



Forest Department
Ministry of Forestry
The Union of Myanmar

Japan International
Cooperation Agency



THE STUDY ON
INTEGRATED MANGROVE MANAGEMENT
THROUGH COMMUNITY PARTICIPATION
IN
THE AYEYAWADY DELTA
IN
THE UNION OF MYANMAR

Final Report
Volume III: Pilot Project 2003/2004



March 2005

 NIPPON KOEI CO., LTD.

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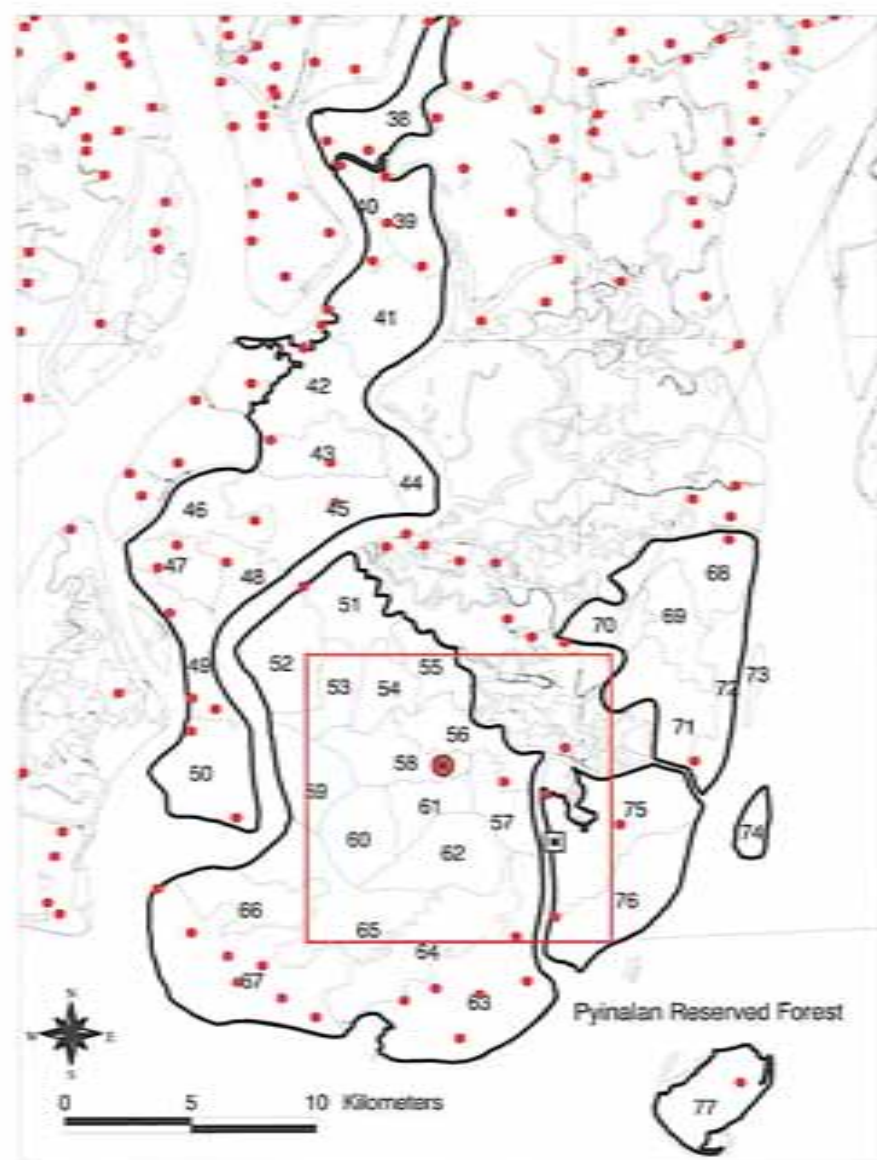
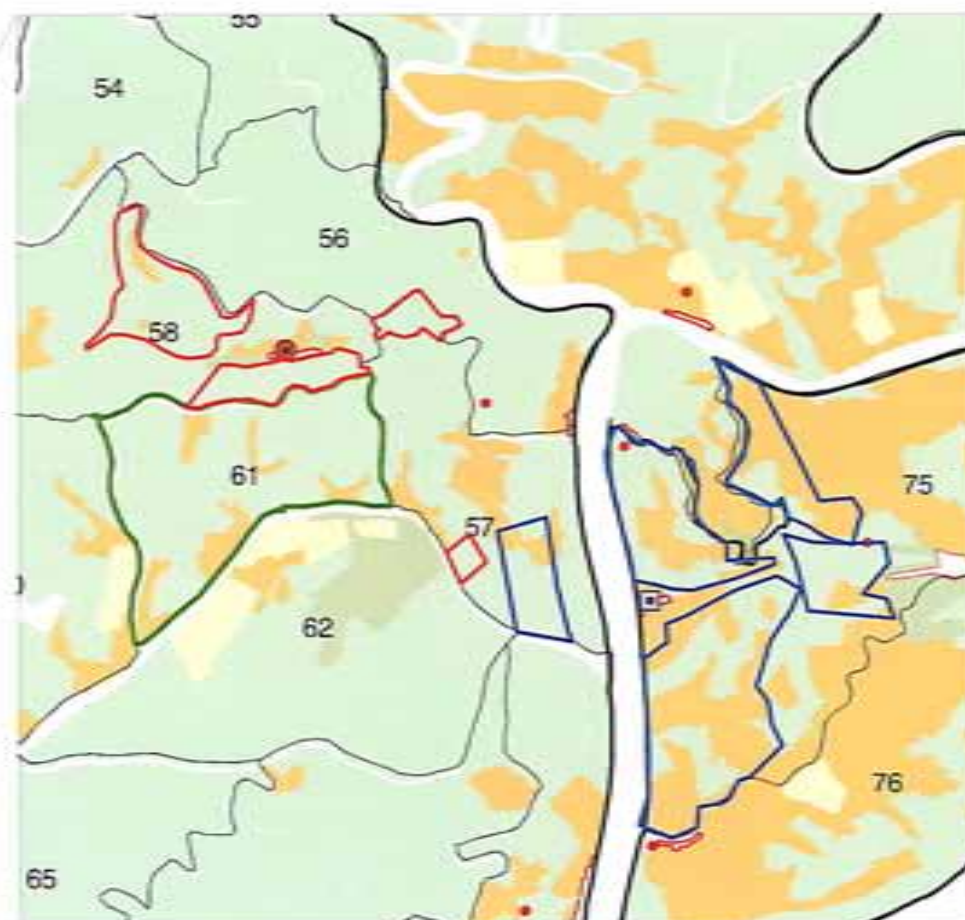
Final Report

Volume III: Pilot Project 2003/2004

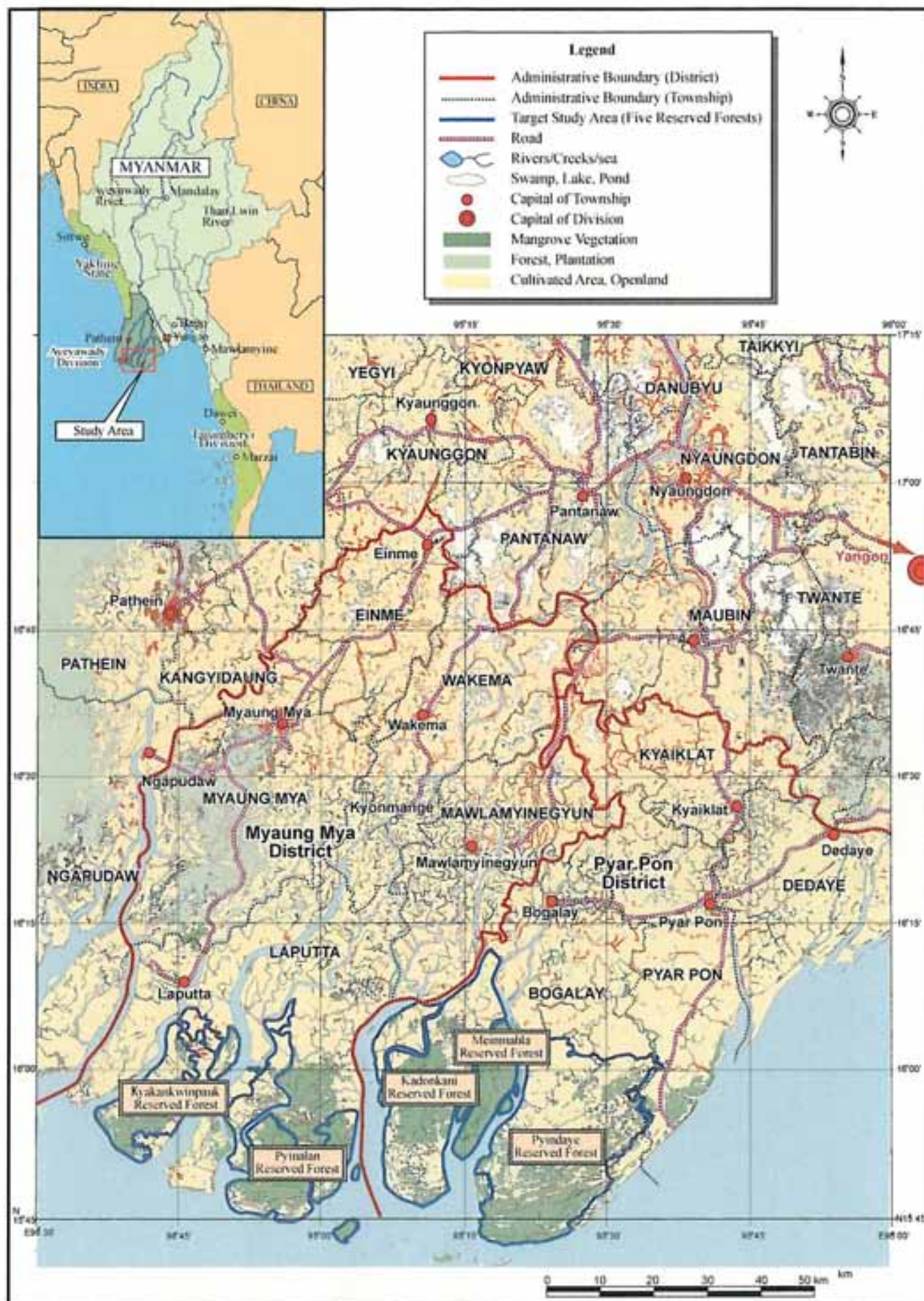
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Source: Topographic Map (2004), Forest Department, Ministry of Forestry



Location Map of Study Area

**THE STUDY ON
INTEGRATED MANGROVE MANAGEMENT
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IN THE AYEYAWADY DELTA**

FINAL REPORT

VOLUME III: Pilot Project 2003/2004

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CHAPTER 1 INTRODUCTION OF THE PILOT PROJECT 2003/2004

1.1 Background

Villagers settled in the Ayeyawady delta are mostly relying their livelihood on natural resources especially mangrove vegetation and aquatic resources. An excessive exploitation of natural resources in the delta has brought about serious environmental degradation, and forced villagers into poverty condition. To cope with this situation, the Forest Department (FD) initiated the Community Forestry Instruction (CFI) in 1995, and has continued efforts to improve and sustain mangrove resources and economic activities of the villagers by means of participatory approach on plantation, natural forest improvement operation (NFIO), and CF operation under CFI. However, CFI has not been widely expanded among villagers mainly due to lack of enough knowledge and intention of extension works of township forest officers and foresters who are directly in charge for the management of natural resources in the reserved forests of the delta. Taking this situation into account, the forest department decided to strengthen the management capability of regional forest officers and to promote a CF further in the delta area. In this context, the forest department and the Japan International Cooperation Agency (JICA) agreed to implement the Study on Integrated Mangrove Management through Community Participation in the Ayeyawady Delta (the study).

1.2 The Study

The study is undertaken by the study team (the study team) with close cooperation of the Myanmar counterpart personnel of FD based on the Scope of Work signed between FD and JICA. The Study consists of Phase I “Formulation of Integrated Mangrove Management Plan (IMMP) from February 2002 to January 2003” and Phase II “Implementation of the pilot project from February 2003 to October 2004”. The objectives of the Study are:

- To formulate an Integrated Mangrove Management Plan (IMMP) aiming at rehabilitation and sustainable use of mangrove resources;
- To implement a pilot project to confirm practicability of the IMMP and for capacity building of the stakeholders; and
- To transfer relevant technology to the Myanmar counterpart personnel through on-the-job training in the course of the Study.

1.3 Pilot Project

1.3.1 Objectives, Themes and Target Villages

Phase I of the study was started from February 2002 and in January 2003 the interim report was prepared for the draft IMMP, the pilot project implementation plan, and mangrove rehabilitation manuals.

The formulated pilot project had primary objectives as follows:

- To obtain data and information to confirm the practicability of the draft IMMP,
- To strengthen the capacity of the stakeholders concerned, and
- To contribute to the actual community forestry (CF) implementation by user groups and FD.

Based on the above primary objectives, themes to be verified in the pilot project were set as follows:

- Effectiveness of the CF extension,
- Possibility for diversification of CFI.

FD and the study team selected the Pyinalan Reserved Forest as the target reserved forest for the pilot project implementation among the five reserved forests, because the reserved forest 1) still has a certain extent of mangrove forest which requires conservation by CF activities, and 2) is one of the priority areas as a candidate site for the Integrated Resource Management (IRM) by FD. Of the five villages in the southern Pyinalan Reserved Forest targeted in the rapid rural appraisal (RRA), the Thar Yar Kone village and the Nyaung Ta Pin village were selected for the target villages of the pilot project for the reasons indicated in the following table.

Reasons for Selection of Thar Yar Kone and Nyaung Ta Pin Villages

Thar Yar Kone Village
<ul style="list-style-type: none">- Possesses strong unity as a group, and there is competent leadership- Possesses high interest for participating in CF- Already possesses experience in CF activities and thus can serve as a model to other villages- Possible to verify diversification of the CF activities, based on the previous CF experience- Adjacent to a candidate mangrove nursery site for the CF seedling production.
Nyaung Ta Pin Village
<ul style="list-style-type: none">- No experience in the CF activities but possesses high interest and possible to verify effectiveness of the CF extension- Located inside the proposed IRM area, and there is high necessity for joint buffer management and patrolling against illegal activities with FD- Rapid increase in village population, and enlightenment and implementation of mangrove conservation through the CF activities are of urgent necessity.

1.3.2 Timeframe and Component of Pilot Project

The pilot project 2003 was implemented from February 2003 to February 2004. Originally, the pilot project was scheduled to be implemented only during the fiscal year 2003. However, there were requests for the continuation of the pilot project from both FD and the target CF user groups. The request was approved by JICA and the pilot project

was continued as the pilot project 2004 for the fiscal year 2004. Based on lessons and findings from the pilot project 2003, the pilot project 2004 was implemented from May 2004 to October 2004. However, implementation of the pilot project 2004 was continued up to January 2005 as a part of “the consideration for the continuation of the pilot project” of the study.

The CF user groups and FD have been fully engaged in planning and drawing the CF management plan, implementation of the activities of the pilot project 2003 and 2004. The components of the pilot project 2003 and 2004 were selected by the stakeholders based on the proposal prepared by FD and the study team that are compiled in the draft IMMP. For, the FD capacity development pilot project in 2004, leftover components of the Thar Yar Kone FD integrated mangrove nursery pilot project in 2003 were included.

Schedule and Components of the Pilot Project 2003 and 2004

Pilot Project	Period	Major Component
Pilot 2003	Project Feb. 2003 – Feb. 2004	Planning, implementation and evaluation for: - Thar Yar Kone Village CF - Nyaung Ta Pin Village CF - Thar Yar Kone Forest Department Integrated Mangrove Nursery - The Forest Department Frontline Staff Capacity Development
Pilot 2004	Project May 2004 – Oct. 2004 Oct. 2004 – Jan. 2005	Planning, implementation and evaluation for: - Forest Department Capacity Development - Thar Yar Kone and Nyaung Ta Pin CF Planning and implementation for: - Consideration of pilot project continuation activities - Continuation of remaining pilot project activities

1.3.3 Pilot Project 2003: Objective and Scope of Works

The pilot project 2003 consisted of four components, namely 1) Thar Yar Kone Village Community Forestry pilot project, 2) Nyaung Ta Pin Village Community Forestry pilot project, 3) Thar Yar Kone Forest Department Integrated Mangrove Nursery pilot project, and 4) Forest Department Frontline Staff Capacity Development pilot project. The specific purpose of the pilot project 2003 is shown below:

Specific Purpose of Pilot Project

Pilot Project	Specific Purpose
1) Thar Yar Kone village CF	Diversification of CF
2) Nyaung Ta Pin village CF	Extension of CF
3) Forestry Department Integrated Mangrove Nursery	Capacity development of FD for supporting the CF activity
4) Forest Department Frontline Staff Capacity Development	Capacity development of the FD frontline staff to extend CF

1.3.4 Pilot Project 2004: Objective and Scope of Works

The pilot project 2004 was composed of 2 components, 1) Forest Department Capacity Development pilot project 2004 (for Management and Support of the Community Forestry) and 2) Thar Yar Kone and Nyaung Ta Pin Village Community Forestry pilot project 2004.

The concept of the pilot project 2004, improving the CF supporting capacity of FD and the CF implementation capacity of the CF user groups for enabling the rehabilitation of mangrove resources through sustainable CF activities, was refined from lessons obtained during the implementation of the pilot project 2003. Figure 1.1 visualizes the concept of the pilot project 2004.

The specific purposes of the pilot project 2004 were same as the pilot project 2003. The FD capacity development pilot project was for diversification and capacity development of the CF support by FD, whereas the CF pilot project was for diversification and capacity development of the CF implementation by CF user groups.

The components of the pilot project 2004 were prepared based on the following basic agreement among the user groups, FD and JICA.

- The pilot project 2004 would include only new activities apart from the pilot project 2003 allowed by CFI and the forest law in the reserved forest,
- The pilot project 2004 would cover the not accomplished activities planned under the pilot project 2003, and
- The pilot project 2004 would target only the CF user groups of Thar Yar Kone Village and Nyaung Ta Pin Village.

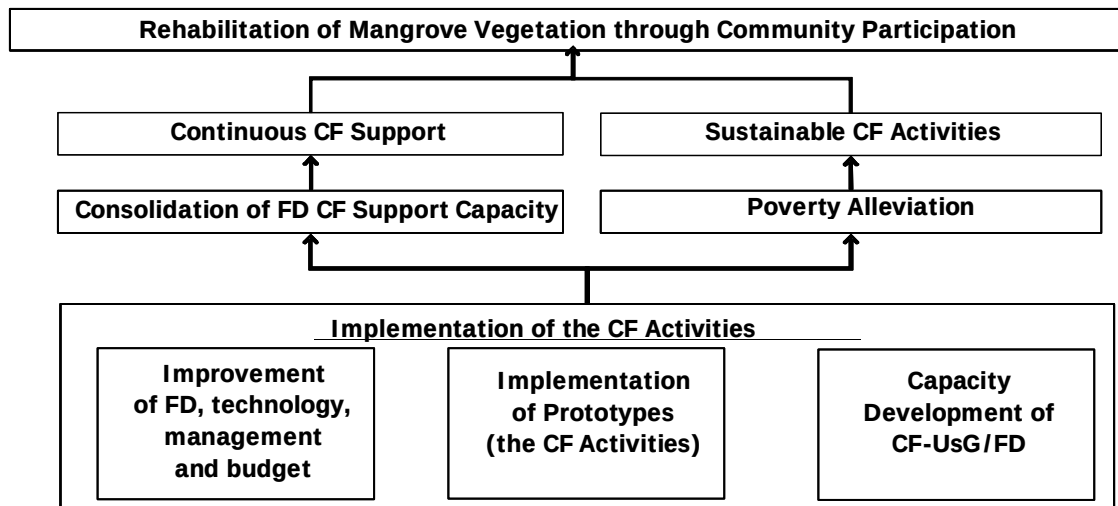


Figure 1.1 Basic Concept of Pilot Project 2004

The Figure 1.2 shows image flow and relationship of the pilot project 2003, the pilot project 2004, and the study. The obtained lessons through implementation of the pilot project would be fed back to finalize the IMMP.

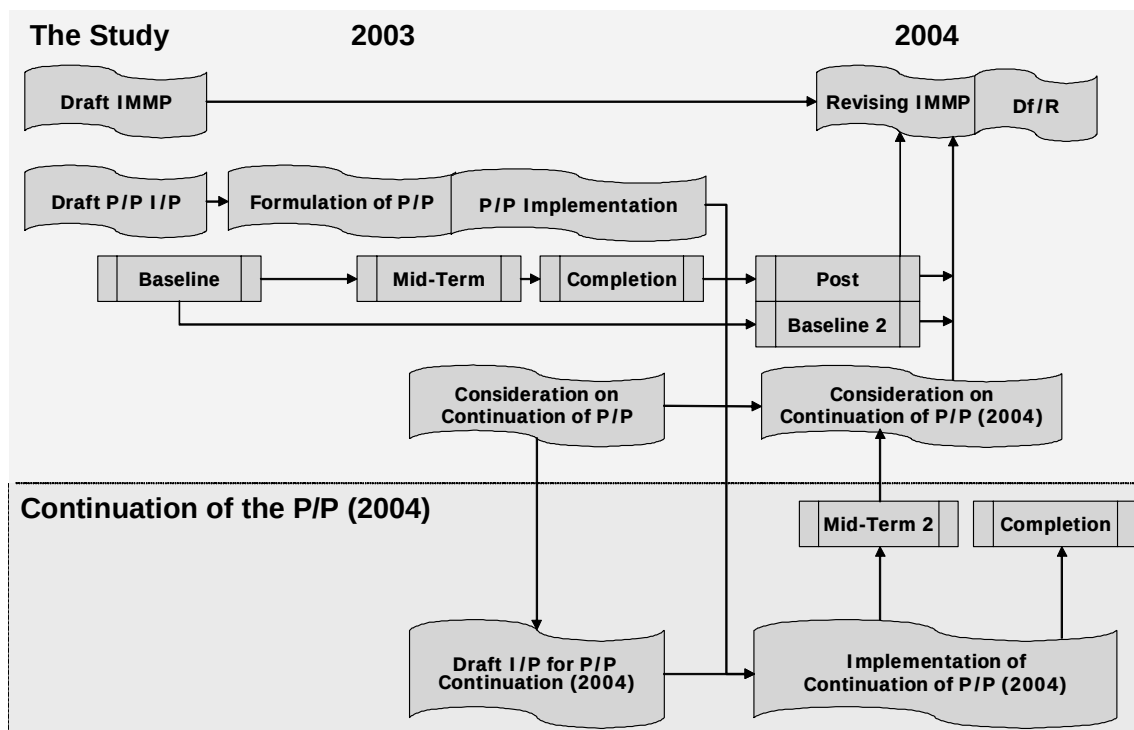


Figure 1.2 Flow and Relationship of the Pilot Project 2003/2004 and the Study

CHAPTER 2 FORMULATION AND IMPLEMENTATION OF THE PILOT PROJECT 2003

2.1 Overall Implementation Procedure

The overall implementation procedures for the pilot project 2003 are indicated in the following table. For the two CF pilot projects, the preparation started from formulation of CF user groups and certification of the formulated CF user groups in accordance with the procedure designated in CFI. Also, the procurement of a subcontractor was the key procedure for conducting the Thar Yar Kone village CF, the Nyaung Ta Pin village CF, and the Thar Yar Kone FD Integrated Mangrove Nursery pilot projects.

Implementation procedures in Pilot Project 2003

1) Formulation of Pilot Project
<ul style="list-style-type: none">- Formulation of user groups- Preparation of the CF management plans- Preparation of pilot project plans- Approval of the CF management plan and issue of the CF certificates
2) Implementation
<ul style="list-style-type: none">- Procurement of subcontractor and trainers- Commencement ceremony for the pilot project- Preparation of action plans for pilot project implementation- Organization of implementation setup- Implementation
3) Mid-term Evaluation
<ul style="list-style-type: none">- Physical progress check- Mutual understanding program- Mid-term evaluation workshop
4) Completion
<ul style="list-style-type: none">- Completion check (physical progress, evaluation, analysis)
5) Consideration for Continuation

2.2 Planning of Pilot Project 2003

Through a series of workshops in the selected villages, the draft pilot project implementation plan including user group formulation, land allotment, and component selection, was developed with participatory approach by villagers and FD in March 2003.

2.2.1 Target Area and User Group of the Pilot Project 2003

Pilot project sites were in and around the Thar Yar Kone village and the Nyaung Ta Pin village located in the forest compartment Nos. 57, 58 and 75 of the Pyinalan Reserved Forest in the Laputta Township.

In the workshops, FD and the study team presented the background, purpose, and contents of pilot projects, and called for participation to the villagers. Finally, 65 households in the Thar Yar Kone and 81 households in the Nyaung Ta Pin expressed their

will to participate the pilot project. All households in the Nyaung Ta Pin village were the first time to apply for CF, whereas in the Thar Yar Kone village, the households except for one subgroup were already established user group in 1998. Based on the location and occupation of the user group members, user group of the Thar Yar Kone village was divided into 6 subgroups and user group of the Nyaung Ta Pin village was into 9 subgroups as shown below.

Subgroups and Households of User Group Members

Village	No. of Subgroups in User Group	User Group Member Household
Thar Yar Kone	6	65
Nyaung Ta Pin	9	81
Total	15	146

2.2.2 Preparation of Community Forestry Management Plan

In accordance with the draft pilot project implementation plan, the Laputta Township FD office in collaboration with the study team worked out preparation of a CF management plan with the user group members who newly applied CF. The CF management plan for each user group member was prepared for the next five-year CF activities and it should be revised at least every 5 years during the 30 years CF application period.

2.2.3 Preparation of Community Forestry Pilot Project Plan

Concurrent with the CF management plan, the draft pilot project implementation plan of Thar Yar Kone and Nyaung Ta Pin Villages CF pilot projects were elaborated through additional workshops, user group and subgroup discussions, and site verifications with user group and FD. The user group members selected components of the pilot project from 17 proposed schemes in the draft Integrated Mangrove Management Plan (IMMP). Then, a technical examination related to feasibility and applicability of the selected components was conducted by FD and the study team. The following Table shows the pilot project component selected by user group. It contained several new trials concerning to diversification and intensification of CF such as agroforestry, agroforestry nursery, school woodlot, demonstration of plantation, and capacity development of user group in addition to conventional plantation and natural forest improvement operation (NFIO).

The Myaung Mya District FD office granted CF certificates to the applied user groups on 23 July 2003 after checking the CF management plan. However, the certificate was granted for the first two years of the 5 year CF management plan.

Components included in the Thar Yar Kone and Nyaung Ta Pin CF Pilot Projects

Pilot Project	Component	Item	Area
Thar Yar Kone Village CF	1. Community Forestry (CF)	- Plantation	17.49 ha
		- NFIO	10.45 ha
		- Agroforestry	1.80 ha
		- School woodlot (CF intensification)	4.00ha
	2. Agroforestry	- Agroforestry Nursery	-
		- Home garden	0.50 ha
	3. CF Intensification	- School renovation	-
	4. Capacity Development	- Water filtration material	-
- School agroforestry (fruit seedling)		-	
- Group leader training		-	
- Study tour for mutual understanding		-	
Nyaung Ta Pin Village CF	1. Community Forestry (CF)	- Plantation	53.05 ha
		- Demonstration plantation	5.00 ha
		- NFIO	14.97 ha
		- Demonstration NFIO	1.50 ha
	2. Agroforestry	- Homestead woodlot	0.92 ha
		- Demonstration farm	0.08 ha
	3. Capacity Development	- Group leader training	-
		- Study tour for mutual understanding	-

2.2.4 Plan Formulation for the Thar Yar Kone FD Integrated Mangrove Nursery pilot project

The Thar Yar Kone FD Integrated Mangrove Nursery pilot project consists of 1) nursery construction, 2) nursery operation, and 3) equipment procurement. As for the nursery construction, a detail design including demarcation of nursery site, facility layout, structure, and specification was drafted by FD and the study team in May 2003. A seedling production plan and capacity of the nursery was decided based on 1) seedling requirements of user group for year of 2004 and after, 2) FD's future plan for direct forestry operations in the southern Pyinalan RF, and 3) extension potential of CF in the southern Pyinalan RF. The component is summarized below.

Component of the Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project

Component	Item	Quantity	Component	Item	Quantity
Nursery Construction	1. Nursery Bed		Nursery Construction	7. Demonstration and Monitoring	
	- FD type Nursery	3,235m ²		- River Bank Stabilization Fence	200m
	- Natural Nursery	1,011m ²		- Water Gage Station	2
	- Germination Bed (shading facility)	24m ²		8. Renovation	
	2. Nursery Road			- Thar Yar Kone CF Extension Center	1 l.s.
	- Main Road	530m	Nursery Operation	1. Seedling Production	625,000
	- Access Road	120m		2. Materials & Equipment for Seedling Production	1 l.s.
	- Nursery Road	780m			
	3. Jetty	1			
	4. Water Reservoir				
	- Freshwater Pond	1			
	- Water Tank (concrete &	2+2			

Component	Item	Quantity	Component	Item	Quantity
	plastic)				
	5. Stack Yard		Procurement of	1. For Nursery Operation	
	- Seedling Stack Yard	100m2	Nursery	- Generator,	1
	- Soil Yard (stock pile & mixed soil)	364 m2	Equipment	- Pumps (engine, tread)	1/1
	6. Temporary Building			- Rechargeable Battery	1
	- Nursery Office	72m2		- Inverter	1
	- Residence 1 & 2, Workers Hut	36+72+360m2		- Seedling Transportation Boat	1
	- Warehouse 1 & 2, Seed Storage	72+36 m2		2. For Demonstration & Extension	
	- Generator house, Fuel Storage	18+36 m2		- Water Gage	2
	- Rest Shade for Workers	72 m2		- Portable Salinity Meter, pH Meter	2
	- Incinerator	1 set		- Binoculars	2

2.2.5 Plan Formulation for the FD Frontline Staff Capacity Development Pilot Project

The FD Frontline Staff Capacity Development pilot project consists of 1) training of FD frontline staff at the Thar Yar Kone Extension Centre (TYKEC) and 2) training at the Central Forestry Development and Training Centre (CFDTC). This pilot project aims at capacity development of the FD frontline staff through actual implementation and monitoring of the pilot project and 10 trainees were nominated by FD in the Laputta Township to receive the training in total.

Component of the FD Frontline Staff Capacity Development Pilot Project

Training	Training Topic	Trainees	Duration	Remarks
1. Training at TYKEC				
(1st session)	1) participatory development and CFI management, 2) mangrove technical guidance, 3) consolidation activities of CF,	5 trainees	May to June in 2003 (10-day-session)	
(2nd session)		10 trainees	Oct to Nov in 2003 (10-day-session)	(5 trainees from the first session attend as trainer)
2. 1. Training at CFDTC				
	"Training for Extension Staff"	for deputy ranger		organized by COMFORT*
	"Community Forestry Development Training Course on Extension Staff Training"	for a deputy ranger for range officer	August March	organized by CFDTC.

COMFORT=Community Forestry Training and Extension Project.

2.2.6 Procurement of Subcontractor and Trainers

The Thar Yar Kone Village CF, the Nyaung Ta Pin Village CF, and the FD Integrated Mangrove Nursery pilot projects were implemented by subcontracting under the study team. A subcontractor was procured through competitive bidding in accordance with the JICA's regulation. A bidding document was distributed to the short listed 3 eligible

organizations on 8 May 2003, and their tender documents were submitted on 14 May 2003. The Forest Resource Environmental Development and Conservation Association (FREDA) was awarded as a successful bidder from technical point of view. After an approval from the JICA Headquarters in Japan, the study team and FREDA signed a contact agreement for pilot project implementation on 23 May 2003.

Trainers for the FD Frontline Staff Capacity Development pilot project were selected with FD by evaluation of CVs and interviews in the middle of May 2003.

2.3 Institutional Framework of the Pilot Project 2003

The implementation and organizational structure of the pilot project 2003 is described in Figure 2.1. The study team directly conducted the operation and the management of the FD frontline staff capacity development pilot project. On the other hand, the subcontractor of the study team, FREDA conducted the actual operation and management of the remaining three pilot projects under the study team.

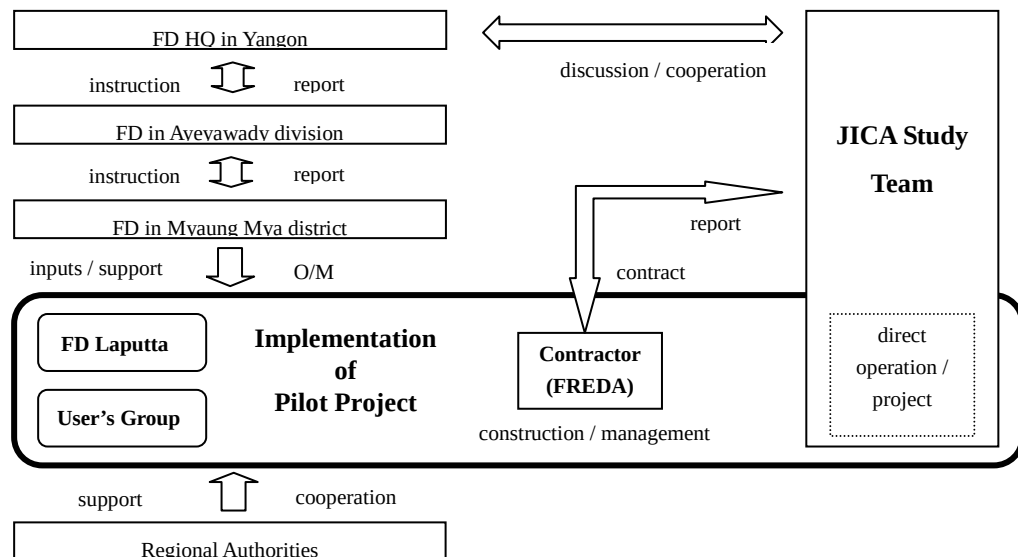


Figure 2.1 Organization Structure of Pilot Project 2003

Concerned organizations as the stakeholder of the pilot project are summarized as follows.

(1) FD

The FD appointed the assistant director of the Myaung Mya District FD office as a project director who had direct responsibility and jurisdiction of the pilot project. Under the control of the Ayeyawady Division FD office, the Myaung Mya District FD office supervised and instructed the Laputta Township FD office for the pilot project

implementation. The following Figure shows implementation setup of FD for the pilot project.

(2) User Group

The CFI defines the organization of CF user group that lead by 5 management committee members of i) chairman, ii) secretary, and iii) three committee members. To strengthen the management capacity of user group and to apply participatory development method, the pilot project formulated subgroups under user group. Decision making and administration of CF activities is concentrated to the management committee of user group. Communication between the management committee and the user group members was done through subgroup leader's meeting with other user group members.

(3) JICA Study Team

For supervision and technical assistance of the pilot project, the study team established a team of national consultants which was composed of a participatory development expert, an agroforestry expert, and a procurement/construction engineer. The national consultants supervise and monitor the pilot project and its result was regularly reported to the study team.

(4) FRED A

FRED A established an implementation setup consisted of a monitoring/supervision team and a field operation team. The monitoring/supervision team, composed of a team leader, a mangrove expert, an agroforestry expert, a participatory development expert, a procurement expert, and a construction expert, gave technical guidance to the field operation team. The field operation team was composed of a project director, a Thar Yar Kone CF in charge, a Nyaung Ta Pin CF in charge, an integrated nursery development, and six field technicians.

2.4 Components of the Pilot Project 2003

2.4.1 Preparation of Action Plan for the Pilot Project Implementation

Based on the contact agreement for the pilot project implementation, the subcontractor (FRED A) commenced a field survey for preparation of an action plan of the pilot project. The FRED A held participatory workshops with user group for preparation of the action plan of the Thar Yar Kone and Nyaung Ta Pin Villages CF pilot project. The action plan for the FD Integrated Mangrove Nursery pilot project was formulated by series of tripartite meeting among FD, the study team, and FRED A. The pilot project action plan

was drafted in July 2003 and it was elaborated and finalized by detailed field verifications and consideration of socioeconomic and natural conditions of the target villages. The following tables show the summary of action plan (The detail work quantity of the action plan are indicated in Attachment 1-1).

Components of Action Plan for Thar Yar Kone and Nyaung Ta Pin Villages CF Pilot Project

Pilot Project	Component	Item	Area
Thar Yar Kone Village CF	1. Community Forestry (CF)	- Plantation - NFIO - School Wood Lot (CF intensification)	12.73 ha 28.97 ha 1.00 ha
	2. Agroforestry	- Nursery - Home Garden	0.50 ha 0.50 ha
	3. CF Intensification	- School Renovation - Water Filtration Material - School Agroforestry (fruit seedling)	- - -
	4. Capacity Development	- Group Leader Training - Boat tour for mutual understanding	- -
Nyaung Ta Pin Village CF	1. Community Forestry (CF)	- Plantation - Demo Plantation - NFIO - Demo NFIO - School Woodlot	5.49 ha 2.00 ha 52.06 ha 0.00 ha 0.50 ha
	2. Agroforestry	- Homestead/woodlot - Demonstration Farm	1.00 ha 0.08 ha
	3. Capacity Development	- Group Leader Training - Boat tour for mutual understanding	- -

Components of Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project

Component	Item	Quantity	Component	Item	Quantity
Nursery Construction	1. Nursery Bed	1.5 ha	Nursery Construction	7. Demonstration and Monitoring	
	- FD type nursery	3,960m ²		- River bank stabilization fence	200m
	- Natural nursery	576m ²		- Water gage station	2 set
	- Germination bed	72m ²	Nursery Operation	8. Renovation	
	- Non-mangrove (shading facility)	162m ²		- Thar Yar Kone CF Extension Center	1 l.s.
	- (shading facility)	1,755m ²	Procurement of Nursery Equipment	1. Seedling Production	625,000
	2. Nursery Road			2. Materials & Equipment for Seedling Production	-
	- Main road	245m		1. For Nursery Operation	
	- Access road	420m		- Generator,	1
	- Nursery road	675m		- Pumps (engine, tread)	1/1
Nursery Construction	3. Jetty	1 set		- Rechargeable battery	1
	4. Water Reservoir			- Inverter	1
	- Freshwater Pond (80m3)	1		- Seedling transportation boat	1
	- Water Tank (concrete & plastic)	2/2		2. For Demonstration & Extension	
	5. Stack Yard	72m ²		- Portable salinity meter, pH meter	2/2
	- Seedling stack yard	72+72m ²		- Binoculars	2
	- Soil Yard (stock pile & mixed soil)				
	6. Temporary Building	84m ²			
	- Nursery office	36+72+360			
	- Residence 1 & 2, Workers hut	m ² 72+36 m ²			
	- Warehouse 1 & 2	18+36 m ²			
	- Generator house/Fuel storage, Seed storage	72 m ²			
	- Rest shade for workers	1 set			
	- Incinerator				

For the commencement of FD Frontline Staff Capacity Development pilot project, the study team prepared an action plan based on the pilot project implementation plan.

2.5 Implementation of the Pilot Project 2003

2.5.1 Commencement Ceremony of the Pilot Project

A commencement ceremony of pilot project was held in Laputta Township on 26 May 2003. The Assistant Director of the Myaung Mya District FD office announced the commencement of the pilot project under the FD's initiative and authority and it was acknowledged to the participants of the ceremony. Major participants were the secretary of Laputta Township Peace and Development Council, officers from the agriculture department and the fishery department in Laputta Township, representatives of the Peace and Development Councils of concerned village tracts, representatives of user group, and representatives from the JICA Myanmar office.

2.5.2 Implementation Schedule of the pilot project 2003

The implementation period of the pilot project 2003 was about 13 months from February 2004 to February 2005. The following table indicates the overall work schedule of the pilot project 2004.

Overall Implementation Schedule of Pilot Project 2003

Subject		Year	2003												2004																																							
		Month	2				3				4				5				6				7				8				9				10				11				12				1				2			
		Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																
1 Overall Work Schedule																																																						
1.01	Finalizing for selection of theme, RF and village for implementation of P/P																																																					
1.02	Workshop with villagers for P/P formulation (component and sites)																																																					
1.03	Preparation of P/P implementation plan (2nd draft)																																																					
1.04	Preparation of Mangrove Management and Planning Map for P/P																																																					
1.05	Preparation of CF Management Plan																																																					
1.06	Preparatory work for subcontracting for implementation of P/P																																																					
1.07	Contract for subcontracting for implementation of P/P																																																					
1.08	Implementation of P/P																																																					
	- Preparation of Action Plan of UsG P/P																																																					
	- Designing Thar Ya Kone FD Mangrove Nursery																																																					
	- Implementation of P/P (Procurement, construction, operation & management)																																																					
1.09	Self-monitoring of P/P by P/P UsG																																																					
1.10	Mid-term evaluation of P/P																																																					
1.11	Termination of the P/P																																																					
1.12	Hand over the P/P to FD																																																					
1.13	Supervision of subcontracted work for P/P implementation																																																					
	- Construction, procuremen, and operation and management																																																					
	- Midterm evaluation																																																					
	- Post evaluation (scheduled on May, 2004)																																																					

The detail implementation schedule of each pilot project is indicated in Attachment 1-2.

2.6 Physical Result of the Pilot Project 2003

2.6.1 Thar Yar Kone Village and Nyaung Ta Pin Village CF Pilot Projects

The physical results of the Thar Yar Kone Village and Nyaung Ta Pin Village CF pilot projects were verified during the completion check conducted from 13 January to 2 February 2004. The completion check was conducted for all of operations and activities under the pilot project which include not only the CF plantation and natural forest improvement operation (NFIO) but also activities such as demonstration plantation, school woodlot, agroforestry nursery, individual homestead agroforestry and other CF intensification activities. The actual field check was conducted by visiting all of sites with a composite team comprising representatives from concerned user groups, CF management committees, subgroup leaders, FD, FRED, and the study team.

(1) Thar Yar Kone Village Achievement

Though a component, namely the school woodlots, was not certified under CF, the

majority of the planned activities were implemented except for the water filtration component under the CF intensification. The following table shows the achievement of the pilot project in the Thar Yar Kone village in comparison to the CF management plan for year 2003 and the pilot project action plan.

Achievement of Thar Yar Kone Village Community Forestry Pilot Project

Thar Yar Kone Village Community Forestry Pilot Project				
Pilot Project Component		Plan	Achievement(Feb. 2004)	
		Area(ha)	Area(ha)	%
1. CF	Plantation	12.73	11.97	94
	NFIO	28.97	18.81	65
2. Agroforestry	Agroforestry	1.80	1.80	100
	Agroforestry nursery	1 unit (0.11ha)	0.11	100
3. CF Intensification	School woodlot	4.00	4.00	100
	Home garden	0.50	0.50	100
	School renovation	1 unit	1	100
	Water filtration material	1 unit	0	0
	School agroforestry	1 unit (0.03ha)	0.03	100
4. Capacity Development	Group leader training	1 unit	Done	100
	Mutual understanding	1 unit	Done	100

Source: JICA Study Team

In terms of operated area, the plantation was 94% achievement, whereas NIFO was 65% of the original plan. The achievement of NFIO still lagged behind the target of the CF management plan by the end of January 2004. It increased by 22 % from October 2003 to January 2004 based on the continued activities in the dry season. During the rainy season the user group members were very much busy for economic activities, and they disfavored the pruning and thinning of *Rhizophora* stands because they considered the pruning and thinning would cause some damages to aquatic resources due to tannin content. Agroforestry and CF intensification components under pilot project achieved 100% progress in terms of area or unit, except for the water filtration material. The water filtration activity was not possible because a fresh water source which was targeted for water filtration had been affected by salt water during an abnormal high tide, and not feasible for water filtration.

Group leader training and mutual understanding program under the capacity development components were originally subcontracted components to be implemented by FRED A. However, FRED A could not manage to organize the program by itself. Thus the study team, in collaboration with FD, took the initiative and two programs were conducted in 20-23 October 2003 for the mutual understanding program, and from 1-31 December 2003 for the group leader training.

(2) Nyang Ta Pin Village Achievement

The following table shows the achievement of the pilot project in the Nyaung Ta Pin

village in comparison to the CF management plan for year 2003 and the pilot project action plan.

Achievement of Nyaung Ta Pin Village Community Forestry Pilot Project

Nyaung Ta Pin Village Community Forestry Pilot Project				
Pilot Project Component		Plan	Achievement (Feb. 2004)	
		Area(ha)	Area(ha)	%
1. Community	Plantation	5.48	5.28	96
	NFIO	52.06	38.20	73
2. Agroforestry	Demo Plantation	5.00	5.00	100
3. CF Intensification	School Woodlot	0.50	0.50	100
	Homestead/woodlot	30HH (1.00 ha)	1.00	100
	Demo Agro-farm	0.50	0.30	60
4. Capacity Development	Group Leader Training	1unit (training)	Done	100
	Mutual Understanding	1unit (training)	Done	100

Source: JICA Study Team

In terms of operated area, the plantation was 96% achievement, whereas NIFO was 73% of the original plan and had similar tendency as Thar Yar Kone village, though, the total target area for NFIO was nearly twice larger than Thar Yar Kone village. The low achievement in NFIO activities resulted from some members who were not really engaged in the CF activity. One of reasons was that five members who had already transferred to other villages lost their interests in continuing CF. Agroforestry and CF intensification components under the pilot project achieved 100% progress in terms of area or unit, except for the demo agro-farm. The demonstration agro-farm activity was not completed due to unavailable planting materials that FRED A should have procured.

The situation was the same with Thar Yar Kone village for the group leader training and mutual understanding program under the capacity development components, thus the study team took the initiative and two programs were conducted in October 2003 for the mutual understanding program, and from December 2003 to January 2004 for the group leader training.

(3) Seedling Survival Rate of CF Plantation and Gap Planting in CF NFIO Area

In terms of the seedling survival, the Nyaung Ta Pin's plantation and the NFIO-gap planting had an average survival rate of 50 %, while Thar Yar Kone had a lower average survival rate of 35 %. Inappropriate planting techniques and timing, unsuitable species planted and lack of tending (care and maintenance) were some factors that caused the overall average survival rate of 43 % of both plantation and the NFIO areas.

Seedling Survival Rate

Operation	TYK	NTP	Average
Plantation Area	40%	57%	48%
NFIO (Gap Planting)	26%	45%	38%
Average Survival	35%	50%	43%

Source: JICA Study Team

(4) Seedling Supply to CF

The actual number of seedlings, particularly mangrove species, provided by FREDa was different from the CF management plan. In the management plan, the seedling number was set by species and was approved by FD based on the requirement of the user group members and technical feasibility. However, FREDa could not provide the exact number of seedling by species set in the CF management plan to the user group members nor informed such difficulties to FD and the study team.

The table below shows the achievement of seedling supply in two villages. Not only lacking in the number of seedling supply but also the species were not distributed according to the management plan. In average, the user group members got 20% of the seedlings of their management plan requirement.

Achievement of Seedling Supply to User Group

Item		Management plan requirement	FREDa distribution	Consistency number
TYK	Number of seedlings	80,100	39,990	17,735
	%	100%	50%	22%
NTP	Number of seedlings	109,000	39,595	20,510
	%	100%	36%	19%
Total	Number of seedlings	189,100	79,585	38,245
	%	100%	42%	20%

(5) Actual Participation of User Group Members in 2003 CF Operations

Out of 64 user group members in Nyaung Ta Pin village, 18 members planned to establish mangrove plantation while 64 members intended to conduct NFIO. However, there were five user group members who did not participate in the actual operation of natural forest improvement although some of them participated in the plantation activity accordingly due to transfer of settlement to another villages and lost interest in participation. On the other hand, out of 49 user group members in Thar Yar Kone village 20 and 38 members planned to participate in plantation and NFIO, respectively. The actual percent of participation in Thar Yar Kone village was 100% which is higher by 7 % to the 92 % participation in Nyaung Ta Pin village.

Actual Participation of User Group Member in CF Operations in 2003.

Item	TYK CF (N=49)			NTP CF (N=64)		
	Target Members	Actual	Percent Participation	Target Members	Actual	Percent Participation
NFIO	38	38	100	64	59	92
Plantation	20	20	100	18	18	100

(6) Some Initiatives by User Group as Indicator to Sustain CF Activities

There are some initiatives of user group that can be considered as potential to sustain CF activities even beyond the pilot project as follows.

Initiatives by User Group as Indicator to Sustain CF Activities

1) 17 and 9 user group members of Thar Yar Kone village and Nyaung Ta Pin village collected seeds/propagules, raised their own seedlings and planted these self secured planting stock without relying to the seedling support and technical assistance of FRED A and FD
2) Nyaung Ta Pin village user group established a village nursery upon suggestion of the study team through FD which demonstrate the villager's capability to raise their own planting stock requirement
3) There are 26 user group members who supplemented the FRED A's seedling provision and transplanted the natural regeneration planting stock collected from nearby adjacent existing mangrove forest which had a higher survival than the seedlings provided by FRED A
4) Some initiated to raise seedling inside their CF area near the planting site to reduce effort in transporting, avoid seedling injuries or damages and to facilitate the planting
5) Some marked mother trees and put a stake in its natural regeneration as potential planting stock for transplanting in their nearby planting site
6) Some planted non mangrove species in high ground area as trial such as <i>Ka Thit</i> , <i>Samanea saman</i> and <i>Albizia procera</i> which they raised/secured by themselves
7) Some preferred and prioritized to plant in sparsely vegetated areas to provide shade to newly planted seedling up to 2 years which afterward an opening should be provided to grown up sapling favorable to hasten growth vigorously. Initially up to 2 to 3 years most mangrove species prefer to grow under partially shaded area and once reached a sapling stage it will become light demanding. Thus a moderate or high intensity NFIO is necessary after 2 to 3 years
8) Some collected propagules of <i>R. apiculata</i> , <i>R. mucronata</i> and <i>B.gymnorhiza</i> by themselves and planted directly in the low ground and middle ground areas with a very satisfactory growth rate and survival
9) Most of them had practical knowledge on species site matching based on species distribution and composition in different ground level
10) Most of them preferred to conduct moderate and high intensity level of NFIO to use the wood product (fuel wood, poles, piles and timber) as a result of the forest improvement cutting or operation.

(7) Rules and Regulations

The user group started the preparation of rules and regulations from April 2003. From 30 December 2003 to 5 January 2004, the user groups and FD held the rules and regulations workshop in the Thar Yar Kone Extension Center with the support from the study team. The site-in-charge of FRED A in Nyaung Ta Pin village also participated in the workshop. 15 villagers of Thar Yar Kone village and 16 villagers from Nyaung Ta Pin village including user group members and 4 of non-user group members discussed the draft rules and regulations. In Thar Yar Kone village, the draft was discussed with the whole user group members in January. Further discussion and building consensus and understanding is needed before finalizing the rules and regulations. In Nyaung Ta Pin village, the draft

has not been shared among the whole user group members because many members were away from the village as casual laborers.

(8) Sales Voucher

For the sustainable CF activity, it is important for the user group members to get production and benefit from their CF area. During the completion check, the management committee members of both of the villages and many of the user group members told that the procedure of the production is not clear yet. The study team and FD prepared the draft sales voucher.

(9) Monitoring

FREDA lacked in monitoring and supervision of the CF activities especially in Thar Yar Kone village, while Nyaung Ta Pin village site-in-charge of FREDA was better in building good relationship with user groups. Almost all the monitoring was done by the supervisors of the study team, except FD sent one forester to conduct field check for 5 user group members in Nyaung Ta Pin village. The management committee in Nyaung Ta Pin village told that they need more frequent monitoring by FD.

(10) Monthly Progress Report

FREDA also lacked in supporting user group to prepare monthly progress report. Although the study team supported user group for the preparation, it was difficult for user group members for filling in. Hence, the study team revised the monthly progress report form.

(11) Understanding of CFI by User Group

Information gathered during the completion check included the level knowledge of User Group on the content of their individual management plan in terms of 2003 target operation, different activities, seedling requirement, prescribed outcome of operation or activities.

- Knowledge on Community Forestry Management Plan

The User Group of Nyaung Ta Pin village had better knowledge and understanding on the terms and conditions of their individual management plan than User Group of Thar Yar Kone village. An average of 32% of the User Group members of Nyaung Ta Pin village fully understood on the important information of their plan as compared to an average of 13% of the User Group members in Thar Yar Kone village.

The difference in understanding between two villages came from difference in the content

of their management plan. In Thar Yar Kone village, except for subgroups 3 and 6, the remaining subgroups which were certified in 1998, did not have much information for individual CF sites, regardless of CF sites were allocated individually.

Knowledge on Community Forestry Management Plan

Item	Knowledge on CF Mgmt. Plan		Knowledge on Plan for 2003 CF Operation	
	Nyaung Ta Pin	Thar Yhar Kone	Nyaung Ta Pin	Thar Yhar Kone
Level of Knowledge				
Full/Complete	32%	13%	88%	49%
Partial/Incomplete	42%	49%	12%	45%
No idea	26%	38%	0%	6%

Note: Full/Complete: the User Group member could explain the target area, operation and seedling for plantation

Partial/Incomplete: the User Group member could explain about his/her management plan, but not all information

No idea: the User Group member did not remember the management plan

- Knowledge on Plantation and NFIO Activities

22 % and 62 % of the User Group members in Nyaung Ta Pin village were completely and partially able to relate the different activities prescribed in their management plan into the actual work undertaken in each respective CF areas. In Thar Yar Kone village, only 2% could fully described the activities and majority (64%) could partially relate the activities described in the management plan. There were more the User Group members (34%) in Thar Yar Kone village compared to 16 % in Nyaung Ta Pin village who could not relate their actual field activities to each individual plan.

Level of Knowledge of User Group Members on Different Activities of NFIO-Plantation

Level of Knowledge	Nyaung Ta Pin	Thar Yhar Kone
Full/Complete	22%	2%
Partial/Incomplete	62%	64%
No idea	16%	34%

Note: Full/Complete: the User Group member could explain the target area, operation and seedling for plantation

Partial/Incomplete: the User Group member could explain about his/her management plan, but not all information

No idea: the User Group member did not remember the management plan

- Knowledge on the Prescribed Outcome of Activities

Since only the spacing is specified in the management plan, the User Group members had difficulty in understanding on the importance or rationale of the specification of survival rate and height/size. Thus, both Nyaung Ta Pin village and Thar Yar Kone village could not fully understand the output specification of the plantation and NFIO. In Nyaung Ta Pin village, 38 % had incomplete understanding, and 62 % had no idea on the output specification required in the management plan. On the other hand, Thar Yar Kone village

had higher percentage of response of no idea (68%) and partially understood (32%) on the output specification.

Level of Understanding of User Group Members on the Output Specification

Level of Understanding	Nyaung Ta Pin	Thar Yar Kone
Full/Complete	0%	0%
Partial/Incomplete	38%	32%
No idea	62%	68%

Note: Full/Complete: the user group member could explain the expected survival rate and size-height.

Partial/Incomplete: the user group member could explain the the expected survival rate and size-height, but not all information

No idea: the user group member did not know the expected survival rate and size-height

- Reasons on the Lower Level of Knowledge of User Group of Thar Yar Kone village on Management Plan

The User Group of Thar Yar Kone village was organized during the UNDP phase 2 and the certificate of CF was issued in 1998. The FD prepared the management plan and most of the User Group members of Thar Yar Kone village were not able to participate in the demarcation, stock-vegetation mapping, and management planning. The User Group of Nyaung Ta Pin village and subgroup 3 and 6 of Thar Yar Kone village were actively and directly participated in the demarcation, stock-vegetation mapping, setting up the target and in planning of different activities for 2003 which maybe the primary reasons of their higher level of knowledge and understanding of their individual management plan. The level of knowledge and understanding may increase their consciousness level to be responsible in achieving their plan/target.

2.6.2 Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project

(1) Procurement

Up to the completion check, only 7 % procurement for the nursery operation equipment, and 21 % for the nursery equipment were procured by FRED A. However by the termination of the contract, FRED A made efforts to procure the un-procured and unqualified equipment and achieved an increase to 47% and 98% for the nursery operation equipment and nursery equipment respectively. The detail of procured equipment under the pilot project 2003 is summarized in Attachment 1-3A.

Result of Procurement of Nursery related Equipment

Item	Procurement (%) by Cost	
	2 Feb. 2004	15 Feb. 2004
Nursery Operation Equipment	7	47
Nursery Equipment	21	98

(2) Construction Management

The study team confirmed approximately 81% progress by the termination of the contract. Nursery beds were evaluated only as 50% completion because the construction was not satisfactory for proper seedling production, though the bed excavated area was in accordance with the action plan. A water reservoir was constructed but intrusion of salty water was identified and it was beyond FREDAs capacity to reconstruct the water reservoir during the contract period. Therefore, the study team evaluated the water reservoir as an incomplete construction. The detail of achieved construction under the pilot project 2003 is summarized in Attachment 1-3B.

Result of Nursery Construction

Component	Progress by Cost (%)
	15 Feb. 2004
1.1 Nursery Bed	52.2
1.2 Nursery Road	98.9
1.3 Jetty	100.0
1.4 Water Reservoir	0.0
1.5 Stack Yard	98.4
1.6 Temporary Building	95.8
1.7 Water Storage	96.7
1.9 Demonstration/Monitoring Facility	84.1
1.10 CF Center Renovation	100.0
(Average %)	80.7

(3) Seedling Production

The study team evaluated that only 44% of the total required seedlings for mangrove species, and only 33% of the total required seedlings for non-mangrove species were acceptable as the achievement of the seedling production by FREDAs, which resulted in very low outcome. In terms of the species, 187,000 seedlings of *Avicennia officinalis* were produced, which correspond to 70% of achieved mangrove species production. Only *Bruguiera gymnorrhiza* achieved the target quantity of the 26 species planned and produced. Since, FREDAs was not able to provide seedling production records in a timely manner to FD and the study team, the figure and the actual conditions of the seedling production were only available from physical progress checks conducted by the study team during the mid-term evaluation and at the completion check. The detail of seedling produced under the pilot project 2003 is summarized in Attachment 1-3C.

Result of Seedling Production

Species	the FD Plan (Target)	the FREDA Record	Acceptable Seedlings	# of Species Fulfilled the Target Amount
Mangrove	600,000 (100%)	292,440 (49%)	264,220 (44%)	1/20
Non-Mangrove	25,000 (100%)	21,000 (86%)	8,143 (33%)	0/06

2.6.3 FD Frontline Staff Capacity Development Pilot Project

Two sessions of training at the Thar Yar Kone CF extension center were conducted by the study team for the Laputta Township FD frontline staff (deputy ranger officers and foresters). The training comprised the following subjects, 1) participatory development and the CFI management, 2) mangrove technical guidance, and 3) consolidation activities of CF.

For the training at the Central Forest Development and Training Center (CFTDC), two deputy ranger officers from the Laputta Township were dispatched as the trainees for the CF development training course held in August 2003. However, Laputta Township FD office had dispatched deputy ranger officers who were not assigned as the counterpart staff of the study or the pilot project.

Summary of Training under FD Frontline Staff Capacity Development Pilot Project

Training Name	Description
- Training of FD frontline staff at Thar Yar Kone CF Extension Center	1 st session: May 27 to June 2003 , 5 trainees 2 nd session: October 20 – November 7, 10 trainees
- Training at CFDTC	2 deputy ranger officers from Laputta Township attended the training at CFDTC in August 2003

In the beginning of the 2nd Thar Yar Kone training, half of trainees had not enough knowledge of mangrove management and/or CF. During the training, they expressed willingness of participation and understood the training contents well except agroforestry and buffer zone management.

2.7 Completion and Evaluation of the Pilot Project 2003

2.7.1 Monitoring and Evaluation Methods

The monitoring and evaluation methods conducted in the pilot project 2003 are summarized in the following table. The mid-term evaluation was conducted in October 2003, and aimed at reflecting the result on further operation and management of the pilot project 2003. The completion check was conducted in February 2004 and its primary objectives were to inspect and evaluate a final achievement of the pilot project 2003, and to obtain key factors and lessons to be integrated in the post evaluation of the pilot project 2003 and the IMMP. Based on the result of the completion check, an evaluation was conducted to identify 1) current assets, 2) anticipated assets, and 3) needs of FD and user groups were evaluated. The factors of current assets and anticipated assets are composed of the five sub-factors; human capital, social capital, physical capital, financial capital and natural capital.

Generally, regular monitoring and recording by FD, user groups and the subcontractor were very weak or nearly absent during the implementation of the pilot project 2003.

Monitoring and Evaluation Methods of Pilot Project 2003

1) Regular Recording/ Monitoring
<ul style="list-style-type: none"> - Minutes of workshops and meetings - Physical checks by concerned stake holders - Bi-weekly/ monthly progress reports by the CF user groups - Records by FD - Work records and monthly progress reports by subcontractor - Supervision records and monthly progress reports by the study team
2) Mid-term Evaluation
<ul style="list-style-type: none"> - Confirmation of physical progress, problems, and obstacles based on physical checks (site checks) and existing records - Workshops, mutual understanding programs and cross visits for activation and consolidation of potential of the stakeholders - Physical checks, workshops, and interviews for evaluation of development potentials of stakeholders
4) Completion Check/ Evaluation
<ul style="list-style-type: none"> - Self evaluations, surveys, and site checks for achievement and lessons of the CF activities for the TYK and NTP Villages CF Pilot Projects - Site checks for the TYK FD Integrated Mangrove Nursery Pilot Project - Self-evaluations and user group interviews for the FD Frontline Staff Capacity Development Pilot Project

2.7.2 Completion Ceremony

A completion ceremony of the pilot project was held on 2 February 2004 at the Thar Yar Kone Community Forestry Extension Centre. The ceremony aimed at mutual understanding among the stakeholders concerned about termination and conclusion of the pilot project, and extension of CF to adjacent villages. The user group members, FD in Myaung Mya District and Laputta Township, villagers from nearby villages, and the study team were in attendance at the ceremony. In the morning, it focused on the conclusion of the Thar Yar Kone Village and Nyaung Ta Pin Village CF pilot projects including 1) to encourage user group for continuing CF, 2) to share experiences and lessons of successful CF activities, and 3) to disseminate of CF to adjacent villages. In the afternoon, it was the FD Thar Yar Kone Integrated Mangrove Nursery and FD Frontline Staff Capacity Development pilot projects focusing on 1) to recognize important roles of the FD frontline staffs, 2) to understand completion situation of nursery construction, procurement and supply, operation and management, 3) to acknowledge a property transfer of the nursery to FD, and 4) to confirm objective, operation and management methods of the nursery.

2.7.3 Potential of Thar Yar Kone and Nyaung Ta Pin CF User Groups

(1) Potential of Thar Yar Kone CF User Group as of the Completion Check

The study team kept monitoring and evaluated the change happened to the capitals. The

description below is the potential change of User Group in Thar Yar Kone village during the pilot project period.

Potential of Thar Yar Kone CF User Group

Capital	Rating/Evaluation
<u>Bridging social capital</u>	Rating: good enough for CF implementation
Through several trainings and CF activities, the User Group members build a better relationship with FD. The User Group trusts FD more because FD devised a countermeasure against illegal weir problems. However, FD needs to keep facilitating User Group for the CF activity, working for technical assistance, illegal weir, illegal cutting control, and explaining production procedure of CF.	
<u>Bonding social capital</u>	Rating: good enough for CF implementation)
The User Group started monthly meeting and also set rules and regulations for CF activities. The User Group members had chances to discuss own ideas and shared information on their activities. In the other hand, the community was revealed to have two groups concerning the religion and blood relationship. After activation of the CF activities, these two groups had a few difficulties in decision making. However, the study team observed that the rules and regulations setting and the action plan drawing could be an effective countermeasure against this decrease of bonding social capital in decision making.	
<u>Human capital</u>	Rating: good enough for CF implementation)
Trainings and workshops empowered the knowledge, techniques and discussion skills of the User Group members. Before starting pilot project, only the CF chairman knew and controlled the CF activities, but now, almost all User Group members lead the activities.	
<u>Natural capital</u>	Rating: just enough for CF implementation
Some plots need re-plantation and re-operation, because low survival rate of the planted seedlings and insufficient NFIO were observed in some areas. However, User Group learned from the Pilot Project how to operate the activities for the next year.	
<u>Physical capital</u>	Rating: just enough for CF implementation
Two factors could be pointed out. One was the construction of water reservoir would solve water shortage, and the other was the size of agroforestry nursery could be too small for the extensive agroforestry activity.	
<u>Financial capital</u>	Rating: just enough for CF implementation
The User Group is interested in aqua-agroforestry. Extension of aqua-agroforestry, agroforestry, and home garden will increase their income. Income from NFIO is also necessary. The FD staff officer in Laputta Township prepared and applied a sales voucher.	

(2) Potential of Nyaung Ta Pin CF User Group as of the Completion Check

The description below is the summary of potential change of user group in Thar Yar Kone village during the Pilot Project period.

Potential of Nyaung Ta Pin CF User Group

Capital	Rating/Evaluation
<u>Bridging social capital</u>	Rating: just enough for CF implementation
Compared with Thar Yar Kone village, the involvement of FD was lower. Especially, the frontline staff are expected to support User Group more including sales voucher. The management committee requires close supervision and monitoring by FD.	
<u>Bonding social capital</u>	Rating: good enough for CF implementation
The Management Committee started to work as a functional organization, so further empowerment can be possible. For example, one committee member started to help the CF chairman after group leader training. The CF chairman thinks to have election for subgroup leaders to activate subgroups. Nyaung Ta Pin village society seems to be more united than Thar Yar Kone village.	
<u>Human capital</u>	Rating: just enough for CF implementation
The Management Committee became more functional. Over 10 User Group members formed the nucleus of actual implementation of CF through trainings and workshops. Facilitation of the activity is still in need, but steadily user group becomes more mature.	
<u>Natural capital</u>	Rating: good enough for CF implementation
Collection of the seeds and seedlings were tried. The number of the successful sites is more than that of Thar Yar Kone village, and CF activity so far well improve their forest resources. User Group learns to know the importance of their CF area after Ever Seiko company acquired the area officially.	
<u>Physical capital</u>	Rating: just enough for CF implementation
Communal woodlot is one of the possible physical inputs by the CF framework. Hence, it should be authorized by FD as CF. School woodlot and demonstration plantation was conducted under pilot project. Jetty renovation was done by the villagers during the Pilot Project period.	
<u>Financial capital</u>	Rating: just enough for CF implementation
From home gardens, the User Group members harvested for sales and for self consumption. However, not many User Group members are using CF products because of sales voucher lacking.	

2.7.4 Overall Organization Review concerned to the Pilot Project

The overall review of organization concerned to the pilot project is carried out by evaluation of performance and achievement throughout planning, implementation, monitoring and supervision of the pilot project, and its result is summarized the table below.

Summary of Overall Organizations Review concerned to the Pilot Project

Pilot Project	Organization	Review
Thar Yar Kone Village and Nyaung Ta Pin Village Community Forestry	FD Yangon (Headquarters)	<ul style="list-style-type: none"> - Understood P/P and established implementation organization. - Commenced support CF activities for operation and management (such as rules and regulations, and sales voucher under CFI).
	FD Myaung Mya District	<ul style="list-style-type: none"> - Achieved liaison role among FD Yangon / FD Ayeyawady Division, and FD Laputta Township. - Did not show leadership throughout planning, implementation, and evaluation of P/P.
	FD Laputta Township	<ul style="list-style-type: none"> - Implemented its role of pilot project, though the office had difficulties from budget and staff for routine revenue collection works. - Did not work as implementation organization of pilot project in the planning stage. Its reason could be related to eradication of illegal weirs and shrimp ponds that encroaching the CF area under pilot project. - Frontline staff engaged in the pilot project activities such as preparation of CF-management plan, drawing CF map in the planning stage. - Frontline staff held workshops for preparation of rules and regulation, sales voucher. - Developed good relationship with the user group members.
	FREDA	<ul style="list-style-type: none"> - Conducted workshop with user group. But the workshop was not proceeded by means of participatory approach.. - Did not understand the contract and pilot project (for example, announcement the FREDA/FD/JICA Pilot Project, design change by themselves, neglect of the management plan, and rice distribution). - Some distributed seedling were low quality and hard to obtain good survival rate and not proper species to the site. - Only one staff in charge for the NTP CF pilot project established mutual understanding between with user group. - Could not develop organizational capability on CF throughout implementation of pilot project.
	User Group Members	<ul style="list-style-type: none"> - Received heavy load and burden from pilot project such as many of workshops and CF activities.. - Sustained pilot project works well based on understanding objectives of pilot project. - Be encouraged by land use right as for crab catching and firewood collection area (member announced area of CF to adjacent people in and around the village). - Could not be encouraged for practicing sustainable CF activities because of low survival rate. - Group function was not developed enough: frame work of rules for management of the group is developed, but all user group members were not understood a merit of the group activity.
	Laputta Township PDC	<ul style="list-style-type: none"> - The Township PDC showed understanding and cooperation to pilot project throughout the planning and implementation period
	MAS Laputta, MOAI	<ul style="list-style-type: none"> - Participated to the workshops held in Laputta Township such as local workshops and pilot project opening ceremony. - There was no collaboration or any contact at the pilot project site
	DoF Laputta, MOLF	<ul style="list-style-type: none"> - Ditto
	study team	<ul style="list-style-type: none"> - Led FD for CF promotion activities based on their experience in the planning stage. - Failed to promote diversification (agroforestry and aqua-agroforestry) because the approach was not matured in FD. - Led user group for CF intensification activities in collaboration with charged staff of FREDA, but failed to confirm sustainability of the activities such as agroforestry because of time shortage

Pilot Project	Organization	Review
FD Thar Yar Kone Integrated Mangrove Nursery	FD Myaung Mya District	- Achieved the same results of the CF Pilot Project.
	FD Laputta Township	- Improved basic understanding, technology and capacity of nursery construction and O/M. - Developed capacity for the pilot project implementation such as CF activity, nursery construction and O/M. - Established basic function as organization for implementation of project in collaboration with superior FD offices.
	FREDA	- Developed a limited capacity for project implementation based on the contract. Their experiences were only from projects which budget and goods are endowed to FREDA. - Limited basic capacity regarding construction technology, construction management such as progress control, record keeping, and reporting. - Limited function as organization there was no proper report on time in its organization. - Limited capacity of mangrove plantation because of failure of seedling production.
	Workers and labors	- Unskilled labor: Mainly TYK villagers were hired for construction and nursery operation of pilot project. They had capacity as nursery labor. Labor works did not influence them to change their life style or daily life. - Skilled labor: Mostly employed adjacent large villages and Laputta Town.
FD Front Line Staff Capacity Development	Yangon (Headquarters)	- Conducted sophisticated selection procedure of trainees for capacity development at central level. It could be for sharing fare chance by FD staff, so that the study team only recommended candidates of trainees to CFDTTC.
	FD Myaung Mya District	- Achieved the same results of the CF Pilot Project.
	FD Laputta Township	- Understood importance of training, and dispatched ten trainees of FD Laputta staff to TYK training. - Twenty days of training for ten staff was heavy burden for FD in Laputta Township.
	FD Frontline Staff	- Expressed a preference of routine work of FD Laputta than the training. - Understood training contents in lecture and demonstration, so that practice at site was necessary by means of On the Job Training (OJT).

2.7.5 Non-participants Survey in Thar Yar Kone and Nyaung Ta Pin Villages

In the course of the completion check, the study team conducted 1) a “non-participant survey” in the Thar Yar Kone and the Naung ta Pin villages, and 2) an “impact survey” in the three adjacent villages, namely Kambalar Ta Pin village, Thaung Lay village, and Thit Poke village. The “non-participant survey” aimed to confirm the characteristics of non-participants and obstacles to participate in and continue the operation of the pilot project, and also to clarify the impacts of the pilot project on them. On the other hand, the impact survey aimed to survey the pilot projects’ impact in the three adjacent villages.

(1) Thar Yar Kone Village

The main reasons of non-participation in CF and pilot project activities were being newcomer, and no affordability of labor such as health problem or age and remoteness follows as shown below.

Reasons no Community Forestry

Reason	Number
New comer	7
Health problem	3
Working in/near to other villages	3
Women (single & widow)	2
Livelihood problem	1
Disappearance of CF area	1
Total	17

Reasons no Pilot Project

Reason	Number
New comer	7
Health problem	3
Working in/near to other villages	3
Women (single & widow)	2
Livelihood problem	1
Disappearance of CF area	1
Total	17

(2) Nyaung Ta Pi Village

Most households who did not participate the pilot project were newcomers/migrant people. They had little intension to live in Nyaung Ta Pin village for long time. Though they were registered as villager, they got a little information about village administration matters. Another reason of non-participation was that they had moved temporally to other places for livelihood, such as fuel wood cutting and wage labor. For these people, it was difficult to attend the meetings for CF. Next, some people had livelihood problem and no time. Also, some villagers seemed to distrust FD because of FD's contradictory activities related to mangrove protection.

Reasons no Community Forestry

Reason	Number
No time (livelihood, etc.)	4
Newcomer	2
Health problem	2
Age	1
Total	9

Reasons of pilot project Dropping out

Reason	Number
Move to other villages after issue of CFC	5
Personal reason (alcoholic, faith)	2
No intension of NFIO (plantation only)	1
Existence of illegal weir construction	1
Total	9

(3) Impact Survey in Adjacent Villages

Kambalar Ta Pin village showed the strongest impact from the pilot project. The reasons were supposed that this village located very near to the pilot project sites, and the villagers had closer relationship due to small population (40 households excluding migrant's residence). The impact was positive in the sense that they wanted strongly to start CF now. On the contrary, Thaug Lay village showed the low impact because of farther distance and low awareness of the necessity of mangrove management due to the existence of fuel wood sellers. Thit Poke village received strong impact from the pilot project, but the degree of impact was not as same as for all the villagers.

Impact of Pilot Project

Village	Knowledge of PP	Cognition				Intension	Total
		Contents of PP	Individual ownership	Income opportunity	Other	Community Forestry	
Kambalar Ta Pin	4	2	4	1	0	4	15
Thaung Lay	1	0	0	0	0	0	1
Thit Poke	3	2	4	2	0	3	14

Note: 0: nothing 1: little 2: a little bit 3: fair 4: strong

2.7.6 Outputs of the Pilot Projects

(1) Evaluation Results

In consideration of the pilot project purposes and goals, there were some improvements except for the diversification of the CF activities in the Thar Yar Kone user group through implementation of the pilot project 2003. Agroforestry and school woodlots were initially planned to be the certified activity under CF. However, the activity was not applied and certified as CF during the pilot project 2003 implementation period, due to misunderstandings by stakeholders.

Evaluation Result of the Pilot Project 2003

Project Purpose and Goal	Evaluation
The CF Activity is Diversified by TYK user groups.	Not Achieved
CFI is understood by user group and by NTP user groups.	Satisfactorily Achieved
The FD Capacity for supporting the CF activity is improved by TYK FD Nursery and Training of the FD Frontline Staff.	Improved but not satisfactorily achieved
The Pilot Project attains Mangrove Rehabilitation.	Improved but not satisfactorily achieved
Participatory mangrove rehabilitation through CFI is accelerated (FD).	Improved but not satisfactorily achieved
Participatory mangrove rehabilitation through CFI is accelerated (FREDA).	Not Achieved

(2) Establishment of Foundation for CF Management and Support in Pyinalan Reserved Forest

Though there were some uncompleted construction, procurement, and functions for the Thar Yar Kone FD integrated mangrove nursery, the constructed nursery and produced seedlings were handed over to FD in February 2004. Further renovations were required for the full function of the nursery, however FD gained a core seedling production in the southern Pyinalan Reserved Forest. Since, CFI states that FD's obligation is to provide seedlings for the first rotation of the CF planting activities, the existence of the nursery served as the foundation for CF management and support by FD.

2.7.7 Findings and Lessons Obtained

Through the implementation of the pilot project 2003, the following lessons were learned.

- Insufficient maintenance of the CF activities by FD: Though the FD staff and the township office possess potential for administering CF, it was obvious that only limited support and management systems are available from FD for sustainable CF activities. There were no regulations, no format and no budget for the actual CF support and management, nor a plan for the CF promotion.
- Insufficient maintenance of socioeconomic activities: Inside the reserved forest various socioeconomic activities (forestry, agroforestry, paddy, fishery, shrimp ponds, salt production, settlement, etc.) are causing a decrease of mangrove resources. Most of such activities are not officially permitted and lack appropriate technology, causing further decrease of mangrove resources leading to the vicious circle.
- Limited capacity development of user groups: Though the CF user groups possess intentions to start and implement the CF activities there were some internal difficulties to continue the CF activities. The internal difficulties were lack of experienced leaders, limited opportunities to obtain information, and less experience of the successful CF activities.

From the above-mentioned lessons it can be concluded that, under the existing conditions, there are difficulties for conducting sustainable CF activities in the study area. The difficulties for sustainable CF activities are summarized in the following table.

Difficulties for Sustainable CF Activities

Laputta Township FD office	CF user groups
<ul style="list-style-type: none"> - Existing potential of the FD offices and staff for the CF activities - No formats for operation and management of CFI - No plan for the CFI promotion - No budget for CF 	<ul style="list-style-type: none"> - Good collaboration with Laputta Township FD - Limited capacity of leaders - Limited visible success with the CF activities - Existence of illegal activities / shifting villagers

The identified difficulties were reflected to the pilot project 2004 upon formulation of an implementation plan for the pilot project 2004.

2.8 Continuation of Pilot Project 2003

2.8.1 Consideration of Continuation of the Pilot Project

The pilot project 2003 was terminated in February 2004 with the following objectives being fulfilled 1) to contribute providing actual incentives to stakeholders, 2) to obtain practical lessons and outputs to be fed back to IMMP, and 3) to raise public awareness through demonstration effects and to confirm possibility of diversification of CF and

extension of CFI.

The CF activities commenced by the pilot project 2003 achieved the planning and completion of the first year's CF activities - only in an initial step. Operation and management activities of CF such as establishment of draft rules and regulations, application of sales vouchers for selling, and revising five-year management plan by means of preparation of next year's action plan were also started. However, these operation and management activities of CF were not completed yet. These CF operation and management activities are considered that its actual completion time will come around five years later when the user group members can earn the first harvest benefit from planting. This means that the exact confirmation of sustainable CF activities would require further continue implementation, monitoring and evaluation at least one cycle (5 years) of the CF activities.

Therefore, it is recommended that the pilot project 2003 should be extended for necessary period in order to fulfill the first cycle of the CF activities.

The Study can afford to continue the pilot project up to the next fiscal year, but can not be extended more than one year. Therefore, continuation of the pilot project 2004 under the study was considered.

2.8.2 Basic Approach for the Continuation of the Pilot Project

(1) Objectives and Themes

The objectives of the pilot project 2004 were set as same as the Pilot Project 2003 in principle. However, its themes should be shifted to verification of diversification of CF and extension for obtaining more practical understandings and results. A verification of diversification of CF includes 1) CF Agroforestry, 2) CF Aqua-agroforestry, 3) CF village, 4) CF FD camp, and 5) CF public woodlots such as CF river bank stabilization, CF compost woodlot, CF school woodlot, CF wind break, CF paddy woodlot. A verification of CFI extension includes 1) user group capacity development by means of education of CF-user group leaders and extension workers, and development example of successful CF practice for realizing sustainable CF activities and 2) FD and FD staff capacity development by means of rehabilitation of CF operation and management format such as application methods of land allotment, simplification of management plan, regular support of FD to user group, official sales voucher, and license for value adding production, and by strengthening FD CF organization by commencement of CF task force.

(2) Target Villages, Components, and Responsible Organization

Target villages of pilot project 2004 are Thar Yar Kone (TYK) and Nyaung Ta Pin (NTP) villages, and adjacent villages which requested supports of FD such as Kmbalar Ta Pin, Thit Poke, and Thaung Lay. These villages are directly or indirectly influenced by the pilot project 2003 and in emergency situation of the mangrove vegetation. These villagers have strong intention for participation of the CF activity, so pilot project 2004 is planned to support them by means of training some user group members as an extension worker of the villages.

The component of pilot project 2004 consists of 1) components that were not implemented under the pilot project in 2003, 2) components that are officially permitted by CFI, and 3) components that were not achieved by the pilot project in 2003.

CHAPTER 3 FORMULATION AND IMPLEMENTATION OF THE PILOT PROJECT 2004

3.1 Overall Implementation Procedures

The overall implementation procedures for the pilot project 2004 are indicated in the following table. Basically, the pilot project 2004 was prepared, planned and implemented based on the lessons and findings from the pilot project 2003. Also, information sharing and discussions with district level Peace and Development Council, which has important decision makers and authorities for the study area, was initiated in the course of the pilot project 2004 preparation.

Implementation Procedures in Pilot Project 2003

1) Preparation of Pilot Project
<ul style="list-style-type: none"> - Preparation of pilot project plans based on the findings and lessons from FY2003 - Establishment of the FD supporting organization for CF - Information sharing with local authorities at district and township levels - Updating of action plans for 2004 (from 2003 CF management plans) - Confirmation of border lines for the CF areas
2) Implementation
<ul style="list-style-type: none"> - Procurement - Establishment of implementation setup - Implementation of continuation activities of the pilot project 2003 - Implementation of 2003 leftover components - Implementation of new components
3) Completion
<ul style="list-style-type: none"> - Completion check (physical progress, evaluation, analysis)
4) Consideration for the Pilot Project Continuation
<ul style="list-style-type: none"> - Continuous implementation of pilot project 2004 components - Formulation of guideline for the continuation

3.2 Planning of Pilot Project 2004

Based on the consideration of continuation of the pilot project (section 2.8) formulated during the fiscal year 2003, pilot project 2004 components, draft implementation plans were prepared, among FD, user groups and the study team, during May to June, 2005. In the course of the project implementation, project components and implementation plans were modified in accordance with the actual conditions and necessities at sites.

3.2.1 Plan Formulation for FD Capacity Development Pilot Project

To achieve the primary objectives/ themes of the pilot project in general (Section 1.3.1), and specific purpose of the pilot project 2004 (Section 1.3.3), the FD capacity development pilot project consists of 1) establishment of the FD organization for CF management and support, 2) institutional development of FD CF management and support, 3) COMFORT/ Mangrove study team counterpart joint training, 4) Thar Yar Kokne (TYK)

FD integrated mangrove nursery 2004, and 5) patrolling.

For the establishment of the FD organization, the study team proposed “CF Task Force” at the Myaung Mya district level and “ supporting organization” at Laputta township level. In May 2004, discussions were held among concerned FD offices (Director General Office, Ayeyawady Division FD Office, Myaung Mya District FD office, and the Laputta Township Office) and the study team. After discussions FD authorized to establish CF monitoring team at the Myaung Mya district level, and the CF task force at the Laputta township level. In concurrence with the preparation for establishment of CF supporting organization, a draft TOR of the organization and draft institutional development plans were prepared and discussed among concerned FD offices and the study team. The counterpart joint training component was organized after discussions with COMFORT experts.

The TYK integrated mangrove nursery component was 1) nursery regular operation by FD, 2) completion of leftover components of the pilot project 2003, 3) mangrove areas forest management strengthening, and 4) consideration for charcoal production. The implementation plan was prepared by the Laputta Township FD office counterparts and the study team.

3.2.2 Information Sharing with Local Authorities

During the pilot project 2003 implementation, it was revealed that information sharing with local authorities is essential for rehabilitation of mangrove forest through community participation and livelihood improvement of mangrove depended communities, considering about the socio-economic conditions and mangrove forest conditions of the reserved forest. Therefore, local work shop 2, inviting local authorities such as the peace and development council and police, was held in the Myaung Mya District and the Laputta Township in May 2004. The workshop presented current situation of mangrove and people in the reserved forest, about the study and the pilot project, and necessity of collaboration among local authorities for mangrove rehabilitation and regional development. The chairman of the Myaung Mya District Peace and Development Council proposed establishment of a committee and administrative measures for encroachment (legal action, public awareness) in the mangrove area. Based on the proposal, public awareness activities were also included as a part of the FD capacity development pilot project.

3.2.3 Target Area and User Group of the Pilot Project 2004

The target pilot project areas for the pilot project 2004 were the same forest compartments as those of the pilot project 2003. The CF target areas under the pilot project 2004 were

fixed by means of an update of the CF management plan that was prepared in the course of the pilot project 2003. In addition to the three forest compartments, compartment no. 61 was planned for plantation sites for the CF FD camp, in the course of the pilot project 2004. The same two user groups as the pilot project 2003 were the target user groups of the pilot project 2004. However, there were changes in the member of each user group. Both user groups had decrease in their members, but there were also new members in the Nyaung Ta Pin CF user groups.

Subgroups and Households of User Group Members

Village	No. of Subgroups	User Group Member Household (2003)	User Group Member Household (2004)	Difference
Thar Yar Kone	6	65	64	1 member dropped
Nyaung Ta Pin	9	81	76	13 members dropped 8 members joined
Total	15	146	140	

3.2.4 Update of the Action Plan of the CF Management Plan Prepared in the Pilot Project 2003

In Thar Yar Kone and Nyaung Ta Pin villages, the action plan for the CF management plan prepared under the pilot project 2003 was updated by the user groups. The workshops for the update were held during May in 2004 supported by FD and the study team. The management committee understood the necessity of the update of the action plan because the target area of the pilot project 2004 should include the unaccomplished target area of the pilot project 2003. The user group of Thar Yar Kone submitted the updated action plan to FD. The user group of Nyaung Ta Pin, however, did not submit the updated action plan to FD, because they misunderstood that FD and the study team should take care of the updated action plan. There were no written records by the user group about the submission of the updated action plan. Samples and formats of the action plan are indicated in Attachment – 2.

3.2.5 Update of CF management plan

The management plans of Thar Yar Kone and Nyaung Ta Pin village were updated by the user groups. In Thar Yar Kone village, one member dropped out because of lacking in labor force to implement CF. The CF area of the dropped out member was reallocated as the CF church woodlot under the agreement between the user group and FD. In Nyaung Ta Pin village, 13 members dropped out mainly due to a migration to other villages, but 8 members joined the user group newly. The 8 new comers took over the CF areas of the dropped out 8 members. With the verbal permission by FD and agreement by the management committee, the 8 new comers copied the previous members' management

plan and submitted to FD. The copy of submitted documents was kept by the chairman of the user group. The samples of the revised CF management plan are indicated in Attachment -3.

FD understood the necessity of the update in order to secure the CF right. However, the official procedure for amendment to the management plan was not proceeded yet even as of January 2005.

3.2.6 Other Updates related to CF Activities

The preparation of following activities were also conducted as the part of the pilot project 2004 planning, and the actual activities were practiced during the pilot project 2004 implementation.

(1) Rules and Regulations of User Groups

The draft rules and regulations of CF user groups prepared during the pilot project 2003 were updated during the pilot project 2004. During this year, not only the rules and regulation for the entire user group, but also for sub group activities such as CF agroforestry, CF village wood lot, and CF women group activities were prepared. Samples of the rules and regulations are indicated in Attachment - 4.

(2) Application and trial of sales voucher and license for value added products

For 1) livelihood/ benefit improvement of user groups from CF, 2) authorized CF production in accordance with CFI procedures by CF user groups, 3) diversification and value adding of CF products, the following activities were considered and prepared in the pilot project 2004. Formats of the sales voucher, the removal pass are indicated in Attachment - 5 and Attachment - 6 respectively.

Application and trial of sales voucher and license for value added products
- application of trail sales voucher - improvement of CF stock map for estimating the harvesting volume - application of removal pass - preparation of value add product plan - application license for the value added products

(3) Confirmation of Border Line and Update of Community Forestry Management Maps

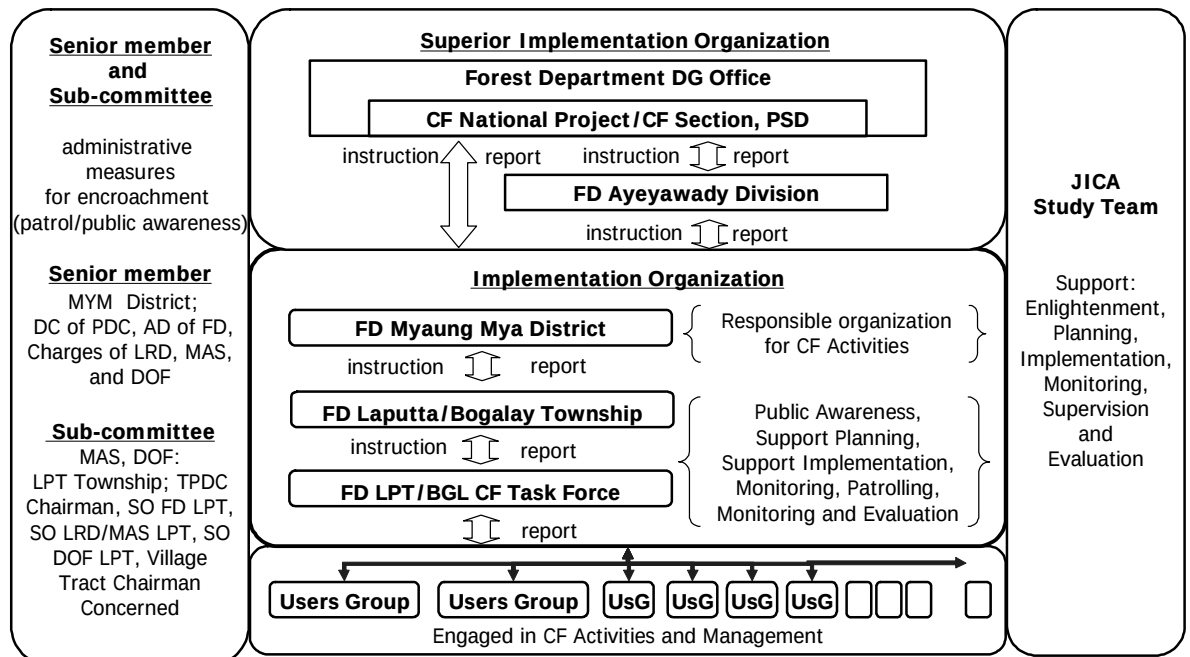
To 1) maintain CF area border line of Thar Yar Kone and Nyaung Ta Pin CF user groups, 2) to update the CF management map delineated under the pilot project 2003, 3) to delineate the CF management map by simple methods such as GPS with better accuracy, and 4) to confirm the sanction procedure of updated CF management map, the following activities were considered and prepared in the pilot project 2004.

Confirmation of Border Line and Update of Community Forestry Management Maps	
<ul style="list-style-type: none"> - confirmation of sub-group boundaries - confirmation of individual boundaries - update and allocation of land for new members - staking for border line management - recording of border line with GPS 	<ul style="list-style-type: none"> - GIS mapping - preparation of updated CF management map - usage of the updated CF management map - commencement of CF area border line management

Samples of the CF management maps are indicated in Attachment - 7.

3.3 Institutional Framework of the Pilot Project 2004

The implementation and organizational structure of the pilot project 2004 is described in Figure 3.1. In comparison to the pilot project 2003, all of the pilot project components were conducted under the direct operation and management of the study team with collaborations among FD and user groups. Furthermore, information sharing and cooperation with the local authorities, particularly with the Myaung Mya District Peace and Development Council had been strengthened in the pilot project 2004.



MYM: Myaung Mya District, DC: District Chairman, PDC: Peace and Development Council, MAS: Myanmar Agriculture Service, LRD: Land Record Department, DOF: Department of Fishery, LPT: Laputta, BGL: Bogalay, SO: Staff Officer

Figure 3.1 Organizational Structure of Pilot Project 2004

3.4 Components of the Pilot Project 2004

The components of the Pilot Project 2004 are listed as follows.

(1) FD Capacity Development Pilot Project

1. Establishment of the FD organization for CF Management and Support

Component	Item	Area/ Quantity
1.1 Establishment of Myaung Mya FD CF Task Force	<ul style="list-style-type: none"> - Formulation of TOR for CF task force - Assignment of CF task force personnel - Maintenance of office facility - Activity of CF task force - Monitoring 	<ul style="list-style-type: none"> - - 1 l.s. - -
1.2 Establishment of the CF supporting organization for Laputta FD office	<ul style="list-style-type: none"> - Formulation of CF promotion plan - Formulation of CF promotion implementation plan - Assignment of extension staff - Maintenance of office facility - Training of extension staff at CFDTC - OJT of staff at site - Monitoring 	<ul style="list-style-type: none"> - - - - 1 l.s. 1 l.s. -

2. Institutional Development of FD CF support

Component	Item	Area/ Quantity
2.1 Institutional development of the CF task force	<ul style="list-style-type: none"> - Evaluation and decision for CF production management regulation - New CF activities evaluation, coordination with higher offices, granting CF certificates - Preparation of FD operation and management format for CF support 	<ul style="list-style-type: none"> - - -
2.2 Institutional development of the CF supporting organization (Laputta)	<ul style="list-style-type: none"> -Application of CF production management regulation -Planning, application, support for new CF activities - Utilization of FD operation and management format for CF support 	<ul style="list-style-type: none"> - - -

3. COMFORT / Mangrove Study Team Counterpart Joint Training

Component	Item	Area/ Quantity
3. Community Forestry Training and Extension Project in Dry Zone (COMFORT) / Mangrove Study Team Counterpart Joint Training	<ol style="list-style-type: none"> 1. Joint training in TYK integrated mangrove nursery 2. Joint training in CFDTC sub-center 	<ol style="list-style-type: none"> 1 l.s. 1 l.s.

4. TYK FD integrated mangrove nursery 2004

Component	Item	Area/ Quantity
4.1 Nursery operation	1. Preparation of 2004 nursery operation plan 2. Nursing of seedlings produced in FY 2003 3. Measurement and recording of water salinity and tide level 4. Nursery management 5. Monitoring	1 l.s. 1 l.s. 1 l.s. 1 l.s. 1 l.s.
4.2 Uncompleted components of pilot project 2003	1. Renovation / finishing work of nursery facilities 2. Completion of uncompleted construction from 2003 3. Seedling production of remaining work from 2003 4. Procurement of un-procured nursery equipment	1 l.s. 1 l.s. 155,000 sdl 1 l.s.
4.3 Mangrove areas forest management strengthening project	1. Diversification of mangrove species seedling production 2. Production of non-mangrove species 3. Establishment and operation of mangrove garden for demonstration 4. Construction and operation of aqua-agroforestry for demonstration 5. Construction and operation of seed production area	50,000 sdl 65,000 sdl 1 l.s. 1 l.s. 1 l.s.
4.4 White charcoal production		n.a.
4.5 Patrolling	1. Formulation of user group patrolling system 2. Implementation and monitoring of patrolling 3. Public awareness	1 l.s. 1 l.s. 1 l.s.

(2) Thar Yar Kone and Nyaung Ta Pin CF Pilot Project

1. Planning

Component	Item	Area/ Quantity
1.1 Update of action plan of management plan prepared under pilot project 2003	1. Preparation of action plan 2004	1 l.s.
1.2 Update of TYK and NTP forest management plan	1. Updating of user group members 2. Land allocation and confirmation of border lines 3. Preparation of revised CF management plan 4. Application and permission of revised forest management	1 l.s. 1 l.s. 1 l.s. 1 l.s.
1.3 Application and trial of sales voucher and license for value added products	1. Improvement of the CF map and harvest plan 2. Application of sales voucher 3. Preparation and application of license for value adding production	1 l.s. 1 l.s. 1 l.s.

2. Implementation

Component	Item	Area/ Quantity
2.1 Continuation activities of pilot project 2003	1. Plantation 2. NFIO 3. Technology support (seedlings)	20.3ha 146.4 ha 126,810sdl
2.2 New activities under pilot project 2004	1. the CF Aqua-agroforestry 2. the CF FD Camp 3. the CF village woodlot 4. the CF church woodlot	8 l.s. 1 l.s. 2. 1.s. 2. 1.s.
2.3 Capacity building of user groups and user group members	1. CF water reservoir construction and operation 2. Training of the CF user group extension workers 3. the CF user group women's group 4. Support monitoring and preparation of progress report of the CF user group	1 l.s. 1 l.s. 1 l.s. 1 l.s.

3.5 Implementation Schedule of the Pilot Project 2004

The implementation period of the pilot project 2004 is about 6 months from May to October in 2004 for feedback its result to revision of the drafted IMMP. The revision of the drafted IMMP is scheduled to complete by December 2004 and the revised IMMP is compiled as a part of the draft final report. The pilot project target area is the delta area located at the most lower part of Ayeyawady river frequently inundated by flood and high tide. During the rainy season from May to September, the pilot project activities were frequently interrupted by weather conditions. Thus, the three months from November 2004 to January 2005 succeeding to the pilot project 2004 implementation period, applies for support of the user group and FD for continuation of the pilot project 2004 activities. Implementation schedule including the pilot project 2004 implementation period and support continuation activities are shown in the following figure:

Implementation Schedule of the Pilot Project 2004

Component of the Pilot Project 2004 /Month	4	5	6	7	8	9	10	11	12	1	2	3
Pilot Project 2004												
Support for Continuation of Pilot Project 2004												
Rainy Season												
Paddy Works												
1. FD Capacity Development												
1.1 Establishment of FD Organization for CF												
1.2 Institutional Development of FD CF Support												
1.3 COMFORT/Mangrove Joint Training												
- Joint Training at CFDTC Sub Center												
- Joint Training at Mangrove pilot project site												
1.4 FD Thar Yar Kone integrated mangrove												
- Nursery Operation												
- Not completed components of pilot project												
- Mangrove areas forest management												
- Patrolling system setup and action planing												
2. TYK/NTP CF Pilot Project												
2.1 Planning												
- Revision of CF forest management plan 2003												
- Preparation of Action Plan for pilot project												
2.2 Line Management of CF area												
- Confirmation of delineation line of CF area												
- Up date of CF management map												
2.3 Implementation												
- Continuation activities of pilot project 2003												
- New CF activities under pilot project 2004												
2.4 Capacity building of UG and UG member												
- CF UG water reservoir construction												
- Training of CF UG extension worker												
- CF UG women group												
- Monitoring and preparation of progress report												
3. Evaluation of the pilot project 2004												
- Completion Check												

FD: Forest Department

CF: community forestry

UsG: user group

TYK/NTP: Thar Yar Kone and Nyaung Ta Pin

3.6 Physical Result of the Pilot Project 2004

3.6.1 Physical Results: FD Capacity Development Pilot Project

The following tables indicate the final physical result of the FD capacity development pilot project as of January 2005. Hard components such as construction, procurement, production were nearly completed or estimated be terminated by the end of January 2005. On the other hand, establishment of operation and management systems, preparation of plans/documents related to CF and pilot project activities tended to be delayed or not implemented by FD.

(1) Establishment of the FD organization for CF Management and Support

1. Establishment of the FD organization for CF Management and Support (1)

Component	Result																														
1.1 Establishment of Myaung Mya FD CF Task Force																															
Summary	Myaung Mya FD CF monitoring team was established in June 2004, and three members were assigned. The Terms of Reference (TOR) of the team was not formulated, and its activity was limited to accompanying the study team to the pilot project site and attending workshops. Recording and monitoring systems had not been established, either. Office facilities and equipment for the CF monitoring team were procured. Currently, reinforcement of the CF monitoring team to district CF task force is conducted by district FD office for implementation of IMMP phase I.																														
a) TOR of the CF monitoring team is established by FD Ayeyawady and Myaung Mya offices	CF monitoring team was established in June in FD Myaung Mya district, but TOR was not established at the final completion check time. The Myaung Mya district FD office is currently under preparation for upgrading the CF monitoring team as the district CF Task Force																														
b) Staff members of FD Myaung Mya are assigned to CF monitoring team for CF management and support.	One staff officer, one range officer and one deputy ranger are assigned to CF monitoring team. Assigned persons got verbal order to collect the information about CF of 2 pilot project villages by assistant director without written appointment. All of them are assigned to their ordinal duties and monitoring team at the same time and they mainly work for their ordinary duties. Currently assignment of staff is on-going for the CF task force at district and reserved forest levels.																														
c) Maintenance of FD CF Monitoring Team Office Facility	<div>The following facilities and training were provided. The CF monitoring team members and office staff started using computer for recording.</div> <table><tr><th>Item</th><th>Quantity</th><th>Unit</th></tr><tr><td>Laptop/ portable printer</td><td>1</td><td>set</td></tr><tr><td>Office table</td><td>1</td><td>no.</td></tr><tr><td>Office chair</td><td>1</td><td>no.</td></tr><tr><td>Long table</td><td>2</td><td>no.</td></tr><tr><td>Wooden chair</td><td>10</td><td>no.</td></tr><tr><td>Computer desk</td><td>1</td><td>no.</td></tr><tr><td>Plywood room partion</td><td>1</td><td>no.</td></tr><tr><td>150A Battery & 1000W inverter</td><td>1</td><td>set</td></tr><tr><td>Basic computer training</td><td>5</td><td>person</td></tr></table>	Item	Quantity	Unit	Laptop/ portable printer	1	set	Office table	1	no.	Office chair	1	no.	Long table	2	no.	Wooden chair	10	no.	Computer desk	1	no.	Plywood room partion	1	no.	150A Battery & 1000W inverter	1	set	Basic computer training	5	person
Item	Quantity	Unit																													
Laptop/ portable printer	1	set																													
Office table	1	no.																													
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Computer desk	1	no.																													
Plywood room partion	1	no.																													
150A Battery & 1000W inverter	1	set																													
Basic computer training	5	person																													
d) Practice of CF management and support according to TOR.	CF management and support is not practiced during the pilot project implementation period. Only activity was to accompany the JICA study team to the pilot project site. Currently the district FD office is in preparation for training and establish CF management and support.																														
e) Recording of FD Myaung Mya CF charged Personnel's Activities	Recording system and monitoring system has not been established.																														

A draft TOR of the CF monitoring team (CF task force) is indicated in Attachment - 8.

1. Establishment of the FD organization for CF Management and Support (2)

Component	Result																								
1.2 Establishment of the CF supporting organization for Laputta FD office																									
Summary	Laputta CF task force was established in June 2004 and four members were assigned. The reserved forest CF promotion, management, support plan, and the CF implementation plan had not been formulated. Equipment and furniture were procured to the Laputta FD office. Currently, in preparation of reserved forest CF task force in accordance with instruction from the district level.																								
a) Formulation of CF Promotion, Manage and Support Plan for the reserved forests	CF promotion, management and support plan for reserved forests has not formulated by the final completion check tim.																								
b) Establishment of CF task force	The CF task force was established in June 2004 with four members. All members of the CF task force worked not only for task force, but also for their ordinary duties. Actually, 70% to 80% of their working time was allocated to the ordinary duties such as forestry administration (range officer), revenue collection and nursery plantation (foresters).																								
c) CF Promotion Plan (organization, format preparation, budget)	CF promotion plan was not formulated. Neither TOR nor budget for task force was prepared. So, the CF task force members were not sure of the detail of their roles. What they understood was that they should support user groups and collect information from user groups and beat officers.																								
d) Maintenance of CF supporting organization facilities	<div>The following facilities and training were provided. The CF task force members and office staff started using computer for recording.</div> <table><tr><th>Item</th><th>Quantity</th><th>Unit</th></tr><tr><td>Laptop/ portable printer</td><td>1</td><td>set</td></tr><tr><td>Office table</td><td>1</td><td>no.</td></tr><tr><td>Plastic chair</td><td>6</td><td>no.</td></tr><tr><td>Long table</td><td>1</td><td>no.</td></tr><tr><td>File rack</td><td>2</td><td>no.</td></tr><tr><td>150A Battery & 800W inverter</td><td>1</td><td>Set</td></tr><tr><td>Basic computer training</td><td>5</td><td>Person</td></tr></table>	Item	Quantity	Unit	Laptop/ portable printer	1	set	Office table	1	no.	Plastic chair	6	no.	Long table	1	no.	File rack	2	no.	150A Battery & 800W inverter	1	Set	Basic computer training	5	Person
Item	Quantity	Unit																							
Laptop/ portable printer	1	set																							
Office table	1	no.																							
Plastic chair	6	no.																							
Long table	1	no.																							
File rack	2	no.																							
150A Battery & 800W inverter	1	Set																							
Basic computer training	5	Person																							
e) Assignment of Extension Staff (under CF task force)	No person was assigned as extension staff. Beat officers were instructed by the township officer for supporting and monitoring of CF activities in their assigned areas.																								
f) Training of extension staff at CF DTC	Four staff received training of participatory extension at the CF DTC sub center by October, 2004.																								
g) Technology Transfer of Extension Staff (LPT CF task force) on the pilot project site	Technologies such as diversification of the mangrove species, application of the non-mangrove species, and water reservoir construction adaptable to the delta area were transferred from the study team during the implementation of the pilot project 2003 and 2004.																								
h) Effect of the technology transfer	The transferred technologies were not effectively extended to other staff, because of the insufficient recording and reporting system.																								

(2) Institutional Development of FD Organization for CF Management and Support

2. Institutional Development of FD Organization for CF Management and Support

Component	Result
2.1 Institutional development of the CF task force	
a) Rules of CF management and support of Myaung Mya FD office	Rules to manage and support CF for CF monitoring team was not established.
b) Preparation of the form for CF management and supporting activities	No form of CF management and support activities was prepared.
c) Application of CF Production Management Regulation (sales voucher, removal pass)	CF production management regulation (sales voucher, removal pass) was not applied. Information and documents concerning application of CF production management regulation were not collected and accumulated at the Myaung Mya FD office.
d) Collection of information and reports concerning harvest and sales voucher	Information and reports concerning the application of CF production management regulation were not collected yet. So, there was no accumulation of concerning documents at the Myaung Mya FD office
2.2 Institutional development of the CF supporting organization (Laputta)	
a) Evaluation and decision for CF production management regulation, coordination with higher offices	Preparation for the regulation for the CF production management and coordination with higher offices was not implemented. Registration of CF production using the sales vouchers, issue of removal passes, and monitoring of the results of the sales were planned as works of the CF task force, but were not started yet.
b) Activities of the CF task force member for supporting user group	Activities of the CF task force members at the final completion check point were: Range officer (leader of the task force): the duty was collecting reports related to CF from beat officers, but reports were seldom submitted from the beat officers). Deputy ranger: the duty was collecting information from the frontline foresters. When he visited the villages, he collected data. Forester: As the frontline staff of FD , two foresters participated in the workshops and meetings of user groups of Thar Yar Kone and Nyaung Ta Pin, accompanied user group patrolling, transferred documents to the range officer, and distributed seedlings to user groups.
c) Application from user group of proposal for new type CF activities such as CF aqua-agroforestry, CF water reservoir, etc	User groups prepared proposal for CF aqua-agroforestry and the CF church woodlot, CF school wood lot, and CF agroforestry and submitted to forester in Thar Yar Kone FD camp.
d) Granting CF certificates of new CF activities	The certificates of the new CF activities such as the CF aqua-agroforestry and the CF church woodlot, CF school wood lot, and CF agroforestry were not granted, though proposals of some components were submitted from user groups.
e) Preparation of FD CF management and support system	The management and support system of user groups was not fully established yet,
f) Support to the user group in planning, application of new CF activities	User group were supported in planning and application of proposal for new CF activities with Laputta FD CF task force foresters, and submitted proposals to Thar Yar Kone FD camp
g) Formulation of the system of supporting CF management Committee and CF User Group	The system of supporting management committee and CF the user group was not formulated.
h) Distribution of seedling of first rotation to the CF user group	Seedlings were distributed by FD to user groups based on the revised action plan (2004) in Thar Yar Kone (14,360 seedlings) and the original management plan (2003) in Nyaung Ta Pin (23,750 seedlings). However, there is difference understanding of numbers of distributed seedlings between user group and FD.
i) Utilization of the FD operation and management format for CF support.	Format for the FD operation and management was prepared by neither the CF task force nor the township FD. Monitoring, recording and reporting were not done regularly.

(3) COMFORT / Mangrove Study Team Counterpart Joint Training

3. COMFORT / Mangrove Study Team Counterpart Joint Training

Component	Result
3. COMFORT/Mangrove Study Team Counterpart Joint Training	
1. Joint training in TYK integrated mangrove nursery	1. Training held from October 18 to 22, 2004: 5 counterparts from COMFORT and 6 counterparts from mangrove study participated
2. Joint training in CFDT sub-center	Training held from September. 26 to October. 1, 2004: 7 counterparts from COMFORT and 6 counterparts from mangrove study participated
Learning form the training	Following subjects were discussed in the training: FD 's participation, CF promotion, different operations according to different natural conditions. In Thar Yar Kone, FD 's activity through the pilot project was main subject of discussion.

(4) TYK FD Integrated Mangrove Nursery 2004

4.1 Nursery Operation

Component	Result			
4.1 Nursery operation				
a) Preparation of 2004 FD TYK Nursery Operation Plan	The Thar Yar Kone nursery seedling production and operation plan of 2004 was not prepared in a written form but discussed and decided by FD.			
b) Nursing of seedlings produced in FY 2003	Remaining seedlings (FY2003) were kept in the Thar Yar Kone nursery and distributed to CF user groups and FD direct plantations. Some seedlings were distributed for CF prototype activities.			
	FD started seedling production for FY 2005. The following is achievement as of January 2005			
	Species	Quantity	Unit	Remarks
	19 species	250,000	pots	
	<i>Avicenna officinalis</i>	120,000	Pots	
	<i>Bruguiera gymnorhiza</i>	30,000	pots	
	<i>A. officinalis</i>	600,000	seedlings	bare-root
	Note: some seedlings of 19 species produced were transplanted from the previous year seedling production.			
c) Plan of measurement and recording of water salinity and tide level	Equipment was provided by the study team, but FD did not prepare an action plan for measurement and recording. For tide level, forester started to record twice daily.			
d) Management of the facilities for nursery management	Facilities and equipment for seedling production were procured but nursery facilities management rules were not prepared in a written form..			
e) Establishment and practice of monitoring	Monitoring form integrating all activities such as two weeks report, technology, seedling distribution, CF promotion, management, support, and accounting, was not prepared.			
f) Regular monitoring of the Thar Yar Kone nursery	Thar Yar Kone nursery was monitored daily by a forester (nursery in charge), as a part of his original duty.			
g) Transmission of reports of the result of monitoring of the seedling production to Laputta Township FD office	Reports of monitoring result were not submitted to Laputta Township FD office regularly and timely.			

4.2 Uncompleted Components of Pilot Project 2003 (1)

Component	Result																																																		
4.2 Uncompleted components of pilot project 2003																																																			
1. Renovation/ finishing work of nursery facilities																																																			
(1) Nursery Bed Renovation	Re-excavation and leveling of nursery beds were conducted at 8 blocks (including renovation of water gate and main channel) <table><tr><th>Activity</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Re excavation</td><td>1,704</td><td>m³</td><td>1,704</td><td>100%</td></tr><tr><td>Side embankment finishing</td><td>976</td><td>m</td><td>976</td><td>100%</td></tr></table>	Activity	Target	Unit	Result	Rate	Re excavation	1,704	m ³	1,704	100%	Side embankment finishing	976	m	976	100%																																			
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Re excavation	1,704	m ³	1,704	100%																																															
Side embankment finishing	976	m	976	100%																																															
(2) Nursery Facility Renovation	Following components were constructed or renovated at the Thar Yar Kone nursery. <table><tr><th>Component</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Nursery main road 1 (mounding and leveling around the road)</td><td>91.5</td><td>m</td><td>91.5</td><td>100%</td></tr><tr><td>Nursery road 1,2,3,4,5,6,7 (side embankment finishing)</td><td>610</td><td>m</td><td>610</td><td>100%</td></tr><tr><td>Seedling stack yard (floor backfilling)</td><td>27.61</td><td>m³</td><td>27.61</td><td>100%</td></tr><tr><td>Potting yard (floor backfilling)</td><td>27.61</td><td>m³</td><td>27.61</td><td>100%</td></tr><tr><td>Warehouse 2 (construction)</td><td>30.13</td><td>m²</td><td>30.13</td><td>100%</td></tr><tr><td>Worker hut construction (29.3m²x 10)</td><td>293.00</td><td>m².</td><td>293.00</td><td>100%</td></tr><tr><td>Worker hut renovation (30.13m²x 10)</td><td>301.30</td><td>m²</td><td>301.30</td><td>100%</td></tr><tr><td>Incinerator construction (outer dimension 1.22m x 1.53m x 1.22m with 1.83 chimney)</td><td>1</td><td>no</td><td>1</td><td>100%</td></tr><tr><td>Concrete (brick) water storage (outer dimension 1.22m x 1.53m x 1.22m)</td><td>1</td><td>no</td><td>1</td><td>100%</td></tr></table>	Component	Target	Unit	Result	Rate	Nursery main road 1 (mounding and leveling around the road)	91.5	m	91.5	100%	Nursery road 1,2,3,4,5,6,7 (side embankment finishing)	610	m	610	100%	Seedling stack yard (floor backfilling)	27.61	m ³	27.61	100%	Potting yard (floor backfilling)	27.61	m ³	27.61	100%	Warehouse 2 (construction)	30.13	m ²	30.13	100%	Worker hut construction (29.3m ² x 10)	293.00	m ² .	293.00	100%	Worker hut renovation (30.13m ² x 10)	301.30	m ²	301.30	100%	Incinerator construction (outer dimension 1.22m x 1.53m x 1.22m with 1.83 chimney)	1	no	1	100%	Concrete (brick) water storage (outer dimension 1.22m x 1.53m x 1.22m)	1	no	1	100%
Component	Target	Unit	Result	Rate																																															
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Concrete (brick) water storage (outer dimension 1.22m x 1.53m x 1.22m)	1	no	1	100%																																															
(3) Water Reservoir Construction	One embankment type water reservoir with two steps was constructed at Thar Yar Kone nursery. <table><tr><th>Activity</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Water reservoir construction (16.78 m x 13.73m x ht. 1.83m, 396t capacity)</td><td>1</td><td>set</td><td>1</td><td>100 %</td></tr></table>	Activity	Target	Unit	Result	Rate	Water reservoir construction (16.78 m x 13.73m x ht. 1.83m, 396t capacity)	1	set	1	100 %																																								
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Water reservoir construction (16.78 m x 13.73m x ht. 1.83m, 396t capacity)	1	set	1	100 %																																															
(4) Water Gage Construction	Of targeted two water gage, one water gage was constructed at Thar Yar Kone nursery. The remaining water gage was not constructed due to lack of available site. <table><tr><th>Activity</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Water gage construction (reinforced concrete, up to 5 m measurement)</td><td>2</td><td>set</td><td>1</td><td>50%</td></tr></table>	Activity	Target	Unit	Result	Rate	Water gage construction (reinforced concrete, up to 5 m measurement)	2	set	1	50%																																								
Activity	Target	Unit	Result	Rate																																															
Water gage construction (reinforced concrete, up to 5 m measurement)	2	set	1	50%																																															
(5) CF Center Renovation	Overhaul of generator was conducted. <table><tr><th>Activity</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Overhaul of generator (PP2003 procurement)</td><td>1</td><td>set</td><td>1</td><td>100%</td></tr></table>	Activity	Target	Unit	Result	Rate	Overhaul of generator (PP2003 procurement)	1	set	1	100%																																								
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Overhaul of generator (PP2003 procurement)	1	set	1	100%																																															

4.2 Uncompleted Components of Pilot Project 2003 (2)

Component	Result																																																																																																																								
2. Seedling production of remaining work from 2003																																																																																																																									
	Of targeted 155,000 seedlings, the following number of seedlings was produced.																																																																																																																								
	<table><tr><th>Species</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Avicennia officinalis</td><td>73,000</td><td>pots</td><td>78,621</td><td>107.7%</td></tr><tr><td>Bruguiera gymnorrhiza</td><td>30,000</td><td>pots</td><td>40,515</td><td>135.1%</td></tr><tr><td>Ceriops decandra</td><td>20,000</td><td>pots</td><td>12,540</td><td>62.7%</td></tr><tr><td>Heritiera fomes</td><td>10,000</td><td>pots</td><td>9,504</td><td>95.0%</td></tr><tr><td>Rhizophora mucronata</td><td>1,000</td><td>pots</td><td>588</td><td>58.8%</td></tr><tr><td>Rhizophora apiculata</td><td>1,000</td><td>pots</td><td>588</td><td>58.8%</td></tr><tr><td>Sonneratia apetala</td><td>20,000</td><td>pots</td><td>35,436</td><td>177.2%</td></tr><tr><td>Total</td><td>155,000</td><td>pots</td><td>177,792</td><td>115.0%</td></tr></table>	Species	Target	Unit	Result	Rate	Avicennia officinalis	73,000	pots	78,621	107.7%	Bruguiera gymnorrhiza	30,000	pots	40,515	135.1%	Ceriops decandra	20,000	pots	12,540	62.7%	Heritiera fomes	10,000	pots	9,504	95.0%	Rhizophora mucronata	1,000	pots	588	58.8%	Rhizophora apiculata	1,000	pots	588	58.8%	Sonneratia apetala	20,000	pots	35,436	177.2%	Total	155,000	pots	177,792	115.0%																																																																											
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3. Procurement of un-procured nursery equipment																																																																																																																									
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4.2 Uncompleted Components of Pilot Project 2003 (3)

Component	Result				
3. Procurement of un-procured nursery equipment					
	Equipments for seedling production and nursery management were procured. Also, overhaul of equipment was conducted				
	Component	Quantity	Unit	Result	Rate
	Fuel tank (10 gal tank)	5	no	10	100%*
	Furniture for Nursery Office				
	Office desk	2	no	2	100%
	Office chair	2	no	2	100%
	Dinning table	1	no	1	100%
	Dinning chair	6	no	6	100%
	Book shelf	2	no	2	100%
	Desk lamp	2	no	2	100%
	Overhaul of Water Pump	1	ls	1	100%
	Overhaul of Seedling Transportation Boat	1	ls	1	100%
	Black board	1	no	1	100%
	Sign board	1	no	0	0%**
	Record book	12	no	12	100%
Binoculars	2	no	2	100%	
* changed to 10 5gal fuel tank (plastic) for easier handling					
** Not procured based on agreement between FD and Study Team					

4.3 Mangrove Areas Forest Management Strengthening Project (1)

Component	Result				
4.3 Mangrove areas forest management strengthening project					
1. Diversification of mangrove species seedling production	The production plan was developed by FD and the study team. Production of 14 mangrove species with a total of 55,000 seedlings started from July 2004 and the final achievement is as follows.				
	Activity	Target	Unit	Result	Rate
	<i>Aegiceras corniculatum</i>	7,000	pots	5,132	73.3%
	<i>Avicennia alba</i>	13,000	pots	17,102	131.6%
	<i>Avicennia marina</i>	15,500	pots	13,214	85.3%
	<i>Bruguiera sexangula</i>	1,000	pots	1,602	160.2%
	<i>Bruguiera parviflora</i>	500	pots	1,076	215.2%
	<i>Bruguiera cylindrica</i>	500	pots	1,260	252.0%
	<i>Excoecaria agallocha</i>	8,000	pots	4,374	54.7%
	<i>Heritiera littoralis</i>	1,000	pots	1,116	111.6%
	<i>Kandelia candel</i>	500	pots	306	61.2%
	<i>Lumnitzera racemosa</i>	6,000	pots	7,540	125.7%
	<i>Sonneratia griffithii</i>	500	pots	1,188	237.6%
	<i>Sonneratia caseolaris</i>	500	pots	1,854	370.8%
	<i>Xylocarpus moluccensis</i>	500	pots	1,585	317.0%
	<i>Xylocarpus granatum</i>	500	pots	403	80.6%
	Total	55,000	pots	57,752	105.0%

4.3 Mangrove Areas Forest Management Strengthening Project (2)

Component	Result				
4.3 Mangrove areas forest management strengthening project					
2. Production of non-mangrove species	The production plan was prepared by the study team. Production of 8 non-mangrove species with a total of 65,000 seedlings started from July 2004 and the achievement is as follows.				
	Activity	Target	Unit	Result	Rate
	Samanea saman	5,000	pots	4,500	90.0%
	Melaleuca leucadendra	8,000	pots	12,362	154.5%
	Melaleuca alternifolia	10,000	pots	15,270	152.7%
	Melaleuca viridiflora	10,000	pots	7,416	74.2%
	Melaleuca cajuputi ssp. patyphylla	10,000	pots	13,622	136.2%
	Albizia procera (lebbek)	11,000	pots	8,658	78.7%
	Casuarina equistifolia	10,000	pots	8,855	88.6%
	Terminalia beleria	1,000	pots	120	12.0%
	Total	65,000	pots	70,803	108.9%
3. Establishment and operation of mangrove garden for demonstration	The construction and management plan of a mangrove garden was formulated by FD and the study team. Material procurement and the construction were started from October 2004 and completed in January 2005.				
	Activity	Target	Unit	Result	Rate
	Total area (24 acre)	9.72	ha	9.72	100%
	Focal garden x 6, Terrace garden x1	0.24	ha	0.24	100%
	Wooden walking board (30ft)	9.15	m	9.15	100%
	Water drainage (250ft)	76.3	m	76.3	100%
	Renovation of nursery office for demonstration (compartment adding and walling for demonstration)	1	l.s.	1	100%
	Sapling planting	300	sdl	300	100%
	Wooden boundary pillars	10	pc	10	100%
	Sign boards (6' x 3' size)	6	set	6	100%
	Sign boards (2' x 3' size)	20	pc	20	100%
	Species board (6" x 18" size)	150	pc	150	100%
	* Sapling was provided from TYK FD Integrated mangrove nursery				

4.3 Mangrove Areas Forest Management Strengthening Project (3)

Component	Result																																																																																																			
4.3 Mangrove areas forest management strengthening project																																																																																																				
4. Construction and operation of aqua-agroforestry for demonstration	The construction, management and production plan and procurement plan were prepared, by the study team. Material procurement and the construction were started from September 2004 and completed in January 2005. 400m ² x 2 ponds =800m ² (water body 220m ² , land 580m ²)																																																																																																			
	<table><tr><th>Activity</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Pond excavation (1,080 ft³)</td><td>286.27</td><td>m³</td><td>286.27</td><td>100%</td></tr><tr><td>Inlet and waterway excavation (525 ft³)</td><td>14.91</td><td>m³</td><td>7.46</td><td>50%</td></tr><tr><td>Canal and waterway excavation to mangrove garden terrace garden</td><td>-</td><td>m³</td><td>7.45</td><td>(50%)</td></tr><tr><td>Creek excavation (4,290ft³)</td><td>120.12</td><td>m³</td><td>120.12</td><td>100%</td></tr><tr><td>Water gate</td><td>2</td><td>no.</td><td>2</td><td>100%</td></tr><tr><td>Aquaculture related procurement</td><td>1</td><td>l.s.</td><td>1</td><td>100%</td></tr><tr><td>Agriculture related procurement</td><td>1</td><td>l.s.</td><td>1</td><td>100%</td></tr><tr><td>Wooden boundary pillars</td><td>6</td><td>pc</td><td>6</td><td>100%</td></tr><tr><td>Sign boards (6' x 3' size)</td><td>2</td><td>set</td><td>2</td><td>100%</td></tr><tr><td>Species board (6" x 18" size)</td><td>50</td><td>pc</td><td>50</td><td>100%</td></tr></table>	Activity	Target	Unit	Result	Rate	Pond excavation (1,080 ft ³)	286.27	m ³	286.27	100%	Inlet and waterway excavation (525 ft ³)	14.91	m ³	7.46	50%	Canal and waterway excavation to mangrove garden terrace garden	-	m ³	7.45	(50%)	Creek excavation (4,290ft ³)	120.12	m ³	120.12	100%	Water gate	2	no.	2	100%	Aquaculture related procurement	1	l.s.	1	100%	Agriculture related procurement	1	l.s.	1	100%	Wooden boundary pillars	6	pc	6	100%	Sign boards (6' x 3' size)	2	set	2	100%	Species board (6" x 18" size)	50	pc	50	100%																																												
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4.3 Mangrove Areas Forest Management Strengthening Project (4)

Component	Result				
4.3 Mangrove areas forest management strengthening project					
5. Construction and operation of seed production area	The site was selected and demarcated by FD in September 2004. Material procurement and the construction were started from October 2004 and completed in January 2005.				
	Activity	Target	Unit	Result	Rate
	Total area (5 acre)	2.03	ha	2.03	100%
	Wooden walking board (125ft)	38.13	m	38.13	100%
	Temporary hut for observation and storage (324ft ²)	30.13	m ²	30.13	100%
	Sapling planting	150	sdl.	150	100%*
	Wooden boundary pillars	6	pc	6	100%
	Sign boards (6' x 3' size)	2	set	2	100%
	Species board (6'' x 18''' size)	50	pc	50	100%
	* Sapling was provided from TYK FD Integrated mangrove nursery				

4.4 Charcoal Production/ 4.5 Patrolling

Component	Result																			
4.4 White charcoal production																				
	At the final completion check time, the application for the charcoal production was under preparation by the FD officer in charge of the pilot project.																			
4.5 Patrolling																				
1. Formulation of user group patrolling system	The patrolling system was set up in both Thar Yar Kone and Nyaung Ta Pin. The action plan was formulated, and demonstration patrolling was practiced by the user groups and FD.																			
2. Implementation and monitoring of patrolling	The user group implemented patrolling by themselves using their boats accompanied by the CF task force members twice. Recording and reporting systems were not prepared and conducted by either user groups or the CF task force.																			
3. Public awareness	<div>1. Public awareness local workshops were conducted 18 times at 2 districts, 2 townships, 13 villages and Bogalay FD office.</div> <table><tr><th>Activity</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Public awareness local workshop</td><td>27</td><td>time</td><td>18</td><td>-</td></tr></table> <div>2. A handout for public awareness was prepared by the study team and FD and distributed the handout in collaboration with local authorities.</div> <table><tr><th>Component</th><th>Quantity</th><th>Unit</th></tr><tr><td>Public Awareness pamphlet</td><td>50,000</td><td>copies</td></tr><tr><td>Public Awareness poster</td><td>500</td><td>copies</td></tr></table>	Activity	Target	Unit	Result	Rate	Public awareness local workshop	27	time	18	-	Component	Quantity	Unit	Public Awareness pamphlet	50,000	copies	Public Awareness poster	500	copies
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3.6.2 Physical Results: Thar Yar Kone and Nyang Ta Pin CF Pilot Project

The following tables indicate the final physical result of the CF pilot project as of January 2005. Hard components such as procurement of construction and production materials were nearly completed or estimated to be terminated by the end of January 2005 except for the CF aqua-agroforestry that quantity was reduced and limited to a demo

aqua-agroforestry for each village. On the other hand, the actual construction by the CF user group members was still on-going at the end of January 2005. Based on the availability of time and labor, the CF user group members will continue the remaining works even after the termination of the pilot project 2004. Due to delay in the construction, production activities in agroforestry and aquaculture were not start under CF during the pilot project implementation period.

Preparation and updating of plans/documents related to CF activities were conducted during the pilot project implementation period by the CF user groups with support from FD staff. However, authorization and/or certification of such activities were not given to the CF user groups by FD even at the end of January 25.

(1) Planning

1. Planning (1)

Component	Item
1. Planning	
1.1 Update of action plan of management plan prepared under pilot project 2003	
1. Preparation of action plan 2004	
a) Necessity of update is understood by the user groups	The management committee understood and agreed for the activities needed for the update, but not all of the user group members understood.
b) Preparation and submission of action plan	The action plan for the management plan prepared under the pilot project 2003 was updated by the two user groups. The Thar Yar Kone user group submitted the updated action plan to FD but the Nyaung Ta Pin user group, did not submit the updated action plan to FD, because they misunderstood that FD should take care of the updated action plan. There was no written record by the user group about the submission of the updated action plan.
1.2 Update of TYK and NTP forest management plan (1)	
1. Updating of user group members and allocation of CF area for new members	
	<p>The management plans of Thar Yar Kone and Nyaung Ta Pin village were updated by the user groups.</p> <ul style="list-style-type: none"> - In Thar Yar Kone village, one member dropped out because of a lack of labor force to implement CF. The CF area was reallocated as the CF church woodlot by the verbal agreement between the user group and FD. - In Nyaung Ta Pin village, 13 members dropped out mainly due to a migration to other villages, but 8 members joined the user group. The 8 newcomers took over the CF areas of the dropped out 8 members.

1. Planning (2)

Component	Item
1.2 Update of TYK and NTP forest management plan (2)	
2. Land allocation and confirmation of border lines	
Summary	The update of the CF management map was completed by the user group, the CF task force, and the Geographic Information System (GIS) section of FD. The updated CF management maps including new and dropped out user group members, and the new CF activities, were submitted to the CF task force. However, the update CF management map was not authorized by the Myaung Mya District FD office yet.
a) Confirmation of delineation method	Confirmed by the user groups. The user group confirmed the delineation method integrating the chain survey, the boarder line management by clear-cutting the boarder line, and the GPS recording. The user group recognized the survey in 2004 itself was not so different from the previous one in 2003.
b) Delineated line confirmation (sub-group boundary) in Thar Yar Kone and Nyaung Ta Pin.	Thar Yar Kone: completed for all sub-groups (1~6) Nyaung Ta Pin: completed for all sub-groups (1~9)
c) Delineated line confirmation (individual boundary) in Thar Yar Kone and Nyaung Ta Pin	Thar Yar Kone: not completed except sub-group 6 Nyaung Ta Pin: completed for all individual CF area
d) Understanding about border line management	Through the confirmation activity of the CF area border line, both the CF user groups and the CF task force understood about the importance of the border line management.
e) Preparation of revised CF management map	Preparation of updated CF management map by the GIS section based on the GPS data collected at the field.
f) Map distribution	The GIS section itself did not distribute any map and data. The JICA study team distributed to front line office at Thar Yar Kone camp in September 2004.
g) Budget allocation for mapping and printing for preparation of CF management map	The GIS section consumed an ordinary budget for necessary procurement. There is no budget allocation for the CF mapping at present.
3. Preparation of the revised CF management plan	
	The 8 new comers in Nyaung Ta Pin submitted the management plan to FD in August. The CF user groups prepared the rules and regulations regarding the border line management through holding workshops by the user group and FD. The rules and regulations will be confirmed by the user group in writing in November 2004.
4. application and permission of revised forest management plan	
	Though FD understood the necessity of the update in order to secure CF rights, the official procedure for amendment to the management plan has not proceeded yet.
1.3 Application and trial of sales vouchers and licenses for value added products	
1. Improvement of the CF map and harvest plan	
	The user group members did not have any experience and knowledge about the stock estimation of their area, and it was difficult for them to prepare a harvesting plan. In the workshop, FD suggested the user group measure girth and height of trees in their area.
2. Application of sales voucher	
	The management committee members and subgroup leaders understood how to use the draft sales voucher. The trial of the sales voucher was not implemented by January 2005 by the user groups and FD.
	Removal pass was not issued.
3. Preparation and application of license for value adding production	
	The license for value added products was not applied by the user group members in the pilot project 2004.

(2) Implementation

2.1 Continuation Activities of Pilot Project 2003

Component	Item																																																																											
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	The user groups implemented the plantation and NFIO activities. The seedling distribution from FD was based on the updated action plan in Thar Yar Kone. On the other hand, in Nyaung Ta Pin the distribution was based on the original management plan prepared in 2003. The total seedling distribution by FD was about 40,000 seedlings. The achievement of the CF plantations and NFIO was 15 to 23% in both villages except for 105% achievement for the plantation in Nyaung Ta Pin.																																																																											
1. Plantation																																																																												
a) Implementation	<div>Areas under CF Plantation</div> <table><tr><th>UsG</th><th>Target (2003)</th><th>Target (2004)</th><th>Unit</th><th>Result</th><th>Rate (2004)</th></tr><tr><td>TYK</td><td>3.48</td><td>13.42</td><td>ha</td><td>3.78</td><td>28.1%</td></tr><tr><td>NTP</td><td>1.95</td><td>1.89</td><td>ha</td><td>1.98</td><td>104.8%</td></tr><tr><td>Total</td><td>5.43</td><td>15.31</td><td>ha</td><td>5.76</td><td>37.5%</td></tr></table> <div>Required and Planted Seedlings</div> <table><tr><th>UsG</th><th colspan="2">Target</th><th colspan="3">Result</th></tr><tr><th></th><th>(2003)</th><th>(2004)</th><th>By FD</th><th>By UsG</th><th>Total</th></tr><tr><td>TYK</td><td>14,840</td><td>49,510</td><td>5,360</td><td>3,400</td><td>8,760</td></tr><tr><td>NTP</td><td>15,400</td><td>1,000</td><td>2,550</td><td>1,000</td><td>3,550</td></tr><tr><td>Total</td><td>30,240</td><td>50,510</td><td>7,910</td><td>4,400</td><td>12,310</td></tr></table> <div>Note: management plan in 2003 does not specify seedling requirement based on operation (Plantation or NFIO). Result is based on UsG record</div>	UsG	Target (2003)	Target (2004)	Unit	Result	Rate (2004)	TYK	3.48	13.42	ha	3.78	28.1%	NTP	1.95	1.89	ha	1.98	104.8%	Total	5.43	15.31	ha	5.76	37.5%	UsG	Target		Result				(2003)	(2004)	By FD	By UsG	Total	TYK	14,840	49,510	5,360	3,400	8,760	NTP	15,400	1,000	2,550	1,000	3,550	Total	30,240	50,510	7,910	4,400	12,310																					
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2.2 New Activities under Pilot Project 2004 (1)

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1. CF Aqua-agroforestry																																																																																																																																													
	Subgroups for the CF aqua-agroforestry were formulated in each village. The subgroups prepared the management plan, and the rules and regulations, and submitted them to FD. The land allocation was not yet done because Laputta FD understood that permission from the divisional FD office was necessary.																																																																																																																																												
a) Formulation of subgroups	The subgroup was formed and the rules and regulations were formulated in each village.																																																																																																																																												
b) Allocation of CF areas	Aqua-agroforestry was planned in the already allocated CF land.																																																																																																																																												
c) Preparation and submission of CF management plan	Management plan was formulated and submitted to FD. Submitted management plan was not yet authorized. Demonstration aqua-agroforestry was permitted in each village.																																																																																																																																												
d) Construction	<p>The construction was started but still on going by both user group as of January 2005. 1set of CF aqua-agroforestry 400m² x 2 ponds =800m² (water body 220m², land 580m²)</p> <table><tr><th>UsG</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>TYK</td><td>2</td><td>set</td><td>1</td><td>Under construction</td></tr><tr><td>NTP</td><td>2</td><td>ste</td><td>1</td><td>Under construction</td></tr><tr><td>Total</td><td>4</td><td>set</td><td>2</td><td>(50.0%)</td></tr></table>	UsG	Target	Unit	Result	Rate	TYK	2	set	1	Under construction	NTP	2	ste	1	Under construction	Total	4	set	2	(50.0%)																																																																																																																								
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e) Procurement of construction material	<p>Procurement of necessary construction materials was completed by the end of January 2005. The following materials were procured.</p> <p>Thar Yar Kone</p> <table><tr><th>Item</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Brick</td><td>1,137</td><td>pc</td><td>1,418</td><td>125%</td></tr><tr><td>Broken brick</td><td>17</td><td>cft</td><td>-</td><td>*</td></tr><tr><td>Sand</td><td>28</td><td>cft</td><td>50</td><td></td></tr><tr><td>Cement</td><td>6</td><td>bag</td><td>6</td><td></td></tr><tr><td>Coconut fibre</td><td>634</td><td>viss</td><td>634</td><td></td></tr><tr><td>Shingle</td><td>1</td><td>cft</td><td>-</td><td>*</td></tr><tr><td>Timber</td><td>8</td><td>cft</td><td>-</td><td>**</td></tr><tr><td>Poles</td><td>12</td><td>pc</td><td>12</td><td>100%</td></tr><tr><td>Wire nails</td><td>1</td><td>lb</td><td>-</td><td>**</td></tr><tr><td>Nylon net</td><td>60</td><td>sft</td><td>-</td><td>**</td></tr><tr><td>10" concrete pipe</td><td>6</td><td>pc</td><td>6</td><td>100%</td></tr><tr><td>Ready made water gate x 2</td><td>-</td><td>set</td><td>1</td><td></td></tr><tr><td>Ready made screen gate x 2</td><td>-</td><td>set</td><td>1</td><td></td></tr></table> <p>* replaced to brick, ** replaced to ready made gates</p> <p>Nyang Ta Pin</p> <table><tr><th>Item</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Brick</td><td>1,137</td><td>pc</td><td>1,418</td><td>125%</td></tr><tr><td>Broken brick</td><td>17</td><td>cft</td><td>-</td><td>*</td></tr><tr><td>Sand</td><td>28</td><td>cft</td><td>50</td><td></td></tr><tr><td>Cement</td><td>6</td><td>bag</td><td>6</td><td></td></tr><tr><td>Coconut fibre</td><td>634</td><td>viss</td><td>634</td><td></td></tr><tr><td>Shingle</td><td>1</td><td>cft</td><td>-</td><td>*</td></tr><tr><td>Timber</td><td>8</td><td>cft</td><td>-</td><td>**</td></tr><tr><td>Poles</td><td>12</td><td>pc</td><td>12</td><td>100%</td></tr><tr><td>Wire nails</td><td>1</td><td>lb</td><td>-</td><td>**</td></tr><tr><td>Nylon net</td><td>60</td><td>sft</td><td>-</td><td>**</td></tr><tr><td>10" concrete pipe</td><td>6</td><td>pc</td><td>6</td><td>100%</td></tr><tr><td>Ready made water gate x 2</td><td>-</td><td>set</td><td>1</td><td></td></tr><tr><td>Ready made screen gate x 2</td><td>-</td><td>set</td><td>1</td><td></td></tr></table>	Item	Target	Unit	Result	Rate	Brick	1,137	pc	1,418	125%	Broken brick	17	cft	-	*	Sand	28	cft	50		Cement	6	bag	6		Coconut fibre	634	viss	634		Shingle	1	cft	-	*	Timber	8	cft	-	**	Poles	12	pc	12	100%	Wire nails	1	lb	-	**	Nylon net	60	sft	-	**	10" concrete pipe	6	pc	6	100%	Ready made water gate x 2	-	set	1		Ready made screen gate x 2	-	set	1		Item	Target	Unit	Result	Rate	Brick	1,137	pc	1,418	125%	Broken brick	17	cft	-	*	Sand	28	cft	50		Cement	6	bag	6		Coconut fibre	634	viss	634		Shingle	1	cft	-	*	Timber	8	cft	-	**	Poles	12	pc	12	100%	Wire nails	1	lb	-	**	Nylon net	60	sft	-	**	10" concrete pipe	6	pc	6	100%	Ready made water gate x 2	-	set	1		Ready made screen gate x 2	-	set	1	
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2.2 New Activities under Pilot Project 2004 (2)

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	Note: Procured equal amount of items for both Thar Yar Kone and Nayng Ta Pin villages																																																																																																																							
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	<table><tr><th>Item</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Coconut</td><td>24</td><td>pc</td><td>26.0</td><td>108%</td></tr><tr><td>Mango</td><td>24</td><td>pc</td><td>26.0</td><td>108%</td></tr><tr><td>Arecanut</td><td>24</td><td>pc</td><td>18.0</td><td>75%</td></tr><tr><td>Lemon</td><td>24</td><td>pc</td><td>18.0</td><td>75%</td></tr><tr><td>Lime</td><td>24</td><td>pc</td><td>18.0</td><td>75%</td></tr><tr><td>Guava</td><td>24</td><td>pc</td><td>0.0</td><td>0%</td></tr><tr><td>Banana</td><td>48</td><td>pc</td><td>0.0</td><td>0%</td></tr><tr><td>Black papper</td><td>30</td><td>pc</td><td>60.0</td><td>100%</td></tr><tr><td>Zawlone</td><td>600</td><td>pc</td><td>1,200.0</td><td>100%</td></tr><tr><td>Long Bean</td><td>0.5</td><td>kg</td><td>1.0</td><td>100%</td></tr><tr><td>Cucumber</td><td>50.0</td><td>gm</td><td>100.0</td><td>100%</td></tr><tr><td>Pumkin</td><td>0.8</td><td>kg</td><td>0.2</td><td>100%</td></tr><tr><td>Bottle gourd</td><td>0.1</td><td>kg</td><td>0.2</td><td>100%</td></tr><tr><td>Snake gourd</td><td>0.06</td><td>kg</td><td>0.0</td><td>100%</td></tr><tr><td>Roselle</td><td>1.0</td><td>kg</td><td>2.0</td><td>100%</td></tr><tr><td>Drumstick</td><td>80</td><td>pc</td><td>0.0</td><td>0%</td></tr><tr><td>Sweet Potato</td><td>120</td><td>pc</td><td>0.0</td><td>0%</td></tr><tr><td>Watercress</td><td>1.0</td><td>kg</td><td>2.0</td><td>100%</td></tr><tr><td>Okra</td><td>0.5</td><td>kg</td><td>1.0</td><td>100%</td></tr><tr><td>Chilli</td><td>60</td><td>Gm</td><td>60</td><td>100%</td></tr><tr><td>Egg Plant</td><td>60</td><td>Gm</td><td>200</td><td>100%</td></tr><tr><td>Cow Manure(25Kg)</td><td>120</td><td>bag</td><td rowspan="2">160</td><td>100%</td></tr><tr><td>Chicken Manure(25Kg)</td><td>40</td><td>bag</td><td>100%</td></tr></table>	Item	Target	Unit	Result	Rate	Coconut	24	pc	26.0	108%	Mango	24	pc	26.0	108%	Arecanut	24	pc	18.0	75%	Lemon	24	pc	18.0	75%	Lime	24	pc	18.0	75%	Guava	24	pc	0.0	0%	Banana	48	pc	0.0	0%	Black papper	30	pc	60.0	100%	Zawlone	600	pc	1,200.0	100%	Long Bean	0.5	kg	1.0	100%	Cucumber	50.0	gm	100.0	100%	Pumkin	0.8	kg	0.2	100%	Bottle gourd	0.1	kg	0.2	100%	Snake gourd	0.06	kg	0.0	100%	Roselle	1.0	kg	2.0	100%	Drumstick	80	pc	0.0	0%	Sweet Potato	120	pc	0.0	0%	Watercress	1.0	kg	2.0	100%	Okra	0.5	kg	1.0	100%	Chilli	60	Gm	60	100%	Egg Plant	60	Gm	200	100%	Cow Manure(25Kg)	120	bag	160	100%	Chicken Manure(25Kg)	40	bag	100%
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2.2 New Activities under Pilot Project 2004 (3)

Component	Item																																																							
2.2 New activities under pilot project 2004 (3)																																																								
g) CF agroforestry	The Thar Yar Kone CF agroforestry subgroup established in 2003 continued their activity by themselves, and submitted the management plan to the CF task force.																																																							
	TYK Agronursery																																																							
	<table><tr><th>Item</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Tarro</td><td>5</td><td>kg</td><td>0</td><td>0%</td></tr><tr><td><i>Sesbania grandiflora</i> (seed)</td><td>1</td><td>kg</td><td>1</td><td>100%</td></tr><tr><td>Pomelo</td><td>10</td><td>pc</td><td>10</td><td>100%</td></tr><tr><td>Jack fruit</td><td>5</td><td>pc</td><td>5</td><td>100%</td></tr><tr><td>Drum stick (seed)</td><td>1</td><td>kg</td><td>1</td><td>100%</td></tr><tr><td>Tomato</td><td>1</td><td>kg</td><td>1</td><td>100%</td></tr><tr><td>Soap pod</td><td>100</td><td>pc</td><td>0</td><td>0%</td></tr><tr><td>Water melon</td><td>1</td><td>kg</td><td>1</td><td>100%</td></tr><tr><td>Ginger (seed)</td><td>5</td><td>kg</td><td>5</td><td>100%</td></tr><tr><td>Rambutan</td><td>10</td><td>pc</td><td>5</td><td>100%</td></tr></table>	Item	Target	Unit	Result	Rate	Tarro	5	kg	0	0%	<i>Sesbania grandiflora</i> (seed)	1	kg	1	100%	Pomelo	10	pc	10	100%	Jack fruit	5	pc	5	100%	Drum stick (seed)	1	kg	1	100%	Tomato	1	kg	1	100%	Soap pod	100	pc	0	0%	Water melon	1	kg	1	100%	Ginger (seed)	5	kg	5	100%	Rambutan	10	pc	5	100%
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Item	Target	Unit	Result	Rate																																																				
Mango	-	pc	20																																																					

2.2 New Activities under Pilot Project 2004 (4)

Component	Item						
2.2 New activities under pilot project 2004 (4)							
2. CF FD Camp							
	The Laputta township FD officers and laborers organized the user group for the CF FD camp. FD allocated 526.5 ha (1,300 acre) in the forest compartment No. 61 in the Pyinalan Reserve Forest. The management plan and the rules and regulations were prepared in November and December 2004.						
	In October, approximately 30,000 seedlings were distributed from the Thar Yar Kone FD integrated nursery for plantation.						
	<p>For CF FD camp, following items were procured in January 2005</p> <table> <tr> <th>Item</th><th>CF FD Camp</th></tr> <tr> <td>Boundary pillars</td><td>34</td></tr> <tr> <td>Signboards</td><td>8</td></tr> </table>	Item	CF FD Camp	Boundary pillars	34	Signboards	8
Item	CF FD Camp						
Boundary pillars	34						
Signboards	8						

2.2 New Activities under Pilot Project 2004 (5)

Component	Item																																																
2.2 New activities under pilot project 2004 (5)																																																	
3. CF village woodlot																																																	
a) Formulation of subgroups	The subgroup was formed and the rules and regulations were formulated.																																																
b) Allocation of CF areas	The land was allocated for communal woodlots except the school woodlot in Thar Yar Kone.																																																
c) Preparation and submission of CF management plan	Management plan was formulated and submitted to FD. Submitted management plan was not yet authorized.																																																
d) Implementation	<div>Areas under CF Village woodlot</div> <table><tr><th>UsG</th><th>Target (All)</th><th>Target (2004)</th><th>Unit</th><th>Result</th><th>Rate (2004)</th></tr><tr><td>TYK school woodlot</td><td>0.81</td><td>0.81</td><td>ha</td><td>0.20</td><td>24.7%</td></tr><tr><td>NTP village woodlot</td><td>1.94</td><td>1.94</td><td>ha</td><td>1.82</td><td>93.8%</td></tr><tr><td>Total</td><td>2.75</td><td>2.75</td><td>ha</td><td>2.02</td><td>73.5%</td></tr></table> <div>Survival rate of the planted seedling (sampling survey)</div> <table><tr><th>Species</th><th>Survival %</th><th>Spacing</th></tr><tr><td>NTP village wood lot</td><td></td><td></td></tr><tr><td><i>Heritiera fomes</i></td><td>40%</td><td>6 x 6 ft (1.83 x 1.83m)</td></tr><tr><td><i>Excoecaria agallocha</i></td><td>60%</td><td>6 x 6 ft (1.83 x 1.83m) 4.5 x 4.5 ft (1.37 x 1.37m)</td></tr><tr><td>TYK school wood lot</td><td></td><td></td></tr><tr><td><i>Avicennia officinalis</i></td><td>90%</td><td>6 x 6 ft (1.83 x 1.83m)</td></tr></table>	UsG	Target (All)	Target (2004)	Unit	Result	Rate (2004)	TYK school woodlot	0.81	0.81	ha	0.20	24.7%	NTP village woodlot	1.94	1.94	ha	1.82	93.8%	Total	2.75	2.75	ha	2.02	73.5%	Species	Survival %	Spacing	NTP village wood lot			<i>Heritiera fomes</i>	40%	6 x 6 ft (1.83 x 1.83m)	<i>Excoecaria agallocha</i>	60%	6 x 6 ft (1.83 x 1.83m) 4.5 x 4.5 ft (1.37 x 1.37m)	TYK school wood lot			<i>Avicennia officinalis</i>	90%	6 x 6 ft (1.83 x 1.83m)						
UsG	Target (All)	Target (2004)	Unit	Result	Rate (2004)																																												
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2.3 Capacity Building of User Groups and User Group Members (1)

Component	Item																																																																																
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1. CF Water Reservoir Construction and Operation																																																																																	
Formulation of CF user group water reservoir subgroup and the rules and regulations	The water reservoir subgroup was formulated in both Thar Yar Kone and Nyaung Ta Pin villages in May 2004. The draft rules and regulations were also formulated																																																																																
Action plan for the construction is formulated	The action plan was formulated based on the work quantity and updated based on the user group members' availability																																																																																
Construction of water reservoir	The construction was started by both user groups at the end of October 2004 and still on going by both user group as of January 2005 CF Water Reservoir : 15.25 m x 15.25 m x ht. 1.83m, 396t water capacity																																																																																
Procurement of construction material	Procurement of necessary construction materials was completed by the end of January 2005. The following materials were procured. Thar Yar Kone <table><tr><th>Item</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Silt</td><td>328</td><td>cft</td><td>0</td><td>0%</td></tr><tr><td>Lime (30 viss)</td><td>157</td><td>bag</td><td>157</td><td>100%</td></tr><tr><td>coconut fibre(1 viss)</td><td>1,082</td><td>bag</td><td>1,082</td><td>100%</td></tr><tr><td>Brick</td><td>1,350</td><td>pc</td><td>1,062</td><td>79%</td></tr><tr><td>Sand</td><td>28</td><td>cft</td><td>100</td><td>357%</td></tr><tr><td>Cement</td><td>6</td><td>bag</td><td>6</td><td>100%</td></tr><tr><td>Ready made wooden step x2</td><td>-</td><td>set</td><td>1</td><td>100%</td></tr></table> Nyang Ta Pin <table><tr><th>Item</th><th>Target</th><th>Unit</th><th>Result</th><th>Rate</th></tr><tr><td>Silt</td><td>328</td><td>cft</td><td>0</td><td>0%</td></tr><tr><td>Lime (30 viss)</td><td>157</td><td>bag</td><td>157</td><td>100%</td></tr><tr><td>coconut fibre(1 viss)</td><td>1,082</td><td>bag</td><td>1,082</td><td>100%</td></tr><tr><td>Brick</td><td>1,350</td><td>pc</td><td>1,062</td><td>79%</td></tr><tr><td>Sand</td><td>28</td><td>cft</td><td>100</td><td>357%</td></tr><tr><td>Cement</td><td>6</td><td>bag</td><td>6</td><td>100%</td></tr><tr><td>Ready made wooden step x2</td><td>-</td><td>set</td><td>1</td><td>100%</td></tr></table> Minor changes in design have resulted in changes in the procurement amount.	Item	Target	Unit	Result	Rate	Silt	328	cft	0	0%	Lime (30 viss)	157	bag	157	100%	coconut fibre(1 viss)	1,082	bag	1,082	100%	Brick	1,350	pc	1,062	79%	Sand	28	cft	100	357%	Cement	6	bag	6	100%	Ready made wooden step x2	-	set	1	100%	Item	Target	Unit	Result	Rate	Silt	328	cft	0	0%	Lime (30 viss)	157	bag	157	100%	coconut fibre(1 viss)	1,082	bag	1,082	100%	Brick	1,350	pc	1,062	79%	Sand	28	cft	100	357%	Cement	6	bag	6	100%	Ready made wooden step x2	-	set	1	100%
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Ready made wooden step x2	-	set	1	100%																																																																													
2.Training of the CF user group extension workers																																																																																	
a) Selection of extension workers	Totally, 2 trainees each from Thar Yar Kone, Nyaung Ta Pin, Kanbala Ta Pin,, Thaung Lay were selected by the management committee and / or the village authority.																																																																																
b) Lecture related to the pilot project 2004 is implemented.	Lectures on plantation, NFIO, aqua-agroforestry, monitoring, agroforestry, agro-nursery, rules and regulations, efficient stove were implemented from May to October 2004, two weeks per month on average.																																																																																
c) On-the-job training through the pilot project 2004 is implemented.	On-the-job trainings on action planning, delineation, management planning , implementation of plantation and NFIO, aqua-agroforestry, agroforestry, women group activities were implemented from May to October 2004, two weeks per month on average.																																																																																
d) Study tour and phoenix heart marketing	A study tour was conducted in January 2005 for extension workers for observation of aquaculture production, agricultural production in Yangon areas. Also attended the technology transfer seminar.																																																																																

2.3 Capacity Building of User Groups and User Group Members (2)

Component	Item
2.3 Capacity building of user groups and user group members (2)	
3. CF user group women's group	
	The CF women subgroup was formulated with 20 members. The rules and regulations and the processing manual for phoenix was also prepared by the subgroup and the study team.
a) Formulation of women group is formed and rules and regulations for the women group are formulated.	Women group was formed with 20 members in Thar Yar Kone and its rules and regulations are formulated.
b) The method of processing phoenix shoots	The method was summarized as the manual and the women group learned the method. . The subgroup arranged the 4 working groups and produced about 300 bottles of phoenix shoots
c) The sample tasting for the marketing of the phoenix shoot.	The trial tasting was held twice in Yangon. And also served to participants of the technology transfer seminar in January 2005
e) Consideration for further production of the phoenix shoot	The phoenix resource was estimated enough for the sustainable production. The production plan was prepared. However, the bottle procurement for the production was difficult within the pilot project duration.
4. Support monitoring and preparation of progress report of the CF UsG	
	The annual progress report for 2003 was prepared by the user groups, by support and supervision of the study team. The management committee submitted the annual progress report for 2003 to FD in August 2004.
	The extension workers supported the user groups to monitor and record the activity for 2004. The interim achievement was shared with the user groups in the wrap up meeting on 20th October 2004.

A sample of the progress report prepared by Nyaung Ta Pin CF user group is indicated in Attachment - 9.

3.7 Completion and Evaluation of the Pilot Project 2004

3.7.1 Achievement of the Pilot Project to be Delivered to the Stakeholders

(1) Delivery to FD

Of the achieved components under the FD capacity development pilot project, the components summarized below were implemented by the contribution of JICA. The completed construction, procurement, seedling production were handed over to FD for the further usages and maintenance upon termination of the pilot project in January 2005. The delivered items to FD are listed in Attachment -10. Also, items listed in Attachment 1-3 were also delivered to FD at the completion of the pilot project in February 2004.

(2) Delivery to CF User Groups

Materials and equipment procured for construction, planting, agricultural/ aqua-cultural production for CF activities were delivered to the concerned CF user groups. The delivered items are already utilized for would be utilized for the further CF activities.

3.7.2 Monitoring and Evaluation Methods

The monitoring and evaluation methods conducted in the pilot project 2004 were basically the same as that of pilot project 2003, with some modifications especially for report/recording formats for the user group. Also, a mid-term evaluation was not conducted due to the shorter period for the implementation of the pilot project 2004.

The completion check/evaluation was conducted in October 2004 for a post evaluation of the pilot project 2003 and a completion evaluation for the pilot project 2004. The objectives of the evaluation were 1) to integrate the outcome of the pilot project activity, 2) to consider continuation policies for the pilot project, and 3) to revise the IMMP. The completion check was conducted by the study team, FD and user groups through review of monitoring records, site (physical) checks, discussions, workshops, and interviews. Based on the completion check an evaluation was conducted to identify assets and needs of FD and user groups. Also, a socioeconomic condition survey II was conducted to analyze differences in communities to which target user groups belong, before and after the implementation of the pilot project.

3.7.3 Potential of FD and CF User Groups for CF Implementation

(1) FD

The potential of FD were evaluated as follows. Human capital: the staff have intention for CF promotion, but the knowledge can be improved more through the implementation (on-the-job training) and training. Social capital: the organization and institutional development for CF promotion started in accordance with the pilot project 2004 implementation plan. Though there were problems regarding staff assignment and rules and regulations for CF operation and management, it can be improved by the support from the project. For physical capital, the project support was proved to be effective. For financial capital, even the FD officers in the field level can request the budget to the higher offices, due to the financial condition of FD, the support is necessary. The natural capital was evaluated as sufficient in the pilot project area.

(2) CF User Group

The potentials of the community were evaluated as follows. Human capital: the user group members have strong intention for the production from the CF activity, but livelihood problems can be the obstacles for the effective implementation. The support for income generation is necessary. For social capital, even the group activities were started, it needed further support the group becomes mature. For physical capital, the solid assets (materials)

for the CF were not enough, but the community possesses enough labor force for the activity such as the water reservoir construction. For the financial capital, almost all of the user group members have problems for their livelihood. For the natural capital, effective utilization and management can be accelerated through the project implementation.

3.7.4 Outputs of the Pilot Project 2004

(1) Evaluation Results

The physical output and its evaluation are summarized in the following table. In consideration of the primary objectives and themes (Section 1.3.1), and the specific purpose of the pilot project 2004 (Section 1.3.2), there were improvements and initiation of unachieved /problematic activities from the pilot project 2003.

Evaluation Result of the Pilot Project 2004

Project Purpose and Goal	Evaluation
CF Activity was Diversified by user groups	Started but not satisfactorily achieved
Capacity Development of the CF user groups.	Started but not satisfactorily achieved
CF support and management system by FD was established, improved and diversified.	Started but not satisfactorily achieved
Participatory mangrove rehabilitation through CFI is accelerated (FD).	Improved but not satisfactorily achieved

(2) Establishment of Foundation for the CF Diversification and the CF Management and Support

Though the output of the pilot project 2004 had not fully accomplished the original plan, it was possible to confirm the following items as a foundation of sustainable CF activities for the mangrove rehabilitation in the study area.

- Diversification of the CF Activities: On-going socioeconomic activities inside the reserved forest had been initiated or to be tried as the CF activity, such as the CF aqua-agroforestry, the CF agroforestry, the CF communal wood lots, and the CF water reservoir. Still many steps are required to officialize such activities as CF. However, the pilot project 2004 served to verify the potential of the diversified CF activity.
- CF Management and Support Setup: Though the setup and activity practiced under the pilot project 2004 for CF management and support by FD were limited and insufficient, the CF monitoring team, the CF task force, the border line management, sales vouchers and removal passes, and public awareness/patrolling revealed constraints and potentials for further CF management and support by FD in the study area.

CHAPTER 4 EVALUATION OF THE PILOT PROJECT 2003/2004

4.1 Evaluation of Capacity of Stakeholder of the Pilot Project 2003/2004

4.1.1 Employed Evaluation Method

(1) Evaluation Method

The evaluation method based on a concept of the SLA adopted for clarification of the stakeholders' capacity for engagement in sustainable CF activities. The capacity is evaluated, by 1) firstly confirming the facts on the progress of the two pilot projects of 2003 and 2004, 2) comparing differences between the two pilot project results, and

Sustainable Livelihood Approach:

This evaluation method employed to the study is refereed to a theory of "Sustainable Livelihood Approach (SLA)" developed by DFID. The SLA aims at formulation of a sustainable project through confirmation of context between fact composing a project environment and capacity of stakeholders related to a project.

The study must recognize an ability of stakeholders and environment of the IMMP, then the IMMP have to be formulated based on the recognitions. Therefore the SLA is refereed as of evaluation method.

3) estimating the anticipated capacity of stakeholders. All activities of the pilot project 2003 and 2004 including planning, implementation, operation and management of the CF activities are categorized to five capitals of 1) human, 2) social, 3) physical, 4) natural and 5) financial, and scored by stakeholders of FD and CF user groups member respectively based on support of the study team. Then the score is taken average by each capital of FD and CF user group respectively. This evaluation method is expected to serve as a feedback mechanism from the pilot project to the IMMP to enhance its practicability.

(2) Implication of the Evaluation Method

The Figure 4.1 illustrates the structure of the evaluation and relationship between the evaluation and the IMMP.

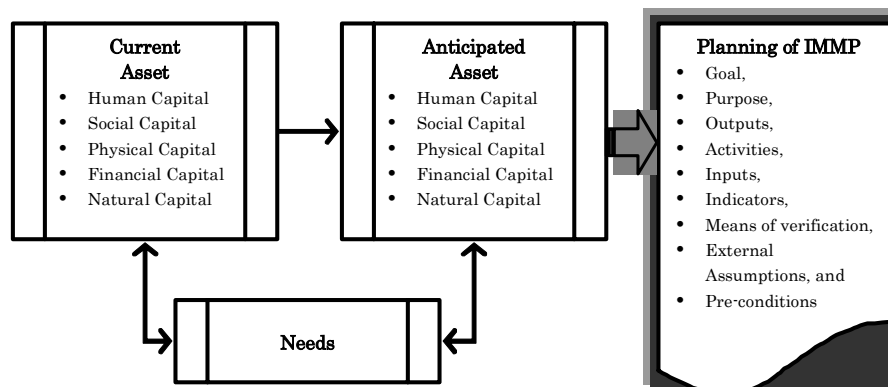


Figure 4.1 Structure of the Evaluation

The anticipated asset is evaluated based on confirmation of current asset-present activity implies findings of feasible works for the stakeholders in engaging in the CF activity. The requirements for fulfilling all activities for each component of the pilot project are identified.

(3) Data Applied to the Evaluation

To confirm current and anticipated assets, the following data and survey results are referred to:

- Interview of stakeholders of FD and the CF user group,
- Monthly progress reports of the supervisor of the pilot project,
- Village profile survey and Rapid Rural Appraisal (RRA),
- Socioeconomic condition survey 1 and 2, and
- Pilot project 2003 and 2004

4.1.2 Capital and Evaluation Element

(1) Setting Evaluation Element

The capitals cannot be directly evaluated, so the evaluation elements corresponding to the capitals are selected from each activity practiced under the pilot projects. Therefore the evaluation elements are composed of the activities of each stakeholder in the pilot projects. The following table shows simplified structure of capital, evaluation elements and activities.

Structure of the Capital, Evaluation Elements and Pilot Project Activities

Capital	Evaluation Elements	Activities
Five Capitals	Five major elements are selected from pilot project activities corresponding to each capital	Pilot project 2003 and 2004: All activities of planning, implementation, operation and management of the CF activities are listed.

(2) Capitals and Evaluation Element for FD

The following table shows the selected evaluation elements for each capital. The evaluation elements and corresponding pilot project activities to each element are identified by the study team as essential factors for achieving sustainable CF activity.

Capital and Evaluation Elements (FD)

Capital	Evaluation Elements
Human Capital of the FD officer and field staff	<ul style="list-style-type: none"> - The FD officer and field staff have a practical intention regarding CF - The FD officer and field staff have intention for CF expansion for forest conservation and production - The FD officer and field staff possess practical techniques and knowledge - The FD office and field staff have enough income for engaging in CF management and support - The FD officer and field staff maintain healthy CF management and support
Social Capital of the FD as an aggregation	<ul style="list-style-type: none"> - Necessary policy, national and regional plans for CF are prepared - Necessary institutional development for fulfillment of the CF objective and intention of FD is completed - Necessary records are accumulated based on a proper reporting system regarding the CF activity - Necessary organization for the CF management and support is prepared - Necessary CF training and extension material of FD and community are prepared
Physical Capital	<ul style="list-style-type: none"> - FD has facilities and equipment of the CF extension, management and support - FD has facilities and equipment for seedling production and distribution - FD has equipment and tools for forestry operation - FD has facilities, equipment for patrolling - FD has facilities and equipment for the CF extension and public awareness
Financial Capital	<ul style="list-style-type: none"> - FD has necessary budget for the CF extension, management and support - FD has necessary budget for seedling production and distribution - FD has necessary budget for forestry operations - FD has necessary budget for patrolling - FD has necessary budget for the CF extension and public awareness activities
Natural Capital	<ul style="list-style-type: none"> - Vegetation can be rehabilitated by culturing methods of the local people - Natural conditions are suited to sustainable production - Forest conditions have anticipated to fulfill demand for wood products and non-timber forest products (NTFP) for local needs - FD has necessary budget for patrolling - Forest conditions have potential to fulfill wood products and NTFP demands of FD

(3) Capitals and Evaluation Element for the CF User Group

The following table shows the selected evaluation elements for each capital of the CF user group. The evaluation elements and corresponding pilot project activities to each element are identified by the study team as essential factors for achieving the sustainable CF activity by the CF user group.

Capital and Evaluation Elements (the CF User Group)

Capital	Evaluation Elements
Human Capital	<ul style="list-style-type: none"> - People have a practical intention regarding CF. - People have intention for CF expansion for forest conservation and/or production. - People possess practical techniques and knowledge for CF. - People earn enough income and production from engagement in CF. - People maintain good conditions for CF management and support.
Social Capital of village or the CF user group	<ul style="list-style-type: none"> - Community possesses customs and know-how to engage in group activities. - Community possesses informal customs or norms to engage in group activities. - Community has customs or written rules for engaging in group activities. - Community possesses necessary knowledge and techniques for forestry. - Community has leadership supporting engagement in CF activities.
Physical Capital	<ul style="list-style-type: none"> - Community has necessary solid assets to engage in the CF activities such as roads, boats, jetties, warehouses, tools, equipment and materials. - People have necessary equipment to engage in the CF activities such as forestry equipment, tools (boat, machete, and boots), etc. - Community has necessary labor forces to be engaged in the CF activities. - People have necessary labor forces to be engaged in the CF activities. - Community has necessary facilities to engage in processing value added production.
Financial Capital	<ul style="list-style-type: none"> - People have necessary income for preparatory work of the CF activity - People have necessary income for implementation of the CF activity - People have necessary income for harvesting - People have necessary income for management of the CF activity - People have necessary income for patrolling of the CF area
Natural Capital as of needs of CF for local people	<ul style="list-style-type: none"> - Natural conditions allow people to live in the reserved forest. - There is land for engaging in the CF activity. - Natural resources exist in the area. - The productivity of the area is enough to sustain CF activities. - There are seeds and propagules for the CF activity nearby.

4.1.3 Scoring of the Activities and Evaluation Point

The stakeholders and the study team undertake the evaluation and scoring in terms of the all activities of the pilot projects. The criteria applied to the evaluation and scoring are shown in the following table.

Scoring Sheets of the Evaluation

Evaluated Point Score	Physical output level based on input and support	Capacity of the Stakeholders	Achievements of the planned progress
2	Output gets successfully, with or without support.	Full output continues and reduce necessary input/support	100%
1.5	25 % of output is failed	Output generation continues with limited input/support	Less than 75%
1	50 % of output is failed	Output generation continues with necessary input/support	Less than 50%
0.5	75 % of output is failed	Start to generate output, but will suspend unless support	10-20%
0	100 % of output is failed	No output required input support to every activity.	0

Then the scores of each activity were taken average of the scores of activates for each evaluation elements level and capital level.

4.1.4 Current and Anticipated Assets

For FD and CF user group, evaluation and scoring of the activities were conducted for five capitals and attributed evaluation elements described in Section 4.1.2. Three assets, namely 1) assets as of 2003, 2) assets as of 2004, and 3) anticipated assets were evaluated and scored. The result of evaluation and scoring of the activities are listed in Attachment 11.

4.1.5 Overall Evaluation Results

(1) Summary of the Scoring and Evaluation Results

Assessed results are summarized in the following radar charts (Figures 4.2 and 4.3). Score of “2” means the ability of stakeholders is enough for implementing the sustainable CF activity in regard to each capital. Therefore, the balance between anticipated assets and score of “2” is evaluated as a deficit for the stakeholders to be engaged in sustainable CF activity.

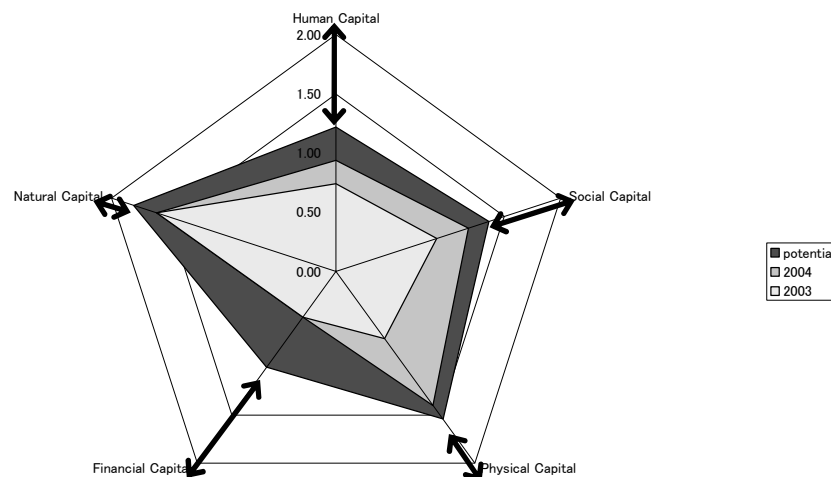


Figure 4.2 Current and Anticipated Asset Evaluation of FD

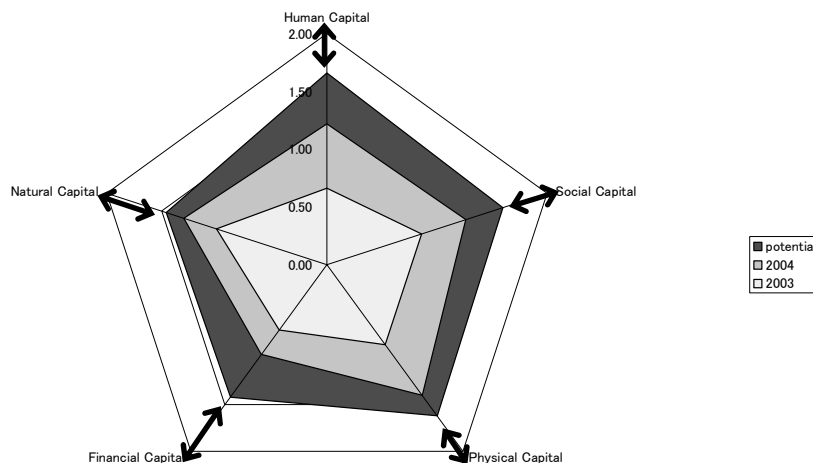


Figure 4.3 Current and Anticipated Asset Evaluation of CF User Group

(2) Results of the Evaluation of Ability

The following table summarizes the results of the ability evaluation of the stakeholders. Based on this result, the IMMP is formulated. The evaluation shows that the ability does exist for asset for engagement in the sustainable and independent CF activity by FD and the CF user group. However, it is analyzed that further input is necessary to establish continuous CF activities because the deficit also exists for each capital.

Analysis of Results of the Ability's Evaluation

Capital	Analysis
FD	
Human	There is 1.25 of ability and 0.75 of deficit in the full score of 2.0, so that it would be able to take part in the CF management and support activities, though it is required to inputs for capacity development of FD officer and field staff.
Social	There is 1.40 of ability and 0.60 of deficit of FD social capital for engagement in the sustainable CF management and support activity. FD would be able to manage and support CF implementation stage. However, further input is required for fulfillment the duty independently.
Physical	The anticipated asset of the physical capital is analyzed to jump up during the two pilot projects implementation period, based on input by the pilot project. Deficit is evaluated due to lack of operation and maintenance ability of those physical assets.
Financial	The financial capital is resulted the lowest ability among five capitals, after estimation of improvement of asset to two times because of starting FD camp plantation and CF task force. Financial capital has potential to improve its assets, but it is required to input by donors enabling a independence sustainable CF management and support by FD.
Natural	Natural capital gains almost full score of self-reliance implementation of sustainable CF activity. Deficit would be filled up based on implementation of sustainable CF activity in the pilot project area.
CF User Group	
Human	There is 1.5 points of the ability, so that it would gains full score based on engagement in the sustainable CF activity and production from CF activity based on procedure of CFI.
Social	Social capital also get 1.5 points after adding 0.5 points to the score of 2004. It is anticipated that the CF user group would be able to engaged in sustainable CF activity based on further input in empowerment of the CF user group such as group management for CF production.
Physical	There is 0.5 points of deficit to qualify full score. The physical asset would be fulfilled based on engagement in the CF activity enabling production and income. However, this score means the activity will be suspended without support by FD or technical assistance.
Financial	The financial capital is resulted 0.6 deficit to full score. The CF user group and user group member would fulfill the asset based on also engaged in sustainable CF activity by proper FD supports.
Natural	Natural capital is resulted to be decreased or deteriorated without necessary input and have potential to fulfill the asset with proper input.

Moreover, throughout Phase I of the study and Phase II implementation stage of the pilot projects, various kinds of constraints were clarified for achieving sustainable CF activity i.e. legislative constraints, institutional constraints, technical constraints, administrative constraints, socioeconomic constraints, or difficulty pertaining to natural conditions. When simply considering the missing essential activities for achieving sustainable CF activity, there is no alternative for promotion of the CFI.

However during the eight years since enactment of CFI, Myaung Mya District, Laputta and Bogalay Township FD Offices have formulated CF user groups based on allocation of CF area. Considering that strong intention for establishment of sustainable CF activities has been indicated by FD and CF user groups, the evaluation can only be “existence of potential”.

This ability for the ownership establishment of FD and the user group was modeled as the cycle of ownership establishment. The cycle is composed of the three factors, or the

flow of knowledge - awareness – practice. And the practice generates further knowledge and awareness. This cycle was confirmed through the pilot project as follows.

- FD (officers and field staff in the study area) and CF user groups started to accumulate knowledge of CFI and CF related technique through the pilot project implementation.
- Each stratum of the FD offices in townships, district, division, and the Director General office has become aware of the responsibility of FD and its concrete role for mangrove conservation and rehabilitation as an implementation/ supporting organization for CF through the pilot project.
- CF user groups have become aware of duties and rights of mangrove conservation and rehabilitation as the inhabitants in the reserved forest through the pilot project implementation.
- CF user groups practiced diversified CF activities such as CF agroforestry, CF school woodlot, CF communal wood lot, CF church woodlot, through the pilot project implementation.
- FD recognized insufficient implementation capacity for CF management and support, and established a CF FD camp which enables benefits of the user group to be utilized as a budget for CF management and support. Furthermore FD initiated the reserved forest management and mangrove conservation activities in collaboration with local authorities such as district and township peace and development councils.
- Further awareness will be generated by accumulation of knowledge and experience of implementation, and it will generate further achievement of practice.

Further practice is necessary and also the accumulation of knowledge and awareness will generate further achievement of practice. This cycle should be continued and accelerated in the future.

4.1.6 Subjects to Secure Sustainable CF Activities

(1) Subject to Secure Sustainable CF activities

In general, feasibility of sustainability would be composed of several external and internal conditions i.e. i) economical, ii) social, iii) environmental, or iv) institutional. Therefore sustainability would be guaranteed by consolidation of such external and internal factors. In case of sustainability of CF user group activity in the study area, the following factors are needed to secure the sustainable CF activities from their poverty condition.

CF User Group

- Existence of reliable leader in the group,
- Existence of successful experience such as production and benefit from CF activities (satisfaction of incentives of CFI), and
- Existence of information collection and delivery system.

Forest Department

- Establishment of necessary institutional system and organization for sole charged to CF activity and
- Establishment of successful forestry technology of the Ayeyawady delta.

(2) Evaluation of Subject to Secure the Sustainability of the CF User Group

“Leaders” of the CF user groups at both Thar Yar Kone and Nyaung Ta Pin villages have been educated under the pilot project. Since the capacity of chairmen, secretaries, and treasury, or extension worker of CF user group, has been improved, especially about knowledge and technology. However, capacity of group management that will be determined by capability of individual CF user group members has not been improved. Therefore the leaders were forced to work hard for management of the group. The existence of leader that will be founded by group member would be fulfilled in future in accordance with improvement of capacity of each group member.

“Successful experience” of the CF user group has not been fulfilled through the pilot project. Currently CF user group has strong intention to sell the CF products by official procedure. When this is accomplished, after estimation of CF products, and printing the sales voucher and registration of the sales voucher, CF user groups will gain successful experience and sustainability of CF activity will improve. The official selling of CF products is expected within five years. At that time, sustainability of CF activity would be consolidated. Therefore a methodology for supplying continuous incentive will be a key factor of the sustainability.

“Information” that CF user group is limited because of remoteness and isolation by water body or scarcity of communication equipment. Information reaches villages by verbal communication. It is estimated that the information source would increase in accordance with increased CF activity including harvesting and selling of CF products.

(3) Evaluation of Subject to Secure the Sustainability of FD

When considering Laputta and Bogalay Township FD Office, the “Establishment of necessary institutional system and organization for sole charged to CF” would be a subject to secure the sustainable CF activity. Though each officer or field staff of the

offices have the intention of promoting and supporting CF activity, promoted CF activity is not sustainably supported or managed because no system exists for it. Based on institutional development for the CF management and support, FD will be able to practice continuously the duty. Then the sustainability of the CF activity will be secured.

“Establishment of successful forestry technology of the Ayeyawady delta” will promise production from CF activity. When periodical production by firm forestry technology is secured, expected production from CF activity will be realized.

4.2 Findings and Lessons Learned from the Pilot Project 2003/2004: Implication for IMMP

As a summary, through the implementation of the pilot projects 2003 and 2004, the following findings and lessons were obtained.

- Insufficient maintenance of socioeconomic activities inside the reserved forest: Inappropriate technologies and illegal activities are destroying mangroves,
- Diversification of CF activities takes some time for understanding by FD staff and CF user groups. No practical rules or guidelines for the diversification of CF activities,
- Necessity of mangrove nurseries and CF extension centers as foundations for seedling production, CF promotion, and CF management and support,
- Necessity of diversification and integration of mangrove related forestry technology for better practices and outcomes,
- Necessity of introducing regular CF production activities including sales vouchers, removal passes and value-added production. No practical rules or guidelines for the CF production activities,
- Necessity of CF border line management, patrolling, and public awareness for protection of CF areas from conflicts and encroachers,
- Institutional limitations of FD for CF management and support: Insufficient plans and procedures for maintenance of the CF activities, and lacks budget, formats and facilities for CF management and support,
- Possibility and constraints of CF task force or relevant organizations for further CF management and support by FD,
- Limited capacity development of user groups for sustainable CF activities,
- Limited recording and monitoring capacities by both FD and CF user groups,
- Necessity of practical rules and regulations for CF user groups to manage and operate CF activities in accordance with CFI and needs of the CF user group,
- Necessity of practical guidelines and/or bylaws for FD to manage and support CF.

In accordance with evaluated implementation capacity based on assets and needs of CF stakeholders (Section 4.2), the above implications were incorporated as components and activities in the finalized IMMP.

CHAPTER 5 CONSIDERATION OF CONTINUATION OF THE PILOT PROJECT

5.1 Forest Department Capacity Development

5.1.1 Key for Establishment and Institutional Development of FD Organization for CF Management and Support

(1) Key for Establishment of FD Organization for CF Management and Support

Based on the implementation of the pilot project, the key for establishment of FD organization for CF management and support can be summarized as follows.

- Clearly define and formulate terms of reference (TOR) for CF management and support organization,
- TOR shall be clearly instructed and understood not only to the organization but also by each member of such organization,
- Prompt submission of budget proposals to superior offices for maintenance and operation of the organization,
- Calculation/estimate of cost based on the actual expenditure,
- Assignment of full time staff as much as possible to concentrate on achieving TOR of the organization.

(2) Key for Institutional Development of FD Organization for CF Management and Support

Based on the implementation of the pilot project, the key for institutional development of FD organization for CF management and support can be summarized as follows.

- Clearly define and formulate rules and regulations for practical application of CFI,
- Also define and formulate rules and regulations for whatever related to CF management and support by FD,
- Consider, regional characteristics for such rules and regulations,
- Establish and apply rules and regulations for implementation and management of CF production (sales voucher, removal pass, etc.),
- Establish and apply rules and regulations for implementation and management of various CF prototypes activities,
- Further education and training for FD staff to understand the above mentioned rules and regulations related to CF activities,
- Technical supports to CF user groups for CFI, CF production, and CF prototypes,
- Bear esteem and confidence to FD staff who engage in CF management and support operations,

- Establish tight communication lines among user groups, field offices/stations, townships, districts, division/states, and DF office.

(3) Recommendation of Continuation for the Institutional Development

The followings are recommended as continuation activities for fulfillment of the keys above mentioned.

- Only two years of the CF certificates were granted to Thar Yar Kone and Nyaung Ta Pin CF user group, therefore it is recommended to grant 30 years CF certificate by amendment of the CF management plan of the two CF user groups.
- The two CF user groups worked for the preparation of CF management plan for CF school woodlot, CF church woodlot, and CF water reservoir and the management plans were submitted to Thar Yar Kone FD camp. These plans have not been forwarded yet to Myaung Mya District FD Office through Laputta Township FD office. It is recommended that amendment of the CF certificates that permits those CF activities should be issued to the CF user groups.
- One of subjects to secure a sustainability of the CF activity is production from CF activity and selling based on CF sales voucher. A member of CF user groups is ready for the production through NFIO activity. Therefore, it is highly recommended to start production and selling based on utilization of the sales voucher that is drafted under the pilot project.
- Thar Yar Kone CF user group started monthly meetings for management of the CF activity. The extension workers of the CF user groups selected from Thar Yar Kone and Nyaung Ta Pin CF user group joined the “OJT” for planning, implementation and monitoring of CF activity. Thus the CF user groups are ready to start submission of the progress report that is the obligation of the CF user groups provided by the CFI. Therefore it is recommended to start monitoring of CF activity by the two CF user groups with the support from FD.

5.1.2 Key for Sustainable Operation of the Thar Yar Kone FD Integrated Mangrove Nursery

Based on the implementation of the pilot project, the key for sustainable operation of the Thar Yar Kone FD Integrated Mangrove Nursery can be summarized as follows.

1. Objectives of the nursery
2. Responsible operations at the nursery
3. Recommended operations at the nursery
4. Suggested working calendar for nursery management and seedling production by FD
5. Contributions and obligations by FD

Hereafter, details are described.

(1) Objectives of the Nursery

An objective of the Thar Yar Kone FD Integrated Mangrove Nursery pilot project is to improve the capacity of FD for supporting the CF activities by user groups.

Therefore, primary objectives of the nursery operation are:

“To provide sufficient seedlings for the CF user groups in the southern Pyinalan Reserved Forest.”

“To serve as a core center in the southern Pyinalan Reserved Forest for,

- a) Promotion, guidance, and improvement of CF activities,
- b) Implementation of FD’s direct forestry operations/management, and
- c) Improvement of the forest rehabilitation technology for mangrove areas.
- d) Demonstration of various CF prototypes, applicable inside reserved forests

(2) Responsible Operations at the Nursery

The followings are responsible operations at the nursery.

- Seedling production of mangrove species (600,000 seedlings by pots, or more by bare-roots)
- Seedling production of non mangrove species for high ground level areas (at least 50,000 seedlings by pots, or more)
- Maintenance and repair of nursery beds, and other seedling production related equipment, materials, and facilities
- Maintenance and repair of other building facilities, equipment
- Full time operation as nursery and forest camp
- Nursery/nursery operation management in general

(3) Recommend Operations at the Nursery

The followings are recommend operations at the nursery to full fill the objective mentioned above.

- Regular leveling of nursery beds and water channels for uniformity of seedling quality
- Daily recording of water gage and water salinity
- Increase production capacity of non-mangrove species (Melaleuca, etc.)
- Introduce and establish appropriate nursing method for new non-mangrove species for forest rehabilitation
- Trail planting and seedling production with less common mangrove species for reforestation

(4) Suggested Work Calendar for Nursery Management and Seedling Production by FD

Month	Activities
March	<ul style="list-style-type: none"> - Completion and modification of facilities for more efficient uses (2004) - Newly seedling production in the nursery to utilize existing natural beds (2004) - Nursing of existing seedlings in nursery bed - Leveling of nursery beds and water channel - Collection and storage of propagules - Transplanting propagules to pots (if necessary) - Seed collection and sowing of species ready for seedling production
April	<ul style="list-style-type: none"> - Newly seedling production in the nursery (2004) - Nursing of existing seedlings in nursery bed - Collection and storage (and direct planting) of propagules - Transplanting propagules to pots (if necessary) - Seed collection and sowing of species ready for seedling production
May	<ul style="list-style-type: none"> - Nursing of existing seedlings in nursery bed - Preparation for rainy season of facilities in general - Collection and storage (and direct planting) of propagules - Seed collection and sowing of species ready for seedling production
June	<ul style="list-style-type: none"> - Shipping and transportation of seedlings to sites - Bed preparation for the next seedling production - Collection (and direct planting) of propagules - Seed collection and sowing of species ready for seedling production
July	<ul style="list-style-type: none"> - Shipping and transportation of seedlings to sites - Bed preparation for the next seedling production - Seed collection and sowing of species ready for seedling production
August	<ul style="list-style-type: none"> - Shipping and transportation of seedlings to sites - Seed collection and sowing of species ready for seedling production
September	<ul style="list-style-type: none"> - Shipping and transportation of seedlings to sites - Seed collection and sowing of Thame and other species ready for seedling production
October	<ul style="list-style-type: none"> - Modification of the following year seedling production plan - Maintenance and repair of damaged facilities during the rainy season - Leveling of nursery beds and water channel - Seed collection and sowing of species ready for seedling production
November	<ul style="list-style-type: none"> - Seed collection and sowing of species ready for seedling production - Nursing of existing seedlings in nursery bed
December	<ul style="list-style-type: none"> - Seed collection and sowing of species ready for seedling production - Nursing of existing seedlings in nursery bed
January	<ul style="list-style-type: none"> - Nursing of existing seedlings in nursery bed - Seed collection and sowing of species ready for seedling production
February	<ul style="list-style-type: none"> - Seed collection and sowing of species ready for seedling production - Nursing of existing seedlings in nursery bed - Collection and storage of propagules - Transplanting propagules to pots (if necessary)
All Year Around	<ul style="list-style-type: none"> - Countermeasures for pests, damages and other disasters to nursery and seedlings - Technical guidance for seedling production, planting, tending activities to user group Members - Monitoring activities of CF activities and FD direct operations - Monitoring of water level, salinity level

(5) Contributions and Obligations by the Forest Department

Personnel:

- Full-time stationed forester(s) and/or officer
- Skilled nursery workers
- Cost

- Operation cost for the nursery management
- Seedling production cost
- Seedling transportation cost
- Diesel cost for boats, pump and generators
- Salary of staff / workers

Others:

- Safety and security of nursery facilities, seedlings
- Technical guidance to user group members based on necessity
- Regular work record, quality control, technical control
- Regular budget request proposals to superior offices
- Submission of other proposals related implementation of nursery, FD, and CF operations

5.2 Community Forestry in Thar Yar Kone and Nyaunt Ta Pin Village

5.2.1 Key for Planning CF Activities

Based on the implementation of the pilot project, the key for planning of CF activities can be summarized as follows.

- Share information between FD and CF user groups for procedures for applying CF activities, preparing CF management plan, and updating CF management plan/ action plan,
- Distribute the latest information regarding procedures, rules and regulations, CF prototypes, CF production to communities by FD
- Formulation of subgroups based on activities and locations of CF areas
- Try to develop individual CF management plan for CF user groups with individually allocated CF areas.
- Define and formulate rules and regulations for CF user group at initial stage of CF activities. The rules and regulations should be confirmed by district FD officers,
- The rules and regulations for CF user groups shall include procedure for production (sales voucher, license for value adding production), and benefit sharing.
- Conduct annual review of CF management plan both by FD and CF user groups,
- Consider revision/update of CF management plan and/or revision/update of annual action plan based on the change in actual conditions (members changes, operation changes, etc.),
- Consider regular border line (boundary) management of CF areas by CF user group members and verification by FD for confirmation of boundaries and monitoring of CF areas.

5.2.2 Key for Implementing CF Activities

Based on the implementation of the pilot project, the key for implementation of CF activities can be summarized as follows.

- Technical support to CF user groups by FD at needs basis,
- Technical support to CF user groups for agriculture and fishery related technologies from relevant organizations by coordination of FD,
- Appearance of FD staff to CF user groups at regular intervals and based on request by CF user groups for monitoring, and management of CF activities,
- Seedling distribution to adjacent areas for planting by FD for the first rotation.
- Establish patrolling system against encroachment in CF areas among CF user groups, FD, and local authorities,
- Initiate regular user group leader trainings and extension worker trainings by FD for better self sufficiency of CF user groups in the long run,
- Initiate, fresh water management (ex. water reservoir construction and maintenance), development of profitable products (ex. phoenix heart production by women subgroup) by CF user groups with necessary guidance from FD and relevant organizations.

Attachment-1

Pilot Projects Information of Pilot Project 2003

Work Quantity: Thar Yar Kone Village Pilot Project (Revised)				
Item	Contents	Unit	Q'ty	Reference
1.0 Plantation	<i>Total area of plantation</i>	<i>ha</i>		
	<i>Low ground area</i>	<i>ha</i>		
	<i>Middle ground area</i>	<i>ha</i>		
	<i>High ground area</i>	<i>ha</i>		
	<i>Extremely high ground area</i>	<i>ha</i>	0	
1.1 Seedling	Total seedling for plantation	seedling	47,738	
	<i>Avicennia officinalis</i>	pc	20,435	plastic bag
	<i>Avicennia marina</i>	-do-	-	-do-
	<i>Bruguiera spp</i>	-do-	0	propagule
	<i>Cerriops decandra</i>	-do-	230	plastic bag
	<i>Excoecaria agallocha</i>	-do-	-	-do-
	<i>Heritiera fomes</i>	-do-	-	-do-
	<i>Amoora cucullata</i>	-do-	-	-do-
	<i>Rizophora apiculata</i>	-do-	10,007	propagule / plastic bag
	<i>Rizophora mucronata</i>	-do-	8,850	-do-
	<i>Sonneratia apetala</i>	-do-	7,816	plastic bag
	<i>Nypa fruticans</i>	-do-		-do-
	<i>Samanea Saman</i>	-do-	400	-do-
	<i>Melaleuca spp</i>	-do-	0	-do-
	<i>Casaurina equisetifolia</i>	-do-	0	-do-
1.2 Transportation of seedling	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3day, 10000 seedling/time, 10 %	trip	6	Boat hire +operation cost of boat (diesel, driver, and assistant)
1.3 Labor for plantation	Land preparation	400m2/md	318	
	Staking	260staks/md	153	md
	planting seedling (hauling, digging and planting)	200 sdlg/md	191	plastic bag
	planting propagule (hauling and planting)	300sdlg/md	0	Bruguiera spp, Rizophora spp
	patching 25% martality	600sdlg/md	16	based on 750 seedlings
	Weeding 1	400m2/md	318	high intensity
	Weeding 2	400m2/md	318	high intensity
	Pruning	800m2/md		not applied first year
	Thinning	400m2/md		not applied first year
	Fire protection (break line management)	2000m2/md		5 % of plantation area x 2 times
1.4 Materials				
Stakes	12.73 x 3000 + 10% waste	No.	42009	
Boundary posts	12 (UGS) x 4	No.	48	
Sign board (Individual)	12 (UGS) x 1	No.	12	
Sign board (2m x 1m approx)		No.	1	
2.0 NFIO	Total	ha	28.97	
	<i>Low ground area</i>	<i>ha</i>		
	<i>Middle ground area</i>	<i>ha</i>		
	<i>High ground area</i>	<i>ha</i>		
	<i>Extremely high ground area</i>	<i>ha</i>		
2.1 Seedling	Total seedling for plantation on gaps (7.24 Ha)	seedling	28,612	Estimated 25% of Total + Extra 1462 requested by IIG
	<i>Avicennia officinalis</i>	-do-	11,660	plastic bag
	<i>Avicennia marina</i>	-do-		-do-
	<i>Bruguiera spp</i>	-do-	0	propagule
	<i>Cerriops decandra</i>	-do-	820	plastic bag
	<i>Excoecaria agallocha</i>	-do-		-do-
	<i>Heritiera fomes</i>	-do-		-do-
	<i>Amoora cucullata</i>	-do-		-do-
	<i>Rizophora apiculata</i>	-do-	5,707	propagule / plastic bag
	<i>Rizophora mucronata</i>	-do-	5,055	-do-
	<i>Sonneratia apetala</i>	-do-	4,470	plastic bag
	<i>Nypa fruticans</i>	-do-		-do-
	<i>Samanea Saman</i>	-do-	900	-do-
	<i>Melaleuca spp</i>	-do-	0	-do-
	<i>Casaurina equisetifolia</i>	-do-	0	-do-
2.2 Transportation of seedling	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3day, 10000 seedling/time, 10 %	trip	3	Boat hire+operation cost of boat (diesel, driver, and assistant)
2.3 Labor for NFIO	Land preparation	400m2/md	724	md
	Staking	260staks/md	87	md
	planting seedling (hauling, digging and planting)	200 sdlg/md	109	plastic bag

	Item	Contents	Unit	Q'ty	Reference
		planting propagule (hauling & planting during low	300sdlg/md	0	Bruguiera spp, Rizophora spp
		patching	600sdlg/md	9	based on 750 seedlings
		Weeding 1	400m2/md	181	high intensity
		Weeding 2	400m2/md	181	high intensity
		Pruning	800m2/md	0	not applied first year
		Thinning	800m2/md	0	not applied first year
		Fire protection (break line management)	2000m2/md		5% of NFIO area x 2 times
2.4	Equipment and material	Machete	pc	51	
		Jungle boots	pc	51	
		Stakes 3000/Ha x 7.24 + 10% waste	pc	23,892	
		Sign board (2m x 1m approx)	pc	1	
		Boundary posts	pc	156	
3.0	CF intensification program	Total	ha	1.0	estimated as two CFI HH area
	(School CF woodlot)	Low ground area	ha		estimated as same ratio of CF
		Middle ground area	ha		
		High ground area	ha		
		Extremely high ground area	ha		
3.1	Seedling (plantation and	Total seedling	seedling	3,750	(all plantation area)
		<i>Avicennia officinalis</i>	-do-	1,605	plastic bag
		<i>Avicennia marina</i>	-do-	-	-do-
		<i>Bruguiera spp</i>	-do-	0	propagule
		<i>Ceriops decandra</i>	-do-	50	plastic bag
		<i>Excoecaria agallocha</i>	-do-	-	-do-
		<i>Heritiera fomes</i>	-do-	-	-do-
		<i>Amoora cucullata</i>	-do-	-	-do-
		<i>Rizophora apiculata</i>	-do-	786	propagule / plastic bag
		<i>Rizophora mucronata</i>	-do-	695	-do-
		<i>Sonneratia apetala</i>	-do-	614	plastic bag
		<i>Nypa fruticans</i>	-do-	-	-do-
		<i>Albizia lebbek</i>	-do-	-	-do-
		<i>Melaleuca spp</i>	-do-	0	-do-
		<i>Casaurina equisetifolia</i>	-do-	0	-do-
3.2	Transportation of seedling	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3day, 10000 seedling/time, 10 %	trip	1	Boat hire operation cost of boat (diesel, driver, and assistant)
3.3	Labor for plantation	Land preparation	400m2/md	25	m2
		Staking	260staks/md	12	md
		planting seedling (hauling, digging and planting)	200 sdlg/md	15	plastic bag
		planting propagule (hauling and planting)	300sdlg/md	0	Bruguiera spp, Rizophora spp
		patching	600sdlg/md	1	based on 750 seedlings
		Weeding 1	400m2/md	25	high intensity
		weeding 2	800m2/md	25	high intensity
		Pruning	800m2/md	0	not applied first year
		Thinning	400m2/md	0	not applied first year
		Fire protection (break line management)	2000m2/md	-	5% of plantation area x 2 times
3.4	Materials Stakes	Stakes	pc	3,300	6' x 6' spacing
		Boundary posts	pc	4	
		Sign board	pc	1	
4.0	Agroforestry				
4.1	Agroforestry Nursery				
(1)	Construction	Nursery area	m2	500	whole nursery area
		Site clearing (400m ² /md)	md	4	
		Seedling bed	m2	400	2 x 20 m x 10 block
		Orchard for propagation of agroforestry plant	m2	200	
		Small scale water reservoir	m3	800	20 x 20 x 2 m depth
		Manure storage	m2	40	brick floor, wall/roof nypa
(2)	Material for nursery	Bricks for seedling bed, manure storage floor, and	pc	6,000	
		Roofing materials	m2	40	Posts, bamboo and nypa
(3)	Material for reservoir	Boulder and gravel for side slop reinforcement	m3	80	40 x 3 m
	(10x10x2m)	Coconuts shell	pc	4,608	for plugging 0.25x0.25m/pc
		Silt for sealing	m3	8	for compaction (2cm thickness)
		Lime powder	25 kg	50	for compaction
		Bamboo sheet (1' x 1')	pc	3,520	80 m2 /slope x 4 faces
(4)	Nursery Equipment	Watering can	-do-	10	
		Plastic bucket	-do-	10	2 gallons

	Item	Contents	Unit	Q'ty	Reference
		Machete	-do-	10	
		Rake	-do-	10	
		Sieve	-do-	5	
		Measuring tape (50m plastic)	-do-	2	
(5)	Materials for production	Vinyl pot (3 inch) for agroforestry seedling	1000 pc	9	180 pots/lb
		Vinyl pot (7 inch) for agroforestry seedling	500 pc	7	70 pots/lb
		Chicken manure for compost making	25 kgbag	50	for school agroforestry (0.5 ha)
		Mango	pc	50	1 seedling / 8 m2 (for school)
		Lemon	pc	100	
		Guava	pc	100	
		Banana	pc	150	
		Areca nut	seedling	100	
		Coconut	pc	50	
(6)	Materials for production	Seedling for scion and stock for lemon, guava and	seedling	120	1 seedling / 16 m2
		Seeds of Sesnabia groundiflora	kg	1	10000 pc
(7)	Labor	Nursery construction	m/d	270	45 HH x 5 days
		Small scale water reservoir	day	1,620	45 HH x 30 days
		Ridging and planting fruits orchard	day	20	1 day/HH x 23 HH
4.2	Agroforestry (Home garden)	Total area	ha	1.0	8 HH
(1)	Material for production	Fruits Seedlings Mango	pc	170	1 seedling / 16 m2
		Lemon	pc	93	-do-
		Guava	pc	195	1 seedling / 32 m2
		Banana	pc	180	0.2 kg / HH
		Areca nut	pc	150	
		Coconut	pc	400	
		Okra	kg	2	0.2 kg / HH
		Cucumber	kg	0.5	0.2 kg / HH
		Indian Rhubarb	kg	6	0.2 kg / HH
		Drum Stick	kg	50	30 seedling/HH
		Sesbania	pc	50	0.2 kg / HH
		Sweet Potato	pc	900	30 pc / HH
		Citrus	pc	100	2 x 8 HH
(2)	Labor	Bitter Gourd	kg	0.5	1 day/HH x 8 HH
		Wax Gourd	kg	0.5	1 day/HH x 8 HH
		Pole bean	kg	1	
		Zaw Lone	pc	900	
		Chilli	pc	50	
		Chicken manure	25kgbag	80	
5.0	CF intensification program				
5.1	School renovation	Galvanized iron sheet	2 m2	20	for school roof repairmen
		Bamboo for making bamboo sheets	3 m2/pc	50	for school wall repairmen
		Wood board	mm	25	20 x 200 mm x 20 window, floor
		Black board	pc	2	
		Crude oil (for wall, roof and pillar painting)	kg	50	400m2
5.2	Water filtration material	Charcoal (high quality)	little	1,000	for 10 filtration drum
		Gravel	m3	0.75	
		Sand	m3	0.75	
		Drum for filtration can (plastic)	pc	10	200 litre (plastic)
5.3	School agroforestry lot	Area	m2	1,000	Current school land
	Fruits seedling	Mango	pc	10	1 seedling / 8 m2
		Lemon	pc	10	-do-
		Guava	pc	40	-do-
		Banana	pc	20	1 seedling / 16 m2
		Acera nut	pc	10	
		Okra	kg	0.5	
		Indian Rhubarb	kg	6	
5.4	Labor	School renovation	day	40	1 day/HH x 20 HH x 2
		Land preparation/ridging	day	40	1 day/HH x 20 HH x 2
		Planting fruits seedling	day	40	1 day/HH x 20 HH x 2
		Maintenance of agroforestry	day	200	5 day/HH x 20 HH x 2
6.0	Engineering support expense	by sub contractor for Implementation of P/P by UG			
6.1	Engineering fee	Term: contract period (9 months: May 03 - Jan. 04)			
		Team leader	M/M	2.3	1 week/month x 9 months for
		Mangrove plantation/Project operation &	M/M	2.3	site work and reporting

	Item	Contents	Unit	Q'ty	Reference
		Agroforestry/Project operation & management	M/M	2.3	
		Participatory development/Group management	M/M	2.3	
6.2	Direct expense	Lodging, Allowance, Transportation, Matials, etc	LS	1	20% of engineering fee
7.0	Capacity development for the community				
7.1	Education of group leaders (Training at the village, 12 unit of class / 2 weeks by 3 trainers x 2 times)				
(1)	Lecture fee	Expert 1 (social development/community forestry)	unit	8	4 training unit/week/village x 2
		Expert 2 (mangrove rehabilitation: technical aspect)		8	-do-
		Expert 3 (agroforestry/livelihood)		8	-do-
(2)	Trainers' allowance	Expert 1 (social development/community forestry)	m/d	14	2 weeks x 2 times for 2 villages
		Expert 2 (mangrove rehabilitation: technical aspect)		14	-do-
		Expert 3 (agroforestry/livelihood)		14	-do-
(3)	Trainers' lodging	Expert 1 (social development/community forestry)	prs/night	14	2 weeks x 2 times for 2 villages
		Expert 2 (mangrove rehabilitation: technical aspect)		14	-do-
		Expert 3 (agroforestry/livelihood)		14	-do-
(4)	Trainers' transportation	Expert 1 (social development/community forestry)	prs/trip	2	2 trips (Yangon - Thar Yar
		Expert 2 (mangrove rehabilitation: technical aspect)		2	-do-
		Expert 3 (agroforestry/livelihood)		2	-do-
(5)	Boat hiring	for trainer/forester (OJT)/coordinator (in	day/boat	14	1 boat x 28 days for 2 villages
(6)	Training material	Stationary, text, recording (assistant), etc	LS	1.0	per trainer for 2 villages
(7)	Trainees allowance	Meals	times	240	per unit of class
7.2	Boat tour for mutual understanding (8 days training at 3 villages: Thar Yar Kone, Nyaunt Ta Pin and village at Bogalay)				
(1)	Lecture / Training fee	Training fee	unit	1.5	1trainer for the tour at 3 villages
		Allowance	m/d	8	3 village (P/P and at Bogalay
		Lodging	prs/night	6	1 trainer 6 days
		Transportation (Yangon - Thar Yar Kone)	trip	1	1 trainer x 1 trip
(2)	Trainees' expense	Lodging with meal (2 nights for visiting Bogalay	prs/night	2	6 sub UG x 2 person x 2 nights
		Meals (lunch) (12UG + trainer) x 4	time	52	12 trainees x 4 days
(3)	Boat hire	for trainer/trainee/ forester (OJT), share by two	boat/day	4	4 days in Pyinalan
		-do-	boat/day	3	3 days for Bogalay
(4)	Training material	Stationary, text, recording (assistant), etc	LS	1	per trainer

Work Quantity: Nyaung Ta Pin Village Pilot Project (Revised)					
	Item	Contents	Unit	Q'ty	Reference
1.0	Plantation	Total area of plantation	ha	5.49	
		Low ground area	ha		
		Middle ground area	ha		
		High ground area	ha		
		Extremely high ground area	ha		
1.1	Seedling	Total seedling for plantation	seedling	20,588	
		<i>Avicennia officinalis</i>	-do-	16,000	plastic bag
		<i>Avicennia marina</i>	-do-	-	-do-
		<i>Bruguiera spp</i>	-do-		propagule
		<i>Ceriops decandra</i>	-do-		plastic bag
		<i>Excoecaria agallocha</i>	-do-	-	-do-
		<i>Heritiera fomes</i>	-do-		-do-
		<i>Amoora cucullata</i>	-do-	-	-do-
		<i>Rizophora apiculata</i>	-do-	2,588	propagule
		<i>Rizophora mucronata</i>	-do-		-do-
		<i>Sonneratia apetala</i>	-do-	2,000	plastic bag
		<i>Nypa fruticans</i>	-do-		-do-
		<i>Albizzia lebbek</i>	-do-		-do-
		<i>Melaleuca spp</i>	-do-		-do-
		<i>Casaurina equisetifolia</i>	-do-		-do-
1.2	Transportation of seedling	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3day, 10000 seedling/time 10 % loss)	trip	3	Boat hire operation cost of boat (diesel, driver, and assistant)
1.3	Labor for plantation	Land preparation	400m2/md	137	m2
		Staking	260staks/m	66	stakes
		planting seedling (hauling, digging and	200	82	plastic bag
		planting propagule (hauling and planting)	300sdlg/m		Bruguiera spp, Rizophora
		patching	600sdlg/m	7	based on 250 seedlings
		Weeding 1	400m2/md	137	high intensity
		Climber cutting	400m2/md	137	mid intensity
		Pruning	800m2/md	-	not applied first year
		Thinning	400m2/md	-	not applied first year
		Fire protection (breal line management)	2000m2/m		5% of planatation area x 2
1.4	Materials	Stakes 5.49 x 3000 + 10% waste	pc	18,117	
		Boundary Posts (18UG x 4)	pc	72	
		Sign Board (18UG x 1)	pc	18	
		Sign Board (2m x 1m approx)	pc	1	
2.0	Demo plantation	Total area for demo plantation	ha	2.00	10 % of plantation area
		Low ground area	ha		-do-
		Middle ground area	ha		-do-
		High ground area	ha		-do-
		Extremely high ground area	ha		-do-
2.1	Seedling for demo	Total seedling	ha	7,500	
		<i>Avicennia officinalis</i>	ha	3,750	plastic bag
		<i>Avicennia marina</i>	ha	-	-do-
		<i>Bruguiera spp</i>	ha	-	propagule
		<i>Ceriops decandra</i>	seedling	-	plastic bag
		<i>Excoecaria agallocha</i>	-do-	550	-do-
		<i>Heritiera fomes</i>	-do-	-	-do-
		<i>Amoora cucullata</i>	-do-	-	-do-
		<i>Rizophora apiculata</i>	-do-	1,600	propagule
		<i>Rizophora mucronata</i>	-do-	1,200	-do-
		<i>Sonneratia apetala</i>	-do-	400	plastic bag
		<i>Nypa fruticans</i>	-do-	-	-do-
		<i>Albizzia lebbek</i>	-do-	-	-do-
		<i>Melaleuca spp</i>	-do-	-	-do-
		<i>Casaurina equisetifolia</i>	-do-	-	-do-

2.2	Transportation of seedling	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3day, 10000 seedling/time, 10 % loss)	trip	1	Boat hire operation cost of boat (diesel, driver, and assistant)
2.3	Labor for demo	Land preparation	400m2/md	50	m2
		Staking	260staks/m	24	stakes
		planting seedling (hauling, digging and	200	30	plastic bag
		planting propagule (hauling and planting)	300sdlg/m		Bruguiera spp, Rizophora
		patching 25% mortality	600sdlg/m	3	clearing, weeding, planting, average norm for medium
		Weeding 1	400m2/md	50	
		Weeding 2	400m2/md	50	
		Pruning	800m2/md	-	not applied first year
		Thinning	400m2/md	-	not applied first year
		Fire protection (breal line management)	2000m2/m		5% of demo plantation area x
2.4	Materials	Stakes (2 x 3000) + 10% waste	pc	6,600	
		Boundary Posts	pc	4	
		Sign Board	pc	1	
3.0	NFIO	Total area of plantation	ha	52.06	
		Low ground area	ha		
		Middle ground area	ha		
		High ground area	ha		
		Extremely high ground area	ha		
3.1	Seedling for NFIO	Total seedling for plantation 25% = 13 02	seedling	79,587	gap planting + 30762 Extra requested by UGM
		<i>Avicennia officinalis</i>	seedling	34,230	plastic bag
		<i>Avicennia marina</i>	-do-	-	-do-
		<i>Bruguiera spp</i>	-do-	-	propagule
		<i>Ceriops decandra</i>	-do-	2,000	plastic bag
		<i>Excoecaria agallocha</i>	-do-	9,220	-do-
		<i>Heritiera fomes</i>	-do-	-	-do-
		<i>Amoora cucullata</i>	-do-	-	-do-
		<i>Rizophora apiculata</i>	-do-	12,087	propagule
		<i>Rizophora mucronata</i>	-do-	11,850	-do-
		<i>Sonneratia apetala</i>	-do-	5,000	plastic bag
		<i>Xylocarpur granatum</i>	-do-	500	-do-
		<i>Samanea saman</i>	-do-	3,900	-do-
		<i>Melaleuca spp/ Eucalyptus</i>	-do-	800	-do-
		<i>Casaurina equisitifolia</i>	-do-	-	-do-
3.2	Transportation of seedling	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3days, 10000 seedling/time, 10 % loss)	trip	9	operation cost of boat (diesel, driver, and assistant)
3.3	Labor for NFIO	Land preparation	400m2/md	1,284	
		Staking of gaps (25% of Total) 12.84	260staks/m	154	stakes
		planting seedling (hauling, digging and	200	193	plastic bag
		planting propagule (hauling and planting)	300sdlg/m	-	Bruguiera spp, Rizophora
		patching 25% mortality	600sdlg/m	16	based on 250 seedlings
		Weeding 1	400m2/md	321	high intensity
		Weeding 2	800m2/md	321	high intensity
		Pruning	800m2/md	-	not applied first year
		Thinning	400m2/md	-	not applied first year
		Fire protection (break line management)	2000m2/m	-	5 % of NFIO area x 2 times
3.4	Equipment and material	Machete	pc	64	
		Jangle boots	pc	64	
		Stakes	pc	38,520	
		Sign Board individual	pc	46	
		Boundary posts 46UGs x 4	pc	184	
		Sign Board (2m x 1m approx)	pc	1	
4.0	Demo Plantation	Total area of plantation	ha	0.5	
	School Woodlot	Low ground area	ha		
		Middle ground area	ha		
		High ground area	ha		
		Extremely high ground area	ha		
4.1	Seedling for demo NFIO	Total seedling	seedling	1,875	
		<i>Avicennia officinalis</i>	-do-	1,450	plastic bag
		<i>Avicennia marina</i>	-do-	-	-do-
		<i>Bruguiera spp</i>	-do-	-	propagule
		<i>Ceriops decandra</i>	-do-	-	plastic bag

		<i>Excoecaria agallocha</i>	-do-	-	-do-
		<i>Heritiera fomes</i>	-do-	-	-do-
		<i>Amoora cucullata</i>	-do-	-	-do-
		<i>Rizophora apiculata</i>	-do-	225	propagule
		<i>Rizophora mucronata</i>	-do-		-do-
		<i>Sonneratia apetala</i>	-do-	200	plastic bag
		<i>Nypa fruticans</i>	-do-	-	-do-
		<i>Albizzia lebbek</i>	-do-	-	-do-
		<i>Melaleuca spp</i>	-do-	-	-do-
		<i>Casaurina equisitifolia</i>	-do-	-	-do-
4.2	Transportation of seedling fro demo NFIO	Kaw Kaw Ka Lay to Thar Yar Kone (Round, 1time/3day, 10000 seedling/time, 10 % loss)	trip	-	operation cost of boat (diesel, driver, and assistant)
4.3	Labor for demo NFIO	Land preparation	400m2/md	13	
		Staking	260staks/m	6	stakes
		planting seedling (hauling, digging and	200	8	plastic bag
		planting propagule (hauling and planting)	300sdlg/m	-	Bruguiera spp, Rizophora
		patching 25% mortality	600sdlg/m	1	based on 750 seedlings
		Weeding 1	400m2/md	13	high intensity
		Weeding 2	400m2/md	13	high intensity
		Pruning	800m2/md	-	not applied first year
		Thinning	400m2/md	-	not applied first year
		Fire protection (break line management)	2000m2/m	-	5 % of demo NFIO area x 2
4.4	Materials	Stakes + 10% waste	pc	1,650	
		Boundary Posts	pc	4	
		Sign Board	pc	1	
5.0	Agroforestry				
5.1	Homestead / woodlot	Total area	ha	1.00	36 HH
(1)	Seedlings/Seeds	Mango	pc	170	1 seedling / 16 m2
		Lemon	pc	255	-do-
		Guava	pc	115	1 seedling / 32 m2
		Banana	pc	460	100 seedling / HH
		Papaya	pc	160	0.2 kg / HH x 1.2
		Coconut	pc	70	0.2 kg / HH
		Okra	kg	4	0.2 kg / HH
		Cucumber	kg	2.5	0.2 kg / HH
		Indian lhubarb	kg	10	30 seedling/HH
		Drum Stick	pc	30	0.2 kg / HH
		Sesbaia	pc	100	
		Melakuca	pc	310	
		Snake gourd	kg	0.5	
		Bitter gourd	kg	0.5	
		Wax gourd	kg	1	
		Chilli	pc	300	
		Pole Bean	kg	2	
		Chicken manure for compost making	25 kg bag	80	
		Sweet potato	pc	950	
		pipper	pc	35	
		Tapioca Plant	pc	130	
(2)	Labor	Land preparation/ridging	day	25	1 day/HH x 2 HH
		Planting fruits seedling	day	25	1 day/HH x 2 HH
		Maintenance of agroforestry	day	1,080	30 day/HH x 36HH

5.2	Development demo farm (material and labor is included above)		m2	800	2 HH
(1)	Seedlings/Seeds	Mango	pc	50	1 seedling / 8 m2
		Lemon	pc	40	-do-
		Guava	pc	40	-do-
		Banana	pc	200	100 seedling / HH
		Coconut	pc	50	
		Citrus	pc	20	
		Drum Stick	pc	30	
		Kapok	pc	100	
		Papaya	pc	60	
		Sesbania	pc	60	
		Okra	kg	1	
		Cucumber	kg	0.5	
		Indian lhubarb	kg	4	
		Zaw Lone	pc	900	
		Wax gourd / Bitter gourd / Snake gourd	kg	2	
		Sweet Potato	pc	900	
		Chilli	pc	40	
(2)	Equipment and material	Watering can	pc	2	2 HH
		Compost (chicken manure)	25 kg	4	2 x 2 HH
(3)	Labor	Land preparation/ridging	day	2	1 day/HH x 2 HH
		Planting fruits seedling	day	2	1 day/HH x 2 HH
		Maintenance of agroforestry	day	60	
6.0	Engineering support expense	by sub contractor for Implementation of P/P by IIG			
6.1	Engineering fee	Term: contract period (9 months: May 03			
		Team leader	M/M	2.3	1 week/month x 9 months for site work and reporting
		Mangrove plantation/Project operation &	M/M	2.3	
		Agroforestry/Project operation &	M/M	2.3	
		Participatory development/Group	M/M	2.3	
6.2	Direct expense	Lodging, Allowance, Transportation,	LS	1	20% of engineering fee
7.0	Capacity development of the community				
7.1	Education of group leaders (Training at the village, 12 unit of class / 2 weeks by 3 trainers x 2 times)				
(1)	Lecture/training fee	Expert 1 (social development/community	unit	8	4 training unit/week/village x
		Expert 2 (mangrove rehabilitation:		8	-do-
		Expert 3 (agroforestry/livelihood)		8	-do-
(2)	Trainers' allowance	Expert 1 (social development/community	m/d	14	2 weeks x 2 times for 2
		Expert 2 (mangrove rehabilitation:		14	-do-
		Expert 3 (agroforestry/livelihood)		14	-do-
(3)	Trainers' lodging	Expert 1 (social development/community	prs/night	14	2 weeks x 2 times for 2
		Expert 2 (mangrove rehabilitation:		14	-do-
		Expert 3 (agroforestry/livelihood)		14	-do-
(4)	Trainers' transportation	Expert 1 (social development/community	prs/trip	2	2 trips (Yangon - Thar Yar
		Expert 2 (mangrove rehabilitation:		2	-do-
		Expert 3 (agroforestry/livelihood)		2	-do-
(5)	Boat hiring	for trainer/forester (OJT)/coordinator	day/boat	14	1 boat x 28 days for 2
(6)	Training material	Stationary, text, recording the training,	LS	3	per trainer for 2 villages
(7)	Trainees allowance	Meals	times	588	per unit of class x trainee
7.2	Boat tour for mutual understanding (8 days training at 3 villages: Thar Yar Kone, Nyaunt Ta Pin and village at Bogalay)				
(1)	Trainer's expense	Training fee	unit	1	1trainer for the tour at 3
		Allowance	m/d	8	3 village (P/P and at Bogalay
		Lodging	prs/night	3	1 trainer 6 days
		Transportation (Yangon - Thar Yar	trip	2	1 trainer x 1 trip
(2)	Trainees' expense	Lodging with meal (2 nights for visiting	prs/night	36	9 sub UG x 2 person x 2 night
		Meals (lunch)	time	87	18 trainees x 4 days
(3)	Boat hire	for trainer/trainee/ forester (OJT), share	boat/day	4	4 days in Pyinalan
		-do-	boat/day	3	3 days for Bogalay
(4)	Training material	Stationary, text, recording the training,	LS	1	per trainer

Work Quantity: Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project					
Item	Contents	Unit	Q'ty	Reference	
1.0 Nursery Construction					
1.1 Nursery Bed Construction					
(1) Site clearing		Ha	1.5	Including stump extraction	
(2) Nursery Bed 1 (FD Nursery)	Nursery Bed	m2	3,960	1.2 x 30 m x 110 beds	
	Foot Path	m2	2,016	0.6 x 30 m x 112 beds	
(3) Germination Bed	Germination Bed	m2	72	1.2 x 10 m x 2 beds	
(4) Nursery bed 2 (Natural Nursery)	Nursery Bed	m2	576	1.2 x 30 x 16	
	Foot Path	m2	288	width 0.6m	
(5) Non-mangrove beds	Nursery Bed	m2	162	1.2 x 15 x 9 beds 1.2m high	
	Foot Path	m2	81	0.6 x 15 x 9 beds 1.2m high	
(6) Shading Facility	25% of Nursery Bed 1 + non - mangrove beds	m2	1,755	1.2 x 30 x 9 + foot path	
(7) Soil Excavation		m3	6,825	130m x 70m x 0.75m	
(8) Concrete Pipe 6'x1'	for free flow of tide water	no.	50		
(9) Water gate	Control of tide water	no.	1		
(10) Main Canal excavation	for tidal water inflow	md	195	130m x 2' x 2' approx	
1.2 Nursery Road Construction	Total	m	1,330		
	Nursery Main Road 1,	m	610	0.75 m height, 1.4 m wide road with concrete plate installed and side bank enforcement	
	Nursery Main Road 1, Nursery	m			
	Access Road	m			
	Nursery Road 1-7	m	720	0.75 m x 1.4m wide soil mounding with compaction	
	Nursery Main Road 1	m			
	Wooden Bridge	no.	1		
	Culvert 2'x2'x5' with wing	no.	4		
1.3 Jetty Construction	Jetty	no.	1	6 m long x 3.0 m wide	
1.4 Water Reservoir Construction					
	Water Reservoir 1	no.	1	approx. 79 m3 water holding capacity, boulder and coconut fiber sealing and reinforcement	
1.5 Stack Yard Construction	Total	m2	288		
	Seedling Stack Yard	m2	72	for seedling loading, with nipa thatch shade	
	Soil Yard (Stock Pile)	m2	72	pile height 1.2 m, brick floor with shade	
	Soil Yard (Mixed Soil Yard)	m2	72	pile ht 1.2 m, with shade	
	Work place for potting, etc.	m2	72	with shade	
1.6 (Temporary) Building Construction	Total	m2	786		
	Nursery Office	m2	84	with toilet, iron sheets roof for rain water collection, 18ft x 36ft	
	Residence 1	m2	36	with iron sheets roof for rain water collection, 18 ft x 18 ft	
	Residence 2	m2	72	with iron sheets roof for rain water collection, 18ft x 36ft	
	Workers Hut	m2	360	nipa & bamboo roof/wall, wooden poles, 18ft x 18 ft, 10 huts	
	Warehouse 1	m2	72	nipa & bamboo roof/wall, wooden poles, 18ft x 36 ft	
	Warehouse 2	m2	36	nipa & bamboo roof/wall, wooden poles, 18 ft x 18ft	
	Generator house	m2	18	iron sheet roof	
	Fuel Storage	m2			
	Seed Storage	m2			
	Rest shade for workers	m2	72	nipa & bamboo roof, wooden poles	

	Item	Contents	Unit	Q'ty	Reference
		Sainitary facility	l.s	1	with septic tank or equivalent function
		Inceierator	pc	1	for burning combustibile
1.7	Water Storage for Daily Use				
		Concrete Water Tank	pc	2	1.5 x 2.0 x 1.0 m /each
		Plastic Water Tank	pc	2	plastic 1 m3/each + Trestle
		Plumbing facility	l.s.	1	pipes, horse, joints, with tank and roof
1.8	For BZ Management				
		Watch Tower	set		ht 60 ft, wooden made (or steel made) with concrete
1.9	For Demonstration and Monitoring				
		Riverbank Stabilization Fence	m	200	bamboo, phoenix poles, and
		Water Gage Station	set	2	water gage fixing, access facility, 0-500cm
1.10	For Renovation of Thar Yar Kone CF Extension Center				
		Materials for Extension Center Renovation	l.s.	1	
1.11	Other works				
		Plumbing work	l.s.	1	
		Electric wiring work	l.s.	1	
		Carpenter work	l.s.	1	
		Maientence and Repair	l.s.	1	
2.0	Nursery Operation				
2.1	Seedling Production				
(1)	Seed Collection	mangrove	1000sdl.	605	
		non mangrove	1000sdl.	20	
(2)	Plastic bags 7" x 1" x 3"		1000sdl.	688	10% damage / waste
(3)	Pot filling material	mangrove	1000sdl.	605	
		non mangrove	1000sdl.	20	soil, sand, manure
(4)	Pot filling	mangrove + non mangrove	1000sdl.	625	
(5)	Sowing Work	mangrove	1000sdl.	605	
		non mangrove	1000sdl.	20	
(6)	Germination bed - mangrove	germination bed maintenance	1000sdl.	72	
	- non mangrove	germination bed maintenance	1000sdl.	162	
(7)	Transptanting		1000sdl.	625	
(8)	Maintenance Work	mangrove	1000sdl.	605	labour m/d to be estimated
		non mangrove	1000sdl.	20	labour m/d to be estimated
2.2	Nursery Equipment				
		Seive	pc	6	200mm sieve
		Spray	-do -	3	plastic, ~10liter/unit
		Cart (Barrow) 1 wheel	-do -	6	for soil transportation v: 0.1m3~ or w:30kg~
		Cart (Barrow) 2 wheels	-do -	5	for seedling container 0.1m3 v: 0.1m3~ or w:30kg~
		Garden trowel	-do -	29	Handle length: 150mm, blade: ~50mm
		Plastic Bucket	-do -	20	approx. 5 liters
		Tray	-do -	9	290x330x45 mm
		Watering can	-do -	10	plastic, 3~6liter/unit
		Shovel	-do -	17	Handle length: ~100cm, blade: ~20 x 30 cm
		Container	-do -	720	plastic container for seedling transportation, size:
		Weed Hoe	-do -	9	blade: ~150mm, Handle length: ~40cm
		Weed Cutter (sickle)	-do -	9	Handle length: ~120cm
		Scale	-do -	2	5kg x 50g measure

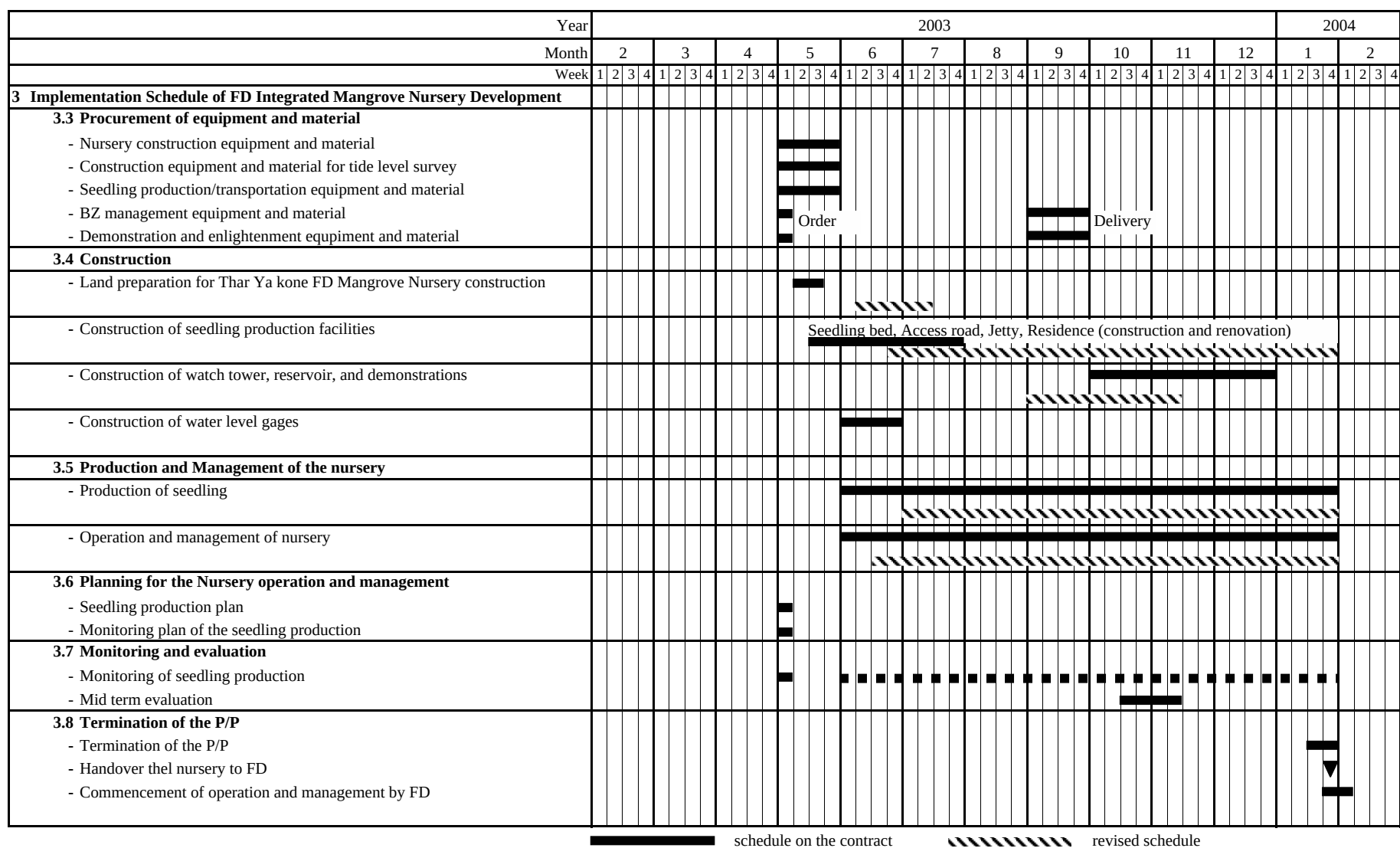
	Item	Contents	Unit	Q'ty	Reference
		Retractable Tape	-do -	2	measure length ~2m
		Hand Pruner	-do -	2	blade: ~50mm
		Caliper	-do -	2	measure diameter ~20cm
		Hand Ax	-do -	2	
		Ladder	-do -	2	5 m
		Machete	-do -	2	
		Saw	-do -	3	22"
		Rake	-do -	3	
		Measuring tape (30m)	-do -	3	metric/english reading, plastic
		Measuring tape (50m)	-do -	3	metric/english reading, plastic
		Lining tape (100m)	-do -	3	metric/english reading, plastic
		Leveling rake	-do -	3	
		Carpentary Set	set	1	nail puller, hanmmar, nipper, jigsaw, whetstone, knife, screw driver set, file, level
2.3	Nursery Operation and Maintenance				
		Security and maitenance guard	md	246	
		Safety control	ls	1	fire and disaster prevention equipment
		Office maintenance	ls	1	stationary
		Labor management	ls	1	helmet, hat, saftey gloves, etc.
		Communication	ls	1	
		Fuel expenses	gl	480	diesel for pump and generator
		Demonstration and extension activites maintenance	ls	1	
		Micellaneous cost	ls	1	
3.0	Procurement of Nursery Equipment				
3.1	Equipment for Nursery Operation				
		generator	set	1	Diesel Engine 13 Hp+ Dynamo 5kw+ Frame
		fuel tank	pc	5	10 gallon tank
		generator spare parts	set	1	
		Rechargeable Battery	pc	1	150Amp
		Inverter	set	1	800 Watt
		water pump with spare parts	set	1	5Hp engine + 3" Pump & Pipe
		tread pump	set	1	
		Boat for seedling transportation "Pharr Ku" Type	boat	1	45 ft x 12 ft 24 hp desiel engine x 2 loading capacity 16 t (12' x 20' x 6')
		Furniture for office	set	1	desk x 2, chair x2, table x 1, chair x 4, book shelf x 2, desk lamp x 2, etx
3.2	Material and Equipment for Demonstration and Extension Activities				
(1)	For Extension	Black board	pc	1	
(2)	For Monitoring				
		Record book	ls	12	for water gauge recording
		Binoculars	pc	2	for BZ management
		Portable Sailinity meter	set	2	
		Portable pH meter	set	2	

Work Quantity: Capacity development of Forest Department Front line Staff					
Item		Contents	Unit	Q'ty	Reference
1.0	FD frontline staff capacity development				
1.1	Training at CFDTC for Participatory Development and Community forestry (3 trainees FD budget, 7 trainees: JICA Study Team)				
(1)	Training fee	Classroom and practice	prs	10	Foresters charged for Pyinalan RF
(2)	Trainee's lodging/meal	-do-	prs/night	112	14 days training
(3)	Trainee's transportation	-do-	prs/trip	10	Thar Yar Kone - Yangon (Hmowbi)
2.0	Training on at Thar Yar Kone CIF Extension Centre at sites				
2.1	First session (3 trainer for 5 foresters of trainee: two weeks 15 classes) (May-June)				
(1)	Training fee	Preparatory work (preparation of training	LS	3	
		Training on participatory approach and community forestry	unit	5	5 units of training class during two weeks
		Training on mangrove rehabilitation (technical	unit	5	-do-
		Training on consolidation activities of UG	unit	5	-do-
(2)	Trainers' allowance (per-diem)	3 trainers	m/d	42	2 weeks/trainer x 1 times x 3 trainer
(3)	Trainers' lodging/meal	-do-	prs/night	42	-do-
(4)	Trainers' transportation	-do-	prs/trip	3	3 trainers x 1 times
(5)	Trainees' meal	5 trainee	m/d	50	10 training days / trainee
(6)	Trainees' transportation	5 trainees	prs/trip	5	half of training days for OJT
(7)	Operation and maintenance	Stationary, copy, recording, etc	L/S	3	for each trainer
2.2	2nd Session (3 trainer for 10 trainee of forester: two weeks 15 classes) (November - December)				
(1)	Training fee	Preparatory work (preparation of training	LS	3	
		Training on participatory approach and community forestry	unit	5	5 units of training class during two weeks
		Training on mangrove rehabilitation (technical	unit	5	-do-
		Training on consolidation activities of UG	unit	5	-do-
(2)	Trainers' allowance	3 trainers	m/d	42	2 weeks/trainer x 1 times x 3 trainer
(3)	Trainers' lodging/meal	-do-	prs/night	42	-do-
(4)	Trainers' transportation	-do-	prs/trip	3	3 trainers x 1 times
(5)	Trainees' meal	10 trainee	m/d	100	10 training days / trainee
(6)	Trainees' transportation	10 trainees	prs/trip	5	half of training days for OJT
(7)	Operation and maintenance	Stationary, copy, recording, etc	L/S	3	for each trainer
3.0	Equipment and materials for capacity development of FD frontline staff				
(1)	Equipment for ground truth	GPS for survey, planning, and monitoring	pc	10	accuracy: 5 m
		Computer, software with licenced, and printer	set	2	for GPS data input
(2)	Forest survey equipment	Tree hight, DBH, Measuring range, etc	set	2	

	Year				2003																								2004																											
	Month				2				3				4				5				6				7				8				9				10				11				12				1				2			
	Week				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4												
4 Implementation schedule of Thar Yar Kone Village Pilot Project																																																								
4.2 Procure and Supply equipment and material																																																								
- Seedlings for plantation, NFIO and agroforestry																																																								
- Equipment and material for plantation, NFIO, BZ, nursery, and school work																																																								
4.3 Construction																																																								
- Construct self reliance agroforestry nursery																																																								
- Construct water reservoir for self reliance agroforestry nursery																																																								
- School renovation																																																								
4.4 Implementation																																																								
- Operation and maintenance of agroforestry nursery																																																								
- Agroforestry practicing																																																								
: Land preparation, ridging and applying compost																																																								
: Fruits tree planting																																																								
: Vegetable cultivation																																																								
: Harvetsting and selling																																																								
- Plantation, NFIO, and BZ management																																																								
: Land preparation																																																								
: Hauling, and Planting / NFIO																																																								
: Inventory of planting, patching and weeding																																																								
- School woodlot																																																								
: Land preparation																																																								
: Hauling, and Planting / NFIO																																																								
: Inventory of planting, patching and weeding																																																								
4.5 Capacity development																																																								
- Group leader training																																																								
- Consolidation of UG																																																								
- Mutual understanding																																																								
4.6 Operation and Management																																																								
- Monitoring																																																								
- Holding monthly meeting																																																								
- Preparation of monthly progress report																																																								
- Patrolling																																																								
- Mid term evaluation																																																								
- Termination of the P/P (confirmation of result/planing for following year activity)																																																								

 schedule on the contract

 revised schedule



Year				2003																								2004							
Month				2		3		4		5		6		7		8		9		10		11		12		1		2							
Week				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
6 Implementation schedule of FD Frontline Staff Capacity Building Pilot Project																																			
6.1 Preparation of second draft implementation plan																																			
- Confirmation of FD Mangrove Management Plan for Pyinalan																																			
- Confirmation of FD Formation of Pyinalan																																			
- Planning for FD frontline capacity development pilot project																																			
- Preliminary selection of trainer and trainee																																			
- Coordination with CFDTC																																			
- Preparation curriculum and teaching material for the capacity development																																			
- Draft cost estimation																																			
6.2 Designing and Planning																																			
- Development teaching material for the capacity development																																			
- Preparation of monitoring and evaluation plan																																			
- Arrangement training plan, trainers and trainees																																			
6.3 Implementation																																			
- Participatory development and community forestry (CFDTC)																																			
- Basic training for community forestry (Thar Yar Kone / P/P sites)																																			
- Villagers Enlighenment (Thar Yar Kone / P/P sites)																																			
- CFI management (Thar Yar Kone / P/P sites)																																			
- Technical guidance for mangrove rehabilitation (Thar Yar Kone/P/P sites)																																			
- Consolidation activities of community forestry (Thar Yar Kone/P/P sites)																																			
- Unitlization and up date of Mangrove Management-Planning Map																																			
6.4 Monitoring and evaluation																																			
- Self-Monitoring																																			
- Villagers' monitoring about relationship between FD and UG																																			
- Mid term evaluation																																			
6.5 Termination of the P/P																																			
- Demonstration of CFI promotion activity by trained forester as facilitator																																			
- Certification of trained forester																																			
- Preparation of activity plan of trained forester for following year																																			

work schedulerevised schedule

1-3A Achievement of Equipment Procurement in Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project

	Item	W/Q in A/P		Finished Components as of 15 Feb	Completion % by 15 Feb:
1	Nursery Equipment				
	Seive (200mm sieve)	6	set	(6)	100%
	Spray (plastic, ~10liter/unit)	3	set	2	67%
	Cart barrow (one wheel) (for soil transportation v: 0.1m3~ or w:30kg~)	6	set	(6)	100%
	cart barrow (two wheel) (for seedling container 0.1m3 v: 0.1m3~ or w:30kg~)	5	set	0	0%
	Garden trowel (Handle length: 150mm, blade: ~50mm)	29	set	(8)	28%
	Plastic bucket (approx. 5 liters)	20	set	20	100%
	Tray (290x330x45 mm)	9	set	0	0%
	Watering can (plastic, 3~6liter/unit)	10	set	2	20%
	Shovel (Handle length: ~100cm, blade: ~20 x 30 cm)	17	set	2	12%
	Container (plastic container for seedling transportation)	720	set	368	51%
	Weed hoe (blade: ~150mm, Handle length: ~40cm)	9	set	0	0%
	Weed cutter (sickle) (Handle length: ~120cm)	9	set	0	0%
	Scale (5kg x 50g measure)	2	set	0	0%
	Retractable tape (measure length ~2m)	2	set	0	0%
	Hand pruner (blade: ~50mm)	2	set	0	0%
	Caliper (measure diameter ~20cm)	2	set	0	0%
	Hand ax	2	set	0	0%
	Ladder (5 m)	2	set	0	0%
	Machete	2	set	0	0%
	Saw	3	set	2	67%
	Rake	3	set	2	67%
	Measuring tape (30 m) (metric/English reading, plastic)	3	set	1	33%
	measuring tape (50 m) (metric/English reading, plastic)	3	set	0	0%

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	Item	W/Q in A/P		Finished Components as of 15 Feb	Completion % by 15 Feb:
	Lining tape (100 m) (metric/English reading, plastic)	3	set	0	0%
	Levelling rake	3	set	0	0%
	Carpentry set (nail puller, hammer, nipper, jigsaw, whetstone, knife, screw driver set, file, level)	1	set	0	0%
2	Equipment for Nursery				
	Generator (diesel engine 13 H.P , 5 KW dynamo & frame)	1	set	1	100%
	Fuel tank (10 gal tank)	5	pc	0	0%
	Generator spare parts	1		1	100%
	Rechargeable battery (150 amp , 12 V)	1	pc	(1)	100%
	Inverter (800 W-)	1	set	(1)	100%
	5 H.P engine , 3"pump & 20' pipe	1	set	1	100%
	Tread pump	1	set	0	0%
	Boat ("Pharr Ku" Type 45 ft x 12ft, loading capacity 16 t (12' x 20 ' x 6 ')	1	no.	1	100%
	Furniture				
	12'x 20' desk 2 nos.	2	set	0	0%
	Chair 2 nos.	2	set	0	0%
	Table 1 no.	1	set	0	0%
	Chair 4 nos.	4	set	0	0%
	Book shelf 2 nos.	2	set	0	0%
	Desk lamp 2 nos.	2	set	0	0%
3	Material and Equipment for Extension and Monitoring				
	Black board	1	pc	0	0%
	Water gauge (scale 0 to 500 cm)	2	set	0	0%
	Record book	12	ls	0	0%
	Binoculars	2	pc	0	0%
	Portable salinity meter	2	set	2	100%
	Portable PH meter	2	set	2	100%

1-3B Achievement of Construction in Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project

		W/Q in Action Plan			Final Conclusion		Incomplete Work
					W/Q	Completion % & Acceptance	Major Remaining parts and to be deducted from the Contract
1		Nursery Construction					
1	1	Nursery Bed Construction				52.2%	
	1	Nursery bed 1 (FD nursery) Block 1	900	m2	900	Partial	1. Leveling which critically affects the growth of seedlings. 2. Some compaction after leveling 3. Completion of side embankment cutting
	2	Nursery bed 1 (FD nursery) Block 2	900	m2	900	Partial	1. Leveling which critically affects the growth of seedlings. 2. Some compaction after leveling 3. Bed frame construction 4. Completion of side embankment cutting
	3	Nursery bed 1 (FD nursery) Block 3	900	m2	900	Partial	1. Leveling which critically affects the growth of seedlings. 2. Some compaction after leveling 3. Bed frame construction 4. Completion of side embankment cutting 5. Adjustment of shade nets 6. Removal of dead pots
	4	Nursery bed 1 (FD nursery) Block 4	900	m2	900	Partial	ditto
	5	Nursery bed 1 (FD nursery) Block 5	900	m2	900	Partial	1. Leveling which critically affects the growth of seedlings. 2. Some compaction after leveling 3. Bed frame construction 4. Completion of side embankment cutting
	6	Nursery bed 1 (FD nursery) Block 6	900	m2	900	Partial	1. Leveling which critically affects the growth of seedlings. 2. Some compaction after leveling 3. Completion of side embankment cutting
	7	Nursery bed 1 (FD nursery) Block 7	900	m2	900	Partial	ditto
	8	Nursery bed 1 (FD nursery) Block 8	900	m2	900	Partial	1. Leveling which critically affects the growth of seedlings. 2. Some compaction after leveling
	9	Nursery bed 2 (natural bed)	576	m2	578	O.K.	
	10	Non mangrove nursery	194	m2	220	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	11	(Shading Facility)	1755		2,020	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check

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		W/Q in Action Plan			Final Conclusion		Incomplete Work
					W/Q	Completion % & Acceptance	Major Remaining parts and to be deducted from the Contract
	12	Water gate	1	pc	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	13	Main Channel	130	m	130	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	14	Water Way (Main Channel - Bed) 2 no per block	8	set	8	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
1	2	Nursery Road Construction				98.9%	
	1	Nursery main road 1	165	m	163	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	2	Nursery main road 2	130	m	118	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	3	Access road	370	m	370	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	4	Nursery road 1 (soil mounding)	90	m m	90	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	5	Nursery road 2 (soil mounding)	70	m	70	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	6	Nursery road 3 (soil mounding)	70	m	70	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	7	Nursery road 4 (soil mounding)	90	m	90	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	8	Nursery road 5 (soil mounding)	130	m m	130	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	9	Nursery road 6 (soil mounding)	130	m	130	Partial	Deduction from contract amount for unacceptable quality and function under the Contract

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		W/Q in Action Plan			Final Conclusion		Incomplete Work
					W/Q	Completion % & Acceptance	Major Remaining parts and to be deducted from the Contract
	10	Nursery road 7 (soil mounding)	95	m	95	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	11	Wooden bridge	1	set	1	O.K.	
	12	Culvert 4 nos.	4	set	4	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
1	3	Jetty Construction				100.0%	
		Reinforced concrete jetty	1	set	1	O.K.	
1	4	Water reservoir				(0.0%)	
		Water reservoir	1	set	0	No	Overall reconstruction. Compaction from the beginning
1	5	Stack Yard Construction				98.4%	
	1	Seedling stack yard	72	m2	72	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	2	Soil yard (stock pile)	72	m2	72	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	3	Mixed soil yard	72	m2	72	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	4	Work place for potting	72	m2	72	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
1	6	Temporary Building Construction				95.8%	
	1	Nursery office	84	m2	84	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	2	Residence 1	36	m2	36	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check

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		W/Q in Action Plan			Final Conclusion		Incomplete Work
					W/Q	Completion % & Acceptance	Major Remaining parts and to be deducted from the Contract
	3	Residence 2	72	m2	72	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	4	Workers hut	360	m2	360	Partial	1. Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	5	Ware house 1	72	m2	72	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	6	Ware house 2	36	m2	36	No	Construction
	7	Generator house & fuel storage	18	m2	18	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	8	Seed storage	36	m2	36	Partial	
	9	Rest shades for workers (1)	36	m2	36	O.K.	
	10	Rest shades for workers (2)	36	m2	36	O.K.	
	11	Sanitary facility (septic tank)	1		1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	12	Incinerator	1		0	No	Material procurement and construction
1	7	Water Storage for Daily Use				96.7%	
	1	Water storage (brick wall)	2	set	2	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	2	Over head plastic water tank	1	set	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	3	Plumbing facility	1	set	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	4	Sanitary facility (toilet1)	1	set	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check

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		W/Q in Action Plan			Final Conclusion		Incomplete Work
					W/Q	Completion % & Acceptance	Major Remaining parts and to be deducted from the Contract
	5	Sanitary facility (toilet2)	1	set	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
1	8	For BZ Management					
1	9	For Demonstration and Monitoring				84.1%	
	1	River bank stabilization fence	200	m	200	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	2	Water gauge 2 nos.	2	set	0	No	Material procurement and construction of water gauges
1	10	For Renovation of TYK CF Center				100.0%	
	1	Renovation CF centre (Jetty)	1	l.s.	1	O.K.	
	2	Renovation CF centre (Timber floor repair and guest house facilities)	1	l.s.	1	O.K.	
	3	Renovation CF centre (water tank & water supply)	1	l.s.	1	O.K.	
	4	Renovation CF centre (CGI sht roofing)	1	l.s.	1	O.K.	
	5	Renovation CF centre (pipe fittings & valves)	1	l.s.	1	O.K.	
	6	Renovation CF centre (Kitchen floor upgrading)	1	l.s.	1	O.K.	
	7	Renovation CF centre (Fix septic tank 2 nos.)	1	l.s.	1	O.K.	
	8	Renovation CF centre (Replacing lighting and generator)	1	l.s.	1	O.K.	
	9	Renovation CF centre (Wall Painting)	1	l.s.	1	O.K.	
	10	Renovation CF centre (Jetty connection road)	1	l.s.	1	O.K.	
1	11	Other Works				96.7%	
	1	Plumbing Work	1	l.s.	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check

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		W/Q in Action Plan			Final Conclusion		Incomplete Work
					W/Q	Completion % & Acceptance	Major Remaining parts and to be deducted from the Contract
	2	Electric wiring works	1	l.s.	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	3	Carpenting Work	1	l.s.	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check
	4	Maintenance and Repair	1	l.s.	1	Partial	Deduction from contract amount for unacceptable quality and function under the Contract based on the additional completion check

1-3C Achievement of Seedling Production in Thar Yar Kone FD Integrated Mangrove Nursery Pilot Project

Species	FD Plan (A)	FREDA Record (B)	Acceptable Quantity (C)	Completion % (D)=C/A	Balance2 (E)=C-A	Balance 3 (J)=C-B
Mangrove species						
<i>Heritiera littoralis</i>	5,000	1,164	1,044	21%	-3,956	-120
<i>Heritiera fomes</i>	10,000	6,381	5,781	58%	-4,219	-600
<i>Xylocarpus moluccensis</i>	5,000	1,496	0	0%	-5,000	-1,496
<i>Xylocarpus granatum</i>	5,000	1,058	377	8%	-4,623	-681
<i>Amoora cuculata</i>	5,000	0	0	0%	-5,000	0
<i>Lumnitzrea racemosa</i>	50,000	4,159	3,883	8%	-46,117	-276
<i>Bruguiera gymnorhiza</i>	30,000	57,692	51,484	172%	21,484	-6,208
<i>Bruguiera sexangula</i>	5,000	0	0	0%	-5,000	0
<i>Bruguiera parviflora</i>	5,000	731	644	13%	-4,356	-87
<i>Bruguiera cylindrica</i>	5,000	1,768	1,592	32%	-3,408	-176
<i>Rhizophora mucronata</i>	10,000	225	140	1%	-9,860	-85
<i>Rhizophora apiculata</i>	10,000	2,916	1,846	18%	-8,154	-1,070
<i>Kandelia candel</i>	5,000	0	0	0%	-5,000	0
<i>Ceriops decandra</i>	10,000	6,800	2,138	21%	-7,862	-4,662
<i>Excoecariaaria agallocha</i>	10,000	3,183	612	6%	-9,388	-2,571
<i>Avicennia alba</i>	30,000	0	0	0%	-30,000	0
<i>Avicennia marina</i>	30,000	6,534	6,209	21%	-23,791	-325
<i>Avicennia officinalis</i>	200,000	192,333	187,302	94%	-12,698	-5,031
<i>Sonneratia graffithii</i>	20,000	0	0	0%	-20,000	0
<i>Sonneratia apetala</i>	150,000	6,000	0	0%	-150,000	-6,000
Sub total	600,000	292,440	263,052	44%	-336,948	-29,388
Non mangrove species						
<i>Samanea saman</i>	10,000	500	0	0%	-10,000	-500
<i>Malaluca leucadandra</i>	10,000	10,000	7,800	78%	-2,200	-2,200
<i>Albizzia procera (lebbek)</i>	1,500	0	343	23%	-1,157	343
<i>Terminalia beleria</i>	1,000	0	0	0%	-1,000	0
<i>Swietenia macrophylla</i>	1,000	0	0	0%	-1,000	0
<i>Xylia do la brifomis</i>	1,500	0	0	0%	-1,500	0
<i>Sesbania groundiflora</i>	0	5,500	0	-	0	-5,500
<i>Leucaena leucocephala</i>	0	5,500	0	-	0	-5,500
Subtotal	25,000	21,500	8,143	33%	-16,857	-13,357

Attachment-2

Community Forestry Action Plan 2004

2. Thar Yar Kone and Nyaung Ta Pin Village CF Pilot Project 2004**2.1 Thar Yar Kone CF Pilot Project 2004****2.1.a.1 CF Church Woodlot By Groups of Thar Yar Kone Village**

Group	Activity	Area (acre)	No. of Users	Remark
Group 1	NFIO (2003 remaining)	0.1	1	
	NFIO (2004)	48.826	16	
	CF Aqua agro forestry	0.01	1	
	CF Agroforestry	0.96	4	
Group 2	Plantation (2003 remaining)	0.5	1	
	Plantation (2004)	5.2	4	
	NFIO (2004)	43.2	14	
	CF Aqua agro forestry	0.06	1	
	CF Agroforestry	0.54	2	
Group 3	Plantation (2004)	3	3	
	NFIO (2004)	15	3	
Group 4	Plantation (2003 remaining)	2	1	
	Plantation (2004)	10	5	
	NFIO (2004)	12.5	5	
	CF Agroforestry	0	0	
Group 5	Plantation (2004)	2.72	4	
	NFIO (2004)	19	7	
	CF Agroforestry	0.54	3	
Group 6	Plantation (2003 remaining)	1	1	
	Plantation (2004)	5.2	4	
	NFIO (2003 remaining)	14	9	
	NFIO (2004)	43.8	12	
	CF Aqua agro forestry	0.06	1	
	CF Agroforestry	0.15	1	
New Group	NFIO 2004	22	8	
	CF Agroforestry	0.07	1	
Total	Plantation (2003 remaining)	3.5	3	
	Plantation (2004)	26.12	20	
	NFIO (2003 remaining)	14.1	10	
	NFIO (2004)	182.326	57	
	CF Aqua agro forestry	0.13	3	
	CF Agroforestry	2.19	10	
2.1.a.2	CF Public Woodlot inTYK	2004 target	Need to Summit AD	
	All User	CF Village Woodlot	5	to propose 15 ac for 30 year CF
	All User	CF Roadside Woodlot	2.5	to propose 2.5 ac for 30 year CF
	All User	CF School Woodlot	3	to propose 3 ac for 30 year CF
	16 User	CF Church Woodlot	2	to propose 8 ac for 30 year CF

Attachment 2-1 Community Forestry Action Plan 2004 (Thar Yar Kone Summary)

2.1.a.3 **CF Agro forestry Nursery**

All User	CF Agro nursery	0.01	
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2.1.a.4 **CF Water Reservior**

All User	CF Water Reservior	0.33	a water Reservior
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2.1.b **New member / Dropped member by Groups**

Group	Condition	No. of member	Remark
Group 1	2003 member	13	
	2003 Dropped member	0	
	Continue member	16	
	New member		
Group 2	2003 member	10	
	2003 Dropped member	0	
	Continue member	15	
	New member		
Group 3	2003 member	3	
	2003 Dropped member	0	
	Continue member	3	
	New member		
Group 4	2003 member	6	
	2003 Dropped member	0	
	Continue member	7	
	New member		
Group 5	2003 member	3	
	2003 Dropped member	0	
	Continue member	9	
	New member		
Group 6	2003 member	13	
	2003 Dropped member	0	
	Continue member	13	
	New member		
New Group	New member	8	already proposed 110.5 ac for CF
Total	2003 member	48	
	2003 Dropped member	0	
	Continue member	63	
	New member	8	already proposed

Attachment 2-1 Community Forestry Action Plan 2004 (Thar Yar Kone Summary)

2.1.c Seedling requirement/ activity / species / seedling type / by sub group

Group	Species	Activity	Seedling type	Seedling Qty	Source	Remark
Group 1	Am	NFIO	Transplant	100	UG Self	
	Ao	NFIO	Potted	1,720	FD Sup	
	Ao	NFIO	Seed	650	UG Self	
	Ao	NFIO	Transplant	1,930	UG Self	
	Bg	NFIO	Seed	1,000	UG Self	
	Cd	NFIO	Transplant	100	UG Self	
	Ea	NFIO	Transplant	1,510	UG Self	
	Hf	NFIO	Transplant	100	UG Self	
	Melaleuca	NFIO	Potted	350	FD Sup	
	Cucumber	AAF	Seed	0.03 kg	JST	
	Roselle	AAF	Seed	0.1 kg	JST	
	Taro	AF	Rhizome	57 kg	JST	
	Sweet potato	AF	Tuber	18 kg	JST	
Group 2	Ao	Plantation	Seed	1,000	UG Self	
	Ao	Plantation	Potted	660	FD Sup	
	Ao	Plantation	Transplant	700	UG Self	
	Ao	NFIO	Potted	600	FD Sup	
	Ao	NFIO	Seed	1,850	UG Self	
	Ao	NFIO	Transplant	1,700	UG Self	
	Ea	NFIO	Transplant	1,200	UG Self	
	Leucaena Leucocela	Plantation	Potted	1,200	FD Sup	
	Xm	NFIO	Potted	300	FD Sup	
	Melaleuca	Plantation	Potted	300	FD Sup	
	Xg	NFIO	Potted	300	FD Sup	
	Ra	NFIO	Propagule	500	UG Self	
	Sa	NFIO	Potted	850	FD Sup	
	Long bean	AAF	Seed	0.04 kg	JST	
	Snake gourd	AAF	Seed	0.05 kg	JST	
	Lady finger	AAF	Seed	0.06 kg	JST	
	Cucumber	AAF	Seed	0.1 kg	JST	
	Drum stick	AAF	Potted Seedling	35	JST	
	Roselle	AAF	Seed	0.1 kg	JST	
Group 3	Ao	Plantation	Seed	2,800	UG Self	
	Ao	Plantation	Transplant seedling	1,500	UG Self	
	Ao	NFIO	Seed	5,100	UG Self	
	Taro	AF	Rhizome	20 kg	JST	
	Sweet pototo	AF	Tuber	5 kg	JST	
Group 4	Ao	Plantation	Potted	1,250	FD Sup	
	Ao	Plantation	Seed	5,500	UG Self	
	Ao	Plantation	Transplant	750	UG Self	
	Ao	NFIO	Transplant	1,010	UG Self	
	Ao	NFIO	Seed	7,000	UG Self	
	Bg	NFIO	Seed	750	UG Self	
	Bg	Plantation	Seed	3,750	UG Self	
	Ea	NFIO	Transplant	260	UG Self	
	Kathit	Plantation	Transplant	400	UG Self	
	Samanea Saman	Plantation	Transplant	400	UG Self	

Attachment 2-1 Community Forestry Action Plan 2004 (Thar Yar Kone Summary)

Group	Species	Activity	Seedling type	Seedling Qty	Source	Remark
	Melaleuca	Plantation	Potted	700	FD Sup	
	Ra	NFIO	Propagule	750	UG Self	
	Ra	Plantation	Propagule	750	UG Self	
	Albizia procera	Plantation	Transplant	400	UG Self	
Group 5	Ao	NFIO	Potted	1,540	FD Sup	
	Ao	NFIO	Seed	1,860	UG Self	
	Ao	Plantation	Potted	2,810	FD Sup	
	Bg	NFIO	Seed	500	UG Self	
	Leucaena Leucoccephala	Plantation	Potted	50	FD Sup	
	Melaleuca	Plantation	Potted	50	FD Sup	
	Nepa frutescens	NFIO	Seed	2,000	UG Self	
	Sebania grandiflora	Plantation	Potted	50	FD Sup	
	Taro	AF	Rhizome	42 kg	JST	
	Sweet potato	AF	Tuber	20 kg	JST	
	Pumelo	AF	Potted Seedling	5	JST	
Group 6	Am	Plantation	Transplant	2,750	UG Self	
	Am	NFIO	Transplant	3,250	UG Self	
	Ao	NFIO	Potted	2,710	FD Sup	
	Ao	NFIO	Seed	4,650	UG Self	
	Ao	Plantation	Transplant	1,850	UG Self	
	Ao	Plantation	Potted	1,500	FD Sup	
	Bg	NFIO	Seed	4,900	UG Self	
	Bg	NFIO	Potted	100	FD Sup	
	Bg	Plantation	Seed	1,300	UG Self	
	Cd	NFIO	Transplant	1,300	UG Self	
	Ea	NFIO	Transplant	1,450	UG Self	
	Sa	NFIO	Potted	360	FD Sup	

TYK New propose UG 22 ac of 2004

New Group	Ao	NFIO	Seed	7,200	UG Self	
	Ao	NFIO	Transplant	1,000	UG Self	
	Bg	NFIO	Seed	5,000	UG Self	
	Long bean	AAF	Seed	0.06 kg	JST	
	Snake gourd	AAF	Seed	0.06 kg	JST	
	Bitter gourd	AAF	Seed	0.06 kg	JST	
	Cucumber	AAF	Seed	0.11 kg	JST	
	Drum stick	AAF	Potted Seedling	20	JST	
	Roselle	AAF	Seed	0.1 kg	JST	
	Taro	AF	Rhizome	16 kg	JST	
	Pumelo	AF	Pc	5	JST	
	Sweet potato	AF	Tuber	3 kg	JST	

TYK CF Village Woodlot 5 ac

All User	Ao	NFIO	Seed	1,200	UG Self	
	Bg	NFIO	Seed	2,400	UG Self	
	Am	NFIO	Seed	1,200	UG Self	
	Ea	NFIO	Transplant	1,500	UG Self	

TYK CF Village Roadside Woodlot

All User	Melaleuca	Plantation	Potted	1,200	FD Sup	
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Attachment 2-1 Community Forestry Action Plan 2004 (Thar Yar Kone Summary)

Group	Species	Activity	Seedling type	Seedling Qty	Source	Remark
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TYK CF School Woodlot

All User	Ao	Plantation	Potted	300	FD Sup	
	Malaluca	Plantation	Potted	100	FD Sup	
	Samanea Saman	Plantation	Potted	50	FD Sup	
	Albizza Lebbk	Plantation	Potted	50	FD Sup	

TYK CF Church Woodlot

17 Users	Ao	Plantation	Potted	1,250	FD Sup	
	Malaluca	Plantation	Potted	500	FD Sup	
	Leucaena Leucocel	Plantation	Potted	300	FD Sup	
	Albizza Lebbk	Plantation	Potted	300	FD Sup	
	Samanea Saman	Plantation	Potted	100	FD Sup	

TYK CF Agro nursery

CF Agro forestry UG	Turo	Agro Nursery	Rhizone	5 kg	JST	
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Am: Amoora culcuta

Ao: Avicennia officinalis

Bg: Bruguiera gymnorrhiza

Cd: Ceriops decandra

Ea: Excoecaria agallocha

Hf: Heritiera fomes

Sa: Sonneratia apetala

Ra: Rhizophora apiculata

Xg: Xylocarpus granatum

Xm: Xylocarpus moluccensis

Thar Yar Kone Village 2004 Action Plan Revising

Sr	Group	Group / Name	Old / New	2003 remaining / 2004 work	Area (Acre)	CF Activity	Species	Seedling Type	Qty	Source S/FD
1	G1	Lar Set	Old	2004	3.00	NFIO	Ea	T	200	S
2	G1	Lay Tay	New	2004	2.00	NFIO	Av	Pot	200	FD
3	G1	Gay Lal	Old	2004	3.50	NFIO	Ea	T	100	S
4	G1	Say Htoo	Old	2004	1.50	NFIO	Av	Pot	300	FD
4	G1	Say Htoo	Old	2004	0.026	AF				
5	G1	Shee Mo	Old	2004	5.00	NFIO	Av	T	400	S
5	G1	Shee Mo	Old	2004		NFIO	Bg	Seed	400	S
6	G1	Boe Yar	Old	2004	2.00	NFIO	Ea	T	360	S
7	G1	Nelson	Old	2004	2.00	NFIO	Av	T	200	S
7	G1	Nelson	Old	2004	0.10	AF				
8	G1	Saw Kor Htoo	Old	2004	3.00	NFIO	Av	T	330	S
9	G1	Daw Sel Lar	Old	2004	4.00	NFIO	Ea	T	200	S
9	G1	Daw Sel Lar	Old	2004		NFIO	Av	T	200	S
9	G1	Daw Sel Lar	Old	2003	0.10	NFIO	Ea	T	500	S
9	G1	Daw Sel Lar	Old	2003		NFIO	Av	T	500	S
10	G1	U Khin Htwee	Old	2004	3.70	NFIO	Av	Pot	720	FD
10	G1	U Khin Htwee	Old	2004	0.01	AAF				
11	G1	Daw Htwe Yi/Saw Lal Wa		2004	2	NFIO	Av	Pot	500	FD
12	G1	Petar Pyu	Old	2004	5.00	NFIO	Bg	Seed	300	S
12	G1	Petar Pyu	Old	2004	0.026	NFIO	Malaluca	Pot	300	FD
12	G1	Petar Pyu	Old	2004						
13	G1	JawYemu	New	2004	2.50	NFIO	Av	S	650	S
13	G1	JawYemu	New	2004		NFIO	Ea	T	250	S
14	G1	Jawlay	Old	2004	2.00	NFIO	Am	T	100	S
14	G1	Jawlay	Old	2004	0.07	AF				
15	G1	Petarkyaw	Old	2004	3.5	NFIO	Hf	T	100	S
15	G1	Petarkyaw	Old	2004		NFIO	Cd	T	100	S
15	G1	Petarkyaw	Old	2004		NFIO	Ea	T	100	S
16	G1	Saw Larbwyl	Old	2004	4	NFIO	Av	T	300	S
16	G1	Saw Larbwyl	Old	2004		NFIO	Bg	Seed	300	S
16	G1	Saw Larbwyl	Old	2004		NFIO	Malaluca	Pot	50	FD
1	G2	U Chit Maung	Old	2004	2	NFIO	Sa	Pot	250	FD
1	G2	U Chit Maung	Old	2004		NFIO	Ra	P	200	S
1	G2	U Chit Maung	Old	2004	0.25	Plantation	Bosking	Pot	300	FD
1	G2	U Chit Maung	Old	2004	0.25	Plantation	Bosking	Pot	200	FD
2	G2	Ne Mu	Old	2004	4	NFIO	Ra	P	200	S
3	G2	Thar Mu	Old	2004	1	NFIO	Av	Pot	300	FD
4	G2	Kyaing Sal	Old	2004	6	NFIO	Bg	S	1000	S
4	G2	Kyaing Sal	Old	2004		NFIO	Av	S	1250	S
4	G2	Kyaing Sal	Old	2004		NFIO	Sa	Pot	200	FD
4	G2	Kyaing Sal	Old	2004	0.25	Plantation	Bosking	Pot	200	FD
4	G2	Kyaing Sal	Old	2004		CW	Malaluca	Pot	300	FD
5	G2	Daw Say Lyar	Old	2004	1.5	NFIO	Sa	Pot	300	FD
5	G2	Daw Say Lyar	Old	2004		NFIO	Av	S	100	S
5	G2	Daw Say Lyar	Old	2004	0.07	Plantation				
6	G2	U BarBu	New	2004	3	Plantation	Av	S	1000	S
6	G2	U BarBu	New	2004	1	NFIO	Av	S	500	S
6	G2	U BarBu	New	2004	0.25	Plantation	Bosking	Pot	500	FD
7	G2	U Tun Ngwel	Old	2004	0.5	Plantation	Av	Pot	660	FD
7	G2	U Tun Ngwel	Old	2003	0.5	Plantation	Av	T	700	S
8	G2	U Tet Sein	New	2004	2	NFIO				
9	G2	U Jet Son	New	2004	1	NFIO	Ea	T	300	S
9	G2	U Jet Son	New	2004		NFIO	Kya Na	Pot	100	FD
9	G2	U Jet Son	New	2004		NFIO	Pinlelohn	Pot	100	FD
10	G2	U Johnsonyin	New	2004	1	NFIO	Ea	T	300	S
10	G2	U Johnsonyin	New	2004		NFIO	Kya Na	Pot	100	FD
10	G2	U Johnsonyin	New	2004		NFIO	Pinlelohn	Pot	100	FD

Thar Yar Kone Village 2004 Action Plan Revising

Sr	Group	Group / Name	Old / New	2003 remaining / 2004 work	Area (Acre)	CF Activity	Species	Seedling Type	Qty	Source S/FD
11	G2	U Johnson	New	2004	4.7	NFIO	Ea	T	500	S
11	G2	U Johnson	New	2004		NFIO	Kya Na	Pot	100	FD
11	G2	U Johnson	New	2004		NFIO	Pinlelohn	Pot	100	FD
11	G2	U Johnson	New	2004	0.06	AAF				
12	G2	Saw Ne Htoo	Old	2004	5	NFIO	Av	T	600	S
12	G2	Saw Ne Htoo	Old	2004		NFIO	Bg	S	360	S
13	G2	Say Mu	Old	2004	5	NFIO	Ea	T	100	S
13	G2	Say Mu	Old	2004		NFIO	Av	T	400	S
14	G2	Htoo Lel	Old	2004	5	NFIO	Ra	P	100	S
14	G2	Htoo Lel	Old	2004		NFIO	Av	T	500	S
14	G2	Htoo Lel	Old	2004		NFIO	Sa	Pot	100	FD
15	G2	Daw Say lar	Old	2004	4	NFIO	Av	T	200	S
15	G2	Daw Say lar	Old	2004		NFIO	Av	Pot	300	FD
1	G3	Sel Nel Tha	Old	2004	0.5	Plantation	Av	S	800	S
1	G3	Sel Nel Tha	Old	2004	4.5	NFIO	Av	S	1200	S
2	G3	Saw Htoo Say	Ole	2004	1	Plantation	Av	T	1500	S
2	G3	Saw Htoo Say	Ole	2004	6	NFIO	Av	S	2400	S
3	G3	U Myint Aung	Old	2004	1.5	Plantation	Av	S	2000	S
3	G3	U Myint Aung	Old	2004	4.5	NFIO	Av	S	1500	S
1	G4	Saw Lal Say	Old	2004	1.5	NFIO	Bg	S	750	S
1	G4	Saw Lal Say	Old	2004		NFIO	Ra	P	750	S
1	G4	Saw Lal Say	Old	2004		NFIO	Av	T	750	S
1	G4	Saw Lal Say	Old	2004	1.5	Plantation	Bg	S	750	S
1	G4	Saw Lal Say	Old	2004		Plantation	Ra	P	750	S
1	G4	Saw Lal Say	Old	2004		Plantation	Av	T	750	S
2	G4	U Saw Lwin	Old	2003	2	Plantation	KaThit	T	400	S
2	G4	U Saw Lwin	Old	2003		Plantation	Kokko	T	400	S
2	G4	U Saw Lwin	Old	2003		Plantation	Sit	T	400	S
2	G4	U Saw Lwin	Old	2004	1.5	Plantation	Malaluca	Pot	700	FD
3	G4	HtooPhalal	Old	2004	5	NFIO	Av	S	3000	S
2	G4	Aung Than/Kyi Win	New	2004	2	NFIO	Av	T	260	S
2	G4	Aung Than/Kyi Win	New	2004		NFIO	Ea	T	260	S
4	G4	King Bet	Old	2004	3	Plantation	Bg	S	3000	S
4	G4	King Bet	Old	2004		Plantation	Av	S	1500	S
5	G4	Thorahtal /Saw Shwe	New	2004	2	NFIO	Av	S	3000	S
6	G4	Delneal	Old	2004	1	Plantation	Av	Pot	1250	FD
6	G4	Delneal	Old	2004	2	NFIO	Av	S	1000	S
7	G4	Thar Sel	Old	2004	3	Plantation	Av	S	4000	S
1	G5	U Say Thar	New	2004	1	Plantation	Av	Pot	800	FD
1	G5	U Say Thar	New	2004	1	NFIO				
1	G5	U Say Thar	New	2004	0.07	AF				
2	G5	Sarkapol	New	2004	5	NFIO	Bg	S	500	S
3	G5	Htwe Oo	New	2004	1.5	NFIO	Av	Pot	880	FD
4	G5	Kyaw Khin	Old	2004	3	NFIO	Av	S	1200	S
4	G5	Kyaw Khin	Old	2004	0.07	AF				
5	G5	U Pho Tu	New	2004	0.6	Plantation	Av	Pot	660	FD
5	G5	U Pho Tu	New	2004	0.05	AF				
6	G5	Kyaw Shwe Myint	New	2004	1.5	NFIO	Av	S	660	S
7	G5	U Ngwe La	Old	2004	3	NFIO	Av	Pot	660	FD
7	G5	U Ngwe La	Old	2004	0.04	Plantation	Malaluca	Pot	50	FD
7	G5	U Ngwe La	Old	2004	0.08	Plantation	Boskaing	Pot	50	FD
7	G5	U Ngwe La	Old	2004		Plantation	PaukPanPhyu	Pot	50	FD
8	G5	Thar Htoo	New	2004	1	Plantation	Av	Pot	1350	FD
9	G5	Aung Nyunt	Old	2004	4	NFIO	Nepa Frutican	S	2000	S
1	G6	Saw Ne Tun	Old	2003	2	NFIO	Av	T	500	S
1	G6	Saw Ne Tun	Old	2004	1	Plantation	Av	T	1500	S
1	G6	Saw Ne Tun	Old	2004	3	NFIO	Av	Pot	400	FD

Thar Yar Kone Village 2004 Action Plan Revising

Sr	Group	Group / Name	Old / New	2003 remaining / 2004 work	Area (Acre)	CF Activity	Species	Seedling Type	Qty	Source S/FD
1	G6	Saw Ne Tun	Old	2004		NFIO	Bg	S	800	S
2	G6	U Sein Maung	Ole	2003	1	Plantation	Bg	S	1300	S
2	G6	U Sein Maung	Ole	2003	2	NFIO	Av	S	1300	S
2	G6	U Sein Maung	Ole	2003		NFIO	Ea	T	350	S
2	G6	U Sein Maung	Ole	2004	4	NFIO	Cd	T	500	S
2	G6	U Sein Maung	Ole	2004		NFIO	Ea	T	500	S
2	G6	U Sein Maung	Ole	2004		NFIO	Bg	S	500	S
3	G6	Byu Lal	Old	2004	2	Plantation	Am	T	2750	S
3	G6	Byu Lal	Old	2004	2	NFIO	Av	T	600	S
4	G6	Pho Cho	Old	2003	1.5	NFIO	Am	T	1500	S
4	G6	Pho Cho	Old	2004	4	NFIO	Am	T	1200	S
4	G6	Pho Cho	Old	2004		NFIO	Ea	T	600	S
5	G6	YarDoe	Old	2003	1	NFIO	Bg	Pot	100	FD
5	G6	YarDoe	Old	2003		NFIO	Av	Pot	1250	FD
5	G6	YarDoe	Old	2004	4	NFIO	Av	T	1500	S
6	G6	Aung Kyal Lin	Old	2004	4	NFIO	Av	T	1500	S
6	G6	Aung Kyal Lin	Old	2004		NFIO	Bg	S	1500	S
6	G6	Aung Kyal Lin	Old	2004	0.06	AAF				
6	G6	Aung Kyal Lin	Old	2004	0.07	AF				
7	G6	KeeDo	Old	2003	1.5	NFIO	Bg	S	250	S
7	G6	KeeDo	Old	2003		NFIO	Av	Pot	200	FD
7	G6	KeeDo	Old	2004	4	NFIO	Av	S	1500	S
7	G6	KeeDo	Old	2004		NFIO	Bg	S	250	S
8	G6	Nwee War	Old	2003	1	NFIO	Cd	T	800	S
8	G6	Nwee War	Old	2004	4	NFIO	Bg	S	1000	S
9	G6	U Tun Ngwe	Old	2004	4	NFIO	Av	T	550	S
9	G6	U Tun Ngwe	Old	2004		NFIO	Am	T	550	S
9	G6	U Tun Shwe	Old	2004	0.7	Plantation	Av	T	350	S
9	G6	U Tun Shwe	Old	2004	4.3	NFIO	Bg	S	600	S
9	G6	U Tun Shwe	Old	2004		NFIO	Sa	Pot	360	FD
10	G6	Aung Kyaw Htoo	Old	2003	1	NFIO	Av	Pot	360	FD
11	G6	Sel Ne	Old	2003	1	NFIO	Av	Pot	100	FD
11	G6	Sel Ne	Old	2004	4	NFIO	Av	Pot	400	FD
12	G6	Thein De	Ole	2003	3	NFIO				
12	G6	Thein De	Ole	2004	2.5	NFIO				
12	G6	Thein De	Ole	2004	1.5	Plantation	Av	Pot	1500	FD
		Daw Khin San Win	New	2004	0.026	AF				
									90830	
		CF School Woodlot		2004	3	Plantaton	Av	Pot	1000	FD
		CF School Woodlot		2004		Plantaton	Malaluca	Pot	200	FD
		CF School Woodlot		2004		Plantaton	Sit	Pot	50	FD
		CF School Woodlot		2004		Plantaton	Kokko	Pot	50	FD
		CF Village Woodlot		2004	5	NFIO	Av	Pot	3000	FD
		CF Village Woodlot		2004		NFIO	Bg	S	3000	S
		CF Church Woodlot		2004	2	Plantaton	Av	Pot	1250	FD
		CF Church Woodlot		2004		Plantaton	Malaluca	Pot	500	FD
		CF Church Woodlot		2004		Plantaton	Boskaing	Pot	300	Fd
		CF Church Woodlot		2004		Plantaton	Sit	Pot	200	Fd
		CF Church Woodlot		2004		Plantaton	Kokko	Pot	250	FD
		CF Village Road Site		2004	1	Plantaton	Malaluca	Pot	1200	FD

NFIO: CF Natural Forest Improvement Operation

Pot: Potted Seedling

S: Self

P: CF Plantation

P: Propergue

FD: Forest Department

AAF: CF Aqua Agro Forestry

S: Seed

CW: CF Compost Woodlot

AF: CF Agro Forestry

T: Transplant

WbP: CF Wind break Woodlot

2.2.1 Total Area for Plantation / NFIO / AAF/ AF / CF Public Wood Lot / CF School Wood Lot / CF Church Woodlot By Groups of nyaung Ta Pin Village

Group	Activity	Area (acre)	No. of Users	Remark
Group 1	NFIO (2003)	0.5	1	
	NFIO (2004)	27	13	
	CF Aqua agro forestry	0.2	1	
	CF Agro Forestry	0.12	1	To Propose New CF
Group 2	NFIO (2004)	13	7	
	CF Aqua agro forestry	0.1	1	To Propose New CF
Group 3	NFIO (2004)	15	3	
Group 4	NFIO (2004)	7.5	4	
Group 5	NFIO (2004)	9	5	
Group 6	NFIO (2004)	20.5	6	
Group 7	NFIO (2003)	2.5	3	
	NFIO (2004)	6.25	3	
Group 8	NFIO (2003)	1	1	
	NFIO (2004)	6	4	
Group 9	NFIO (2004)	4	3	
Total	NFIO (2003)	7	5	
	NFIO (2004)	108.25	48	
	CF Aqua agro forestry	0.3	2	
	CF Agro forestry	0.12	1	

2.2.a.2	CF Public Woodlot in NTP	2004 target	Need to Summit AD
All User	CF Village Woodlot	4.8	to propose 5 ac for 30 year CF
All User	CF School Woodlot	1.8	to propose 2 ac for 30 year CF
User	CF Church Woodlot	2	to propose 3 ac for 30 year CF

2.2.a.3 CF Water Reservoir

All User	CF Water Reservoir	0.33	a water Reservoir
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2.2.b New member / Dropped member by Groups

Group	Condition	No. of member	Remark
Group 1	2003 member	13	
	2003 Dropped member	2	Petalu, Kyaw Myint
	Continue member	11	
	New member	2	Gor Thu, Saw Htee Khu
Group 2	2003 member	11	
	2003 Dropped member	2	Aung Myo, Sar Say
	Continue member	9	
	New member	2	U Tun Nyein, Chit Min Ko
Group 3	2003 member	5	
	2003 Dropped member	1	Kan Myint
	Continue member	4	
	New member	1	Min Min
Group 4	2003 member	8	
	2003 Dropped member	1	Chit Nyunt
	Continue member	7	
	New member		
Group 5	2003 member	7	
	2003 Dropped member	1	Min Thu
	Continue member	6	
	New member	1	Jar Sin Ta
Group 6	2003 member	7	
	2003 Dropped member	0	
	Continue member	7	
	New member		
Group 7	2003 member	3	
	2003 Dropped member	0	
	Continue member	3	
	New member		
Group 8	2003 member	5	
	2003 Dropped member	0	
	Continue member	5	
	New member		
Group 9	2003 member	5	
	2003 Dropped member	0	
	Continue member	5	
	New member		
Total	2003 member	64	
	2003 Dropped member	11	
	Continue member	53	
	New member	6	

2.1.c Seedling requirement/ activity / species / seedling type / by sub group

Group	Species	Activity	Seedling type	Seedling Qty	Source	Remark
Group 1	Ao	NFIO	Seed	1,200	UsG Self	
	Ao	NFIO	Potted	300	FD Sup	
	Bg	NFIO	Propagule	2,600	UsG Self	
	Ea	NFIO	Transplant	200	UsG Self	
	Ra	NFIO	Propagule	1,800	UsG Self	
	Sa	NFIO	Potted	500	FD Sup	
	Cucumber	AAF	Seed	0.03kg	JST	
	Mango	AF	Potted	20	JST	
	Guava	AAF	Potted	15	JST	
	Citrus	AAF	Potted	15	JST	
	Roselle	AAF	Seed	0.1kg	JST	
Group 2	Ao	NFIO	Seed	500	UsG Self	
	Bg	NFIO	Propagule	4,200	UsG Self	
	Bg	NFIO	Potted	1,000	FD Sup	
	Rm	NFIO	Propagule	300	UsG Self	
	Xg	NFIO	Seed	400	UsG Self	
	Xg	NFIO	Potted	100	FD Sup	
Group 3	Ao	NFIO	Seed	300	UsG Self	
	Ao	NFIO	Potted	100	FD Sup	
	Bg	NFIO	Propagule	500	UsG Self	
	Xg	NFIO	Potted	100	FD Sup	
	Xm	NFIO	Potted	400	FD Sup	
Group 4	Ao	NFIO	Seed	2,100	UsG Self	
	Ea	NFIO	Transplant	650	UsG Self	
	Xg	NFIO	Potted	200	FD Sup	
	Xm	NFIO	Potted	200	FD Sup	
Group 5	Ao	NFIO	Seed	500	UsG Self	
	Bg	NFIO	Propagule	2,300	UsG Self	
	Xg	NFIO	Seed	200	UsG Self	
Group 6	Ao	NFIO	Seed	1,000	UsG Self	
	Ao	NFIO	Potted	500	FD Sup	
	Bg	NFIO	Propagule	800	UsG Self	
	Bg	NFIO	Potted	1,500	FD Sup	
	Ea	NFIO	Transplant	300	UsG Self	
	Ea	NFIO	Potted	800	FD Sup	
	Hf	NFIO	Transplant	400	UsG Self	
Group 7	Ao	NFIO	Potted	600	FD Sup	
	Bg	NFIO	Propagule	500	UsG Self	
	Ea	NFIO	Transplant	800	UsG Self	
	Sa	NFIO	Potted	1,400	FD Sup	
Group 8	Ao	NFIO	Seed	650	UsG Self	
	Bg	NFIO	Propagule	1,250	UsG Self	
	Cd	NFIO	Transplant	200	UsG Self	
	Ra	NFIO	Propagule	360	UsG Self	
Group 9	Bg	NFIO	Propagule	740	UsG Self	
	Ra	NFIO	Propagule	520	UsG Self	

Attachment 2-1 Community Forestry Action Plan 2004 (Nyaung Ta Pin Summary)

NTP CF Village Woodlot 5 ac

All User	Ao	NFIO	Seed	300	UsG Self	
	Melaleuca	NFIO	Potted	200	FD Sup	
	Sa	NFIO	Potted	200	FD Sup	
	Albizzia Proce	NFIO	Potted	100	FD Sup	

NTP CF School Woodlot

All User	Ao	NFIO	Seed	200	UsG Self	
	Melaleuca	NFIO	Potted	300	FD Sup	
	Sa	NFIO	Potted	200	FD Sup	

NTP CF Church Woodlot

21 Users	Ao	NFIO	Seed	500	UsG Self	
	Melaleuca	NFIO	Potted	200	FD Sup	
	Xg	NFIO	Potted	20	FD Sup	

Am: Amoora culcuta

Ao: Avicennia officinalis

Bg: Bruguiera gymnorrhiza

Cd: Ceriops decandra

Ea: Excoecaria agallocha

Hf: Heritiera fomes

Sa: Sonneratia apetala

Ra: Rhizophora apiculata

Xg: Xylocarpus granatum

Xm: Xylocarpus moluccensis

Nyaung Ta Pin Village 2004 Action Plan

Sr	Group	Group / Name	Old / New	2003 remaining/ 2004 work	Area (Acre)	CF Activity	Species	UsG Selfseedling Type	Qty	UsG Selfsource UsG Self/FD
1	G1	U Tun Nyein	Old	2004	2.50	NFIO	Ao	Potted	200	FD
1	G1	U Tun Nyein	Old	2004		NFIO	Bg	Propagule	200	UsG Self
2	G1	Saw Htee Khu/Kyaw M	New	2004	1.00	NFIO	Bg	Propagule	300	UsG Self
3	G1	Pe Oo	Old	2004	1.00	NFIO	Bg	Propagule	800	UsG Self
3	G1	Pe Oo		2004	0.12	AF	Mango	Potted	20	JST
4	G1	Man Sar	Old	2004	2.00	NFIO	Ao	Seed	200	UsG Self
4	G1	Man Sar	Old	2004		NFIO	Bg	Propagule	300	UsG Self
5	G1	Man Win	Old	2004	1.00	NFIO	Bg	Propagule	500	UsG Self
5	G1	Man Win	Old	2003	0.50	NFIO	Ra	Propagule	200	UsG Self
6	G1	Man Tu	Old	2004	1.00	NFIO	Bg	Propagule	300	UsG Self
7	G1	U Hla Myint	Old	2004	3.00	NFIO	Ao	Seed	500	UsG Self
8	G1	U San	Old	2004	6.00	NFIO	Ra	Propagule	600	UsG Self
8	G1	U San	Old	2004	0.20	AAF	Rosele	Seed	0.1 kg	JST
8	G1	U San	Old	2004		AAF	Cucumber	Seed	0.03 kg	JST
8	G1	U San	Old	2004		AAF	Citrus	Pc	15	JST
8	G1	U San	Old	2004		AAF	Guava	Pc	15	JST
9	G1	Gor Thu/Petalu	Old	2004	3.00	NFIO	Bg	Propagule	100	UsG Self
10	G1	Hla Myo	Old	2004		NFIO				
11	G1	Khaing Win/ Moe Zel	New	2004	2.00	NFIO	Ao	Potted	100	FD
11	G1	Khaing Win/ Moe Zel	New	2004	1.00	NFIO	Bg	Propagule	100	UsG Self
12	G1	Yawhan	Old	2004	2.00	NFIO	Ra	Propagule	1000	UsG Self
12	G1	Yawhan	Old	2004		NFIO	Sa	Potted	500	FD
13	G1	U Shwe	Old	2004	2.00	NFIO	Ao	Seed	500	UsG Self
13	G1	U Shwe	Old	2004		NFIO	Ea	Transplant	200	UsG Self
1	G2	Pho Tor	Old	2004	2.00	NFIO	Xg	Seed	100	UsG Self
1	G2	Pho Tor	Old	2004		NFIO	Bg	Propagule	200	UsG Self
1	G2	Pho Tor	Old	2004	0.10	AAF				UsG self
2	G2	Ohn Kyaw	Old	2004	2.00	NFIO	Bg	Pot	1000	FD
3	G2	Kyin Thein	Old	2004	2.00	NFIO	Bg	Propagule	1000	UsG Self
3	G2	Kyin Thein	Old	2004		NFIO	Rm	Propagule	300	UsG Self
4	G2	Kyi Than	Old	2004	2.00	NFIO	Bg	Propagule	2000	UsG Self
4	G2	Kyi Than	Old	2004		NFIO	Xg	Potted	100	FD
5	G2	Bar Lo	Old	2004	3.00	NFIO	Bg	Propagule	300	UsG Self
5	G2	Bar Lo	Old	2004		NFIO	Xg	Seed	300	UsG Self
6	G2	Chit Min ko / UsG Self	New	2004	1	NFIO	Bg	Propagule	500	UsG Self
6	G2	Chit Min ko / UsG Self	New	2004		NFIO	Ao	Seed	500	UsG Self
7	G2	Pho Htwe	Old	2004	1	NFIO	Bg	Propagule	200	UsG Self
1	G3	Thant Zin Oo	Old	2004	2.50	NFIO	Xm	Potted	100	FD
1	G3	Thant Zin Oo	Old	2004		NFIO	Xg	Potted	100	FD
1	G3	Thant Zin Oo	Old	2004		NFIO	Ao	Seed	300	UsG Self
2	G3	Pho UsG Selfe	Old	2004	2.00	NFIO	Xm	Potted	300	FD
2	G3	Pho UsG Selfe	Old	2004		NFIO	Ao	Potted	100	FD
3	G3	Htay Lwin	Old	2004	2.00	NFIO	Bg	Propagule	500	UsG Self
1	G4	U Nyunt Tin	Old	2004	2.00	NFIO	Ao	Seed	500	UsG Self
2	G4	UsG Selfein Myint	Old	2004	2.00	NFIO	Ea	Transplant	500	UsG Self
3	G4	Man Khwar Gyi	Old	2004	1.50	NFIO	Ea	Transplant	150	UsG Self
3	G4	Man Khwar Gyi	Old	2004		NFIO	Ao	Seed	100	UsG Self
4	G4	Hla Kyaing	Old	2004	2.00	NFIO	Ao	Seed	1500	UsG Self
4	G4	Hla Kyaing	Old	2004		NFIO	Xg	Potted	200	FD
4	G4	Hla Kyaing	Old	2004		NFIO	Xm	Potted	200	FD
1	G5	Ba Lu Nor	Old	2004	1.00	NFIO	Bg	Propagule	500	UsG Self

Nyaung Ta Pin Village 2004 Action Plan

Sr	Group	Group / Name	Old / New	2003 remaining/ 2004 work	Area (Acre)	CF Activity	Species	UsG Selfeedling Type	Qty	UsG Selfsource UsG Self/FD
2	G5	Bay Dar	Old	2004	2.00	NFIO	Bg	Propagule	500	UsG Self
3	G5	Jar Sin Tar/ Min Thu	New	2004	1.00	NFIO	Bg	Propagule	500	UsG Self
4	G5	Han Myint	Old	2004	3.00	NFIO	Ao	Seed	500	UsG Self
4	G5	Han Myint	Old	2004		NFIO	Bg	Propagule	500	UsG Self
5	G5	Nga Pu	Old	2004	2	NFIO	Xg	Seed	200	UsG Self
5	G5	Nga Pu	Old	2004		NFIO	Bg	Propagule	300	UsG Self
1	G6	Nyein Chan	Old	2004	2.50	NFIO	Ea	Potted	500	FD
1	G6	Nyein Chan	Old	2004		NFIO	Bg	Potted	1500	FD
2	G6	Hla Nyein	Old	2004	6.00	NFIO	Ao	Seed	500	FD
3	G6	Kyi Aung	Old	2004	2.00	NFIO	Ea	Potted	300	FD
3	G6	Kyi Aung	Old	2004		NFIO	Bg	Propagule	300	UsG Self
4	G6	Hla Tun	Old	2004	2.00	NFIO	Hf	Transplant	400	UsG Self
5	G6	Maung Myo	Old	2004	4.00	NFIO	Ao	Potted	500	FD
5	G6	Maung Myo	Old	2004		NFIO	Bg	Propagule	500	UsG Self
6	G6	U Chit Hlaing	Old	2004	4	NFIO	Ao	Seed	500	UsG Self
6	G6	U Chit Hlaing	Old	2004		NFIO	Ea	Transplant	300	UsG Self
1	G7	U Thein Shwe	Old	2004	2.00	NFIO	Bg	Propagule	200	UsG Self
1	G7	U Thein Shwe	Old	2004		NFIO	Ea	Transplant	500	UsG Self
1	G7	U Thein Shwe	Old	2003	1.00	NFIO	Bg	Propagule	200	UsG Self
2	G7	Myint Oo	Old	2004	2.50	NFIO	Ao	Seed	600	FD
2	G7	Myint Oo	Old	2003	1.00	NFIO	Ea	Transplant	300	UsG Self
3	G7	Ohn Shwe	Old	2004	1.75	NFIO	Sa	Potted	1200	FD
3	G7	Ohn Shwe	Old	2004		NFIO	Bg	Propagule	100	UsG Self
3	G7	Ohn Shwe	Old	2003	0.50	NFIO	Sa	Potted	200	FD
1	G8	Moe kyaw	Old	2004	1.00	NFIO	Cd	Transplant	200	UsG Self
2	G8	Myint Soe	Old	2004	2.00	NFIO	Bg	Propagule	850	UsG Self
2	G8	Myint Soe	Old	2004		NFIO	Ra	Propagule	100	UsG Self
3	G8	Maung Aye	Old	2004	1.00	NFIO	Bg	Propagule	200	UsG Self
3	G8	Maung Aye	Old	2003	1	NFIO	Bg	Propagule	200	UsG Self
4	G8	U Myint Oo	Old	2004	2.00	NFIO	Ao	Seed	650	UsG Self
4	G8	U Myint Oo	Old	2004		NFIO	Ra	Propagule	260	UsG Self
1	G9	Hla Min Tin	Old	2004	1.50	NFIO	Bg	Propagule	220	UsG Self
2	G9	U Thein Win	Old	2004	1.00	NFIO	Bg	Propagule	400	UsG Self
2	G9	U Thein Win	Old	2004		NFIO	Ra	Propagule	400	UsG Self
3	G9	U Thein Lwin	Old	2004	1.50	NFIO	Bg	Propagule	120	UsG Self
3	G9	U Thein Lwin	Old	2004		NFIO	Ra	Propagule	120	UsG Self
		CF Church Woodlot	New		2	NFIO	Melalueca	Pot	200	FD
		CF Church Woodlot	New				Xg	Pot	20	FD
		CF Church Woodlot	New				Ao	UsG Self	500	UsG Self
		CF Village Woodlot	Old		4.8	NFIO	Melalueca	Pot	200	FD
		CF Village Woodlot	Old				sit	Pot	100	FD
		CF Village Woodlot	Old				Ao	UsG Self	500	UsG Self
		CF Village Woodlot	Old				Sa	Pot	200	FD
		CF UsG School Woodl	Old		1.8	NFIO	Melalueca	Pot	300	FD
		CF UsG School Woodl	Old				Sa	Pot	200	FD
		CF UsG School Woodl	Old				Ao	UsG Self	200	FD

Attachment 2-2 Format for the update of the Action Plan

Community Forestry Activities Action Plan Year 2004 (Plantation)

1	U/Daw				2 NRC. No								
3	Father's name				4 village sub group no.								
5	CF established area	ac.	Plantation	ac.	NFIO	ac.					self contribution	necessary for support	Remark
6	plantating	spp:	spp:	spp:	spp:	spp:	spp:	total					cost est.
	seeds												
	seedlings												
	potted plant												
	graft												
	patching												
	total												
	spacing												
	esti. Survival %												
	necessary equipment												
7	activities	activities amount	implementation period(month-month)	lasting day	responsible							Remark	
					self	FD	others						
7.1	plantation establishment												
7.1.1	site cleaning												
	site delineation												
	boundary post												
	demarkation line												
7.1.2	staking												
	stake collection												
7.1.3	seedlings taking												
	sedds collection												
	seedlings collection												
	graft collection												
	transportation												
7.1.4	planting/transplanting												
	direct seeds sowing												
	pottet seedlings												
	necket root												
	graft												
	stake preparation											to avoid	
7.1.5	weeding												
	sport weeding												
	weeding												
7.1.6	patching												
	checking survival 1st												
	checking survival 2nd												
	taking seedlings												
	patching												
7.1.7	fire protection												
	protection line prepar.												
7.1.8	thinning												
	thinning 1st time												
	thinning 2nd time												
7.1.9	patrolling												
	patrolling												
	hut making												
8	the above plan is drawn by myself for the ()ac for implementation. I will follow the above plan.												

sign:

Chairman
CF MC

member
CF users

secretary
CF MC

Attachment 2-2 Format for the Updating the Action Plan

Community Forestry Activities Action Plan Year 2004 (NFIO)

1	U/Daw			2 NRC. No							
3	Father's name			4 village sub group no.							
5	CF established area	ac.	Plantation ac.	NFIO ac.					self contribution	necessary for support	Remark
6	planting	spp:	spp:	spp:	spp:	spp:	spp:	total			cost est.
	seeds										
	seedlings										
	potted plant										
	graft										
	patching										
	total										
	spacing										
	esti. Survival %										
	necessary equipment										
7	activities	activities amount	implementation period(month-month)	lasting day	responsible					Remark	
					self	FD	others				
7.2	NFIO										
7.2.1	fire protection										
	protection line prepar.										
7.2.2	climber cutting										
7.2.3	branch cutting										
7.2.4	Gap planting										
7.2.5	site preparation										
	measuring for this year ac										
7.2.6	stake collection										
	staking										
7.2.7	receiving seedling										
	collection seeds										
	collection seedlings										
	collection graft										
	carrying										
7.2.8	transplanting										
7.2.9	seeds										
	sedlings										
	sedlings (pot)										
	graft										
	stake preparaing for transplanted one										
7.2.9	weeding										
	spot weeding										
	weeding										
7.2.10	patching										
	checking survival 1st										
	checking survival 2nd										
	taking seedlings										
7.2.11	protection										
	patrolling										
	watching										
7.2.12	selected felling										
7.2.13	nomination for limited GBH & production										
	species:	fuel,nipa,...	production period /month	lasting day	self	FD	est.amo	est.cost	remark		
8	the above plan is drawn by myself for the ()ac for implementation. I will follow the above plan.										

sign:

Chairman
CF MC

member
CF users

secretary
CF MC

Attachment-3

Community Forestry Management Plan (updated 2004)

**Community Forestation
Individual yearly Plan**

1. Name- Man Hu Bet
 2. National Registration Card No. -
 3. Father Name- U Jam
 4. Village- Nyaung Ta Pin
 5. CF propose area: 20 (acre)
 6. [Plantation Area : 10 (acre), NFIO area : 10 (acre)], Species: Ao, Ea,
 7. Yerly operation Plan (2003- 2007) yr

Sr	CF activity	First felling Duration (acre)					Total
		2003	2004	2005	2006	2007	
1	Plantation	2	2	2 acre	2 acre	2	10
2	NFIO	2	2 acre	2 acre	2 acre	2 acre	10
	Total	4	4 acre	4 acre	4 acre	4 acre	20

7.1 Plantation Activities

Sr	Activity	Period (month to month)
7.1.1	Site preparing	June to Sep
7.1.2	Staking	June to Sep
7.1.3	Seedling transportation	April, May, June
7.1.4	Plantation	July, August
7.1.5	Weeding	September, Oct, Nov
7.1.6	Patching	August to Sep
7.1.7	Fire protection	Nov to April
7.1.8	Pruning	Feb, March,
7.1.9	Selected felling (month)	March, April
7.1.10	Patrolling(month)	all month

7.2 NFIO Activity Duration

Sr	Activity	Period (month to month)
7.2.1	Fire Protection	March to April
7.2.2	Climber cutting	June to September
7.2.3	Branch cutting	June to September
7.2.4	Gap-planting	August to October
7.2.5	Selected felling	March to May

7.2.6. Nomination of Selected Felling

Sr	Species	GBH (feet, inches)	Remark
1	Cd	8 inches	For Pole
2	Pp	10 inches	For Post
3	Bg	8 inches	For Pole
4	Hf	8 inches	For Pole/ Post
5	Ao	2 ft and above	For Log for Timber

8. I here by admit to accomplishing the community forestry activities in accordance with the working schedule mentioned above.

Signature-
Member
Management Committee

Signature-
Member
Management Committee

Signature-
member
CF User

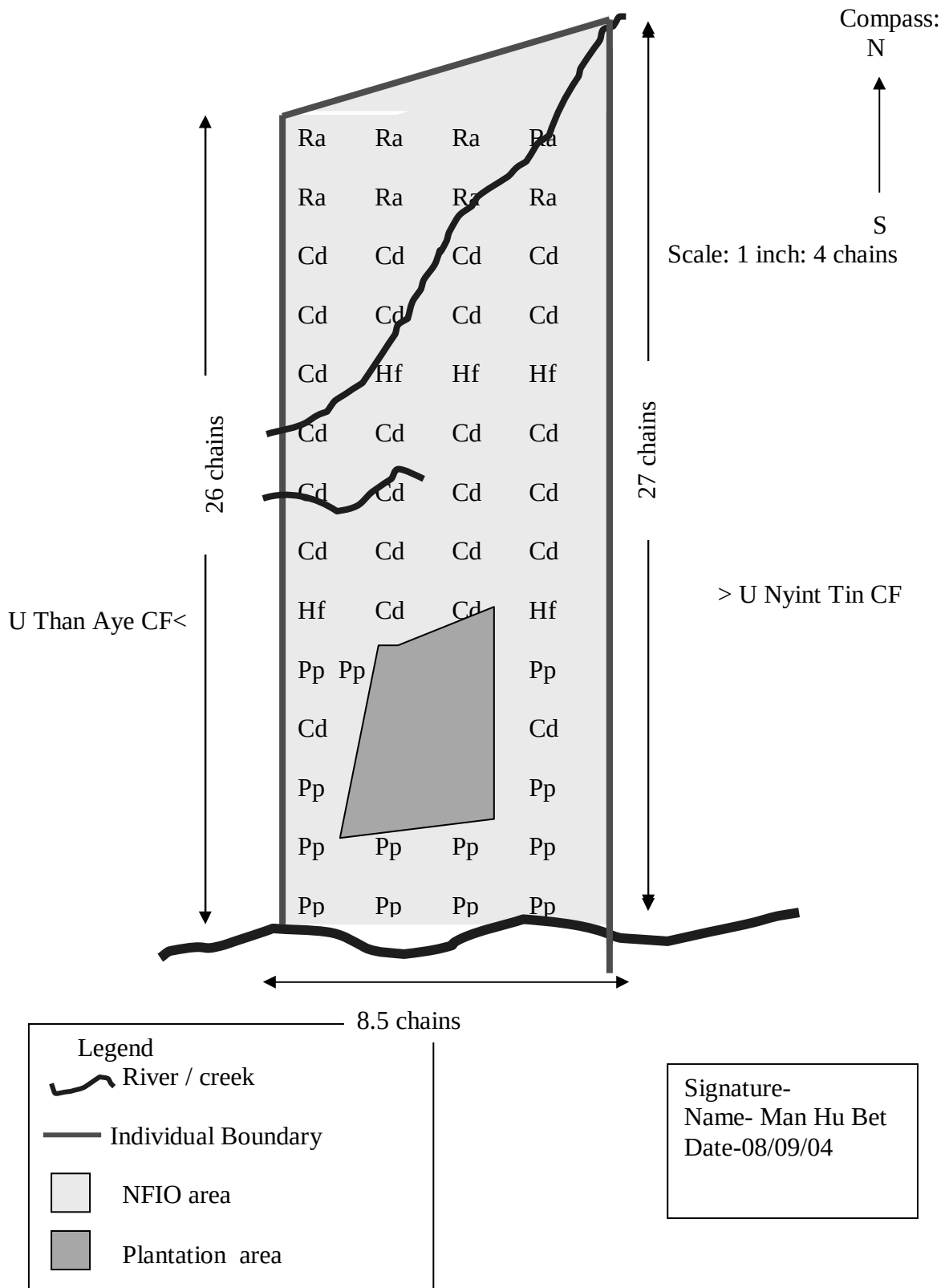
**Community Forestry Establishment Activity
Stock map for Individual CF area**

Owner Name- Man Hu But

Father Name- U Jam

Village- Nyaung Ta Pin

Village tract- Yetween Seik



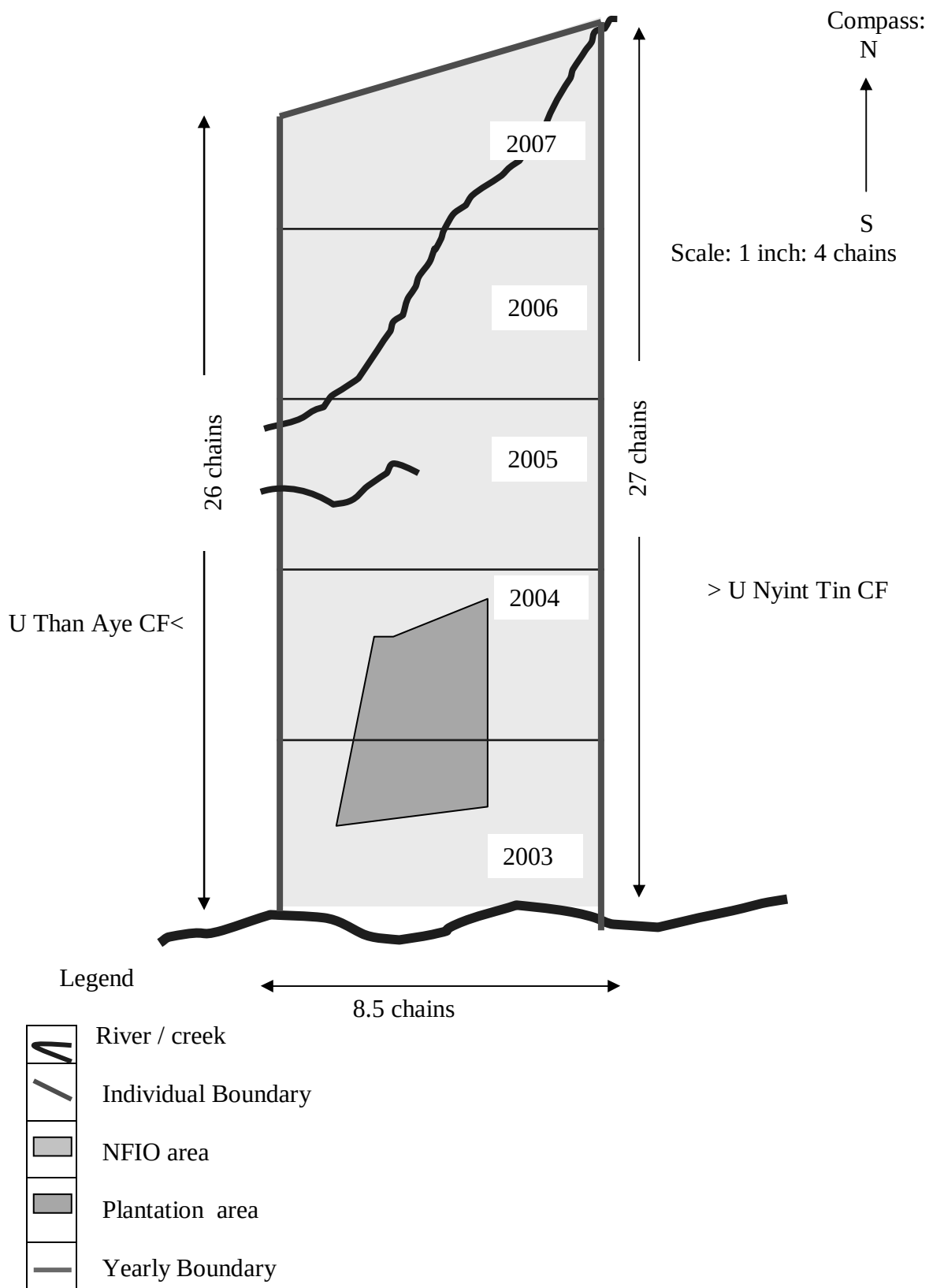
Community Forestry Establishment Activity Management Map for Individual CF area

Owner Name- Man Hu But

Father Name- U Jam

Village- Nyaung Ta Pin

Village tract- Yetween Seik



Community Forestry Establishment Annual Seedling Requirement Map for individual CF area

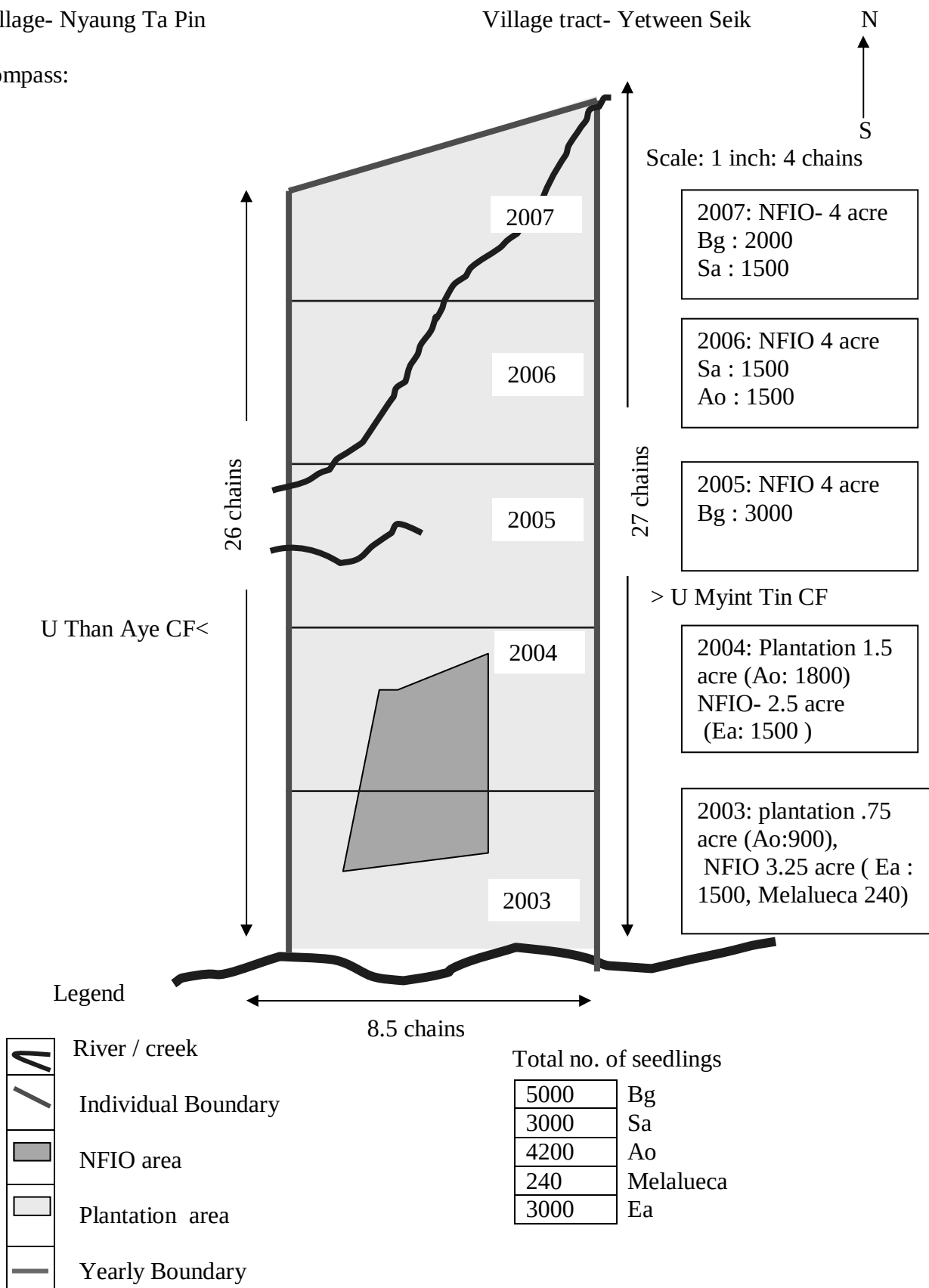
Owner Name- Man Hu But

Father Name- U Jam

Village- Nyaung Ta Pin

Village tract- Yetween Seik

Compass:



Community Forestation
CF Church Woodlot Yearly Plan

1. CF sub-group leader name- U Yaw Lay
2. No. of users- 15 participants
3. Village name- Thar Ya Kone
4. CF area: 4.7 (acre)
5. [Plantation: 1 (acre), NFIO: 3.7 (acre)]
6. To be planted species: Ao, Ea,
7. Annual schedule

Sr	CF activity	1 st selected felling period					Total
		2004	2005	2006	2007	2008	
	Plantation	1 acre					1 acre
	NFIO	1 acre	2.7 acre				3.7 acre
	Total	2 acre	2.7 acre				4.7 acre

7.1 Plantation schedule

Sr	Activity	Period (month to month)
1	Site preparation	September
2	Staking	September
3	Seedling transportation	September
4	Planting	September
5	Weeding	October
6	Patching	October
7	Fire protection	March to April
8	Thinning	March, April, May
9	Selected felling	Jan, Feb
10	Patrolling	Necessary Time

7.2 NFIO schedule

Sr	Activity	Period (month to month)
1	Fire Protection	March, April
2	Climber cutting	June, July
3	Branch cutting	June, July
4	Gap-planting	Aug, Sep,
5	Selected felling	Jan, Feb

6. Nomination of Selected felling

Sr	Species	GBH (inches, feet)	Remark
1	Ao	2 ft above	Post
	Ao	3 ft above	Log for Timber
2	Am	8 in	Pole
	Am	2 ft	Post
	Am	3 ft and above	Log for Timber
3	Ea	3 ft and above	Log for Timber

8. Above CF management Plan (4.70 -acre) drew by us. We admitted to following above management plan.

Signature-
 Name- Saw Htoo Say
 CF MC Chairmen

Signature-
 Name- Yaw Lay
 CF sub-group leader

Signature-
 Name- Kyaw Khin
 CF sub-user

Community Forestry Establishment Stock map for Individual CF area

Leader- U Yaw Lay
Village- Thar Yar Kone

No. Member- 17 UsG member
Village tract- Pyinalen

Compass:

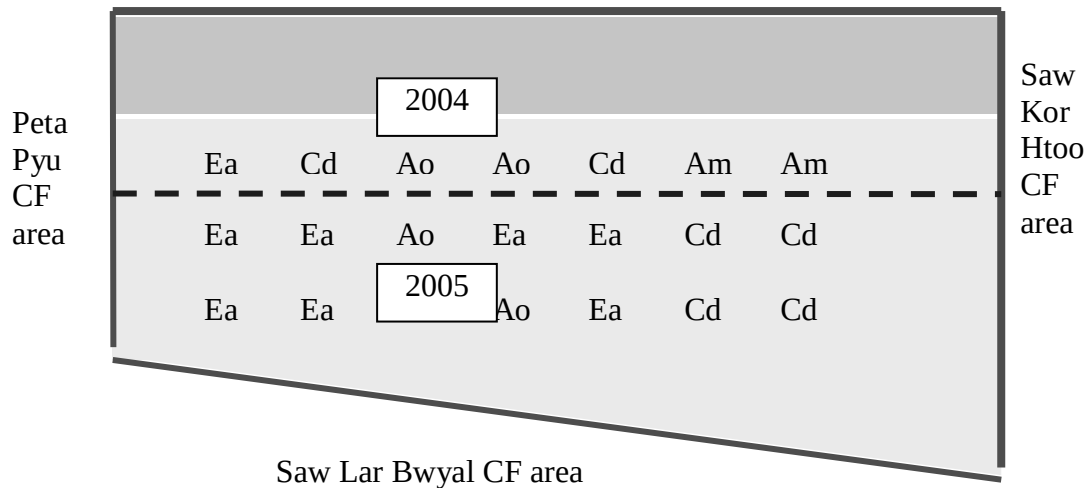
N



S

Scale: 1 inch: 4 chans

U Ngwe La paddy field



Legend

-  Creek/ River
-  Plantation area
-  Border
-  NFIO area
-  Individual Boundary

Signature-
Name- Yaw Lay
Date- 18-08-04

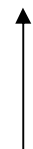
**Community Forestry Establishment
Management map for Individual CF area**

Leader- U Yaw Lay
Village- Thar Yar Kone

No. Member- 17 UsG member
Village tract- Pyinalen

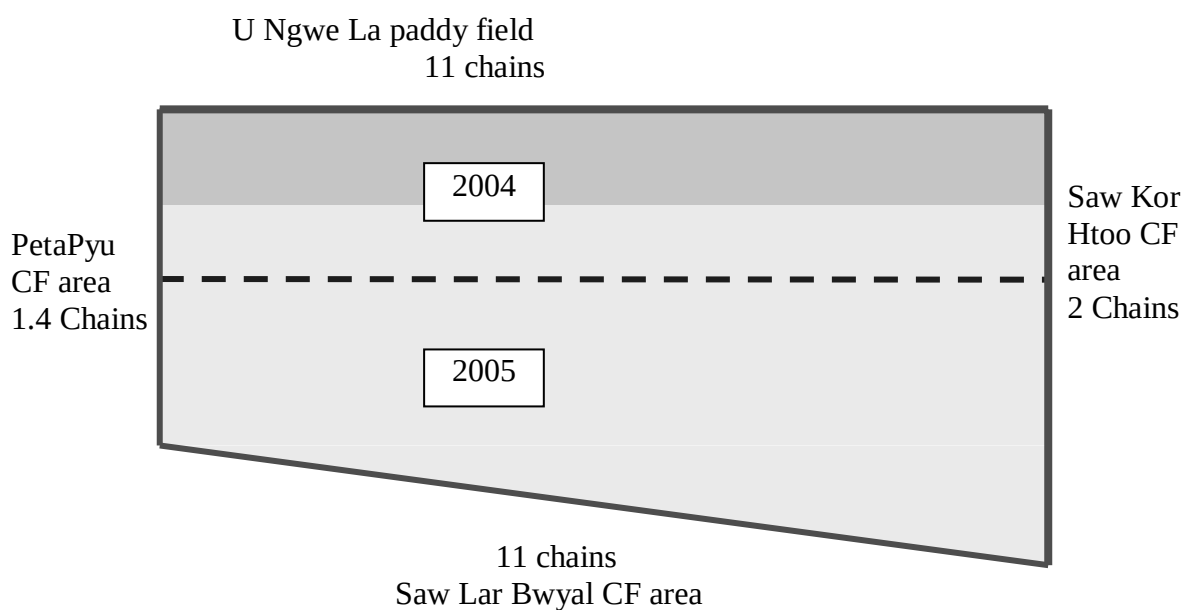
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Scale: 1 inch: 4 chains



Legend



Creek/ River



Plantation area



Border



NFIO area



Individual Boundary

Signature-
Name- Yaw Lay
Date- 18-08-04

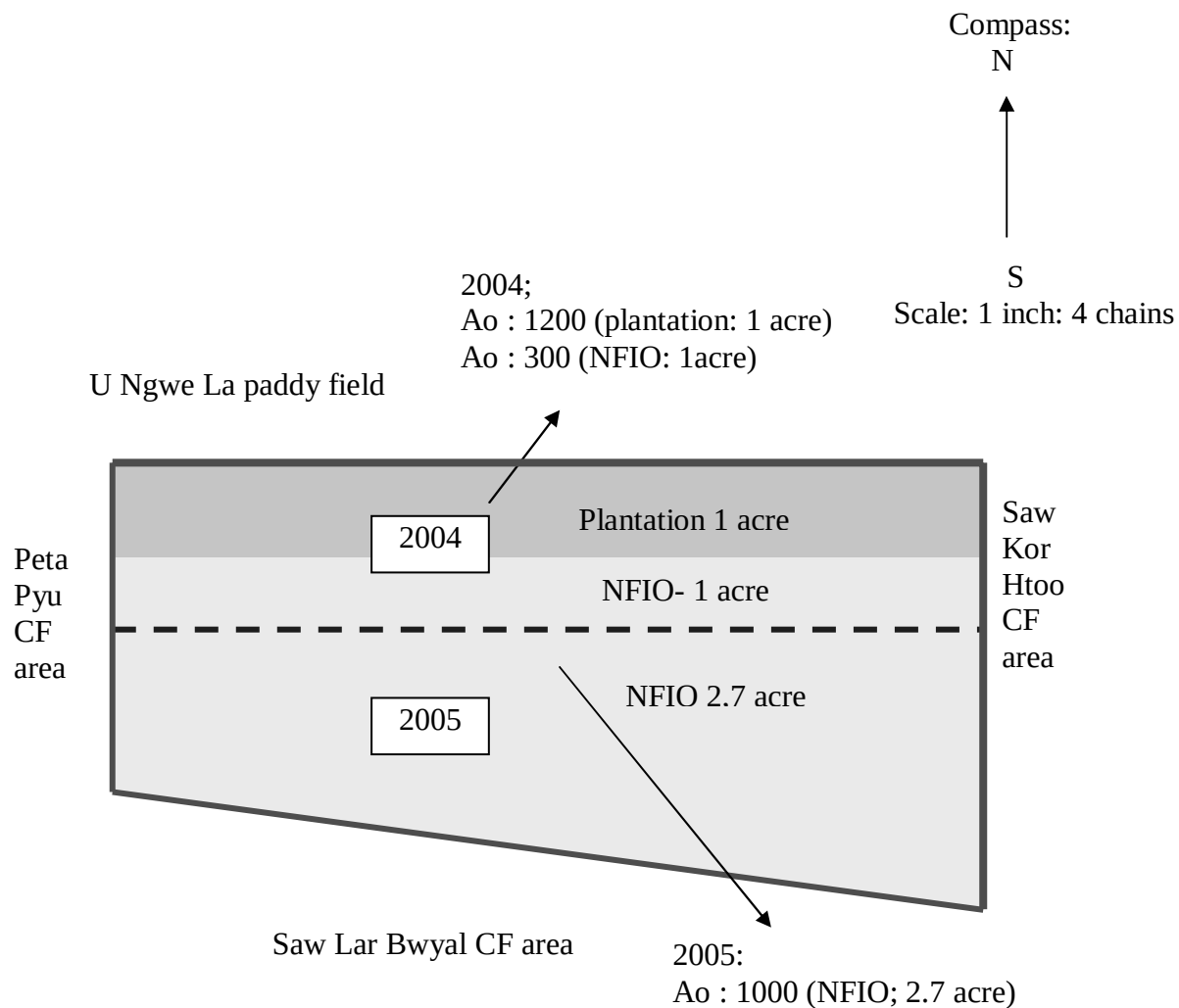
Community Forestry Establishment Annual seedling Requirement map in CF area

Name: CF church woodlot (17 members) U Yaw Lay

Village- Thar Yar Kone

Village tract- Pyinalen

r



Legend

-  Creek/ River
-  Plantation area
-  Border
-  NFIO area
-  Individual Boundary

Total no. of seedlings

2,500	Ao
-	other

Attachment-4

Rules and Regulations of Community Forestry (samples)

- Thar Yar Kone and Nyaung Ta Pin Community Forestry User Groups
- Thar Yar Kone CF Agro Nursery Sub User Group
- Thar Yar Kone and Nyaung Ta Pin CF Agroforestry Sub User Group
- Thar Yar Kone and Nyaung Ta Pin Donation Boat
- Thar Yar Kone and Nyaung Ta Pin CF Aqua-agroforestry Sub User Group
- Thar Yar Kone Women's Group (Phoenix Heart Production)
- Thar Yar Kone CF Church Woodlot
- Thar Yar Kone CF School Woodlot
- Nyaung Ta Pin CF Village Woodlot

Attachment 4 Rules and Regulations of Community Forestry (samples)

Draft Rules and Regulations

Thar Yar Kone and Nyaung Ta Pin CF-User Group

5 January 2004

Contents (sub-title)

- 1 Definition and meaning for the usage
- 2 Forming of user group
 - 2.1 Foundation of user group (UsG)
 - 2.2
- 3 Community Forestry (CF) Management Committee (MC) membership criteria
- 4 CF membership criteria
- 5 Formation system for UsG management committee
 - 5.1 First formation of UsG management committee
 - 5.2 Election for new CF management committee
- 6 CF management committee duty, right, responsibilities; (chairman, secretary, extension worker,...)
 - 6.1 General
 - 6.2 Accountant / recorder duty responsibilities
 - 6.3 Auditor responsibilities
 - 6.4 Chairman Duty and Responsibilities
 - 6.5 Secretary Duty & Responsibilities
 - 6.6 Extension Workers
 - 6.7 Role of sub group leader
- 7 CF memberships' duty & responsibilities
- 8 Funding
 - 8.1 General
 - 8.2 Funding management
 - 8.3 Funding allocation
- 9 Monitoring for forest conservation activities
- 10 Preparation for sale voucher and printing out
- 11 Conducting for holding of monthly, annual, urgent meeting, and financial clearances
- 12 Problem solving, imposing penalty and punishment
- 13 General

Attachment 4 Rules and Regulations of Community Forestry (samples)

- 1. Definition and meaning for the usage** (detail discussion will be held later)
 1. Chairman means a person for CF UsG member of Nyaung Ta Pin village. (cont.).
- 2. Forming user group**
 - 2.1 Foundation of CF UsG**
 2. CF User group of Nyaung Ta Pin was formed in February 2002 with the 64 villagers who are decided to participate in CF activities under CFI.
 - 2.2 User group member**
 - 3 CF User group membership will be confirmed by annual meeting
 - 4 Allocation of CF area for new UsG member shall be provided by the FD
 - 5 Change of UsG member (new and stopped UsG member) is summarized letter addressed FD
 - 6 Certified letter about change of UsG member is attached to the CF management plan
- 3. CF User group management committee membership criteria**
 7. Those who have primary education
 8. Those who should not be unruly or a thoughtless drinker
 9. Those who are patient, capable of participating in the UsG activities
 10. Those who have good character, can do exactly for community activities, not biased
 11. Those who can go to others areas for the UsG concerned issues
 12. Those who are able to communicate with other members
 13. Those who can afford taking the administrative and management matters
 14. Those who can explain & discuss clearly with UsG members about FD instruction
- 4. CF membership criteria**
 15. must be permanent resident in the village at least one year
 16. are actual interesting villagers for CF activities
 17. is obedient for the UsG members' Rule & Regulation
 18. one person from each household, and also the person over 15 years old can be a member of CF
 19. can effort to be implemented their certified CF area
- 5. Formation system for UsG management committee**
 - 5.1 First Formation of UsG management committee**
 20. First step: election for 2 sub group leader from each sub group, voting by each sub group member.
 21. second step: election for 5 UsG members from all sub group leaders, voting by all members
 22. Third step: election for posting for each member as chairman, secretary, accountant /recorder, auditor, forestry extension worker, voting by all members. Secretary is responsible for taking care for fund, financial matters (in the CF instruction mentioned)
 - 5.2 Election for new CF management committee**
 23. MC, Beat officer, village VPDC, villager elder person need to chair for leading for election in one month in advance before end of MC life span.
 24. Ex MC members can be elected up to 2nd term. One term is 2 years.
 25. After election ex MC need to handover all records, responsibilities to new MC within one month.
 26. elections are based on UGs members' desire. In accordance with MC membership's criteria & formation system of MC.
- 6. Duty, right, responsibilities of CF-UsG MC (chairman, secretary, extension worker,...):**
 - 6.1 General**
 27. taking for CF managing matters
 28. to initiate & conduct annual, monthly workshop for UsG members
 29. arranging for following month plan
 30. funding, funding management
 31. have to travel for UsG CF matters
 32. communicate with FD & others organization
 33. MC can organize as group forming, can share duties for sub group leaders.
 34. submission of monthly report submission to FD

Attachment 4 Rules and Regulations of Community Forestry (samples)

35. taking effect action for the member who is breaking their rule, imposing punishment, accepting new CF members.
36. preparation for sale voucher format& procurement for sale voucher
37. monitoring for CF implementation based on CF Management plan
38. take responsibilities concerned financial clearances
39. reforestation extension activities
40. to informed to beat officers for UGs difficulties, problem concerned
41. term for management committee is 2 year .The Mc members can be elected to a second term
42. have to arrange to get permission from FD for production for charcoal & value added products
43. to connect with FD beat foresters to get the right for fishery work freely under individual CF area,
44. MC have to do necessities arrangement for handover for new MC at the end of MC's life span
45. Term for management committee is 2 year but Mc member should be elected if he or they are wrong in something
- 6.2 Accountant / recorder duty responsibilities**
 46. recording all meeting, discussion, workshop, decision
 47. Financial record
 48. Keeping for UsG members list, acre, and preparation for the achievement of CF activities cooperation with sub group leader.
 49. Need to cooperate with sub group leaders for monthly progress, problem, and activities.
- 6.3 Auditor responsibilities**
 50. auditing for the financial record monthly & necessary to explain to all members at workshop
 51. preparation & explanation financial record for annual, bi annual workshop
 52. Has to mention to MC for weak, missing part, unacceptable condition in the financial record.
- 6.4 Chairman Duty and Responsibilities**
 53. communicate with FD
 54. need to confirm for the decision of all members
 55. Need to confirm for the necessary expenditure for members
 56. need to access for the problems, difficulties of UsG members
- 6.5 Secretary Duty & Responsibilities**
 57. take chairman's duty during his absence.
 58. keeping records, is obligate for financial matters.
 59. initiate the activities for UsG funding, monthly workshop.
 60. preparation & submit to FD for monthly CF report.
 61. communicate with FD
 62. management matters for CF activities
- 6.6 Extension Workers**
 63. have to extend for forest conservation activities
 64. need to assist to MC
 65. need to share information to all members
 66. assisting to MC to held meeting, group discussion
- 6.7 Role of sub group leader**

*All participants wanted to discuss for sub group leaders role.
- 7 CF members' duty and responsibilities**

In the CFI, there are 11 responsibilities mentioned for UsG members.

 67. have to contribute the membership fee based on the UsG members agreement e.g., 500 kyat
 68. have to inform to MC for long trip traveling (seasonal hire labor, mango trading, etc.....)
 69. have to inform to MC for family moving to other area for the inheritance, to transfer
 70. need to participate for the village community activities
 71. have to follow FD rule& regulation
 72. have to inform to MC for CF activities accomplishment & also inform for the production amount
 73. have to inform to MC for the difficulties for the on time implementation of CF e.g., bad health.....
 74. have to obey the UsG rules and regulations
 75. have to inform in 15 days advance for the production activities to preparation for the sale voucher

Attachment 4 Rules and Regulations of Community Forestry (samples)

- 76. have to follow individual CF Management plan, fire protection
- 77. have to construct the hut for patrolling if it is necessary based on the creek, entrance

8 Funding

8.1 General

- 78. chairman of the MC have to receipt the fund for the UsG member from other organization
- 79. chairman need to confirm the membership fee for UsG member according to UsG decision
- 80. Chairman need to confirm for the contribution the 10 % of income from production CF according to decision by the UsG.
- 81. MC together with UsG members have to work for fund for the proper time, once a month
- 82. MC need to confirm for 500 kyats for membership fee contribution
- *Budget will close in May 31st based on the production season.

8.2 Funding Management

- 83. keep in the secretary up to 10000 kyat in hand.
- 84. bank account will be check and see in the bank booklet to know the balance at the meeting
- 85. Secretary have to keep 50 thousand kyats in hand, the left amount need to send to the bank
- 86. Secretary and Chairman have to keep the fund at the bank with the NRC ,national registration card, number.
- 87. secretary must keep the exact record for the financial matters.
- 88. meeting minute & decision is necessary for financial matters

8.3 Funding allocation

- 89. Environmental conservation & forest development (%) seedling, potted
- 90. social welfare cost e.g., health, education for the poorer family (%)
- 91. Village development e.g., foot path, bridge, school (%)
- 92. Administration, management cost e.g., stationary, transportation cost, training attending (%)
- 93. honorable fee, awarding (%) for UsG members
- 94. will consider for CF members' income generation activities ,if there is fund.
- *UsG would like to support to FD (%),and wanted to discuss for foresters' role in CF activities in their villages

9. Monitoring for forest conservation activities

- 95. MC and sub group leaders need to formulate for patrolling team & system
- 96. MC and sub group leaders need to check for accomplishment of CF activities.
- 97. Sub group leaders need to monitor in the field for their activities.
- 98. If there is illegal cutting, any encroachment in the CF area, member needs to inform to MC, VPDC, police station and FD for taking action.
- 99. MC needs to cooperate with FD for receiving in time for technical & supported seedlings.
- 100. Mc & Sub group leaders need to check for the Cf production whether UGs members produce the products with the permitted GBH or not.
- 101. IF FD cannot support enough seedlings, MC & sub group leaders need to establish natural mangrove nursery by seeds collection for members.
- 102. MC arrange hut for patrolling.
- 103. MC, sub group leaders, and members need to cooperate for the natural mangrove nursery
- 104. establishment for school CF, village communal plantation and also for production.
- 105. Transportation, shipping schedule for CF products: production period the boat should anchor the maximum 0.5 mile from the CF area, to avoid loading of illegal cutting products.

10. Preparation for sale voucher and printing out

- 106. Chairman need to prepare the format with the desire of MC.
- 107. MC needs to register sale voucher format at FD office and publication for the necessary amount. MC needs to discard the typing format from the press in front of two witnesses to avoid from imitation and to inform FD
- 108. form of sale voucher 3 parts(white, yellow, blue,)
- 109. Sub group leader need to check & recommend for CF products to mention on sale voucher.

Attachment 4 Rules and Regulations of Community Forestry (samples)

110. The additional writing, any changes on sale voucher will not permit.

*Based on the sale amount, members need to contribute the fund.

11. Conducting for folding of monthly, annual, urgent meeting, and financial clearances

111. Monthly workshop will be held on every 20th.

112. Annual meeting will be held on May 31st.

113. MC & sub group leaders will hold the urgent meeting, workshop based on the condition.

114. A financial clearance is necessary to explain every monthly workshop.

115. Auditor has to audit in every 6 months and explain to all Ug members.

116. Budgeting, funding allocation will discuss & decide at 31st May.

12. Problem solving, imposing penalty and punishment

117. 500 kyat for the finding for UsG members for 2 times absent attending of workshop. Except health, away on a journey.

118. MC, VPDC will inform to FD for the encroachment for changes from forestland to others type. (illegal weir, paddy, salt pan, selling, any severe forest degradation activities). If necessary, will send it to township court.

119. MC co operate with the VPDC to take action for illegal cutting, hunting (set up snare), crab, fish, prawn catching, in CF area.

120. If they cannot take action for illegal cutting, MC will inform to the concerned beat officer.

121. MC will solve for the boundary problems cooperate with the sub group leader by field checking, measuring.

122. MC will take proper action for punishment for UsG member, breach of their rules up to 3 times. MC will discuss the members; breach their rules up to 2 times.

Signature

U San

Chairman,

Nyaung Ta Pin Community Forestry Users Group

U Saw Htoo Say

Chairman,

Thar Yar Kone Community Forestry Users Group

Annex list for the rules and regulations for the new activities

The rules and regulations developed in the pilot project 2003 period were updated with following attachment rules and regulations for the new community forestry activities

Sr	Description	Village		Remark
		NTP	TYK	
1	CF Agro Nursery R & R	-	O	
2	CF Agro Forestry R & R	-	O	
3	RR for CF patrolling by using boat	O	O	
4	CF AAF R & R	O	O	
5	CF WG R & R	-	O	
6	CF Church Woodlot	O	O	
7	CF School Woodlot	O	-	
8	CF village Woodlot	O	-	

AGRONURSURY GROUP FORMATION IN THAR YAR KONE (2004)

WORK PLAN FOR AGRONURSERY PRODUCT OF THAR YAR KONE (T Y K)

- (1) Invitation for meeting
- (2) Reform of new organization base on former organization
- (3) Recognition of new membership
- (4) Formation of nursery management group
- (5) Duties assignment for new group
 - (a) Receiving equipment list from FREDA
 - (b) Keeping record for existing plant list
 - (c) Continuation of watering for existing plant
- (6) Fixing value for stock balance.
- (7) Pricing and listing of plant variety
- (8) Discussion and agreement of contract term for present **farm land(village own +loan)**
- (9) Duties assignment for management committee
- (10) Assessment for raising labour charge for full time employee
- (11) Confirmation of temporary rules and regulation
- (12) Drawing rules and regulation of new management committee

REFORMING OF AGRONURSERY

I.OBJECTIVE

- (1) To get obtaining of nursery plant at anytime
- (2) To be skilful agriculture practice for all membership
- (3) Income generation for village families

II. SELECTION OF FARM MANAGEMENT CF SUB GROUP

- (1) Selection of sub CF group from C F user group (UsG)
- (2) C F leader should not be selected for agroforestry sub group leader

III DISCUSSION ON SUPERVING COMITTEE FOR SUB GROUP

- (If direct assignment were given to C F group leader)
- (1) Long distance from agro-nursery
 - (2) The same duties for CF and Agro-nursery
 - (3) All CF Group leader cannot take care their responsibility
 - (4) All CF group leader were not interested in nursery
 - (5) ALL C F group leader are not skilful in homestead gardening
- (Due to above constraint participants of the meeting prescribed the new criteria as below)

IV .DECESSION OF NEW CRITERIA

- (1)Members are interested in nursery
- (2)More favour to the person who are closed to the nursery

- (3) Selection of the person who are more skilful in nursery
- (4) Selection of good leader for the nursery
- (5) Selection of the member who served the duties well

V. AGRO NURSERY COMMITTEE LIST

- | | |
|------------------|----------------|
| (1) Farm manager | U Saw King But |
| (2) Dy manager | U Saw Lae Say |
| (3) Store keeper | U Saw Lae Say |
| (4) Casher | U Jan Sell |
| (5) member 1 | U Kyaw Khin |
| (6) member 2 | U Say Htoo |
| (7) member 3 | U Saw Lu Pha |
| (8) Accountant | U Tun Ngwe |

DUTIES AND ASSIGNMENT

I FARM MANAGER

- (1) Day and night security
- (2) Daily duties assignment
- (3) Recording of nursery stock
- (4) Recording of daily expenditure
- (5) Implementation of work plan
- (6) Supervising of work plan

II .Dy FARM MANAGER

- (1) To bare responsibility of farm manager
- (2) Supporting of required farm

III. STORE KEEPER

- (1) Maintenance of farm building and Agriculture Equipment
- (2) Keeping stock books

IV. ACCOUNTANT

- (1) Cost of building
- (2) List of agriculture equipment
- (3) Stock of seedlings
- (4) Budged
- (5) Work done report
- (6) Daily work done report
- (7) Monthly meeting

V.CASHER

- (1) Saving of cash receipt
- (2) Keeping cash book

VI. COMMITTEE (3)

- (1) Control of farm discipline
- (2) To assist proposal of member
- (3) To assist in technology transfer for member
- (4) To assist in discipline control
- (5) Production of seedling requirement

VII.MEMBERSHIP

- (1) TO abide the discussion made by management committee
- (2) TO keep inform one day ahead if absent
- (3) TO sign daily attendance

DISCIPLINE

I.FARM MANGER

- (1) To sign work done
- (2) To sign daily work done
- (3) To transfer duties to Dy farm manager in the case of farm manager is absent
- (4) Not allowed buying or selling without decision of the group
- (5) Never disagree on reject the duties assigned by the group
- (6) To submit monthly report and future work plan

II. Dy MANAGER

- (1) To submit monthly report
- (2) To sign daily work done

III. STORE KEEPER

- (1) To submit the list of equipment
- (2) Not allowed to use the equipment except agro forestry sub group
- (3) Not to issue the equipment or material without permission of the committee
- (4) Inspection of stock balance

IV. ACCOUNTANT

- (1)To report monthly budget statement
- (2)To submit quarterly report
- (3)To submit seedling stock balance

Attachment 4 Rules and Regulations of Community Forestry (samples)

- (4) To form new group annually

V. CASHIER

- (1) To accept cost receipt
- (2) To issue cash receipt voucher
- (3) No to use the cash received for personal affairs
- (4) To allow monthly inspection of cash received

VI. MEMBERSHIP

- (1) To observed fully duties and responsibility assigned

ACTION AGAINST (OR) PUNISHMENT

- (1) To action against in accordance with the guilty heavy or light decided by committee
- (2) Decision

- | | |
|------------|-----------------------|
| (1) First | warning |
| (2) Second | seriously warning |
| (3) Third | expel from membership |

Sub UsG Rules and Regulations for Agro forestry (Figure – 3)

Rules and Regulations

Abide by the rules and regulations in accordance with the planning.
Abide by the decisions of the Agro forestry Management Committee.
Abide by the self-schedule of planning.
Mount or raised bed must be height in order to avoid water logged.
Compost making and compost collection must be well prepared before monsoon. (i.e. 4 pyi per plant for Fruit tree and 4 can per plant for vegetables.
Good fencing must be prepared to prevent for domestic animal.
Supported seedlings must be sown within 3 days. If cannot sown within 3 days, the seedlings must be sent back to the Agro forestry Sub Group.
Mulching and basin management must be done after monsoon for the fruit trees.

Duties and Responsibilities

Self collection of own seedlings collection
Plant propagation of fruit tree must be allowed to the Agro forestry Group.
Full presentation was given to the inspection Group.
The crop cultivation records must be kept systematically.
If the condition of the crop performance was not improved, immediately report back to the Agro forestry Group Leader.
Transferring of seedling to another party or second person is strictly prohibited.
After Crop Harvesting, data of income and consumption must be reported to the Agro forestry Group.

Action and Punishment

- 1) Seedling will be not supported if not enough collection of compost for sowing.
- 2) Seedling will be not supported if the raised bed was found not enough in height.
- 3) If a member who is not abides by the rules and regulations, prescribed by the Agro forestry Group will not be supported for the future cultivation season.

Rules and Regulation of donation boat for NTPCF village

Boat

- 1 Docking time: once per month.
- 2 Boat CF MC has to accompany, if CF UsG member patrol periodically.
- 3 Boat in charge only has right to instruct the permission for driving for someone,
- 4 If boat was hired for fund, boat driver has to get the daily wage for driving.
- 5 Hired time is between from 6Am to 18 Pm.
- 6 Never permitted for night time (over 6Pm)for driving, if something wrong in driving, boat user must take care for the accidents, machine broken, etc.
- 7 Boat will be permitted for doing for villager affair.
- 8 If forest responsible person want to use the boat, they have to inform to CF MC in advance

Rules and Regulation of donation boat for TYK village

- 1 Boat will be permitted from CFMC of boat to use for villagers
- 2 If boat is used, villagers must take care on first priority for villager's affaire and second priority for CF.
- 3 Boat user must pay 1500 kyats for boat hiring cost and 500 kyats for boat driver.
- 4 If boat will be free, boat driver (U Hla Bwal) can use boat.

(A).Rules and Regulations of community forestry aqua-agroforestry

(A.1) Rule of community forestry aqua-agroforestry

1. Rotational leadership within group
2. Period of leader must be one year.
3. Must obey rules and regulation of community forestry UsG
4. Pond digging activity must be finished before monsoon.
5. Must obey technical consultation
6. Must take care with guard hut in aqua-agroforestry area
7. Must report progress of aqua-agroforestry activity to the MC of community forestryUG

(A.2) Regulation of community forestry-aqua-agroforestry

1. To check up water intake and outlet pipe regularly.
2. To check up status of shrimp and crab
3. To regular check up pond water condition everyday.
4. To prevent extreme high tide
5. To grow horticulture systematically
6. To record data for selling price and weight of shrimp and crab
7. To record data for selling price of vegetable
8. To help reciprocally within aqua-agroforestry sub community forestry group
9. To mobilized and discuss to other members to get interested on it.

Rules and regulations for Phoenix Heart Production

1. Operation and management of CF women's group

- 1.1 Objective of the CF women's group
 - Mangrove conservation through sustainable utilization
 - Livelihood improvement of CF women's group
- 1.2 Status of the CF women's group
 - Formation of the CF women's group
The CF women's group was formed on the date of 25th of May, 2004
The name of the CF women's group is "Shwe Ye Kha Yar Thar Yar Kone CF women's group"
 - membership of the CF women's group
Any TYK women over age of 18 can join the CF women's group
 - Monthly meeting of the CF women's group
The meeting of the CF women's group will be held monthly on every 15th of the month. If the 15th is Sunday, the meeting will be held on 16th
If the member is absent from the meeting three times in succession, she will lose the membership
- 1.3 Duty of the members of the CF women's group
 - Terms of members of the CF women's group
The members must attend regular monthly meeting
Every member must respect the rules and regulations of CF women's group
When the member wants to absent, she needs to inform the other member of CF women's group
 - Management of the CF women's group
The management of CF women's group will be led by 3 members, namely a leader, a secretary, and an accountant
 - Terms of a leader, a secretary, and an accountant
One year, each of them can be elected up to two terms
 - Responsibility of a leader
Communication with CF management committee
Confirmation of the decision by all members
Confirmation of the necessary expenditure for members
Solving the problems and difficulties of women's group members together
 - Responsibility of a secretary
Keeping records of all activities by CF women's group
Initiate the activities for monthly workshop
Take leader's duty during her absence
Communication with CF management committee
Management of CF women's group activities
 - Responsibility of an accountant
Keeping the financial record monthly
Explanation about financial record to all members at workshop
Preparation and explanation of the annual financial record

- 1.4 management of the CF women's group
 - If the members need to go to near village and out site township for the CF women's group activities, the CF women's group will provide daily allowance and travel allowance.

2. Activities of CF women's group (should be attached and updated for each new activities)

2.1 Phoenix shoot production

2.1.1 Work sharing of CF women's group

- the working group
 - the number of working groups
The working groups are formed for phoenix production, and they consist of 4 to 5 persons.
The working groups are formed in the meeting by the CF women's group by the agreement of all members
 - role of the members of working groups
fire wood, fresh water and phoenix shoot and coconut husk fiber must be contributed by every responsible persons of women sub group

activity	place	person	method
harvesting	CF area of TYK	by working group and men's help?	once in five years harvesting / at least two shoot should be left for each stand
processing	women's group house	working group	following the manual
recording	women's group house	working group	record the produced number of bottles and report to secretary and accountant

- substitution of the members
 - In case of some of members' absence due to any reason, the other members should support the working group

2.1.2 Benefit sharing of CF women's group

- record of the account
 - The accountant needs to keep financial record
 - The secretary supports the accountant by providing the activity records
 - The account record should be explained to the members of CF women's group in the monthly meeting
- benefit sharing method
 - The accountant will prepare the income and the expenditure record for each month
 - 40 % of the net benefit is reserved as the fund for the CF women's group members' emergency case, the other CF activities, and the public purpose.
 - The distribution is reimbursed according to each member's working days for the CF women's group activities.
 - In case the income per person per day is found to be extraordinary rate compared with the average in the area, the way of distribution shall be discussed and revised by the

CF women's group

- saving for common use
 - The 40% of the benefit is reserved as the fund for the CF women's group members' emergency case, the other CF activities, and the public purpose. Detail benefit allocation is as follows.
 - 15% of the benefit will be saved and used for material needed for the activities, including the investment for new activities of CF women's group. Part of this portion can be utilized as the allowance for leader, secretary and accountant under the agreement of all members.
 - 20% of the benefit will be saved for CF women's group members' emergency cases, such as sickness, death and urgent need for money. The utilization of this fund will be decided by the all member meeting of CF women's group.
 - 5% of the benefit will be utilized for communal use, such as education of the children, communal buildings renovation and communal ceremonies. The utilization of this portion will be decided by the discussion among CF women's group and village authorities.

2.1.3 Quality control

- harvesting phoenix shoot for manufacturing
 - Harvesting should be done in the CF area
 - Harvesting should be done by the sustainable manner. It is not allowed to cut all the shoots from one stand. At least two shoot should be left for each stand. However, the stand with only one or two shoots can be cut down as long as many phoenix stands are found in the surrounding area.
- processing preserved phoenix shoot
 - The processing method should be consistent with the UsG manual for phoenix heart production.
- quality control and food sanitary
 - To produce phoenix heart bottles of the same quality, it is necessary to follow the manual. The size of the phoenix, weight, and processing method is mentioned in the manual.
 - To keep hygiene, washing hands and processing materials (ex. cutting boards, knives) are important
 - All the water used during the processing needs to be boiled once
 - Citric acid needs to be used for processing
- transportation and selling
 - The products are transported to Yangon by ferryboat from Thit Poke
 - At least one member of CF women's group is responsible for bringing the products to Yangon
 - The bottles are put in the container and covered with well cleaned and dried coconut fiber for cushion.
 - The necessary cost for selling will be covered by the CF women's group, including the transportation, lodging, meal, and allowance for the responsible person for selling.

3. Others

- According to the necessity, this rules and regulations shall be discussed and revised at any time.

TYK CF Church Woodlot (Silver Association)
Rule & Regulation

1. Composed of 17 religious villagers of Silver Christian Association
2. CF Church Woodlot Sub-UsG is under the management of TYK CF Management Committee
3. All CF operation will be implemented by of CF church members together
4. Forest products will use in Church building construction
5. Surplus of CF products will be utilized for social welfare.(in kind/ cash after selling)

**CF School Woodlot
Thar Yar Kone Village**

1. Objective

1. To get forest products for school furniture, renovation.
2. To get fund for school education development after selling CF products.
3. To get students' involvement in mangrove conservation.

2 CF school woodlot operations

2. 100 household is a leader for school CF
1. All CF members will cooperate for school CF activities
3. Operation will follow with the consultation CF UsG Management Committee.
4. Members will follow under the sub group leader management.
5. School CF sub group need to prepare for the working plan & proposal.
6. Monthly and annual monitoring and evaluation will be done with the consultation of FD & CF MC.

**CF Village Woodlot Activity
Nyaung TaPin Village**

1. Objective

4. To get forest products for construction of village communal building and furniture
5. To get welfare fund for village development from CF product selling.
6. To involve by villagers' participation in mangrove conservation.
7. To distribute CF forestry products for disable or aged household and fuel wood for migrants villagers who are temporary living in NTP village & participating in CF activities during their staying period.

3. Implementation

1. The FD, 100 hh head, CF users' members will implement through community participation according to CF village woodlot management plan.
 2. Sub group will implement CF activities under CF UsG MC Management & consultation.
 3. CF sub group (woodlot) need to prepare working plan & have to follow that plan.
 4. Distribution of benefit is as the mentioned in above.
 5. Monthly & annually monitoring will be done by supporting of CF UsG MC & FD.
- .

Attachment-5

Sales Voucher for Community Forestry Production

Sales Voucher Copy of CF MC/UsG Date..... Book no.....voucher no..... Nyaung Ta Pin Village, Laputta TS. Sale Voucher of Forest Product For CF User Group	Sales Voucher Copy of Trader Date..... Book no.voucher no..... Nyaung Ta Pin Village, Laputta TS. Sale Voucher of Forest Product For CF User Group	Sales Voucher Copy of FD Date..... Book no.voucher no..... Nyaung Ta Pin Village, Laputta TS. Sale Voucher of Forest Product For CF User Group
<u>Selling Product</u> 1. Name: 2. Type of product: 3. Target annual production: 4. Selling Quantity sale quantity 1:..... sale quantity 2:..... sale quantity 3:..... sale quantity 4:.....	<u>Selling Product</u> 1. Name: 2. Type of product: 3. Target annual production: 4. Selling Total Quantity sale quantity 1:..... sale quantity 2:..... sale quantity 3:..... sale quantity 4:.....	<u>Selling Product</u> 1. Name: 2. Type of product: 3. Target annual production: 4. Selling Quantity sale quantity 1:..... sale quantity 2:..... sale quantity 3:..... sale quantity 4:.....
<u>Sale 1</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)	The above CF forest products were being produced according to CF MP of UGs of Nyaung Ta Pin Village. (CF chairman's Signature) <u>Sales Voucher Tag 1</u> Book no.....voucher no..... Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: Seller Name:..... Seller CF UsG Name:	<u>Sale 1</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)
<u>Sale 2</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)	<u>Sales Voucher Tag 2</u> Book no.....voucher no..... Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: Seller Name:..... Seller CF UsG Name:	<u>Sale 2</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)
<u>Sale 3</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)	<u>Sales Voucher Tag 3</u> Book no.....voucher no..... Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: Seller Name:..... Seller CF UsG Name:	<u>Sale 3</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)
<u>Sale 4</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)	<u>Sales Voucher Tag 4</u> Book no.....voucher no..... Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: Seller Name:..... Seller CF UsG Name:	<u>Sale 4</u> Trader Name: Address: 1. Buying Quantity:..... 2. Sales destination: 3. Sales schedule: (Trader's Signature)
- The above CF forest products were being produced according to CF MP of UGs of Nyaung Ta Pin Village. (CF chairman's Signature)	- The above CF forest products were being produced according to CF MP of UGs of Nyaung Ta Pin Village. (CF chairman's Signature)	- The above CF forest products were being produced according to CF MP of UGs of Nyaung Ta Pin Village. (CF chairman's Signature)

Attachment-6

Removal Pass for Community Forestry Production

Copy for FD

**Removal Pass for CF Forest Products
(Township)**

FD _____ Township Office

Book no.....voucher no.....

Nyaung Ta Pin Village ,Laputta TS.
Removal Pass of CF Forest Product
of CF User Group

Name of Trader

Name: _____

Address: _____

Original Producer

Name: _____

Address: _____

Trading of:

Products: _____

Volume: _____

Date: _____

The above CF forest product was being produced
according to CF MP of UGs of Nyaung Ta Pin Village.

(Signature)
CF Chairman

The above CF forest products are registered and permitted
trading to Laputta township of CF production by Forest
Department.

(Signature)
FD Township Officer

**Removal Pass for CF Forest Products
(Township)**

FD _____ Township Office

Book no.....voucher no.....

Nyaung Ta Pin Village ,Laputta TS.
Removal Pass of CF Forest Product
of CF User Group

Name of Trader

Name: _____

Address: _____

Original Producer

Name: _____

Address: _____

Trading of:

Products: _____

Volume: _____

Date: _____

The above CF forest product was being produced
according to CF MP of UGs of Nyaung Ta Pin Village.

(Signature)
CF Chairman

The above CF forest products are registered and permitted
trading to Laputta township of CF production by Forest
Department.

(Signature)
FD Township Officer

Attachment
Sales Voucher Tag

Copy for Trader

Copy for FD
Removal Pass for CF Forest Products
(for outside township)
FD Laputta Township Office



Book no.....voucher no.....

Nyaung Ta Pin Village ,Laputta TS.
Removal Pass of CF Forest Product
of CF User Group

Name of Trader

Name: _____

Address: _____

Original Producer

Name: _____

Address: _____

Trading of:

Products: _____

Volume: _____

Date: _____

The above CF forest product was being produced
according to CF MP of UGs of Nyaung Ta Pin Village.

(Signature)
CF Chairman

The above CF forest products are registered and permitted
trading to outside Laputta township of CF production by
Forest Department.

(Signature)
FD Township Officer

Copy for Trader
Removal Pass for CF Forest Products
(for outside township)
FD Laputta Township Office



Book no.....voucher no.....

Nyaung Ta Pin Village ,Laputta TS.
Removal Pass of CF Forest Product
of CF User Group

Name of Trader

Name: _____

Address: _____

Original Producer

Name: _____

Address: _____

Trading of:

Products: _____

Volume: _____

Date: _____

The above CF forest product was being produced
according to CF MP of UGs of Nyaung Ta Pin Village.

(Signature)
CF Chairman

The above CF forest products are registered and permitted
trading to outside Laputta township of CF production by
Forest Department.

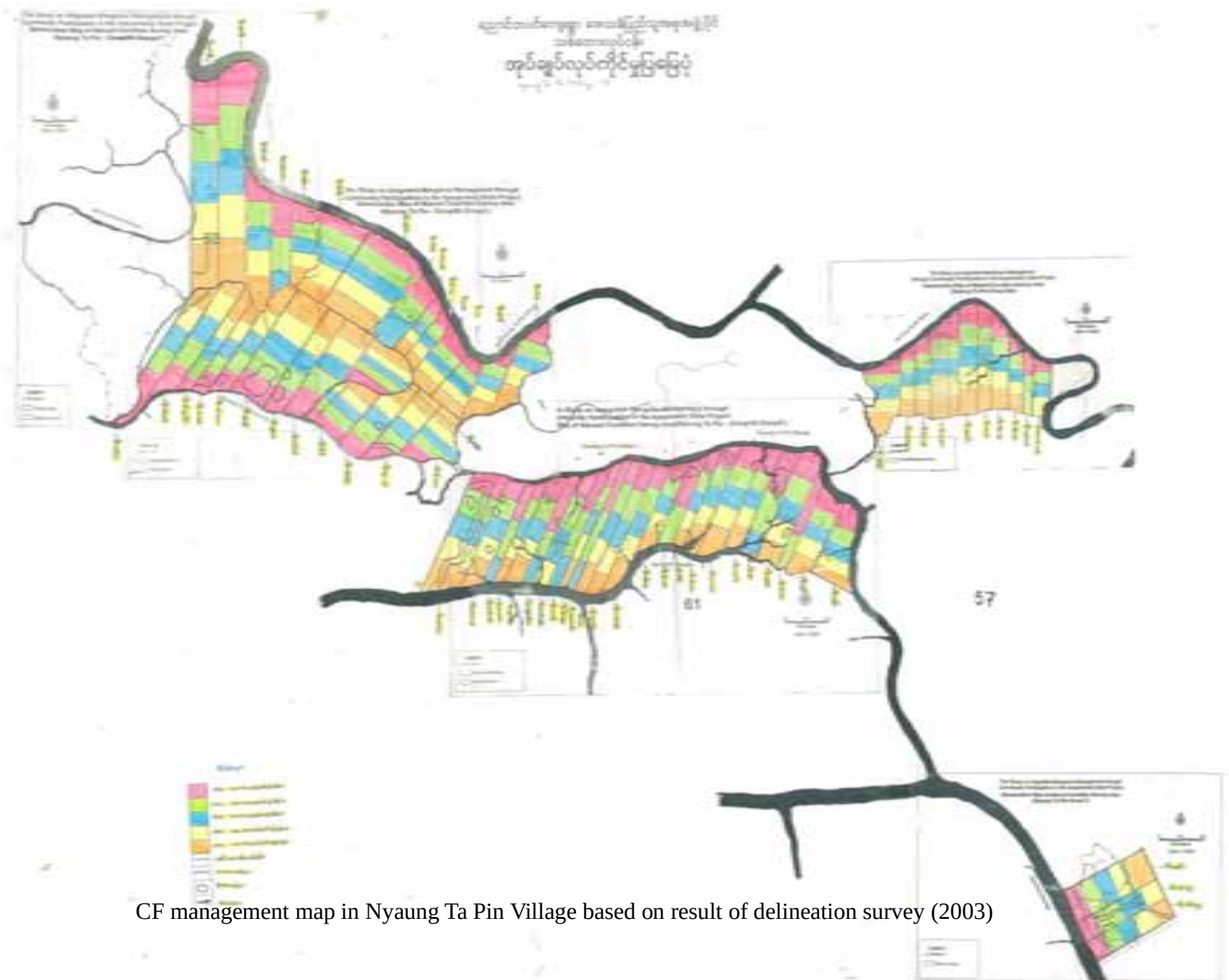
(Signature)
FD Township Officer

Attachment
Sales Voucher Tag

Attachment-7

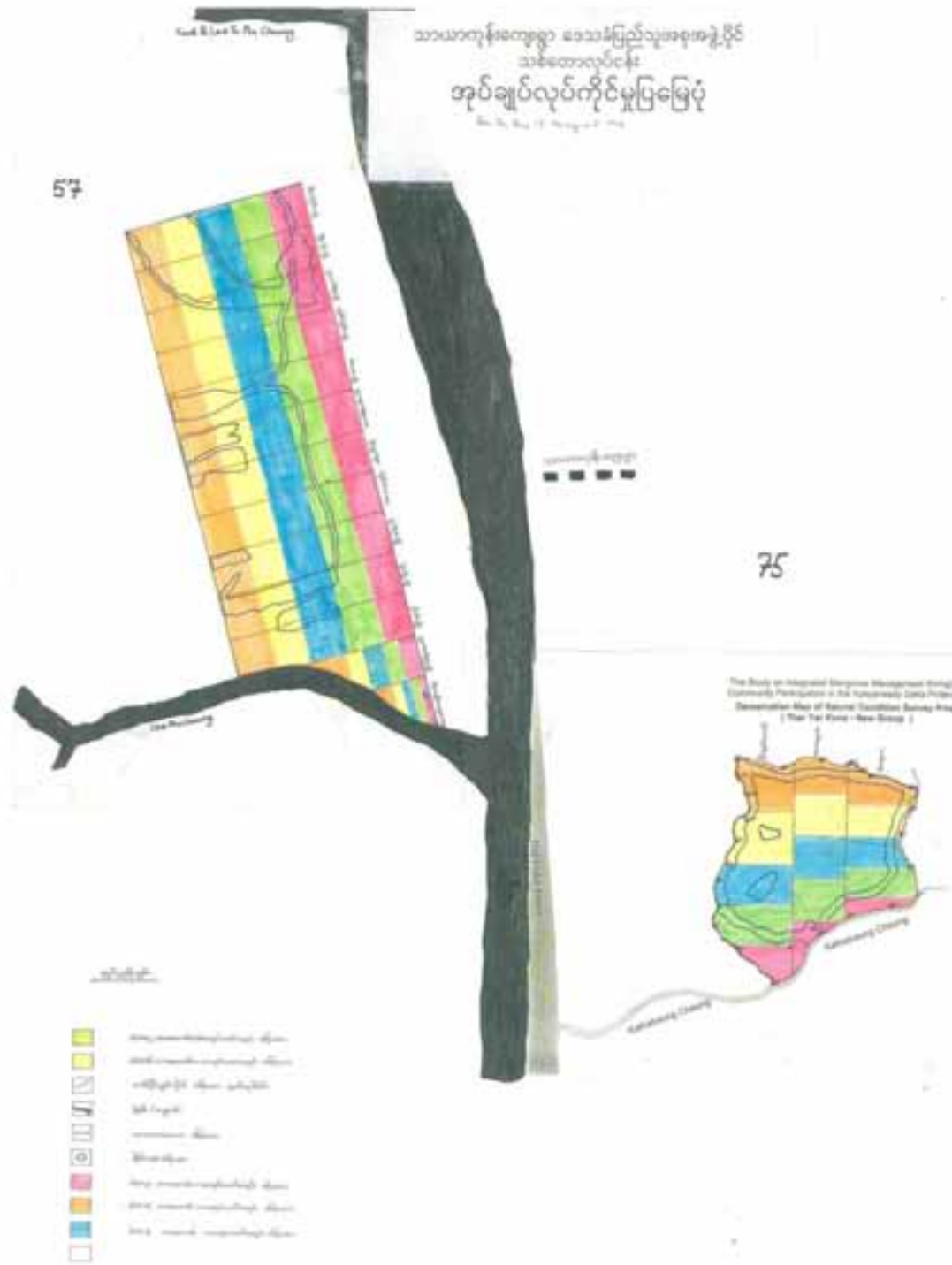
Integrated Community Forestry Management Map

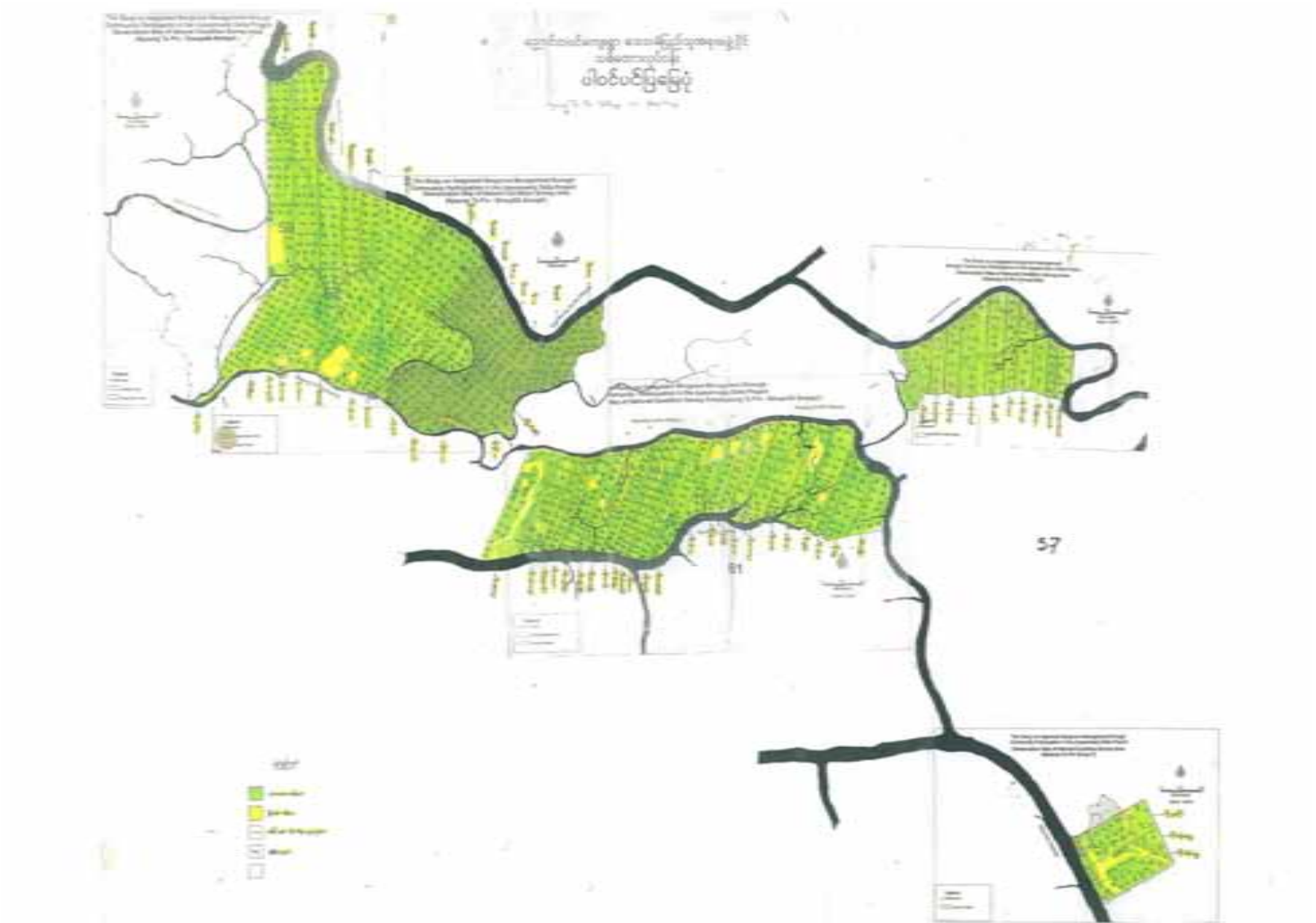
- 7.1 Community Forestry Management Map and Stock Map (2003)
- 7.2 Updated Community Forestry Management Map (2004)



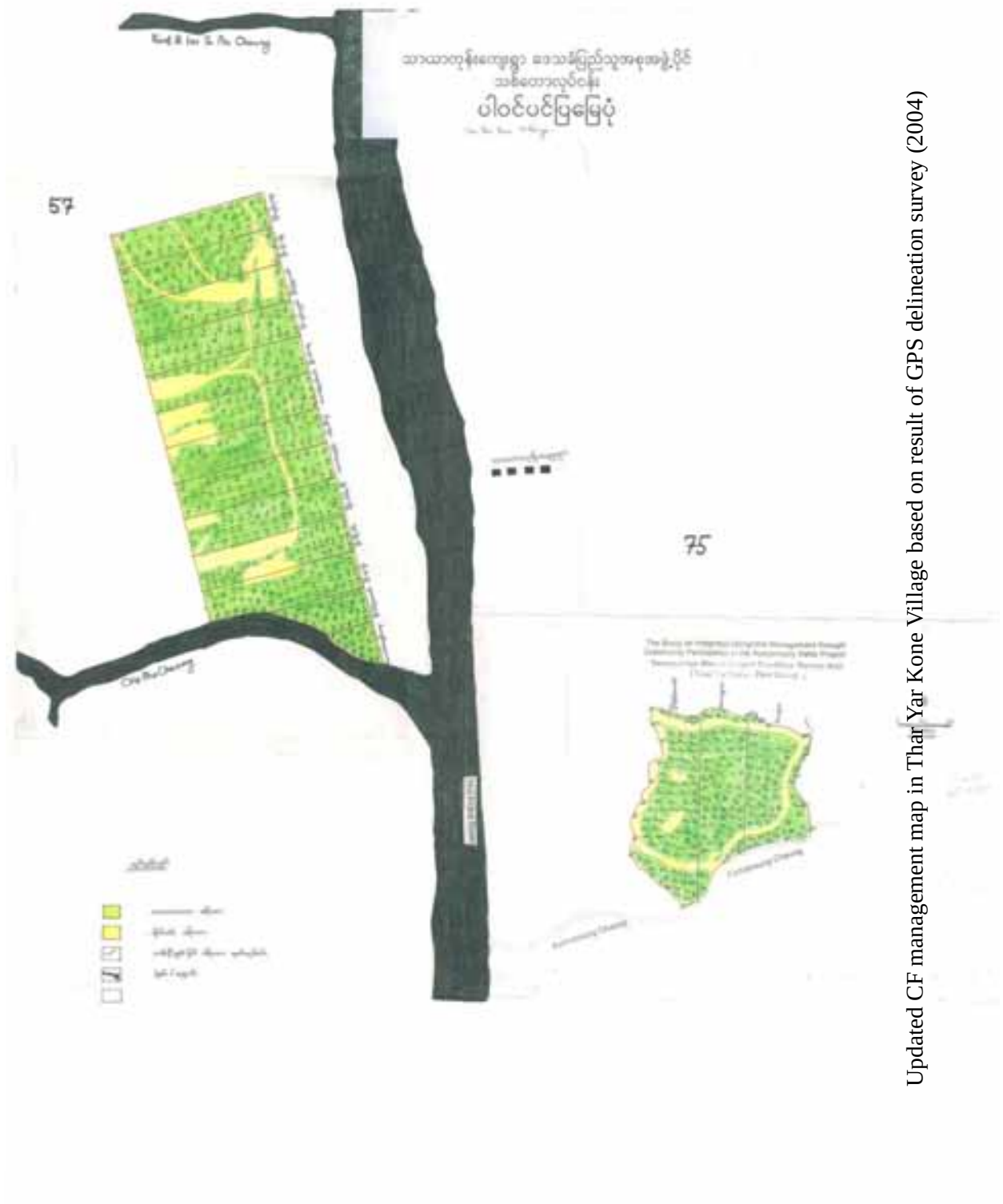
CF management map in Nyaung Ta Pin Village based on result of delineation survey (2003)

CF management map in Thar Yar Kone Village based on result of delineation survey (2003)

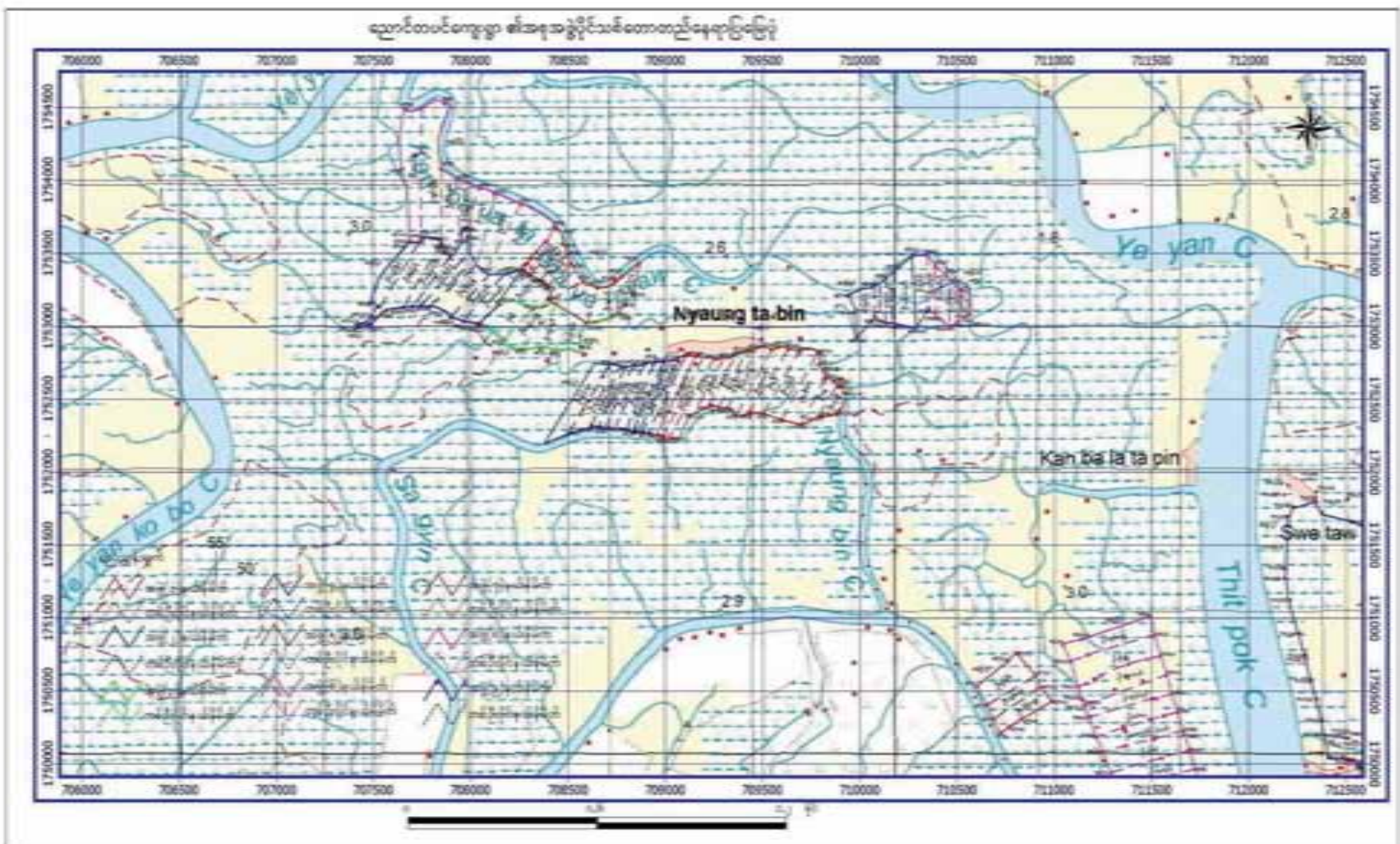




CF stock map in Nyaung Ta Pin Village based on result of delineation survey (2003)



Updated CF management map in Thar Yar Kone Village based on result of GPS delineation survey (2004)



Updated CF management map in Nyaung Ta Pin Village based on result of GPS delineation survey (2004)



Updated CF management map in Thar Yar Kone Village based on result of GPS delineation survey (2004)

Attachment-8

Organization and Terms of Reference of the Community Forestry Task Force of the Forest Department

Attachment8 : Organization and Terms of Reference of the Community Forestry Task Force of the Forest Department

Draft CF Task Force Action Plan

Integrated Mangrove Management through Community Participation
7/5/2004
JICA Study Team

1. Objective of the CF Task Force

- Enable to manage CF activities and procedure based on CFI and
- Enable to support successful and sustainable CF activities of CF user groups (UsG)

2. Formulation and Organization of CF Task Force

- CF Task Force shall be formulated and led by FD Township Officer based on instruction, report and discussion with FD District officer
- CF Task Force shall be formulated as a permanent function of the FD Township Office, since following duty shall be continued continuously from now on

3. Duty of the CF Task Force

- Information collection and reporting about necessity of promotion of CFI such as intention of population/community for participation of CF, necessity of local consumption, or endangered mangrove vegetation
- Promotion of CFI
 - Obtaining understanding about conservation of environment and CFI through conversations, workshop and public awareness with villagers
 - Support formulation of CF Management Committee and CF User Group
 - Draft Allocation of CF areas to CF UsG members
 - Support preparation of CF Management Plan
 - Support drawing CF Management Map
 - Reception and forward the CF Management Plan and Management Map to FD township office as CF Proposal of the CF UsG
- Support Implementation of CFI by UsG
 - Support preparation of rules and regulation of CF UsG
 - Supply seedling of first rotation planned on the CF management plan to the CF UsG
 - Support forestry technology to CF UsG for practicing CF activities
 - Support preparation of CF UsG monitoring reports
 - Monitoring and report of the CF UsG activities
 - Support problem solving based on monitoring records
- Registration of sales voucher
- Issuing removal pass
- Support patrolling of CF UsG in collaboration with local authorities

4. Format of Activity Record

- Two week report of CF Task Force to FD Township Office about CF promotion and preparatory activities
- Two week report of CF Task Force to FD Township Office about supports and monitoring activities of CF implementation
- Patrolling report

5. Principle of Activity of CF Task Force

Attachment8 : Organization and Terms of Reference of the Community Forestry Task Force of the Forest Department

Activity of the CF Task Force	Estimated working day for the duty	No of Charged CF Task Force Officer/Staff			Required equipment/material
		RO	DRO	Forester	
Promotion of CFI	Three days/month One week/month One week/month	1	2	1	Boat/operation cost for Distribution
- Obtaining understanding of villager about conservation of environment and CFI through conversation, workshop and public awareness					
- Support formulation of CF Management Committee and CF User Group					
- Draft Allocation of CF area to CF UsG member					GPS, Battery, Measurement rope, Machete
- Support preparation of CF Management Plan					Stationary
- Support drawing CF Management Map					Stationary
- Reception and forward the CF Management Plan and Management Map to FD township office as CFI Proposal of the CF UsG					Delivery by monthly between beat office and TS
Support Implementation of CFI by UsG	Five days/month One week/month	1	2	1	
- Support preparation of rules and regulation of CF UsG					
- Production of CF seedling	15 days/month			1	5 labor x 30 20 labor x 5 Seedling production material Boat/operation cost
- Supply seedling of first rotation planned on the CF management plan to the CF UsG					Boat/operation cost for Distribution
- Support forestry technology to CF UsG for practicing CF activities					
- Support preparation of CF UsG monitoring reports					
- Monitoring of the CF UsG activities and report the result to FD TS office					
- Support problem solving based on monitoring record					
- Registration of sales voucher					
- Issuing removal pass					
Support patrolling of CF UsG in collaboration with local authorities	Two days/month One week/month	1		1	Boat/operation cost for Distribution

Note: 1. CF Task Force conformed of one RO: range officer, two DRO: deputy range officer, and two foresters.
2. One forester is charged to nursery for seedling production and the nursery operation and management.
3. Work volume is estimated for 20 CF UsG by 5 member of CF Task Force
4. CF Task Force officer/staff engages CF support activities for two weeks per month.
5. Therefore, CF Task Force officer/staff engages other FD TS activities during remaining two weeks of the month.

Attachment-9

Progress Report of Community Forestry User Group (sample)

Attachment-10

*Pilot Project 2004 Components Delivered to the Forest
Department*

Attachment 10 Pilot Project 2004 Components Delivered to the Forest Department

Procurement and Achievement of FD Capacity Development Pilot Project (2004) (under JICA budget)									
1	FD Capacity Development Pilot Project (2004)								
Components	Activity	Target	Quantity	unit	Quantity	Unit	Percentage	Achievement	Located or Equipment placed at
		Item						Specification/ Remarks	
1.1.1	Establishment of Myaung Mya FD CF Monitoring Team								
	- Maintenance of office facility								
		Laptop/ portable printer procurement	1 set		1 set		100%	Dell Inspiron 5150 note book computer (including Windows XP home edition and MS Office 2003 small business edition), Canon Pixus i-80 portable printer	MYM FD Office
		Office furniture procurement							
		Office table	1 no.		1 no.		100%	Teak 4'x 3'	MYM FD Office
		Chair	1 no.		1 no.		100%	Teak	ditto
		Long table	2 no.		2 no.		100%	Teak 8'x 3'	ditto
		Chair	10 no.		10 no.		100%	Teak	ditto
		Computer desk	1 no.		1 no.		100%	Teak 2'x 3'	ditto
		Plywood room partition	1 no.		1 no.		100%	Teak plywood 15' L x 7' H	ditto
		150A Battery & 1000W inverter	1 set		1 set		100%	Panasonic brand & Linyama brand	ditto
		Basic computer training	5 person		5 person		100%	by Centre of computing and information system	MYM
		Total							
1.1.2	Establishment of CF Supporting Organization (CF Task Force) for FD Laputta Office								
	- Maintenance of office facility								
		Laptop/ portable printer procurement	1 set		1 set		100%	Dell Inspiron 5150 note book computer (including Windows XP home edition and MS Office 2003 small business edition), Canon Pixus i-80 portable printer	LPT FD Office
		Office furniture procurement							
		Office table	1 no.		1 no.		100%	Teak 4'x 3'	LPT FD Office
		Chair	6 no.		6 no.		100%	Plastic	ditto
		Long table	1 no.		1 no.		100%	8'x 3'	ditto
		File rack	2 no.		2 no.		100%	Steel pipe	ditto
		150A Battery & 1000W inverter	1 set		1 set		100%	GS brand & Linyama brand	ditto
		Basic computer training	5 person		5 person		100%	By Local trainer	LPT
		- CFDTC Training							
		Total							
1.3.1	Joint Training in CFDTC sub-center								
	- Counter Part (C/P) Joint Training								
		Joint Training in Dry zone	1 ls		1 ls		100%	7 C/Ps of COMFORT and 6 C/Ps of Mangrove Study Team participated	Dry zone (Patheingyi, Pakokku, Monywa)
		Joint Training in Delta	1 ls		1 ls		100%	5 C/Ps of COMFORT and 6 C/Ps of Mangrove Study Team participated	Pyinlan Reserved Forest
		Total							
1.4.2	2003 Leftover Component								
	1) Nursery Construction/Renovation								
	(1) Nursery bed renovation							Includes water gate, main channel re-excavation and finishing	TYK Integrated Mangrove Nursery
	Nursery bed block 1	a. re excavation	5,000	cft	5,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. reallocation of pots for renovation	100,000	pot	100,000	pot	100%		
	Nursery bed block 2	a. re excavation	5,000	cft	5,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. bed frame construction	14	row	14	row	100%		
	Nursery bed block 3	a. re excavation	10,000	cft	10,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. reallocation of pots for renovation	100,000	pot	100,000	pot	100%		
	Nursery bed block 4	a. re excavation	10,000	cft	10,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. reallocation of pots for renovation	100,000	pot	100,000	pot	100%		
	Nursery bed block 5	a. re excavation	10,000	cft	10,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. bed frame construction	14	row	14	row	100%		
	Nursery bed block 6	a. re excavation	10,000	cft	10,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. reallocation of pots for renovation	100,000	pot	100,000	pot	100%		
	Nursery bed block 7	a. re excavation	5,000	cft	5,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. reallocation of pots for renovation	100,000	pot	100,000	pot	100%		
	Nursery bed block 8	a. re excavation	5,000	cft	5,000	cft	100%		
		b. leveling & compaction							
		c. side embankment finishing	400	rft	400	rft	100%		
		d. reallocation of pots for renovation	100,000	pot	100,000	pot	100%		
	(2) Nursery facility renovation								
	Nursery Road								TYK Integrated Mangrove Nursery
	Nursery main road 1	mounding and levelling around the road & the seedling stackyard	300	rft	300	rft	100%		
	Nursery road 1,2,3,4,5,6,7	Side embankment finishing	2,000	rft	2,000	rft	100%		
		Levelling & compaction							
	Stack Yard								TYK Integrated Mangrove Nursery
		seedling stack yard soil mounding	972	cft	972	cft	100%	18'x 36'x 1.5' ht:	
		potting yard soil mounding	972	cft	972	cft	100%	18'x 36'x 1.5' ht:	
	Warehouse 2	Construction	324	sqft	324	sqft	100%	18' x 18' (warehouse/ kitchen hut)	TYK Integrated Mangrove Nursery
	Worker hut construction and renovation	Construction	1 ls		1 ls		100%	Newly construction of 10 Nos.x 15' x 21' worker hut and renovation of 10 existing worker hut	ditto
	Building Incinerator	Construction	1 no		1 no		100%	4' x 4' x 4' with 6' chimney	ditto
	Rest shade for workers								ditto
		soil mounding	162	cft	162	cft	100%	18'x 18'x 1.5' ht:	
		soil mounding	162	cft	162	cft	100%	18'x 18'x 1.5' ht:	
	Worker hut construction and renovation	Construction	1 ls		1 ls		100%	Newly construction of 10 Nos.x 15' x 21' worker hut and renovation of 10 existing worker hut	TYK Integrated Mangrove Nursery
	Water Storage	Construction	1 no		1 no.		100%	4'x 4'x 4'ht brick wall water tank	ditto
	(3) Water reservoir reconstruction	Construction	1 no		1 no		100%	Embankment type, 45' x 55' x 5' ht: 80,000 gallon capacity(4.5' water depth with 6" free 5.0 meter measurement, 8"x 3"concrete made, 0.5 cm accuracy scale	TYK Integrated Mangrove Nursery
	(4) Water gauge construction	Construction	2 set		1 set		50%		ditto
	(5) CF Center renovation	Equipment Maintenance	1 ls		1 ls		100%	Overhaul of Generator	ditto
		Total							

Attachment 10 Pilot Project 2004 Components Delivered to the Forest Department

Procurement and Achievement of FD Capacity Development Pilot Project (2004) (under JICA budget)									
1	FD Capacity Development Pilot Project (2004)								
Components	Activity	Target					Achievement		Located or Equipment palced at
		Item	Quantity	unit	Quantity	Unit	Peren tage	Specification/ Remarks	
2)	Seedling Production								TYK Integrated Mangrove Nursery
		<i>Avicennia officinalis</i>	73,000	seedling	78,621		108%	Potted seedlings	
		<i>Bruguiera gymnorrhiza</i>	30,000	seedling	40,515		135%	Potted seedlings	
		<i>Ceriops decandra</i>	20,000	seedling	12,540		63%	Potted seedlings	
		<i>Heritiera fomes</i>	10,000	seedling	9,504		95%	Potted seedlings	
		<i>Rhizophora mucronata</i>	1,000	seedling	588		59%	Potted seedlings	
		<i>Rhizophora apiculata</i>	1,000	seedling	588		59%	Potted seedlings	
		<i>Sonneratia apetala</i>	20,000	seedling	35,436		177%	Potted seedlings	
		Total	153,000		177,792		115%		
3)	Equipment Procurement								
	Equipment for Seedling Production								
		Spray	2	no	2	no	100%	(plastic, ~ 5 liter / unit)	TYK Integrated Mangrove Nursery
		cart barrow (one wheel)	8	no	8	no	100%	(for seedling container 0.1m3 v: 0.1m3~ or w:30kg~)	ditto
		cart barrow (two wheel)	2	no	2	no	100%	(for seedling container 0.1m3 v: 0.1m3~ or w:30kg~) change to three wheels cart for easier handling	ditto
		Tray for transplanting germinnats	10	no	10	no	100%	(290x330x45 mm)	ditto
		Watering can	8	no	8	no	100%	(plastic, 3~6liter/unit)	ditto
		Shovel	15	no	15	no	100%	(Handle length: ~100cm, blade: ~20 x 30 cm)	ditto
		Container	350	no	350	no	100%	(plastic container for seedling transportation)	ditto
		Weed hoe	10	no	10	no	100%	(blade: ~150mm, Handle length: ~40cm)	ditto
		Weed cutter (sickle)	10	no	10	no	100%	(Handle length: ~120cm)	ditto
		Scale	2	no	2	no	100%	(5kg x 50g measure) english/metric	ditto
		Retractable tape	2	no	2	no	100%	(measure length ~5 m)	ditto
		Hand pruner	2	no	2	no	100%	(blade: ~50mm)	ditto
		Caliper	2	no	2	no	100%	(measure diameter ~20mm)	ditto
		Hand ax	2	no	2	no	100%	10 lb, 24"handle length	ditto
		Ladder (5 m)	2	no	2	no	100%	Aluminium 7' ht-folding type & 10' to 20'extension type	ditto
		Machete	2	no	2	no	100%	24"blade, 3 viss wt: & 8"handle	ditto
		Saw	1	no	1	no	100%	20"blade with plastic handle	ditto
		Rake	1	no	1	no	100%	5'Length spike, 16' width & 5' wooden handle	ditto
		Measuring tape (30 m)	2	no	2	no	100%	(metric/English reading, plastic)	ditto
		Measuring tape (50 m)	3	no	3	no	100%	(metric/English reading, plastic)	ditto
		Lining tape (100 m)	3	no	0	no	0%	Not procured based on agreement between FD and Study Team	ditto
		Levelling rake	3	no	3	no	100%	4"depth x16"width blade, 5'length wooden handle	ditto
		Carpentary set	1	no	1	no	100%	(nail puller, hammer, nipper, jigsaw, whetstone, knife, screw driver set, file, level)	ditto
	Equipment for Nursery Management	Equipment Procurement							
		Fuel tank (10 gal tank)	5	no	10	no	200%	changed to 10 5gal fuel tank (plastic) for easier handling	TYK Integrated Mangrove Nursery
		Furniture for Nursery Office							
		Office desk	2	no	2	no	100%	6' x 3' teak desk	TYK Integrated Mangrove Nursery
		Office chair	2	no	2	no	100%	teak office chair	ditto
		Dinning table	1	no	1	no	100%	7' x 3' teak dinning table	ditto
		Dinning chair	6	no	6	no	100%	teak dinning chair	ditto
		Book shelf	2	no	2	no	100%	6' x 4' x 1' 8" teak book shelf	ditto
		Desk lamp	2	no	2	no	100%	Fluorescent desk lamp	ditto
		Overhaul of Water Pump	1	ls	1	ls	100%	change some parts of engine, pump & foot valve	ditto
		Overhaul of Seedling Transportation Boat	1	ls	1	ls	100%	Boat docking and engine overhaul	LPT Township (either in LPT town or TYK nursery)
		Black board	1		1		100%	3' x 6' ht: both side applicable with 7' length wooden pointer, duster & assorted colour chalk	TYK Integrated Mangrove Nursery
		Sign board	1		0		0%	Not procured based on agreement between FD and Study Team	
		Record book	12		12		100%	For water gage recording	TYK Integrated Mangrove Nursery
		Binoculars	2		2		100%		ditto
		Total							
1.4.4	Mangrove areas forest management strengthening project (strengthening participatory CF activities, diversification of planting species)								
1)	Diversification of mangrove species seedling production								TYK Integrated Mangrove Nursery
		<i>Aegiceras corniculatum</i>	7,000	seedling	5,132		73%		
		<i>Avicennia alba</i>	13,000	seedling	17,102		132%		
		<i>Avicennia marina</i>	15,500	seedling	13,214		85%		
		<i>Bruguiera sexangula</i>	1,000	seedling	1,602		160%		
		<i>Bruguiera parviflora</i>	500	seedling	1,076		215%		
		<i>Bruguiera cylindrica</i>	500	seedling	1,260		252%		
		<i>Excoecariaaria agallocha</i>	8,000	seedling	4,374		55%		
		<i>Heritiera littoralis</i>	1,000	seedling	1,116		112%		
		<i>Kandelia candel</i>	500	seedling	306		61%		
		<i>Lumnitzrea racemosa</i>	6,000	seedling	7,540		126%		
		<i>Sonneratia graffithii</i>	500	seedling	1,188		238%		
		<i>Sonneratia caseolaris</i>	500	seedling	1,854		371%		
		<i>Xylocarpus moluccensis</i>	500	seedling	1,585		317%		
		<i>Xylocarpus granatum</i>	500	seedling	403		81%		
		Total	55,000		57,752		105%		
2)	Production on non-mangrove species							Including bed preparation	TYK Integrated Mangrove Nursery
		<i>Samanea saman</i>	5,000	seedling	4,500		90%		
		<i>Melaleuca leucadendra</i>	8,000	seedling	12,362		155%		
		<i>Melaleuca alternifolia</i>	10,000	seedling	15,270		153%		
		<i>Melaleuca viridiflora</i>	10,000	seedling	7,416		74%		
		<i>Melaleuca cajuputi ssp. patyphylla</i>	10,000	seedling	13,622		136%		
		<i>Albizia procera (lebbek)</i>	11,000	seedling	8,658		79%		
		<i>Casuarina equisetifolia</i>	10,000	seedling	8,855		89%		
		<i>Terminalia beleria</i>	1,000	seedling	120		12%		
		Total	65,000		70,803		109%		

Attachment 10 Pilot Project 2004 Components Delivered to the Forest Department

Procurement and Achievement of FD Capacity Development Pilot Project (2004) (under JICA budget)									
1	FD Capacity Development Pilot Project (2004)								
Components	Activity	Target	Quantity	unit	Quantity	Unit	Percentage	Achievement	Located or Equipment placed at
		Item						Specification/ Remarks	
3)	Establishment and operation of mangrove garden for demonstration								TYK Integrated Mangrove Nursery
	Demarcation/ Site preparation	Total Area	24	acre	24	acre	100%	Demarcation, site cleaning, thinning and pruning	
		Focal garden 1	0.23	acre	0.23	acre		High ground level (include backfilling and fencing)	
		Focal garden 2	0.05	acre	0.05	acre		High ground level (include backfilling and fencing)	
		Focal garden 3	0.11	acre	0.11	acre		Medium ground level (include fencing)	
		Focal garden 4	0.06	acre	0.06	acre		Medium ground level (include fencing)	
		Focal garden 5	0.05	acre	0.05	acre		Low ground level (include fencing)	
		Focal garden 6	0.05	acre	0.05	acre		Low ground level (include fencing)	
		Terace Garden	0.05	acre	0.05	acre		excavation, levelling	
	Boundary pillars	Procurement and installation	10	no	10	no	100%	Hardwood boundary pillars for outside boundary	
	Garden sign board	Construction	1	no	1	no	100%	6' 8" x 5' 5" concrete made	
	Focal garden/ terace sign board	Procurement and installation	7	no	7	no	100%	6' x 3' wooden board	
	Notice sign board	Procurement and installation	20	no	20	no	100%	2' x 3' sign board	
	Walking board	Construction	30	ft	30	ft	100%	4' wide wooden board to natural mangrove nursery	
	Water drainage	Construction	250	ft	250	ft	100%	2' 6" x 2' dimension	
	Renovation of nursery office for demonstration	Construction	1	ls	1	ls	100%	Deleted 2 no. 6"x 6" timber post and made two compartments.	
	Sapling planting	Procurement and planting	300	no	300	no	100%	Introduction of desired seed trees	
	Species sign board	Procurement and installation	150	no	150	no	100%	5" x 14" sign board	
	Procurement of related equipment/material	Procurement	1	ls	1	ls	100%	Plastic container (x3), Plastic basket (x5), Plastic sack (x10)	
		Total							
4)	Construction and operation of aqua-agroforestry site for demonstration								TYK Integrated Mangrove Nursery
	Pond area	Construction	10,080	cft	10,080	cft	100%	Excavation	
	Embankment area	Construction	10,560	cft	10,560	cft	100%	mounding with coconut fibre reinforcement	
	Inlet and water ways	Construction	525	cft	525	cft	100%	Excavation	
		Construction	25	Rft	25	Rft	100%	9" brick wall, 2' width cannal	
	Creek excavation	Construction	14,370	cft	14,370	cft	100%	Excavation	
	Water gate	Construction	2	no	2	no	100%	Nylon net screen one layer & timber gate one layer	
	Concrete culvert slab	Construction	1	no	1	no	100%	5'x 3'x 4" tk: slab at access road crossing	
	Timber bridge	Construction	2	no	2	no	100%	across on water gate 2 nos. at embankment	
	10" concrete pipe water way	Construction	1	no	1	no	100%	connection between two ponds	
	Agricultural area earthwork	Construction	1,000	cft	1,000	cft	100%	soil mounding for fruit trees at outer embankment & vegetable on embankment.	
	Procurement for Production								
	Aquaculture related procurement	Procurement	1	lot	1	lot	100%	attached list	
	Agriculture related procurement	Procurement	1	lot	1	lot	100%	attached list	
		Total							
5)	Construction and operation of seed orchard for demonstration								TYK Integrated Mangrove Nursery
	Demarcation/ Site preparation	Construction	5	acre	5	acre	100%	Demarcation, site cleaning, thinning and pruning	
	Boundary pillar	Procurement and installation	6	no	6	no	100%	Hardwood boundary pillars for outside boundary	
	Sign board	Procurement and installation	2	no	2	no	100%	6' x 3' sign boards	
	Walking board	Construction	125	ft	125	ft	100%	4' wide wooden board	
	Temporary hut	Construction	324	ft2	324	ft2	100%	18' x 18', for observation and seed storage	
	Sapling planting	Procurement and planting	150	no	150	no	100%	Introduction of desired seed trees	
	Species sign board	Procurement and installation	50	no	50	no	100%	6" x 14" sign board	
	Procurement of related equipment/material	Procurement	1	ls	1	ls	100%	Plastic container (x3), Plastic basket (x5), Plastic sack (x10)	
		Total							
1.4.5	Patrolling (system setup, preparation of action plan)								
	Public Awareness related activities	Public Awareness Local Workshop	27	times	18	times		Originally planned for 2 districts, 2 townships, 2 sub-townships, and 21 village tracts. Actually conducted for 2 districts, 2 townships, 13 villages and BGL FD office	
	Printing of brochures	Public Awareness Poster	500	copies	500	copies	100%	For distribution to local authorities and workshops	
		Public Awareness Pamphlet	50,000	copies	50,000	copies	100%	For distribution to concerned households	
		Total							
Total		Grand Total							

Attachment-11

Scoring of Asset for Forest Department and User Groups

1. Scoring of Asset for Forest Department (FD)

Note: Score of the assets below are averages of each score of activities listed as A, B, -- in the following tables.

1.1 Human Capital of FD

Assets 2003	Score	Assets of 2004	Score	Anticipated Asset	Score
1) The FD officer and staff have a practical intention regarding CF.					
Assets 2003	1.0	Assets of 2004	1.2	Anticipated Asset	1.5
A. At the planning stage of the pilot project, foresters supported villagers in drawing management plan map, under the supervision of a range officer. (Score:1)		Activities concerning the CF are not the only duty of the members of CF monitoring team and CF task force, but these activities are implemented with the effort as much as possible. (Score:1.5)		The members of CF monitoring team and CF task force implemented the CF activities with the effort as much as possible. But the clear TOR for CF is necessary. (Score:1.5)	
B. Foresters did not supported user group so often during the pilot project 2003 because necessary instruction was not given and they prioritized their original duties such as tax collection or plantation work. (Score:0.5)		FD staff assigned to the CF task force spent around 30% of their working time for management and support of the CF. In this condition, they attended meetings of user groups, distributed seedling, and did patrol with user group members. (Score:1)		To work for the CF, superior's instruction is inevitable. (Score:1.5)	
C. At the preparation stage, the range officer in-charge of Pyinalan Reserved Forest supported villagers in collaboration with the JICA study team and ordered his staff to work with him. (Score:1.5)		The range officers assigned for the pilot project supported the promotion, implementation and diversification of CF. (Score:1.5)		The experienced range officer has practical intention to promote CF, unless his superiors refuse. (Score:1.5)	
D. The range officer in-charge of the pilot project supported user groups in plantation, seedling distribution, and consultation. Sometimes he did not receive the instruction in response to his request of decision from the FD Laputta in proper time, but he tried to solve the problems as possible as he could. (Score:1)		The range officer in-charge of the pilot project supported user groups in plantation, seedling distribution, and consultation. He took more initiative than in the pilot project 2003. (Score:1)		The experienced range officer have intention to manage the CF and support user group by his own intention and plan, unless his superiors refuse it. (Score:1.5)	
E. The range officer in-charge of the pilot project took measures against the illegal encroachment near the pilot project sites with the decision of the FD Laputta. (Score:1)		With the strong order from the district government and FD, the range officers in charge of pilot project continued to try solving the illegal encroachment. (Score:1)		FD officers has intention to protect the forest from encroachment. (Score:1.5)	
F. There was no special organization structure for the CF implementation. FD implemented CF as one of the normal duties. However, CF activity was not prioritized compared with tax collection and/or department plantation. (Score:0.5)		A range officer assigned as leader of the CF task force managed the CF and supported user groups in a few months. He could not work for it in full time because he had to work for other duties in other reserved forests. (Score:1)		Officers who work in other offices have difficulty to understand the practical CF support unless they have chances to visit and work for the CF. (Score:1.5)	

Attachment 11 Scoring of Asset for Forest Department and User Groups

G. Assistant director of FD Myaung Mya declared the commencement of the pilot project, and approved the proposal of CF of Thar Yar Kone and Nyaung Ta Pin and granted CF certificate, though the approval was delayed. (Score:1)	Assistant director of FD Myaung Mya supported the pilot project, but the approval took time because the decision was not made in time. (Score:1)	FD district office are ready to work the basic activities as the responsible organization of the CF. (Score:1.5)			
H. Immediate measure against illegal encroachment was taken and necessary instruction was given to the officers and the FD staff by the FD Laputta. (Score:1)	As same as pilot project 2003. (Score:1)	FD township office is ready to take measures to encroachment. (Score:1.5)			
I. FD director general office and FD Ayeyawady appointed assistant director of the FD Myaung Mya as project director and FD Myaung Mya as responsible organization for the pilot project implementation. But they did not take strong initiative to implement the pilot project. (Score:1)	CF monitoring team and CF task force were established in the FD Myaung Mya in June 2004. (Score:1.5)	Concrete activities of promotion of the community forestry, mangrove conservation and necessary institutional development will progress on the initiative of the staff of the FD Myaung Mya. (Score:1.5)			
J. At the commencement of the pilot project in May 2003, FD director general office and FD Ayeyawady appointed assistant director of the FD Myaung Mya as project director. (Score:1)	In June 2004, FD Ayeyawady instructed to the FD Myaung Mya to organize the CF monitoring team and the CF task force to facilitate the management and support of the CF. (Score:1.5)	Necessary management of CF and support to CF user group can be done. (Score:1.5)			
K. At the commencement of the pilot project 2003, the communication among officer of the director general, division, and district were not smoothly done, because the FD organizational structure was not established for the CF management. However, the instruction system was unified in 2003 under the instruction of the FD director general office. (Score:1)	The FD director general office started to re-structure the FD Laputta and Bogalay for reinforcement of the management and support of the CF for fulfilling the contents of the IMMP. (Score:1.5)	FD director general office can take initiative of the system for the CF support. (Score:1.5)			
L. The FD DG office and FD Ayeyawady visited the project site to confirm the progress and considered its next step. (Score:1)	As same as pilot project 2003. (Score:1)	The staff members of the FD division and director general offices have intention to understand the actual state of the CF. (Score:1.5)			
2) The FD officer and staff have intention for CF expansion for forest conservation and production.					
Asset 2003 (Average from A. to F.)	0.5	Asset 2004	1.0	Anticipated Asset	1.5

Attachment 11 Scoring of Asset for Forest Department and User Groups

A. FD staff understood the necessity of forest conservation and production at the beginning of the pilot project 2003 but did not know the purpose and detail of the CFI regarding the economic factor of the CF. (Score:0)	FD staff accumulated knowledge of conservation and production through the implementation of the pilot project and participation in training. (Score:1)	FD staff can manage and promote user groups about the CF expansion for forest conservation and production when they are instructed and get training. (Score:1)
B. The range officer in-charge of pilot project did not take concrete action for the sales voucher. (Score:1)	The range officer in-charge of pilot project understood the objectives of the CFI and the role of the FD. With the instruction of the FD township and district offices, he planned to support user group in estimation of the harvest of CF from November 2004, in order to regularize the sales of forest product from the CF area that some user group members of the pilot project area wanted. (Score:1.5)	The range officer in charge of pilot project can manage and promote user groups when he is instructed and necessary system is established by the FD. (Score:1.5)
C. Range officers who worked for support of the CF did not have knowledge about relation of the forest conservation and sales of product. (Score:0.5)	Range officers who worked for support of the CF did not have knowledge about relation of the forest conservation and sales of product, even though the concept was given in the training (for officers who participated in training on the CF.) (Score:0.5)	Officers who do not work for the CF are difficult to manage and promote user groups about the CF expansion for forest conservation and production unless they receive OJT. (Score:1)
D. The FD township and district offices understood the necessity of legalization of sales from CF production. But no action was taken. (Score:0.5)	The FD township and district offices instructed the range officer to take necessary action toward the intention of user groups about the sales of the forest product. (Score:1)	The FD township and district offices are ready to establish the system for manage the CF expansion for forest conservation and production and to instruct the officers and staff. (Score:2)
E. FD Ayeyawady once decided that a practical trial of printing and use of the sales voucher from November 2003 in collaboration with study team, though the practice was not executed during the pilot project 2003 implementation period. (Score:0.5)	CF expansion for forest conservation and production reached agreement between the staff of the FD and study team. The FD Ayeyawady planed to start explanation about sales voucher to CF user group and giving training to FD frontline staff. (Score:1)	System of the CF expansion for forest conservation and production can be established by the FD district office. (Score:1.5)
F. The FD director general office understood necessity of the CF expansion for forest conservation and production. (Score:0.5)	The FD director general office discussed about production of forest products with the FD division and district offices. (Score:1)	System of the CF expansion for forest conservation and production can be supervised by the FD director general office. (Score:2)

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3) The FD officer and staff possess practical techniques and knowledge for CF					
Asset 2003	1.0	Asset 2004	1.3	Anticipated Asset	1.3
A. 3 deputy rangers and 7 foresters of FD Laputta received training (FD frontline staff capacity development project) in May-June and October-November in 2003 at the Thar Yar Kone mangrove extension center. They learnt the subjects of CF and participatory development, mangrove management and villager's consolidation activities. When five trainees were interviewed at the completion check, they answered that they understood well about all subjects and applied them in villages, but it was confirmed that they had rare opportunity to practice support to user group and CF extension and to transfer the subjects to other staff. (Score:1)		Training of participatory extension was held at the CFDTC sub-centre and Thar Yar Kone mangrove extension center targeted at FD (personnel concerning the CF. In the training of Thar Yar Kone, trainees checked their learning every night and discussed about the possible and better CF among them. They confirmed their knowledge and understanding of CF progressed. (Score:1.5)		The result of the training will be applied to the management and support of the community forestry in the field. (Score:1.5)	
B. A range officer and foresters supported user groups in planning and drawing management plan. Through this activity, they accumulated experience and knowledge of the planning and starting point of the CF. (Score:1)		Through the experience of pilot project 2004, range officer in charge of pilot project attended meetings of user group in Thar Yar Kone and Nyaung Ta Pin about CF operation, CF expansion, production and patrolling. They increased understanding of practical role of FD in the management and support of CF. (Score:1)		Experience and knowledge for supporting user group in planning and implementation of the community forestry are accumulated by the staff of the Thar Yar Kone nursery and the community forestry task force. Those for production and sales starts to be accumulated through their activities (as OJT). (Score:1)	
C. Necessary technologies for implementation of the components of the pilot project 2003, CF and mangrove rehabilitation were not transferred to the concerned staff and officer because of rare opportunity of communication between the sub-contractor and FD. (Score:1)		Necessary technologies for implementation of the components of the pilot project 2004 such as completion of the nursery construction, diversification of mangrove species seedling production and non-mangrove species seedling production were transferred to the FD C/P working in Thar Yar Kone nursery and range officer in charge of pilot project. They needed more OJT for direct operation because their experience is limited. (Score:1.5)		Technologies necessary for implementation of all steps of the CF are possessed by the staff of the Thar Yar Kone nursery and the CF task force, though it is difficult for them to conduct the direct operation by themselves. More experience is necessary through the OJT. (Score:1.5)	
4) The FD officer and staff have enough income for engaging in the duty of CF management and support.					
Asset 2003	0.7	Asset 2004	0.7	Anticipated Asset	1.0

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A. Salary of the FD officer and above level staff is not enough for their livelihood as a middle class (official salary was around 5,000 kyat per month), but generally they have opportunity to carry out side jobs to get supplement income. (Score:0.5)	Salary is the same as year 2003, however, the new trial of CF FD camp is started to generate income for FD staff through the CF activity. (Score:0.5)	Income of the officer and above level staff of the FD is not enough, but it is not obstacles against the CF management and support. The income from the CF FD camp is expected later. (Score:1)			
B. Salary of the FD staff is not enough for their livelihood as a staff member of the government organization (practically their monthly income was around 100 thousand ks), especially those whose main duty is tax collection, is not enough for livelihood because they could not achieve the target of the task if they are engaged in the CF. (Score:0.5)	Salary of the FD staff is not enough for their livelihood as a staff member of the government organization (practically their monthly income was around 100 thousand ks), especially those whose main duty is tax collection, is not enough for livelihood because they could not achieve the target of the task if they are engaged in the CF. (Score:0.5)	Low salary, especially loss of income caused by engagement in the CF is one of the obstacles against the engagement in it for field level staff of the forest department. (Score:1)			
C. Workers who were employed by the FD Thar Yar Kone integrated nursery for seedling production earned 500 kyat a day for their livelihood as a wage labour of plantation work. (Score:1)	Workers who were employed by the FD Thar Yar Kone integrated nursery for seedling production earned 500 kyat a day for their livelihood as a wage labour of plantation work. (Score:1)	Stable income opportunity is one of the incentives of working in the FD nursery for wage labourers. (Score:1)			
5) The FD officer and staff maintain good health condition for CF management and support.					
Asset 2003	0.5	Asset 2004	0.5	Anticipated Asset	1.0
A. The health condition of the staff members of FD offices was not always at good conditions for management and support to CF because of suffering malaria and other diseases. (Score:0.5)	The health condition of the staff member of FD offices was not always at good conditions for management and support to CF because of suffering malaria and other diseases. (Score:0.5)		The health condition could be obstacle to the management and support of the community forestry for all staff of the FD. More health care for the staff is necessary. (Score:1)		

1.2 Social Capital of FD

Assets 2003	Score	Assets of FD 2004	Score	Anticipated Asset	Score
1) Necessary policy, national and regional plans for CF are prepared.					
Asset 2003	2.0	Asset 2004	2.0	Anticipated Asset	2.0
A. National Forestry Sector Master Plan (2001-2031) exists, including establishment of 2.25 million acre of the CF area in the country. (Score:2)		National Forestry Sector Master Plan (04/2001-03/2031) exists, including establishment of 2.25 million acre of the CF area in the country. (Score:2)		CF activity is an activities specified in the national plan. (Score:2)	
B. Myaung Mya and Pyarpon district forest management plan exists (1996-2006), including the local supply/ community forest-working circle. (Score:2)		Myaung Mya and Pyarpon district forest management plan exists (04/1996-03/2006), including the local supply/community forest-working circle. (Score:2)		CF activity is an activities specified in the regional plan. This plan needs to refer to the IMMP at the next revision in 2006. (Score:2)	
C. Township five-year plan and annual plan were prepared. (Score:2)		Township five-year plan and annual plan were prepared. (Score:2)		CF activity is an activities specified in the township (Score:2)	

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2) Necessary institutional development for fulfillment of CF objective and intention of the FD is completed.					
Asset 2003	0.8	Asset 2004	0.9	Anticipated Asset	1.0
A. A range officer and foresters were verbally instructed to support villagers in starting CF to support villagers in preparation of CF management plan. (Score:1)		CF task force was established by the instruction of the FD Ayeyawady. CF task force was verbally instructed to support user group in CF operation including monitoring the CF activities. (Score:1)		The institution of management and support of CF is established, though it was by verbal instruction. More effective staff allocation in Laputta and BGL is considered by the FD DG on the proposal of the study team. (Score:1)	
C. ToR was not prepared in written form for the assigned officer and foresters and supporting plans for planning and implementation of the components of the pilot projects 2003. (Score:0.5)		ToR for the staff assigned to CF task force and CF monitoring team was not prepared. Action plan for assigned staff is not prepared, either. The staff was instructed verbally. (Score:0.5)		The immediate necessity of ToR for the staff assigned to CF task force and CF monitoring team is understood by the staff of the FD Myaung Mya. (Score:1)	
D. Promotion, manage, support plan for the CF including mandate, member, target and budget did not exist. (Score:0.5)		Promotion, manage, support plan for the CF including mandate, member, target and budget was not established by the completion check time. (Score:0.5)		The immediate necessity of the promotion, manage, support plan for the CF including mandate, member, target and budget is understood by the staff of the FD Myaung Mya. (Score:0.5)	
E. Working time allocated to the CF is not enough to fulfill the verbally instructed works for staff assigned to the pilot project 2003, because foresters had to continue their previous tasks. (Score:1)		Working time allocated to the CF is not enough to the assigned members of CF task force and CF monitoring team. (Score:1)		Shortage of working time engaging for management and support of the CF is understood at the FD director general and the FD Myaung Mya, but can be arranged. Though it is difficult to allocate more working time to the CF due to the limited number of staff, more effective working demarcation can be considered. (Score:1)	
F. CF certificate was granted to user groups of Thar Yar Kone and Nyaung Ta Pin organized in the pilot project by the FD Myaung Mya office. (Score:1.5)		Submission system of CF proposal was not provided, but CF task force accepted to receive updated CF management plan. (Score:1.5)		According to the establishment of the concrete role and activities of the CF task force, documents submitted by user groups can be transferred to higher offices (township, district) . (Score:1.5)	
G. FD Ayeyawady once decided that a practical trial of printing and use of the sales voucher from November 2003 in collaboration with study team, though the practice was not executed during the pilot project implementation period. (Score:0.5)		Supporting system for the CF production management regulation (sales voucher) was discussed and drafted with the study team but was not formulated. User group prepared and submitted the draft sales voucher to the FD. (Score:1)		Supporting system for the CF production management regulation (sales voucher) will start in 2004 and the FD will try to monitor the effect. (Score:1)	
3) Necessary record is being accumulated based on proper reporting system regarding CF activity.					
Asset 2003	0.5	Asset 2004	0.5	Anticipated Asset	1.0
A. Necessity of recording and reporting system for management and support of the CF (item, format, and submission time) was understood but the system was not established. (Score:0.5)		Necessity of recording and reporting system for management and support of the CF (item, format, and submission time) was understood but the system was not established. (Score:0.5)		The necessity of recording and reporting system necessary for management and support of the CF is understood by the staff of the FD Myaung Mya and will established. (Score:1)	

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B. Necessity of monitoring system of management and support of the CF was understood but not established. FD Myaung Mya has little experience of monitoring. FD frontline staff capacity development project was monitored both by the trainees and training staff, and the progress report of the training was prepared based on the result of the monitoring. (Score:0.5)	Monitoring system of management and supporting the CF was not established. FD in Myaung Mya has little experience of monitoring. Through OJT of user group extension workers, CF task force members who attended it could understand the contents and necessity of monitoring. (Score:0.5)	Though the necessity of the monitoring is understood by the staff of the FD Myaung Mya, it will take time to start the monitoring system of management and supporting the CF because the FD staff has little experience of monitoring. Training and OJT are needed. (Score:1)			
4) Necessary organization for CF management and support is prepared.					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.3
A. Themes, target area and villages of the pilot project were selected in collaboration of FD and study team. (Score:1)	Objectives of the pilot project were settled through the discussion among stakeholders, especially FD, user groups and the study team. (Score:1)			FD understands the necessary activity and support for user groups in promoting CF. (Score:1)	
B. Planning and drawing management plan and map and preparation of rules and regulation were supported by range officer in-charge of Pyinalan Reserved Forest and actual in-charge of pilot project and by foresters. (Score:0.5)	User group was supported by the CF task force in planning of new CF activities, implementation of CF operation and preparation of rules and regulation. (Score:1)			After the ToR is prepared, support to user group in every activity of CF from planning up to harvest can be done by the FD officers and staff who are assigned to the CF support, though the working time is not sufficiently allocated to this. (Score:1.5)	
C. Staff officer of FD Laputta was informed information about progress of the pilot project by the frontline staff, but he did not always give proper instruction for the progress of the pilot project or take necessary measure against obstacles. (Score:0.5)	CF monitoring team and CF task force were instructed to collect information about CF. But CF monitoring team did not start it because of lack of time and knowledge. (Score:1)			After the ToR is prepared, staff of the FD district office can start to collect information about CF, though knowledge of CF procedure and working time need to be increased to them. (Score:1.5)	
D. Range officer of FD Laputta and in charge of pilot project knew the progress of the pilot project and tried to take necessary measure as maximum as possible. (Score:0.5)	Range officer in charge of pilot project and CF task force member in charge of Thar Yar Kone integrated mangrove nursery collected information related to CF and seedling production and informed to their superior but not regularly. (Score:1)			The range officer in-charge of the pilot project can support to user group in every activity of CF from planning up to harvest, if he has enough working time for support of the CF. (Score:1.5)	
E. There was no regular patrolling by user groups. (Score:0)	Patrolling of user group in collaboration with local authorities (VPDC) was supported by the CF task force at necessity of the user group members. (Score:1)			Patrolling of user group in collaboration with local authorities (VPDC) is established. Because the CF task force members understand the necessity, it will continue in collaboration with user group. (Score:1)	

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F. FD Laputta understood the necessity of the sales voucher, but planning and implementation of registration of sales voucher was not supported by FD staff. (Score:0.5)	Planning and implementation of registration of sales voucher was not sufficiently supported by the CF task force. (Score:0.5)	Necessity of registration of sales voucher is understood by the staff of the FD Myaung Mya and trial registration is planned to be started in 2004. Training for sales voucher is needed for the CF task force for effect support. (Score:1)			
G. Technologies and knowledge about construction and management of the nursery were not transferred to the task team members. (Score:0.5)	Technology and knowledge about construction and management of the nursery including water channel, water reservoir, and nursery facilities, and new components of the CF were transferred to the staff of the Thar Yar Kone nursery and the CF task force from the study team staff. (Score:1)	Technology and knowledge about the construction of nursery, related facilitate and plantation of new mangrove species and non-mangrove species are not sufficient for the CF task force. OJT is needed for direct operation. (Score:1.5)			
5) Necessary CF training and extension material for the FD and community are prepared.					
Asset 2003	0.7	Asset 2004	1.5	Anticipated Asset	1.5
A. No staff members received training at the CFDTC, though CFDTC and COMFORT organized the 'training for extension staff' for deputy range officers and 'community forestry development training' for deputy range officer and range officers. (Score:0.5)	Four staff members of the counter part personnel received training of the participatory extension at the CFDTC in August to October 2004. They intended to apply their learning in their duty. (Score:2)	Training at the CFDTC is available to the staff of the FD Ayeyawady. The concept and theory of participatory extension can be accumulated in the staff of FD Ayeyawady. It can be applied in villages FD officers and staff have opportunity to work in villages. (Score:2)			
B. There was no OJT as the training system in FD. (Score:0.5)	There was no OJT system in the FD. However, the FD staff engaged in the pilot project had opportunities to experience activities of management and support the CF activities. (Score:1.5)	FD staff can learn knowledge and experiences during the work of management and support of CF user groups, as long as proper instruction and monitoring of FD are prepared in order that the work on site becomes good OJT opportunity. (Score:1.5)			
C. FD frontline staff CD project was implemented twice at Thar Yar Kone. Five frontline staff members attended the 1st session and nine frontline staff members attended the second session including five trainees of the 1st session. (Score:1)	Two of the trainees of pilot project 2003 were assigned as the CF task force members, while some trainees were transferred to other place and away from mangrove and CF. (Score:1)	Opportunity of transfer of technology and knowledge among frontline staff is limited, unless the opportunity of communication among the FD officers and staff is prepared by the FD township and district offices. (Score:1)			
Nil	Handout for public awareness is prepared in collaboration with DPDC and FD Myaung Mya. (Score:1.5)	Handout for public awareness is distributed to inhabitants in the reserved forests of Laputta and Bogalay in collaboration of FD and DPDC. (Score:1.5)			

1.3 Physical Capital of FD

Assets 2003	Score	Assets of FD 2004	Score	Anticipated Asset	Score
1) The FD has facilities and equipment for CF extension, management and support.					
Asset 2003	0.5	Asset 2004	1.5	Anticipated Asset	1.5
A. Construction of FD Thar Yar Kone integrated mangrove nursery was started, which was planned not only for the seedling production but also for FD CF extension centre in the area. (Score:1)		Construction of FD Thar Yar Kone integrated mangrove nursery was completed and the FD worked for management and support CF: for example, the FD staff invited CF members in the area to the center for discussion of CF activity for coming year. (Score:2)		Not only seedling production but also CF support activity are implemented at the FD Thar Yar Kone integrated mangrove nursery. (Score:2)	
B. The FD had no boat for management and support of CF user groups and CF extension. They used private boats of the officers and boats hired by pilot project. (Score:0.5)		The FD had no boat for management and support of CF user groups and CF extension. They mainly used private boats of the officers and boats hired by pilot project. One boat was procured from FD Laputta. (Score:1)		Transportation for support CF user group is difficult due to the lack of enough number of boats. (Score:1)	
C. Necessary stationary was not sufficient for the use of CF management and support of CF user groups. (Score:0.5)		Necessary stationary was not sufficient for the use of CF management and support of CF user groups. (Score:1)		Lack of necessary number of stationary is one of the obstacle against the effective activity of the CF task force, but it will be possible to request the budget to the FD director general office. (Score:1)	
D. There was no computer used for forest management in district and township level. (Score:0)		Computers and furniture were procured to the FD Myaung Mya and Laputta for CF management and accumulation of information concerning the CF. (Score:2)		Offices of the FD Myaung Mya and Laputta are equipped with computer, which are used for the documentation of CF and management. (Score:2)	
2) The FD has facilities and equipment for seedling production and distribution.					
Asset 2003	1.0	Asset 2004	1.5	Anticipated Asset	1.5
A. Kwa Kwa Ka Lay nursery produced seedling for FD direct operation and CF. (Score:1)		Seedling production unified at the Thar Yar Kone integrated mangrove nursery and Kwa Kwa Ka Lay nursery stopped production. (Score:1)		The FD Thar Yar Kone integrated mangrove nursery has capacity to produce enough seedlings for CF plantation and FD direct plantation, as long as management of the nursery is strengthened. (Score:1.5)	
B. The integrated mangrove nursery pilot project was started in May 2003 based on the plan prepared by the FD Laputta and the study team. (Score:1)		The construction of nursery, jetty, temporary building such as office and warehouse, renovation of Thar Yar Kone CF extension centre were completed at the completion check time. (Score:2)		- Ditto - (Score:1.5)	

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C. Seedling production was expected after completion of the Thar Yar Kone integrated mangrove nursery to fulfill the requirement of CF activity of Thar Yar Kone and Nyaung Ta Pin, FD's future plan for direct operations in southern Pyinalan reserved forest and potentials for expansion of CF villages in the same area. (Score:1)	Seedling production was started at the Thar Yar Kone integrated mangrove nursery. (Score:1.5)	- Ditto - (Score:1.5)			
D. Necessary nursery equipment was planned and procurement to the Thar Yar Kone integrated mangrove nursery was started. (Score:1)	Necessary nursery equipment was procured to the Thar Yar Kone integrated mangrove nursery by the pilot project. (Score:1.5)	Seedling is produced in the FD Thar Yar Kone integrated mangrove nursery using the procured nursery equipment. (Score:1.5)			
E. FD did not have a boat for seedling transportation. FD officers use their own private boats. The pilot project 2003 procured one big boat for seedling transportation. (Score:1)	The boat was started to be used for seedling transportation. (Score:1.5)	FD has a boat for seedling transportation. (Score:1.5)			
3) The FD has equipment and tools for forestry operation.					
Asset 2003	1.0	Asset 2004	2.0	Anticipated Asset	2.0
A. The FD Laputta had equipment and tools for FD forestry operation. (Score:1)	Equipment and tools were procured by the pilot project to Thar Yar Kone integrated mangrove nursery for FD forestry operation. (Score:2)	Forestry operation is implemented using the procured equipment and tools. (Score:2)			
4) The FD has facilities, equipment for patrolling.					
Asset 2003	0.5	Asset 2004	0.5	Anticipated Asset	1.0
A. Six forest camps were located in Pyinalan and Kyakankwinpauk reserved forests. They could be the bases of patrolling. (Score:0.5)	Six forest camps were located in Pyinalan and Kyakankwinpauk reserved forests. They could be the bases of patrolling. (Score:0.5)	Six forest camps located in Pyinalan and Kyakankwinpauk reserved forests can be the bases of patrolling, but the establishment of patrolling system is needed. (Score:1)			
Nil	Equipment and material for patrolling were not required by the CF task force. (Score:0.5)	Patrolling will be equipped with equipment and materials for patrolling to be procured. (Score:1)			
B. The FD did not have special boat for the use of patrolling. (Score:0.5)	The FD did not have special boat for the use of patrolling. (Score:0.5)	Lack of boat of the FD used for patrolling is an obstacle against the continuation of patrolling, but CF task force can use the patrolling boats of user groups. (Score:1)			
5) The FD has facilities and equipment for CF extension and public awareness.					
Asset 2003	0.5	Asset 2004	1.5	Anticipated Asset	1.7
A. The Thar Yar Kone FD integrated mangrove nursery was planned to be used for the centre of public awareness of mangrove conservation after completion. (Score:0.5)	The Thar Yar Kone FD integrated mangrove nursery became ready to be used for the centre of public awareness of mangrove conservation. (Score:2)	Program of public awareness of mangrove conservation can be done at the Thar Yar Kone FD integrated mangrove nursery. (Score:2)			

Attachment 11 Scoring of Asset for Forest Department and User Groups

B. FD Ayeyawady and Myaung Mya did not prepare the hand out for public awareness of mangrove conservation. (Score:0)	Hand out for public awareness of mangrove conservation was prepared in collaboration of FD and study team. (Score:1.5)	People receive a handout of mangrove conservation. (Score:2)
C. FD Laputta only owns a few boats. So the boats are not available for public awareness. And fuel cost management is always the problem. (Score:0.5)	FD Laputta only owns a few boats. So the boats are not available for public awareness. And fuel cost management is always the problem. But FD started the collaboration with local authorities. (Score:1)	Lack of transportation for public awareness is one of the obstacles, but it is possible to request to the FD director general office through township and district offices. (Score:1.5)
D. Equipment and tools necessary for public awareness were planed to be procured to the Thar Yar Kone FD integrated mangrove nursery. (Score:1)	Equipment and tools necessary for public awareness such as blackboard was procured to the Thar Yar Kone FD integrated mangrove nursery by the pilot project. (Score:1.5)	Public awareness program can be done at the FD Thar Yar Kone integrated mangrove nursery using the procured equipment and tools such as black board. (Score:1.5)

1.4 Financial Capital of FD

Assets 2003	Score	Assets of FD 2004	Score	Anticipated Asset	Score
1) The FD has necessary budget for CF extension, management and support.					
Asset 2003	0.6	Asset 2004	0.6	Anticipated Asset	1.0
A. system of budget request and allocation existed in the FD. (Score:1)		A system of budget request and allocation existed in the FD. (Score:1)		A system of budget request and allocation existed in the FD. (Score:1)	
B. No project budget was distributed to supporting user group during the pilot project 2003. FD Laputta requested project budget to the FD director general office but it was not accepted, because of lack of breakdown. (Score:0.5)		No project budget was distributed to supporting user group during the pilot project 2004 by the FD. (Score:0.5)		Project budget will be distributed to the CF task force to support of user group based on the request, but it is judged difficult for FD director general office to allocate the full requested amount because of shortage of project budget. (Score:1)	
C. The FD did not allocate the budget for compensating salary of frontline staff whose income could be reduced because of CF support. (Score:0.5)		The FD did not allocate the budget for compensating salary of frontline staff whose income could be reduced because of CF support. (Score:0.5)		Compensation of salary is difficult, but the FD considers it.. (Score:1)	
Nil		Nil		New income of FD can be generated by commission of sales voucher for forest product exportation. (Score:1)	
2) The FD has necessary budget for seedling production and distribution.					
Asset 2003	0.8	Asset 2004	0.8	Anticipated Asset	1.0
A. The FD had paid the budget for seedling production and allocated. The amount was based on the requirement of user group and the FD direct operation, but it was not enough. (Score:1)		The FD had the budget for seedling production and allocated it. The amount was based on the requirement of user group and the FD direct operation, but it was not enough. (Score:1)		Budget for seedling production can be allocated to the FD township office based on the budget request. (Score:1)	

Attachment 11 Scoring of Asset for Forest Department and User Groups

B. The FD did not have budgets for seedling transportation to CF villages. (Score:0.5)		The FD did not have budgets for seedling transportation to CF villages. CF task force prepared requirement of budget for seedling distribution to the FD director general office. (Score:0.5)		It is a system of request of special budget for distribution. (Score:1)							
3) The FD has necessary budget for forestry operation.											
Asset 2003		1.0		Anticipated Asset		1.0					
A. The FD had the budget for forestry operation and allocated it, but it was not enough. (Score:1)		The FD had the budget for forestry operation and allocated, but it was not enough. (Score:1)		Budget for forestry operation can be allocated even the amount is not enough. (Score:1)							
4) The FD has necessary budget for patrolling.											
Asset 2003		0		Asset 2004		0		Anticipated Asset		1.0	
A. The FD did not allocate the budget for patrolling to FD Laputta. (Score:0)		The FD did not allocate the budget for patrolling to FD township office. (Score:0)		Budget for patrolling can be allocated to the FD township office based on the budget request, though the amount may not enough. (Score:1)							
5) The FD has necessary budget for CF extension and public awareness.											
Asset 2003		0		Asset 2004		0		Anticipated Asset		1.0	
A. The FD did not allocate the budget for CF extension and public awareness. (Score:0)		The FD did not allocate the budget for CF extension and public awareness. (Score:0)		Budget for CF extension and public awareness can be allocated to the FD township office, though the amount may not be enough. (Score:1)							

1.5 Natural Capital of FD

Assets 2003	Score	Assets of FD 2004	Score	Anticipated Asset	Score
1) Vegetation has potential to be rehabilitated by culturing methods by local people					
Asset 2003	2.0	Asset 2004	2.0	Anticipated Asset	2.0
A. During the pilot project 2003, 17.25 ha of community forestry plantation and 57.01 ha of NFIO area was planted in both villages were rehabilitated. (Score:2)		During the pilot project 2004, 16.6 acre of community forestry plantation and 61.9 acre of NFIO area was planted in both villages were rehabilitated. (Score:2)		Rehabilitated area will increase by extension of the CF. (Score:2)	
B. Illegal shrimp ponds and salt pans increased around the pilot project site, but FD township office ordered to destroy them to the range officer in-charge of pilot project. (Score:2)		Illegal shrimp ponds and salt pans were destroyed and the forest department instructed these owners to recover mangrove forest. (Score:2)		Rehabilitated area will increase by extension of the plantation at destroyed shrimp ponds and salt pans. (Score:2)	
2) Natural conditions allow local people for sustainable production.					
Asset 2003	1.5	Asset 2004	1.5	Anticipated Asset	2.0
A. Harvesting with the sales voucher has not started yet, but some user group members started harvest from their community forest plantation and NFIO areas. (Score:2)		Harvesting with the sales voucher has not started yet, but some user group members started harvest from their community forest plantation and NFIO areas. They tried to start harvesting with the sales voucher. (Score:2)		Forest products from the CF plantation and NFIO areas in 2004 are harvested by some CF user group members using the trial sales voucher. (Score:2)	
B. Agroforestry was started in the community forestry area. (Score:1)		Agroforestry was practiced in the community forestry area. (Score:1)		Present agroforestry area continues production. (Score:2)	

Attachment 11 Scoring of Asset for Forest Department and User Groups

3) Forest conditions have potential to fulfill demand of wood products and NTFP of local needs.					
Asset 2003	1.5	Asset 2004	1.5	Anticipated Asset	2.0
A. Before the commencement of the CF, local people fulfilled their demand of wood products and NTFP such as poles, timber or nipa leaves for thatch in forests adjacent their residential areas. (Score:1.5)		Local people fulfilled their demand of wood products and NTFP such as poles, timber or nipa leaves for thatch in forests adjacent their residential areas. However, after the commencement (Score:1.5)		Forest condition continues to fulfill the demand of local people if user group and the FD manage the CF sustainably. (Score:2)	
B. After the commencement of the pilot project, CF was established and CF area was delineated. Members of user group could fulfill their demand of products exclusively from their CF area. (Score:2)		Villagers of adjacent villages increased their intention to start the CF. (Score:2)		Villagers of adjacent villages increased their intention to start the CF. (Score:2)	
C. Encroachment (illegal shrimp pond, illegal woodcutting and so on) increases in the reserved forest even after the pilot project started, but the CF . (Score:1)		Encroachment (illegal shrimp pond, illegal woodcutting and so on) increases in the reserved forest. (Score:1)		Encroachment area will decrease because FD strengthens countermeasure. (Score:2)	
4) Forest conditions have potential to fulfill demand of wood products and NTFP of the FD.					
Asset 2003	2.0	Asset 2004	2.0	Anticipated Asset	2.0
A. Wood products still satisfy the needs of the FD that is objective of the management of forest department to the area. (Score:2)		Wood products still satisfy the needs of the FD that is objective of the management of forest department to the area. (Score:2)		To fulfill demand of forest produced, the CF FD camp is under the preparation with 1,300 acre at the forest compartment No.61. (Score:2)	
B. Encroachment (illegal shrimp pond, illegal woodcutting and so on) increases in the reserved forest even after the pilot project started. (Score:2)		Encroachment (illegal shrimp pond, illegal woodcutting and so on) increases in the reserved forest. (Score:2)		Encroachment area will decrease because FD strengthens countermeasure. (Score:2)	
Nil		Weirs were destroyed by forest department and areas where once had been encroached were converted to plantation area. (Score:2)		Conversion from illegal land use to plantation will continue with the effort of the FD. (Score:2)	
Nil		To fulfill demand of forest products, the CF FD camp was under the preparation with 1,300 acre at the forest compartment No.61. (Score:2)		The FD will increase forest products and forest conservation by the manage the CF FD camp, even it requires the FD to more effort. (Score:2)	

2. Scoring of Asset analysis of the CF user groups

2.1 Human Capital of the CF user groups

Asset 2003	Score	Asset 2004	Score	Anticipated Asset	Score
1) People have a practical intention regarding community forestry					
Asset 2003	0.8	Asset 2004	1.4	Anticipated Asset	1.9
A. The user group members developed the management plan and started the community forestry activities. (Score:1)		The management plan and the action plan were updated by the user group. (Score:1.5)		The user group can start the CF activity with the support from FD. (Score:2)	
B. The user groups selected the CF chairmen, management committee members and subgroup leaders. (Score:1)		Extension workers were selected by the user group. (Score:1.5)		the user group can organize the user group. (Score:2)	
C. 30 years land utilization right was the incentive for starting the CF. this incentive was fulfilled. (Score:1.5)		6 new members started the CF activity to receive 30 years land utilization right. (Score:1.5)		The incentive works for the people to start the CF activity. (Score:2)	
D. The user group were keen on the sales voucher for the legal production from CF, but the user group could not start issuing the sales voucher. (Score:0.5)		The user group were keen on the sales voucher. The management committee members and half of the subgroup leaders understood how to issue the sales voucher. Actual application for the sales voucher was not started. (Score:1)		The incentive will work for the people to sustain the CF activity, but it was not confirmed during the pilot project. (Score:1.5)	
2) People have intension for community forestry expansion for forest conservation and/or production					
Asset 2003	0.8	Asset 2004	1.5	Anticipated Asset	1.5
A. One of the user groups were interested in starting patrolling and had plan to build a hut for patrolling purpose. (Score:1)		The patrolling activity was started by the user groups with the donated boat. The CF user group members in one of the satellite village started patrolling by their own rowing boat. (Score:1.5)		the user groups could start the patrolling by the support from the pilot project and the donator. Id user groups. (Score:1.5)	
B. The surrounding village was interested in the CF application to secure their area for the timber collection. (Score:1)		Kanbala Ta Pin village got interested in the CF activity more because of the CF aqua-agroforestry. The village authority send the candidate extension workers (Score:1.5)		the other villages also want to start CF. FD started the rehabilitation on the inactive user groups organized by FD in the UNDP project (Score:1.5)	
C. The CF area of Chan Thar Kone Village and Thar Yar Kone Village was overlapping. But no action was taken. (Score:0.5)		The border line between Chan Thar Kone and Thar Yar Kone Village was identified and confirmed by the both user group members with the support by FD (Assistent Director of Ayeyawady Division and the CF task force). (Score:1.5)		the other villages also want to start CF. (Score:1.5)	

3) People possess practical techniques and knowledge for community forestry					
Asset 2003	0.7	Asset 2004	1.2	Anticipated Asset	1.8
A. The user group members learned the techniques of plantation and NFIO from the pilot project activities. (Score:1)		The user group revised the action plan based on the experience of plantation in the pilot project 2003. Line management and monitoring was also started by the user group members. (Score:1.5)		With support, the user group learned the process to apply for CF (Score:2)	
B. The sales voucher issuing procedure was not clearly understood by the user groups. (Score:0.5)		The procedure of the sales voucher was understood by the management committee and the extension workers. (Score:1)		the sales voucher procedure is understood by the leaders. However, actual implementation is not yet done. (Score:1.5)	
C. The recording ability of the user group members was weak. FD and the study team's strong support was necessary. (Score:0.5)		The recording ability was improved especially for the extension workers and the recording result was shared in the workshop with the user group members. However, further training and awareness raising for recording is necessary to keep monitoring for annual progress report submission. (Score:1)		Leaders are able to keep records. The recording ability improvement needs the training. (Score:1.5)	
4) People can earn enough income and production from engagement of community forestry activity					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.5
A. The legal production from the community forestry with the sales voucher was not started. (Score:0.5)		The procedure to issue sales voucher was explained to the user groups by FD. The production activities under the community forestry such as the CF aqua-agroforestry were also started, but the income from the CF activity was not generated by the completion check period. (Score:1)		Not yet, but the intention of the user group is high. The surplus production from NFIO can be sold. For agroforestry and aqua-agroforestry, it is expected that if some people succeed, the other will follow. (Score:1.5)	
5) People maintain good health condition for community forestry management and support					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.5
A. The user group could implement the community forestry activity. Some people answered the health condition is one of the big obstacles for the community forestry. (Score:0.5)		The water reservoir construction was started. (Score:1)		Better water can be available throughout the year. (Score:1.5)	

2.2 Social Capital of the CF user groups

Asset 2003	Score	Asset 2004	Score	Anticipated Asset	Score
1) People's community has customs and know-how to engaged in group activities					
Asset 2003	1.0	Asset 2004	1.3	Anticipated Asset	1.5
A. Some of the user group members collaborated for NFIO and plantation usually by the family based cooperation. For demo plantation and school woodlot, the user group members collaborated. (Score:1)		The user group formed subgroups and prepared the management plan to start the communal type CF activities, namely the CF church woodlot, the CF school woodlot, the CF village woodlot, in both villages. (Score:1.5)		If facilitated, the interested user groups are able to be engaged in collaborative works. (Score:2)	

Attachment 11 Scoring of Asset for Forest Department and User Groups

B. Thar Yar Kone user group started the monthly meeting for CF. (Score:1)		Thar Yar Kone user group continued the monthly meetings for the CF activities, which made information sharing easier among the user group members. However, according to the result of the interview with the user group members, the information about the procedure of CF activities was not shared well because sometimes the participants were not many. (Score:1)		The monthly meeting can be started, but the information sharing should be considered. (Score:1)							
2) People's community possesses informal customs or norms to be engaged in group activities.											
Asset 2003		0.8		Asset 2004		1.2		Anticipated Asset		1.7	
A. Thar Yar Kone Village is more accustomed to the group activities compared with Nyaung Ta Pin Village. Thar Yar Kone user group started the CF monthly meeting. (Score:1)				Thar Yar Kone user group continued the CF monthly meeting while Nyaung Ta Pin user group did not hold periodical meetings. (Score:1)				User groups can hold meetings by themselves, however the support from FD is expected. (Score:1.5)			
B. Lack of customs of recording in any kind of purpose was observed throughout the pilot project 2003 implementation period. (Score:0.5)				Some of the extension workers and management committee members acquired the experience to keep record. (Score:1)				The custom for the recording did not exist. The capacity development was necessary. (Score:1.5)			
C. People in Thar Yar Kone Village were Kayin people who were said to be accustomed to the group activities. The school management were identified as active. And Thar Yar Kone Village started the CF monthly meeting. (Score:1)				The monthly meeting in Thar Yar Kone was continued. One of the Christian group members in Thar Yar Kone Village started the CF church woodlot. (Score:1.5)				The traditional group can be the CF subgroup because the group members expected for the production from the CF activity. (Score:2)			
3) People's community has customs or written rules for engaged in group activities.											
Asset 2003		1.0		Asset 2004		1.5		Anticipated Asset		1.8	
A. The user groups developed the rules and regulations for the CF activity. The user group members recorded only by their memory. (Score:1)				The user groups developed the rules and regulations for the new CF prototypes. However, recording of the rules and regulations in writing was weak. The record was kept in the user group members' memory. (Score:1.5)				the support was necessary for the user groups to develop the rules and regulations. The rules and regulations should be recorded in writing. (Score:1.5)			
Nil				The CF women group developed the rules and regulations and manual for the phoenix shoot processing. Now the women group processes phoenix heart following the manual. (Score:1.5)				With close facilitation, the women group could follow the written rules in the manual. (Score:2)			
4) People's community possess necessary knowledge and techniques for forestry											
Asset 2003		1.0		Asset 2004		1.3		Anticipated Asset		1.5	

Attachment 11 Scoring of Asset for Forest Department and User Groups

A. Through the mutual understanding, the user group learned the CF activities and the aqua-agroforestry in Bogalay. The group leader training and the actual implementation of the CF activities improved the forestry related knowledge and techniques of the user group members. (Score:1)	The user groups have decent knowledge about mangrove species, but not for the non-mangrove species. The knowledge about the site-species matching of mangrove species was utilized for revising the action plan. (Score:1.5)	the user group has limited information source. With the support by FD and the pilot project, the forest operation knowledge for mangrove species was improved. (Score:1.5)			
B. The stock map was prepared that indicated the vegetation (species distribution) of the CF area. (Score:1)	The stock map to estimate the resource volume and the allowable harvesting volume was not yet prepared. (Score:1)	The map to show the vegetation was prepared, but the stock map was not prepared. (Score:1.5)			
5) People's community has leader for engaged in community forestry activities					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.5
A. The CF chairmen were active in both of the user groups. Some of the management committee members and the subgroup leaders of Thar Yar Kone CF user group were active in discussion. The management committee members and the subgroup leaders of Nyaung Ta Pin user group was not active, but getting more and more active through the self evaluation during the pilot project. (Score:0.5)	The chairman of the user groups coordinated the user group members, based on communication with the forest department at Thar Yar Kone nursery. Also the management committee took the responsibility for submission of documents and organization of the members. (Score:1)	The user group could select the management committee and subgroup leaders. However, the support for the management of the group is necessary. (Score:1.5)			
B. Nil (Score:0)	The extension workers supported the management committee for recording and monitoring of the activities. However, because the knowledge and skill of the extension worker was limited, the role of extension worker as of communication center in the management committee of the user group was just at the beginning stage. (Score:1)	The user group members can be the extension worker through the on-the-job training. The extension workers obtained the knowledge, custom and skill for recording. (Score:1.5)			

2.3 Physical Capital of the CF user groups

Asset 2003	Score	Asset 2004	Score	Anticipated Asset	Score
1) Community has necessary solid asset to be engaged in community forestry activities such as road, boat, jetty, warehouse, tools, equipment and material					
Asset 2003	1.0	Asset 2004	1.5	Anticipated Asset	1.3
A. One of the user groups renovated the jetty with the support by the pilot project. The road connecting the nursery and the village is paved. Both of the villages own the building where the user group can have discussion. The agro-nursery was constructed in Thar Yar Kone with storage. (Score:1)		The pilot project 2004 supplied necessary material for CF aqua -agroforestry, CF water reservoir, CF value adding production (boiled phoenix heard) etc. But the utilization and management of these materials were just at the beginning stage and should be continued to support. (Score:1)		The materials supplied should be managed by subgroups of user groups. The subgroups can follow the rules and regulations which they already set by themselves with the support of the pilot project. (Score: 1.5)	
B. The user group members own their area in far place (for example, subgroup 6 of Thar Yar Kone Village and subgroup 5 and 6 of Nyaung Ta Pin Village) and had difficulties for daily operation and monitoring. The seedling transportation was burden for most of the user group members. (Score:1)		Both of the user group received the boat as donation that is essential equipment enabling effective patrolling, member's transportation, seedling transportation, etc for the CF activities. (Score:1)		The boat can be utilized by the user groups in accordance with the rules and regulations for boat management that were set by themselves with the support of the pilot project. Because the cost for engine boat management is bigger than the other materials, the boat management should be considered carefully. (Score:1)	
2) People has necessary solid assets to be engaged in the CF activities such as forestry equipments and tools					
Asset 2003	0.8	Asset 2004	1.0	Anticipated Asset	1.3
A. The user group members received the machete and the jungle boots for the CF activity. (Score:1)		Many of the tools supplied by the pilot project 2003 were damaged by the salty water and unfavorable condition in the delta and the user group members had shortage of jungle boots and machete for the forest operations. (Score:1)		The shortage of principle tools for forestry caused by chronic poverty condition is the obstacle of the future community forestry activity. (Score:1)	
B. Especially in Thar Yar Kone, the transportation, namely the boat availability is low. Also in Nyaung Ta Pin, it takes long time to row a boat to some of the subgroup CF area. (Score:0.5)		The donated boats are operated by the user group members. Sometimes the subgroup uses the boat for approaching their area together. (Score:1)		In the rainy season, it is difficult and dangerous to access far place by rowing boat, but the donated boat can be utilized for safer transportation. (Score:1.5)	
3) Community has necessary labor forces to be engaged in community forestry activities					
Asset 2003	1.0	Asset 2004	2.0	Anticipated Asset	2.0
A. The user groups cooperated for the demo plantation, school woodlot in plantation and NFIO. (Score:1)		The user group is supplying labor force for the construction of the water reservoir that required around 1,000 man-days. The user group will be able to supply work force for the community forestry. (Score:2)		The user group members can share the workload if necessary. (Score:2)	
4) People has necessary labor forces to be engaged in community forestry activities					
Asset 2003	1.0	Asset 2004	1.5	Anticipated Asset	2.0
A. Out of 26 interviewee of the non-participants for the CF activity, 13 persons answered the lack of labor was the reason of non-participation. (Score:1)		Six user group members quitted from the user groups because of lacking in spare labor force. However, these members participated in the CF. (Score:1.5)		Even though not all people can be involved in the CF activity according to the labor availability in their family, these people can participate in the communal CF activities such as the CF church woodlot and the CF water reservoir. (Score:2)	

5) Community has necessary facilities for processing the value added products					
Asset 2003	0.5	Asset 2004	1.5	Anticipated Asset	1.5
A. Each of the community possessed communal hall. Thar Yar Kone village had buildings in the CF extension center. (Score:0.5)		A hut in the extension center area was renovated and equipped with the phoenix shoot processing facilities. It can also be utilized for the other purpose if the women group wishes. (Score:1.5)		The marketing and the quality control needs the further experience and input, however the benefit can encourage the people to continue the activities. (Score:1.5)	

2.4 Financial Capital of the CF user groups

Asset 2003	Score	Asset 2004	Score	Anticipated Asset	Score
1) People have necessary income for preparatory work of community forestry activities					
Asset 2003	1.0	Asset 2004	1.3	Anticipated Asset	1.6
A. The user group members whose achievement rate was low mentioned that they had difficulty to earn their living. (Score:1)		Some of the user group members said that the burden for contributing labor and/or money for the government and village was the obstacle for the community forestry implementation. (Score:1)		The user group will get benefit from the CF activities with further support by FD. (Score:1.5)	
B. The income generation activities were started under the CF. (Score:1)		The income generation activities were diversified under the CF. (Score:1.5)		The user group will get benefit from the CF activities with further support by FD. (Score:2)	
C. The livelihood of the two villages depended heavily on the crab catching and wage labor. (Score:1)		The livelihood structure is the same as the last year. But income generating activity through CF is diversified and started. (Score:1.5)		the village economy is vulnerable to the economical situation of the outside, but it is possible to strengthen the economy by diversification of the CF income generating activity with further support by FD. (Score:2)	
D. The average income of the two villages were just enough and no surplus for their livelihood (Score:1)		The average income of the two villages were just enough and no surplus for their livelihood. (Score:1)		Income is increased. The pilot project impact was seen from the wage labor in the nursery. (Score:1)	
2) People have necessary income for implementation in community forestry activities					
Asset 2003	1.0	Asset 2004	1.0	Anticipated Asset	1.0
A. The people who own the land in the lower ground level usually go to their area when they go for fishing and crab catching. (Score:1)		Some of the user group members said that the burden for contributing labor and/or money for the government and village was the obstacle for the community forestry implementation. (Score:1)		As long as the income can be generated, the CF implementation is feasible. (Score:1)	
3) People have necessary income for harvesting of community forestry activities					
Asset 2003	0.5	Asset 2004	0.5	Anticipated Asset	1.0
A. The tools like a machete are necessary for the harvesting. As long as harvesting brings the certain amount of benefit to the user groups, the user group can operate harvesting (Score:0.5)		The tools like a machete are necessary for the harvesting. As long as harvesting brings the certain amount of benefit to the user groups, the user group can operate harvesting (Score:0.5)		If the products can be legalized for sales, harvesting can be done. (Score:1)	
4) People have necessary income for management of community forestry activities					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.0
A. The user group had a plan to construct a hut, but they did not. (Score:0.5)		The trainee joined the extension worker training with the 500 kyat of daily allowance. It is supposed to be not much income even for the villagers. They could be engaged in the CF activities with the normal income. (Score:1)		At the moment, the management committee members can not get any payment, however, after the sales voucher is issued, each member can share some benefit for the management committee. (Score:1)	

5) People have necessary income for the patrolling of community forestry activities					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.5
A. The user group had plan to construct a hut, but they did not. (Score:0.5)		The user groups started the patrolling with the donated boat. The subgroup for the boat management is responsible for the boat budget. The user group members living in the satellite village started the patrolling by their own boat. (Score:1)		The subgroup manages the boat and collect money if someone hires it. The fuel and the maintenance cost covering plan in formulated, thus the actual management should be done in accordance with the plan. (Score:1.5)	

2.5 Natural Capital of the CF user groups

Asset 2003	Score	Asset 2004	Score	Anticipated Asset	Score
1) Natural condition allows people to live in the reserved forest					
Asset 2003	1.0	Asset 2004	1.0	Anticipated Asset	1.5
A. Though it is rapidly decreasing, there are mangrove resources and fishery resources enough for the local people for survival. However, there is land erosion in some villages, which may result in the resettlement later on. (Score:1)		Though it is rapidly decreasing, there are mangrove resources and fishery resources enough for the local people for survival. However, there is land erosion in some villages, which may result in the resettlement later on. (Score:1)		As long as the population continues to grow, it is not sustainable living condition. In some area, the erosion causes the bad effect. However, the land ownership based on the CF certification can be the barrier against more migration from the other area. Also the ownership by the local people would improve the natural condition by the appropriate resource management together with FD. (Score:1.5)	
2) There is land for engaged in community forestry activity					
Asset 2003	1.5	Asset 2004	1.5	Anticipated Asset	1.5
A. The land is allocated for the user groups of Thar Yar Kone and Nyaung Ta Pin Village by FD (Score:1.5)		The land allocation for new members and new community forestry activities did not meet any constraint of the land availability. The school woodlot will be allocated in the current community forest area of Thit Poke Village. The forest department will withdraw Thit Poke community forestry area next to Tar Yar Kone community forestry area because that area was not operated now. It is evaluated that the land for community forestry is enough in southern Pyinalan reserved forest. (Score:1.5)		The land availability is enough in the pilot project area. Even though some of the area is clear cut by the illegal activities, there are still some forest resources for the NFIO activity to get production soon. (Score:1.5)	
3) Natural resource exists in the area					
Asset 2003	0.5	Asset 2004	1.0	Anticipated Asset	1.5
A. The user groups planted over 40 acres of the CF area. (Score:0.5)		The user group planted over 80 acre of the CF area. (Score:1)		The bare land existed in the CF area is rehabilitated (Score:1.5)	
B. Some of the user group members utilized the product from the NFIO activity. The sales voucher format to legalize the CF product was prepared, but not applied yet. (Score:0.5)		The stock map was not developed by the CF user group. At the moment, the user group only has the vegetation map showing the mangrove species distribution. Based on the resource map, currently practicing the community forestry activities. For the production of boiled phoenix shoot, it was assessed that there were enough phoenix resources for production. Based on the resources, the production plan was prepared (Score:1)		The CF activities will increase the natural resources available for the user group members. With FD's initiative, it can be possible for user groups to produce from the forest resources legally. (Score:1.5)	

4) The productivity of the area is enough to sustain the CF activities					
Asset 2003	1.0	Asset 2004	1.5	Anticipated Asset	1.5
A. The productivity of the land is low from the production of Agroforestry in the homestead area was started especially in Nyaung Ta Pin Village even though it was not certified as the CF prototype. (Score:1)		The agroforestry activity supported by the pilot project 2003 was re-activated as the CF agroforestry during the pilot project 2004. The agro-nursery activity was reorganized and will be utilized for production of seedling and seeds for continuous activities of agroforestry. (Score:1.5)		Agroforestry, compost making, CF plantation for windbreak can improve the productivity of delta area with the continuous support by FD. Also NTFP such as phoenix shoot and medicinal plants are potential income source. (Score:1.5)	
B. The user group members got interested in the aqua-agroforestry in Bogalay through the mutual understanding. Actual implementation was not yet started. (Score:1)		The management plan of the CF aqua-agroforestry was developed, but the actual implementation was not yet started. However, because the crabs and fish were one of the main productions in the area, there should be high potential for the sustainable production as long as management plan and production plan exist. (Score:1.5)		The CF aqua-agroforestry can be the legal means of producing shrimps, fish and crabs for livelihood improvement. However, the technical support is still necessary. (Score:1.5)	
5) Seeds and propagules can be easily obtained					
Asset 2003	1.0	Asset 2004	1.5	Anticipated Asset	1.8
A. In the pilot project area, there are abundant mangrove resource for seeds, propagules and natural sapling for transplantation. Some of the user group members collected the seed, propagules and sapling for the plantation and NFIO activity. (Score:1.5)		For the nursery operation, Laputta Township FD set the mother tree orchard for seed and propagules collection. (Score:1.5)		With managing the mother tree orchard, seeds and propagules availability should not be a problem. (Score:2)	
B. Non-mangrove species seeds are not so easy to be collected by the user group members. (Score:0.5)		The diversified non-mangrove species in Thar Yar Kone nursery were utilized for the plantation and NFIO. (Score:1.5)		non mangrove seeds should be supported at least till the first fruiting of the introduced seedlings. (Score:1.5)	