AND THE AUTHORITIES CONCERNED OF  
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
ON JAPANESE TECHNICAL COOPERATION  
FOR "FOREST FIRE REHABILITATION PROJECT"

The Japanese Final evaluation Team (hereinafter referred to as "the Japanese Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. TOJO Yasuhiro, visited Ca Mau Province, the Socialist Republic of Vietnam from 1 October 2006 to 16 October 2006 for the purpose of conducting final evaluation of the technical cooperation for "Forest Fire Rehabilitation Project" (hereinafter referred to as "the Project") in the Socialist Republic of Vietnam.

For this purpose, the Japanese Team and the Vietnamese Authorities concerned formed the Joint Evaluation Team (hereinafter referred to as "the Team"). The Team had a series of discussion and exchanged views on the evaluation with the Vietnamese authorities concerned as well as counterparts and experts of the Project.

The Japanese Team and Vietnamese authorities concerned agreed on the contents of the Evaluation Report attached, which were accepted by the Joint Coordinating Committee. As a result of the discussion, the both sides agreed to report to their respective Governments the matter referred to in the attached evaluation report.

Ca Mau, 13 October 2006

---

Mr. TOJO Yasuhiro  
Senior Deputy Resident Representative  
Vietnam Office  
Japan International Cooperation Agency (JICA)  
Japan

---

Mr. Nguyen Ngoc Binh  
Director General  
Department Forestry  
Ministry of Agriculture and Rural Development  
The Socialist Republic of Viet Nam

---

Mr. Pham Thanh Tuoi  
Vice Chairman  
Ca Mau Provincial People's Committee

---

Mr. Ngo Chi Dung  
Director  
Department of Agriculture and Rural  
Development of Ca Mau province



REPORT OF THE FINAL EVALUATION  
ON JAPANESE TECHNICAL COOPERATION  
ON  
FOREST FIRE REHABILITATION PROJECT

The Japanese Final Evaluation Team (hereinafter referred to as "the Japanese Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), headed by Mr. TOJO Yasuhiro, visited Ca Mau, the Socialist Republic of Vietnam from 1 October 2006 to 16 October 2006, for the purpose of conducting a final evaluation of the Project for "Forest Fire Rehabilitation Project" (hereinafter referred to as "the Project") in the Socialist Republic of Vietnam.

For this purpose, the Japanese Team and the Vietnamese authorities concerned formed the Joint Evaluation Team (hereinafter referred to as 'the Team'). The Team surveyed the Project through field visits, interviews and had a series of discussions for final evaluation.

The Team agreed on the contents of the Evaluation Report attached, which was accepted by the Joint Coordinating Committee. As a result of the discussions, the Team agreed to recommend to their respective Governments the matters referred to in the attached Evaluation Report.

Ca Mau, 13 October 2006

---

Mr. TOJO Yasuhiro  
Team Leader  
Japanese Final Evaluation Team  
Japan International Cooperation Agency  
Japan

---

Mr. HOANG Lien Son  
Team Leader  
Vietnamese Final Evaluation Team  
Forest Science Institute of Vietnam  
The Socialist Republic of Viet Nam

## LIST OF ABBREVIATIONS

AEC	Agricultural Extension Center
BEC	Breeding Extension Center
C/P	Counterpart Personnel
DARD	Department of Agriculture and Rural Development
DoNRE	Department of Natural Resources and Environment
DPC	District People's Committee
EIA	Environmental Impact Assessment
EOJ	Embassy of Japan
FEC	Fishery Extension Center
FFE	Forest and Fishery Enterprise
FGD	Focus Group Discussion
FSSIV	Forestry Science Institute of Vietnam
HCMC	Ho Chi Minh City
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
MARD	Ministry of Agriculture and Rural Development
M/M	Minutes of Meetings
MM	Man Month
ODA	Official Development Assistance
PCM	Project Cycle Management
PDM	Project Design Matrix
PIC	Project Implementation Committee
PO	Plan of Operation
PPC	Provincial People's Committee
R/D	Record of Discussions
ToT	Training of Trainers
VND	Vietnam Dong

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**List of Attachment**

- Attachment 1: Project Design Matrix (PDM)
- Attachment 2: Plan of Operations (PO)
- Attachment 3: Local Cost Born by Japanese Side
- Attachment 4: Local Cost Born by Vietnamese Side
- Attachment 5: Japanese Expert Assignment
- Attachment 6: Allocation of Counterpart Personnel
- Attachment 7: Equipment Provision by Japanese Side
- Attachment 8: Project Outputs
- Attachment 9: List of Interviewees
- Attachment 10: Project Achievement
- Attachment 11: Evaluation Grid with Evaluation Findings

## ATTACHED DOCUMENT

### I INTRODUCTION

The Project started in 16 February 2004 and about two years and eight months has passed. JICA sent a final evaluation team at this moment and the team evaluated achievement of the Project outputs, discussed future perspectives and development of the Project.

The ultimate goal of the current mission is to (1) evaluate the achievement of the Project based on the Project Design Matrix (hereinafter referred to as 'PDM'), (2) discuss the future direction of the project, (3) confirm and share the common understanding of the prospective vision of the Project between Vietnamese and Japanese sides.

### II MEMBER OF FINAL EVALUATION TEAM

#### II.1 JAPANESE MEMBERS

(1) Mr. TOJO Yasuhiro (Leader)

Senior Deputy Resident Representative  
Japan International Cooperation Agency Vietnam Office

(2) Mr. MIZUNO Akira (Silviculture Technique)

Section Chief, International Forestry Cooperation Office, Forestry Agency,  
Ministry of Agriculture, Forestry and Fisheries

(3) Mr. TSUJI Shinichiro (Evaluation Analysis)

Environmental Science and Engineering Department  
Nippon Koei Corporation Limited

(4) Mr. NISHIMIYA Koji (Evaluation Planning)

Senior Project Formulation Advisor  
Japan International Cooperation Agency Vietnam Office

#### II.2 VIETNAMESE MEMBERS

(1) Mr. HOANG Lien Son (Leader)

Head of Division for Forestry Economics Research  
Forest Science Institute of Vietnam

(2) Mr. NGUYEN Tran Thuc (Silviculture Technique)

Horticulture Vice Director  
Agriculture Extension Centre  
Department of Agriculture and Rural Development of Ca Mau

(3) Mr. NGUYEN Ba Thuan (Evaluation Analysis)

Head of General Planning Division  
Department of Agriculture and Rural Development of Ca Mau

## II.3 SCHEDULE

Date		Schedule
Oct. 2	Mon.	Meeting with Ca Mau PPC Meeting with Ca Mau DARD
Oct. 3	Tues.	C/P interview Concerned personnel interview
Oct. 4	Wed.	Farmers group interview and survey of the demonstration farm
Oct. 5	Thurs.	Concerned personnel interview
Oct. 6	Fri.	Concerned personnel interview
Oct. 7	Sat.	Compilation and analysis of survey result
Oct. 8	Sun.	Evaluation grid compiling
Oct. 9	Mon.	Courtesy call to Ca Mau PPC Courtesy call to Ca Mau DARD Evaluation result briefing
Oct. 10	Tues.	Technical survey of the demonstration farm Evaluation result discussion
Oct. 11	Wed.	Evaluation result discussion
Oct. 12	Thurs.	M/M discussion
Oct. 13	Fri.	JCC Meeting Sign on M/M Report to Ca Mau PPC
Oct. 14	Sat.	Drafting summary report
Oct. 15	Sun.	Drafting summary report
Oct. 16	Mon.	Report to JICA Vietnam office Report to MARD

## III OUTLINE OF THE PROJECT

### III.1 BACKGROUND

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.

### III.2 MASTER PLAN

#### **[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 Sulphate 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.

### IV METHODOLOGY OF EVALUATION

#### IV.1 STEP OF THE EVALUATION

The Project Evaluation was conducted in the following steps:

##### 1: Verification of Performances

The degree of accomplishments of the Project namely, Inputs, Activities, Outputs and the Project Purpose were verified with reference to Objectively Verifiable Indicators described in PDM. For this purpose, data and

information were obtained through questionnaires, interviews, focus group discussion and site observation, etc.

## 2: Verification of the Project Implementation Process

The process of the Project and Important Assumptions in PDM were examined.

## 3: Evaluation by the Five Evaluation Criteria as shown below:

### IV.2 FIVE EVALUATION CRITERIA

#### (1) Relevance

Relevance is referred to the validity of the Project Purpose and the Overall Goal in compliance with the development policy of the Government of Socialist Republic of Vietnam as well as the needs of beneficiaries.

#### (2) Effectiveness

Effectiveness is referred if the expected benefits of the Project have been achieved as planned and if the benefit was brought about as a result of the Project (not of the external factors).

#### (3) Efficiency

Efficiency is referred to the productivity of the implementation process and examined if the input of the Project was efficiently converted into the output.

#### (4) Impact

Impact is referred to direct and indirect, positive and negative impacts caused by implementing the Project including the extent of the prospect of the achievement of the Overall Goal.

#### (5) Sustainability

Sustainability is referred to the extent that the Project can be further developed by the recipient country and the benefits generated by the Project can be sustained under the recipient country's policies, technology, systems, and financial state.

### IV.3 METHOD OF EVALUATION

In order to conduct the Project evaluation precisely and efficiently, the PCM (Project Cycle Management) method was applied.

The Team verified the progress of the Project according to the degree of accomplishments of the Project components, namely, Inputs, Activities, Outputs and the Project Purpose with reference to the indicators described in the PDM.

Information was collected through questionnaires, individual interviews to the Japanese experts, Vietnamese counterparts, relevant organizations (MARD, DARD, FSSIV, FFE and AEC), site observation, focus group

discussion and a series of evaluation meetings.

In the meetings, the degree of accomplishments mentioned above were verified with reference to the Objectively Verifiable Indicators described in PDM and relevant Project reports (Progress Reports, etc.) as well.

## V. SUMMARY OF EVALUATION

Basing on the evaluation methodologies previously discussed, the 5 item evaluation was carried out. The evaluation results are summarized in the following sections. The detailed evaluation results are shown in **Attachment 11**.

### V.1. Relevance: Fair to Satisfactory

#### 1.1. Relevance to policies and programs of Vietnam Government: Fair to Satisfactory

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: Satisfactory

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: Fair to Satisfactory

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 Sulphate 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).

V.2. Effectiveness: Satisfactory

2.1. Model development: Satisfactory

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): Satisfactory

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: Satisfactory

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: Satisfactory

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.

### V.3. Efficiency: Satisfactory

#### 3.1. Japanese experts: Satisfactory

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: Satisfactory

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: Satisfactory

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.

#### V.4. Impact: Satisfactory

##### 4.1. Replicability of models and outcomes: Satisfactory

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: Satisfactory

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 Malaleuca.

##### 4.3. Environmental impact: Fair to Satisfactory

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 sulphate 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 sulphate 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: Satisfactory

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.

#### V.5. Sustainability: Fair to Satisfactory

##### 5.1. Preparedness of the Vietnam side to take over the Project: Satisfactory

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: Satisfactory

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-sectoral 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: Fair to Satisfactory

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.

## VI. 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.

## VII. 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.

## VIII. Recommendations:

### VIII 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.

#### VIII 2. Environmental risk mitigation

The construction of embankment and canal at a area with acid sulphate 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.

#### VIII 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 promotion of Melaleuca processing and national development scenario, as well as the potential economic impact at the community level.

#### VIII 4. Strengthening of formers' 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.

#### VIII 5. Post-project activities

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

Attachment

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.

Attachment 1 PDM (Omitted)

Attachment 2 Plan of Operations (Omitted)

Attachment 3 Local cost Borne by Japanese side (Omitted)

Attachment 4 Local cost borne by Vietnamese side (Omitted)

Attachment 5 Japanese Expert Assignment (Omitted)

Attachment 6 Allocation of counterpart personnel (Omitted)

Attachment 7 Equipment provision by Japanese side (Omitted)

Attachment 8 List of Project Outputs (Omitted)



**Attachment 9 List of Interviewees**

Mr. Dinh Tan Dinh (Vice Head of Technical Division, FFE U Minh I)
Mr. Do Van So (Chairman, DPC U Minh Ha)
Mr. Do Viet Khoa (Officer, Environmental Division, DoNRE Ca Mau)
Mr. Doan Van Luc (Farmer, Village 10)
Mr. Duong Minh Long (Technician, FFE U Minh I)
Mr. Ho Van Khai (Farmer, Village 10)
Mr. Hoang Quoc Ni (Technician, U Minh II FFE)
Mr. Hugnh Van Tien (Vice Head of District DoNRE)
Mr. Huynh Nhut Trieu (Head of Forest Protection and Management Division, U Minh I FFE)
Mr. Lam Moc Thanh (Vice Director, U Minh I FFE)
Mr. Le Hoang Vu (Director, U Minh I FFE)
Mr. Le Minh Quan (Farmer, Village 10)
Mr. Le Quang Hien ( Head of Technical and Information Section, Ca Mau AEC)
Mr. Le Van Hai (Vice Head of Sub-DFP Ca Mau)
Mr. Le Viet Binh (Head of Technical Division, Sub- DOF)
Ms. Linh (Officer, Agricultural Division, U Minh Ha District)
Mr. Ly Minh Kha ( Vice Head of Technical and Information Section, Ca Mau, AEC)
Mr. Nguyen Ba Luc (Head of Forest Protection and Management Division, Ca Mau Sub-DFP)
Ms. Nguyen Tan Cuong (Officer, Environmental Division, DoNRE Ca Mau)
Mr. Nguyen Thanh Su (Farmer, Village 10, Block 037)
Mr. Nguyen Thanh Thuan (Officer, Sub- DOF)
Mr. Nguyen Thanh Vinh ( Head of Science and Technology Division, DOST)
Mr. Nguyen Tran Thuc (Vice Director, Ca Mau, AEC)
Mr. Nguyen Trang Hieu (Vice Head of Forest Protection and Management, FFE U Minh I)
Mr. Nguyen Tuyet Giao (Officer, Planning Division, DARD)
Mr. Nguyen Van Quan (Office in Charge, Agriculture and Forestry Sector, PPC)
Mr. Nguyen Van Thuan (Head of Technical Division, FFE April 30)
Mr. Nguyen Van Ut (Farmer, Village 10, Block 037)
Mr. Nobumitsu Miyazaki (Chief Advisor, JICA Project)
Mr. Pham Chi Nhan (Farmer, Village 10, Block 037)
Mr. Pham Minh Dung (Vice Head of Breed Technology Division, Fishery Extension Center)
Mr. Pham Thanh Tuoi (Vice Chairman, PPC)
Mr. Phan Thanh Cong (Officer, FFE Minh I)
Mr. Quach Minh Quoc (Head of Animal Husbandry Station, Agriculture Breeding Center)
Mr. Quach Van Tuoi (Farmer, Village 10)
Mr. Tran Phi Son (Technician, FFE Song Tren)
Mr. Tran Thanh Hoang (Director, AEC Ca Mau)

Attachment

Mr. Tran Thi Hong Nga (Officer, Environmental Division, DoNRE Ca Mau)
Mr. Tran Thi Nuong (Farmer, Village 10, Block 037)
Mr. Tran Thi Nuong (Vice Village Chief, Village 10)
Mr. Tran Van Nam ( Vice Head of Technical and Information Section, Ca Mau, AEC)
Mr. Tran Van Thuc (Vice Director, DARD Ca Mau)
Mr. Tran Viet Hong (Farmer, Village 10, Block 037)
Mr. Trang Quang Thang (Farmer, Village 10)
Mr. Trinh Van Len (Head of Administration Office, PPC)
Mr. Trinh Van Ut (Technician, Technician Division, FFE April 30)
Mr. Vo Trung Vuong (Village Chief, Village 10, Forest Block 037, U Minh I FFE)

## Attachment 10 Project Achievement

Narrative Summary	Indicator	Results	Assumption
<p><b>Project Purpose :</b></p> <p>Necessary techniques for implementation of the rehabilitation and forest fire prevention program of U Minh Ha area are developed and disseminated.</p>	<p>100 % of staff of FSSIV and DARD Ca Mau Province, forestry enterprises agree with project developed techniques and have will to implement a extension technique</p>	<p>The introduced techniques for Melaleuca planting combined with embankment were fully accepted by FSSIV, DARD and FFEs. These techniques were summarized in a technical guide line, and the technical manuals were published and distributed to forestry technicians, extension officers, and farmers For above reason, it could be said that the project purpose is realized.</p> <p>For expanding the Melaleuca planting among farmers, not implemented technical development assistance for Melaleuca log use other than charcoal, and pole is one of the anxious aspect remaining.</p>	<p>-Timber price of Melaleuca do not fall sharply.</p> <ul style="list-style-type: none"> <li>Measures by the program 661 are applied to the farmers who want to have subsidy and/or loan for Melaleuca afforestation</li> </ul>
<p><b>Outputs :</b></p> <p>1. Appropriate techniques of silviculture activities in U Minh area are established and expanded.</p>	<p>a-1 Survival rate of demonstration farm plantation with afforestation guideline is more than 85%. a-2. Staffs of FSSIV and DARD Ca Mau Province hold extension training courses of afforestation appropriate technique on U Minh Ha District 18 times. a-3. Staff (FSSIV and DARD Ca Mau Province) and farmers acquire the technique of afforestation technique guideline for U Minh Ha District.</p>	<p>Planted Melaleuca survival rate of the demonstration farm exceeded 85%. Technical guidelines for technicians, extension officers, and for farmers were published and distributed.</p> <p>Technical trainings were carried out for FFEs staff on 22 subjects/classes, and 2 times for farmers.</p> <p>As the results, FFEs showed strong interests in using heavy equipments for introducing Melaleuca planting techniques combined with embankment in their area. FSSIV gave comments for the technical guideline revision.</p>	<ul style="list-style-type: none"> <li>Measures by the program 661 are applied to the farmers who want to have subsidy and/or loan for Melaleuca afforestation</li> </ul>
<p>2. 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.</p>	<p>b. Staff of FSSIV and DARD Ca Mau Province holds training courses on market research and utilization of Melaleuca timber 3 times.</p>	<p>On the second year, C/P, guided by Experts, implemented market research; and on the third year, C/P implemented similar studies on market research and wood utilization by themselves 4 times to HCM, Ha Noi and Quang Ngai.</p> <p>Through these experiences, C/P developed their capacity, and obtained knowledge about the possibility/importance of Melaleuca wood use for chip board and/or block board.</p>	<ul style="list-style-type: none"> <li>Timber price of Melaleuca do not fall heavily.</li> </ul>

		Then C/P understood the necessity of wood use market promotion to consider their next actions. For realizing next actions, C/P requested to expand the project term for wood use technology development for FFEs.	
3. Fire prevention situation is improved.	c DARD Ca Mau Province staffs are enabled to be conducted training courses of forest fire prevention system.	The forest fire prevention campaign activity was conducted with high priority. This activity included training on fire prevention system and role of community, slogans making, fire fighting tools making, and poster contest. In the first stage, JICA local cost supported fund was used for this activity, but after third year, VN side prepared own budget for this campaign activities, and added this program into own programs such as fire fighting team contest by youth unions in the region. This shows that C/P obtained enough capability to conduct forest fire prevention campaign.	
c.3 To implement trainings on the livelihood improvement of local people.	Not Clearly listed on PDM (included C.3 activity). [This item was recognized important one; therefore, here one column is given.]	Melaleuca planting combined with embankment, L letter ditch and dike were introduced to farmers who are live in the demonstration farm for agroforestry For using this dike, agroforestry activities were introduced for the farmer's income generation. The agroforestry technical trainings were implemented more than 30 times. These training items were selected to meet the needs of the farmers based on their Community Action Plan (CAP). The trainings were implemented in collaboration with the Agriculture extension center, the fishery Extension Center and etc. The project supported formulating farmer's groups, progressive farming model, and organizing technical supporting system. Farmers welcomed these trainings, and say that they could understand why the failed similar challenges before the trainings.	

<b>Activities :</b> a.1 To establish applied techniques from "Afforestation Technology Development Project on Acid Sulphate Soil in the	<b>Input (JP)</b> ■Expert Project manager/participatory forest management(1) 1 person	<b>Input(VN)</b> ■counterpart (MARD) Training 0 (DARD) manager
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Mekong Delta"	Forest soil/Planning analysis 2 persons	Project 1	Director
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	Participatory forest management(2 ) 1 person Marketing 1 person Development of wider-use of timber 2 persons Forest fire prevention 1 person Agroforestry/agriculture 1 person	Vice Project 1 Project 1 WG 5 Demonstration farm 1 Accountant 1 Administration 1 SP boat driver 1 (FSSIV) (Silvicultuer) 0 Wood use manager 1	Director Director Manager leader manager
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)	■Equipment (1000 yen) JFY2004(3-6) 1,602 JFY2004(8-3) 71,521 JFY2005(4-3) 1,312 JFY2006(4-12) 0		
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.	■Local cost support fund and others (1,000 yen) JFY 2004(3-6) 1,484 JFY 2004(8-3) 15,675 JFY2005(4-3) 22,154 JFY 2006(4-12) 17,589		■Facilities ● Land for demonstration farm ● Project Office
b.2 To make the promotion plan on wider-use of Melaleuca timber.			■Budget preparation (1,000 VND) ( FY 2003 )
b.3 To conduct trail to implement the promotion plan on wide-use of Melaleuca timber.	■Training in Japan JFY 2004(3-6) 0 parson JFY 2004(8-3) 2 parson JFY 2005(4-3) 5 parson JFY 2006(4-12) 3 parson		( FY 2004 ) 524,195  ( FY 2005 ) 2,020,527  ( FY 2006 ) 360,000
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.			
3-3 To implement training on the livelihood improvement of local people.			

## Attachment 11 Evaluation Grid with Evaluation Findings

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
Relevance (Project Rationale)	Relevance to policies and programs of recipient country	<ul style="list-style-type: none"> <li>- Reforestation/ Afforestation</li> <li>- Sustainable forest management and utilization</li> <li>- Promotion of social forestry</li> <li>- Market-oriented forestry</li> </ul>	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- 83% of questionnaire respondents answered the relevance of the Project to the Vietnam forestry policies was very much in line, and 17% said maybe so.</li> <li>- The current Socio-economic 5 Year Development Plan stresses the importance of environment protection for sustainable development. The forestry policies in the country, especially the 5MHRP 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.</li> <li>- The Ca Mau government had been working on the forest rehabilitation after the war in 1970s because the forestry was one of the major industries in the province (second largest). Also, after the large forest fire in 2002 in Ca Mau which burned 4,423 ha, the Provincial Government issued the Decision 857/QD/CTUB issued by PPC to rehabilitate the forest. In addition, the Provincial Government also emphasizes the benefit of local people (social forestry). In these lights, the project has been in line with the policy of Ca Mau Government.</li> <li>- The land use plan generated by the project was in line with the overall provincial land use plan 2002-2010, which is in the process of revision (already submitted to MARD for approval).</li> <li>- 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 (FFE) and investors.</li> </ul>
	Relevance to Japanese aid policies		Document review	<ul style="list-style-type: none"> <li>- 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.</li> <li>- 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).</li> </ul>
	Relevance to public interest / appropriateness as a public work	Cost sharing between the government and beneficiaries	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- People in the villages were quite active in the project and contributed a lot, such as the free labor. 100% farmer respondents for the questionnaire survey answered that their contribution to the project was sufficient.</li> </ul>
	Needs of Japanese	Urgency of intervention	- Document review	<ul style="list-style-type: none"> <li>- The fire-affected areas needed to be rehabilitated as soon as possible, and it would take much longer to achieve the project outcomes if there was not JICA assistance.</li> </ul>

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
	technical cooperation		- Questionnaire/ interview survey	- 61% of questionnaire respondents answered that the project was unable to realize without JICA assistance.
		Comparative advantage of Japanese technology	- Document review	- 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 Sulphate Soil in the Mekong Delta" in Long An, where the soil conditions were similar. - 68% of respondents answered that the Japanese technologies was very much indispensable for this project.
Effectiveness	Accomplishment of Output 1 "Appropriate techniques of silvicultural activities in U Minh Ha area are established and expanded" Facilitating and hindering factors for Output 1 and countermeasures or modifications on original plans	- Appropriateness of guidelines and manuals prepared - Effectiveness of training activities - Progress of demo farm construction and survival rate - Appropriateness of participatory forest management plan prepared - Improvement of capability in environmental monitoring and appropriateness of monitoring plan	- Document review - Questionnaire/ interview survey	- Overall: 89% of questionnaire respondents answered that the achievement of Output 1 was outstanding or satisfactory. - Model development: The Project introduced a new model for Melaleuca plantation establishment, of which the construction of embankment and canal was featured. The negative impact of sulphate exposure was evidenced during the first year, but from the second year, the construction of embankment was done more carefully (not exceeding 1.2 m deep), and the agricultural land and forest areas were segregated. The lime was applied to treat sulphate. 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 pilot site 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. The nursery and other silvicultural techniques introduced under this project were more systematic and can produce better seedlings with better variety. Another feature of new plantation technology is lower number of seedling requirement (30,000 seedlings/ha was reduced to 20,000 seedlings/ha). This idea was difficult to understand/adopted by the forest officers at first but accepted after a series of training sessions. During the piloting at Village 10, U Minh I, Ca Mau, the social preparation and participatory process such as Participatory Rural Appraisal and community planning were either hurried or skipped. The model developed by the Project could have been more appropriate if the time for participatory process was included in the project design. - 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 questionnaire survey to CP revealed that they are confident their levels of skills and knowledge in the 72% of what they have learned. - Manuals and guidelines: The Project produced a number of manuals and guidelines, which would be used for the application of technologies. The qualities of those manuals and guidelines were satisfactory in general. 57% of questionnaire respondents answered that the manuals and guidelines were useful to a great extent, and 38% said they are useful to a certain extent. The technical manuals produced were revised once based on the comments from the field. The manuals were evaluated by FSSIV, and the quality was ensured. The manual produced by the project is useful and easy to understand because it has many pictures and drawings, according

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
				<p>to the farmers interviewed. The local consultants (Dr. Chuong) played a key role in the preparation of technical manuals. The manual went through a number of reviewing and revising by concerned personnel, and DARD authority approved the manual their official manual.</p> <ul style="list-style-type: none"> <li>- <b>Model promotion:</b> 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.</li> </ul>
	<p>Accomplishment of Output 2 "Knowledge and techniques related to market research and wider-use/processing of Melaleuca are improved among those who have engaged in silvicultural activities" Facilitating and hindering factors for Output 2 and countermeasures or modifications on original plans</p>	<ul style="list-style-type: none"> <li>- Appropriateness of market research results and other studies on wood processing</li> <li>- Appropriateness of selection of charcoal making as a trial project</li> <li>- Impact of training conducted (basing on the operating condition of charcoal making facilities and quality/profitability of trial products)</li> <li>- Appropriateness of wood-processing promotion plan prepared through the project</li> </ul>	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- 78% of questionnaire respondents answered that the achievement of Output 2 was outstanding or satisfactory. 82% of farmers who underwent the training on the production of charcoal and wood vinegar answered that they understood the skills to a great extent.</li> <li>- A number of options were available for wood processing, and charcoal making and wood vinegar production was selected as the most realistic pilot activities because charcoal was a basic commodity in Ca Mau, and many farmers produce it.</li> <li>- The new technologies on charcoal making and wood vinegar production improved the conventional economic value of Melaleuca. The improved quality of charcoal introduced by the project and shorter production period (1 day for new technology, 7 days for the traditional method) would benefit both producers and consumers. The drum-can type kiln is simpler and easier to operate than larger charcoal kiln. It requires more work for preparing smaller logs. The protection from water and controlling of fire/temperature are the keys for high quality and productivity.</li> <li>- With the new charcoal kiln, a farmer can produce 60kg of charcoal in one fire, which will generate VND 80,000 and 4 liters of wood vinegar, which is not yet marketed but used for domestic purposes. Out of 10 kilns constructed for charcoal and wood vinegar production, 9 are currently under repair because they are not producing the products with appropriate quality. In order to attract consumers, the charcoal with new technology must be trade-marked.</li> <li>- For the wood vinegar, the government is supporting the testing of the effect of wine vinegar, which would be a good investment in future. The application of wood vinegar seems to improve the agricultural productivity, though it is not yet felt significant.</li> <li>- The effect and formula for the wood vinegar for the enhancement of agricultural productivity is still under testing. Although the market is yet to be developed, it has market potential as the food safety incrementally becomes important in the market.</li> <li>- The wood-use promotion plan is under the preparation.</li> </ul>
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	Evaluation Item	Sub-item	Data Collection Method	Major Findings
	<p>Accomplishment of Output 3-a "Fire prevention situation is improved" Facilitating and hindering factors for Output 3-a and countermeasures or modifications on original plans</p>	<ul style="list-style-type: none"> <li>- Appropriateness of fire prevention manuals created</li> <li>- Impact of training (appropriateness of demonstration and campaign activities)</li> <li>- Appropriateness of fire prevention plan prepared</li> <li>- Status of fire prevention systems and institutional mechanisms established</li> </ul>	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- 89% of questionnaire respondents answered that the achievement of Output 3-a was outstanding or satisfactory.</li> <li>- For the forest fire prevention, DFP has been doing environmental education, benefit sharing with farmers, water impounding and construction of fire line and watch towers. In this sense, the project did not brought new ideas but strengthened what have been already done and made them more systematic. 100% of questionnaire respondents said that the manual on fire prevention prepared by the project is outstanding or satisfactory, and 57% of respondents answered that the fire prevention campaign method introduced by the project was effective in a great extent.</li> <li>- DARD expected the project to improve the fire prevention equipments (i.e., pump) and infrastructure. But it was not included in the project due to the lack of JICA fund. The difference in expectations was harmonized between the Japanese side and Vietnam side.</li> <li>- The new Melaleuca plantation technology using embankment and water canal is the largest contribution of JICA project in terms of fire prevention because the new method will prevent the fire to spread.</li> <li>- The best way to prevent forest fire is to enhance the economic value of Melaleuca through wood processing and others. The project contributed to this to a certain extent, in addition to the introduction of good extension works on fire prevention.</li> <li>- The Project also supported the capacity development of concerned offices, officers and farmers in fire prevention. The training and campaign activities supported by JICA were effective. However, the scale was too small as compared to the scale of problems.</li> </ul>
	<p>Accomplishment of Output 3-b "Training for livelihood improvement of local farmers is conducted" Facilitating and hindering factors for Output 3-b and countermeasures or modifications on original plans</p>	<ul style="list-style-type: none"> <li>- Impact of training (improvement in livelihood options of project beneficiaries)</li> <li>- Improved capacity of agricultural extension club and various extension centers</li> </ul>	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- 94% of questionnaire respondents answered that the achievement of Output 3-b was outstanding or satisfactory. 58% of farmer respondents answered in their questionnaire that they are already improving their livelihood level because of the project.</li> <li>- In Ca Mau, the fishery, agriculture and forestry has always been combined to form a kind of agroforestry because of its natural and geographical feature. The project made the traditional agroforestry systematic and scientific. Agroforestry is important to realize both long- and short-term benefit of farmers and to enhance the internal resources of farmers so that their activities can be "interest-based" rather than "subsidy-based".</li> <li>- The inputs for livelihood (such as fish ponds, feed for fish, piglets, feed grinders, rice seedlings, seedlings for fruit trees, etc.) were provided more to those who did not get more for the canal development so that certain equality can be established.</li> <li>- Some beneficiaries failed to maintain their inputs for the livelihood because they were incapable during the early stage of the project.</li> </ul>

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
	Accomplishment of Project Purpose "Necessary techniques for implementing forest rehabilitation programs and forest fire prevention in U Minh Ha area are developed and disseminated"		<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- 94% of questionnaire respondents answered that the achievement of Output 3-b was outstanding or satisfactory.</li> <li>- Officers are very much interested in the new technologies and willing to disseminate them because they have technical and economic advantages, according to the interview survey. 89% of respondents answered that they are willing to do the extension and information dissemination. Even though the model sites were established only in U Minh 1, the officers from other districts participated in the training under the project, which contributed to their adoption of new technologies. After the training, officers started guiding farmers in land treatment and livelihood improvement outside the pilot areas. The trainees shared their skills and knowledge learned during the training with other officers who could not participated in the training. The sharing took place in informal setting, staff meeting, reporting and during their actual work.</li> <li>- After the study tour to the seed orchard, FFE plan to establish the similar one in future. Also, using the nursery techniques learned during the training, FFE has already improved a 1 Ha of nursery. Before the training, FFE purchased seedling from other sources, but they are producing more seedlings from their nurseries. Officers carefully select the mother trees for the seedlings. When they purchase the seedling from other sources, they can choose good seedling. Using the techniques learned during the training, FFE April 30 established 400 Ha of embankment already.</li> <li>- One staff member has organized the fire prevention poster contest introduced by the project without assistance from the project.</li> <li>- The project promoted the concept of "Farmer to Farmer" extension. The villagers are willing to share their experience with farmers in other villages. Farmer-to-farmer training took place because of limited budget. It was efficient, effective and sustainable approach forged though the discussion among the Japanese experts and CP. Villagers are willing to share their experience with other villagers because they are proud of it. The farmers who received subsidy from the project and underwent the training were obliged to do the Farmer-to-Farmer approach. The villager # 9 in their village was not the recipient of fish canal under the JICA project, but he started digging the canal by hand by himself. Village # 11 already decided to use the heavy equipments for the embankment development. The fuel will be shouldered by the villagers.</li> </ul>
	Contribution of outputs to the achievement of Project Purpose	<ul style="list-style-type: none"> <li>- Contribution of technology development to the program development</li> <li>- Contribution of skill development and knowledge on wood processing and marketing to the program</li> </ul>	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- There was appropriate balance between the lecture (theory) and practice/field visits. After the training, documents were provided to the trainees, which were useful. However some trainees commended that some training should have been longer.</li> <li>- DPC will instruct all 5 FFEs under its jurisdiction to adopt the JICA technologies, and FFE plans to develop all the forest-fire affected areas using the JICA technology and machineries.</li> <li>- In addition to the Japanese experts, whose MMs were limited, the project utilized the local consultants (Dr. Chuong and Dr. Try) for designing the training program, preparation of curriculum, preparation of teaching materials, selection of resource persons/trainers.</li> <li>- People in U Minh Ha are all migrants/frontiers, who has high propensity to take risks. They are not susceptible to hardship because of their hard lives during the pioneer. They have strong attachment to their land and high motivation to improve their areas because they are frontiers. In U Minh Ha, there is limited number of ethnic</li> </ul>

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
		development - Contribution of fire prevention system to the program development		<p>minorities, which might have contributed to the spread effect because the society is not segmented.</p> <ul style="list-style-type: none"> <li>- The project emphasized TOT, which contributed to the spread effect of the project.</li> <li>- During the first year, the project adopted the “equal” approach through which the benefits would be distributed as equal as possible among the villager. However, from the second year, it adopted “fair” approach, in which those who put more effort and resources will be benefited more. The second approach was much more effective. The selection of local leaders, beneficiaries and planning were done in a participatory manner, which minimized the conflict among the villager. Selection criteria for the leaders and beneficiaries were set. There was a conflict between the villagers who received some inputs and who did not receive. However, the villagers discussed among themselves and agreed that some villagers are not capable in maintaining the project inputs.</li> </ul>
Efficiency	Appropriateness of quality, timing and quantity of project inputs	Japanese experts	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- Inputs of Japanese experts: Total 33.24 M/M - Participatory Forest Management 1 (12.47 M/M), Participatory Forest Management 2/Project Coordinator (9.84 M/M), Forest Soil/Planning Analysis (1.63 M/M), Forest Fire Prevention (1.03 M/M), Timber Production Development (3.07 M/M), Timber Product Marketing (2.70 M/M), Agroforestry/Agriculture (1.70 M/M), Monitoring and Evaluation (0.80 M/M)</li> <li>- 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.</li> <li>- 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.</li> </ul>
		Equipment and facilities	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> <li>- Field reconnaissance</li> </ul>	<ul style="list-style-type: none"> <li>- The list of equipments is attached in <i>Attachment 7</i>.</li> <li>- 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.</li> <li>- 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.</li> <li>- The quantities of heavy equipments were not enough for FFE U Minh 1 to cover the entire jurisdiction, but they were enough for the pilot in one village only.</li> </ul>
		Training in Japan	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/ interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- It was effective in general based on their self-evaluation. One CP who participated in the training claimed in the questionnaire survey that the training was too short with so much traveling time. Some textbook were only in Japanese, not yet translated into English</li> </ul>
		Counterpart personnel	<ul style="list-style-type: none"> <li>- Document review</li> <li>- Questionnaire/</li> </ul>	<ul style="list-style-type: none"> <li>- The list of CPs is attached in <i>Annex</i></li> <li>- CP worked as a part time (50% project and 50% for regular work). It was difficult for them, and they had to work even during weekends. However, the assignment of CP was appropriate in general. There were no major</li> </ul>

Evaluation Item	Sub-item	Data Collection Method	Major Findings
		interview survey	problems in the implementation of project because they worked diligently to the project.
	Facilities provided by Vietnam Government	- Questionnaire/ interview survey - Field reconnaissance	- The Vietnam Government provided appropriate office facilities and site for demonstration farm and nursery improvement to the Project with no significant delay or shortfalls.
	Counter budget	- Document review - Questionnaire/ interview survey	- The table of counter budget for the project is attached in <u>Annex</u> - The CP Fund was used for the management and operation of the project, including the salaries of project staff members, fire prevention activities and support for farmers and FFE. There have been no major issues on the counterpart fund allotment and disbursement. - The smooth budget securing and fund disbursement are due to: 1) Ca Mau is one of the poorest province, which receives higher central funds, 2) Ca Mau has few foreign-funded project, which allowed the government to prepare the counterpart fund relatively easily, 3) the provincial government has committed to the project, and 4) Ca Mau used to be a forested area, which receives the significant fund for 5MHP. (DARD V. Director)
	Sub-contractors	- Questionnaire/ interview survey	- The project tapped the other government organization (such as AEC) to do a part of project activities as contractors. While they were public organizations, the project provided only a small amount of travel costs and allowance to the sub-contractors. Therefore, it was efficient.
Appropriateness of unit costs		- Document review - Questionnaire/ interview survey	- 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.
Efficiency of contracting out of project management to JOFCA/JIFPRO		- Document review - Questionnaire/ interview survey	- Flexibility in inputs is definitely important for this kind of project. JICA displayed its flexibility to a certain extent but need improvement. Because JOFCA/JIFPRO has its strengths in: 1) working in Vietnam, 2) organizing training activities, and 3) supervising reforestation works, the project was able to achieve its objectives and outcomes with relatively smaller inputs/experts.

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
Impact	Accomplishment of Overall Goal "Techniques developed by the project are utilized by people and Forestry Enterprises in some areas of Mekong Delta" Facilitating and hindering factors for achieving Overall Goal	Replicability of developed technology and extension mechanisms Actual application samples	- Document review - Questionnaire/ interview survey	<ul style="list-style-type: none"> <li>- 47% of questionnaire respondents answered that the technologies can be utilized in other areas to a great extent, and 37% said to a certain extent.</li> <li>- 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.</li> <li>- 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.</li> <li>- The JICA pilot sites will be used as a model site for the other farmers club through the existing mechanism of AEC and farmers club.</li> <li>- FFE officers expressed during the work shop that funding, profitability and economic validity of new technologies would be the hindering factors for replication. The countermeasures for each hindrance were discussed in the workshop. However, the embankment can be constructed in other areas as well manually without heavy equipments when it is a small scale. Some livelihood activities cannot be replicated without technical assistance and training.</li> <li>- The hindering factor would be that most financial institutions, especially the agricultural banks in Vietnam do not avail loans to farmers for forestry activities because of the long-cycle of economic profit. Also, because the farmers do not have the "Red Book", it is difficult to secure their capital for investment.</li> </ul>
	Actual and potential environmental impact	Water and soil contamination due to the acid-sulphate soil exposure by civil works	- Document review - Questionnaire/ interview survey	<ul style="list-style-type: none"> <li>- In Year 2005, the rainy season started late as compared to normal years. The exceeding dry weather associated with the delay of rain created deeper cracks on the ground surface. When the rainy season arrived, the rain penetrated into the deep crack, and the water carried the acid materials to the paddy field. There was almost no rice harvest due to the acidity from the embankment. According to the questionnaire survey, 100% of farmers recognized the water acidity caused by the project. However, the poor harvest was not due to the embankment because the areas without embankment also did not have any harvest in 2005.</li> <li>- Due to the delay of heavy equipment delivery, the embankment construction work on the second year was rushed, which might have contributed to the exposure of sulphate. However, the correlation among the embankment construction, water contamination and poor rice harvest was not yet proven.</li> <li>- Despite the poor harvest, farmers were able to continue participating in the project because they foresee the future benefit from the project. Farmers are so poor and have nothing to loose. After the poor harvest in the 1<sup>st</sup> year, the project tried to segregate embankment (plantation areas) from agricultural areas.</li> <li>- PH paper was distributed to FFE to monitor the acidity of water at the pilot site. It seems they are doing the monitoring, but the data seems not recorded and compiled.</li> </ul>

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
		De-acidification of water and soil by Melaleuca forest rehabilitation	- Document review - Questionnaire/ interview survey	- The neutralization effect of Melaleuca for acid soil and water was taught to the farmer by the trainers, but it is not yet evidenced.
	Actual and potential socio-economic and socio-cultural impact	Effect of project on Melaleuca price	- Questionnaire/ interview survey	- The current decrease of Melaleuca price might not affect the project expansion because the price fluctuation is inevitable, and it would increase in future. Farmers/producers know it. Even though the Melaleuca price is low to date, farmers are still interested in Malaleuca plantation because it will produce income anyway. Melaleuca has positive environmental impact. So even if the price is low, the plantation will be maintained. - The demand for wooden scaffold for construction, which used to be the major consumption of Melaleuca timber, seems to be permanently low due to the new material (steel). The marking of Melaleuca requires a significant breakthrough. However, there might be a Chinese wood chipping company to be established in Ca Mau by the end of Year 2006, which would increase the economic value of Melaleuca.
		Potential for the development forestry industry	- Questionnaire/ interview survey	- 65% of questionnaire respondents answered that there is a great industrial potential for Melaleuca in Ca Mau. - PPC is working on the promotion of Melaleuca timber through the Trading Promotion Center in Ca Mau City to attract investors. Also, DARD has a plan to create a Joint-Stock Wood Processing Enterprise, consisting of all FFEs in Ca Mau, to promote the mass-level charcoal making and laminated wood production.
		Socio-economic impact on the farmers' household account due to the introduction of agroforestry and other livelihood options	- Questionnaire/ interview survey	- The pilot village with 40 HH is 280 Ha in total, 80 Ha of which is agricultural land. The rest of 200 Ha used to be barren bush land after the forest fire, 120 Ha of which became Malaleuca plantation with embankment and canal. The JICA pilot project covers more than 40% of total village areas, which was almost no economic value.
		Impact of project on gender relations and other socially vulnerable population	- Questionnaire/ interview survey	- During the project, women participated in the project activities more than man.
		Collaboration and multiple effect with other projects and donors	- Questionnaire/ interview survey	- The project did not collaborate with any other foreign-funded projects.
Sustained	Preparedness of Vietnamese	Project within the framework of	- Document review	- 5% of questionnaire respondents answered that the Vietnam Government is physically and financially capable to continue project activities without external assistance to a great extent. 26% said it is capable to a certain

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
	Government to take over the project	<p>medium-term and annual plans</p> <p>Institutionalization of various plans and guidelines developed through the project</p>	<p>- Questionnaire/ interview survey</p> <p>- Document review</p> <p>- Questionnaire/ interview survey</p>	<p>extent. 19% of questionnaire respondents answered that the Vietnamese officers are technically capable to continue project activities without external assistance to a great extent. 61% said they are capable to a certain extent.</p> <ul style="list-style-type: none"> <li>- In Ca Mau, the provincial annual plan for Year 2007 was being prepared at the time of Final Evaluation (it will be finalized by the end of November 2006). 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. All those programs were directly related to the Project, and the technologies and models introduced by the Project would be adopted by the programs 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.</li> <li>- 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.</li> </ul>
	Development of institutional framework for project implementation	<p>Establishment of subsidy programs and allotment of budget to continue the project</p> <p>Success/failure of JCC and PIC</p>	<p>- Document review</p> <p>- Questionnaire/ interview survey</p> <p>- Questionnaire/ interview survey</p>	<ul style="list-style-type: none"> <li>- The program on the rehabilitation of burned forests under the Decision # 857 should be tapped for the continuation of the achievement of JICA project. Also, the 5MHRP should take over the project.</li> <li>- The organizational set up for the project implementation was effective because the PIC was created, and the DARD was authorized by PPC to chair the PIC. Because of the authorization, DARD was able to display its leadership in coordination various stakeholder in the project. PIC has its own accountant and executive officers and produced biannual report for JCC. A number of interviewees suggested that PIC should have more members from wider sectors in order to have multiple the effects, and PPC should be a part of JCC. (PPC)</li> <li>- JCC meeting was once a year, which was too few according to a few interviewees. JCC should have emphasized wood processing and fire prevention from the very beginning of this project and should have had the technical capabilities.</li> </ul>
		Status of various committees	<p>- Document review</p> <p>- Questionnaire/ interview survey</p>	<ul style="list-style-type: none"> <li>- The Project supported the establishment of various multi-sectoral and multi-stakeholder committees, including the Agriculture and Forestry Committee and Environmental Monitoring Committee. These institutions would ensure the further development of forestry sector and rural development after the Project.</li> <li>- 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</li> </ul>

## Attachment

	Evaluation Item	Sub-item	Data Collection Method	Major Findings
				<p>capabilities and sustainability of those institutions were adequate to take over the project activities.</p> <ul style="list-style-type: none"> <li>- Breeding Extension Center (BEC) and Fishery Extension Center (FEC) has been involved in the project to provide project materials (e.g., fruit seedlings, piglets, "3 veterinary boxes," training, etc.). The establishment of Agroforestry Support Committee consisting of DARD, AEC, BEC, FEC and other was proposed to PPC already, but the actual operation of committee and planning for the committee is not yet started.</li> </ul>
		Capability of project implementation bodies	- Questionnaire/ interview survey	- DARD improved its capability to sustain the project achievements. However, the financial policy and plan of the provincial government should be examined when it is available.
		Capability and attitude of personnel in charge	- Questionnaire/ interview survey	- Trainees are capable in undertaking what they have learned during the training.
	Economic sustainability of local people (individual household and farmers' groups)	Capability of farmers' groups	- Questionnaire/ interview survey	<ul style="list-style-type: none"> <li>- 26% of questionnaire respondents answered that the farmers' extension club is physically and financially capable to continue project activities without external assistance to a great extent. 53% said it is capable in a certain extent. 16% of farmer respondents answered that they see economic incentives to continue the project activities even if there will be no further assistance from the government.</li> <li>- The Project also assisted the establishment of farmers' extension club at the pilot site 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. There are 43 clubs in Ca Mau, and this model demonstrated the potential for project sustainability and future expansion of technical assistance to other areas.</li> <li>- At the field level, an Agroforestry Extension Club was created to continue the project activities. The club was just established a few weeks ago with 32 HH. The remaining 8 HH are still considering the participation. In the club, 4 interest groups were created, which were the Working Groups under the JICA project.</li> <li>- According to a few interviewees, the involvement of AEC at the beginning of project was mainly as a contractor. But it evolved as a part of project implementer towards the end of project.</li> <li>- A community fire prevention group consists to 30-40 HH which receives training and equipments. They are supposed to make their commitment not to make fires and fight extinguish it when occurs.</li> </ul>
		Economic sustainability of project activities	- Questionnaire/ interview survey	- When asked, farmers failed to answer the cost-benefit of charcoal making, fishery and piggery, which indicates the lack of knowledge in home economics and household accounting. However, the farmers are continuing the livelihood activities introduced by the project, which indicates that the activities are generating income for the farmers.



## 付属資料 2 セミナーの記録

各年次の終了時期に合わせ、それまでの成果を紹介するセミナーを開催した。以下にその概要を示す。

### 1) 2004 年

#### Seminar on Promoting Wider-use of Melaleuca Wood

Date and Venue: 22nd February 2005  
 Conference room at a hotel (to be decided later) in Ho Chi Minh city  
 and at Thanh Hoa experimental forest of FSSIV.

Participants: about 30 persons including;  
 Japanese experts,  
 Counterpart researchers of FSSIV in Ho Chi Minh city,  
 Counterpart officials of DARD, FE, in Ca Mau province,  
 Representative of farmers in the project area in U Minh, Ca Mau,  
 Researchers and students of HCM University of Agriculture and Forestry etc.

Time	Subject and Lecturer	
8:00 ~ 8:30	Registration, Orientation(Organizing Committee)	
8:30 ~ 9:00	Opening Remarks	
9:00 ~ 9:30	1. Present status of supply, demand, and utilization of Melaleuca wood	( Dr. Nhan, VIFA
9:30 ~ 10:00	2. Possible use of wood vinegar and essential oil from Melaleuca biomass	Prof. Yatagai, Univ. of Tokyo
10:00 ~ 10:30	3. Possible use of Melaleuca for cement wood chip board and block	( Dr. Sato, Univ. of Tokyo )
10:30 ~ 11:00	4. Possibility of processing Melaleuca wood into timber or parket board	Dr. Murata, Forestry & Forest Products Institute
	Move to Thanh Hoa experimental station and Lunch	
14:00 ~ 14:40	5. New type kiln producing quality charcoal and wood vinegar ( lecture )	( Mr. Seki, JICA expert
14:50 ~ 15:20	6. New kiln producing quality charcoal and wood vinegar ( inspection )	Mr. Seki, JICA expert
15:30 ~ 16:00	7. Some results of efficacy tests of wood vinegar and charcoal application to agricultural crops conducted in Indonesia and Japan	( Mr. Nagatsuka, JIFPRO
16:00 ~ 17:00	8. Exchange of views on how to promote utilization of Melaleuca resources by farmers participation	( Lecturers and Participants)

## Plan of Seminar on Promoting Melaleuca Plantation

1 Date : 24 February 2005

2 Place : Meeting room on Ca Mau International Hotel and Site of the Demonstration Farm

3. Participants: about 50 persons including;

Counterparts of all working groups DARD and FE U Minh 1 (10-15 persons)

Representatives FSSIV (2-3persons) in Ho Chi Minh

Representatives MARD (1-2 person(s)) Ha Ha Noi

Staff of FFEs in Ca Mau Province (3 persons by each FFE)

Representative of farmers in the project area in U Minh, Ca Mau (4-5)

Other people from other organizations (10-12)

4. Agenda and time table

Time	Subject
8:00 ~ 8:30	Registration for the attendances (for travel allowance)
8:30 ~ 9:00	Opening Remarks (By Mr. Vinh or Mr. Dung)
9:00 ~ 9:30	1. Key note address on Melaleuca Planting Techniques (Dr. Chuong)
9:30 ~ 10:00	2. Key note address on Melaleuca Wood Use ( Dr. Nhan or Mr. Nagatuka JP Expert on Marketing )
10:00 ~ 10:30	3. Introduction on the project objectives and progress (Mr. Binh DARD Ca Mau)
10:30 ~ 11:00	4. Introduction the target areas for the rehabilitation of Melaleuca forest in the areas of the FFE U Minh 1 ( Mr. Miyazaki JICA Expert)
13:00 – 14:30	Field excursion to FE U Minh 1 Demonstration farm
14:30 ~ 15:00	5. Brief introduction FEE U Minh 1 and history of the forest fire ( Director of the FFE Uminh 1)
15:00 ~ 15:20	Move to Demonstration Farm
15:30 ~ 16:00	6. Introduction the activities for the Demonstration farm construction ( Mr. Thuan leader of the WG1 and WG3 )
16:00 ~ 17:00	Go back to Ca Mau

## 2) 2005 年次

**Time :** 15 – 17 / 2 / 2006

**Place :** Seminar Hall of International Hotel Ca Mau

### List of participants:

1. Mr. Tran Van Thuc, Vice Director of DARD Ca Mau
2. Mr. Ly Nhan, Vice Director of Department of Natural Resources and Environment
3. Mr. Nguyen Thanh Vinh , Vice Director of the Project's Implementation Committee
4. Mr. Nobumitsu Miyazaki, Team Leader of Japanese Expert Team
5. Mr. Masayuki Ako, Japanese Expert
6. Mr. Noriaki Seki, Japanese expert
7. Mr. Toshimasa Iida, JIFPRO
8. Dr Hoang Chuong, VIFA's expert
9. Dr Nguyen Trong Nhan, FSIV's expert
10. Dr Pham Hoang Nam , Lecturer of Ho Chi Minh University of Agriculture and Forestry
11. Mr. Do Tien Dung, Specialist of Forestry Department
12. Mr. Pham The Dung, Director of FSSIV
13. Mr. Pham Ngoc Co, ( FSSIV )
14. Mr. Nguyen Van Cat, (Department of Science and Technology)
15. Mr. Lam Dat Thuan (Department of Planning and Investment)
16. Mr. Le Ving Nghi, Deputy Head of Sub- Department of Forest Protection
17. Mr. Trinh Van Lien, Deputy Head of PPC CaMau's Office
18. Mr. Nguyen Thanh (Sub – Department of Forestry)
19. Mr. Nguyen Duc Bang (Sub – Department of Plant Protection)
20. Mr. Tran Manh Hung, FSSIV's engineer
21. Nguyen Thi Thu Van (Agriculture Breeding Centre)
22. Huynh Thi Tuyet (Agriculture Extension Centre)
23. Mr. Le Viet Binh, Project's Coordinator
24. Mr. Nguyen Ba Luc, Leader of Working Group 4
25. Mr. Nguyen Thanh Thuan, Leader of Working Group 1 and 3
26. Mr. Nguyen Tuyet Giao, Leader of Working Group 5
27. Mr.s Phuong Thu Tam, Administrative officer of Ca Mau DARD
28. Mr. Le Minh Loc, Project's Coordinator of JP Expert Office
29. Mr.s Le Nhu Y, Secretary of Project Office.
30. Mr.. Le Thanh Vu, Vice Director of U Minh II FFE
31. Mr.. Nguyen Van Lien (Vo Doi's Forest Protection Section)
32. Mr.. Dao Thanh Ngo (30/ 4 FFE)
33. Mr.. Dinh Tan Dinh (U Minh II FFE)
34. Mr.. Nguyen Thanh Bien (Song Trem FFE)
35. Mr.. Nguyen Vinh Phuoc (U Minh's Extension Office)
36. Mr.. Ngo Van Be, U Minh's Forest Protection Section
37. Mr.. Ho Truc Diep (VietnaMr.adio Station in Can Tho)
38. Mr.. Le Minh Khiem (Ca Mau Television Station)
39. Mr.. Nguyen Hoang Say (Ca Mau Radio Station)
40. Mr.. Vu Van Thanh (Khanh Lam Commune, U Minh district)
41. Mr.. Vo Van Lieu (Nguyen Phich Commune)
42. Mr.. Ho Van Khai, U Minh I's farmer
43. Mr.. Tran Viet Hong, U Minh I's farmer
44. Mr.. Nguyen Van Tung, U Minh I's farmer
45. Mr.. Tran Quang Thang, U Minh I's farmer

The workshop is held in three days, on the first two days, participants focus on hearing reports, presentations and

discussions and on the third day, the Project's Implementation Committee and participants will go for field observation and conduct wrap – up meeting of the workshop at FFE U Minh I

### **Contents of Workshop on Forest Fire Rehabilitation Project in U Minh Ha**

#### **A. Participant Introduction**

First of all , Mr. Binh , Project's Coordinator , welcome and introduce participants who take part in the meeting on behalf of the Project's Implementation Committee .

#### **B. Workshop opening and management**

Mr. Vinh , Vice – Director of the Project's Implementation Committee make a speech for the opening of the workshop .

#### **C. Report presentation**

Mr. Binh to present the report the progress of the project implementation .The report is divided into 5 parts

- I. Project Introduction
- II. Main activities of project
- III. Project achievements until the end of 2005
- IV. Evaluation

Mr. Hung, an FSSIV's engineer, to present the report on construction and trial production of Melaleuca charcoal in Ca Mau with the medium size model kiln. His presentation focused on the following points:

1. Steps constructing Japanese type kiln
  - 1.1 Objectives of Kiln Improvement
    - Wider Utilization of Melaleuca Wood
    - Production of high quality charcoal
  - 1.2 .Typical characteristics of Japanese type kiln
    - Low dome
    - Only one chimney for smoke discharge
    - Wood vinegar – retrieving unit
  - 1.3 . Necessary materials for kiln construction
  - 1.4 . Process of charcoal kiln construction
2. Process of charcoal making by using Japanese type kiln
  - 2.1. Material Preparation
  - 2.2. Charcoal making process
  - 2.3. By-products of charcoal making
  - 2.4 . Some points which need to be paid attention to in each time of charcoal making
3. Result of trial charcoal making in Ca Mau

Giao, leader of working group 5 to present his report on construction of household kiln and charcoal production

trial at farmer households in FFE U Minh 1. His report is divided into five main parts

- I. Bases for Kiln Construction
- II. Construction Process
  1. Preparation of Materials
  2. Kiln Construction
- III. Participants
  1. Name of participants
  2. Duration of the activity
- IV. Scale of the Charcoal Kiln
- V. Result of Charcoal making
  1. Result by First charcoal kiln
  2. Evaluation of the result.
    - + Farmers' evaluation
    - + Participating Officers' evaluation

After Mr. Giao finish his report, Mr. Vinh invite Dr. Nhan, an FSIV's expert, to present about the trial application of wood vinegar and charcoal powder in agricultural production – method and result. Dr Nhan's presentation focus on the following points

- Dilution method and Use of Wood Vinegar for Leaf Fertilization
- Dilution method and Use of Wood Vinegar for Soil improvement
- Arrangement of Experimental Garden for Using Wood Vinegar
- Arrangement of Experimental Garden for Soil improvement
- Sample Selection for Result Inspection
- Remarks

Furthermore, in his presentation, Dr Nhan also introduce to participants of the seminar how to make sheets for observation which he has helped progressive farmers in the project area including

- Sheet for observation of Wood Vinegar Experiment
- Sheet for observation of Soil improvement Experiment
- Sheet for observation of Harvest

Mr. Bien , a representative from Song Trem FFE , presented about using Melaleuca Wood to produce block board in Song Trem FFE ; initial results , advantages and difficulties . His report focus on the following parts

- I. Situation of Organization
  1. Organization
  2. Salary and Income
- II. Total Invested Capital
  1. Result of Investment Implementation

III. Production and Business

1. Production
2. Turnover

IV. Evaluation of causes

1. Advantages
2. Difficulties

V. Petitions

Mr. Binh, Project's Coordinator, continue another report on investigation of wood processing establishments and initial orientations for expanding the utilization of Melaleuca Wood in Ca Mau. The main points of his report are as follows

I. Investigating products and wood processing establishments in Hanoi

1. Defined contents in the investigation tour
2. Some conclusions through the investigation tour

II. Investigating chipboard processing establishments in Ben Tre Province and Cu Chi District

1. Objectives
2. Time and Object for Implementation
3. Implementation Result

III. Investigating products and wood processing establishments in Ho Chi Minh and surrounding provinces

1. Objectives
2. Time and Object for Implementation
3. List of Investigated Establishments
4. Acknowledged information from localities
  - 4.1. Situation of production
    - + Imported wood materials
    - + Wood material from planted forest
    - + Man made board material

4.1.2 . Products

4.2. Some exchanges that relate to the expansion of Melaleuca Wood Utility

IV. Result of Investigation in Long An Province

1. An Overview of Situation
2. Situation of Melaleuca Wood Utility
3. Situation of Melaleuca Wood Processing

V. Market and Product Analysis

VI. Orientation for expansion of Melaleuca Wood Utility in Ca Mau.

VII. Proposals and Petitions

- In terms of argument
- In terms of production reality

Dr Nam, a lecturer from University of Agriculture and Forestry in Ho Chi Minh, presents about potentials for

products, which are processed from Melaleuca Wood. His presentation is divided into four main parts

1. Problems arising
2. Situation of current export wood processing in Vietnam
  - Material sources
  - Types of export wood products
  - Establishments of export wood processing
  - Export turnover of forest products
3. Potentials for development of wood processing sector in Vietnam
  - Market Development
  - Material Area Development
4. Orientation for Development of Melaleuca Wood Processing in Ca Mau

### **The Second day**

16 / 2 / 2006 (Morning from 8.00 to 11.30 Afternoon from 13 .30 to 16. 30 )

#### **I. Report Presentation**

Mr. Miyazaki to present about participatory forest management plan in FFE U Minh I . Mr. Miyazaki's presentation focuses on the following topics

1. How to grasp the latest condition using satellite image
2. How to harmonize farmer's expectation
3. How to expand new technologies for Melaleuca planting
4. How to process data for management planning
5. To show the expected future

Mr. Luc, Leader of Working Group 5, to present about the campaign for forest fire prevention. Mr. Luc's presentation is divided into three main parts

#### **I. An overview of some main points**

1. Time
2. Advantages
3. Difficulties

#### **II. Implementation Result**

1. Inspecting the site to grasp the forest situation and socio- economic situation , organizing forest fire prevention of the project area
2. Making plans to organize training on forest fire prevention for inhabitant communities at FFEs , Forest Management Board ...etc.
3. Organizing to implement training for farmers on forest fire prevention
4. Compiling , printing and publishing materials of forest fire prevention
5. Constructing 200 No Fire notice boards , No Entry boards to warn forest fire at places of high

danger

### III. Implementation plan for 2006

Dr Hoang Chuong, a VIFA's expert, introduces the technical manual of Melaleuca plantation for farmers and how to promote Melaleuca plantation through the manual .The introduction about the manual focuses on the following points.

- Objectives
- Implementation methods
- Content of the manual
- Proposals for effective use of the manual
- Acknowledgement

Mr. Ako present about agro forestry activities program for improving livelihood of farmers. Mr. Ako mentions the following points in his presentation

- Objectives
- Background
- Enforcement plan
- What is the participatory approach?
- Steps of participatory approach

#### 1. Planning stage

- PCM Workshop
- Rules for PCM workshop
- Steps of PCM workshop
  - + Step 1 Problem analysis
  - + Step 2 Objective analysis
  - + Step 3 Making Community Action Plan Format ( CAP )
  - + Step 4 Study Tour
  - + Step 5 Land Use plan

#### 2. Implementation Stage

- 2.1 .Training
- 2.2 . List of the materials supplied to farmers 2004 – 2005

#### 3. Monitoring and Evaluation stage

- 3.1 Workshop for monitoring progress of agro forestry activities in demonstration farm
- 3.2 Workshop on monitoring CAP progress and evaluation agro forestry trainings
- 3.3 Establishment of Progressive farmers
- 3.4 Establishment of agro forestry supporting committee

#### 4. Action plan in 2006

Mr. Thang (a progressive farmer (household 23) in constructing pig raising model) express his gratitude to the project for supporting farmers in training on afforestation, forest fire prevention etc and then he gives brief



information about some implemented results thanks to help from the project.

- 85% Meleleuca trees grow well, bringing economic benefits for farmers
- Agricultural production (Collective Group 10)
  - + The first time, farmers do two crops a year and implement sowing with advantages and they themselves buy seeds for sowing
  - + 5 progressive farmers gets piglets (these progressive farmers raise piglets by applying techniques from training conducted by the project)
  - + The percentage of fresh water fish rising reaches 90%
  - + The percentage of industrial fish-raising reaches 40 – 50%
  - + Fruit trees and vegetables planting (harvest will be implemented in 2006)

Farmers in the project area have been improved their knowledge, they actively exchange knowledge and experiences from the trainings with each other.

**(3) 2006 年次**

**1) メラルーカ材利用促進セミナー**

**Time:** 14 – 15/ 9 / 2006

**Place:** within Ca Mau city and U Minh area

**List of participants:**

1. Tran Van Thuc: Vice Director of DARD Ca Mau
2. Tran Duc Thuan: HCM
3. Tran Huu Chien: HCM
4. Tran Thanh Cao: Forest Science Sub-Institute of South Vietnam (FSSIV)
5. Nguyen Trong Nhan: Expert, Forest Science Institute of Vietnam (FSIV)
6. Nguyen Thanh Vinh: Department of Science and Technology
7. Nguyen Van Tranh: DARD Ca Mau
8. Nguyen Van Duc: Sub-Department of Forestry
9. Lieu Minh Phong: Sub-Department of Forestry
10. Truong Thanh Quoc: Agriculture Extension Center
11. Ly Minh Kha: Agriculture Extension Center
12. Vo Minh Chien: Thuan Phat Enterprise
13. Quach Quang Bao: Thuan Phat Enterprise
14. Huynh Van Toan: Thuan Phat Enterprise
15. Pham Van Song: Agriculture & Rural Development Division in U Minh
16. Tran Manh Hung: Engineer, FSSIV
17. Chau Quoc Van: U Minh 1 FFE (Forestry and Fishery Enterprise)
18. Phan Thanh Cong: U Minh 1 FFE
19. Do Minh Luan: U Minh I FFE
20. Tran Phi Son: Song Trem FFE
21. Hoang Quoc Ni: U Min II FFE
22. Nguyen Hanh Phuc: U Minh III FFE
23. Pham Van Canh: Tran Van Thoi FFE
24. Dao Thanh Ngo: 30/4 FFE
25. Huynh Gop Cong: Farmer from U Minh 1
26. Pham Chi Nhan: Farmer from U Minh 1
27. Nguyen Hoang Cau: Farmer from U Minh 1
28. Pham Van Mong: Farmer from U Minh 1
29. Du Hoang Tuan: Farmer from U Minh
30. Nguyen Hoang Say: Ca Mau Television Station
31. Le Minh Khiem: Ca Mau Television Station
32. Pham Phuong Lai: Ca Mau Newspaper
33. Le Viet Binh: Project Coordinator
34. Nguyen Thanh Thuan: Leader of Working Group 1 & 3
35. Yoichi Nagatsuka: JICA Expert
36. Toshimasa IIDA: JICA Expert
37. Luong Viet Dung: Interpreter

The seminar was held in two days, on the first day, participants focus on hearing reports/presentations and discussions and on the second day, the Project's Implementation Committee and participants went for field observation and conducted wrap-up meeting of the workshop at U Minh area.

**Proceeding of the Seminar on promotion of wider-use of Melaleuca timber**

**The first day**

14/9/2006 (Morning: 8:00 to 11:30, Afternoon: 13:30 to 17:00)

### A. Introduction of participants

First of all, Mr. Binh, Project Coordinator, bade welcome to the participants then introduced participants who took part in the seminar on behalf of the Project's Implementation Committee.

### B. Opening address

Mr. Dac, Deputy Director of Ca Mau Forestry Department, made a speech for the opening of the seminar.

### C. Report/presentation

Mr. Nagatsuka explained about the objectives and overview of the WG5's activities and also recommended some idea for market strategy and extension/participation introducing detailed example.

- I. Objectives of WG5
- II. Over view of WG5
  1. Market Study for Wider-Use of Melaleuca Wood
  2. Election & Extension of New Processing Facilities
  3. Promotion by Utilization Plan & Capacity Building
  4. Some Hints for Further Development of Promotion Plan in the Future
    - 1) Marketing
    - 2) Extension & Participation

Following Mr. Nagatsuka's presentation, Mr. Binh presented necessity of promoting of wide-use of Melaleuca wood.

- I. Outline of activities by WG5
- II. Objectives to make the Promotion Plan on wider-use of Melaleuca wood
- III. Actual Situation of Melaleuca Wood Use in U Minh Ha

Following Mr. Binh's presentation, Mr. Bao, Thuan Phat Enterprise, reported result of test production of Melaleuca charcoal by model kiln that has introduced in Thuan Phat Enterprise (Former Ca Mau FFE).

- I. Summary of the way to construct the medium-sized charcoal kiln
- II. Material and operating way for charcoal production
- III. Result and Examination of/for the test production

After Mr. Bao's report, all of the participants took a tea break.

After the tea break, representative of farmer, Mr. Nhan, reported result of test production of Melaleuca charcoal by simple kiln for farmer instead of Mr. Toan. (Report document was prepared by Mr. Toan.)

- I. Improvement of the simple charcoal kiln (charcoal kiln for farmers)
- II. Procedure for operation of charcoal kiln (test production of charcoal)
- III. Effect of improvement of the kiln that came to light by test production
- IV. Evaluation on improvement of the kiln

Following Mr. Nhan's report, Mr. Luan, FFE U Minh 1, reported result of research on appraisal of charcoal quality through customer's eye. This study aims at comparing the quality of 3 kind of charcoal, such as charcoal made through project activity (Melaleuca), Mangrove charcoal, charcoal made by traditional method (Melaleuca) through customers experience.

- I. Introduction (Objectives of the research)

Attachment

- II. Procedure for the research (Period, Target Area (person) & proceedings)
- III. General information on the target area gathered customers' idea
- IV. Impression and idea by customers
- V. Result of the study on charcoal quality
- VI. Examination (Analysis), conclusion and recommendation

Mr. Luan reported result of trial application of wood vinegar and charcoal powder to agricultural crops that was operated in the demonstration farm, as first reporter after the lunch.

- I. Introduction
- II. Procedure for the trial application (Period, Selection of target crops, Setting of test plots)
- III. Result of trial application
- IV. Examination on the result of trial application

Following Mr. Luan's report, Mr. Kha, Agricultural Extension Center (AEC), reported result of trial application of wood vinegar and charcoal powder to agricultural crops that was operated by AEC.

- I. The way to operated the trial application
- II. Result of application of wood vinegar crop by crop and Examination of the data
- III. Conclusion and Recommendation

Following Mr. Kha's report, Mr. Hung, FSSIV, presented objectives and contents of the manual that explaining how to construct/operate charcoal kiln and how to use wood vinegar.

- I. Objectives and Target person to make the Manual
- II. Brief explanation of the contents of the Manual
  1. The way to construct simple charcoal kiln
  2. The way to operate the kiln
  3. The way to gather wood vinegar
  4. The way to use the wood vinegar

After Mr. Kha's report, all of the participants took a tea break.

After the tea break, Mr. Binh presented prospect of Melaleuca wood utilization in Ca Mau summarizing result of study tours.

- I. Outline of the process of proceedings
  1. Examination for the result on each activity in fiscal 2005
    - 1) Examination of the result of the Study tour for Hanoi
    - 2) Examination of the result of the Marketing study in Ca Mau
    - 3) Examination of the result of the Study tour for Ho Chi Minh
    - 4) Examination of result in Long Anh
  2. Examination of the result on each activity in fiscal 2005
    - 1) Examination of the result of the Study tour for Qui Nhon & Quang Ngai
    - 2) Examination of the result of the Study tour for Gia Lai & Dac Lac
    - 3) Examination of the result of the Study tour for Dong Nai & Binh Duong
- II. Prospect of Melaleuca wood use in Ca Mau

After Mr. Bin's presentation, Dr. Nhan, FSIV, presented promotion plan for utilization of Melaleuca wood (Main contents and proposals).

- I. Introduction
- II. Capability of Melaleuca wood use for Packet-board and Chip-board
- III. Industrial characteristics of Melaleuca Packet-board, Melaleuca Chip-board and examination of the result of study for each products
- IV. Proposal on wider-use of Melaleuca wood in Ca Mau

After Dr. Nhan's presentation, participants exchanged their views on the Seminar.

### **The second day**

15/9/2006 (Morning: 8:00 to 11:30 - observation, Afternoon: 14:00 to 15:30 - wrap-up meeting)

#### **A. Observation the site where AEC operates application test of wood vinegar**

The Project's Implementation Committee and participants went for the field observation where AEC operates efficacy test of application of wood vinegar to agricultural crops. They confirmed the efficacy through their eyes even though difference of growth among each plot was very small.

#### **B. Observation the situation of charcoal making by farmer kiln**

After observation of efficacy test of wood vinegar, every participant moved to the demonstration farm and observed the situation of charcoal and wood vinegar making by farmer kiln introduced by the Project. They confirmed structure of the kiln, quality of charcoal through their eyes. The farmer explained how to operate the kiln and expressed his impression on the new style charcoal making. The farmer had gain enough experience by more than 10 times of practice after kiln repairing in June.

#### **C. Wrap-up meeting of the Seminar**

Wrap-up meeting was held to summarize the information presented/reported through the Seminar and to conclude the result of the Seminar.

At the last of the meeting, Mr. Thuc presented the following opinion concluding the Wrap-up meeting.

- Marketing of *Melaleuca* wood is urgent matter in Ca Mau.
- In the future, DARD will request the AEC to continue trial application of wood vinegar to collect exact data for future promotion of wood vinegar application.
- I think that *Melaleuca* is prospective wood. For example, the factory in Song Trem, by their facilities, already produced more than 20 kinds of products from particle board; and some companies, businessman came to Ca Mau to contact for purchasing *Melaleuca* timber to make materials for producing paper powder, chipping wood,...
- DARD Ca Mau will decide to make strategy for promoting utilization of *Melaleuca* wood according to following four target uses; such as 1) Chip-board, 2) Joint block board, 3) Pile and 4) Charcoal & wood vinegar production aiming at exportation.

## 2) 最終セミナー及びハンドオーバー式典の計画

JICA/MARD/DARD Ca Mau Cooperation Project  
Forest Fires Rehabilitation Project Ca Mau Viet Nam  
Handing over Ceremony

### Final Seminar agenda

Date: November 16 (Thursday)

Time 9:00-16:30 in a Meeting room (Royal Hotel in Ca Mau)

Subjects: The Achievements by the Project

- a. Introduction of the project history (Video show)
- b. Key lecture for Disseminating Melaleuca Plantation ( Dr. Chuong)
- c. Achievements through the project activities (WG leaders and participated farmers)
- d. Results of Joint Evaluation (JICA/MARD)

### Time schedule

Time	Topic	Presentation
08:40-09:00	Registration of the participants	
09:00-09:10	Opening remarks and introduction the participants	Mr. Binh (Project coordinator)
09:10-09:40	Key lecture Melaleuca Plantation Technology	Dr. Chuong
09:40-10:00	Introduction of the project history	Mr. Thuc (Vice Director MARD)
10:00-10:20	Video Show : Introduction the project	Edited by Ca Mau TV
10:20-10:35	Coffee brake	
10:35-11:10	Achievements on WG 1 Training & Manual	Mr. Thuan WG1 leader
11:10-11:30	Achievements on WG 2 Demonstration Farm	Mr. Vu (Director U MInh 1 FFE)
11:30-13:30	Lunch brake	
13:30-13:50	Achievements on WG3 Agroforestry Model	Mr. Thuan WG3 leader
13:50-14:50	Voices from participated farmers	Progressive farmers
	Progressive farmers (4 persons)	
	Small size charcoal kiln	Farmer
	Middle size charcoal kiln	Tran Phat company
14:50-15:00	Coffee brake	
15:00-15:20	Achievements on WG 4 Fire awareness campaign	Mr Luc WG4 leader
15:20-15:40	Achievements on WG 5 Charcoal and Vinegar	Mr. Giao WG5 leader
15:40-16:00	Introduction of the Joint Evaluation	Mr. Thuc member of the Eva team
16:00-16:10	Closing remark and some announcements	Mr. Thuc(Vice Director MARD)

## Expecting Participants

- 1 MARD (DF)
- 2 MARD (ICD)
- 3 MPI
- 4 Director of FSSIV (HCM)
- 5 Mr. Tran Manh Hung, FSSIV's engineer (HCM)
- 6 Mr. Pham Ngoc Co, ( FSSIV ) (HCM)
- 7 PPC Ca Mau's Office
- 8 Department of Planning and Investment Ca Mau
- 9 Department of Science and Technology Ca Mau
- 10 Department of Natural Resources and Environment
- 11 Wetland Research Center Ca Mau
- 12 Dr. Hoang Chuong, VIFA's expert

## DARD

- 13 Mr. Tran Van Thuc, Vice Director of the Project's Implementation Committee
- 14 Sub Department of Forestry
- 15 Sub- Department of Forest Protection
- 16 Sub Department of Plant Protection
- 17 Head of General Planning Division, DARD
- 18 Mr. Nguyen Tran Thuc, AEC Ca Mau,(Evaluation team member)
- 19 Mr. Nguyen Thi Thu Van (Agriculture Breeding Centre)
- 20 Mr. Huynh Thi Tuyet (Agriculture Extension Centre)
- 21 Mr. Dun (Fishery Extension Centre)
- 22 Directors of FFEs (7 persons)
- 23 Tran Phat Company Ca Mau

## Districts

- 24 Vice Cahier person U Minh District PC
- 25 Agriculture department DPC (2 Districts)
- 26 ABC branch office in districts (2 Districts)
- 27 Khanh Lam Commune, U Minh district
- 28 Nguyen Phich Commune
- 29 Farmers from demonstration farm (5 persons)

## Project staff

- 30 Mr. Le Viet Binh, Project's Coordinator
- 31 Mr. Nguyen Ba Luc, Leader of Working Group 4
- 32 Mr. Nguyen Thanh Thuan, Leader of Working Group 1 and 3
- 33 Mr. Nguyen Tuyet Giao, Leader of Working Group 5
- 34 Mr. Le Minh Quan, Accountant officer
- 35 Ms. Phuong Thu Tam, Administrative officer

Attachment

- 36 Mr. Nobumitsu Miyazaki, Team Leader of Japanese Expert Team
- 37 Mr. Masayuki Ako, Japanese Expert
- 38 Mr. Le Minh Loc, Project's Coordinator of JP Expert Office
- 39 M.s Le Nhu Y, Secretary of Project Office.
- 40 Mr. Hoang Tran JP Office
  
- 41 Ca Mau Television Station)
- 42 Ca Mau News paper



JICA/MARD/DARD Ca Mau Cooperation Project  
Forest Fires Rehabilitation Project Ca Mau Viet Nam  
Handing over Ceremony

1. Time: December 17 (Friday)
    - 9:00-12:00 go to U Minh sites
    - 15:00 to 17:00 Ceremony
  2. Place: Meeting room of Royal Hotel Ca Mau
  3. Agenda (5 minutes for each speaker)
    - (a) Opening remarks (Mr. Thuc)
    - (b) Honor speech PPC representative
    - (c) Honor speech JP side (JP *consul* general Ho Chi Minh)
    - (d) Handing over some symbol (a set of CD stored all records of the project)
      - JP leader to Director MARD
    - (e) Gests speech
      - MARD representative
      - JICA representative
    - (f) Address of gratitude
      - Director DARD
      - JP Team Leader
    - (g) Closing remark ( Mr. Thuc)
- Expected Guests
- JP :1. A Representative come from Consular Office HCM
2. A representative JICA VN Office
- VN:1. A representative MARD
2. Vice Chair Person PPC Ca Mau
  3. Director DARD
  4. Directors of following organizations
    - Department of Finance
    - Department Investment and Planning
    - Depart of Science and Technology
    - Department of Natural Resources and Environment
  5. Vice Chair person of District U Minh
  6. Directors of FFE(s)
  7. Directors ABC, AEC, FEC
  8. Director of S Dep. Forest Protection
- Observers from JP consultant farm (JOFCA/JIFPRO)

## 付属資料 3 DARD による、2007 to 2010 の間の植林推進計画

## MELALEUCA PLANTATION PLAN BY NEW TECHNIQUES FOR U MINH HA

Period 2007 - 2010

(Agreed by DARD for obtaining the overall goal of the Forest Fire Rehabilitation Project)

No.	Organization	PLANTATION AREA BY YEAR														
		Including for 2nd period			2007			2008			2009			2010		
		Total	Industrial plantation	Plantation by farmers	Total	Industrial plantation	Plantation by farmers	Total	Industrial plantation	Plantation by farmers	Total	Industrial plantation	Plantation by farmers	Total	Industrial plantation	Plantation by farmers
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
I.	<b>TOTAL FOR THE WHOLE AREA</b>	<b>3037</b>	<b>1025</b>	<b>2012</b>	<b>517</b>	<b>180</b>	<b>337</b>	<b>685</b>	<b>220</b>	<b>465</b>	<b>850</b>	<b>265</b>	<b>585</b>	<b>985</b>	<b>360</b>	<b>625</b>
1	Tran Van Thoi FFE	300	50	250	50	10	40	60	10	50	80	10	70	110	20	90
2	Tran Hoi Commune	125	0	125	40		40	45		45	40		40	0		
3	U Minh I FFE	707	250	457	107	30	77	150	50	100	200	70	130	250	100	150
4	U Minh II FFE	390	110	280	60	10	50	80	20	60	110	30	80	140	50	90
5	30/4 FFE	260	135	125	50	30	20	70	30	40	70	35	35	70	40	30
6	Cai Tau Prison	430	430	0	100	100		100	100		100	100		130	130	
7	Breeding Center in U Minh District	180	0	180	40		40	40		40	50		50	50		50
8	U Minh III FFE (Khanh An Commune)	250	0	250	35		35	60		60	70		70	85		85
9	Song Trem FFE	395	50	345	35		35	80	10	70	130	20	110	150	20	130

**Note:** The area allocated for farmers as the Decision 181/CP is considered as FFE area.

付属資料 4 供与された重機のプロジェクト終了後の活用計画（2010年まで）

<b>CA MAU PROVINCIAL PEOPLE'S COMMITTEE</b> PIC OF REHABILITATION OF FIRED FOREST	SOCIALIST REPUBLIC OF VIETNAM  <u>Independence – Freedom – Happiness</u>  -----  Ca Mau, September 20, 2006
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**PLAN FOR USING EQUIPMENT AND MACHINE (2007 – 2010)**

No	Name of machine	Quantity	User	Use plan				Purpose	Equipment status	Remarks
				2007	2008	2009	2010			
1	Bulldozer Komatsu D41p - 6c	2	U Minh I Forestry and Fishery Enterprise, U Minh II Forestry and Fishery Enterprise	x	x	x	x	Plantation	a	
2	Bulldozer Caterpillar D3G LGP / CAT	2	U Minh III Forestry and Fishery Enterprise, Tran Van Thoi Forestry and Fishery Enterprise	x	x	x	x	Plantation	a	
3	Hydraulic Excavator CAT 315c (0.7)	1	Song Tren Forestry and Fishery Enterprise	x	x	x	x	Plantation	a	
4	Hydraulic Excavator CAT 312c (0.5)	1	U Minh I Forestry and Fishery Enterprise	x	x	x	x	Plantation	a	

## Attachment

5	Farm tractor	2	Tran Van Thoi Forestry and Fishery Enterprise	x	x	x	x	Vegetation treatment	a	
		1	U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
		1	U Minh II Forestry and Fishery Enterprise	x	x	x	x		a	
6	Cage wheel of tractor	2	Tran Van Thoi Forestry and Fishery Enterprise	x	x	x	x		a	
		1	U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
		1	U Minh II Forestry and Fishery Enterprise	x	x	x	x		a	
7	8 discs plough	1	U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
		1	U Minh II Forestry and Fishery Enterprise	x	x	x	x		a	
8	Trailer	1	U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
		1	Tran Van Thoi Forestry and Fishery Enterprise	x	x	x	x		a	
9	2 cutter, 2 Johndeer 51035		U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
10	Pontoon & engine	2	U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
11	Speed boat and engine	2	JICA PIC	x	x	x	x		a	
12	LCD projector	2	JICA PIC	x	x	x	x	Workshop,	a	

								training		
13	Generator	2	U Minh I Forestry and Fishery Enterprise, U Minh II Forestry and Fishery Enterprise	x	x	x	x	Lighting	a	
14	Composite boat 7.2 m length + FRP	2	U Minh I Forestry and Fishery Enterprise, Tran Van Thoi Forestry and Fishery Enterprise	x	x	x	x	Fire protection and other activities	a	
	GX 240 LH 8.0 HP	2	U Minh I Forestry and Fishery Enterprise, Tran Van Thoi Forestry and Fishery Enterprise					Fire protection and other activities	a	
	Inox 8.0 HP frame	2	U Minh I Forestry and Fishery Enterprise, Tran Van Thoi Forestry and Fishery Enterprise					Fire protection and other activities	a	
15	Composite boat 9.2 m length + FRP	2	U Minh I Forestry and Fishery Enterprise, U Minh II Forestry and Fishery Enterprise	x	x	x	x	Fire protection and other activities	a	
	GX 610 QZE4 18 HP	2	U Minh I Forestry and Fishery Enterprise, U Minh II Forestry and Fishery Enterprise					Fire protection and other activities	a	

## Attachment

	Inox 18 HP frame	2	U Minh I Forestry and Fishery Enterprise, U Minh II Forestry and Fishery Enterprise					Fire protection and other activities	a	
16	Laptop	2	JICA PIC	x	x	x	x		a	
17	Desktop + UPS	3	Agriculture and Rural Development PMU	x	x	x	x		a	
			Sub-DoF	x	x	x	x		a	
			Planning Division	x	x	x	x		a	
18	HP Laser jet 51000 (BW) Printer	1	Sub-DoF	x	x	x	x		a	
19	Digital camera	1	JICA PIC	x	x	x	x	Workshop, training...	a	
20	A3 scanner microtek 9800	1	Sub-DoF	x	x	x	x		a	
21	A0 Map printer HP	1	Sub-DoF	x	x	x	x		a	
22	High Speed Printer JP 3000	1	JICA PIC	x	x	x	x		a	
23	Compass	2	U Minh I Forestry and Fishery Enterprise	x	x	x	x		a	
24	Soil survey equipment									
	<i>Soil survey drills</i>	8	JICA PIC	x	x	x	x		a	
	<i>Glass for sample taking</i>	8	JICA PIC	x	x	x	x		a	

<p><b><i>Equipment status</i></b> a: very good (frequent maintenance, equipment is always in good condition) b: good (periodic maintenance) c: usable (when equipment is maintained) d: unusable (specific reasons)</p>		<p>PP Head of PIC Vice Head</p> <p>Tran Van Thuc</p>
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付属資料 5 (1) PDM and P0

プロジェクト名: 森林火災跡地復旧計画

Ver.No.0

ターゲットグループ: Ca Mau Province DARD/FD, FE, FSSIV のスタッフ及び デモンストレーションファーム予定地に居住する農民 (40 家族)

対象地域: カマウ省カマウ市、ウ・ミンハ 期間: 2004 年 3 月 ~ 2006 年 11 月 (33MM)

2004 作成日: 4 月 5 日

プロジェクトの要約	指標	入手手段	外部条件
上位目標			
適応技術がメコンデルタ地域の住民及び FE に利用される	適応技術を利用して 2,000ha の面積が植林される。	DARD 年次報告	
プロジェクト目標			
森林復旧実施のための必要技術及びウ・ミンハ地域の森林火災予防計画が開発され普及する。	100% の FSSIV、DARD カマウ及び林業公社のスタッフがプロジェクトで開発した技術に同意し、普及技術を実施したいと願う。	スタッフへのアンケート 農民の植林実績	メラルーカの木材価格が急落しない プログラム 661 によって農民へのメラルーカ植林の補助金及び / または融資が適応される。
成果			
ウ・ミンハ地域の造林適応技術が開発され普及する。	a-1 造林ガイドラインによるデモンストレーションファームの活着率が 85% を超える a-2. FSSIV、DARD カマウのスタッフがウ・ミンハでの造林適応技術の訓練を 18 回実施する。 a-3. FSSIV、DARD カマウのスタッフ及び農民がウ・ミンハ造林技術ガイドラインの技術を習得する。	モニタリングレポート	・メラルーカの木材価格が急落しない プログラム 661 によって農民へのメラルーカ植林の補助金及び / または融資
b. メラルーカ材のマーケット調査及び木材利用加工における知識・技術が造林活動に従事する住民の間で改善される。	b. FSSIV、DARD カマウのスタッフがメラルーカ材市場調査及びメラルーカ材利用のための訓練を 3 回開催する。	モニタリングレポート	資が適応される。
c. 森林火災防止の状況が改善される。	c. DARD カマウのスタッフによって森林火災予防訓	モニタリングレポート	



活動	投入		
<p>0.1 PDM/PO が合意される。</p> <p>0.2 ステアリングコミティーが発足する。</p> <p>0.3 苗木供給体制を整備する。</p> <p>a.1 ウ・ミンハ地区森林火災跡地の造林事業に適したメコンデルタ酸性硫酸塩土壌造林技術の応用手法が開発される。</p> <p>a.2 a.1 で開発された技術を普及するためのデモンストレーションファーム(産業造林用、アグロフォレストリー)を造成する</p> <p>a.3 メラルーカ造林技術に関する研修(技術研修、デモンストレーションファームでのOJT)を対象農民及び林業公社職員に実施する。</p> <p>a.4 林業公社による植林活動に対して技術的支援を行う。</p> <p>b.1 メラルーカ材市場調査を実施し、プロジェクト関係職員に市場調査の研修を行う。</p> <p>b.2 メラルーカ材利用促進計画を作成する</p> <p>b.3 メラルーカ材利用促進計画の実施を試行する</p>	<p>練システムが実行できるようになる。</p> <p>&lt;ベトナム国側&gt;</p> <p>1. プロジェクト責任者の任命</p> <p>プロジェクトディレクター DARD カマウ</p> <p>プロジェクトコーディネーター DARD カマウ</p> <p>デモンストレーションファーム マネージャー DARD カマウ</p> <p>森林火災予防マネージャー FPSI カマウ</p> <p>造林技術移転及び及び木材利用マネージャー FSSIV</p> <p>訓練マネージャー FD MARD</p> <p>1.2 カウンターパート</p> <p>1.3 管理職員</p> <p>1.4 事務員</p> <p>1.5 運転手</p> <p>2.施設・設備</p> <p>2.1 事務所及び日本人専門家のための必要な施設</p> <p>2.2 機材の設置及び保存場所</p>	<p>&lt;日本国側&gt;</p> <p>1. 短期専門家</p> <p>・業務主任 / 参加型森林管理(1)</p> <p>・参加型森林管理(2)</p> <p>・森林土壌 / 計画分析</p> <p>・森林火災予防</p> <p>・木材利用開発</p> <p>・アグロフォレストリー / 農業</p> <p>・木材利用 / 加工</p> <p>・モニタリング / 評価</p> <p>2. セミナー / 訓練(ベトナム国)</p> <p>ウ・ミンハ地区の林業公社の職員を対象としたメラルーカ造林技術訓練</p> <p>FSSIV 及び関係組織の職員を対象としたメラルーカ材利用技術訓練 / セミナー</p> <p>ウ・ミンハ地区の職員を対象としたメラルーカ材利用技術訓練</p>	<p>・酷い旱魃がおこらない</p> <p>スタッフが職務で訓練を受ける</p> <p>前提条件</p> <p>メコンデルタ酸性硫酸塩土壌造林技術ガイドラインの技術がウ・ミンハ地区で適応する。</p>

c.1 ウ・ミンハ地区の火災予防体制、対策を見直し、同地域での火災予防体制、制度を提案する。  
 c.2 森林火災予防訓練、広報活動を実施する  
 c.3 地域農民の生計向上のための研修を実施する

2.3 電気、エアコン、水、通信機器(電話、FAX 等)  
 2.4 プロジェクト実施のための土地及び必要施設  
 3.経費  
 3.1 ベトナム人スタッフの給与及び旅費の負担  
 3.2 労賃の負担  
 3.3 人民公社用デモンストレーションファームの造成費  
 3.4 農民用デモンストレーションファームの造成費  
 3.5 ストレーションファームでのアグロフォレストリー活動支援のための予算

カマウ省造林技術者を対象とした森林火災跡地復旧技術訓練  
 カマウ省の林業公社及びウ・ミンハ地域の住民を対象とした森林火災予防訓練  
 3. 研修(日本国)  
 4. 機材  
 デモンストレーションファーム造成のための機材  
 重機材

付属資料 5-2 Plan of Operation (PO)

添付資料4

Plan of Operation : ベトナム国 森林火災跡地復旧計画

Date:4th Apr. 2004

活動	目標/指標	03年度				04年度				05年度				06年度				責任者		資機材			
		4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	ベトナム国	日本国				
0.1 PDM/POが合意される。	プロジェクト運営体制、活動計画が決まる	—																	PD	業務主任/参加型森林管理(1)			
0.1.1 PD./PO案がDARD Ca Mau,FSSIVに了承される																			PCD				
0.2 ステアリングコミティーが発足する。		—																	PD				
0.3 苗木供給体制を整備する。	優良な性質を持つ苗木を生産する。																		PCD				
0.3.1 苗畑を整備する。																			PCD				
0.3.2 優良形質の種子を収集する。																			PCD				
0.3.3 育苗技術を改善する																							
0.4 実施委員会 (Ca Mau)が設置し、各活動に対応した責任者を決定する。			—																PCD			JICA ベトナム事務所	重機
0.4.1 各活動を実施するWGが設置され、それぞれのWGが勤務する事務所が整備される。				—														PD					
0.4.2 各活動を担うカウンターパートが指名され、プロジェクト活動実施事務所(HCM, Ca Mau, U Minh Ha 林業公社)に配置される。					—													PCD					
0.5 供与機材が決まる	重機機材リスト																		PCD				
0.6 デモンストレーションファーム対象地の土壌調査手法を確認する。	土壌調査計画が決まる																		PD	森林土壌 / 計画分析			









