

# 添付 19 管区レベル・マングローブ調整 会合記録集 (全容 CD 収納)

添付 19-1:第一回 管区レベル・マングローブ調整会合記録集

添付 19-1:第二回 管区レベル・マングローブ調整会合記録集



Forest Department  
Ministry of Environmental  
Conservation and Forestry  
Republic of the Union of  
Myanmar

Japan International  
Cooperation Agency



**THE INTEGRATED MANGROVE REHABILITATION AND  
MANAGEMENT PROJECT THROUGH COMMUNITY  
PARTICIPATION IN THE AYEYAWADY DELTA  
IN MYANMAR**

Proceedings for  
**1<sup>st</sup> Regional Level Mangrove  
Coordination Meeting  
And  
Mangrove Seminar**  
November 2011

**MANGROVE COMMUNITY FORESTRY TASK FORCE /  
FOREST DEPARTMENT  
JICA EXPERT TEAM (NIPPON KOEI CO., LTD)**

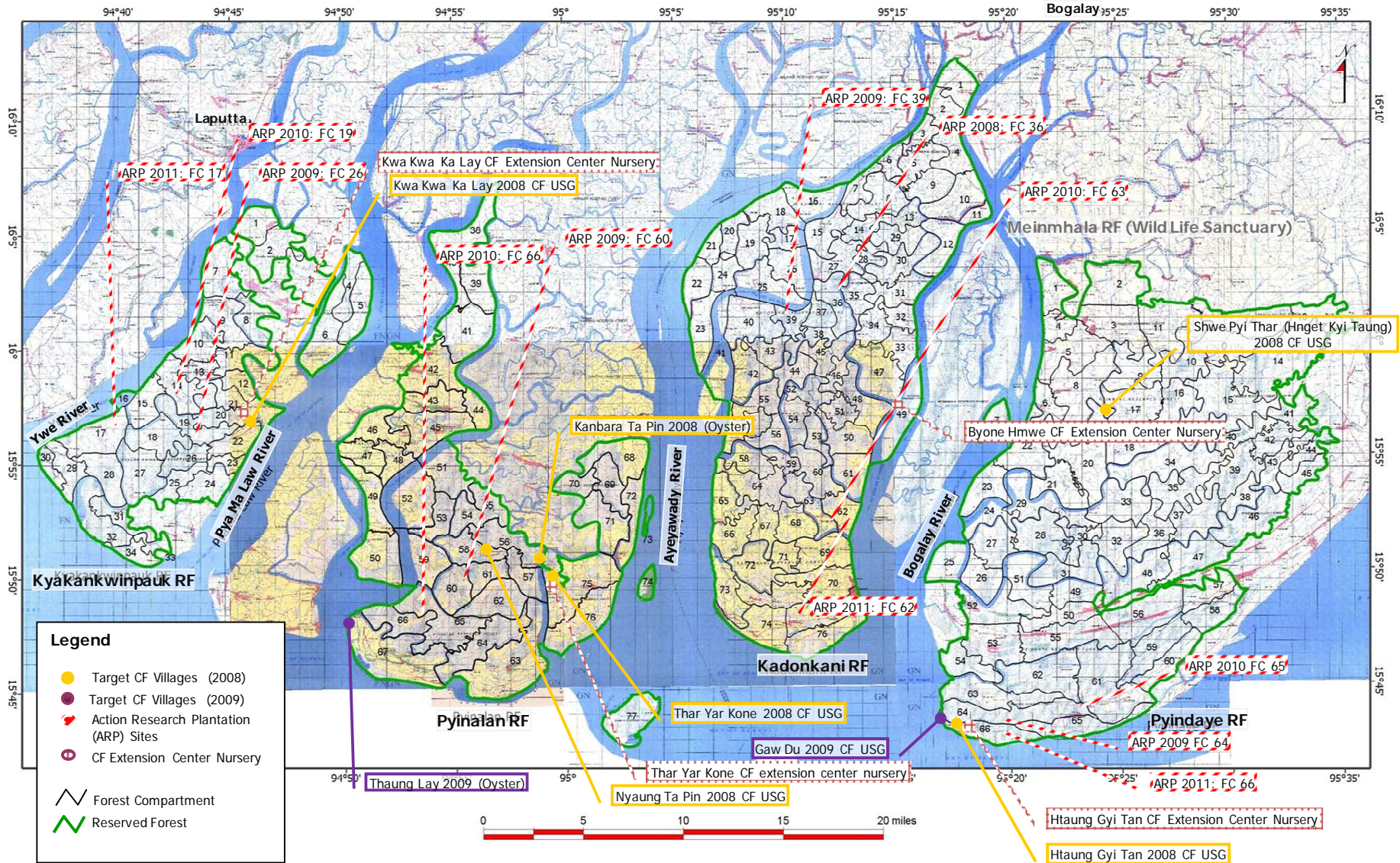
## Location Map of the Project Activities (September 2011)

Target Reserved Forest ( Four RFs)

Target CF User Groups 2008 (yellow) and 2009 CF villages are in purple color, Target Oyster Trial Village (2 villages)

CF Extension Centre Nurseries (4 sites)

Action Research Plantation (ARP) Sites: FY2008 (1 site), FY2009 (4 sites) , FY2010 (4 sites), and FY2011 (3 sites)



**Photos: Opening Ceremony for 1<sup>st</sup> Regional Level Mangrove Coordination Meeting & Mangrove Seminar (Bogalay Township)**



**[Output 4] Regional Mangrove Coordination Meeting 7.11.2011**



**[Output 4] Regional Mangrove Coordination Meeting 7.11.2011**



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Photo : 1<sup>st</sup> Regional Level Mangrove Coordination Meeting (Bogalay Township)



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Photos : Mangrove Seminar (Bogalay Township)



[Output 4] Mangrove Seminar 8.11.2011



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The Integrated Mangrove Rehabilitation and Management Project through Community Participation  
in the Ayeyawady Delta in Myanmar

**Proceedings for 1st Regional Level Mangrove Coordination Meetings  
and  
Mangrove Seminar**

**Table of Contents**

Project Area Map

Photo

Abbreviations

1. Introduction .....	1
2. 1st Regional Coordination Meeting (Bogalay) .....	2
2.1 Agenda .....	3
2.2 Meeting Minutes .....	4
2.3 Participant List .....	10
3. Mangrove Seminar (Bogalay) .....	16
3.1 Agenda .....	17
3.2 Meeting Minutes .....	18
3.3 Participant List .....	23

**Attachment List**

Attachment 2 Presentation Materials for Regional Mangrove Coordination Meeting (Bogalay)

- Attachment 2-1: Opening Speech of Union Minister
- Attachment 2-2: Reserved Forest Management, Land use issues in the Reserved Forest Area
- Attachment 2-3: Progresses and Achievements Related to JICA/FD Mangrove Project
- Attachment 2-4: Mangrove Forest in the Project Area
- Attachment 2-5: Strategies and approaches toward reserved forest area by agriculture sector (MAS)
- Attachment 2-6: Strategies and approaches toward reserved forest area by agriculture sector (SLRD)
- Attachment 2-7: Strategies and approaches toward reserved forest area by agriculture sector (DoF)

Attachment 3: Presentation Materials for Mangrove Seminar (Bogalay)

- Attachment 3-1: Presentation-1: JICA/FD Mangrove Project: Progress and Achievement
- Attachment 3-2: Presentation-2: Action Research Plantation (ARP)
- Attachment 3-3: Presentation-3: CF Activities
- Attachment 3-4: Presentation-4: CF Extension and SOP
- Attachment 3-5: Presentation-5: Discussion result of Group-1
- Attachment 3-6: Presentation-6: Discussion Result of Group-2
- Attachment 3-7: Presentation-7: Discussion Result of Group-3

## Abbreviation Table

Abbreviation	Full Description
AD	Assistant Director
ARP	Action Research Plantation
C/P	Counter Part
CDMA	Code Division Multiple Access (one system of mobile phone)
CF	Community Forestry
CFUSG (CFUG*)	Community Forestry User Group (*The project and former JICA study was using the abbreviation “CFUSG” since 2002. However in order to avoid confusions among relevant stakeholders, gradually replacing “CFUSG” into “CFUG”.)
CFECN	Community Forestry Extension Centre Nursery
CFI	Community Forestry Instruction
DOF	Department of Fishery
DPDC	District Peace and Development Council
DRO	Deputy Range Officer
EC	Electric Conductivity
FAPC	Foreign Affairs Policy Committee
FD	Forest Department
FPM	Field Project Manager
FRI	Forest Research Institute
GIS	Geographic Information System
GPS	Global Positioning System
It/R	Interim Report
IMMP	Integrated Mangrove Management Plan
JCC	Joint Coordinating Committee
JET	JICA Expert Team
JICA	Japan International Cooperation Agency
LBVD	Livestock Breeding and Veterinary Department
MAS	Myanma Agriculture Service
MCFTF	Mangrove Community Forestry Task Force
MOF	Ministry of Forestry
NDVI	Normalized Difference Vegetation Index
NGO	Non Government Organization
NFIO	Natural Forest Improvement Operation
PDC	Peace and Development Council
PSD	Planning and Statistic Division (FD)
PSD	Planning and Statistic Department (MOF)
POM	Project Operation Manual
Pr/R	Progress Report
RECOFTC	Regional Community Forestry Training Centre
R/D	Record of Discussions
RF	Reserved Forest
RO	Range Officer
SLRD	Settlement and Land Record Department
SO	Staff Officer
TPDC	Township Peace and Development Council



Abbreviation	Full Description
UNDP	United Nations Development Program
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
USDA	Union Solidarity Development Association
USG	User's Group/User Group
VPDC	Village Peace and Development Council
WFP	World Food Programme

Area Abbreviation	Full Description
APG	Ahpyin Pade Gaw
ATS	Ahtet Su
AYW	Ayeyawady
BGL	Bogalay
BYM	Byone Hmwe
DMD	Daming Daung
GCG	Gway Chaung Gyi
GAD	Gaw Du
KADK	Kadonkani (Reserved Forest)
KKKL	Kwa Kwa Ka Lay
KKKP	Kyakankwinpauk (Reserved Forest)
KTP	Kanbala Ta Pin
KTS	Kwin Thone Sint
LPT	Laputta
MYM	Myaung Mya
NPT	Nay Pyi Taw
NTP	Nyaung Ta Pin
PNDY	Pyindaye (Reserved Forest)
PNK	Peine Kone
PNLN	Pyinalan (Reserved Forest)
PYP	Pyar Pon
SPT	Shwe Pyi Thar
TGT	Htaung Gyi Tan
TYK	Thar Yar Kone
TWL	Thaung Lay
YGN	Yangon

NGO	Full Description
ACTED	Agency Cooperation Technology and Development
CARE	Care Myanmar
FREDA	Forest Resource and Environmental Development Association
GRET	Group of Research Exchange Technology
MSF	Medici an Sans Frontiers
Metta	Metta Development Foundation
SC	Save the Children
WC	World Concern

Main Text

## 1. Introduction

The Integrated Mangrove Rehabilitation and Management Project through Community Participation in Ayeyawady Delta, so called the JICA/FD Mangrove Project, has 5 outputs and this “Regional Level Mangrove Coordination Meeting” and “Mangrove Seminar” are regarded as an activity under Project’s Output 4 “Establish a Coordination Mechanism among key sectors for mangrove area management”.

The regional level mangrove coordination meeting, held on 7<sup>th</sup> November, 2011, is regarded as an inter-agency coordination meeting, consisting of relevant authorities at the regional level to examine the underlying causes for mangrove deforestation in the Ayeyawady Delta. Originally, a regional coordination committee was aimed to be established but after the Project’s mid-term review (which was conducted between February-March 2011), the activity was re-organised to organize meetings instead of forming a committee.

This regional mangrove coordination meeting aimed to discuss and share each other’s strategies and approaches toward reserved forest area management and mangrove resource management, in relation to the recent move on land use policy in the nation.

The Mangrove Seminar which was conducted on the following day of the Regional Level Mangrove Coordination Meeting is more intended to share about the Project’s progresses, achievements and issues to relevant stakeholders. The Mangrove Seminars have been conducted regularly in the past years, and this Mangrove Seminar had following specific objectives:

- Share experiences / lessons learned from Project Activities with relevant stakeholders (government, donors, NGOs)
- Discussion and share experiences / lessons learned related to better CF/ Mangrove Management and livelihood improvement of communities

This document aimed to brief topic/ issues presented and discussed in “1<sup>st</sup> Regional Level Mangrove Coordination Meeting” and “Mangrove Seminar” to participants and those who are interested.

The Project aims to conduct second Regional Level Mangrove Coordination Meeting during FY2012-13.

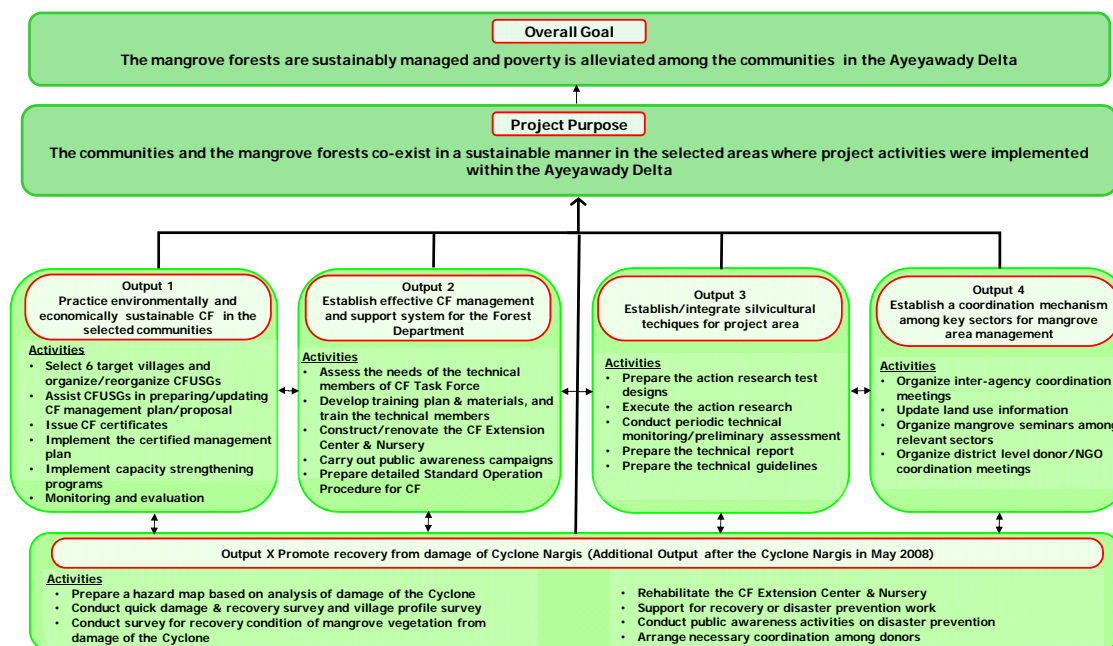


Figure Project Framework Based on PDM Version 2

**2. 1<sup>st</sup> Regional Coordination Meeting (Bogalay)**

## 2.1 Agenda

### AGENDA

#### Regional Mangrove Coordination Meeting and Mangrove Seminar

##### 1. Objective

- Explanation about Progresses and Achievement related to JICA/FD Mangrove Project
- Explanation about mangrove forest status in the Project Area
- Explanation about Reserved Forest Management, Mangrove Management and CF Management by FD
- Explanation about Strategies and Approaches toward Reserved Forest by other departments and agencies
- Discussion and share experiences / lessons learned related to Reserved Forest Management, Mangrove Management and CF Management in the delta area

##### 2. Goals of Meeting

- Participants to share about strategies and approaches among relevant agencies toward reserved forest area
- Participants to discuss and share about possible synergy for mangrove protection and development of reserved forest area.

##### 3. Venue: Bogalay Town Hall

4. Date and Time: 7 November, 2011, Opening Ceremony: (7:30 Registration) 8:00 – 9:30  
Mangrove Seminar: (13:00 Registration) 13:05 – 16:00

##### 5-1. Agenda of Opening Ceremony

Sr.	Time	Subject	Remark
1	07:30-07:55	Registration	All Participants
2	08:00-08:20	Minister of Ministry of Environmental Conservation and Forestry taking seat	Departmental Authorities
3	08:20-08:25	Announcement of "Opening Ceremony"	MC
4	08:25-08:35	Opening Speech 1	Union Minister
5	08:35-08:45	Opening Speech 2	JICA Representative
6	08:50-09:00	Group Photo	All Participants
7	09:00-09:05	Announcement of closing of "Opening Ceremony"	MC
8	09:05-09:30	Refreshment	All Participants
9	09:30	Departure of Union Minister and Body	
10	10:00	Break	All Participants

##### 5-2. Agenda of Regional Mangrove Coordination Meeting

Sr.	Time	Subject	Person
1	13:00-13:05	Registration	All Participants
2	13:05-13:10	Chairperson taking seat	U Bo Ni (Project Coordinator/ Deputy Director)
3	13:10-13:20	Opening speech	JICA Expert
4	13:20-13:30	Reserved Forest Management, Mangrove Management and CF Management by FD	U Bo Ni (Project Coordinator/ Deputy Director)
5	13:30-13:50	Progresses and Achievement related to JICA/FD Mangrove Project	Field Project Manager
6	13:50-14:00	Mangrove forest status in the Project Area	JICA Expert
7	14:00-14:10	Strategies and approaches toward reserved forest area by agriculture sector	MAS
8	14:10-14:20	Strategies and approaches toward reserved forest area by agriculture sector	SLRD
9	14:20-14:30	Strategies and approaches toward reserved forest area by fishery sector	DoF
10	14:30-14:45	Refreshment	All Participants
11	14:45-15:30	Discussion Section (in Myanmar) <ul style="list-style-type: none"> <li>- Differences in Strategies and approaches toward reserved forest area by relevant departments and authorities</li> <li>- Possible synergies among concerned departments for better mangrove management (protection, production,)</li> <li>- Possible synergies among concerned departments for better livelihood improvement of local communities</li> </ul>	Discussion led by Chairperson and/or Facilitator
12	15:30-15:50	Way Forward	U Bo Ni
13	15:50-16:00	Closing Speech	JICA Expert
14	16:00	Announcement of closing of "Regional Coordination Meeting"	MC

## **2.2 Meeting Minutes**

### **Meeting Minutes of 1st Regional Mangrove Coordination Meeting (Bogalay)**

Date	:	7 <sup>th</sup> November 2011
Time	:	08:00 to 16:00
Venue	:	“Bogalay Town Hall”, Bogalay Township
Participants	:	refer participant list)

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#### **1. Opening Ceremony**

U Bo Ni, Deputy Director/ Project Coordinator of FD, acted as MC. First, he read out the agenda of the ceremony. Then, he announced that the ceremony is officially opened.

#### **Opening Speech**

U Win Hun, Union Minister of Environmental Conservation and Forestry, delivered the opening speech. Details of the speech are presented in Attachment 2-1.

#### **Opening Speech**

Mr. Tanaka, chief representative of JICA Myanmar Office, deliver the Opening Speech. First, on behalf of JICA, he thanked to distinguish guests and all participants for giving their valuable time for this meeting. He explained about JICA’s policy and history on assistance toward Myanmar and the forestry sector. He appreciated collaboration between Myanmar side and Japanese side for the implementation of this mangrove project. He concluded his opening speech by expressing his expectance of closer collaboration between Japanese side and Myanmar side in future for creating a sustainable co-existence of community and mangrove forests.

#### **Group Photo & Announcement of Closing of "Opening Ceremony"**

Invited guests and project stakeholders took group photos and MC announced the closing of the Opening Ceremony.

#### **2. Mangrove Seminar**

U Hla Myo Aung, staff officer/ Assistant Project Manager from FD/ Myaung Mya District, acted as MC. First, he read out the agenda of the seminar. Then, he announced that the seminar is officially opened.

#### **Opening Speech**

Mr. Shibayama, Chief Adviser from JICA Expert Team, delivered the opening speech. First, on behalf of JICA and JICA Expert Team, he thanked to all participants for giving their

valuable time for this meeting. Then he explained that this was the first meeting conducted under the project's output 4 "Establishing a coordination mechanism among key sectors for mangrove area management". The objective of 2<sup>nd</sup> Regional Mangrove Coordination Meeting is to discuss and share different departments' strategies and approaches toward reserved forest management and mangrove forest management and to relate these to the recent move on land use policy in the nation. He concluded his opening speech by expressing his sincere thanks to all distinguished guests.

### **Presentation Section**

#### **Presentation-1) Reserved Forest Management, Land use issues in the Reserved Forest**

U Bo Ni, deputy director/ project coordinator FD, made a presentation of the topic above on behalf of U Zaw Win (5), regional director, FD.(See attachment 2-2)

#### **Presentation-2) Progresses and Achievement Related to JICA/FD Mangrove Project**

U Khin Maung Lwin, assistant director from Myaung Mya FD cum field project manager, presented about the progresses and achievements related to the project. (See attachment 2-3)

#### **Presentation-3) Mangrove Forest Status in the Project Area**

Mr. Shibayama, chief adviser of JICA Expert Team, presented about recent mangrove forest/ land use status in the Project Area. (See attachment 2-4)

#### **Presentation-4) Strategies and approaches toward reserved forest area by agriculture sector**

U Hla Wai, assistant general manager of Myanmar Agriculture Service (MAS), made a presentation of the topic above. (See attachment 2-5)

#### **Presentation-5) Strategies and approaches toward reserved forest area by agriculture sector**

U Oh Myint, director of Settlements and Land Record Department (SLRD), made a presentation of the topic above. (See attachment 2-6)

#### **Presentation-4) Strategies and approaches toward reserved forest area by fishery sector**

U Min Naung, district officer of Department of Fisheries (DoF), made a presentation of the topic above. (See attachment 2-7)

### **Discussion Section**

U Bo Ni, Deputy Director of Forest Department acted as Chairman of the meeting. At first, he read out the agenda of the meeting.

Name	Points Raised
Mr. SHIBAYAMA	<ul style="list-style-type: none"> <li>- 3 issues to be discussed</li> <li>- different duties and responsibilities of concerned departments working in a single RF</li> <li>- requests the officials of concerned departments to explain their departments' objectives and strategies to be beneficial and known same/different activities for all participants</li> <li>- discussion doesn't mean to get the agreement immediately</li> <li>- requests all participants to participate in the discussion</li> </ul>
U Bo Ni	<ul style="list-style-type: none"> <li>- DoF and FD has been working together in many projects since before JICA project</li> <li>- Requests U Min Naung of DoF to explain about Mangrove Management in RFs and approaches toward it</li> </ul>
U Min Naung (DoF)	<ul style="list-style-type: none"> <li>- Admits that shrimp culture in the RFs do harm mainly to mangrove forest</li> <li>- DoF cultures sea-tiger species to develop the GDP of the country and it could make vast production before, but production rate is decreasing now</li> <li>- Benefits received from shrimp production is much lower than resources given for shrimp culture</li> <li>- Regarding ownership, DoF gave permission and certificate only a few</li> <li>- Concerned departments need to cooperate to handle the spacious but low effective shrimp ponds</li> <li>- DoF wants to make vast production in small space</li> <li>- Is there any other way without breaking the existing shrimp ponds in the RFs?</li> <li>- After mangrove forests were rehabilitated, more shrimps come to the small creeks near them, and mangrove forests were cut down and culture shrimp</li> <li>- Wants to plant mangrove forests in the forest area and culture shrimp in the creeks</li> <li>- Discussion on the way of rehabilitation over the shrimp ponds back</li> </ul>
U Bo Ni	<ul style="list-style-type: none"> <li>- Discussion is effective.</li> <li>- "Benefits received form shrimp production is much lower than resources given for shrimp culture" is really good.</li> <li>- Believes DoF has good will on the mangrove forests</li> <li>- DG always says that DoF will rehabilitate the mangrove forests.</li> </ul> <p style="margin-top: 10px;">- Requests SLRD to discuss on recording as agriculture land after trespassing paddy fields in the mangrove forests</p>
U Ohn Myint (SLRD)	<ul style="list-style-type: none"> <li>- Main duty is to record all planted acres of paddy fields inside and outside the RFs.</li> <li>- Can share these data to concerned departments to do the projects</li> <li>- Shows land to establish forests and private forests</li> <li>- Shrimp ponds are not official and all planted paddy fields are regarded as trespassed forest lands.</li> <li>- After the new government, it can't be foretold what kind of land-use policy will be issued, but it will be issued very soon.</li> <li>- Ownerships and rules and regulations on how to handle trespassed paddy fields and shrimp ponds inside RFs will be included.</li> </ul>
U Hla Wai (MAS)	<ul style="list-style-type: none"> <li>- Income level of local communities must be generated, so that the living standard can be higher.</li> <li>- Income generation activities for farmers are ongoing under the program of poverty alleviation.</li> <li>- Communities get income from agriculture later than other works like fishery and cutting firewood.</li> <li>- Income from agriculture is very small and takes long time. So, they change their livelihood.</li> <li>- Discuss farmers to substitute with high yield species and crops.</li> <li>- Salty water prevention dams should be taken care of to be more durability.</li> </ul>



Name	Points Raised
U Tin Win (Irrigation)	<ul style="list-style-type: none"> <li>- Salty water prevention dams and sea are directly connected in Ayeyarwady Delta.</li> <li>- Salty water seepage makes farmers difficult in doing agriculture.</li> <li>- If mangrove forests were established on the bank of dams, these dams will be stronger and it can help farmers.</li> <li>- Regarding development of new agriculture land, communities lost their agriculture land in some townships in Ayeyarwady Region between 1990 and 2004. Fish culture is about two and three times than agriculture. 4,000 acres are fish ponds out of 100,000 acres. 20 companies are doing on these fish ponds. MAS, SLRD, Irrigation and DoF are not working well together with one another.</li> <li>- Wants to plant mangrove trees on sluice gates of dams.</li> </ul>
U Hla Wai (MAS)	<ul style="list-style-type: none"> <li>- If farmers grow paddy on the cut mangrove forest, yield rate is high at the first one or two years. Later yield rate become lower and farmers abandon that land and move to another place.</li> <li>- If farmers grow paddy when the salty water dissolve after raining, yield rate is good.</li> <li>- If yield rate is low, green gram or Bocake (crop) should be grown as subsidiary crop. Second priority should be Pinlehnan (<i>Hygrophila pholomoides</i>).</li> <li>- Farmers can get about 3 lakhs per acre from Pinlehnan (<i>Hygrophila pholomoides</i>). Their income will be generated.</li> </ul>
U Min Naing (Education)	<ul style="list-style-type: none"> <li>- Mangrove rehabilitation is not short term activity, but long term.</li> <li>- To look at from education side, awareness raising activities must be given to communities until they realize such as holding public poster and essay competition widely.</li> <li>- Communities, from young to old, must be educated so that they can understand the price of mangrove forests.</li> <li>- Communities must be educated to understand that how natural resources are losing, even though growing paddy at the place of mangrove forest is advantageous for the present.</li> <li>- If farmers were provided with high yield crop technology for their income generation, mangrove rehabilitation activity will be successful with the participation of the communities.</li> </ul>
Dr. Zaw Min Tun (Health)	<ul style="list-style-type: none"> <li>- It is needed that community people must be understood what kind of benefits they can get from conserving mangrove forests.</li> <li>- As educated level came to understand the environmental conservation, visual clarifications are required for them.</li> <li>- Political constitutions are also required.</li> <li>- Some activities must be done although GDP of the country will be lower.</li> </ul>
U Bo Ni	<ul style="list-style-type: none"> <li>- Lives of communities in the mangrove forests are from hand to mouth condition.</li> <li>- It is important to know that what kind of benefits they can get from conserving mangrove forests.</li> <li>- This is the objective of this Project and the Project already accepted that mangrove conservation will be successful only when the local communities were participated systematically.</li> </ul>
U Moe Zaw Aung	<ul style="list-style-type: none"> <li>- Condition of mangrove forests was very good.</li> <li>- While the populations increase, they utilize the mangrove forests. They develop agriculture land without negotiation. They develop up to the bank, and bank erosions are occurred. In some places, yield rate is high. However, as DoF said "Benefits received is much lower than resources given".</li> <li>- Not only FD but also other departments concerned must be cooperated in mangrove conservation and protection.</li> </ul>
Daw Sandar Win	<ul style="list-style-type: none"> <li>- Since before Nergis, mangrove forests were established. After Nargis, mangrove forests were rehabilitated. Guards were sent to those mangrove forests.</li> <li>- The local communities are so poor that they have to live on cutting firewood from generations to generations.</li> <li>- Besides cutting firewood, other job opportunities must be created for their development.</li> <li>- FD arrests the wood cutters and takes actions. But FD can't take actions for the 24</li> </ul>

Name	Points Raised
	<p>hours so that there may be some shortage in taking actions.</p> <ul style="list-style-type: none"> <li>- If there was enough electricity for the energy, this will reduce the usage of firewood and charcoal and also the wood cutters.</li> <li>- But in BGL, their electricity system is that one day's on and two day's off so that they have to rely on charcoal and firewood energy.</li> <li>- If there is enough electricity, this will automatically save the mangrove.</li> <li>- Mangrove trees grow in the delta where there is low/high tide.</li> <li>- Mangrove forest conservation is more important than plantation.</li> </ul>
U Bo Ni	<ul style="list-style-type: none"> <li>- When there were mangroves in Ayeyarwady Region, these mangroves provide a lot of firewood and charcoal for the cities in that Region and Yangon.</li> <li>- The more the demands of firewood and charcoal from that cities reduce, the less the cutting of the mangroves.</li> <li>- We agree that it is more important to conserve the mangroves than to plant them.</li> </ul>
Mr. SHIBAYAMA	<ul style="list-style-type: none"> <li>- It is good to have such discussion between concerned departments. This meeting is a good opportunity to discuss the practical difficulties and conflicts among concerned departments.</li> </ul>
U Min Naung (DoF)	<ul style="list-style-type: none"> <li>- This will be good advantages if there is integrated farming.</li> <li>- There should be flexibility between DoF and FD. If they can give the required arrangements from SLRD, that will become a good coordination.</li> <li>- For example if there was the destruction of shrimp pond, it should reduce the GDP. This should control by the law of FD.</li> <li>- This can control the ownership of shrimp pond. If the technology is changed, everything can be possible.</li> <li>- If there was permission to do model farm for every department and was given the required technologies, DOF can give awareness to this condition. The benefits of the mangroves can become visible from this.</li> <li>- If there was task force between concerned departments, it will provide the coordination and the Project will be successful.</li> </ul>
U Hla Wai (MAS)	<ul style="list-style-type: none"> <li>- In the LPT district, the farmers in the mangrove forests get 30 or 40 baskets of monsoon season paddy.</li> <li>- Paddy fields are flooded in rainy season. After growing monsoon season paddy, farmers make salt on that fields and then again they grow paddy. There are some developments in living in that area.</li> <li>- The poor villages should be focused to conserve the mangrove forests.</li> <li>- In some area, because of dam that prevents the salty water, they don't have fresh water. They have to grow the green gram and other crops as extra crops. After growing paddy, they should be arranged to grow extra crops. They should also grow in waste and uncultivated land. In order to conserve mangroves, there should be laws. It can conserve the mangrove forests by instructing the village authorities that not to cut mangrove trees and not to develop the new land on the mangrove area. Mangroves including forest areas can be prevented by forest law. Village authorities shouldn't encourage the development of the new land and should be taken action effectively according to the forest law.</li> </ul>
U Bo Ni	<ul style="list-style-type: none"> <li>- Before JICA Project, social economic survey was done at some villages. Some villages have about 80 households and they own about 10,000 acres of agriculture land. But about 9,000 acres are owned by one or two households. The rest are labours. They always cut mangrove forests and develop new agriculture land. Then, these lands reach to big land owners. Benefit sharing is not fair.</li> </ul>
U Ohn Myint (SLRD)	<ul style="list-style-type: none"> <li>- Poor farmers pawn their lands to the rich persons. They can't take them back. They are in that vicious circle.</li> <li>- Village level protection law will be issued. Poverty alleviation campaign will be in full swing.</li> <li>- It is difficult to say before these laws.</li> </ul>

**Way forward by U Bo Ni, on behalf of U Zaw Win (5)**

After the discussion section, U Bo Ni delivered the way forward and closing speech.

On behalf of FD and JICA, he would like to express his sincere thanks to each and every participant for giving their valuable time and sharing their knowledge and experience. He deeply appreciated the presentation and discussions of the relevant department officers and expressed that closer and deeper collaboration between different departments would be created in the near future so that better uses and management of reserved forest area can be attained in near future.

**Closing speech by Mr. Shibayama**

Mr. Shibayama delivered the closing speech as follows. He really appreciates and thanks to every participants for their active participation. He also emphasized that meeting objective is not to reach a conclusion or a consensus but to learn and share the opinions and points of views of people from different organizations working in the similar field. In this aspect the meeting was successful and expected active discussions to be conducted in the 2<sup>nd</sup> meeting scheduled in the following year.

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**Attachments**

Attachment 2-1: Opening Speech of Union Minister

Attachment 2-2: Reserved Forest Management, Land use issues in the Reserved Forest Area

Attachment 2-3: Progresses and Achievements Related to JICA/FD Mangrove Project

Attachment 2-4: Mangrove Forest in the Project Area

Attachment 2-5: Strategies and approaches toward reserved forest area by agriculture sector (MAS)

Attachment 2-6: Strategies and approaches toward reserved forest area by agriculture sector (SLRD)

Attachment 2-7: Strategies and approaches toward reserved forest area by agriculture sector (DoF)

## 2.3 Participant List

Date: 7<sup>th</sup> November, 2011

Venue: Bogalaly Town Hall

### Participant List for Opening Ceremony

Sr.	Name	Position	Organization
<b>Invited Participants, Project Stakeholders</b>			
1	U Win Tun	Union Minister	Ministry of Environmental Conservation and Forestry
2	U Aye Myint Maung	Director General	Forest Department
3	U Zaw Win (5)	Director	Forest Department
4	U Ohn Myint	Director	SLRD
5	U Bo Ni	Deputy Director	Forest Department
6	U Kyaw Soe Lin	District General Administration	Pyar Pon District
7	U Soe Than	Township General Administration	Pyar Pon Township
8	U Htin Kyaw	Township General Administration	Bogalaly Township
9	U Khin Maung Lwin	Assistant Director	Forest Department, District Office, Myaung Mya Township
10	U Hla Wai	Assistant General Manager	MAS
11	Dr. Zaw Min Tun	Deputy Head	Department of Health
12	U Min Naung	District Officer	DoF (Myaung Mya)
13	U Min Naing	District Education Officer (Examination)	Department of Basic Education
14	U Kyi Soe	Executive Officer	Department of Municipal (Bogalaly)
15	U Hla Myo Aung	Staff Officer	Forest Department, District Office, Myaung Mya Township
16	U Moe Zaw Aung	Staff Officer	Forest Department, Myaung Mya Township
17	U Aung Gyi	Staff Officer	Forest Department, Laputta Township
18	U Kyi Lin	Staff Officer	Forest Department, Pyar Pon Township
19	U Kan Tun	Staff Officer	Forest Department, Bogalaly Township
20	U Kyaw Nyunt	Staff Officer	Forest Department, Mawlamyng Gyun Township
21	U Myo Min Tun	Range Officer	Forest Department
22	U Kyaw Kyaw Myo	Range Officer	Forest Department
23	U Yu Maung Tun	Range Officer	Forest Department
24	U Kyaw Zaw	Range Officer	Forest Department
25	Mr. Takana	Chief Resident Representative	JICA Myanmar Office
26	Mr. Y. Sato	Resident Representative	JICA Myanmar Office
27	U Kyaw Zaw Aung	Program Officer	JICA Myanmar Office
28	U Aye Kyu	Township Education Officer	Department of Education, Bogalaly
29	U Ohn Kyaing	Principal of B.E.H.S	Department of Education, B.E.H.S (1)
30	Daw Sandar Aye	Staff Officer	Department of Planning
31	Daw Aye Aye Yee	Township Law Officer	Township Court
32	U Win Naing	Township Manager	Myanmar Agriculture Bank

<b>Sr.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
33	U Aung Thiha Cho	Township Staff Officer	SLRD
34	U Thein Saung	Field Officer	Metta Foundation
35	U Saw Han	Manager	Myanmar Economic Bank
36	Daw Tin Mar Lwin	Staff Officer	Department of Irrigation
37	U Than Htay Aung	Reporter	MRTV-4
38	U Aung Aung Tun	Reporter	The Voice
39	U Htay Aung	Reporter	Ayeyarwady Media
40	Mr. T. Shibayama	Chief Adviser	JICA Expert Team
41	Dr. H. Yasu	Community Participatory Development	Forestry/Community JICA Expert Team
42	Ms. M. Tanaka	Training and Extension /Marketing	JICA Expert Team
43	Mr. H. Usuki	Coordinator	JICA Expert Team
44	U Htein Lin	Technical Coordinator	JICA Expert Team
45	U Chan Thar	Technical Interpreter	JICA Expert Team
46	U Paing Soe	Technical Interpreter	JICA Expert Team
47	U Aung Lwin	Technical Interpreter	JICA Expert Team
48	U Myo Myint	Officer Clerk	JICA Expert Team
49	Daw Kyawt Kyawt Khaing	Secretary	JICA Expert Team
<b>General Participants</b>			
50	Daw Myint Myint Oo	Auditor	Auditor's Office
51	Daw Yin Yin Win	Assistant Officer	Information and Public Relation Department (IPRD)
52	U Win Myint	Manager	MAS
53	U Kyaw Htin	Staff Officer	DoF
54	U Tun Thein	Officer In-Charge	Fire Department
55	U Aung Myint	Manager	Inland Water Transport (BGL)
56	Dr. Aung Thu Myo	Township Veterinary Officer	Livestock Breeding and Veterinary Department
57	U Khin Zaw	Staff Officer	Department of Irrigation
58	U Khin Maung Zin	Manager	MAPT
59	U Kyaw Lin Soe	Assistant Manager	ATS
60	U Tin Myo Lwin	Officer In-Charge	Township Sports and Physical Education Department
61	Daw Twae Twae Aye	Company Officer	Myanmar Red-Cross Society
62	Daw Win Win Nwe	Platoon Officer	Myanmar Red-Cross Society
63	U Nyein Chan Aung	Platoon Officer	Myanmar Red-Cross Society
64	Daw Su Su Hlaing	Tutor	Educational College, Bogalay
65	Daw Soe Soe Aye	Tutor	Educational College, Bogalay
66	Daw Ni Ni Lwin	Assistant Lecturer	Educational College, Bogalay
67	U Min Zaw Htay	Deputy Range Officer (DRO)	Forest Department
68	U Dee Lar	DRO	Forest Department
69	U Zaw Nay Lin	DRO	Forest Department

<b>Sr.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
70	U Win Tun Hlaing	DRO	Forest Department
71	U Moe Lwin	DRO	Forest Department
72	U Thein Min Oo	DRO	Forest Department
73	U Kyaw Zin Wai	DRO	Forest Department
74	U Win Min Thein	DRO	Forest Department
75	U Khin Maung Win	DRO	Forest Department
76	U Aung Myint	DRO	Forest Department
77	U Zaw Oo	DRO	Forest Department
78	U Khin Maung Toe	DRO	Forest Department
79	U Han Myo Lin	Forester	Forest Department
80	U Moe Kyaw Oo	Forester	Forest Department
81	U Cho Win	Forester	Forest Department
82	U Than Zaw	Forester	Forest Department
83	U Myo Min Latt	Forester	Forest Department
84	U Saw Huu Bat	Forester	Forest Department
85	U Than Myint	Forester	Forest Department
86	U Saw Win Shwe	Forester	Forest Department
87	U Tin Aung Moe	Forester	Forest Department
88	U Thaung Htay	Forester	Forest Department
89	U Jet Maung Maung	Forester	Forest Department
90	U Arkar Win	Forester	Forest Department
91	U Tin Win	Forester	Forest Department
92	U Win Naing	Forester	Forest Department
93	U Myo	Forest Guard	Forest Department
94	Daw Tin Tin Htwe	Clerk	Forest Department
95	Daw Lay Lay Myint	Clerk	Forest Department
96	Daw Su Su	Clerk	Forest Department
97	Daw Hlaing Kyi Pyar Soe	Clerk	Forest Department
98	U Myo Myint	CF Accountant	SPT CFUSG
99	U Than Soe	CF Chairman	SPT CFUSG
100	U Than Tun	CF Secretary	SPT CFUSG
101	U Thein Aung	Secretary	TGT CFUSG
102	U Nyunt Htay	Secretary 1	TGT CFUSG
103	U Tun Kyi	Treasurer	TGT CFUSG
104	U Win Myint	Accountant	TGT CFUSG
105	U Myint Shwe	Audit	TGT CFUSG
106	U Thura	Audit Member	TGT CFUSG
107	U Kyaw Min Thu	Audit Member	TGT CFUSG
108	U Soe Min Thu	Audit Member	TGT CFUSG
109	U Than Soe	Member	TGT CFUSG
110	U Tin Win	Member	TGT CFUSG

<b>Sr.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
111	U San Myint	Member	TGT CFUSG
112	U Thet Hlaing Oo	Member	TGT CFUSG
113	U Mya Hlaing	Chairman	GAD CFUSG
114	U Aye Naing	Secretary	GAD CFUSG
115	U Tun Myint	Member	GAD CFUSG
116	U Than Win	Member	GAD CFUSG
117	U Zaw Lwin	Member	GAD CFUSG
118	U Myint Oo	Member	GAD CFUSG
119	U Soe Thein	Member	GAD CFUSG
120	U Myo Gyi	Member	GAD CFUSG
121	U Aung Khaing	Member	GAD CFUSG
122	U Min Min	Member	GAD CFUSG
123	U Aye Min Oo	Member	GAD CFUSG
124	Daw Sandar Oo	Director	Private Mangrove Plantation (Annawarkyaw)
125	U Kyaw Than	Activist	Private Mangrove Plantation
126	U Zaw Moe	Activist	Private Mangrove Plantation
127	Daw Khin Thandar Kyaw	Activist	Private Mangrove Plantation
128	U Aung Myo Oo	Activist	Private Mangrove Plantation
129	Daw Yin Nandar Kyaw	Activist	Private Mangrove Plantation
130	Daw Hnin Nwe Soe	Activist	Private Mangrove Plantation
131	U Tin Maung Latt	Commander In-Charge	Militia (Origin Battalion)
132	U Aye Myint	Commander	Militia (Origin Battalion)
133	U Mya Soe	Commander	Militia (Origin Battalion)
134	U Tin Win	Officer In-Charge	Region Fire Bregade
135	U Tin Aung Ni	Officer In-Charge	Region Fire Brigade
136	U Tun Aung Kyi	Deputy Officer in-Charge	Region Fire Brigade
137	U Maung Oo	Deputy Officer in-Charge	Region Fire Brigade
138	Dr. Tun Myint	Dentist	Department of Health
139	Daw Nyunt Nyunt	Head of Nurse	Department of Health
140	Daw Hnin Hnin Ye	Nurse	Department of Health
141	Naw Byu Ke Ge	Nurse	Department of Health
142	Daw Ye Ye Khin	Chairman	Maternal and Child Welfare Association
143	Daw Khaing Mi Mi Hlaing	Member	Maternal and Child Welfare Association
144	Daw Amar Ni	Member	Maternal and Child Welfare Association
145	Daw Kyi Kyi Htay	Member	Women's Affair Federation
146	Daw Htway Tin	Member	Women's Affair Federation
147	Daw Tin Myo Nwe	Member	Women's Affair Federation
148	U Thaung Naing Htay	Private Businessman	Private
149	U Kyaw	Private Businessman	Private
150	U Kyi Htay	Private Businessman	Private

<b>Sr.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
151	U Myint Soe	Private Businessman	Private
152	U Maung Oo	Private Businessman	Private
153	U Saw Oo	Private Businessman	Private
154	U Myo Myint	Private Businessman	Private
155	U Win Thein	Private Businessman	Private
156	U San Nyein	Private Businessman	Private
157	U Soe Thiha	Private Businessman	Private
158	U Zaw Win	Private Businessman	Private

Date: 7<sup>th</sup> November, 2011

Venue: Bogalaly Town Hall

**Participant List for Regional Level Mangrove Coordination Meeting**

<b>Sr.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
1	U Ohn Myint	Director	SLRD
2	U Tin Win	Director	Department of Irrigation
3	U Min Naing	Regional Education Officer (Examination)	Department of Education
4	Dr. Zaw Min Tun	Deputy Health Officer	Department of Health
5	U Bo Ni	Deputy Director	Forest Department
6	U Hla Wai	Assistant General Manager	MAS
7	U Min Naung	District Officer	DoF
8	Daw Yin Min Win	Officer In-Charge	Department of Information and Public Relation
9	U Win Myint	Township Manager	MAS, Bogalay
10	U Khin Zaw	Staff Officer	Department of Irrigation
11	U Kyaw Zayar Tin	Staff Officer	Department of Irrigation
12	U Hla Myo Aung	Staff Officer	Forest Department
13	U Moe Zaw Aung	Staff Officer	Forest Department
14	U Aung Gyi	Staff Officer	Forest Department
15	U Kyaw Nyunt	Staff Officer	Forest Department
16	Daw Sandar Oo	Director	Private Plantation (Annawarkyaw)
17	U Kyaw Kyaw Myo	RO	Forest Department
18	U Yu Maung Tun	RO	Forest Department
19	U Than Win	RO	Forest Department
20	U San Lwin	DRO	Forest Department
21	U Aung Myint	DRO	Forest Department
22	U Zaw Oo	DRO	Forest Department
23	U Khin Maung Zaw	Forester	Forest Department
24	U Win Naing	Forester	Forest Department
25	Daw Su Su	Clerk	Forest Department
26	Daw Tin Tin Htwe	Clerk	Forest Department



<b>Sr.</b>	<b>Name</b>	<b>Position</b>	<b>Organization</b>
27	Daw Lay Lay Myint	Clerk	Forest Department
28	U Than Htay Aung	Reporter	MRTV-4
29	U Aung Aung Tun	Reporter	The Voice
30	U Htay Aung	Reporter	Ayeyarwady Media
31	Mr. T. Shibayama	Chief Adviser	JICA Expert Team
32	Dr. H. Yasu	Community Participatory Development Forestry/Community	JICA Expert Team
33	Ms. M. Tanaka	Training and Extension /Marketing	JICA Expert Team
34	Mr. H. Usuki	Coordinator	JICA Expert Team
35	U Htein Lin	Technical Coordinator	JICA Expert Team
36	U Chan Thar	Technical Interpreter	JICA Expert Team
37	U Paing Soe	Technical Interpreter	JICA Expert Team
38	U Aung Lwin	Technical Interpreter	JICA Expert Team
39	U Myo Myint	Officer Clerk	JICA Expert Team
40	Daw Kyawt Kyawt Khaing	Secretary	JICA Expert Team

### **3. Mangrove Seminar (Bogalay)**

### 3.1 Agenda

## AGENDA

### Mangrove Seminar

1. Objective

- Share experiences / lessons learned from Project Activities with relevant stakeholders (government, donors, NGOs)
- Discussion and share experiences / lessons learned related to better CF/ Mangrove Management and livelihood improvement of communities

2. Venue: Bogalay Town Hall

3. Date and Time : 8 November, 2011, (9:00) 9:30 -16:15

4. Agenda of Mangrove Seminar

Sr.	Time	Subject	Person
1	09:00-09:25	Registration	All Participants
2	09:25-09:30	Departmental Authorities taking seat	FD Regional Director
3	09:30-09:35	Announcement of opening	MC
4	09:35-09:40	Opening speech 1	FD Regional Director
5	09:40-09:50	Opening speech 2	JICA Representative
6	09:50-10:00	Group Photo	All Participants
7	10:00-10:30	JICA/FD Mangrove Project: Progresses and Achievement	Field Project Manager
8	10:30-10:50	Progress and achievement/ lessons learnt from ARP	FD /JICA Expert (Joint Presentation)
9	10:50-11:10	CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by CFUSGs	FD /JICA Expert (Joint Presentation)
10	11:10-11:30	CF Support/ CF-SOP	FD /JICA Expert (Joint Presentation)
11	11:30-12:00	Question and Answer	
12	12:00-13:00	Lunch Break	All Participants
13	13:00-14:30	Group Discussion Section (in Myanmar or English) - Mangrove conservation/ and management in RF area - Effective CF in RF area - Effective livelihood and community empowerment activities in RF area	All Participants/ led by group leaders
14	14:30-14:45	Refreshment	All Participants
15	14:45-15:45	Group Presentation and Questions and Answers	Group Leaders
16	15:45-16:05	Way forward	Chairperson
17	16:05-16:10	Closing Speech 1	Union Minister
18	16:10-16:15	Closing Speech 2	JICA Representative
19	16:15	Announcement of closing of "Closing Ceremony"	MC

### **3.2 Meeting Minutes**

#### **Meeting Minutes of Mangrove Seminar**

**Date** : 08.11.2011

**Venue** : City Hall, Bogalay Township

**Participants** : (JET) Mr. Tomohiro SHIBAYAMA, Dr. Naohiro MATSUI, Ms. Mana TANAKA, Mr. Hiroyuki USUKI, (Project Staff) U Htein Lin, U Paing Soe, U Chan Thar, U Aung Lwin, U Myo Myint Aung, Daw Kyawt Kyawt Khaing and 37 participants from FD, MAS, DoF, SLRD, Representatives from NGOs and Media (Refer the Participant List)

U Hla Myo Aung, SO, Forest Department acted as MC. At first, he read out the agenda of the seminar.

#### **Opening Speech**

U Zaw Win (5), Director of Ayeyawady Region FD, delivered the opening speech. He said he hopes to get the possible good ways regarding mangrove forest management from that seminar. Forests play the important role in biodiversity. There are many kinds of forests. Out of those forests, there are eight kinds of forests according to the types of management. Mangrove forest has only 1% compared to other forests in Myanmar. But it is very important to socio-economic of the communities. People show their interests on mangrove forests, especially after cyclone Nargis. FD is conserving forests including mangrove forests as much as possible. However, it is very difficult to conserve forests by FD alone. All concerned departments must be cooperated. It is very important to co-exist mangrove forests and community people in sustainable manner. This seminar is one of the activities that can fulfil the objective of the Project.

Mr. Tomohiro SHIBAYAMA, Chief Advisor of JICA Expert Team, delivered the short speech. He said thanks to all participants and FD staff for attending and preparing this mangrove seminar. This seminar is held under the Project Output 4: A coordination mechanism is established among key sectors to address the underlying causes of mangrove deforestation in the Ayeyawady delta. Although joint presentation between FD counterpart and JICA Expert Team can't be made, this seminar will be beneficial for both of Myanmar side and Japanese side.

All participants took group photos and MC announced the closing of "opening ceremony of Mangrove Seminar".

#### **Presentation-1: JICA/FD Mangrove Project: Progress and Achievement**

U Khin Maung Lwin, Assistant Director of FD and Field Project Manager of JICA/FD Mangrove Project, presented about the progresses and achievements of the Project.

#### **Presentation-2: Progress and Achievement of Action Research Plantation (ARP)**

Dr. Naohiro MATSUI, Mangrove Expert of JICA Expert Team, presented about the progresses and achievements of ARP.

**Presentation-3: CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by Project Target CFUSGs**

Mr. Tomohiro SHIBAYAMA, Chief Advisor of JICA Expert Team, presented about CFUSG formation, CF M/P formulation and Livelihood activities by Project target CFUSGs.

**Presentation-4: CF Support: CF Standardized Operation Procedure (CF-SOP)**

Ms. Mana TANAKA, Training and Extension Expert of JICA Expert Team, presented about the CF Support: CF Standardized Operation Procedure (CF-SOP).

**Questions and Answers**

U Zaw Win (5), Director of Ayeyawady Region FD, acted as chairperson. Firstly, he recapitulated the presentation points presented this morning.

At first, U Mying Aung of FREDa said he would like to know detail on how targeted villages were selected and reselected. He requested U Khin Maung Lwin to answer fully.

U Khin Maung Lwin said it is a good question. When the project started implementing in 2007, 20 villages were selected from four RFs: one village each per year from each RF and the project duration is 5 years. But unfortunately, Cyclone Nargis of 2008 struck the project area and project activities were delayed and these activities could be started in 2010. Therefore, targeted villages were reduced and reselected to 12 villages. Because of physically and mentally disorder by Cyclone Nargis, targeted villages cannot follow the activities right away. They have to rely on donors and NGOs. USG members were also weak. So, activities for 2011 were reviewed and targeted villages were reselected to 6 villages again and project activities will be implemented in these 6 targeted villages until the end of the project.

TGT and GDU villages in PYP Tsp were reselected, because they exist very close to the sea. These villages need to be developed with regard to natural disaster. SPT village, formerly called as Nget Kyi Taung village, in northern Pyindaye RF in BGL Tsp was reselected because UNDP projects were implemented at that village and this village needs to be continued implementing activities. TYK and NTP villages in LPT Tsp were selected as new villages, but these villages were selected during the pilot project. The last village is KKKL village. These targeted villages were reselected after the mid-term evaluation mission based on many criteria of the villages.

Mr. Tomohiro SHIBAYAMA added some explanation to U Khin Maung Lwin's answer.

U Thiri Tin from ECCDI said he would like to propose 6 questions. Targeted villages were selected as 22 villages, then reselected into 12 and finally into 6 villages. How these villages did are selected/reselected based on what kind of criteria? After this Project, how will continue the livelihood of the communities? That should be considered. He learned that this is foundation period (5 yrs): 1<sup>st</sup> Phase of the Project, 2<sup>nd</sup> Phase is extension period (5 yrs) and 3<sup>rd</sup> Phase is decentralization period (30 yrs). After

Phase 1 and 2, hopefully communities can conserve the mangrove forests by themselves.

He said one presenter presented that CFs are different. How are the differences between CF of FD and CF of Project? Was decision already taken from concerned officials? He would like to advise that these differences should be reported to concerned officials and got decision from them.

Thirdly, this Project distributes seedlings for free of charges and built nurseries, FD offices and cyclone/extension shelters. The Project distributed 12 lakhs of seedlings this year. Are these species suitable for the region and chosen by communities? He assumes that vocational trainings and domestic activity trainings should be given to communities in these extension shelters.

Fourthly, he learned that 1401 acres were planted during 2008 to 2011 and 10 species were tried. Are these species suitable with region and chosen by local communities?

Fifthly, U Khin Maung Lwin presented that collaboration was weak in this Project. Collaboration is very important. Not only regional, district, township and village level concerned departments but also villagers must be interested in the activities. Only then, this Project will be successful. Only then, activities can be continued by themselves after the Project.

Sixthly, Ms. Tanaka may have already received the CF in Myanmar: Progress and Potentials Report done by ECCDI reviewing 15 years' CF activities. Advantages and disadvantages are included. CF will not be successful without community participation. Activities that communities can get intermediate incomes should be prepared for local communities so that they become interested in and participated, so that they get career opportunities and so that they come to plant trees with their own desire. What he would like to advise is that the Project should consider for communities so that they can stand on their own way after the Project.

Regarding the first question, U Khin Maung Lwin answered that 20 villages near four RFs and TYK and NPT villages which were done during pilot project were selected for the development of the villages. Village selections were made based on social economic survey and village profiles done during pilot project. How to implement and continue CF successfully is included. According to the interest of the villagers to establish CF, CFUSG members were organized. This Project supports technology only because this is a kind of TCP project. It can't input for income generation and livelihood activities. But after cyclone Nargis, it planned many activities to support such as oyster culture trial and supporting pepper for agroforestry. However, these are not successful enough. Therefore, the Project has plan to look for other suitable activities.

CF from Delta area is different from that of Dry Zone. It doesn't mean that the whole body of CFI was changed. Regarding agroforestry, crops, eucalyptus and fast growing species can be planted together with CF in Dry Zone. But in Delta area, only mangrove species can be planted according to the geographical condition. Project is planning to give nursery practice, training and extension. But it doesn't have the experiences in doing domestic activities.

Regarding ARP, there are 10 species. There are two types: common and non-common species. Thame Gyi (*Avicennia officinalis*) can be planted everywhere and every time in Delta area. Some mangrove species are lessening in Delta area for some reasons. These species are trying in ARP.

FD is collaborating with MAS, DoF and SLRD. But collaboration is weak as interdisciplinary committee. There are MCFTF members. The Project is seeking better way to collaborate with concerned departments.

U Min Naung of DoF said he is interested in 12 lakhs of seedlings in BYM for targeted CFUSGs. If other departments requested, can FD provide? Can departmental plantations be established in RFs or not, because DoF wants to do biodiversity research? Can private plantations be established or not? If DoF demarcates as "No Crab Catching Zone" in RFs, can FD give permission or not?

U Zaw Win (5) answered that 12 lakhs of seedling nursed at BYM are for Project area, plantations and government plantations. Seedlings are nursing at townships for distribution the public. If requested from these seedlings, FD can give. Anybody can apply for departmental and private plantation establishment and permission will be granted within a few days. "No Crab Catching Zone" and biodiversity conservation can be permitted without limitation. If regional level can't give permission, he will report to DG.

### **Group Discussion and Presentation**

In the afternoon, U Zaw Win (5) explained about the discussion topics and make participants into three groups. (The results of the discussion are attached).

On behalf of Group 1, U Khin Maung Lwin presented the result of discussion.

After his presentation, U Myint Aung said he would like to discuss about free-of-charge distribution. UNDP project distributed seedlings for monsoon planting ceremony. Trees are not survived as much as they should because they got these seedlings for free of charge. Seedlings should be sold and support the village with that money. Activities should be done until they reach cash for work. Can't NR be done in mangrove forest out of two types: AR and NR?

U Zaw Win (5) said distribution seedlings for free is good. FD can't sell them. These are not owned by FD, but village. FD permits fuel wood plantation project. One month after plantation, certificate will be issued. Seedlings must be planted in public places and after 5 years, they will get tables for school. FD makes extension about this. Communities understand and plant together. Regarding law enforcement, law was already issued. Trees must be cut down at suitable time. Many departments are making awareness and information are being issued. Communities value trees more than before. He said he will try to get special budget for NR after choosing plots for NR.

U Thiri Tin said both of NR and AR are doing at one of the projects of MERN in Rakhine. Free-of-charge seedling distribution is complicated. Selling must be practiced according to situation.

U Hla Myo Aung said there are some constraints in RFs. Regarding land use, agriculture land are developed more and more. What will be the best way to handle with win-win theory between farmers and forest conservation?

On behalf of Group-2, U Myint Aung presented the result of discussion.

Regarding benefit sharing, U Thiri Tin said by-laws, how to share benefits and what kind of activities should be implemented part by part should be included in M/P clearly. Only then, problem on benefit sharing will be alleviated.

U Kan Tun said there are many projects come in. According to his experience, guidelines to be discussed should be prepared in advance. FD must give guidelines effectively Myint Aung bottom-up approach should be practiced so as to get better community participation. Top-down approach cannot make communities accept, absorb and understand and cooperation will be weak. There are also weak points in bottom-up approach. Knowledge of communities are not same. They don't have technical experience. To make species choice, sufficient awareness and extension must be given to them. Only then, they can choose the right species. If not, their decision can be wrong even though bottom-up approach is used.

U Bo Ni said if by-laws are put for CFUSG as an agreement, effectiveness and legitimacy will be weak. While these by-laws are signing by USG members, officials from General Administration Department should be presented except FD. If so, they will follow by-laws systematically and effectively.

U Myint Aung said by-laws mean agreement. It is better if that agreement can be registered. He requested SLRD to explain about the registration.

U Ohn Myint said agreement contract must be made for by-laws. Contracts are registered at Cooperation Department. But there is no registration yet regarding CF.

U Zaw Win (5) said that CF area is secure unless Minister doesn't cancel it or required by the State. Even after RF was disintegrated, the certificate is still alive. USG members can do to get compensation legally.

Regarding effective CF, U Thiri Tin said how far CF area is from village should be considered. If it is very far, how can USG members protect and tend to their CF. therefore, CF area should be at most 3 or 4 miles away from the village.

U Zaw Win (5) said that point should be included in the presentation.

On behalf of Group-3, U Maung Maung Pyone presented the result of discussion.

One of the participants said if the Project can provide the activities which are directly effective to communities like Macro Credit and income generation activities, it will be very supportive for communities.

### **Closing Speech**

Mr. Tomohiro SHIBAYAMA delivered the closing marks. He expressed thanks to all participants. He said issues raised and discussed today will not be immediately taken action. But these will support the Project activities. District level donors/NGOs coordination meetings will be held in PYP and LPT Tsp in Nov and Dec. He invited participants to join these meetings as well.



U Zaw Win (5) delivered the closing speech. He said the result of the discussion section will be applied in implementation of the rest of Project period and future projects. He said thanks to all participants for participating actively.

Then, Mangrove Seminar was successfully finished.

**Attachments:**

1. Attachment 3-1: Presentation-1: JICA/FD Mangrove Project: Progress and Achievement
2. Attachment 3-2: Presentation-2: Action Research Plantation (ARP)
3. Attachment 3-3: Presentation-3: CF Activities
4. Attachment 3-4: Presentation-4: CF Extension and SOP
5. Attachment 3-5: Presentation-5: Discussion result of Group-1
6. Attachment 3-6: Presentation-6: Discussion Result of Group-2
7. Attachment 3-7: Presentation-7: Discussion Result of Group-3

**3.3 Participant List**

Date: 8<sup>th</sup> November 2011

Venue: Bogalay Town Hall

<b>Name</b>	<b>Position</b>	<b>Organization</b>
U Zaw Win (5)	Director	Forest Department
U Ohn Myint	Director	SLRD
U Tin Win	Director	Department of Irrigation
U Min Naing	Regional Education Officer (Examination)	Department of Education
Dr. Zaw Min Tun	Deputy Health Officer	Department of Health
U Bo Ni	Deputy Director	Forest Department
U Kyi Soe	Assistant Director	Department of Municipal
U Hla Wai	Assistant General Manager	MAS
U Min Naung	District Officer	DoF
U Khin Zaw	Staff Officer	Department of Irrigation
U Win Myint	Township Manager	MAS
U Khin Maung Lwin	Assistant Director	Forest Department
U Hla Myo Aung	Staff Officer	Forest Department
U Moe Zaw Aung	Staff Officer	Forest Department
U Aung Gyi	Staff Officer	Forest Department
U Kyaw Nyunt	Staff Officer	Forest Department
U Kyi Lin	Staff Officer	Forest Department
U Kan Tun	Staff Officer	Forest Department
U Myint Hlaing	Staff Officer	Forest Department
U Kyaw Kyaw Myo	Range Officer (RO)	Forest Department
U Yu Maung Tun	RO	Forest Department

<b>Name</b>	<b>Position</b>	<b>Organization</b>
U Myo Min Tun	RO	Forest Department
U Than Win	RO	Forest Department
Daw Sandar Oo	Director	Private Plantation (Annawarkyaw)
U Myint Aung		FREDA
U Kaw Nyein		FREDA
U Tay Zar Min	Field Assistant	FREDA
U Thiri Tin	Secretary	ECCDI
U Myo Zaw Win		EcoDev
U Maung Maung Pyone		BANCA
U Aye Cho		BANCA
U Thein Saung		Myitta Foundation
U Naing Lin Htet		Myitta Foundation
U Moe Kyaw		Mingalar Myanmar
U Than Zaw		Mingalar Myanmar
U Aung Bo Bo	Field Assistant	Dear Myanmar
U Tun Tun Lwin		MERN
Daw Tin Tin Htwe	Clerk	Forest Department
Daw Lay Lay Myint	Clerk	Forest Department
Daw Su Su	Clerk	Forest Department
Daw Hlaing Kyi Pyar Soe	Clerk	Forest Department
U Khin Maung Thein	DRO	Forest Department
U Aung Myint	DRO	Forest Department
U Zaw Oo	DRO	Forest Department
U Win Naing	Forester	Forest Department
U Tin Maung San	Forester	Forest Department
U Khin Maung Zaw	Forester	Forest Department
U Aung Aung Tun	Reporter	The Voice
U Htay Aung	Reporter	Ayeyarwady Media
Mr. T. Shibayama	Chief Adviser	JICA Expert Team
Dr. H. Yasu	Community Forestry/ Participatory Community Development	JICA Expert Team
Dr. N. Matsui	Mangrove Forestry	JICA Expert Team
Ms. M. Tanaka	Training and Extension /Marketing	JICA Expert Team
Mr. H. Usuki	Coordinator	JICA Expert Team
U Htein Lin	Technical Coordinator	JICA Expert Team
U Chan Thar	Technical Interpreter	JICA Expert Team
U Paing Soe	Technical Interpreter	JICA Expert Team
U Aung Lwin	Technical Interpreter	JICA Expert Team
U Myo Myint	Officer Clerk	JICA Expert Team
Daw Kyawt Kyawt Khaing	Secretary	JICA Expert Team

## Attachment 2 Presentation Materials for Regional Mangrove Coordination Meeting (Bogalay)

- Attachment 2-1: Opening Speech of Union Minister
- Attachment 2-2: Reserved Forest Management, Land use issues in the Reserved Forest Area
- Attachment 2-3: Progresses and Achievements Related to JICA/FD Mangrove Project
- Attachment 2-4: Mangrove Forest in the Project Area
- Attachment 2-5: Strategies and approaches toward reserved forest area by agriculture sector (MAS)
- Attachment 2-6: Strategies and approaches toward reserved forest area by agriculture sector (SLRD)
- Attachment 2-7: Strategies and approaches toward reserved forest area by agriculture sector (DoF)

Attachment 2-1: Opening Speech of Union Minister

**Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta**

*Opening Speech delivered by Union Minister for the Environmental Conservation and Forestry at the Opening Ceremony of the Regional Mangrove Coordination Meeting and Mangrove Seminar*

Very good morning, Regional government officers from various sectors and levels, representatives from social and business organizations of Pyapon and Bogalay Townships, Representatives of JICA Myanmar and JICA experts for Mangrove Project, Representatives from UN Organizations and Non-Governmental Organizations, Township Elders and Local Village Representatives, media personnel, Distinguished Guests, Ladies and Gentlemen,

This auspicious occasion is “The Ceremony of Opening of the Regional Mangrove Coordination Meeting and Mangrove Seminar” conducted by “Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta”, which is being implemented by JICA and Forest Department, Ministry of Environmental Conservation and Forestry.

First of all I would like to say that I am very proud of myself for having a chance to deliver the speech in this auspicious opening ceremony for the Regional Mangrove Coordination Meeting and Mangrove Seminar. Also I would like to wish all of you to be healthy and prosperity.

Distinguished Guests, Ladies and Gentlemen

Now may I introduce about Mangrove forests of Myanmar. As you may be aware, Myanmar is rich in natural forest resources including Mangroves with the coverage of 46.9% of total land area of the country. The extent of forest cover in Myanmar is largest one among the Continental South East Asia Countries. According to the recent assessment, the extent of mangrove in Myanmar is 1% of total forest area of the country. In 1980s, Myanmar owned the 4<sup>th</sup> largest mangrove area on the world, but recent forest assessment shows that in 2010, Myanmar’s mangrove area was 7<sup>th</sup> largest on the world with area of 5029 square kilometer. This area represents 3.3% of total mangrove forest area of the world.

Distinguished Guests Ladies and Gentlemen,

Since onset of 19 century, Myanmar introduced the scientific mangrove management through reservation of the mangrove and formulation of working plans in the Ayeyawady Delta. But with changes in socio and economic conditions of the country, mangrove areas denuded through conversion to other land uses.

Ministry of Environmental Conservation and Forestry has been being used substantial amount of budget and human resources to restore the degraded mangrove ecosystems and to promote the socio-economic development of the region. Meanwhile, in cooperation with international organizations and local non-governmental organizations, Ministry is endeavoring implementation of various projects in view of restoring mangrove ecosystems and developing socioeconomic conditions of rural people.

This particular project, in the name of “Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta” was commenced with effect from 2007 April for the 5 year duration, but in 2008, cyclone Nargis devastated the project activities implemented. In effect, the project was rescheduled; and, decided by both sides, the project duration was expanded one more year up till 2013 March.

Distinguished Guests, Ladies and Gentlemen

JICA and Ministry of Environmental Conservation has long and good experiences in implementation of mutually benefited projects. JICA experienced implementation of various projects in cooperation with all institutions under the Ministry of Environmental Conservation and Forestry, It is envisaged that there are also more programs to be carried out in the near future. While I have a chance I would like to express my sincere gratitude to JICA delegates for their kind supports in the forestry sector development activities.

The ongoing project is a project type under the Technical Cooperation Programme of JICA. The project introduces the integrated or holistic approach to the sustainable management of mangrove ecosystems in the region. The overall goal of the project is “The mangrove forests are sustainably managed and poverty is alleviated among the communities in the Ayeyawady Delta”. The major activities of the project are implementation of action research plantations and community forestry, and construction of community forestry extension centers and nurseries. Moreover, in cooperation with Department of Fisheries, fish culture is being conducted while agro-forestry activities are being carried out in cooperation with Myanmar Agricultural Services. As was said, the project will lay down the foundation for the integrated mangrove management through participation of all related stakeholders to accomplish the objectives of sustainable management of mangrove ecosystems.

Distinguished Guests, Ladies and Gentlemen

As you may know, carrying capacity of the planet earth is limited and we cannot exploit resources more than carrying capacity of those ecosystems on the planet. If ecosystems are destroyed, the life support systems of the planet will also be devastated. Today, on the world, mankind face human induced environmental problems. Among them the climate change problem is a major threat to human development. Forest ecosystems maintain 90% of terrestrial biological diversity and act as sinks of carbon dioxide which will become one of greenhouse gases if they release into the atmosphere. Mangrove can store more soil carbon in compare to other vegetation types because the root system of it is immense. The long term existence of mangroves in the region depends on our recognition of their socioeconomic and environmental values. Actually mangroves are a kind of renewable natural resources and if we manage it in a sustainable manner, through goods and services they provide, they are crucial resources for rural development and disaster prevention. Mangrove ecosystems are also home to economically important fish and other aquatic species. At the expense of their life and properties, local people know very well that mangroves are useful to prevention of natural disasters such as storm surge, cyclone and tsunamis.

As a consequence of depletion of mangrove ecosystems in this region, local people face such several problems as reducing in fish catch, disappearing of natural barriers to strong wind and waves, reduction of arable land areas through river bank erosion, and decrease in agricultural outputs by salt water contamination of the soil. In this regards, to restore degraded mangrove ecosystems and enjoy goods and services that are accrued from mangroves, local people should cooperate with Forest Department in the operations of conserving existing mangroves, establishing village own plantations, implementation of agro-forestry in Community Forestry areas and establishment of private plantations. I strongly believe that through local people's participation in said operations, they can some extent attain the environmentally sound rural development.

Distinguished Guests, Ladies and Gentlemen

Today's challenges for sustainable rural development are anthropogenic environmental problems including climate change. The greenhouse gases that emit into atmosphere by human activities cause the global warming and interfere with the global climate systems. Nowadays, throughout the world regions, people encounter such unprecedented climate change induced problems as irregular precipitation patterns, deadly strong heat and cold waves, flooding of lowlands through sea level rise, increasing number of cyclonic storm occurrence and their intensity, and so on. World community is trying to mitigate climate change through internationally agreed legal frameworks and commitments. Myanmar is a signatory to a number of treaties and conventions that are related to climate change, and actively participating in mitigation and adaptation activities to climate change problems.

Among climate change mitigation activities, combating deforestation and forest degradation is an essential operation. As you may know, greenhouse gas emission caused by deforestation and forest degradation is responsible for 20% of total annual greenhouse gas emission into the atmosphere. Mangroves reforestation can not only contribute climate change mitigation but bring several co-benefits, inter alia disaster risk reduction and biodiversity conservation are major ones. As Ayeyawady Region is very vulnerable to natural disasters, I would like to strongly recommend local communities to restore mangrove and other forest ecosystems in the region.

Distinguished Guests, Ladies and Gentlemen

If the goals and objectives of this mangrove project are accomplished as planned, the outputs of the project will positively impact the socioeconomic and environmental condition of the region. Towards this end, active participation of related stakeholders in the project is kindly invited. Meanwhile, local community should keep in mind that the projects supported by International Organizations are just for laying down the foundation; and people must do their self for augment of the achievement of projects for self reliance and self sufficiency in the future. I am sure that, for the management, conservation and sustainable development of mangroves in this region, Ministry of Environmental Conservation and Forestry will cooperate and coordinate with local communities, line ministries of union and regional government, various NGOs and INGOs and so on.

Distinguished Guests, Ladies and Gentlemen

Before concluding my speech, my heartfelt gratitude and appreciations go to Regional Government Officials, Representatives from JICA (Myanmar) Office and JICA Experts for the Project, Representatives from UN Organizations in Myanmar, NGOs, Medias, Township Elders and Local Communities for using their time and efforts to participate in this ceremony.

In conclusion, may I wish together with you to accomplish the objectives on **Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta** and, to the sustainable development of all types of forests including mangroves in the Region.

Thank you very much for your kind attention.



Attachment 2-2: Reserved Forest Management, Land use issues in the  
Reserved Forest Area



## CONTENTS

- Introduction
- Coastal Resources of Myanmar
- Mangroves in Myanmar
- Mangrove conservation and management in Myanmar
- Conclusion

## MANGROVE MANAGEMENT IN MYANMAR

### ○ Introduction

- The great Indian Ocean Region has a total coast line over 140000 km long and an ocean of nearly 4 million km<sup>2</sup>.
- The region's vast network of estuaries, lagoons, mangroves, sandy beaches, sea grasses and wetlands encompasses some of the worlds' most extensive and diverse tropical coastal ecosystems.
- These provide essential habitats for many rare and valuable species, which underpin substantial commerce benefiting local national, regional and global economies, as well as supporting the livelihoods of millions of poor people.
- Thus, the humanitarian implications of failure to protect costal ecosystems are extremely serious.

3

## INTRODUCTION.2

- Mangrove communities are clearly important to the stability and maintenance of various adjoining ecosystems, such as **sea-grass, coral reef** and **marine** ecosystems.
- Mangrove represents a unique ecological niche and habitat for a variety of marine and inland animals.
- The amount of organic matter produced by mangrove community supports not only the mangrove ecosystem itself but other related ecosystems as well.
- Moreover, mangrove helps to stabilize shorelines in costal streams and estuaries by protecting them against tidal surge and soil erosion. Mangroves also serve as a barrier against storms.

4

## **COSTAL RESOURCES OF MYANMAR**

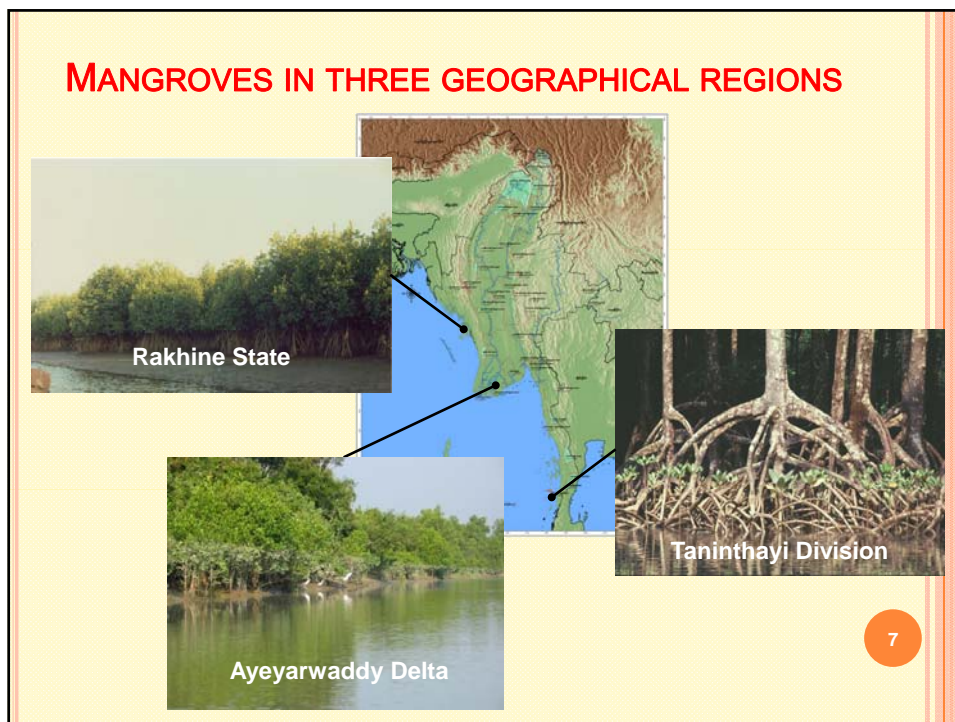
- The 14708 km long coast, about 216,379 Sq km of continental shelf with offshore islands and the Ayeyarwady delta regions of Myanmar form the most important aquatic ecosystems of the country and in the Indian Ocean region.
- The delta and coastal mangroves comprising about 1 per cent of the total forest areas of Myanmar are the most important breeding ground for numerous aquatic species and supply the local inhabitants with food, shelter and transport.

5

## **MANGROVE RESOURCES**

- Mangrove forests are of the fundamental natural resources found in coastlines throughout tropical and subtropical regions of the world.
- Indonesia own world largest area of mangrove with coverage of 31894 sq. km. and it is 20.9 % of world mangrove area.
- There are 70 spp. of mangrove inhabiting 40 spp. in South East Asia, 15 spp. in Africa and 10 spp. in Americas.
- Found in 123 countries with total area of 152000 sq.km. which equal to half of area of Philippines or a quarter of Madagascar.

6



### MANGROVES IN MYANMAR -2

- Myanmar's mangroves was 5<sup>th</sup> largest in area on the world according to IUCN in the 1980s.
- In 2010 (World Mangrove Atlas) Myanmar's mangrove area is 7<sup>th</sup> largest on the world with coverage of 5000 sq. km, it is 3.3% of the total mangrove on the world
- Providing invaluable goods and services, Myanmar also possess one of the largest coastal environments in the Indian Ocean ring countries.
- All the types of mangrove namely riverine, basin, fringe and over-wash, can be seen in Myanmar.
- More than 60 true and associate mangrove species are also found in Myanmar.

8

### MANGROVE IN MYANMAR-3

- **The Ayeyawady Delta** covers an area of 33,670 km<sup>2</sup> and is composed of a large network of creeks, streams and rivers.
- Due to its low altitude (maximum 3 meter above sea level), this region is frequently flooded by tides and rains during the rainy seasons.
- The tidal action in the Delta region together with various other conditions constitutes an ideal ecological environment for mangrove vegetation.
- In Myanmar, Ayeyawady Delta alone, therefore, encompassed about 2,500 km<sup>2</sup> of mangrove forest in the past.

9



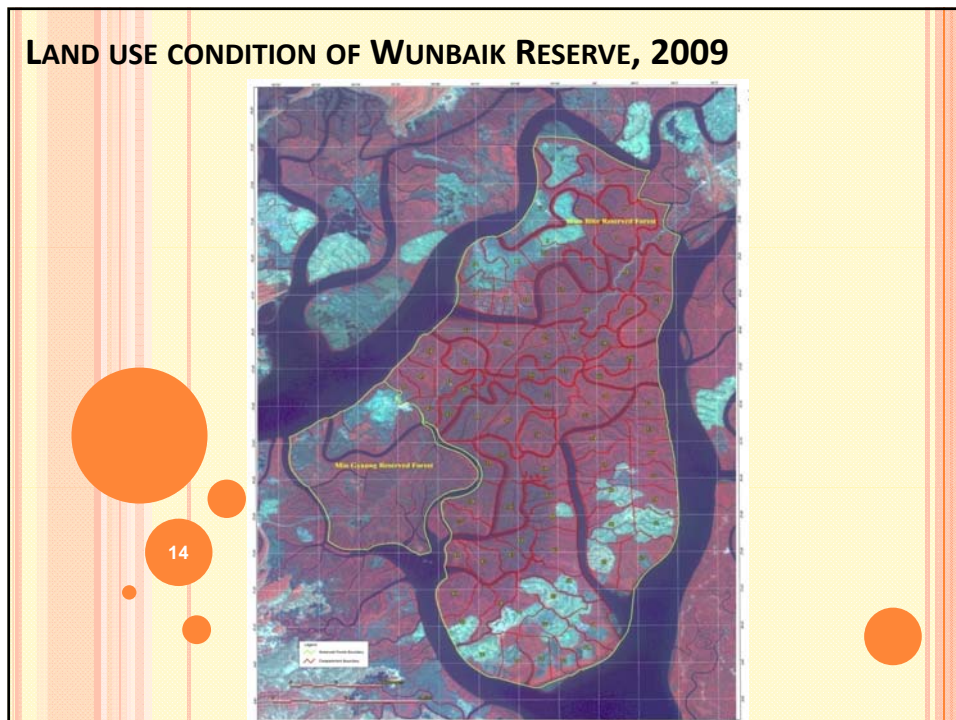
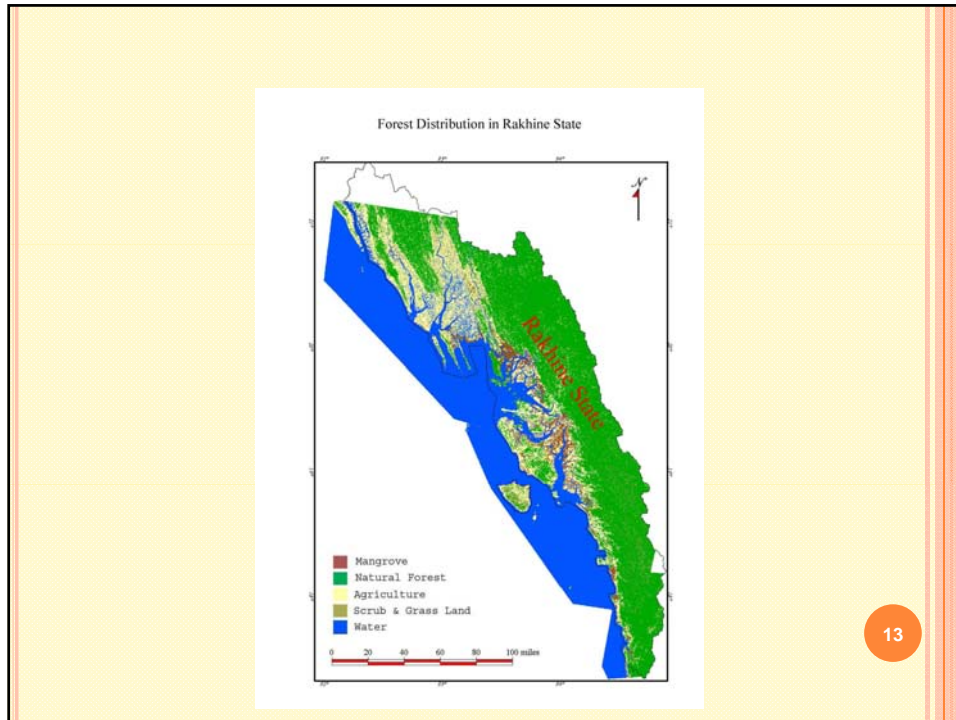
#### MANGROVES IN MYANMAR-4

- **Mangroves in Yakhine State;** The rivers of Yakhine State flow into the Bay of Bengal and are tidal to a considerable distance inland.
- The tidal mangrove areas are most extensive at the mouth of the Kispnadi, Natt, Mayu and Lemyo Rivers and near Rambye and Manaung islands.
- The mangroves of the Yakhine State provide a home for around thirty-five tree species, a complex and diverse range of other vegetation and a unique mixture of marine and terrestrial fauna.
- Wunbaik mangrove forest is situated in Yanbye Township, Kyaukpyu District. The total reserved area is about 56600 acres.

11



A *Sonneratia apetala* tree and its pneumatophores  
in Wunbaik reserved forest





### MANGROVES IN MYANMAR-5

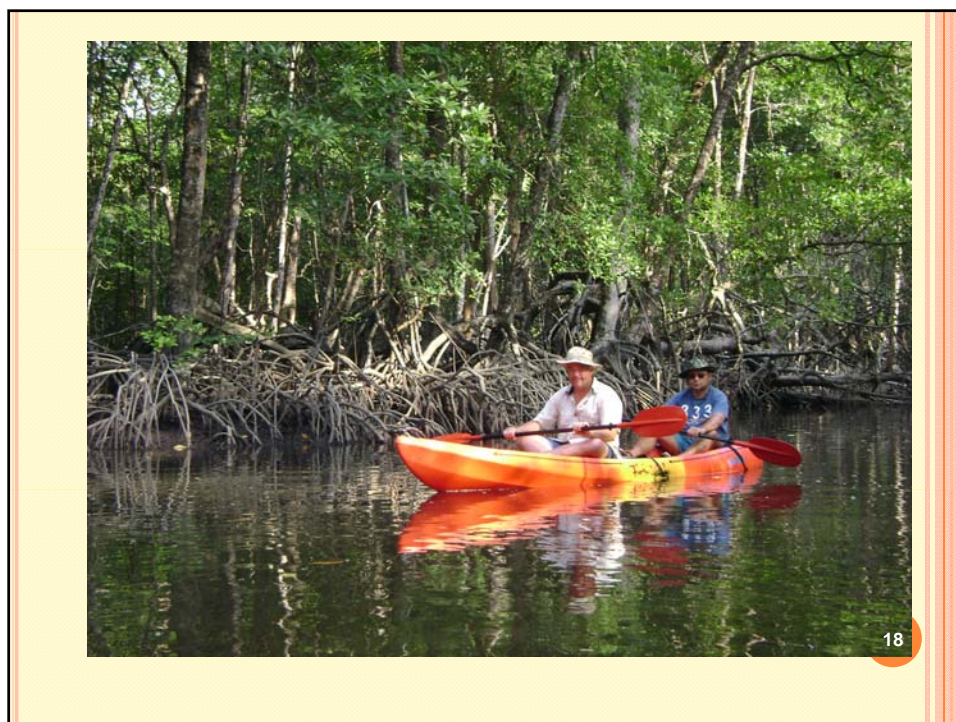
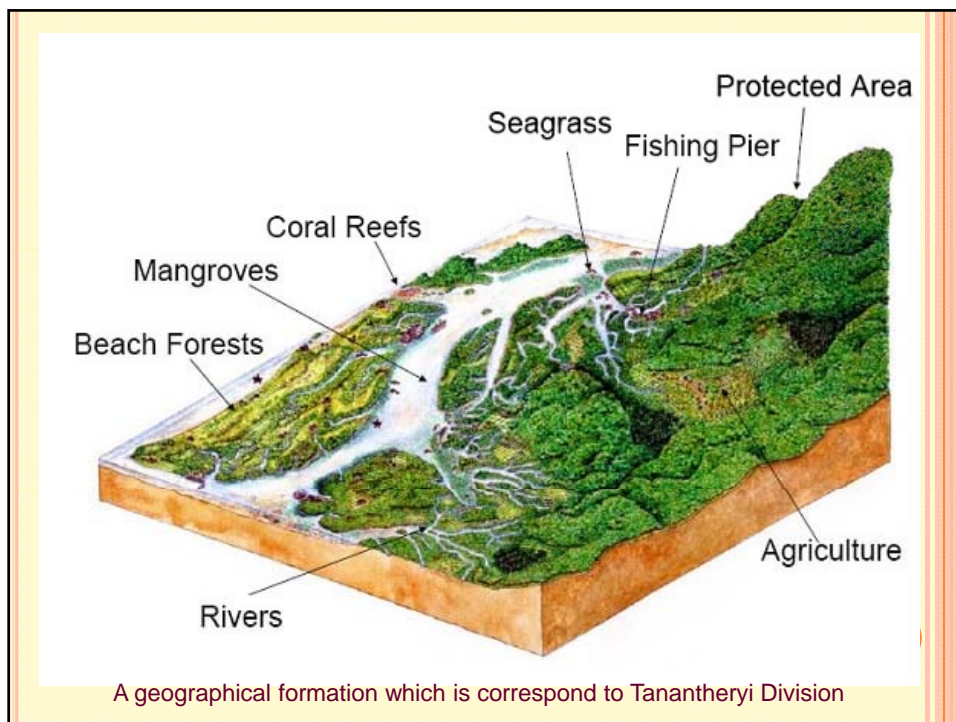
- **Mangrove in Tanintheryi Division;** The coral ecosystems and the islands of the Mergui archipelago form a unique network of aquatic ecosystems.
- They provide favorable opportunities for offshore or near-shore fishing industries and ample potentials for ecotourism.
- The forest resources are some extent in good condition and mangroves in particular are probably intact or climax condition in the some islands.
- With clear, straight and strong boles, dirk green and closed canopies, and pure and uniform stands with enormous stilt roots for acres, the scenery of mangrove in Lampi Island is miraculous.

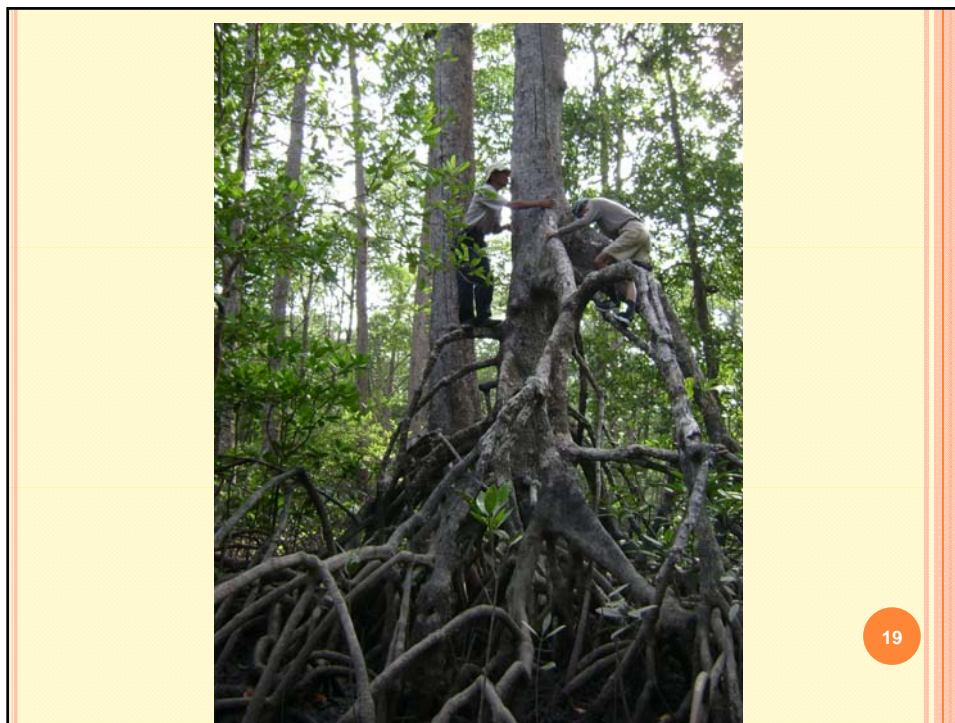
15



16

Mangrove in Lampi marine national park







## FOREST MANAGEMENT IN MYANMAR

- With the long tradition in forest Management, Myanmar is striving to sustain its valuable forest resources.
- National forest policy focusing on the SFM has been in place since its promulgation in 1995.
- To achieve national goal of SFM, forest legislations were reviewed and revised.
- NFMP has been formulated and adopted.
- Also management plans at FMU level were reviewed and revised in line with SFM concepts.
- In order to monitor, assess and reporting on SFM, Myanmar has developed its own C&Is and is actively participating regional initiatives on MAR-SFM, Timber Certification.

23

## MANGROVE CONSERVATION AND MANAGEMENT IN MYANMAR

- **Establishment of Protected Areas**
- **Reservation of costal and mangrove forest**
- **Rehabilitation (Regeneration with natural means and Establishment of Plantation)**
- **Community forestry**
- **Cooperation with national and International organizations**
- **Private sector participation**

24



**RESERVATION OF MANGROVE FOREST**

Sr.	Reserved Forest	Area	Remark
1	Kyakankwin pauk	66,650	Ayeyawady
2	Pyinalan	97,809	II
3	Kakakyan	66,471	II
4	Labutkwe	12,846	II
5	Kalayaik	21,345	II
6	Nyinaung	16,465	II
7	Kadonkani	133,563	II
8	Meinmahla	31,115	II
9	Pyindaye	178,958	II
	<b>Total</b>	<b>625,222</b>	
1	Wunbaik	56600	Yakhine
2.	Minkyauang	11000	II
	<b>Total</b>	<b>67600</b>	
1.	Kyunsu	64000	Tanintheryi
2.	Myeik	68278	II
3.	Auklan Bay	44995	II
	<b>Grand total</b>	<b>870095</b>	

Remark; RFs in Yakhine and Ayeyawady are pure mangrove reserves, but there are also mangroves in the other reserves in association with terrestrial forests in Tanintheryi Division

26

## REHABILITATION (REGENERATION WITH NATURAL MEANS AND ESTABLISHMENT OF PLANTATION)

### Activities done in After-Nargis Period

- Soon after struck of the Cyclone Nargis Forest Department prepared a work plan namely “**Action Plan for Rehabilitation of the Cyclone Nargis Affected Areas and Prevention from Future Natural Disasters**”
- The primary goal is to regain protection as well as production functions of mangrove forests for the local population, and stabilization of coastal environment in the cyclone-affected areas through restoration and rehabilitation activities.

27

## REHABILITATION (REGENERATION WITH NATURAL MEANS AND ESTABLISHMENT OF PLANTATION)

### Activities done After-Nargis Period

- Mangrove forests in the cyclone affected areas is being rehabilitated:
  - to obtain both tangible and intangible benefits from the mangroves;
  - to protect human lives and livelihoods, provide basic needs of local people; and
  - to achieve socio-economic development of the region.
- In each Township, short, medium and long term plans have been prepared and implemented.

28

**Departmental Plantations established in after Nargis Period**

No.	Township	Year	Name of Reserved Forest	Area (Acre)	Remark
1	Boglay	2008-2009	Kadonkani	1000	
		2009-2010	ditto	1000	
		2010-2011	ditto	750	
2	Pyapon	2009-2010	Pyindaye	1000	
		2010-2011	ditto	500	
3	Laputta	2008-2009	Pyinalan+Kyakankwin auk	1000	
		2009-2010	ditto	1000	
		2010-2011	ditto	800	
			<b>TOTAL</b>	<b>7050</b>	

**Remark ! Before Nargis Period, 39075 acres of mangrove plantations had been established in the Ayeyawady Delta**

29





## Mangrove Conservation Activities in Yakhine

Sr. No.	Year	Plantation (AR), Area (acre)	Natural Regeneration (NR), Area (acre)
1	2006-07	50	100
2	2007-08	150	100
3	2008-09	200	100
4	2009-10	250	100
	<b>Total</b>	<b>650</b>	<b>400</b>

A Mangrove plantation



32

A multiple use forest guard post in Kadonkani RF  
(under construction)



33

#### COOPERATION WITH INTERNATIONAL ORGANIZATIONS-1

- While restoring mangrove ecosystems with its own strength, Government of Myanmar is cooperating with International Organizations and local NGOs in this field.
- With JICA “*Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta*” has been launched since 2007.
- Because of the Cyclone Nargis, implemented activities by project were damaged and it was redesigned to cope with recent situation, and expanded the project period from 5 to 6 Years.
- Major project activities are, reconstruction of CF extension centers and nurseries, community forestry, action research plantation and fish culture (trial)

34



35

**Multiple use nursery office**



36

**Bird eye's view of the Byonemway nursery, water pond and quarters**

### Action Research Plantation

No.	Township	Year	Name of Reserved Forest	Area (Acre)	Remark
1	Bogalay	2008-2009	Kadonkani	212	
		2009-2010	ditto	300	
		2010-2011	ditto	80	
2	Pyapon	2009-2010	Pyindaye	14	
		2010-2011	ditto	80	
3	Laputta	2009-2010	Pyinalan+Kyakankwinpauk	500	
		2010-2011	ditto	240	
			<b>TOTAL</b>	<b>1426</b>	

37

### COOPERATION WITH NATIONAL & INTERNATIONAL ORGANIZATIONS-2

- In cooperation with FAO Forest Department implement a project in Yakhine State in the name of "Sustainable Community-based Mangrove Management in Wunbaik Forest Reserve"
- FD also closely cooperating with local NGOs of Myanmar inter alia FREDa, BANCA, MSN, Minglar Myanmar, ECCDI, ECODEV, Mitta Foundation etc. for the restoration of the mangrove ecosystems throughout the mangrove regions.

No.	Township	Year	Reserved Forest	Area (Acre)	Remark
1	Bogalay	2009-2010	Kadonkani	250	FREDa
		2010-2011	Kadonkani	250	II
			<b>TOTAL</b>	<b>500</b>	

38

## MINISTRY OF FORESTRY

Sustainable Community-Based Mangrove Management in  
Wunbak Forest Reserve  
(TCP/MYA/2546/01)

**Project objective**

The Wunbak Forest Reserve will be managed **sustainably through participatory approaches** to conserve the rich biodiversity of Rakhine State's mangrove forests and to strengthen the sustainability of the livelihoods of local communities with a view to creating a widely applicable model of **community based mangrove management**.

**Changes in the Forest Structure**

Category	2008	2009	Change in Acres	Reduction/Increase
Water Holding Area	3794.08	3519.24	-274.82	-7.28
Deltaic Mangroves	30249.52	31520.40	3020.12	+1.13
Degraded Mangroves	8775.56	10252.73	1576.18	+20
Agriculture	7195.50	8190.31	994.81	+13.83
Forest Jungle	81.19	0.00	-81.19	-100
House	218.77	120.41	-98.36	-22.27
Swamp	173.50	21.58	-149.94	-86.43
Shrimp Farming	1142.37	2008.72	1784.35	+154.43
<b>Total Area under Reserve in Wun Bak NP</b>	<b>56633 (22487 ha)</b>			

**Rehabilitation of Mangroves in Cyclone Nargis Affected Area**

**Mangrove Forests Play a Vital Role for the Livelihoods of Local People**

**Mangrove Forests for People**

**The Project**

**Phase 1: Sustainable Mangrove Management**

- 1.1. Assessment of mangrove resources and their potential for sustainable management.
- 1.2. Assessment of the socio-economic conditions of the local communities living in the project area.
- 1.3. Assessment of the institutional arrangements for the management of the mangrove forests.
- 1.4. Assessment of the legal and policy framework for the management of the mangrove forests.
- 1.5. Assessment of the technical and financial resources for the management of the mangrove forests.

**Phase 2: Sustainable Mangrove Management**

- 2.1. Assessment of mangrove resources and their potential for sustainable management.
- 2.2. Assessment of the socio-economic conditions of the local communities living in the project area.
- 2.3. Assessment of the institutional arrangements for the management of the mangrove forests.
- 2.4. Assessment of the legal and policy framework for the management of the mangrove forests.
- 2.5. Assessment of the technical and financial resources for the management of the mangrove forests.

**Phase 3: Sustainable Mangrove Management**

- 3.1. Assessment of mangrove resources and their potential for sustainable management.
- 3.2. Assessment of the socio-economic conditions of the local communities living in the project area.
- 3.3. Assessment of the institutional arrangements for the management of the mangrove forests.
- 3.4. Assessment of the legal and policy framework for the management of the mangrove forests.
- 3.5. Assessment of the technical and financial resources for the management of the mangrove forests.

## COMMUNITY FORESTRY (CF)

- Forest Department strongly recognizes that local communities play a crucial role in sustainable forest management of the country.
- In 1995 Ministry of Forestry promulgated the Community Forestry Instructions for the participation of the local community in the forest management activities.
- To date, 98 users' groups have established 25,831.3 acres of community forests in Laputta and Bogalay Townships.
- Through JICA mangrove project, FD recently established 400 acres of CF in the project area.

40

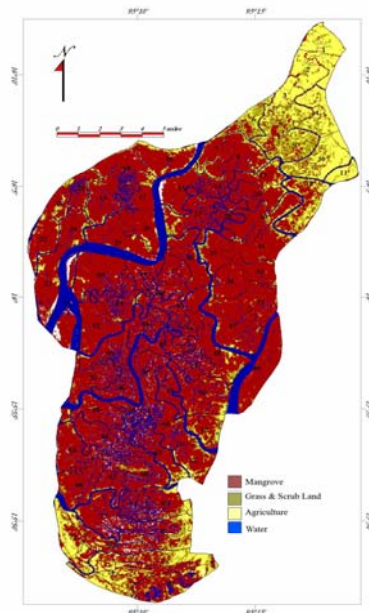
## PRIVATE SECTOR PARTICIPATION

### ○ Private plantation:

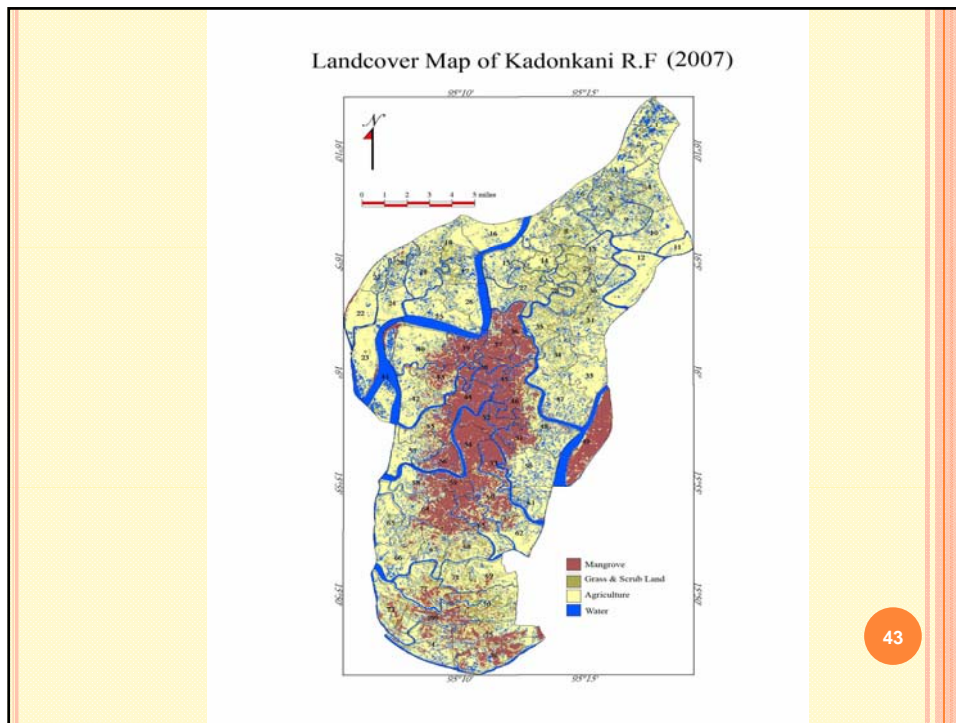
- Under the guidance of the Minister for Forestry, private plantation programme has been implemented since 2007.
- Being suffered from the impact of Cyclone Nargis, local people realized the value of mangrove forests, and consequently, interest in private plantation has been growing.
- In Laputta and Bogalay Townships in Ayeyawady Delta and in Myeik Township in Tanintheryi Division, plantation establishment by private sector has been initiated.

41

Landcover Map of Kadonkani R.F (1990)



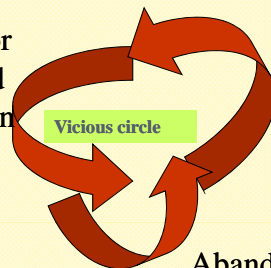
42



## VICIOUS CIRCLE

### Mangrove Destruction in Mangrove Rich Deltas

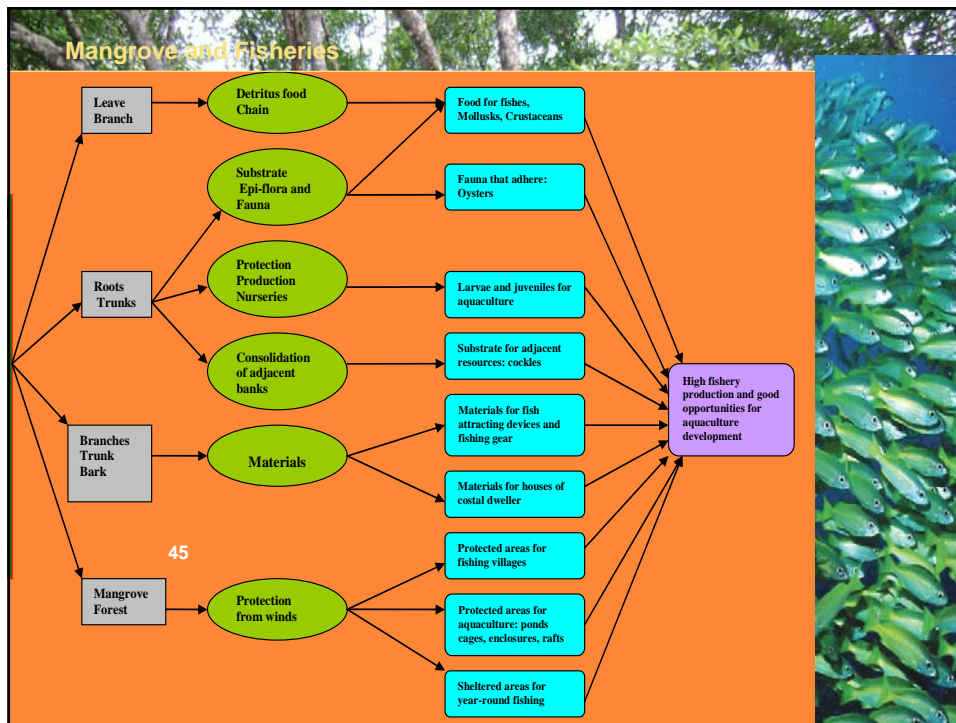
Land clearing for  
shrimp pond and  
Paddy cultivation



Move to another  
Mangrove areas and  
seek new land again  
for cultivation

Abandoned the land

In 4 to 5 years  
output decreases



**COMBINED FACTORS FOR DEPLETION OF MANGROVES**


- There has been inadequate knowledge and understanding of mangrove ecosystem
- The use of mangrove resources has been unplanned and random.
- Reforestation and restoration of degraded mangrove areas has been inefficient.
- Rules against illegal encroachment have not been enforced strictly enough.
- There has been little cooperation among relevant stakeholders.
- Little has been done towards raising of awareness among people about the importance of mangrove ecosystem and etcetera.

Without addressing these shortcomings, we will not able to practice the sustainable mangrove management.

Source: IUCN, Ecology and management of mangroves

46





**CONCLUSION**

- In cooperation with other members of global communities, Myanmar has been implementing environmental conservation to cope with global warming and to combat desertification.
- The Forest Department, Ministry of Forestry will make its utmost Endeavour to successfully implement sustainable mangrove management throughout the country
- Present situation of mangrove in the Ayeyawady Delta calls for urgency of rehabilitation, and we invite related stakeholders including local and international communities to participate with Forest Department of Myanmar.

47



Attachment 2-3: Progresses and Achievements Related to JICA/FD  
Mangrove Project

**Ministry of Environmental Conservation and Forestry, Forest Department**

**The Integrated Mangrove Rehabilitation and Management Project through  
Community Participation in the Ayeyawady Delta**

**Regional Mangrove Coordination Meeting  
7 November, 2011**

**Overall View on JICA/FD Mangrove Project  
Framework and Activities**

*Khin Maung Lwin  
Field Project Manager,  
Assistant Director, Myaung Mya District*

## Background

- From 2002 to 2005, JICA dispatched a development study team to formulate the “Integrated Mangrove Management Plan” (IMMP).
- FD decided to implement the IMMP.
- The IMMP has three phases, (I) foundation period (5 years), (II) extension period (5 years), and (III) de-centralization period (30 years).
- The first five years foundation period, is the most crucial because it will effect the overall prospective of the IMMP.
- The current JICA/FD mangrove project is aimed to support the foundation period of the IMMP.
- The Project Design Matrix (PDM) has been revised twice in the past and the latest PDM is PDM version 2 (July 2011)

## Brief Description about Project

(based on PDM version 2)

- **Project Title:**
  - ❖ The Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta
- **Project Duration**
  - ❖ April, 2007 - March, 2013 (6 years: extended 1 year after Cyclone Nargis)
- **Target Area**
  - ❖ 4 Reserved Forests (Kyakankwinpauk, Pyinalan, Kadonkani, Pyindaye) in the Ayeyawady Delta
- **Target Group**
  - ❖ Community Forestry User Groups (CFUSGs) practicing community forestry in the 4 Reserved Forests in the Ayeyawady Delta
  - ❖ Community Forestry Task Force and other relevant staff from the Forest Department
- **Implementing Organizations**
  - ❖ Myanmar - Forest Department(FD) ( and DOF, MAS, SLRD)
  - ❖ Japan - JICA ,
- **Project Input**
  - ❖ Japanese Side - ¥ 750 Million
  - ❖ Myanmar Side- K 100 Million

## Project Purposes

The communities and the mangrove forests co-exist in a sustainable manner in the selected areas where project activities are implemented within the Ayeyawady Delta.

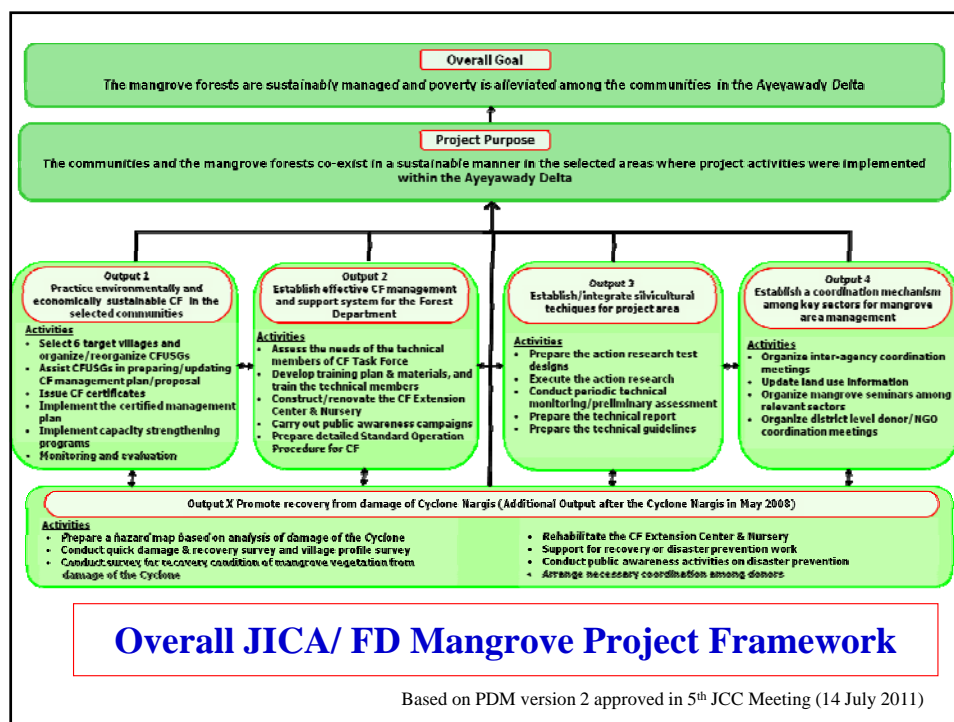
## Overall Goal

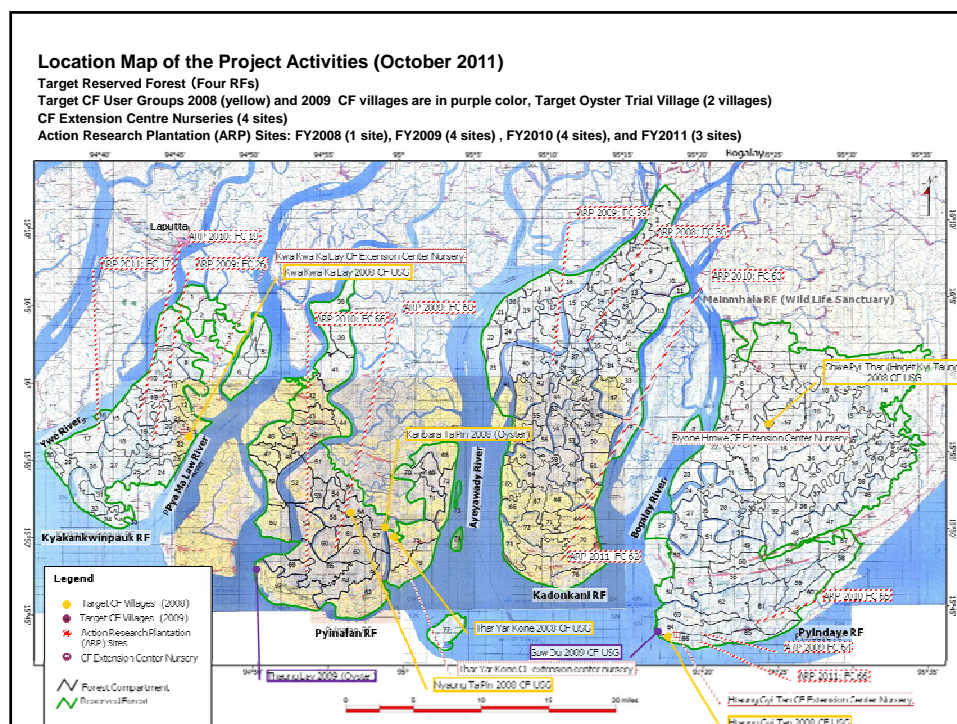
(expected to be achieved after the Project)

Mangrove Forest are sustainability managed and poverty is alleviated among the communities in the Ayeyawady Delta.

## Outputs to be achieved in PDM version 2

1. The selected communities practice environmentally and economically sustainable community forestry (CF).
  2. The management and the support system of the Forest Department (FD) for CF is effective.
  3. Some silvicultural techniques for the rehabilitation and the management of the mangrove and its associated forests for the Ayeyawady Delta are established.
  4. A coordination mechanism is established among key sectors to address the underlying causes of mangrove deforestation in the Ayeyawady delta.
- X. Recovery from damage of Cyclone Nargis is promoted.







## Required activities to achieve Output 1

### Community forest establishment through people participation

- 1-1: Village Selection: 6 villages re-selected for CF
- 1-2: Re-confirmation of socio-economic conditions: on-going
- 1-3: Mobilization and organization/ reorganization of CFUSG: On-going
- 1-4: Preparation of 6 CF management plans: under confirmation process
- 1-5: Certification/ Re-certification of 6 CFUSGs:
- 1-6: Implementation of activities as per CF Management Plan
- 1-7: Income generating activities: Oyster culture trial and aqua-agroforestry (on-going)

**CF activities for Re-selected villages in 2011**

**Confirmation of CF Management Plan**



Shwe Pyit Thar village, Bogalay Township

Kwa Kwa Ka Lay village, Laputta Township

The diagram shows two boxes at the bottom left. The top box, 'Shwe Pyit Thar village, Bogalay Township', has a pink arrow pointing up to a photograph of a meeting. The bottom box, 'Kwa Kwa Ka Lay village, Laputta Township', has a pink arrow pointing right to a photograph of people looking at a map.

**Implementation of CF activities in 2010**



Gaw Du village, Pyarpon

Thar Yar Kone village, Laputta

The diagram shows four photographs arranged in a 2x2 grid. The top-left photo shows a field with many small mangrove saplings planted in rows, with a caption 'Gaw Du village, Pyarpon'. The top-right photo shows a group of people working in a field, with a caption 'Thar Yar Kone village, Laputta'. The bottom-left photo shows a group of people working in a field, and the bottom-right photo shows a group of people working in a field.



Establishment of Community Forest Plantation					
Township	Year	Reserve F.	Compartment	Village	Area (acre)
Bogalay	2009	Kadonkani	32	Apyipadekaw	50
	2009	Pyindaye (N)	17	Ngetkyitaung	50
	2010	Kadonkani	50	Gwaychaung	50
	2010	Pyindaye (N)	23	Damintaung	50
	2011	Pyindaye (N)	17	Nghetgyitaung	40
Laputta	2009	Kyakankwinpauk	22,26	Kwakwakalay	100
	2009	Pyinalan	56	Kanpalatapin	100
	2010	Kyakankwinpauk	27	Kwinthonesint	20
	2010	Kyakankwinpauk	22,26	Kwakwakalay	70
	2010	Pyinalan	75	Tharyakone	25
	2010	Pyinalan	70	Peinekone	25
	2010	Pyinalan	58	Nyaungtapin	25
	2010	Pyinalan	56	Kanpalatapin	10
	2011	Kyakankwinpauk	22,26	Kwakwakalay	90
	2011	Pyinalan	57,58	Nyaungtabin	30
Pyarpon	2009	Pyindaye (S)	66	Htaunggyitan	100
	2010	Pyindaye (S)	35	Gawdu	35
	2011	Pyindaye (S)	64	Gawdu	10
	2011	Pyindaye (S)	66	Htaunggyidan	30
<b>Total</b>					<b>940</b>



## Required activities to achieve Output 2

The management and the support system of the Forest Department (FD) for CF is effective.

### Activities to strengthen CF management and support system of FD :

- Training of MCFTF technical staff and Preparation of CF- SOP (standardized operational procedure)
- Community Forestry Extension Center and Nursery (CFECN) Construction/ Renovation (from ex- output 3)
- Public Awareness related activities" (from ex- output 4)

For the remaining project period, concentrate more for:

- confirmation of roles/responsibilities of MCFTF, and training needs
- consolidation of CF-SOP for project area as outputs

## 2. Construction and Renovation of CF Extension Center & Nursery



### The advantages of CFECN

- Seedling production
- Extension center
- Sharing information to develop mangrove forest
- Use of cyclone shelter
- Create new employment for local people
- Use as office for staff
- Support to enhance forest protection

### CF-SOP Residential Meeting (24-8-2011 to 26-8-2011)



1/21/2013

16

### Required activities to achieve Output 3

Some silvicultural techniques for the rehabilitation of degraded and the management of the mangrove and its associated forests for the Ayeyawady Delta are established.

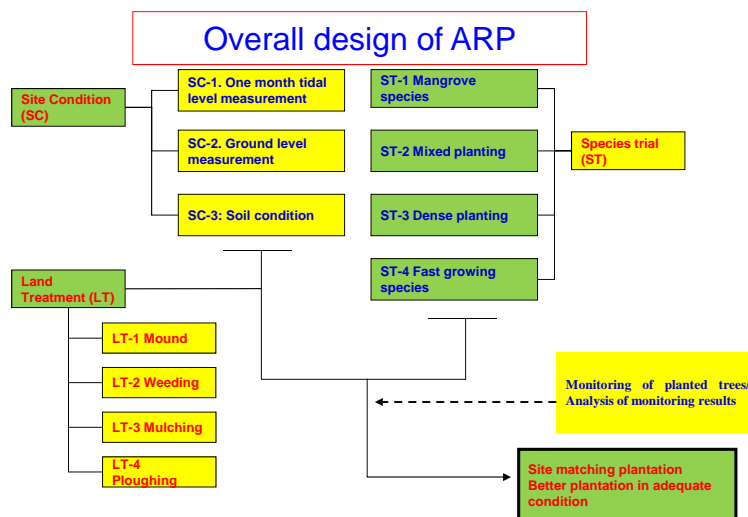
Action Research Plantation (ARP) Activities

Already 4 years of ARP implementation.  
For the remaining project period, concentrate more for consolidation of ARP results/ findings and compile technical guideline and technical report as outputs

Technical Guideline: intend to cover confirmed/ applicable silvicultural techniques for specific purposes.

Technical Reports: intend to cover monitoring data, survey methods and details of ARP





### 3. Establishment of Action Research Plantation (ARP)



**Interaction of the Respective Technology in ARP Activities**

**Objective:** to conduct research on Mangrove forestry for integration of the forestry technology through plantation establishment, activities.

<b>Accomplishment of ARP in 2011-2012</b>				
<b>Township</b>	<b>Fiscal Year</b>	<b>Reserve Forest</b>	<b>Compartment</b>	<b>Area (acre)</b>
<b>Bogalay</b>	2008-09	Kadonkani	36	212
	2009-10	Kadonkani	39	200
	2010-11	Kadonkani	63	80
	2011-12	Kadonkani	62	25
<b>Total</b>				<b>517</b>
<b>Laputta</b>	2009-10	Kyakankwinpauk	26	250
	2009-10	Pyinalan	60	250
	2010-11	Kyakankwinpauk	19	120
	2010-11	Pyinalan	66	120
	2011-12	Kyakankwinpauk	17	25
<b>Total</b>				<b>765</b>
<b>Pyarpon</b>	2009-10	Pyindaye	64	14
	2010-11	Pyindaye (S)	65	80
	2011-12	Pyindaye (S)	66	25
<b>Total</b>				<b>119</b>
<b>Total</b>				<b>1401</b>

<b>Accomplishment of ARP in 2010</b>	
 <p><b>Kyarkankwinpauk 19 (120 acre)</b></p>	 <p><b>Pyinalan 19 (120 acre)</b></p>
 <p><b>Kadonkani 63 (80 acre)</b></p>	 <p><b>Pyindaye 65 (80 acre)</b></p>

### Required activities to achieve Output 4

A coordination mechanism is established among key sectors to address the underlying causes of mangrove deforestation in the Ayeyawady delta.

#### Concentration to activities for realistic coordination mechanism:

- Regional level “**Coordination Committee**” into “**Coordination Meeting**” to confirm and share experiences / lessons learned related to Project and Reserved Forest (RF) / mangrove/CF management with Regional level relevant agencies (Activity: 4.1). **This Meeting!**
- Donor coordination by **District Level Donor/NGO Coordination Meetings** (Activity: 4.4).  
To Confirm and share experiences / lessons learned related project related activities in target areas, about RF management by FD, seek further collaboration/ differentiation of activities among donors/NGOs

### Required activities to achieve Output X

Recovery from damage of Cyclone Nargis is promoted.

- X-1 Prepare a hazard map (from ex-Output 4)
- X-2 Conduct quick damage & recovery survey (from ex-Output 1)
- X-3 Conduct village profile survey (from ex-Output 1)
- X-4 Conduct survey for recovery condition of mangrove vegetation (from ex-Output 3)
- X-5 Rehabilitate the CF Extension Center and Nursery (from ex-Output 3)
- X-6 Support recovery or disaster prevention work through material supply (from ex-Output 4)
- X-7 Conduct public awareness activities on disaster prevention (from ex-Output 4)
- X-8 Arrange necessary coordination among donors (from ex-Output 4)

As of FY2011-12, all of activities except X-4 have been completed

## Achievements and Expected Directions

- Community Based Mangrove Forests in the Ayeyarwady Delta area are sustainably managed in future.
- Poverty of local residence will be alleviated among the communities by their efforts with support from the Project in the Ayeyawady Delta.
- Soon, the communities and the mangrove forests will coexist together in a sustainable manner within the Ayeyawady Delta.
- Some silvicultural techniques for the rehabilitation of degraded and the management of the mangrove are already accomplished between not only JICA and FD, but also FD and Local UGs.
- An inter- disciplinary meeting will be established among key departments including FD, MAS, DOF and SLRD to address the underlying causes of mangrove deforestation in the Ayeyawady Delta.

**Thank You  
for Your Attention**



Attachment 2-4: Mangrove Forest in the Project Area

**The Integrated Mangrove Rehabilitation and Management Project  
through Community Participation in the Ayeyawady Delta**

## **Mangrove Forest Status in the Project Area**

Brief on Reserved Forest Status  
for  
further information sharing and discussions

Regional Mangrove Coordination Meeting 2011  
JICA/FD Mangrove Project

### **1. Reserved Forest (RF)**

- JICA/ FD Mangrove **Project Area is all inside RF areas.**
- “Reserved Forest” can be interpreted as “**Reserved for Forest and Forestry Usage**”
- By the definition of the Forest Law, at inside RF areas:
  - Non-forestry land use is prohibited
  - Human Settlement is not allowed
  - Forest Department is the law enforcement authority

**However, the current Reserved Forest area  
has more complex land use and  
development activities.**



## For your Confirmation & Clarification!!

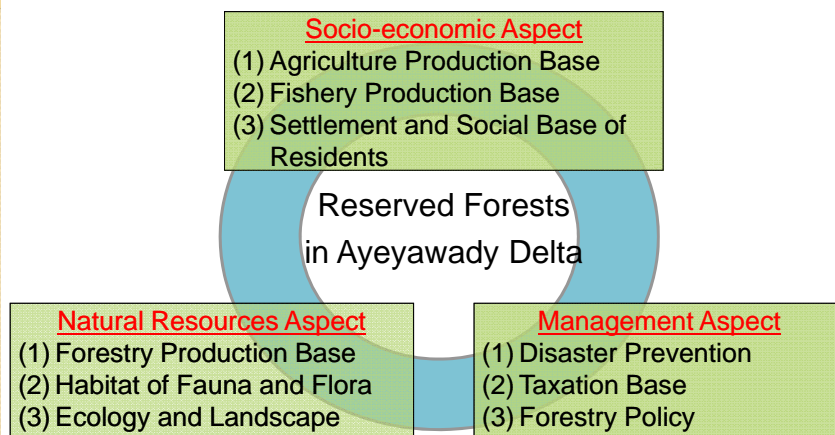
As per the distributed agenda for the Regional Mangrove Coordination Meeting, expected goals of this meeting are:

- **Participants to share about respective strategies and approaches among relevant agencies toward reserved forest area.**
- **Participants to discuss and share about possible synergy for mangrove conservation and sustainable development of the reserved forest area.**

**This is because, the current Reserved Forest has more complex land use and development activities.**

## 2. Current Situation - 1

### Multiple Functions of the Reserved Forests



## 2. Current Situation - 2

### Settlement Aspect of the Reserved Forests

Agriculture (paddy)
Fishery (catcher)

Before Cyclone Nargis, population growth inside RFs were higher than outside of RFs in Laputta and Bogalay Townships.  
 Migration continues after Cyclone Nargis as well.

## 2. Current Situation - 3

### 16,000 acre of Mangrove disappeared from Dec-2007 to Dec 2009

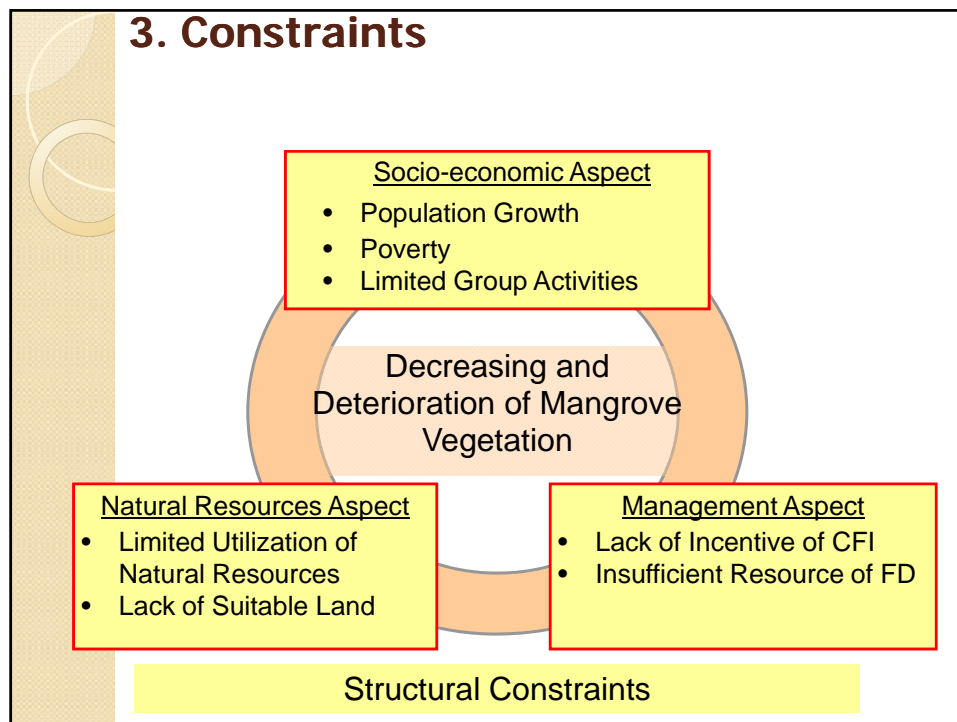
(၂၀၀၇ ဒီဇင်ဘာ မှ ၂၀၀၉ ဒီဇင်ဘာ)အတွင်း ဒီရေတောအရိယာ ၁၆၀၀၀ ဧကခန့် ပျက်စီးဆုံးရှုံးခဲ့ခြင်း

**Dec.2007 land use** (ဒီဇင်ဘာ ၂၀၀၇ ခုနှစ် ဝင်္ဂါအသုံးပြုမှု)

**Dec.2009 land use** (ဒီဇင်ဘာ ၂၀၀၉ ခုနှစ် ဝင်္ဂါအသုံးပြုမှု)

Landuse အမျိုးအစား	Legend အရောင်	Area (2009) by Satellite (acre) ဧက(ဧ) နှင့် ပျက်စီးမှု အခြေအနေ	% ရာခိုင်နှုန်း	Difference between 2007 and 2009 နှစ် ခြားနားမှု ခြားနားခြင်း
Mangrove ဒီရေတော		116,000 ၁၁၆,၀၀၀	22 ၂၂	-3% / -16,000 Acre -၃% / -၁၆,၀၀၀ ဧက
Kaing / Grass စိုင်း		54,200 ၅၄,၂၀၀	10 ၁၀	0 ၀
Agriculture နွားမွေးမြူခြင်း		283,000 ၂၈၃,၀၀၀	54 ၅၄	6%/31,000 Acre ၆% / ၃၁,၀၀၀ ဧက
Home Garden အိမ်နီးခြံမြေ		3,100 ၃,၁၀၀	1 ၁	0 ၀
Wet Land နီမေမြေ		13,100 ၁၃,၁၀၀	2 ၂	-5%/-26,000 Acre -၅% / -၂၆,၀၀၀ ဧက
Water ရေမြစ်		32,200 ၃၂,၂၀၀	6 ၆	-2%/-10,300 Acre -၂% / -၁၀,၃၀၀ ဧက
Salt Pan ဆားကွင်း		5,500 ၅,၅၀၀	1 ၁	1%/5,200 Acre ၁% / ၅,၂၀၀ ဧက
Shrimp Pond ငှက်မွေးမြူရေး		5,300 ၅,၃၀၀	1 ၁	1%/5,200 Acre ၁% / ၅,၂၀၀ ဧက
Sand စောက်		2,500 ၂,၅၀၀	0 ၀	0 ၀
Cloud တိမ်ခါးအာရိယာ		9,600 ၉,၆၀၀	2 ၂	2%/10,300 Acre ၂% / ၁၀,၃၀၀ ဧက
Total စုစုပေါင်း		527,00 ၅၂၇,၀၀၀	100 ၁၀၀	

**16,000 acres of mangrove disappeared between 2007 and 2009**  
 (Also from 1995 to 2001, 30% of mangrove forest disappeared)



- ### 4. Issues to be Shared and Discussed
- Current Project Area has diverse as well as complex land-use, even though the area is regarded as the Reserved Forest.
  - Due to large-scale human settlement and non-forestry activities, certain issues and constraints exist in the RF area.
  - Due to diverse land-use and development activities, not only FD, but other departments and agencies are also highly involved in RF area.
  - Up to now, there were not much of opportunities among relevant departments/ agencies to share each others strategies, approaches, plans related to Reserved Forest.
  - The JICA/FD Mangrove Project would like to extend this meeting as an initial gathering for information sharing and seeking further collaborations among relevant departments/

## **Once Again!! For your Confirmation & Clarification!!**

During the discussion session of this meeting, the JICA Expert Team would deeply appreciate, if participants can actively participate to achieve the expected goals of this meeting:

- **Participants to share about respective strategies and approaches among relevant agencies toward reserved forest area.**
- **Participants to discuss and share about possible synergy for mangrove conservation and sustainable development of the reserved forest area.**

Thank  
you!

**MANGROVE FOR ALL!  
ALL FOR MANGROVE**



Attachment 2-5: Strategies and approaches toward reserved forest area by agriculture sector (MAS)

**The Republic of Union of Myanmar**  
**Ministry of Agriculture And Irrigation**  
**Myanma Agriculture Service**  
**Ayeyawady Region**



**The Integrated Mangrove Rehabilitation  
and  
Management Project**

7.11.2011

Coconut seedling and growing condition for the Integreted Mangrove Rehabilitation and Management in the Ayeyarwady Region, Nargis Area, 2010-2011

Sr No	Name of Township	Dwarf Coconut Variety			Local coconut Variety				Total		
		No of coconut	Nursery Date	Germination Date	No of Germinated coconut	No of coconut	Nursery Date	Germination Date	No of Germinated coconut	No	Seedlings
1	Laputta	2300			1342	3000			1957	5300	3299
	1 <sup>st</sup> time	800	24.09	2.9.09	522	800	6.5.09	2.9.09	457	1600	979
	<b>Total</b>										
	- 2 <sup>nd</sup> time	400	10.8.09	8.9.09	170	400	10.8.09	8.9.09	360	800	530
	<b>Total</b>										
	- 3 <sup>rd</sup> time	1100	25.4.10	20.5.10	650	1200	5.5.10	28.5.10	830	2300	1480
	<b>Total</b>										
	- 4 <sup>th</sup> time	-	-	-	-	600	29.8.10	27.9.10	310	600	310

**Note:** There is a plan to distributed the remaining plants 310 by Forest Department.

= 2 =

Sr No	Name of Township	Distribution and growing Seedlings				
		Name of Village Track	Total Farmer	Seedlings		
				Dwarf Variety	Local Variety	Total
1	La putta	Kantbalatabil	598	1342	1647	2989
		1 <sup>st</sup> time Nyaungtabin	31	31	31	62
		Kwa Kwalay	20	95	88	183
		Thaya kone	62	171	139	310
	<b>Total</b>		<b>107</b>	<b>225</b>	<b>199</b>	<b>424</b>
-	2 <sup>nd</sup> time	Nyaungtabin	20	68	117	185
		Kwa Kwalay	62	53	126	179
		Thaya kone	107	49	117	166
		<b>Total</b>		<b>189</b>	<b>170</b>	<b>360</b>
-	3 <sup>rd</sup> time	Nyaungtabin	20	226	256	482
		Kwa Kwalay	62	214	274	488
		Thaya kone	107	210	300	510
		<b>Total</b>		<b>189</b>	<b>650</b>	<b>830</b>
-	4 <sup>th</sup> time		-	-	-	-



Laputta Township, Distribution of Coconut Seedling





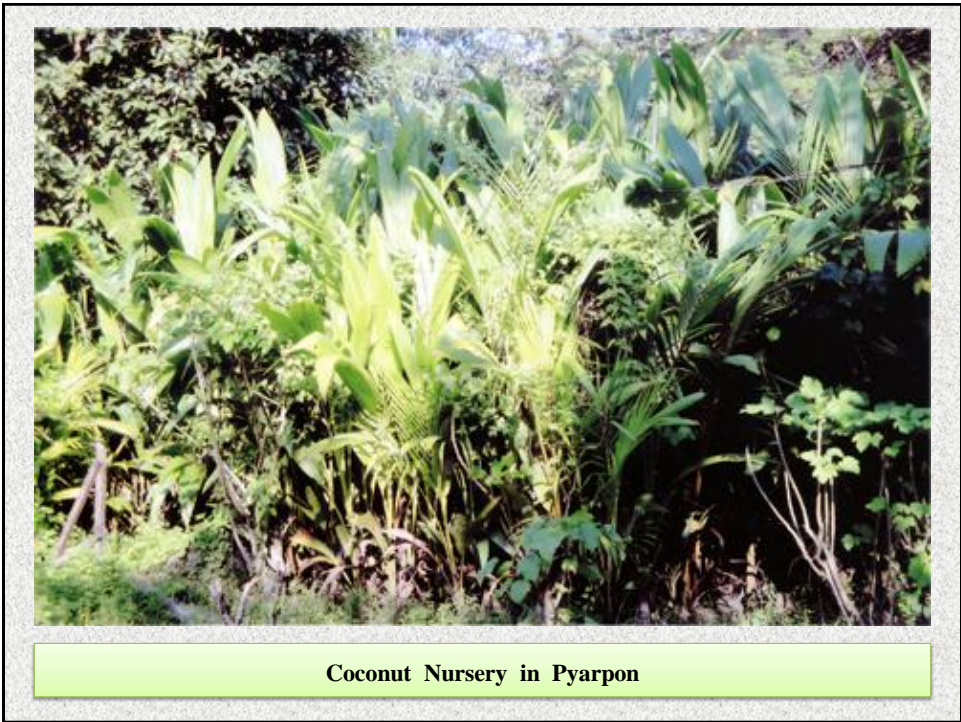


= 3 =

Sr No	Name of Township	Dwarf Coconut Variety				Local coconut Variety				Total	
		No of coconut	Nursery Date	Germination Date	No of Germinated coconut	No of coconut	Nursery Date	Germination Date	No of Germinated coconut	No	Seedlings
2	Pyarpon	1250			661	3000			1831	4250	2492
	1 <sup>st</sup> time	54	27.3.09	20.4.09	45	147	20.4.09	25.4.09	118	201	163
		146	28.3.09	13.5.09	100	94	21.4.09	10.5.09	71	240	171
						280	22.4.09	24.5.09	172	280	172
						39	23.4.09	25.5.09	34	39	34
						40	9.5.09	14.5.09	23	40	23
	<b>Total</b>	<b>200</b>			<b>145</b>	<b>600</b>			<b>418</b>	<b>800</b>	<b>563</b>
	2 <sup>nd</sup> time	560	15.8.09	23.8.09	234	520	19.8.09	25.8.09	506	1080	740
		40	18.8.09	24.8.09	12	80	21.8.09	25.8.09	57	120	69
	<b>Total</b>	<b>600</b>			<b>246</b>	<b>600</b>			<b>563</b>	<b>1200</b>	<b>809</b>
	3 <sup>rd</sup> time	450	17.4.10	25.4.10	270	1800	19.4.10	30.4.10	850	2250	1120

= 4 =

Sr No	Name of Township	Distribution and growing Seedlings				
		Name of Village Track	Total Farmer	Seedlings		
				Dwarf Variety	Local Variety	Total
2	Pyarpon		492	304	981	1285
	1 <sup>st</sup> time	Htaungyita n	265	143	388	531
		Daminseik	Cyclone shelter	-	150	150
		Kyaik latt (quarter-1)	Tree plantation	-	100	100
		Pyarpon Forest Office	-	-	50	50
		Htaungyita n	227	161	293	454
	<b>Total</b>		<b>492</b>	<b>304</b>	<b>981</b>	<b>1285</b>
	2 <sup>nd</sup> time	(1st+2nd = distributed already)				
		(1st+2nd total plants=)				
		seedlings		800	1200	2000
		Distribution		391	981	1372
		dead plant		304	981	1285
		dead seedling		409	219	628
	<b>Total</b>	dead seedling		<b>87</b>	-	<b>87</b>
	3 <sup>rd</sup> time	dead plant		180	950	1130
		dead seedling		150	631	781
		remaining plant		30	319	349



= 5 =

Sr No	Name of Township	Dwarf Coconut Variety				Local coconut Variety				Total	
		No of coconut	Nursery Date	Germination Date	No of Germinated coconut	No of coconut	Nursery Date	Germination Date	No of Germinated coconut	No	Seedlings
3	Bogalay	1250			769	3000			1717	4250	2486
-	1 <sup>st</sup> time	200	3.4.09	2.9.09	154	600	25.6.09	21.12.09	465	800	619
-	2 <sup>nd</sup> time	600	1.8.09	2.9.09	331	600	17.9.09	21.11.09	419	1200	750
-	3 <sup>rd</sup> time	450	22.6.10	9.8.10	284	900	10.7.10	30.8.10	498	1350	782
		-			-	900	21.9.10	15.11.10	335	900	335
	<b>Total</b>	<b>4800</b>			<b>2772</b>	<b>9000</b>			<b>5505</b>	<b>13800</b>	<b>8277</b>

= 6 =

Sr No	Name of Township	Distribution and growing Seedlings				
		Name of Village Track	Total Farmer	Seedlings		
				Dwarf Variety	Local Variety	Total
3	Bogalay	Distribute to Forest Department		769	1717	2486
-	1st time	Distribute to Forest Department		154	465	619
-	2nd time	Distribute to Forest Department		331	419	750
-	3rd time	Distribute to Forest Department		284	498	782
				-	335	335
	<b>Total</b>		<b>1090</b>	<b>2415</b>	<b>4345</b>	<b>6760</b>











Attachment 2-6: Strategies and approaches toward reserved forest area by agriculture sector (SLRD)

**Presentation for the Integration Mangrove  
Rehabilitation and Management Project through Community  
Participation in the Ayeyawady Region .**

Presented by; **U Ohy Myint**  
**Deputy-Head of SLRD**  
**Ayeyawady Region**

**Introduction**

1. Under the Ministry of Agriculture and Irrigation, The Settlement and Land Records Department is Implementing our major achievements and on-going activities as the followings -

- (a) Up-dating Ground, Map and Land Records,
- (b) Surveying and full fill of Mapping,
- (c) Compilation of Agricultural Statistics regularly and rightfully,
- (d) Collecting of Land Utilization,
- (e) Decisions of Land Disputes
- (f) Enumeration of Agricultural Census.

2. Among the above functions , Land Utilization or Land Use is very important and necessary for the other related organizations because of its topics , Reserved Forests and Un-reserved Forests contained. Although, there are so many reserved forests in our country containly Ayeyawady Region but four Reserved Forests which have mangrove resource are emphasized for this Project. They are Kyakankwinpauk, Pyinalan, Kadonkani and Pyindaye R F.

**Major Achievement of SLRD in the forest area and others.**

According to the SLRD's main functions, Revenue Surveyors are collecting data onto the ground to compile the crop statistics monthly. When they make the field operation they use not only their Kwin maps (16 inches = 1 mile) but also military -used map (1 inched map) and forest maps. Therefore, we get agricultural statistics of the whole season and then publish the Annual Seasons and Crops Reports yearly to yearly.

**Land Use of 4 Mangrove Forest  
( 2010-2011 )**

No	Township	Name of R-F	Area (Acre)	Paddy Land	Garden	Dani	Salt Field	Pond	Departmental Plantation	CF	JICA FREDA research Plantation	JICA CF	Individual Plantation	Forest-ed Area	Other
1	Latputta	Kyarkankwinpaut	70926	35897	622	409	1079		1400		370	190		26411	4548
2	Latputta	Pyinalan	107530	27902	2150	929	1115		3750	4209	370	185	400	54041	12259
3	Pyapon (Amar)	Pyindaye	121632	41945	2363	1661	564	6168	1800		4350	294	3245	51262	7980
4	Bogalay	Kadonkani	183482	69105	5710	5553			930	50	80			102054	
5	Bogalay	Pyindaye	68571	30755	47	243				50				37476	
	Total	5	552141	205604	10892	8795	2978	6168	7880	4309	5170	669	3645	271244	24787

**Sown Area of Multiple Crops in 4 Reserved Forest in Ayeyawady Region  
(2010-2011)**

No	Reserved Forest	Area (Acre)	Paddy (Acre)	Jatropha	Remark
1	Kyarkankwinpaut	70926	12417		
2	Pyinalan	107530	42575		
3	Pyindaye	121632 68571	41945 30755	991	Pyapon Bogalay
4	Kadonkani	183482	69105	74	
	Total	552141	196797	1065	

### **Future Plans**

As we know, Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta has been implementing from 2007 to 2011. During the Project we all participate to be successful in accordance with co-ordination and co-operation because the other remain villages and villager's in Delta will be participate afterwards this project's results or benefits.

The paddy land in the mangrove area are reduced its crop rate per acre after three years from started year because of the salted water increasing. If the mangrove, which can soak and control the saltwater, are damaged the salts will be more and more so that it approach to the upper area up to Urban area of Bogalay and Mawlamyainggun.

Therefore if the paddy land is damaged, we should not drive to cultivate any crop and it is necessary to establish the community forest. SLRD will share data and point out these area when the surveyors are collecting crop cultivation in mangrove area regularly. That is why we discuss this matter in accordance with the Prime Minister of Ayeyawady Regional Government says so. Nowadays, the forest area are seriously decreased nowadays by manpower to produce woods and firewoods.

### **Plan and Activities of Relevant to Mangrove Resource and mangrove management**

Our government has laid down the guide line to all Department so that the private sector will be introduced to make teak plantation, mangrove plantation as well as crop cultivation and to organize them. We must review and mark conclusion upon last 4 years performance which related to forest plantation in mangrove area at private sector or individual movement.

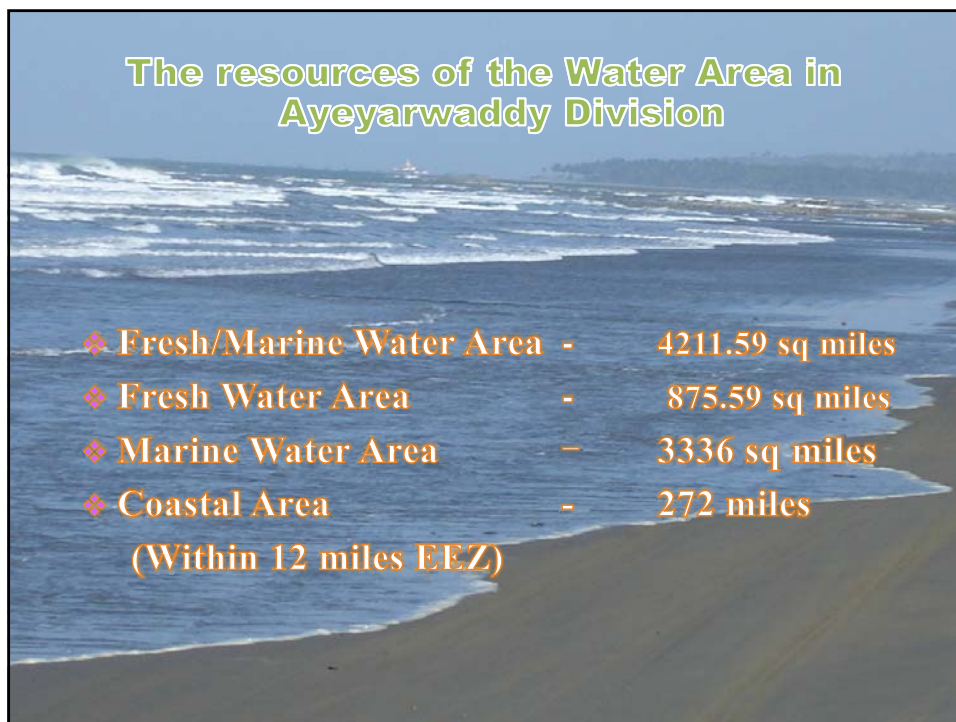
We need the modification of the field data of implementation team and integrated function. Besides, we hope that the conceptual plan of the Project Master Plan may be operational plan really become which held on 10<sup>th</sup> April, 2007 at Patheingyi DFO office. Paddy land and ponds area are surveyed actually on the ground in accordance with the cooperation of departmental concerned. However, that is the duty and responsible for us and major achievement and on-going activities of our department.

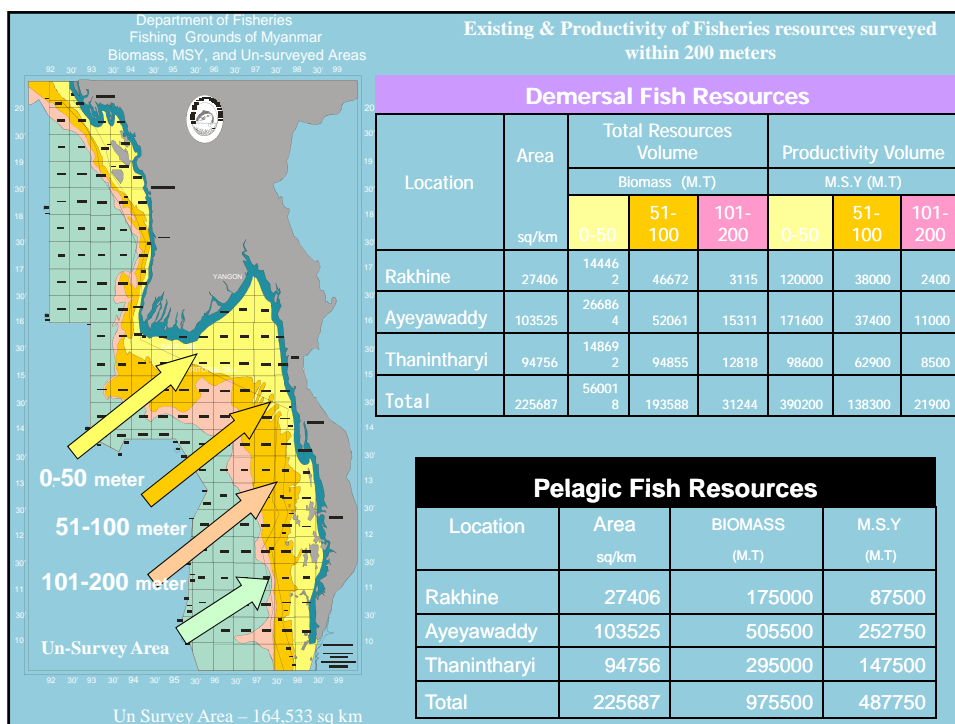
**Conclusion**

The valuable opinions and discussions among the co-operating departments concerned on "Regional Coordination Meeting" and "Mangrove Seminar " give us so many results and assistance for this Project. Therefore , Regional Authority and Government Organizations , Forest Department and the villagers in Ayeyawady Delta may be carried out community participation to success the Integrated Mangrove Rehabilitation and Management Project.

Thank you.

Attachment 2-7: Strategies and approaches toward reserved forest area by agriculture sector (DoF)



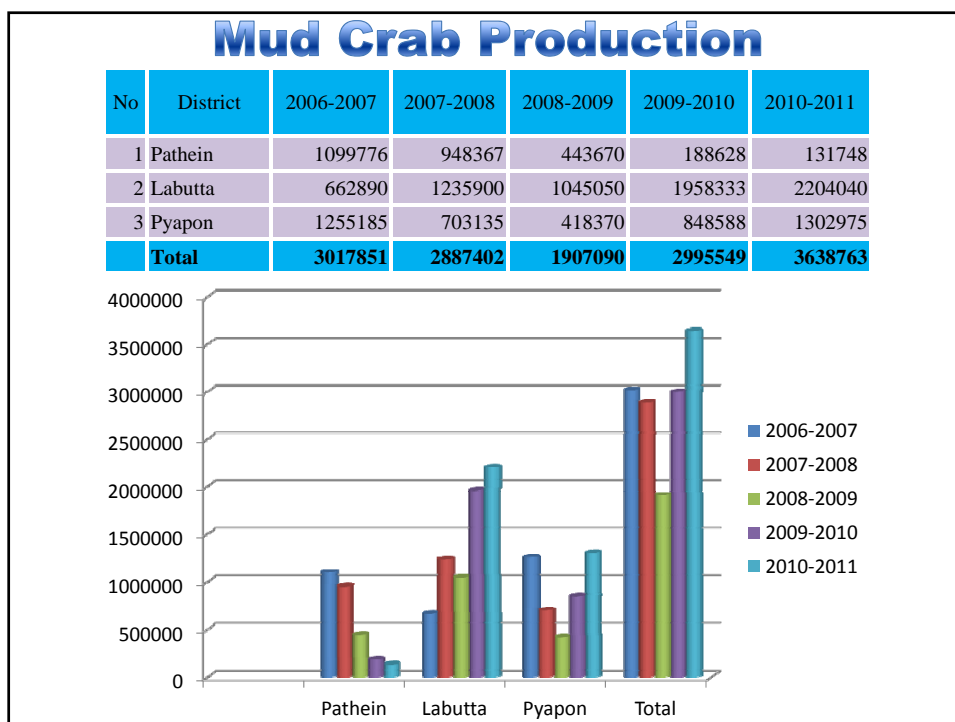
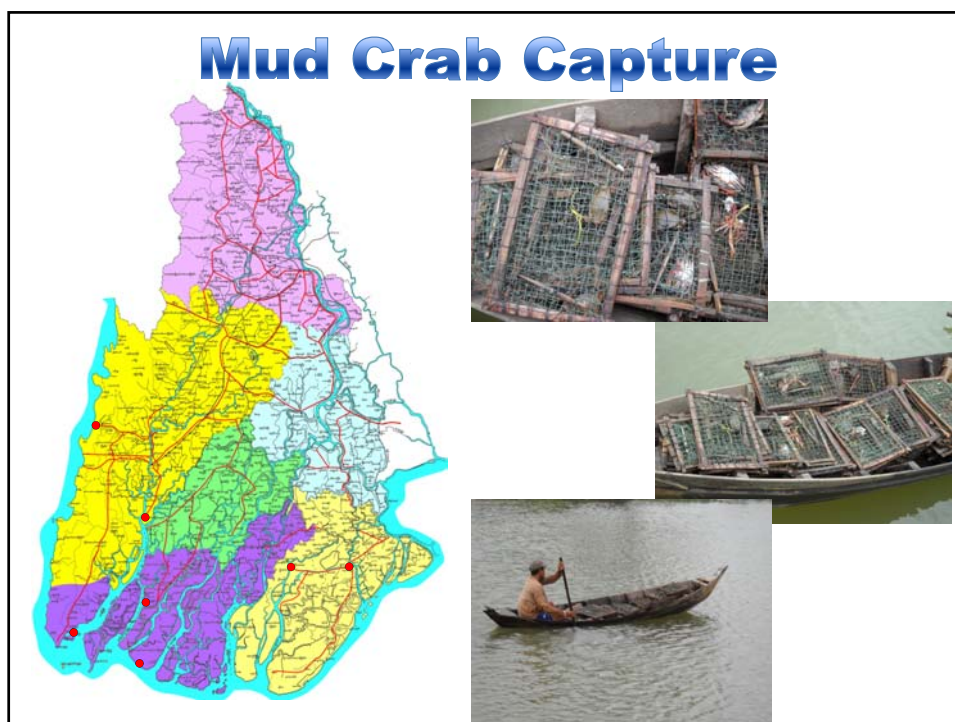


## Fisheries in Mangrove of Ayeyarwaddy Division

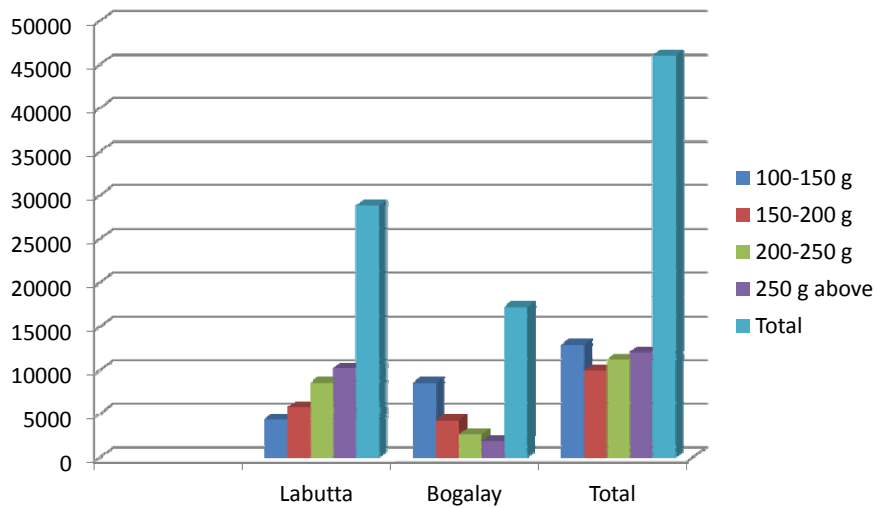
### Fisheries

- ❖ Mud Crab Capture
- ❖ Oyster Culture
- ❖ Shrimp Culture





## Mud Crab Production of size compare



## Mud Crab Bank System



## Oyster Culture

## Shrimp Culture

<b>Patheingyi -</b>	<b>1854.81</b>	<b>Acres</b>
<b>Hinthada-</b>	<b>9.00</b>	<b>Acres</b>
<b>Myaungmya-</b>	<b>42.08</b>	<b>Acres</b>
<b>Labutta-</b>	<b>44247.93</b>	<b>Acres</b>
<b>Maubin-</b>	<b>3770.96</b>	<b>Acres</b>
<b>Pyawon -</b>	<b>7224.48</b>	<b>Acres</b>
<b>Total</b>	<b>57149.26</b>	<b>Acres</b>



### Mud Crab Protected Area

No	Twonship	Acres	remark
1	Ngayokekone Township, Kyaejie village	100	
2	Pathein Township, Chaungtha village	100	
3	Pyinsalu township, Kyarkan village	300	
4	Haiigyikyune township, KyaukNgu village	350	proposal

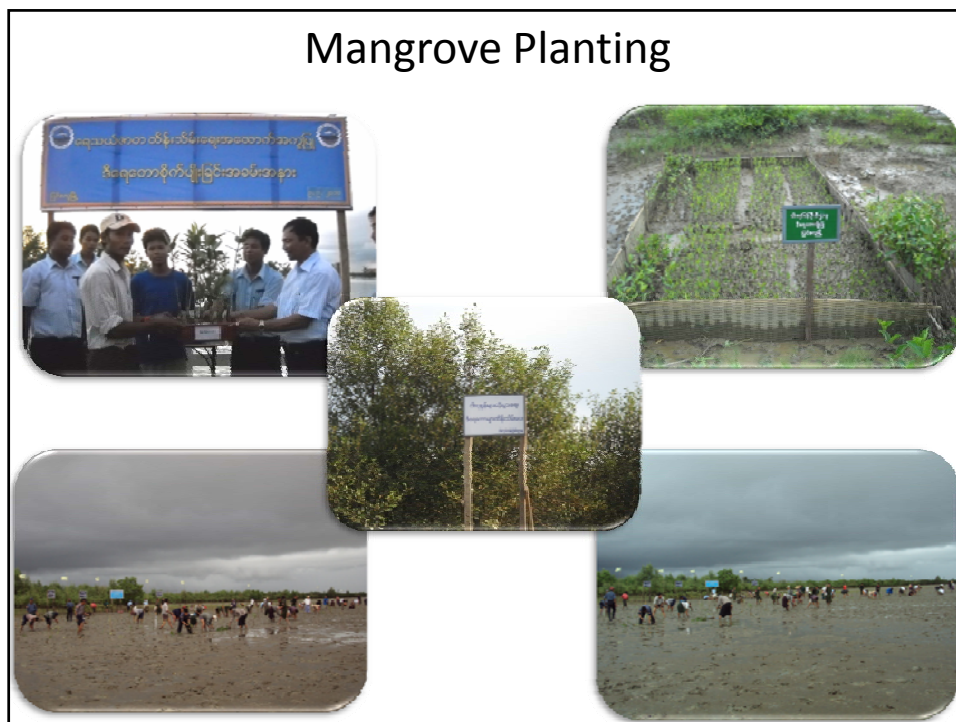


## Mud Crab Restoration



## Mangroves Planting and Nursery

No	Township	Plan	Planting(Acres)	Nursery(No)
1	pyapon	20		
2	Amar	10		
3	Bogolay	20	20	
4	Labutta	20		10000
5	Pyinsalu	10	45.25	10000
6	Haiigyikyune	10	2	9000
7	Pathein	20	20	30000
8	Ngaputaw	20		
9	Nagyokekone	10		
	<b>Total</b>	<b>140</b>	<b>87.25</b>	<b>59000</b>









## Attachment 3: Presentation Materials for Mangrove Seminar (Bogalay)

- Attachment 3-1: Presentation-1: JICA/FD Mangrove Project: Progress and Achievement
- Attachment 3-2: Presentation-2: Action Research Plantation (ARP)
- Attachment 3-3: Presentation-3: CF Activities
- Attachment 3-4: Presentation-4: CF Extension and SOP
- Attachment 3-5: Presentation-5: Discussion result of Group-1
- Attachment 3-6: Presentation-6: Discussion Result of Group-2
- Attachment 3-7: Presentation-7: Discussion Result of Group-3

Attachment 3-1: Presentation-1: JICA/FD Mangrove Project: Progress and Achievement

**Ministry of Environmental Conservation and Forestry, Forest Department**

**The Integrated Mangrove Rehabilitation and Management Project through  
Community Participation in the Ayeyawady Delta**

**Mangrove Seminar  
8 November, 2011**

**JICA/FD Mangrove Project  
Progress and Achievements**

*Khin Maung Lwin  
Field Project Manager,  
Assistant Director, Myaung Mya District*

## Background

- From 2002 to 2005, JICA dispatched a development study team to formulate the “Integrated Mangrove Management Plan” (IMMP).
- FD decided to implement the IMMP.
- The IMMP has three phases, (I) foundation period (5 years), (II) extension period (5 years), and (III) de-centralization period (30 years).
- The first five years foundation period, is the most crucial because it will effect the overall prospective of the IMMP.
- The current JICA/FD mangrove project is aimed to support the foundation period of the IMMP.
- The Project Design Matrix (PDM) has been revised twice in the past and the latest PDM is PDM version 2 (July 2011)

## Brief Description about Project

(based on PDM version 2)

- **Project Title:**
  - ❖ The Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta
- **Project Duration**
  - ❖ April, 2007 - March, 2013 (6 years: extended 1 year after Cyclone Nargis)
- **Target Area**
  - ❖ 4 Reserved Forests (Kyakankwinpauk, Pyinalan, Kadonkani, Pyindaye) in the Ayeyawady Delta
- **Target Group**
  - ❖ Community Forestry User Groups (CFUSGs) practicing community forestry in the 4 Reserved Forests in the Ayeyawady Delta
  - ❖ Community Forestry Task Force and other relevant staff from the Forest Department
- **Implementing Organizations**
  - ❖ Myanmar - Forest Department(FD) ( and DOF, MAS, SLRD)
  - ❖ Japan - JICA ,
- **Project Input**
  - ❖ Japanese Side - ¥ 750 Million
  - ❖ Myanmar Side- K 100 Million

## Project Purposes

The communities and the mangrove forests co-exist in a sustainable manner in the selected areas where project activities are implemented within the Ayeyawady Delta.

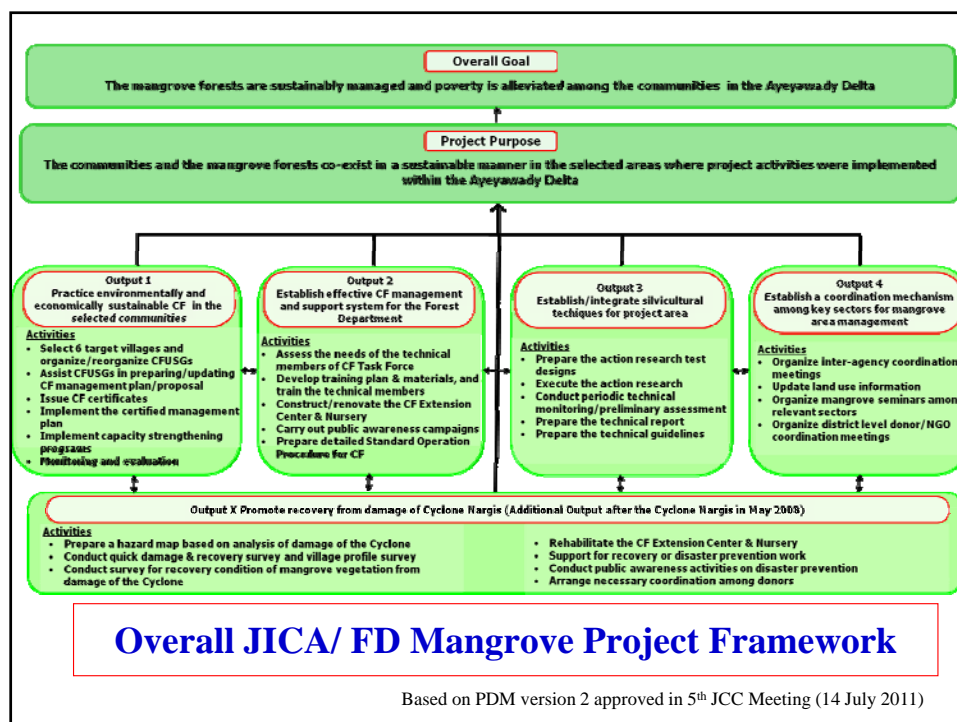
## Overall Goal

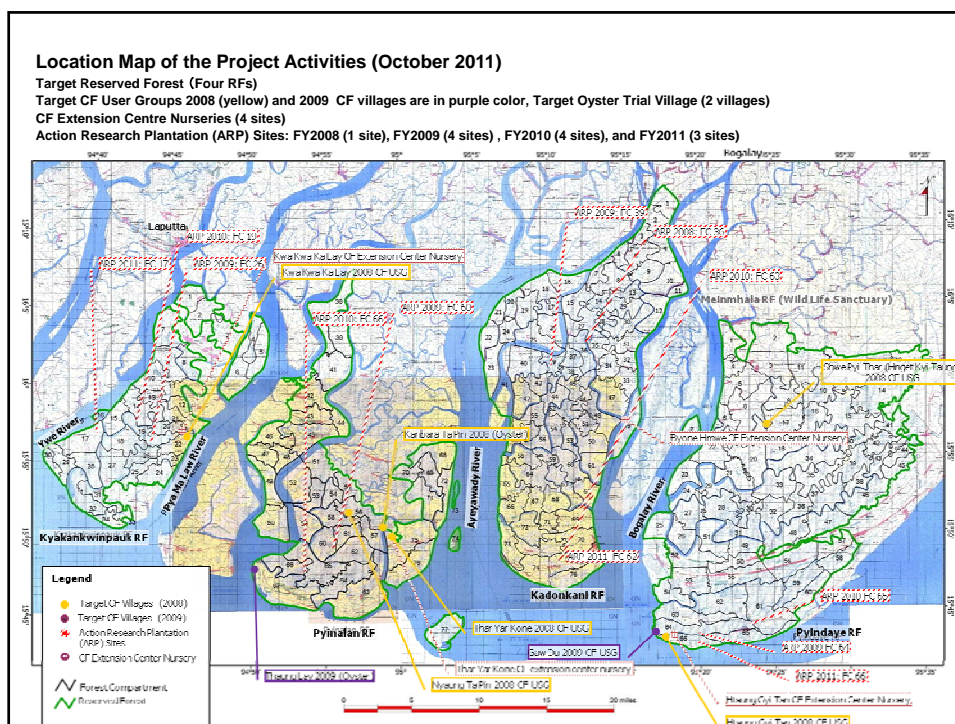
(expected to be achieved after the Project)

Mangrove Forest are sustainability managed and poverty is alleviated among the communities in the Ayeyawady Delta.

## Outputs to be achieved in PDM version 2

1. The selected communities practice environmentally and economically sustainable community forestry (CF).
  2. The management and the support system of the Forest Department (FD) for CF is effective.
  3. Some silvicultural techniques for the rehabilitation and the management of the mangrove and its associated forests for the Ayeyawady Delta are established.
  4. A coordination mechanism is established among key sectors to address the underlying causes of mangrove deforestation in the Ayeyawady delta.
- X. Recovery from damage of Cyclone Nargis is promoted.





## Required activities to achieve Output 1

Community forest establishment through people participation

- 1-1: Village Selection: 6 villages re-selected for CF
- 1-2: Re-confirmation of socio-economic conditions: on-going
- 1-3: Mobilization and organization/ reorganization of CFUSG:
- 1-4: Preparation of 6 CF management plans: under confirmation process
- 1-5: Certification/ Re-certification of 6 CFUSGs:
- 1-6: Implementation of activities as per CF Management Plan
- 1-7: Income generating activities: Oyster culture trial and aqua-agroforestry


### This Year's Activities related to Output 1

- 1-1: Village Selection: 6 villages re-selected for CF
- 1-3: Mobilization and organization/ reorganization of CFUSG were conducted in re-selected villages
- 1-4: 6 CF management plans were prepared  
(Under Confirmation Process)
- 1-5: Certification/ Re-certification of 6 CFUSGs,  
(CF Certification Ceremonies are scheduled)
- 1-6: 230 acres of CF plantation/ forest operations are being carried out in FY2011-12
- 1-7: Income generating activities: Oyster culture trial and aqua-agroforestry (on-going).

### Establishment of Community Forest Plantation

Township	Year	Reserve F.	Compartment	Village	Area (acre)
<b>Bogalay</b>	2009	Kadonkani	32	Apyipadekaw	50
	2009	Pyindaye (N)	17	Ngetkyitaung	50
	2010	Kadonkani	50	Gwaychaung	50
	2010	Pyindaye (N)	23	Damintaung	50
	2011	Pyindaye (N)	17	Nghetgyitaung	40
<b>Laputta</b>	2009	Kyakankwinpauk	22,26	Kwakwakalay	100
	2009	Pyinalan	56	Kanpalatapin	100
	2010	Kyakankwinpauk	27	Kwinthonesint	20
	2010	Kyakankwinpauk	22,26	Kwakwakalay	70
	2010	Pyinalan	75	Tharyakone	25
	2010	Pyinalan	70	Peinekone	25
	2010	Pyinalan	58	Nyaungtapin	25
	2010	Pyinalan	56	Kanpalatapin	10
	2011	Kyakankwinpauk	22,26	Kwakwakalay	90
	2011	Pyinalan	57,58	Nyaungtabin	30
<b>Pyarpon</b>	2009	Pyindaye (S)	66	Htaunggyitan	100
	2010	Pyindaye (S)	35	Gawdu	35
	2011	Pyindaye (S)	64	Gawdu	10
	2011	Pyindaye (S)	66	Htaunggyidan	30
<b>Total</b>					<b>940</b>







**CF activities for Re-selected villages in 2011**

**Confirmation of CF Management Plan**

Shwe Pyit Thar village, Bogalay Township

Kwa Kwa Ka Lay village, Laputta Township




**CF activities for Re-selected villages in 2011**

**Confirmation of CF Management Plan**

Nyaung Ta Pin village, Laputta Township

Thar Yar Kone village, Laputta Township



**Implementation of CF activities in 2010**

**Gaw Du village, Pyarpon**

**Thar Yar Kone village, Laputta**

**Planting of coconut in Laputta township**

**Carrying of nursed coconut trees**

**Distribution of coconut trees in Nyauntabin village**



### Required activities to achieve Output 2

The management and the support system of the Forest Department (FD) for CF is effective.

#### Activities to strengthen CF management and support system of FD :

- Training of MCFTF technical staff and Preparation of CF- SOP (standardized operational procedure)
- Community Forestry Extension Center and Nursery (CFECN) Construction/ Renovation (from ex- output 3)
- Public Awareness related activities" (from ex- output 4)

For the remaining project period, concentrate more for:

- confirmation of roles/responsibilities of MCFTF, and training needs
- consolidation of CF-SOP for project area as outputs

**2. Construction and Renovation of CF Extension Center & Nursery**



**KKKL-special Nursery Office** 18.06.2010



**Thayarkone-Special Nursery Office** .2010



**Byonemwe-special Nursery Office**



**Htaunggyitan-Special Nursery Office**

**Construction and Renovation of Extension Center & Nursery**



**KKKL** 03.06.2010



**Tha Yar Kone**



**Byone Hmwe,BGL**



**TGT,Phya Pon**



**Concrete Jetty** 18.06.2010



**Water channel** 18.06.2010



**Ware House**



**Workers House**



**Concrete walkway**



**Mangrove Nursery Bed**



**Workers House**



**Workers House**

### The advantages of CFECN

- Seedling production
- Extension center
- Sharing information to develop mangrove forest
- Use of cyclone shelter
- Create new employment for local people
- Use as office for staff
- Support to enhance forest protection

### CF-SOP Residential Meeting

(24,25,26/8/2011)

- Identify necessary activities for CF management and CF extension and support (Activity 2-1)
- Confirm role and responsibilities of CF Task Force Members (Activity 2-1)
- Check training needs and resource requirements for CF Management, CF support, and extension activities (Activity 2-3)
- Make plan for how to prepare CF Standardized Operation Procedure.

## CF-SOP Residential Meeting (24-8-2011 to 26-8-2011)



1/21/2013

21

### Required activities to achieve Output 3

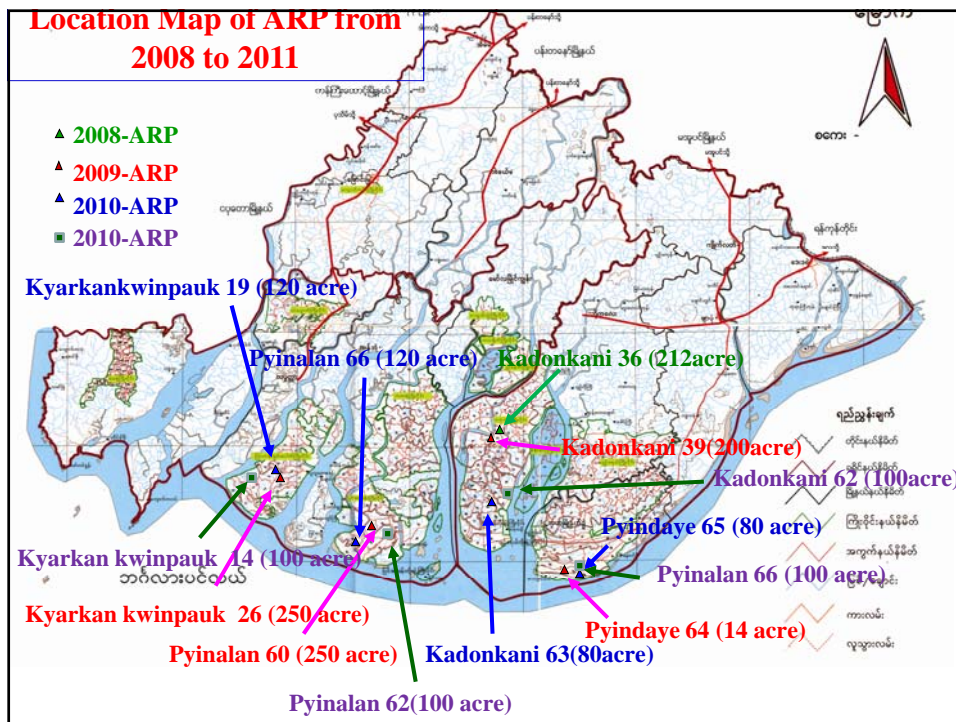
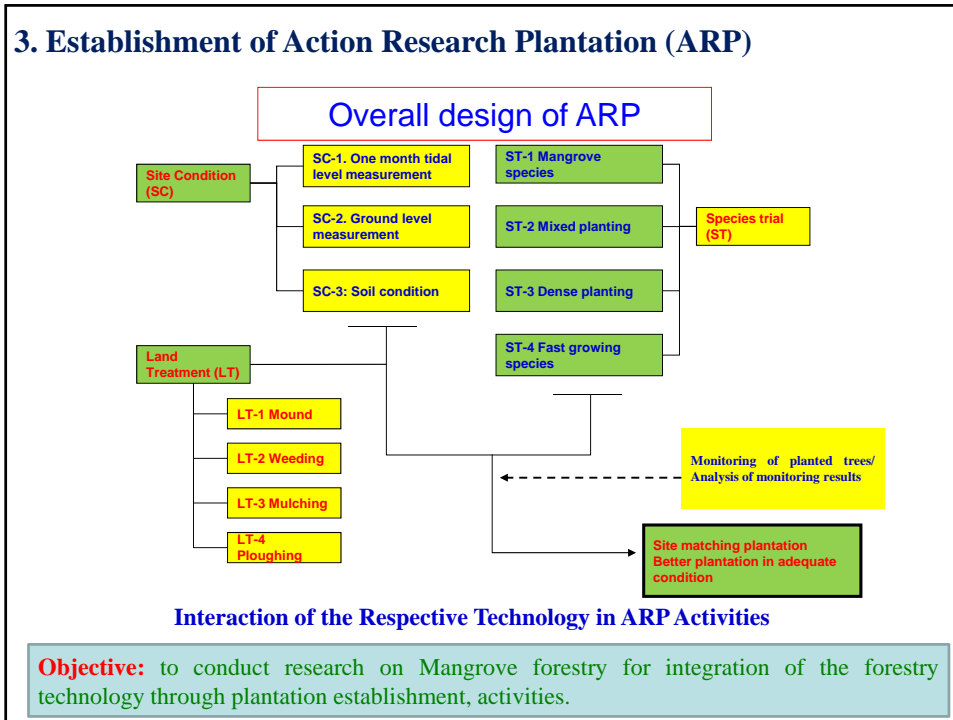
Some silvicultural techniques for the rehabilitation of degraded and the management of the mangrove and its associated forests for the Ayeyawady Delta are established.

Action Research Plantation (ARP) Activities





Already 4 years of ARP implementation.  
For the remaining project period, concentrate more for **consolidation of ARP results/ findings** and compile **technical guideline and technical report** as outputs

Technical Guideline: intend to cover confirmed/ applicable silvicultural techniques for specific purposes.

Technical Reports: intend to cover monitoring data, survey methods and details of ARP



<b>Accomplishment of ARP</b>				
<b>Township</b>	<b>Fiscal Year</b>	<b>Reserve Forest</b>	<b>Compartment</b>	<b>Area (acre)</b>
<b>Bogalay</b>	2008-09	Kadonkani	36	212
	2009-10	Kadonkani	39	200
	2010-11	Kadonkani	63	80
	2011-12	Kadonkani	62	25
<b>Total</b>				<b>517</b>
<b>Laputta</b>	2009-10	Kyakankwinpauk	26	250
	2009-10	Pyinalan	60	250
	2010-11	Kyakankwinpauk	19	120
	2010-11	Pyinalan	66	120
	2011-12	Kyakankwinpauk	17	25
<b>Total</b>				<b>765</b>
<b>Pyarpon</b>	2009-10	Pyindaye	64	14
	2010-11	Pyindaye (S)	65	80
	2011-12	Pyindaye (S)	66	25
<b>Total</b>				<b>119</b>
<b>Total</b>				<b>1401</b>

<b>Accomplishment of ARP in 2010</b>	
 <p><b>Kyarkankwinpauk 19 (120 acre)</b></p>	 <p><b>Pyinalan 19 (120 acre)</b></p>
 <p><b>Kadonkani 63 (80 acre)</b></p>	 <p><b>Pyindaye 65 (80 acre)</b></p>





### **ARP- Residential Meeting**

#### **Purpose of Residential Meeting**

- Share experiences / lessons learned related to ARP among Mangrove Field Taskforce members.
- Consolidate findings and lessons from ARP (applicable objective / goal-wise silvicultural techniques for planting & nursing).
- Provide short lessons for some survey methods related to ARP.
- Prepare and framework technical guideline / reports.

## Action Research Plantation Residential Meeting (3-8-2011 to 5-8-2011)



1/21/2013

29

### Required activities to achieve Output 4

A coordination mechanism is established among key sectors to address the underlying causes of mangrove deforestation in the Ayeyawady delta.

Concentration to activities for realistic coordination mechanism:

- Regional level “**Coordination Committee**” into “**Coordination Meeting**” to confirm and share experiences / lessons learned related to Project and Reserved Forest (RF) / mangrove/CF management with Regional level relevant agencies (Activity: 4.1). **This Meeting!**
- Donor coordination by **District Level Donor/NGO Coordination Meetings** (Activity: 4.4).  
To Confirm and share experiences / lessons learned related project related activities in target areas, about RF management by FD, seek further collaboration/ differentiation of activities among donors/NGOs

### Required activities to achieve Output X

Recovery from damage of Cyclone Nargis is promoted.

- X-1 Prepare a hazard map (from ex-Output 4)
- X-2 Conduct quick damage & recovery survey (from ex-Output 1)
- X-3 Conduct village profile survey (from ex-Output 1)
- X-4 Conduct survey for recovery condition of mangrove vegetation (from ex-Output 3)
- X-5 Rehabilitate the CF Extension Center and Nursery (from ex-Output 3)
- X-6 Support recovery or disaster prevention work through material supply (from ex-Output 4)
- X-7 Conduct public awareness activities on disaster prevention (from ex-Output 4)
- X-8 Arrange necessary coordination among donors (from ex-Output 4)

As of FY2011-12, all of activities except X-4 have been completed

### Plan for Major Activities (FY2011)

1. Monitoring of CF Progressive Report (Output 1)
2. Monitoring of CF Management Plan and Certification (Output 1)
3. Preparation of draft CF-SOP (Output 2)
4. Preparation and implementation of training (Output 2)
5. Extension of Nursery and Establishment of Community Forests (Output 3)
6. Monitoring of data collection for ARP (Output 3)
7. Preparation of Technical Report and Technical Guideline (Output 3)
8. Holding of District Level Regional Coordination Meetings: Bogalay and Laputta Township (Output 4)
9. 6th JCC Meeting (Output 0)
10. Holding of regular meeting between JET-JICA and FD (Output 0)
11. Compilation of Annual Report for Next JCC Meeting (Output 0)

## Achievements and Expected Directions

- Community Based Mangrove Forests in the Ayeyarwady Delta area are sustainably managed in future.
- Poverty of local residence will be alleviated among the communities by their efforts with support from the Project in the Ayeyawady Delta.
- Soon, the communities and the mangrove forests will coexist together in a sustainable manner within the Ayeyawady Delta.
- Some silvicultural techniques for the rehabilitation of degraded and the management of the mangrove are already accomplished between not only JICA and FD, but also FD and Local UGs.
- An inter- disciplinary meeting will be established among key departments including FD, MAS, DOF and SLRD to address the underlying causes of mangrove deforestation in the Ayeyawady Delta.

**Thank You  
for Your Attention**



Attachment 3-2: Presentation-2: Action Research Plantation (ARP)

**Mangrove seminar**  
for  
Integrated Mangrove Rehabilitation and Management Project through  
Community Participation in the Ayeyawadi Delta

**Progress and Achievement of Action Research Plantation (ARP)**

Site-species matching mangrove plantation  
*Determination of ground level for better species selection*

**JICA Expert Team**  
**Matsui Naohiro**

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8 November 2011

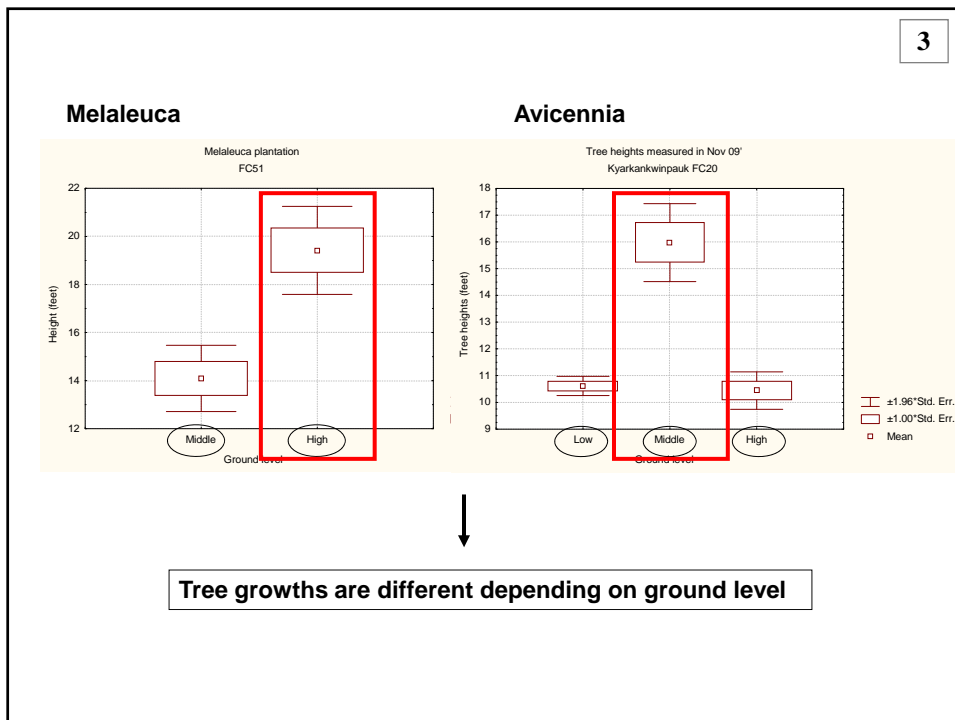
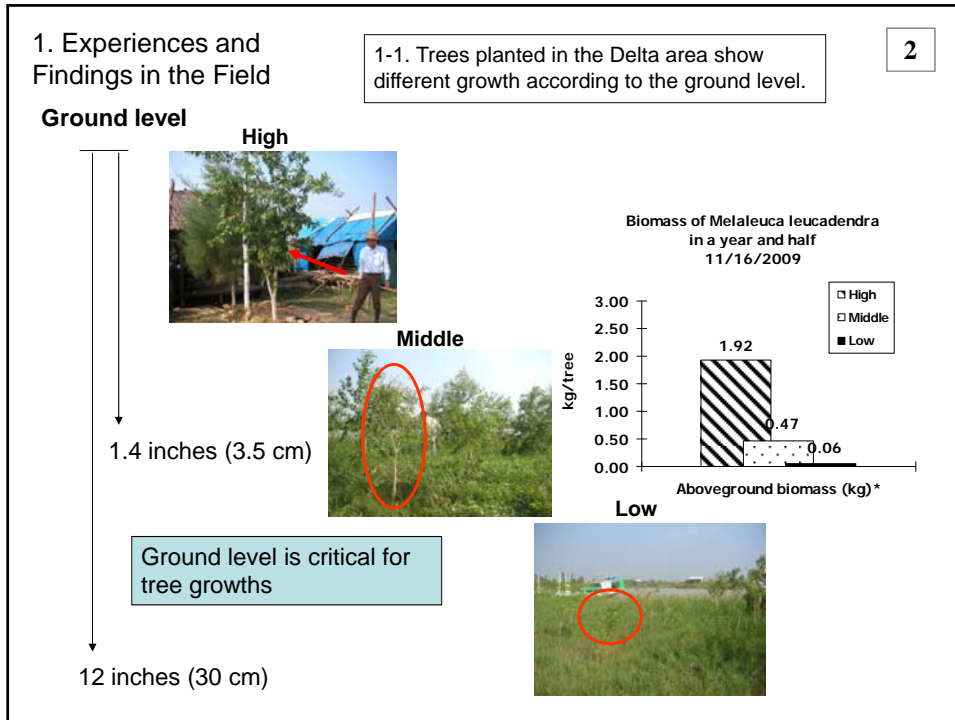
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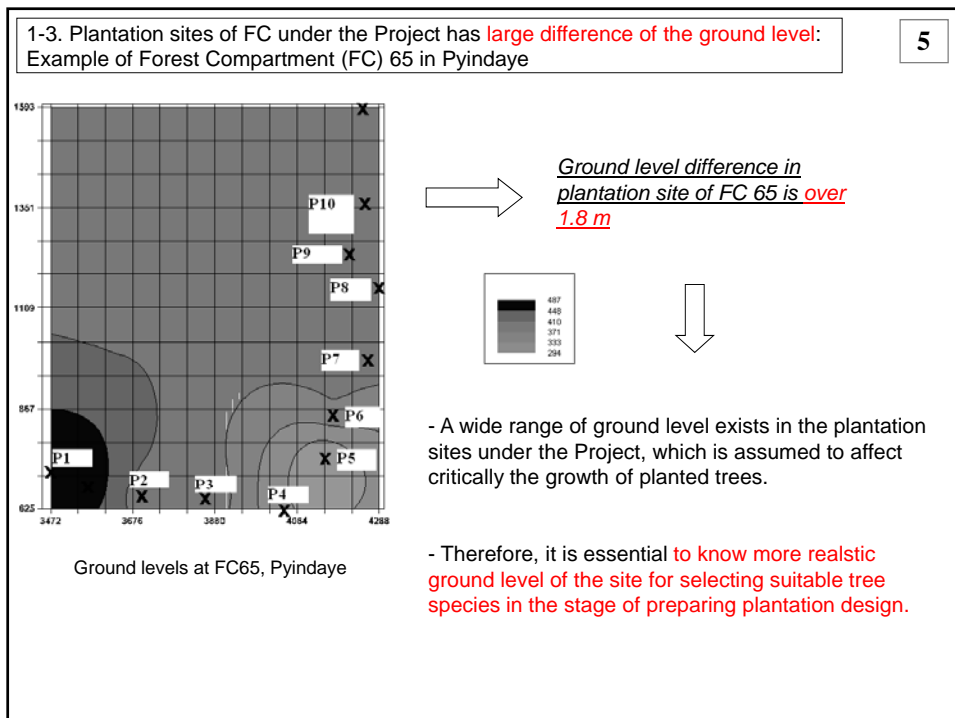
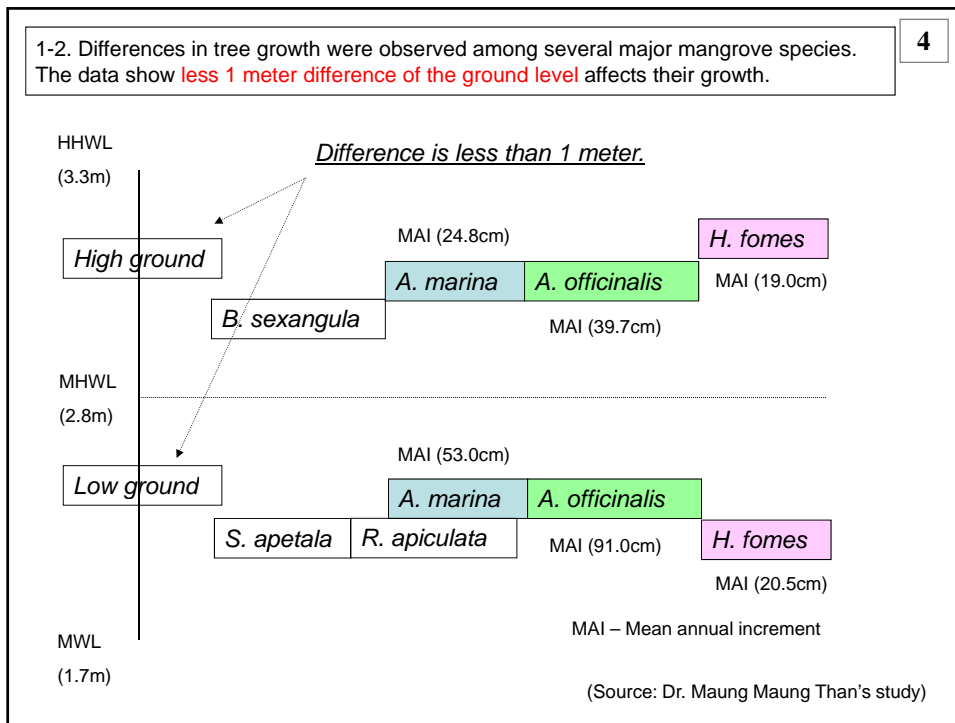
**Output 3**

Some silvicultural techniques for the rehabilitation and the management of the mangrove and its associated forests for the Ayeyawady Delta are established.

**Backgrounds and purpose of this presentation**

1. To produce the Output 3, ARP is implemented to develop silvicultural technologies to be applied to the objectives/goals of the FD plantation and CF activities.
2. Among the existing issue and problems of silvicultural technologies, ARP focuses to confirm applicable cum practical objective/goal-wise silvicultural technologies for FD plantation as well as for CF activities.
3. As the basis to confirm applicable cum practical silvicultural technologies, ARP intended **to improve the methodologies to identify the tree species suitable for planting in the Delta area** by conducting detailed field survey and recording such as ground and tide level measurement, mapping, trial tree planting in the sites of different conditions.
3. This presentation reports the progress and the findings of ARP activities until the mid 2011.







2. Conventional Method for Ground Level Determination

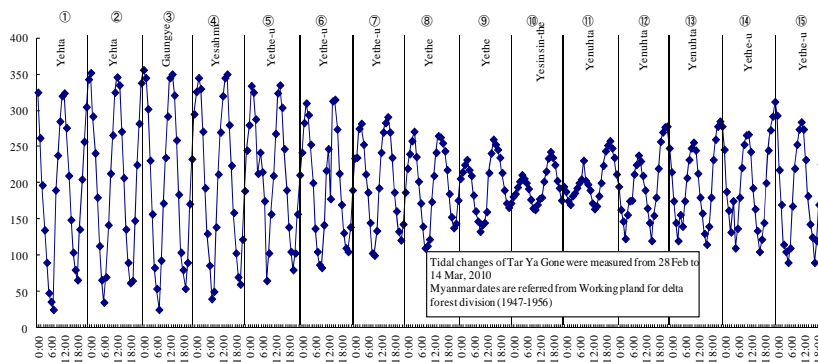
6

Ground level is defined referring to inundation days.

Usually, inundation days are calculated based on the Myanmar lunar calendar.

Tree species suitable for the site are identified based more on the past experiences.

Myanmar lunar dates and nature of tides



Moon waning days pattern (Tide rises at moonrise)

On 7<sup>th</sup> day of waning day, the moon rises at the midnight and tide rises at moonrise. On 13<sup>th</sup> day, tide rises at daybreak

Myanmar lunar calendar and inundation time

7

Myanmar lunar month and its corresponding inundation time

Day	Myanmar term	Nature of the tide	Inundation time (hours)*
1	Yehta	High rise	10
2	Yehta	High rise	10
3	Gaungye	Highest rise, spring tide	12
4	Yesahmi	Almost as high as gaungye	10
5	Yethe-u	Beginning of the low rise	10
6	Yethe-u	Medium rise	9
7	Yethe-u	Medium rise	11
8	Yethe	Low rise	9
9	Yethe	Low rise	6
10	Yesinsin-the	Lowest rise, neap tide	3
11	Yenuhta	Small rise	6
12	Yenuhta	Small rise	6
13	Yenuhta	Small rise	9
14	Yethe-u	Beginning of the rise	9
15	Yethe-u	Medium rise	9

Inundation time (hours)\* - For the case of the previous slide at the ground level of 230 cm  
 Myanmar term and nature of the tide are from 'Working plan for delta forest division (1947 - 1956)'

Myanmar lunar calendar is useful for inundation time determination but ground level determination sometimes is not precise especially when the plantation site is large.

3. Challenges of ARP to improve the methodology to determine the ground level and suitable tree species for plantation

8

**3-1. Issues to be settled:**

- 1) Ground level is determined based on the inundation time in Myanmar lunar calendar.
- 2) This method has been commonly applied in the mangrove area. But it is not precise in some cases, especially when the site is large with micro-topography (Ground level determination tend to be subjective).
- 3) As a result, selected species based on the determined ground level do not always match well with the ground conditions and their survival and growth were not favorable.

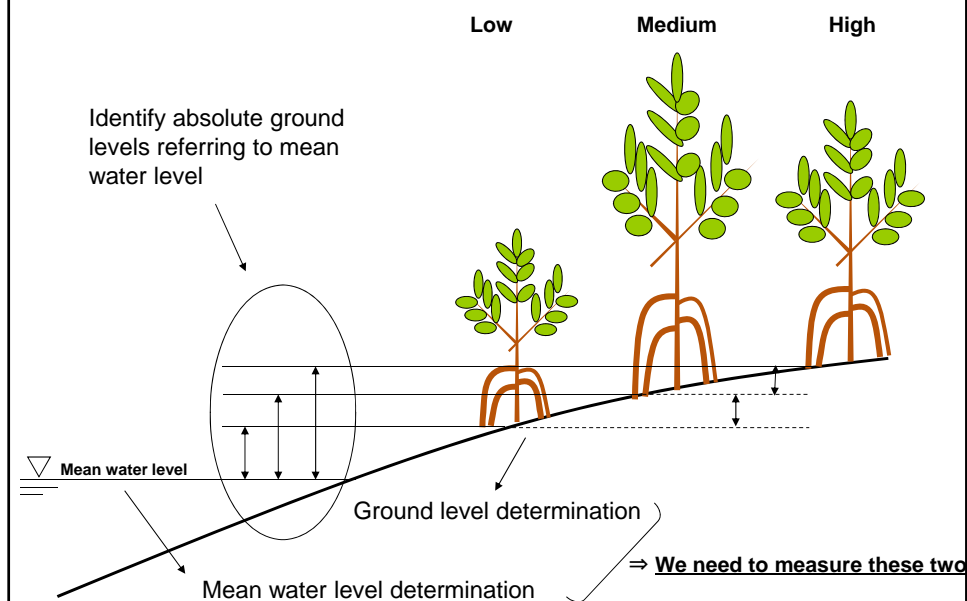


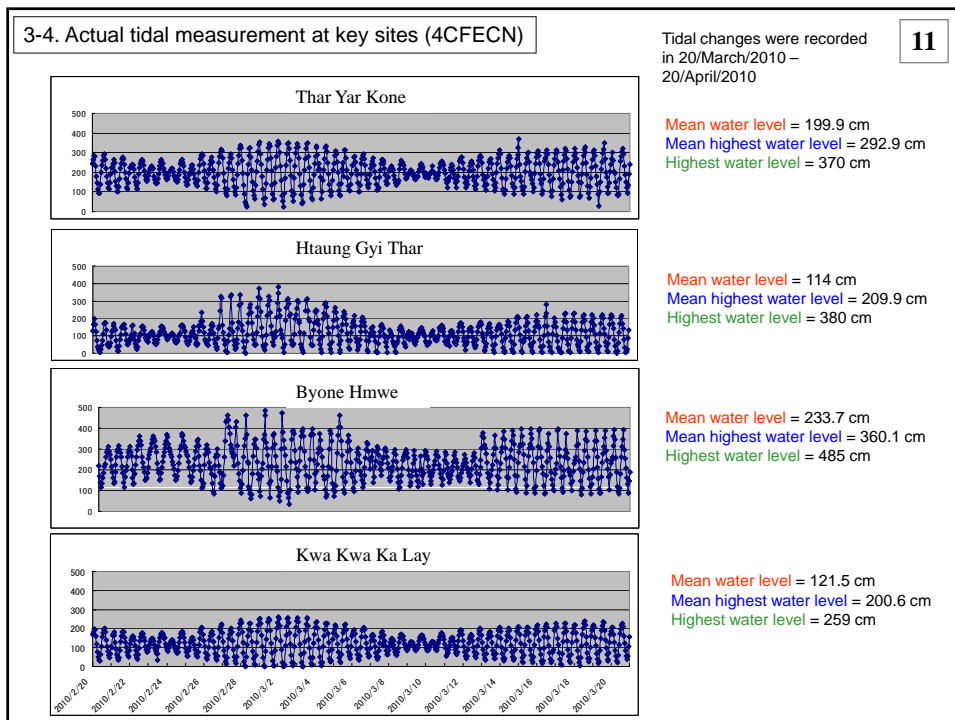
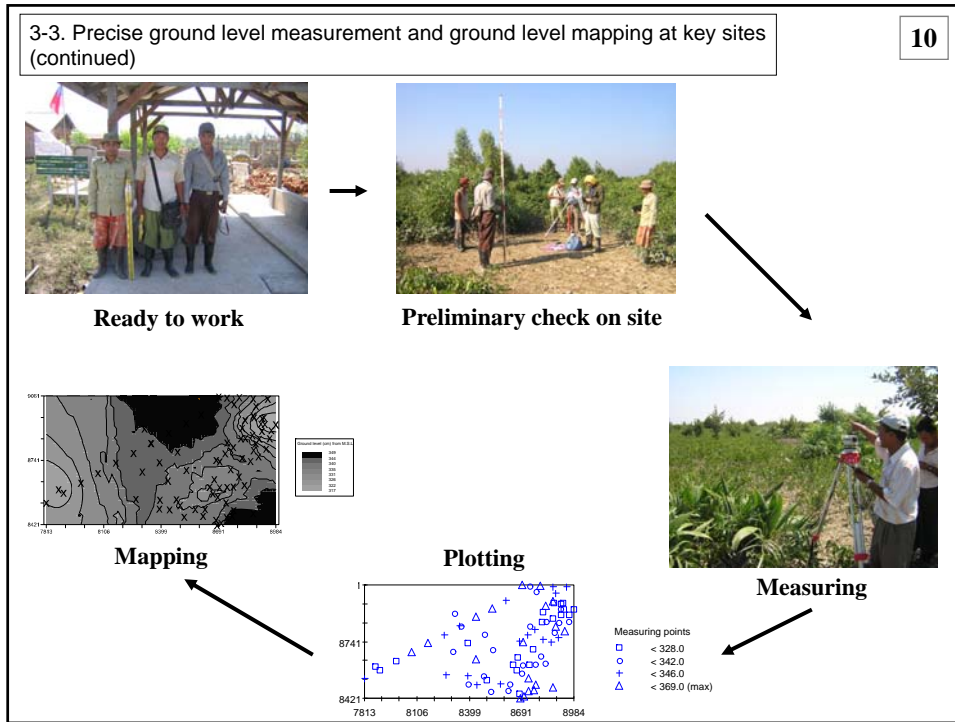
**3-2. Solutions to be tried in ARP:**

- 1) Precise ground level measurement and its mapping at key sites
- 2) Actual tidal measurement at key sites
- 3) Species trial and monitoring of their growth rates

3-3. Precise ground level measurement and its mapping at key sites

9





4. What Should Be Done as a Next Step in ARP and Its Expected Outputs

12

4-1. Activities planned in the period to come

- Ground level measurement and mapping
- Tidal measurement and prediction using the model
- Monitoring of the survival and growth of planted trees

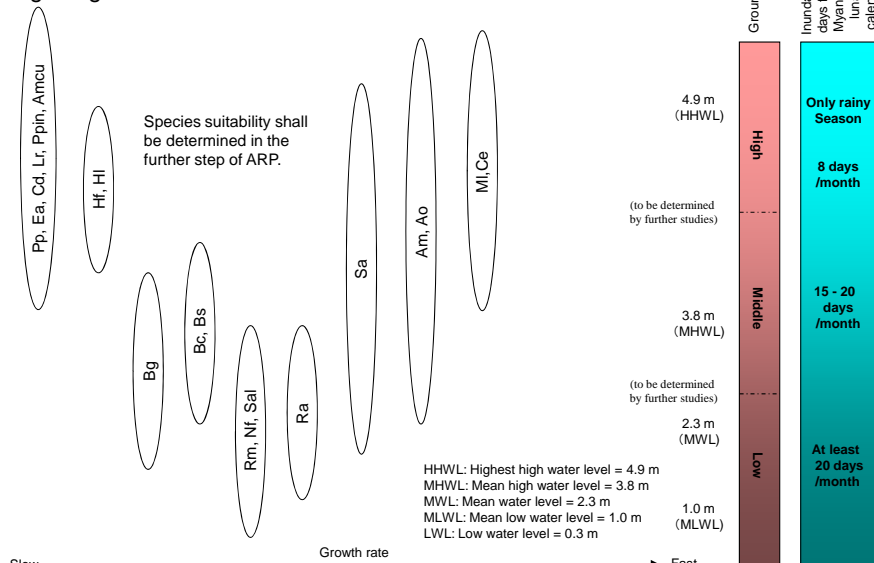
4-2. Expected outputs

- Followings to be compiled in forms of technical report and technical guideline:
- Species-site (ground level) matching table/ diagram
- Applicable objective/goal-wise silvicultural technology matrix
- Database (Inventory) of tree species suitable to be planted according to the ground level

Provisional Species-site (ground level) matching diagram

13

Am – *Avicennia marina*, Ao – *Avicennia officinalis*, Amcu – *Amoora cucullata*, Bc – *Bruguiera cylindrica*, Bg – *Bruguiera gymnorhiza*, Bs – *Bruguiera sexangula*, Cd – *Ceriops decandra*, Ce – *Casuarina equisetifolia*, Ea – *Excoecaria agallocha*, Hf – *Heritiera fomes*, Hl – *Heritiera littoralis*, Lr – *Lumnitzera racemosa*, Ml – *Melaleuca leucadendra*, Nf – *Nypa fruticans*, Pp – *Phoenix paludosa*, Ppin – *Pongamia pinnata*, Sa – *Sonneratia apetala*, Sal – *Sonneratia alba*, Sc – *Sonneratia caseolaris*, Ra – *Rhizophora apiculata*, Rm – *Rhizophora mucronata*



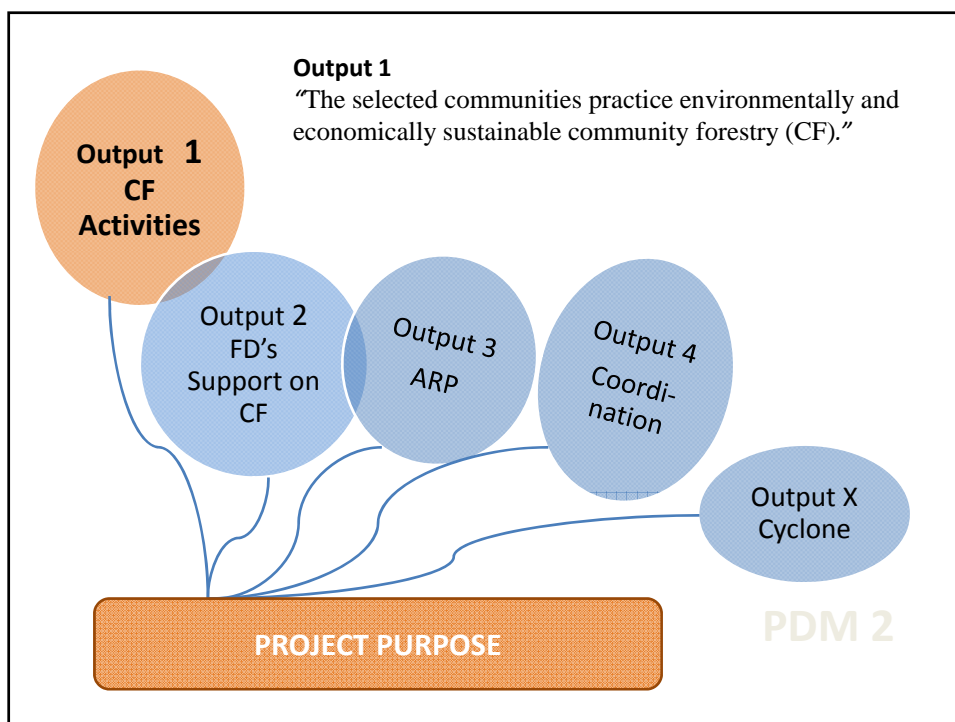
Suitability of different mangrove species according to ground levels (Draft August 2011)  
 Tide levels were cited from the monitoring results obtained at BYM in April – May, 2010

Attachment 3-3: Presentation-3: CF Activities

**The Integrated Mangrove Rehabilitation and Management Project through  
Community Participation in the Ayeyawady Delta**

**CFUSG Formation, CF Management  
Plan Formulation and Livelihood  
Activities by Project Target CFUSGs**

Mangrove Seminar 2011  
JICA/FD Mangrove Project



### Conclusion and Recommendations of Mid-term Review (Feb-Mar 2011)

- The indicators set by the PDM1 are obviously too excessive to achieve during the project period in spite of great damage for the Target Area and the various recovery activities.
- There were some cases in which process of implementing the activities was not so effective and efficient for the expected Outputs.

Current Output 1 has been reorganized based on recommendations made by the mid-term review

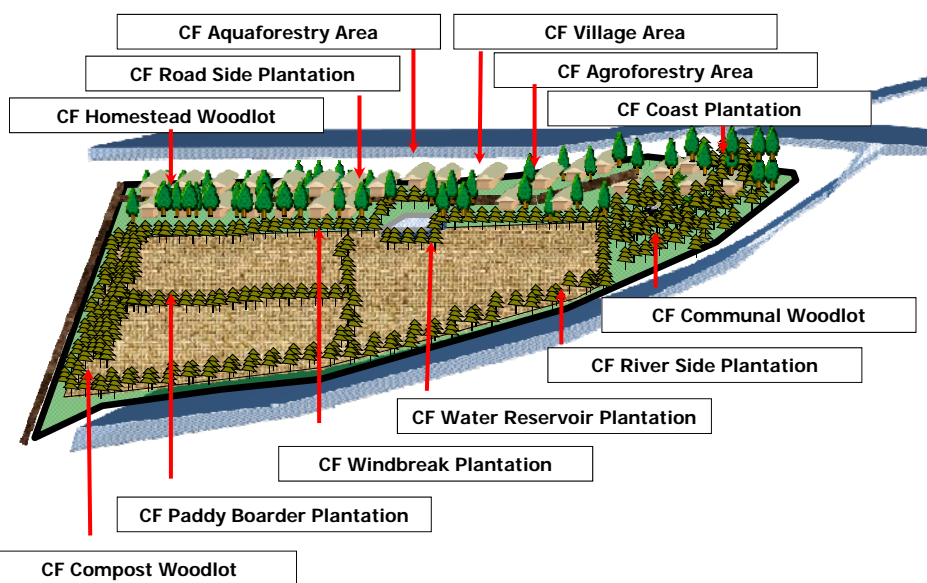
### Recommendations for the Output 1 of Mid-term Review (Feb-Mar 2011)

- (1) Selection and categorization of monitoring CF Target Villages in the remaining period to focus on 6 villages instead of already selected 12 villages in consideration of available resources and underlying issues/causes of the respective villages.
- (2) To implement further trial activities for livelihood improvement,
- (3) The early issue of CF certificates
- (4) To make a CF management map in which only CF management areas are specified
- (5) Assistance to establish byelaws within CFUSGs

### Major Issues Related to Output 1 (up to FY2010-11)

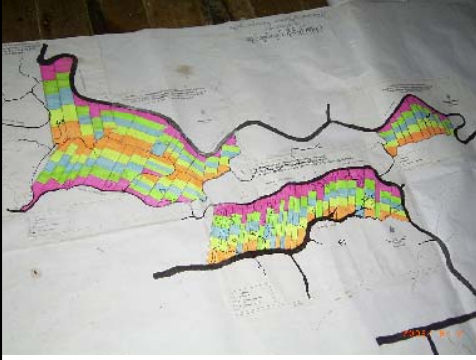
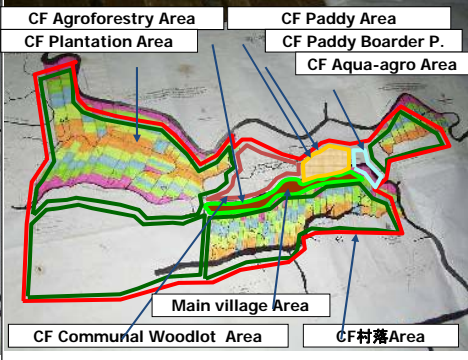
- Even though 12 CFUSGs have been organized, management plans for just 11 CFUSGs have been formulated and 8 Management plan were submitted to District FD but not certified.
- Most of prepared CF Management Plans were not fully shared / understand even among with Management Committee (MC) members.
- After Cyclone Nargis, the selected USGs were not stable and activities stagnated. Also CF Certificates have yet to be issued.
- Income generating activities associated to this output could not be carried on after Cyclone Nargis.
- So-called “CF- Village concept” was not fully applicable .

### CF- Village Concept Originally aimed in the Project





**Original Consideration on CF management map  
(environmentally and economically sustainable CF)**

Nyaung Ta Pin CFUSG CF Management Map 2003	Image of New Nyaung Ta Pin CFUSG CF Management Map 2008										
											
	<table border="1"> <tr> <td>CF Agroforestry Area</td> <td>CF Paddy Area</td> </tr> <tr> <td>CF Plantation Area</td> <td>CF Paddy Boarder P.</td> </tr> <tr> <td></td> <td>CF Aqua-agro Area</td> </tr> <tr> <td></td> <td>Main village Area</td> </tr> <tr> <td>CF Commurial Woodlot Area</td> <td>CF 村落 Area</td> </tr> </table>	CF Agroforestry Area	CF Paddy Area	CF Plantation Area	CF Paddy Boarder P.		CF Aqua-agro Area		Main village Area	CF Commurial Woodlot Area	CF 村落 Area
CF Agroforestry Area	CF Paddy Area										
CF Plantation Area	CF Paddy Boarder P.										
	CF Aqua-agro Area										
	Main village Area										
CF Commurial Woodlot Area	CF 村落 Area										
<p>✓ above left: Current CF management map of Nyaung Ta Pin CFUSG prepared in 2003 under the pilot project of JICA IMMP study. Individual CF land is demarcated. Also operation years are planned and drawn by different colors. Plenty of days are used for planning and land mark on the ground.</p> <p>✓ above right: Image of new CF management map. Key points are:</p> <ul style="list-style-type: none"> <li>- Delineation of village area (thick red line)</li> <li>- Delineation of CF area (CF paddy, CF agroforestry, CF plantation, etc). In addition, CF river bank, CF school woodlot etc can be delineated based on needs</li> </ul>											

**Current Output 1 based on PDM 2 (1)**

The selected communities practice environmentally and economically sustainable community forestry (CF).

1. Target number of villages: 22 villages in PDM1. 12 villages were already selected. However,

**Reduced target to 6 villages, in order to:**

- improve quality of CFUSG activities and management plan through more participatory approaches,
- improve CFUSG capacity strengthening

**Reselection of target villages was conducted based on**

- available resources of FD and JET to support CFUSGs
- avoiding internal village conflicts and other problems difficult to solve by the Project.

Reselected 6 villages:

**Laputta:** Kwa Kwa Lay (KKKL), Thar Yar Kone (TYK), Nyaung Ta Pin (NTP)

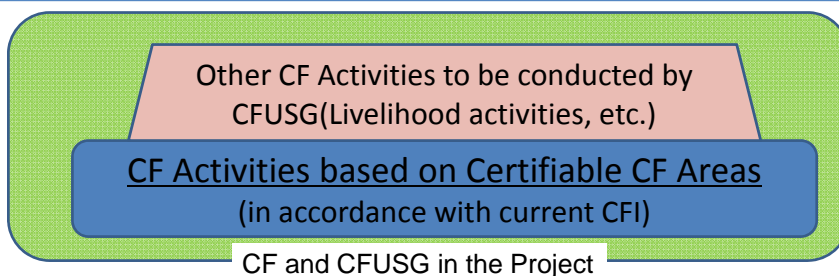
**Bogalay:** Shwe Pyi Thar (SPT)

**Pyar Pon:** Htaung Gyi Tan (TGT), Gaw Du (GAD),

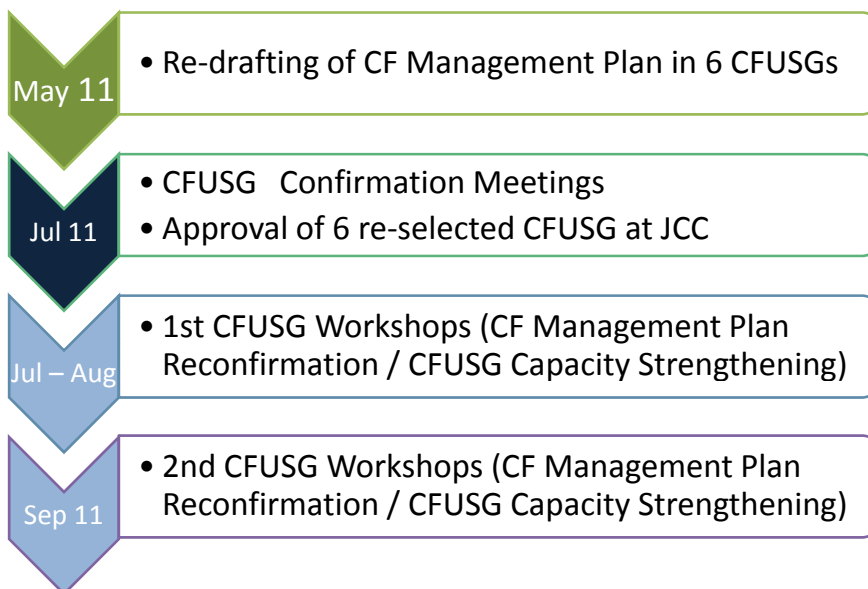
### Current Output 1 based on PDM 2 (2)

Though “CF – Village Concept” was added in PDM1, PDM 2 somewhat returned to PDM 0 and ;

- CFUSG and CF as per current Community Forestry Instruction (CFI)
- Aim “CF (Mangrove) Management” and “CFUSG Consolidation + Capacity Strengthening” through approach indicated in below diagram



### FY2011- Output 1 Activities (1)



## FY2011- Output 1 Activities (2)

Oct  
11

- 3<sup>rd</sup> CFUSG Workshops (CF Management Plan Reconfirmation / CFUSG Capacity Strengthening)

Nov 11

- 4<sup>th</sup> CFUSG Workshops
- Finalization of CF Management Plan/ by-law

Dec 11

- CF Certification Procedure
- Selection/ Consideration for additional livelihood activities
- CF Certification

Feb 12

- CF Certification Ceremony
- Revised baseline survey
- Preparation of CFUSG progress (annual) report

### • CFUSG Workshop Contents (1)

- **Confirmation of Management Committee Members (Finalized MC member list)**
- **Confirmation of CF User Group Members (Finalized CFUSG List)**
- **Confirmation of CF Areas**
- **Confirmation of CF Activities depicted in draft CF Management Plan**
- **Confirmation of Activities in CF Management Plan (CF area based activities)**
- **Confirmation of Other Activities for CFUSG (home garden, fishery, etc.)**
- **Group Consolidation as CFUSG**
  - Why Group Consolidation?
  - CFUSG common fund
- **CFUSG By-law (Initial Information Sharing and Planning)**
  - Introduction about by-law
  - Explanation of Draft By-law
  - Group Discussion about draft by-law
  - Presentation and suggestions by subgroups
  - Consolidation

• CFUSG Workshop Contents (2)  
(Livelihood Related)

• **Resource Assessment and Identification of Potential Livelihood Activities for CFUSG**

- Identification of Available Resources for CFUSG
- Identification of Potential Livelihood Activities based on Available Resources for CFUSG

• **Reconfirmation of Potential Livelihood Activities for CFUSG and Screening of Activities**

- Overview of List of Potential Livelihood
- Clarification of the List (time frame, markets outside of village)
- Other available potential livelihood activities by CFUSG (forestry (charcoal, minor forest products), fishery )
- Screening and Evaluation
- Revision of the List or Potential Resources

• **Selection of Potential Livelihood Activities for CFUSG and Consideration of possible support by the Project (direct support/ information sharing, etc.)**

CFUSG Workshop



2<sup>nd</sup> CFUSG Workshop, NTP CFUSG (September 2011)  
Re-confirmation of CF area and draft CF management map

### CFUSG Workshop



2<sup>nd</sup> CFUSG Workshop, TGT CFUSG (September 2011)  
simple SWOT analysis for CF area allocation issue

### CFUSG Workshop



2<sup>nd</sup> CFUSG Workshop, GAD CFUSG (September 2011)  
Group discussion for preparation of CFUSG by-law

### CFUSG Workshop



2<sup>nd</sup> CFUSG Workshop, GAD CFUSG (September 2011)  
Confirmation of available resources and potential livelihood activities

### Difficulties for CFUSG formation and CF Implementation

- ◆ Timely information sharing between FD frontline staff and CFUSGs
- ◆ Timely information sharing/ distribution within CFUSG
- ◆ Limited understanding of CFUSGs members toward CF (CF = planting tree)
- ◆ Limited Group Consolidation experience for CFUSG
- ◆ Internal Conflict
- ◆ External Conflicts

## Way Forward

- ◆ Though, series of CFUSG workshops (meeting, group discussion, field confirmation, etc.) are time consuming process, the process enables followings aspects for better CF implementation:
  - Better understanding/ initiative toward CF by CFUSGs
  - Better information sharing/ mutual understanding between FD staff and CFUSGs
  - Cross-check confirmation of CF management plan and actual ground situations
- ◆ CF certificate to be issues after confirmation of fundamental issues for CF management plan and CFUSG consolidation



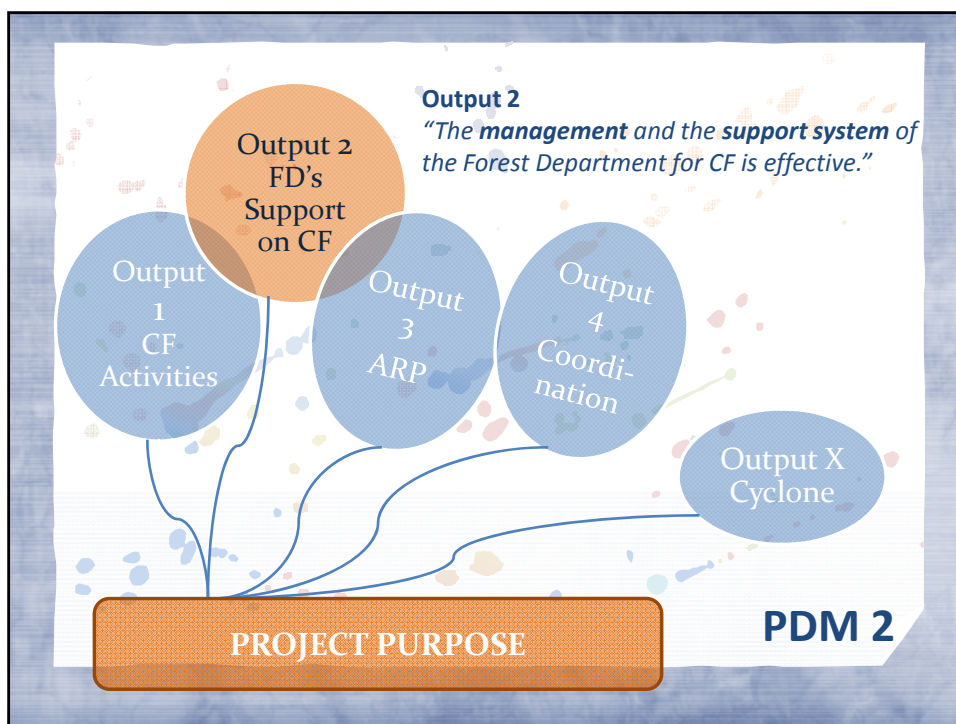
Attachment 3-4: Presentation-4: CF Extension and SOP



The Integrated Mangrove Rehabilitation and Management Project through  
Community Participation in the Ayeyawady Delta

## CF Support: CF Standardized Operation Procedure (CF-SOP)

Mangrove Seminar 2011  
JICA/FD Mangrove Project



## Confirmation of FD's Roles in CF



## What is FD's Roles in "CF Management"?

Task	Priority
Issue CF Certificate	High
Support Formation of CF Management Plan	High
Provide Detailed Instruction to CF	High
Assign Particular Worker or Staff from Local Community for CF	High
Prepare List of Duties among USG Members	High
Form CFUSG	High
Supervise CFUSG	High
Consolidate Rights of Land Ownership	High
Support Surveying CF Area	High
Provide Seedlings and Techniques	High
Monthly Meeting with CFUSG	Medium
Certify or Specify Bylaws in USG	Medium
Continuous Examinations on CF Activities	Medium

*Highlighted: Roles Specified in CF Instruction*

### What is the FD's Roles in "CF Support"?

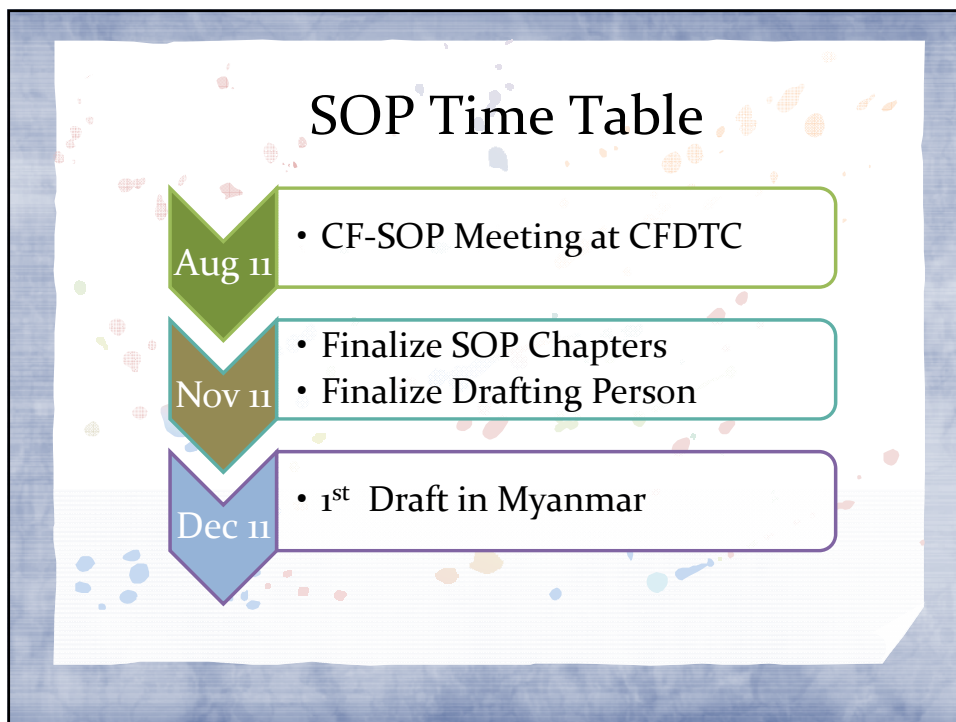
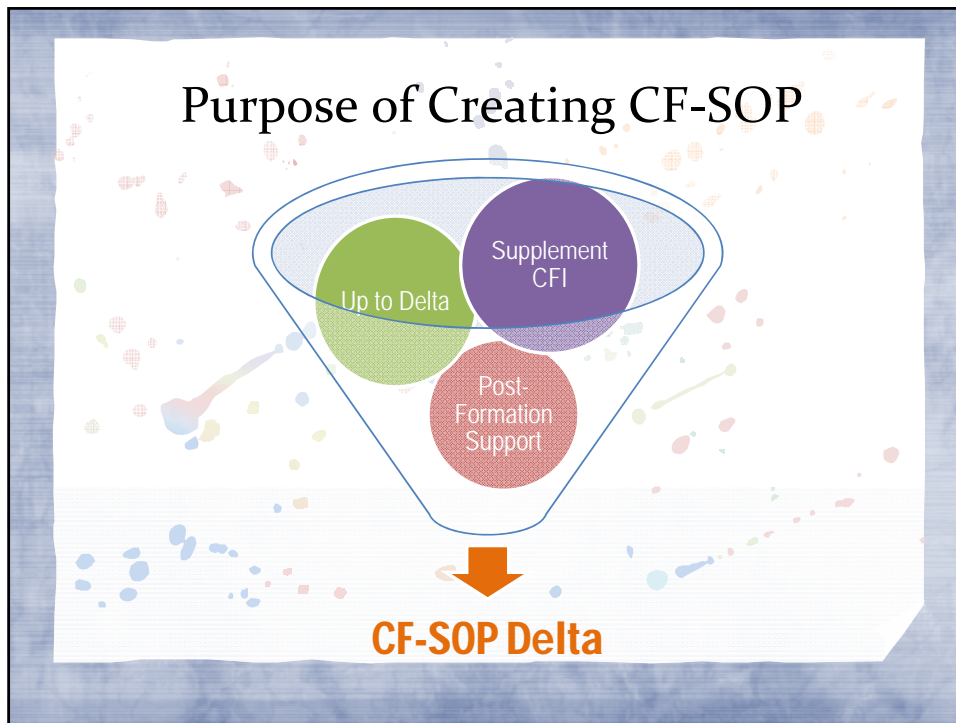
Task	Priority
Support Community with Fruit Trees, Income Generation, Education, Health Care (Social Support for Trust Building)	High
Support Transportation of Seedlings Required for Remote CFUSG	High
Support Solving Difficulties (internal conflict, poverty) of USG members	High
Provide Techniques of Nursery Establishment	High
Loans/ Microfinance	High
Support Materials for CFUSG (boats, communication equipments, etc.)	High
Technical Support	High
Coordination with Other Department and Solve Issues	Medium
Support Agroforestry Techniques	Low

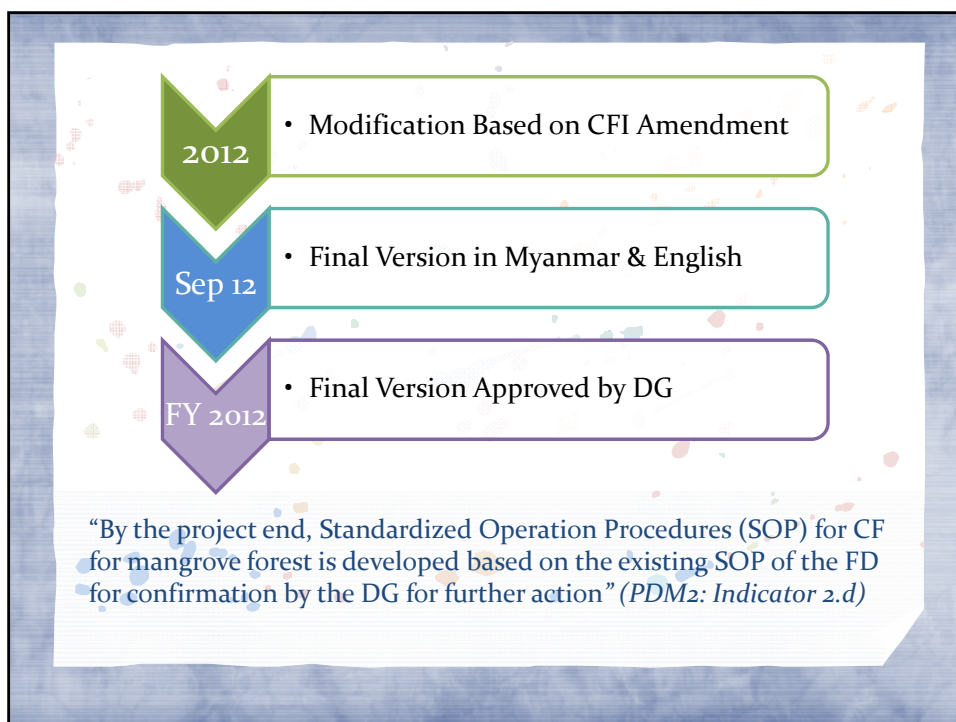
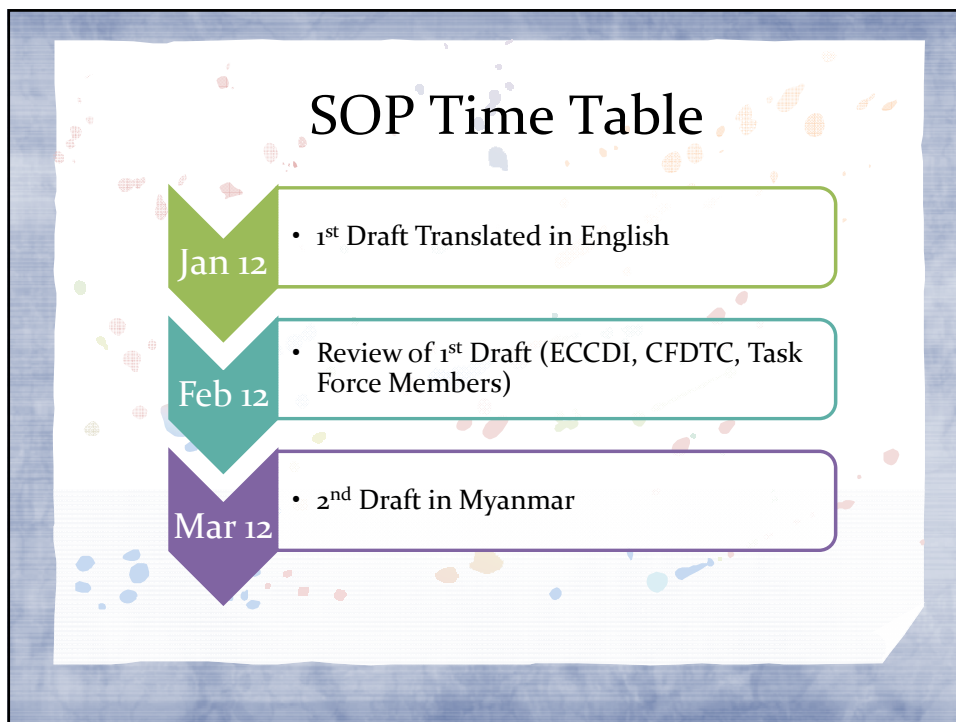
*Highlighted: Roles Specified in CF Instruction*

### Many CF Support Tasks are in the Shadow....

Roles in  
CFI

Invisible Tasks  
(Awareness Raising,  
Trouble Shooting,  
Monitoring and Follow-  
up of CFUSG)






Aug 11 • CF-SOP Meeting at CFDTC

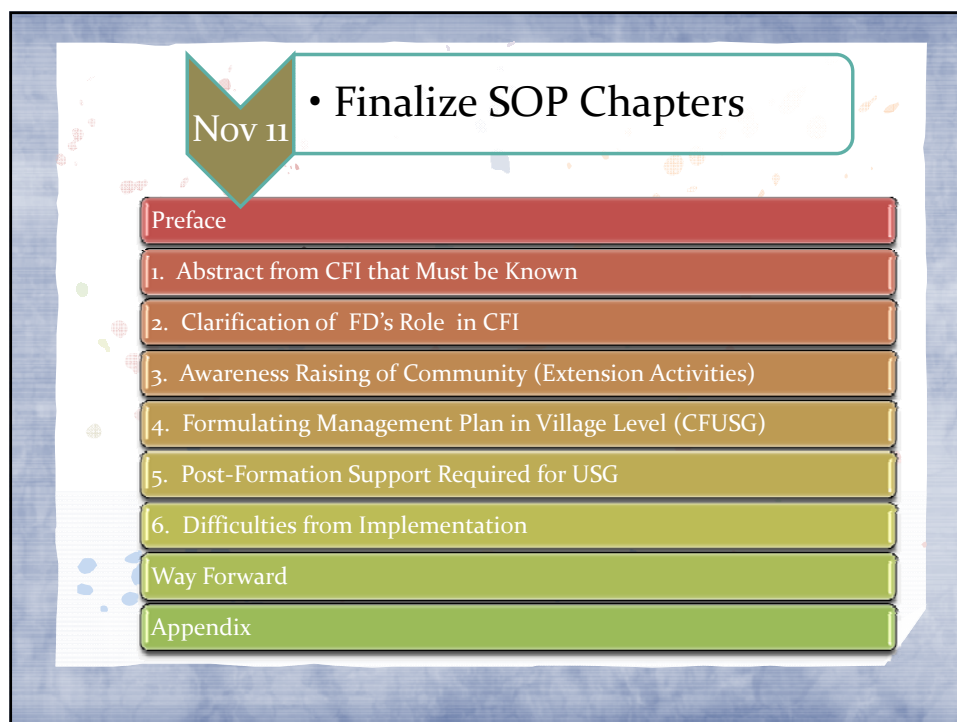
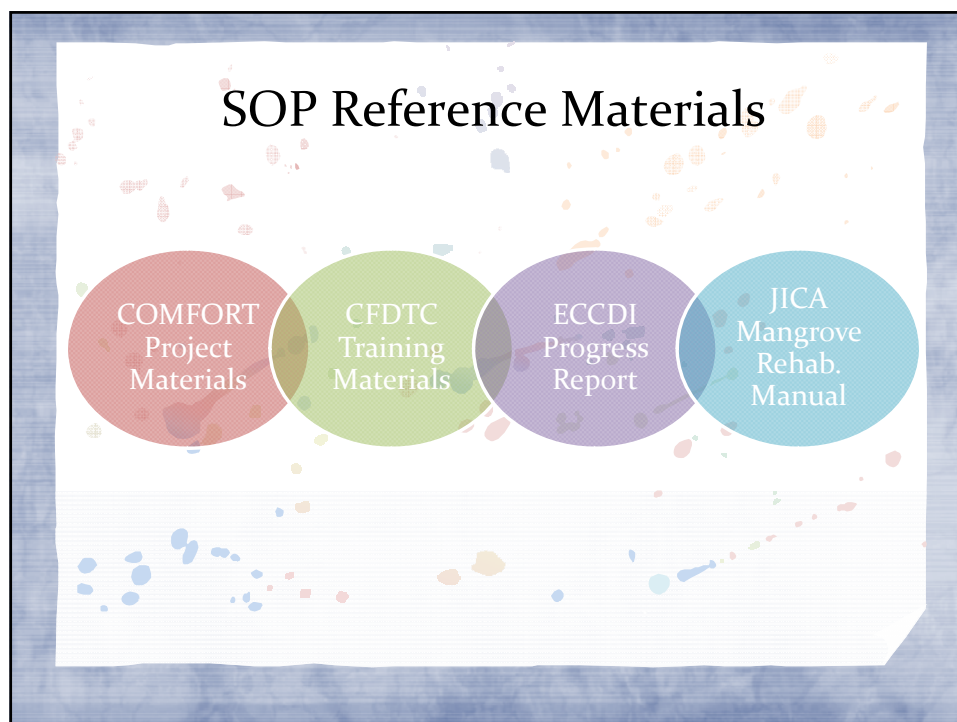


CF-စ်လုပ်ငန်းအဆင့်ဆင့်ဆိုင်ရာအတူတကွနေထိုင်ပြုလုပ်မည့်အစည်းအဝေး  
CFDTC (မော်ဘီ၊ ရန်ကုန်)  
၂၀၁၁ခုနှစ် ဩဂုတ်လ

Oct 11 • Discuss about SOP Chapters



University of Forestry, Yezin



## 2. Clarification of FD's Role in CFI

- ◆ Provide Seedlings and Technical Advise (Section 17)
- ◆ Accept CF Application & Specify CF Area (Section 9)
- ◆ Allotment of Land for CF (Section 11)
- ◆ Advise & Confirm CF Management Plan (Section 14, 15)
- ◆ Issue Certificate for CFUSG (Section 15)
- ◆ Inspect/ Monitor CF Site(Section 37)
- ◆ Check Report and Provide Corrections (Section 37)
- ◆ Collect & Comment & Submit CFUSG's Annual Report (Section 38, 39)

## 5. Post-Formation Support Required for USG

- ◆ Support Formulating Bylaws in USG
- ◆ Checking CF Site
- ◆ Enforcement of Law against Encroachers
- ◆ Monitoring of CF Site
- ◆ Collecting and Commenting on Progress Report (Annual Report)
- ◆ Revision of CF Management Plan



## 6. Difficulties from Implementation

- ◆ **CF Management: Bottom-Up or Top-Down Approach?**
- ◆ **Getting Secure Land for CF**
- ◆ **Taking Longtime to Yield Profit**
- ◆ **Lack of Group Training for USG**
- ◆ **Migration in Delta RF Area**
- ◆ **Internal Conflict**



Thank you!

**WE WELCOME YOUR COMMENTS!**

Attachment 3-5: Presentation-5: Discussion result of Group-1

**Group-1**

အဖွဲ့-(၁)

**Mangrove Conservation and Management in Reserve Forest Area**

သစ်တောကြိုးပိုင်းဧရိယာများတွင် ဒီရေတောများ ထိန်းသိမ်းခြင်းနှင့် စီမံအုပ်ချုပ်ခြင်း

- U Thiri Tin                      ECCDI
- U Khin Maung Lwin AD, Myaung Mya District FD
- U Aung Gyi                      SO, Laputta Township FD
- U Min Naung                      SO, Department of Fisheries
- U Hla Wai                      Assistant Manager, Myanma Agriculture Service
- U Khin Zaw                      SO, Irrigation Department
- Dr. Matsui                      JICA Expert Team
- U Myo Zaw Win                      Eco-Dev
- U Thein Soung                      Myitta Foundation
- U Aung Bo Bo                      Dear Myanmar
- Daw Sandar Oo                      Private Forest Plantation (Anwarkyaw)

1. Law enforcement- Demonstration, Policy makers,....., encroachment
2. People participation
3. People awareness (Monsoon planting, Free Of Charge for seedling distribution, model farm, CFI, media)
4. Land use (Proper land used management, extension of paddy field, salt ban)
5. Extension (Capacity building, public information)
6. Protection ( Patrolling ,Police, local authority, FD,.....)
7. Establishment of plantation, N/R, RIF, Gap Planting (Dept., Private, NGO,.....)
8. Collaboration of relevant agency (Task force, Community Base Organization)
9. Role of NGOs & Donor (Empowerment of NGOs in the research forest)
10. Working plan & Action Plan, M&E
11. Poverty alleviation
12. Alternative energy (fuel wood, charcoal/gas, electricity, solar energy, gasifire)
13. Proper Communication system

Attachment 3-6:      Presnetation-6: Discussion Result of Group-2

## Group-2

အဖွဲ့ (၂)

### **Effective CF in RF Area**

သစ်တောကြီးပိုင်းဧရိယာများတွင် ထိရောက်သော ဒေသခံပြည်သူအစုအဖွဲ့ပိုင်သစ်တောလုပ်ငန်းများ

U Myint Aung	FREDA
•Dr. Zaw Min Tun	Deputy Township Head, Department of Health
•U Ohn Myint	Assistant Director, Settlement and Land Record Department
•U Moe Zaw Aung	SO, Myaung Mya District FD
•U Kyi Lin	SO, Phya Pon Township FD
•U Myo Min Tun	RO, Bogalay Township FD
•Ms. Tanaka	JICA Expert Team
•U Kyaw Nyein	FREDA
•U Naing Lin Htet	Myitta Foundation
•U Tun Tun Lwin	MERN

## **Effective CF in RF Area**

### **1. Effective CF**

- Capacity Developed FUG and Staff
- Income Generation
- Clear Benefit Sharing
- Productive
- Sustainable

## Effective CF in RF Area

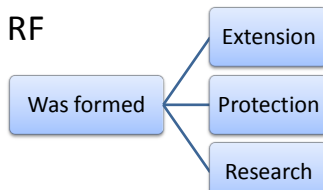
### 2. How to establish effective CF

- Awareness building
- Capacity building of USG
- To make assure land approval
- Choice of species
- Good Management plan (MP)
  - Clear
  - Applicable
  - Acceptable
- To follow CFI, rules and regulations, MP
- By-law among CFUSG
- Inspection and Supervision
- Coordination and cooperation of relevant agencies

## Effective CF in RF Area

### 3. CF Establishment in RF area

- Kinds of land
  - Permanent Forest Estate (PFE)
  - Land disposal of government
- PFE
  - Reserved Forest
  - Public Protected Forest
  - Protected Area System
- RF



## **Effective CF in RF Area**

### **3. CF Establishment in RF area (Continued)**

#### **– CF Plantation**

- To find secure land
- Select the CF users and forming
- Awareness and discussion about Rule and Regulation of CFI
- To draw work plan
- Required materials
- Nursery and Plantation
- Monitoring and Conservation of Management

## **Effective CF in RF Area**

### **4. Establishing E-CF in RF Area**

- Stakeholder advocacy
- Extension
- Formation of FUG
- Formation of MC
- Application of CF proposal
- Formulation of MP
- Implementation
- Production
- Benefit sharing
- Sustainable Management
- Monitoring and Evaluation

Attachment 3-7: Presentation-7: Discussion Result of Group-3





**Effective Livelihoods and Community Empowerment Activities**

**Group 3**



**CF Establishment**

- ◆ Education Program
- ◆ Nursery establishment
- ◆ Planting Trees
- ◆ RIF



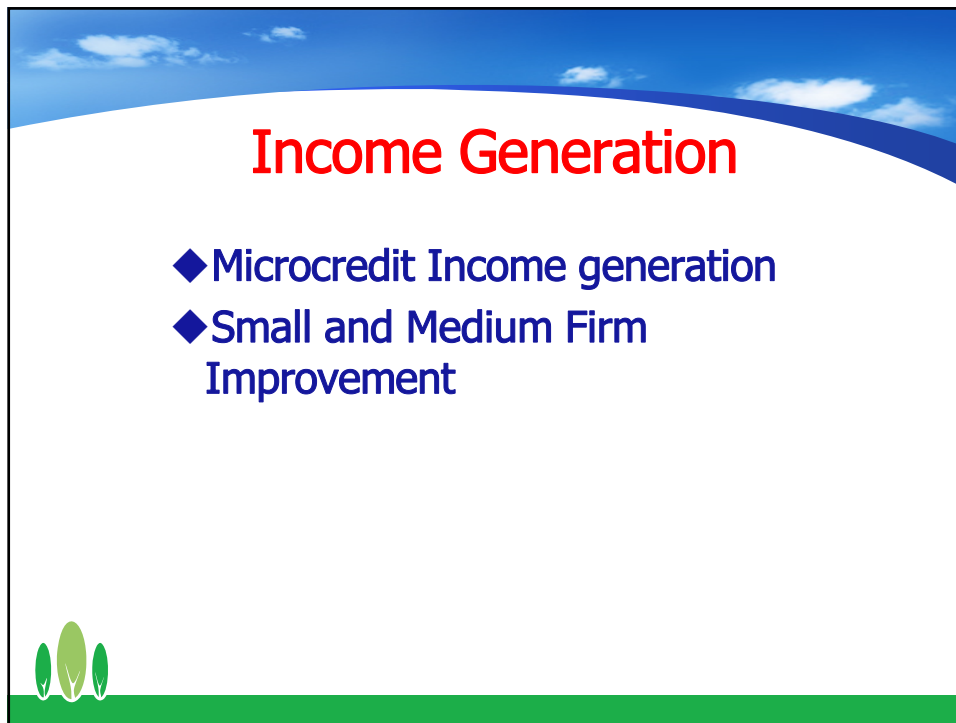
## Land-use Planning

- ◆ Assessments
- ◆ Inventory
- ◆ Planning
- ◆ Crop diversity



## Alternative Income

- ◆ Home Garden
- ◆ Aqua-agroforestry



**Income Generation**

- ◆ Microcredit Income generation
- ◆ Small and Medium Firm Improvement

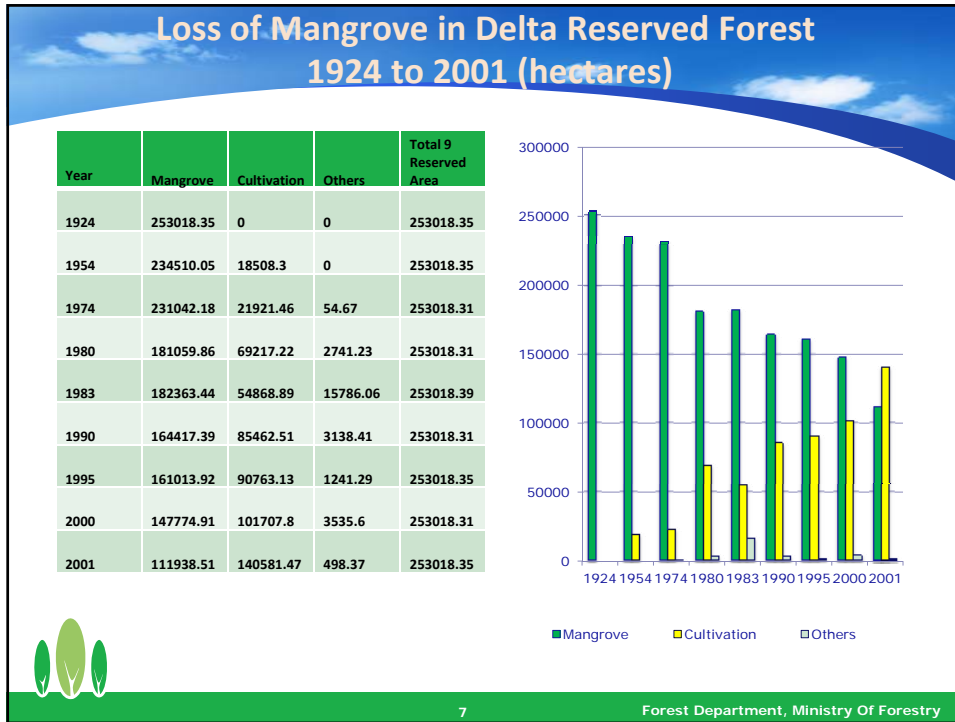
The slide features a blue sky with white clouds at the top, a white background for the text, and a green grassy area at the bottom with three stylized green trees on the left side.



**Training**

- ◆ Knowledge
- ◆ Skills
- ◆ Attitude

The slide features a blue sky with white clouds at the top, a white background for the text, and a green grassy area at the bottom with three stylized green trees on the left side.



### Mangroves offer win-win opportunity

For the first time in many years there is an emerging opportunity to clear the smoke, and community-based conservation of mangroves is a good place to start



**Dr Mark Huxham**  
an Earthwatch researcher  
Napier University, Scotland




နှစ်ပေါင်း များစွာ ကာလ အတွင်း ပါတ်ဝန်းကျင် သန့်ရှင်း စေ ရန် ဆောင်ရွက်ရမည့် အခွင့်အလမ်း အား ပထမဆုံး အကြိမ် ရရှိလာပြီ ဖြစ်ပါသည်။ ပြည်သူ့ လူထု ၏ အား ဖြင့် ဒီ ရေ တော များ ထိန်းသိမ်း ကာကွယ် ခြင်း သည် သာ အကောင်းဆုံး ခြေလှမ်း ပင် ဖြစ်ပါသည်။



# Thank You !

## 添付 19-2: 第二回 管区レベル・マングローブ調整会合記録集



**Forest Department  
Ministry of Environmental  
Conservation and Forestry  
Republic of the Union of  
Myanmar**

**Japan International  
Cooperation Agency**



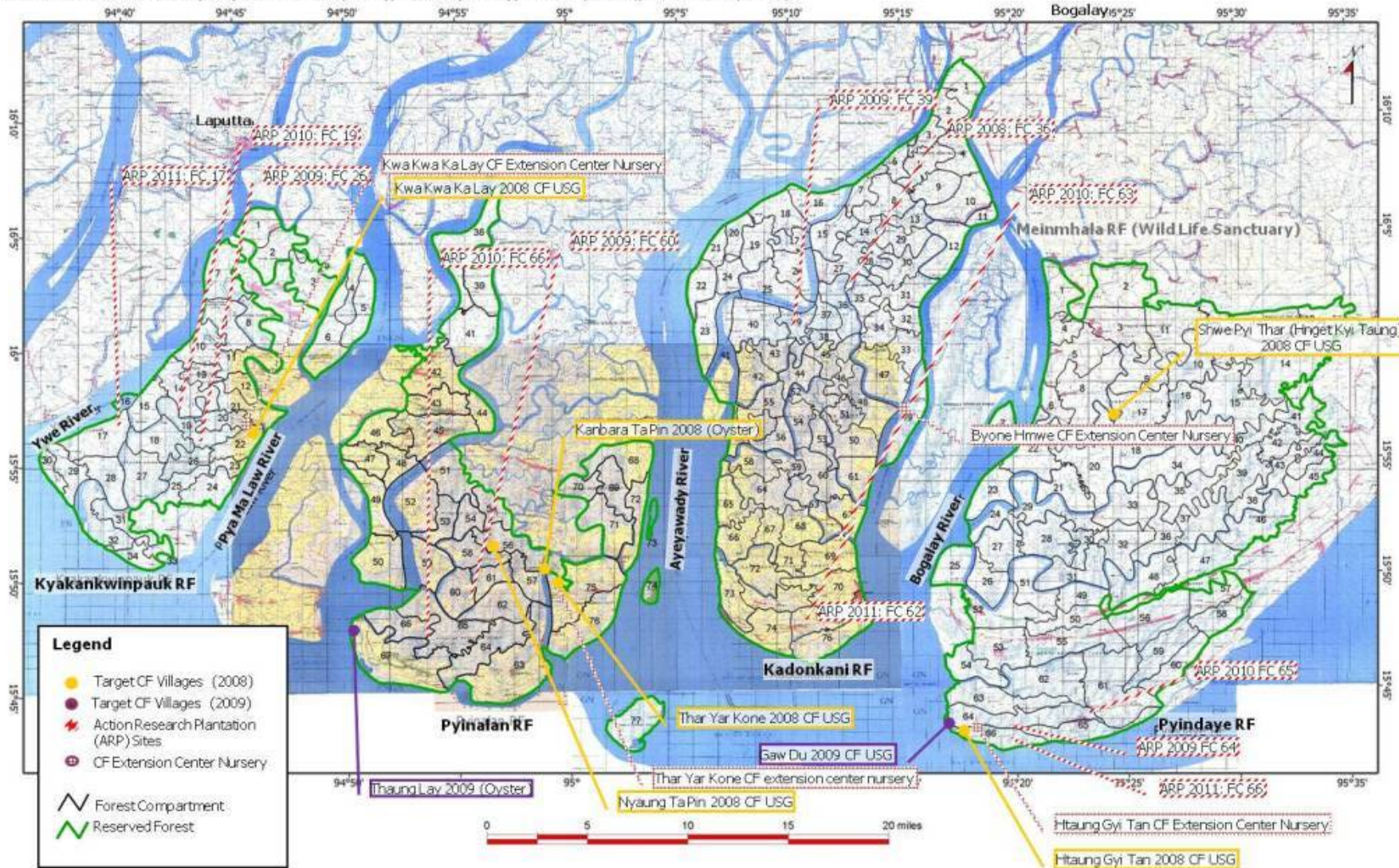
**THE INTEGRATED MANGROVE REHABILITATION AND  
MANAGEMENT PROJECT THROUGH COMMUNITY  
PARTICIPATION IN THE AYEYAWADY DELTA  
IN MYANMAR**

**Proceedings for  
2<sup>nd</sup> Regional Level Mangrove  
Coordination Meeting  
And  
Mangrove Seminar  
October 2012**

**MANGROVE COMMUNITY FORESTRY TASK FORCE /  
FOREST DEPARTMENT  
JICA EXPERT TEAM (NIPPON KOEI CO., LTD)**

### Location Map of the Project Activities (September 2012)

Target Reserved Forest (Four RFs)  
 Target CF User Groups 2008 (yellow) and 2009 CF villages are in purple color, Target Oyster Trial Village (2 villages)  
 CF Extension Centre Nurseries (4 sites)  
 Action Research Plantation (ARP) Sites: FY2008 (1 site), FY2009 (4 sites), FY2010 (4 sites), and FY2011 (3 sites)



Photos: 2<sup>nd</sup> Regional Level Mangrove Coordination Meeting/ Mangrove Seminar



[Output 4] 2<sup>nd</sup> Regional Mangrove Coordination Meeting 2.10.2012



[Output 4] 2<sup>nd</sup> Regional Mangrove Coordination Meeting 2.10.2012



[Output 4] 2<sup>nd</sup> Regional Mangrove Coordination Meeting 2.10.2012



[Output 4] 2<sup>nd</sup> Regional Mangrove Coordination Meeting 2.10.2012



[Output 4] Mangrove Sminar 2.10.2012



[Output 4] Mangrove Sminar 2.10.2012



[Output 4] Mangrove Sminar 2.10.2012



[Output 4] Mangrove Sminar 2.10.2012



The Integrated Mangrove Rehabilitation and Management Project through Community Participation  
in the Ayeyawady Delta in Myanmar

**Proceedings for 2<sup>nd</sup> Regional Level Mangrove Coordination Meetings  
and  
Mangrove Seminar**

**Table of Contents**

Project Area Map

Photo

Abbreviations

1. Introduction .....	1
2. 2nd Regional Coordination Meeting (Pathein).....	3
2.1 Agenda.....	4
2.2 Meeting Minutes.....	5
2.3 Participant List .....	12
3. Mangrove Seminar (Pathein) .....	13
3.1 Agenda.....	14
3.2 Meeting Minutes.....	15
3.3 Participant List .....	24

**Attachment List**

Attachment 2: Presentation Materials for 2nd Regional Coordination Meeting (Pathein)

Attachment 2-1: Reserved Forest Management, Land use issues in the Reserved Forest Area

Attachment 2-2: Progresses and Issues Related to JICA/FD Mangrove Project

Attachment 2-3: Recent Mangrove Forest/ Land Use Status in the Project Area

Attachment 3: Presentation Materials for Mangrove Seminar (Pathein)

Attachment 3-1: Progresses and Issues Related to JICA/FD Mangrove Project

Attachment 3-2: Mangrove Forest Status and Achievement/ Lessons learnt from ARP

Attachment 3-2: CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by  
CFUSG

Attachment 3-4 CF Support/ CF-SOP

## Abbreviation Table

Abbreviation	Full Description
AD	Assistant Director
ARP	Action Research Plantation
C/P	Counter Part
CDMA	Code Division Multiple Access (one system of mobile phone)
CF	Community Forestry
CFUSG (CFUG*)	Community Forestry User Group (*The project and former JICA study was using the abbreviation “CFUSG” since 2002. However in order to avoid confusions among relevant stakeholders, gradually replacing “CFUSG” into “CFUG”.)
CFECN	Community Forestry Extension Centre Nursery
CFI	Community Forestry Instruction
DOF	Department of Fishery
DPDC	District Peace and Development Council
DRO	Deputy Range Officer
EC	Electric Conductivity
FAPC	Foreign Affairs Policy Committee
FD	Forest Department
FPM	Field Project Manager
FRI	Forest Research Institute
GIS	Geographic Information System
GPS	Global Positioning System
It/R	Interim Report
IMMP	Integrated Mangrove Management Plan
JCC	Joint Coordinating Committee
JET	JICA Expert Team
JICA	Japan International Cooperation Agency
LBVD	Livestock Breeding and Veterinary Department
MAS	Myanma Agriculture Service
MCFTF	Mangrove Community Forestry Task Force
MOF	Ministry of Forestry
NDVI	Normalized Difference Vegetation Index
NGO	Non Government Organization
NFIO	Natural Forest Improvement Operation
PDC	Peace and Development Council
PSD	Planning and Statistic Division (FD)
PSD	Planning and Statistic Department (MOF)
POM	Project Operation Manual
Pr/R	Progress Report
RECOFTC	Regional Community Forestry Training Centre
R/D	Record of Discussions
RF	Reserved Forest
RO	Range Officer
SLRD	Settlement and Land Record Department
SO	Staff Officer
TPDC	Township Peace and Development Council

<b>Abbreviation</b>	<b>Full Description</b>
UNDP	United Nations Development Program
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
USDA	Union Solidarity Development Association
USG	User's Group/User Group
VPDC	Village Peace and Development Council
WFP	World Food Programme

<b>Area Abbreviation</b>	<b>Full Description</b>
APG	Ahpyin Pade Gaw
ATS	Ahtet Su
AYW	Ayeyawady
BGL	Bogalay
BYM	Byone Hmwe
DMD	Daming Daung
GCG	Gway Chaung Gyi
GAD	Gaw Du
KADK	Kadonkani (Reserved Forest)
KKKL	Kwa Kwa Ka Lay
KKKP	Kyakankwinpauk (Reserved Forest)
KTP	Kanbala Ta Pin
KTS	Kwin Thone Sint
LPT	Laputta
MYM	Myaung Mya
NPT	Nay Pyi Taw
NTP	Nyaung Ta Pin
PNDY	Pyindaye (Reserved Forest)
PNK	Peine Kone
PNLN	Pyinalan (Reserved Forest)
PYP	Pyar Pon
SPT	Shwe Pyi Thar
TGT	Htaung Gyi Tan
TYK	Thar Yar Kone
TWL	Thaung Lay
YGN	Yangon

<b>NGO</b>	<b>Full Description</b>
ACTED	Agency Cooperation Technology and Development
CARE	Care Myanmar
FREDA	Forest Resource and Environmental Development Association
GRET	Group of Research Exchange Technology
MSF	Medici an Sans Frontiers
Metta	Metta Development Foundation
SC	Save the Children
WC	World Concern

Main Text

## **1. Introduction**

The Integrated Mangrove Rehabilitation and Management Project through Community Participation in Ayeyawady Delta, so called the JICA/FD Mangrove Project, has 5 outputs and this “Regional Level Mangrove Coordination Meeting” and “Mangrove Seminar” are regarded as an activity under Project’s Output 4 “Establish a Coordination Mechanism among key sectors for mangrove area management”.

The regional level coordination meeting is regarded as an inter-agency coordination meeting, consisting of relevant authorities at the regional level to examine the underlying causes for mangrove deforestation in the Ayeyawady Delta. The first meeting was held in November 2011 and this 2<sup>nd</sup> meeting was the final meeting for the project, since the project is scheduled to terminate in March 2013.

This 2<sup>nd</sup> regional mangrove coordination meeting aimed to discuss and share each other’s strategies and approaches toward reserved forest area management and mangrove resource management, in relation to the recent move on land use policy in the nation.

The Mangrove Seminar which was conducted after the 2<sup>nd</sup> Regional Level Mangrove Coordination Meeting was more intended to share about the Project’s progresses, achievements and issues to relevant stakeholders. The Mangrove Seminars have been conducted regularly in the past years, and this Mangrove Seminar had following specific objectives:

- Share experiences / lessons learned from Project Activities with relevant stakeholders (government, donors, NGOs)
- Discussion and share experiences / lessons learned related to better CF/ Mangrove Management and livelihood improvement of communities

This document aimed to brief topic/ issues presented and discussed in “2<sup>nd</sup> Regional Level Mangrove Coordination Meeting” and “Mangrove Seminar” to participants and those who are interested.

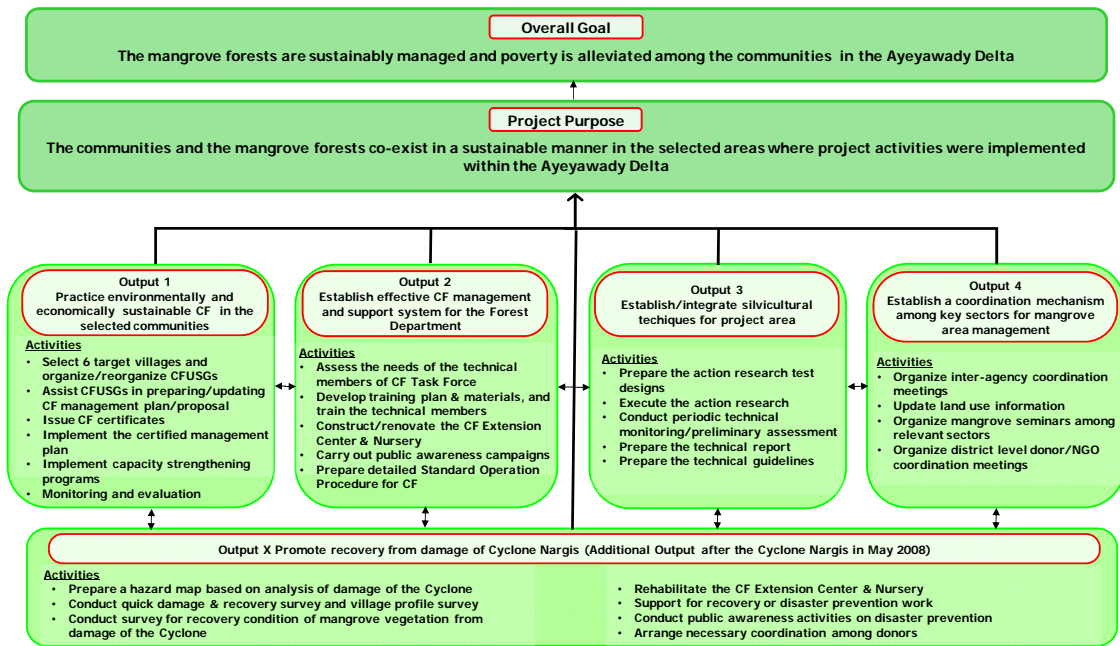


Figure Project Framework Based on PDM Version 2

## **2. 2<sup>nd</sup> Regional Coordination Meeting (Pathein)**

## 2.1 Agenda

### **AGENDA**

#### **2<sup>nd</sup> Regional Mangrove Coordination Meeting**

##### 1. Objective

- Explanation about Reserved Forest Management, and Mangrove Management by FD
- Explanation about Progresses and Achievement related to JICA/FD Mangrove Project
- Explanation about mangrove forest / land use status in the Project Area
- Explanation about Land Use Strategies and Approaches toward Reserved Forest by other departments and agencies
- Discussion and share experiences / lessons learned related to Reserved Forest Management, Mangrove Resource Management in the delta area

##### 2. Goals of Meeting

- Participants to share about strategies and approaches among relevant agencies toward reserved forest area
- Participants to discuss and share about possible synergy for mangrove protection and development of reserved forest area.

##### 3. Participants: Refer Participant List

##### 4. Venue: Patheingyi Hotel, Patheingyi

##### 5. Date and Time: 2<sup>nd</sup> October, 2012, (08:00) 08:15 -11:25

##### 6. Agenda of Regional Coordination Meeting

Sr.	Time	Subject	Person
1	08:00-08:15	Registration	All Participants
2	08:15	Chairperson taking seat	FD Regional Director
3	08:15-08:20	Announcement of opening	MC
4	08:20-08:25	Opening speech 1	FD Regional Director
5	08:25-08:30	Opening speech 2	JICA Expert
6	08:30-08:45	Reserved Forest Management, Land use issues in the Reserved Forest Area	FD Regional Director
7	08:45-09:10	Progresses and Issues related to JICA/FD Mangrove Project' Specifically in respect to land use	FD Field Project Manager
8	09:00-09:20	Recent Mangrove forest / land use status in the Project Area	JICA Expert
9	09:20-09:30	Strategies and approaches toward reserved forest area by fishery sector: In respect to land use policy / plan	DoF
10	09:30-09:40	Strategies and approaches toward reserved forest area by agriculture sector: In respect to land use policy / plan	MAS
11	09:40-09:50	Strategies and approaches toward reserved forest area by agriculture sector: In respect to land use policy / plan	SLRD
12	09:50-10:05	Refreshment	All Participants
13	10:05-11:05	Discussion Section (in Myanmar) - How recent moves on Land use policy and land use management influence reserved forest area - Differences in Strategies and approaches toward reserved forest area by relevant departments and authorities - Possible synergies among concerned departments for better mangrove management (protection, production,)	Discussion lead by Chairperson
14	11:05-11:15	Way Forward	Chairperson
15	11:15-11:20	Closing Speech	FD Regional Director
16	11:20	Announcement of closing of "Regional Coordination Meeting"	MC
17	11:20-11:25	Group Photo	All Participants



## **2.2 Meeting Minutes**

### **Meeting Minutes of 2<sup>nd</sup> Regional Mangrove Coordination Meeting (Pathein)**

Date	:	2 <sup>nd</sup> October 2012
Time	:	08:15 to 11:40
Venue	:	“Pathein Hotel Meeting Room”, Pathein
Participants	:	Total (20) participants: (7) FD counterparts, (9) participants from JICA Expert Team & (4) participants from relevant departmental authorities (refer participant list)

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U Hla Myo Aung, staff officer from FD/ Myaung Mya District, acted as MC. First, he read out the agenda of the ceremony. Then, he announced that the ceremony is officially opened.

### **Opening Speech**

U Zaw Win (5), FD Regional Director of Ayeyawady Region, delivered the opening speech. Firstly, he expressed his thanks to the distinguished guests and participants. He said that Myanmar is a country rich in natural forests and forest resources and is also the country which possesses the largest area of forest coverage among south-east Asian inland countries. In terms of mangrove forests coverage, it is the seventh country of the world.

From the beginning of the 19<sup>th</sup> century began the systematic management of mangrove forests by creating reserved forests. But due to the increased and dense population, the mangrove forests area has decreased as they are relied on for the basic needs of local community. In order to put an end to such kind of deforestation, rehabilitation and management of mangrove forests are being conducted either by forest department itself or by cooperation with non-governmental organizations and international cooperation agencies. This JICA project's goal is to sustainably manage the mangrove forests and to alleviate poverty among the communities in the Ayeyawady Delta. In order to achieve the overall goal of the project, FD and community alone cannot work out even with the technical support from JICA Expert Team, i.e. inputs from relevant government departments SLRD, DoF, DoA are expected.

He concluded his opening speech by expressing his expectance of closer collaboration between FD and relevant departments in future for creating a sustainable co-existence of community and mangrove forests.

### **Opening Speech**

Mr. Shibayama, Chief Adviser from JICA Expert Team, delivered the opening speech. First, on behalf of JICA and JICA Expert Team, he thanked to all participants for giving their valuable time for this meeting. Then he explained that this was the second regional coordination meeting, the first meeting being held in last November and that it is conducted under the project's output 4 "Establishing a coordination mechanism among key sectors for mangrove area management". The objective of 2<sup>nd</sup> Regional Mangrove Coordination Meeting is to discuss and share different departments' strategies and approaches toward reserved forest management and mangrove forest management and to relate these to the recent move on land use policy in the nation. He concluded his opening speech by expressing his sincere thanks to all distinguished guests.

### **Presentation Section**

#### **Presentation-1) Reserved Forest Management, Land use issues in the Reserved Forest**

U Zaw Win (5), regional director from FD, made a presentation on the topic above.

(See attachment 2-1)

#### **Presentation-2) Progresses and Issues Related to JICA/FD Mangrove Project (Specifically in respect to land use)**

U Khin Maung Lwin, assistant director from Myaung Mya FD cum field project manager, presented about the progresses and issues related to the project. (See attachment 2-2)

#### **Presentation-3) Recent Mangrove Forest/ Land Use Status in the Project Area**

Mr. Shibayama, chief adviser of JICA Expert Team, presented about recent mangrove forest/ land use status in the Project Area. (See attachment 2-3)

### **Discussion Section**

#### **Department of Fisheries (DoF)**

##### **U Min Naung (Staff Officer/ Myaung Mya)**

U Min Naung discussed that:

- DoF plays a vital role in mangrove forest rehabilitation and management since it has to deal with all kinds of fish and prawn/shrimp culture, issuing legal license to those who want to establish shrimp ponds within reserved forest area, etc. in mangrove area,
- it is true that clearing sites of mangrove forests to make them into fish/shrimp ponds has adverse effects on environment as well as on community people who have to rely on those areas yielding fishery products for their daily livelihood,
- it would be best if DoF could give technical support to those land owners so that they could apply techniques less affecting on environment and mangrove forest area, for example, in Thailand, implementation of shrimp pond with "water treatment system" by leaving 50 yards space of mangrove forest along the river bank as for wind break plantation of disaster protection and soil erosion protection is permitted,
- in the extent that systems mentioned above cannot be applied to targeted villages, it is also possible for DoF to welcome discussion with Forest Department for closer collaboration between two departments as to reduce the number of fish/ shrimp ponds or to prevent establishment of such ponds in specific area such as core zones, etc,
- since senior government officers from relevant ministries and departments are on the process of formulating a new land use policy (such as National Workshop on Land Use Policy, National Land Use Scrutiny Committee, etc), he believe that conflicts between Forest Department and Department of Fisheries and CF user groups would be solved in near future after this land use policy is put into place.

Department of Agriculture (DoA)

Daw Nwe Nwe Win (Staff Officer/ Pathein)

Daw Nwe Nwe Win discussed that:

- the Department of Agriculture has certain departmental duties to extend area of paddy field so that they have to allow the farmers to clear some of mangrove forest sites to make them into paddy fields,
- it is impossible for DoA to forbid/prevent farmers from growing paddy as their livelihood activities, and cultivation is also one of the programs as prescribed by the state for "poverty alleviation".

She suggested to FD as follows:

- to make wind break plantations around paddy fields would be the best available alternative,
- to establish "Model CF village" where there are a moderate combination of farm land and mangrove plantation by CF users and where proper livelihood activities are implemented,
- for such establishment of model CF villages with the best combination of land use, Department of Agriculture can closely collaborate with FD and other relevant departments.

Settlement and Land Record Department (SLRD)

U Zaw Win (Deputy Regional Director/ Pathein)

U Zaw Win introduced himself first and briefly explained about his department's duties and responsibilities. SLRD is mainly responsible for settlement of land, collection of tax on land users and regular recording of land use situation.

Then, he made further discussions as follows:

- making attempts for closer collaboration between general administration department (GAD), forest department (FD), settlement and land record department (SLRD), department of agriculture (DoA) and department of fisheries (DoF) for better management of mangrove forests is an excellent idea,
- for land management matters, SLRD can support FD in deciding which area should be reserved forests and which area should be farm land, etc.
- the nation is currently subject to political as well as economic reforms, it is evident to everyone that some parts of existing laws on forestry, agriculture and some other sectors which are no longer reflecting actual situation on the ground would gradually be amended and updated,
- law on agriculture land management has been developed in August 2012
- after these updated laws and follow-up actions be put into place, he believes that most of the existing conflicts could be solved systematically,

The discussions of each representative from DoF, DoA and SLRD were followed by further discussions of FD counterparts.

In the absence of the chairman (FD Regional Director), U Khin Maung Lwin led the discussion section.

Forest Department (FD)

U Khin Maung Lwin (Assistant Director/ Myaung Mya)

Following the suggestion made by Daw Nwe Nwe Win from DoA, U Khin Maung Lwin explained that wind break plantation, river bank plantation are among the principle activities undertaken by Forest Department and FD staffs fully understand the importance of these plantations for disaster prevention and livelihood of community. But getting the local people involved for such plantation can be said as one of the extremely difficult challenge faced by FD. Despite several persuasions by FD, it is proved to be impossible for the local community to make 1 acre-plantation per village.

In response to the discussion by SLRD, U Khin Maung Lwin said that FD appreciates a lot the collaboration with SLRD, DoF and DoA. If possible, he would like to propose SLRD, DoF and DoA to participant in field visits with at least one representative officer from each of these departments to the mangrove forest area so that actual situations and problems in the field are shared at the same time and possible solutions as well as probable approaches could jointly be formulated with the least delay. But up to now, there are still some limitations on resources in terms of the number of available staffs, budget, facilities, etc.

Forest Department (FD)

U Hla Myo Aung (Staff Officer/ Myaung Mya)

U Hla Myo Aung pointed out that according to the instructions of top level government officers, a conference on land use conflicts faced by different departments was held in Patheingyi in July 2012 with the Union/ Regional Minister as the chairperson.

At that time, the chairperson emphasized that reserved forest area might be expanded based on necessity.

U Hla Myo Aung supported the opinion of U Zaw Win from SLRD that after a clear-cut land use policy is properly formulated and put into place, it would be much easier to solve land use conflicts and this would contribute to the better management of mangrove forests.

Forest Department (FD)

U Kan Tun (Staff Officer/ Bogalay)

U Kan Tun briefly explained about the FD approach undertaken in his township for better rehabilitation and management of mangrove forests as follows:

- some mangrove area which have once been turned into farm land could be rehabilitated as mangrove forests, but some are not,
- some regions need mangrove forests more than anything since these forests are indispensable to the disaster prevention and thus, largely contributing to the protection of lives and properties of local community,
- in some other areas in contrast to the above-mentioned area, the existence of farm land, fish and shrimp ponds are equally required as mangrove forests as they are the only means of livelihood activities of local people,

So, the FD approach is to make proper zonation and correct decision upon which area should be rehabilitated and which are not, which areas are subject to a strict and regular "mangrove forest management", which areas are open to "farm land" and "fish/shrimp pond". Therefore, the best available option for those areas open to other land use other than mangrove forest plantations is to get local community involved in the "firewood plantation", "wind break plantation", "riverbank plantation", etc.

#### Forest Department (FD)

##### U Hla Myo Aung (Staff Officer/ Myaung Mya)

U Hla Myo Aung expressed his support to what has been discussed by U Kan Tun as follows:

- this JICA/FD mangrove project is a 30-year-project and this period of 2007 to 2013 is the foundation period after which regular monitoring activities are expected from FD for the sustainable development of mangrove forests and local community,
- the proposal by the JICA pilot project also emphasized on the importance of zonation in the mangrove forest areas, i.e. not all mangrove forests were expected to be rehabilitated and managed but such needs to be done depending on the necessity and importance of them in the sustainable development and disaster prevention.

Then he asked U Moe Zaw who has been assigned as a range officer in Bogalay for many years and currently assigned in Nay Pyi Taw to share his knowledge and experience.

#### Forest Department (FD)

##### U Moe Zaw (Staff Officer/ Nay Pyi Taw)

U Moe Zaw shared his opinion and knowledge as follows:

- each department, i.e. DoF, DoA, SLRD and FD, is handling different land use matters in its own way,
- each department has to admit honestly that the collaboration or integration between departments is found to be weak,
- in order to solve this problem, the "National Land Use Scrutiny Committee" was organized in June 2012 with the Union Minister of MOECAAF as the president,
- the first meeting of this Committee was held on 4<sup>th</sup> July yielding (7) decisions as output,
- the first two important decisions are (i) to ensure monthly report from each relevant department with information summarized from all available data and figures on current land use situations and (ii) to organize a national workshop on land use policy,
- in accordance with the second decision, a national workshop on land use policy was held on 17<sup>th</sup> and 18<sup>th</sup> of September from which (15) outcomes were extracted,
- the two most important outcomes are (i) since each different department has its own existing law and regulations which also do not necessarily need to be abolished and in order to formulate a new one which stays in line with the existing ones, a "National Land Use Plan" instead of a "National Land Use Policy" is planned to be developed, and (ii) creating "Task Force" for implementation of such plan,
- those task forces are expected to conduct nation-wide survey for data collection on land use after which compilation of these data to be used in planning zonation of land use.

Forest Department (FD)

U Kyi Lin (Staff Officer/ Pyar Pon)

U Kyi Lin also shared his experience and difficulties faced by FD in his township:

- in his township project area, the conflicts between farm land and mangrove forests can be said as non-existing or very few,
- the main problem faced by FD is the establishment of fish and shrimp ponds in the CF target area which deter better watercourse for mangrove forests and prevent CF users from freely catching of fish and prawn for their livelihood,
- during the field visit of deputy minister in last September, it was found out that 2,000 acres of FD plantation had been destroyed by shrimp ponds,
- there are also day-to-day conflicts between shrimp-pond-people and local community,
- it is known that top-level departmental authorities are currently making attempts to formulate a new policy which will solve these land use conflicts, but it is also urgently needed to transmit the message to lower level and field level staffs so that the efforts made by FD and related NGOs/Donors and local community could not be destroyed in one or two days,
- as discussed by U Kan Tun, Forest Compartments 65, 64, 66 and 63 in Pyindaye RF are those area where mangrove forest coverage is indispensable to the disaster prevention of local community area and that is the reason that he strongly requests to the representatives from relevant departments for closer collaboration with FD for timely saving of these precious forests.

Forest Department (FD)

U Hla Myo Aung (Staff Officer/ Myaung Mya)

U Hla Myo Aung supported the request by U Kyi Lin by explaining how the embankment and storage of water for shrimp ponds can destroy mangrove forest plantations in just a few days, wasting all the budget input and the efforts by concerned people.

Settlement and Land Record Department (SLRD)

U Than Shein (Staff Officer/ Pathein)

U Than Shein emphasized on the importance of raising public awareness to local community as the farmers do not have knowledge of how these mangrove forests can support them in terms of livelihood and environmental protection. He also suggested that the importance of mangrove forests and ways of better rehabilitation and management should be prescribed and included in school syllabus in primary or secondary education.

Settlement and Land Record Department (SLRD)

U Zaw Win (Deputy Regional Director/ Pathein)

Regarding better rehabilitation and management of mangrove forests, he expressed his opinion as follows:

- as the saying "prevention is better than cure", he believed that plantation of mangrove forests is essential, but prevention of deforestation of existing forests is also equally important and even more urgently needed,
- for effective prevention of mangrove forest deforestation, it would be best if concerned departments could (i) launch more extension, trainings and workshops to local community as to raise public awareness on the importance of the sustainable existence of mangrove forests and (ii) take strict legal actions against those committing illegal wood-cutting, etc.
- as for the land use conflicts, he nor neither of the participants of this meeting could decide on their own on how these lands should be used and managed, but they can report to upper level decision-makers on the problems and conflicts existing in current mangrove forest area.

#### Department of Agriculture (DoA)

##### Daw Nwe Nwe Win (Staff Officer/ Pathein)

Daw Nwe Nwe Win made one point that paddy-farming cannot be done on all kind of soil, for example, on soil with high salinity, it is totally impossible to grow paddy.

#### Forest Department (FD)

##### U Kan Tun (Staff Officer/ Bogalay)

U Kan Tun gave his support to what was proposed by U Zaw Win from SLRD that prevention is better than cure. Between 1997 and 2012, there has been 35% increase in the mangrove forest coverage in Kadonkani Reserved Forest in Bogalay Township. This was due to the prevention measures and various curing means that 33,340 acres of mangrove forests are properly conserved in his township.

#### **Way forward and Closing Speech U Khin Maung Lwin on behalf of U Zaw Win (5)**

After the discussion section, U Khin Maung Lwin delivered the way forward and closing speech.

On behalf of FD and JICA, he would like to express his sincere thanks to each and every participant for giving their valuable time and sharing their knowledge and experience. He deeply appreciated the presentation and discussions of the relevant department officers and expressed his belief that closer and deeper collaboration between different departments, not only by means of meeting and conference but also by means of field visits and patrolling with at least one responsible officer from each department to the actual mangrove forest sites, would be created in the near future so that land use conflicts can be solved and proper zonation can be prepared with the slightest delay.

#### **Group Photo & Announcement of Closing of "2<sup>nd</sup> Regional Mangrove Coordination Meeting"**

All participants took group photos and MC announced the closing of 2<sup>nd</sup> Regional Mangrove Coordination Meeting.

Attachment 2-1: Reserved Forest Management, Land use issues in the Reserved Forest Area

Attachment 2-2: Progresses and Issues Related to JICA/FD Mangrove Project

Attachment 2-3: Recent Mangrove Forest/ Land Use Status in the Project Area

### 2.3 Participant List

Date: 2<sup>nd</sup> October 2012

Venue: Pathein Hotel, Pathein

Time: 08:15 to 11:40

Sr. No	Name	Position/Organization	Place (Region/State/District /Township)
1	U Khin Maung Lwin	Assistant Director, FD	Myaung Mya
2	U Hla Myo Aung	Staff Officer, FD	Myaung Mya
3	U Moe Zaw	Staff Officer, FD	Nay Pyi Taw
4	U Hla Myint	Staff Officer, FD	Laputta
5	U Kyi Lin	Staff Officer, FD	Pyar Pon
6	U Kan Htun	Staff Officer, FD	Bogalay
7	Daw Nwet Nwet Win	Assistant Director, Department of Agriculture	Pathein
8	U Min Naung	Staff Officer, Department of Fisheries	Myaung Mya
9	U Zaw Win	Deputy Regional Director, Settlement and Land Record Department	Pathein
10	U Than Shane	Staff Officer, Settlement and Land Record Department	Pathein
11	U Zaw Win	Director, FD	Pathein
12	Mr. Tomohiro Shibayama	Chief Adviser, JICA Expert Team	Yangon
13	Ms. Haruko Chikaraishi	Coordinator, JICA Expert Team	Yangon
14	U Saw Win Kyaw	Technical Interpreter, JICA Expert Team	Yangon
15	U Tun Tun Win	Technical Interpreter, JICA Expert Team	Yangon
16	Daw Shwe May Kyaw	Administrative Coordinator, JICA Expert Team	Yangon
17	Daw Kyawt Kyawt Khaing	Secretary, JICA Expert Team	Yangon
18	U Hla Min Oo	Office Assistant, JICA Expert Team	Myaung Mya
19	U Aung Hein Htun	Office Assistant, JICA Expert Team	Myaung Mya
20	U Myo Myint Aung	Office Clerk, JICA Expert Team	Yangon



### **3. Mangrove Seminar (Pathein)**

### 3.1 Agenda

## **AGENDA** **Mangrove Seminar**

1. Objective

- Share experiences / lessons learned from Project Activities with relevant stakeholders (government, donors, NGOs)
- Discussion and share experiences / lessons learned related to better CF/ Mangrove Management and livelihood improvement of communities

2. Participants: Refer Participant List

3. Venue : Pathein Hotel, Pathein

4. Date and Time: 2<sup>nd</sup> October, 2012, (13:00) 13:15-17:40

5. Agenda of Mangrove Seminar

Sr.	Time	Subject	Person
1	13:00-13:15	Registration	All Participants
2	13:15-13:20	Announcement of opening	MC
3	13:20-13:25	Opening speech 1	FD Regional Director
4	13:25-13:30	Opening speech 2	JICA Expert
5	13:30-13:40	Group Photo	All Participants
6	13:40-13:55	JICA/FD Mangrove Project: Progresses and Achievements	Field Project Manager
7	13:55-14:15	Mangrove forest status and achievement/ lessons learnt from ARP	FD /JICA Expert (Joint Presentation)
8	14:15-14:30	CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by CFUSG	FD /JICA Expert (Joint Presentation)
9	14:30-14:45	CF Support/ CF-SOP	FD /JICA Expert (Joint Presentation)
10	14:45-15:00	Question and Answer	All Participants
11	15:00-15:15	Refreshment	All Participants
12	15:15-16:15	Group Discussion Section (in Myanmar or English) <ul style="list-style-type: none"><li>- Mangrove Protection/ and management in RF area</li><li>- Effective CF in RF area</li><li>- Effective livelihood and community empowerment activities in RF area</li></ul>	All Participants
13	16:15-17:15	Group Presentation and Questions and Answers	Group Leaders
14	17:15-17:30	Way forward	Chairperson
15	17:30-17:35	Closing Speech	FD Regional Director
16	17:35-17:40	Announcement of closing of "Regional Coordination Meeting"	MC

### **3.2 Meeting Minutes**

#### **Meeting Minutes of Mangrove Seminar (Pathein)**

Date	:	2 <sup>nd</sup> October 2012
Time	:	13:15 to 17:40
Venue	:	“Pathein Hotel Meeting Room”, Pathein
Participants	:	Total (28) participants: (7) FD counterparts, (9) participants from JICA Expert Team & (12) participants from relevant departmental authorities and NGOs/Donors (Refer Participant List)

U Hla Myo Aung, staff officer from FD/ Myaung Mya, acted as MC. First, he read out the agenda of the ceremony. Then, he announced that the ceremony is officially opened.

#### **Opening Speech-1**

U Zaw Win (5), FD Regional Director of Ayeyawady Region, delivered the opening speech. Firstly, he expressed his thanks to the distinguished guests and participants. He said that Myanmar is a country rich in natural forests and forest resources and is also the country which possesses the largest area of forest coverage among south-east Asian inland countries. In terms of mangrove forests coverage, it is the seventh country of the world.

From the beginning of the 19<sup>th</sup> century began the systematic management of mangrove forests by creating reserved forests. But due to the increased and dense population, the mangrove forests area has decreased as they are relied on for the basic needs of local community. In order to put an end to such kind of deforestation, rehabilitation and management of mangrove forests are being conducted either by forest department itself or by cooperation with non-governmental organizations and international cooperation agencies.

He concluded his opening speech by expressing his expectance of closer collaboration between FD, NGOs/Donors and relevant departments in future for creating a sustainable co-existence of community and mangrove forests.

#### **Opening Speech-2**

Mr. Shibayama, Chief Adviser from JICA Expert Team, delivered the opening speech. First, on behalf of JICA and JICA Expert Team, he thanked to U Zaw Win (5) for organizing this mangrove seminar and to FD officers and project staffs for thoroughly prepared and arranged for this series of meeting and seminar.

He explained that in the 2<sup>nd</sup> Regional Coordination Meeting which has just been finished that morning, relevant departmental officers at regional level participated to discuss and share each department's strategies and approaches towards reserved forest area management and mangrove forests resource management, in relation to recent move on the land use policy.

In this afternoon seminar, the JICA Expert Team would like to present some key progresses and issues of the project. Then group discussions are expected from participants for some key topics related to mangrove and community forestry.

He believed that this seminar would be beneficial to all participants and concluded his opening speech by expressing his sincere thanks to all distinguished guests.

### **Group Photo**

All participants took group photos.

### **Presentation Section**

Presentation-1) Progresses and Issues Related to JICA/FD Mangrove Project (Specifically in respect to land use)

U Khin Maung Lwin, field project manager, presented about the progresses and issues related to the project. (See Attachment 3-1)

Presentation-2) "Mangrove Forest Status and Achievement/ Lessons learnt from ARP"

Mr. Shibayama, chief adviser of JICA Expert Team, made a presentation on "mangrove forest status, achievement and lessons learnt from ARP". (See Attachment 3-2)

Presentation-3) "CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by CFUSG"

Mr. Shibayama, chief adviser of JICA Expert Team, made a presentation on this topic.

(See Attachment 3-3)

Presentation-4) "CF Support/ CF-SOP"

Mr. Shibayama, chief adviser of JICA Expert Team, made a presentation on "CF support/CF-SOP".

(See Attachment 3-4)

### **"Questions and Answers" Section**

#### **❖ Question**

U Myint Hlaing (Project Officer, UNDP)

"Regarding output-2, since it is for capacity strengthening, what kinds of indicators are being used to evaluate/measure the achievement and progress?"

#### **Answer**

U Khin Maung Lwin (Assistant Director, Myaung Mya, FD)

"Output 2 is the complementary output to output 1, i.e. output 2 is indispensable to the successful

achievement of output 1, which is to practice environmentally and economically sustainable CF. FD has to accept that there were several area certified for CF and two or three years after the certification, CF activities slowed down and finally disappeared. This was due to lack of clear understanding by local people of the importance of CF activities and lack of willingness to participate in such activities which was also the result of insufficient extension and trainings of FD staffs to those local people. So, in order to avoid the same thing would happen to this project CF area, this output aims to strengthen the capacity of FD staffs so that they can conduct better and more effective extension and training to community. Moreover, FD with the support of JICA Expert Team, conducted field visits to the target CF villages (not less than 5 times per village between 2011 and 2012) to ensure that proper management plans and by-laws specific to each village were formulated by CFUSGs themselves. So, the long-term sustainability of the CF villages can be said as one of the indicator for output 2.

Another point is that FD has its long-established "Community Forestry Instructions" which govern all activities of CF. At the time of its development in 1995, CFI fully covered almost all area reflecting the actual situations on the ground at that time. But throughout the years, there appeared one issue after another which can no longer be coped with the use of CFI alone. As it is impossible to amend or change the existing CFI, a more flexible set of procedures, CF-SOP (Community Forestry – Standardized Operation Procedures), which is much easier to understand for the FD frontline staffs, is under serious review by FD and JICA Expert Team. This CF-SOP is also one of the indicators of output 2."

❖ Question

U Myint Hlaing (Project Officer, UNDP)

"He understood that output 4 is supposed to establish a coordination mechanism among key sectors for mangrove area management. Apart from organizing coordination meeting and mangrove seminars, are there any plan, in future, of formulating a more systematic coordination mechanism among key sectors?"

Answer

U Khin Maung Lwin (Assistant Director, Myaung Mya, FD)

"It is true that coordination mechanism between relevant agencies is a bit weak apart from these coordination meetings and seminars. But even from these coordination meetings, respective departments can gain opportunities to share and discuss the problems, weaknesses, findings, lessons learnt and to find the best possible solutions. After the foundation period of the project ends in 2013, it will be the duty and responsibility of FD to ensure that such coordination mechanism still exists between relevant departments, NGOs and donors for the better management of mangrove forests."

Mr. Shibayama (Chief Advisor, JICA Expert Team)

"Since a single project cannot fully coordinate with other donors, NGOs, and authorities, current activities for coordination were suggested by the Project's mid-term review.

Apart from the final mangrove seminar, there will be no more coordination meetings scheduled under the project (since the project will terminate in coming March). We, expert side, also appreciate similar coordination/ information sharing mechanism to be continued by relevant

stakeholders in Myanmar side."

❖ Question

U Hla Win Tin (Project Coordinator, METTA Foundation)

"If other NGOs/Donors want to establish CF, how can they cooperate with JICA and how to proceed?"

Answer

Mr. Shibayama (Chief Advisor, JICA Expert Team)

"We are just JICA experts and not officers or representatives of JICA, and following is my personal view. Basically, JICA's technical cooperation projects normally work with recipient country's governmental offices/ personnel. So in our case, we support CF through FD. In this context, JICA does not directly support NGOs/Donors for CF establishment.

One possibility is that Japanese Government has grass-root grant aid scheme and this requires local organization to manage project activities, applying to grass-root grant aid may have possibility."

❖ Question

U Hla Win Tin (Project Coordinator, METTA Foundation)

"What subjects are included for the curriculum of training materials to FD staffs and local community and how they contribute to the project output?"

Answer

U Khin Maung Lwin (Assistant Director, Myaung Mya, FD)

"The principal goal of our extension and trainings is that all FD staffs engaged in the project sites have a clear and thorough understanding on what CF is, how CFI (community forestry instructions) govern these activities and what other considerations such as livelihood activities are complementary to CFI for better conservation and management of CF. Only if FD frontline staffs, having to deal face-to-face with local people, have adequate knowledge on CF and CFI, they will be able to guide CFUSGs in formulating a realistic down-to-earth CF management plans on their own."

❖ Question

U Hla Win Tin (Project Coordinator, METTA Foundation)

"What are taken into consideration when formulating a specific benefit-sharing scheme among CFUSGs? Also, how would be the benefits shared if only 30% of a CF village is listed as CF members and the rest is not?"

Answer

U Khin Maung Lwin (Assistant Director, Myaung Mya, FD)

"This question is also an important one. To answer the question in short, benefits can be shared only among the 30 % members and not for the rest, but through extension and trainings to

members, FD can persuade more and more people to be listed as members and get them involved in CF activities for the future.

It has been 17 years that Forest Department has initiated CF activities and during that time, some CF still surviving until now and some disappeared. Failure to establish CF has several reasons and benefit-sharing among users is also one of them:

- local people are concerned for benefits more for individuals rather than "community concept",
- when management plans aim solely for forest plantation and conservation without taking into consideration the livelihood activities and it made local people think that CF only means plantation of trees and they are concerned only for cutting them for their immediate income,
- since wood-cutting is done by everyone and plantation is done only by a few, the community forestry concept entirely disappeared and no one continues to replant,
- for the long-term sustainability of CF, agroforestry, aquaculture and aqua-agroforestry activities should be considered as livelihood activities for income generation.
- to make short, formulation of a clear benefit-sharing scheme is essential to the sustainability of CF.

❖ Question

Dr. Win Tin (Senior Agriculture Advisor, MERCY CORPS)

"This JICA project period is 30 years starting from 2007. If the CF user groups consistently carry out CF activities by following the instructions laid down by FD until the end of the project, does FD have any plan of extension of the land use right for the user groups?"

Answer

U Moe Zaw (Staff Officer, Nay Pyi Taw, FD)

"Under the existing CFI, there is a paragraph saying that FD can consider the extension of land use if there is willingness and acceptable performance from the side of community."

❖ Question

U Myint Hlaing (Project Officer, UNDP) to Mr. Shibayama

- (i) "In computing the change from 2007 to 2012, you mentioned different land set images. When you compute the change/deductions, have you used the same sensor like rapid eye throughout the time series?"
- (ii) You have calculated area changes (increase/decrease) throughout different years of project period, after you have made ground truth. What sampling methods have you used? What strategy have you applied?

Answer

Mr. Shibayama (Chief Advisor, JICA Expert Team)

- (i) As you have pointed out, ideally, same sensor (satellite image) shall be used throughout the period. However due to problem in Landsat 7 and also termination of ALOS satellite operation; it was not possible to use the same satellite throughout the period. Therefore three different satellite images were used. In these changes, resolution of images got higher (30m -> 10 m -> 5m )

(ii) Ground truth for the latest satellite images has not been initiated yet.

Basically, we are planning to do simple ground truth to confirm and improve the validity of classifications.

**Group Discussion Section (in Myanmar and English)**

The 17 participants from FD and NGOs/Donors are divided into 3 groups with the JICA experts and team staffs supporting as observers.

Sr. No	Group-1	Group-2	Group-3
1.	U Khin Maung Lwin	U Hla Myo Aung	U Moe Zaw
2.	U Hla Myint	U Kyi Lin	U Kan Tun
3.	U Than Shein	U Min Naung	Daw Nwe Nwe Win
4.	U Hla Win Tin	U Myint Hlaing	Dr. Win Tin
5.	Daw Chaw Su Hlaing	U Nyo Latt	U Myo Zaw Win
6.	Daw Ei Ei Soe	-	U Nay Naing Tun

Topics to be discussed by each group

1. Mangrove Protection and Management in RF area
2. Effective CF in RF area
3. Effective livelihood and community empowerment activities in RF area

After group discussion, the following presentations were made by each group.

Group-1) Presentation on "Mangrove Protection and Management in RF area"

On behalf of group 1, U Hla Win Tin from Metta Foundation made a short presentation as follows: for effective mangrove protection and management, it is important to manage 4Ms (Men, Money, Materials, Methods) in an effective, efficient and economical way.

No	Methods (Process)	Men (Who)	Materials (Facility Needed)	Remark
1.	Plan of operation	Jointly by FD and community	Facilities as vehicles, petrol for field visits and holding workshops with local people	As in CF management plans formulation
2.	Law enforcement	FD	CFI and other forest laws	Legal actions
3.	Public awareness	FD and NGOs/Donors	Extension and training materials, pamphlets, newsletters, signboards, etc	
4.	Monitoring and control	FD	Facilities as vehicles, petrol, etc. for regular patrolling	Monthly meetings, etc.

Group-2) Presentation on "Effective CF in RF area"



On behalf of group 2, U Myint Hlaing from UNDP presented that following points are essential to effective CF in RF area:

<ul style="list-style-type: none"> <li>• diversification of livelihood activities (presence of PACT but not cover for all CFUSGs) for income generation</li> </ul>
<ul style="list-style-type: none"> <li>• awareness raising, campaign (FD staffs for community development)</li> </ul>
<ul style="list-style-type: none"> <li>• adequate number of facilities like boats and other vehicles</li> </ul>
<ul style="list-style-type: none"> <li>• capacity building (decentralized approach for self-reliance after completion of the project)</li> </ul>
<ul style="list-style-type: none"> <li>• decentralized nurseries</li> </ul>
<ul style="list-style-type: none"> <li>• patrolling camps (watch towers, shelters, etc)</li> </ul>
<ul style="list-style-type: none"> <li>• codify between FD and community for benefit sharing</li> </ul>

**Group-3) Presentation on "Effective livelihood and community empowerment activities in RF area"**

On behalf of group 3, U Myo Zaw Win from ECODEV made a short presentation as follows:

<ul style="list-style-type: none"> <li>• regarding effective livelihood activities it can be conducted in both of CF area and private forest area which exist in RF area</li> </ul>
<ul style="list-style-type: none"> <li>• in CF area, effective livelihood activities such as 1) agroforestry system – mangrove species are planted by growing <i>Hygrophila phlomoides</i>, <i>Sesbania grandiflora</i>, Coconut and <i>Nipa fruticans</i> as cash crop; 2) Aqua-forestry system – mangrove species are planted by culturing crabs (crab-fattening), oyster culture, etc.; and 3) Aqua-agro-forestry system – mangrove species are planted by aquaculture and growing agricultural crops,</li> </ul>
<ul style="list-style-type: none"> <li>• in private forest, effective livelihood activities such as mangrove species are planted for intermediate yield as firewood, pole, seeds and propagules and for final yield as post, wood and timber</li> </ul>
<ul style="list-style-type: none"> <li>• in RF area, Aquaculture such as crab culture (caged culture) and crab catching, fish catching, prawn catching and also livestock breeding (ducks, pigs, goats) can be conducted as effective livelihood activities</li> </ul>
<ul style="list-style-type: none"> <li>• as for effective community empowerment activities, tenders for fishery products especially in the creeks inside CF area are allowed for CFUG members by DOF but it is not sure whether it is possible, managing CF by catching fishery products as livelihood activities, and producing and selling forest products from CF area without taxing</li> </ul>

**"Discussions/ Questions and Answers on Group Presentations"**

▪ U Kyi Lin on group-1 presentation

From management point of view, it would be better to conduct collection and compilation of data on how many acres of mangrove forests are being used annually by local community and how many acres should be replanted each year for reforestation in order to cover the forest usage.

▪ U Hla Win Tin on group-3 presentation

U Hla Win Tin proposed an immediate income generation activity which he found to be on-going in one of the villages in Hai Gyi Area. This is the sale of a product locally called "leit-sar-phet".

It is obtained by drying the jelly-like substance found on the roots of some species of mangrove forest trees. The selling price is 2,000 kyats per viss and there is regular demand from "Kyaik-kha-Mee", a small town near Mawlamyaing. The use of this product is not exactly known but it is said to be edible as salad. He would like to propose this as an income generation activity in the project area.

▪ U Kan Tun

It is true that benefits can be gained from such activities mentioned by U Hla Win Tin. But they should also be aware that continuous extraction of such products is conducive to the "sedimentation" and gradually to "soil erosion". So, we should also bear in mind the concept of protection and management when we find ways for immediate income generation for local people.

▪ U Min Naung on group-3 presentation

Proposals for reduction of fish/shrimp ponds in CF area might be considered by top-level officers from DoF if the request is made for the community. But rivers tender and auctions are very complicated departmental procedure involving tax collection, etc. so better not to raise this issue.

**Overall summarizing by U Zaw Win (5)**

After discussions and presentations by three groups, U Zaw Win, FD Regional Director, summarized the following points on each of the presentation:

i) Group-1

The presentation by group-1 on "Mangrove Protection and Management in RF area" is very good and clear, but there is already the district level forest management plan by FD. By following the working plan laid down by this district level management plan, he believed effective mangrove protection and management can be achieved.

ii) Group-2

Effective CF can be achieved;

- through frequent field visits and patrolling to the project sites by FD frontline staffs: by those frequent field visits, they can get the local community more and more familiar with CF and make them involve in those CF activities. But due to the limitations of FD task force and facilities to a certain extent, FD kindly requests NGOs, INGOs and international cooperation agencies to support FD to be able to conduct such field visits as much as possible.
- through decentralized nurseries: instead of distributing seedlings for free of charge from a sole centralized nursery, it is better and more effective to establish decentralized nurseries by letting the local people nurse on their own with FD providing only plastic bags and seeds. Primary and secondary schools in project target villages can also be made as decentralized nurseries with school children being taught how to nurse these trees themselves and how important to plant/conserves these trees. Since people are reluctant to destroy something that they have created on their own, letting them start all activities since the nursery stage will surely be an effective way.

iii) Group-3

"Effective livelihood and community empowerment activities in RF area" can be achieved by the integrated approach making the best combination of agriculture, agroforestry, aquaculture and aqua-agroforestry.

**Way forward and Closing Speech by U Zaw Win (5)**

U Zaw Win (5) delivered the way forward and closing speech. On behalf of FD and JICA, he would like to thank to each and every participant for giving their valuable time and sharing their knowledge and experience. Since mangrove forests are indispensable to disaster prevention in coastal regions, FD has a plan of mangrove reforestation along the coastal regions starting from Ayeyawady delta up to the Rakhine State. It would be impossible for FD alone to implement this plan. So, on behalf of FD, he would like to invite the NGOs, INGOs, Donors and international cooperation agencies to participate and collaborate in this reforestation plan in future.

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**Attachments:**

Attachment 3-1: Progresses and Issues Related to JICA/FD Mangrove Project

Attachment 3-2: Mangrove Forest Status and Achievement/ Lessons learnt from ARP

Attachment 3-2: CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by CFUSG

Attachment 3-4 CF Support/ CF-SOP

### 3.3 Participant List

Date: 2<sup>nd</sup> October 2012

Venue: Pathein Hotel, Pathein

Time: 13:15 to 17:40

Sr. No	Name	Position/Organization	Place (Region/State/District/Township)
1	U Khin Maung Lwin	Assistant Director, FD	Myaung Mya
2	U Hla Myo Aung	Staff Officer, FD	Myaung Mya
3	U Moe Zaw	Staff Officer, FD	Nay Pyi Taw
4	U Hla Myint	Staff Officer, FD	Laputta
5	U Kyi Lin	Staff Officer, FD	Pyar Pon
6	U Kan Htun	Staff Officer, FD	Bogalay
7	Daw Nwet Nwet Win	Assistant Director, Department of Agriculture	Pathein
8	U Min Naung	Staff Officer, Department of Fisheries	Myaung Mya
9	U Zaw Win	Deputy Regional Director, Settlement and Land Record Department	Pathein
10	U Than Shane	Staff Officer, Settlement and Land Record Department	Pathein
11	U Zaw Win	Director, FD	Pathein
12	Dr. Win Htin	Senior Agriculture Advisor, MERCY CORPS	Yangon
13	U Myint Hlaing	Consultant, UNDP	Yangon
14	U Hla Win Tin	Project Coordinator, METTA Foundation	Myaung Mya
15	U Myo Zaw Win	Project Coordinator, Meals Project (MERN)	Bogalay
16	Daw Chaw Su Hlaing	Admin/ Finance Officer, ECODEV	Bogalay
17	Nyo Latt	Team Leader, Network Activities Group	Pyar Pon
18	Nay Naing Tun	Project Officer, MERCY CORPS	Laputta
19	Ei Ei Soe	Program Officer, MERCY CORPS	Laputta
20	Mr. Tomohiro Shibayama	Chief Adviser, JICA Expert Team	Yangon
21	Ms. Haruko Chikaraishi	Coordinator, JICA Expert Team	Yangon
22	U Saw Win Kyaw	Technical Interpreter, JICA Expert Team	Yangon
23	U Tun Tun Win	Technical Interpreter, JICA Expert Team	Yangon
24	Daw Shwe May Kyaw	Administrative Coordinator, JICA Expert Team	Yangon
25	Daw Kyawt Kyawt Khaing	Secretary, JICA Expert Team	Yangon
26	U Hla Min Oo	Office Assistant, JICA Expert Team	Myaung Mya
27	U Aung Hein Htun	Office Assistant, JICA Expert Team	Myaung Mya
28	U Myo Myint Aung	Office Clerk, JICA Expert Team	Yangon

## Attachment 2: Presentation Materials for 2nd Regional Coordination

### Meeting (Pathein)

Attachment 2-1: Reserved Forest Management, Land use issues in the Reserved Forest Area

Attachment 2-2: Progresses and Issues Related to JICA/FD Mangrove Project

Attachment 2-3: Recent Mangrove Forest/ Land Use Status in the Project Area (English and Myanmar)

Attachment 2-1: Reserved Forest Management, Land use issues in the  
Reserved Forest Area

# ဧရာဝတီတိုင်းဒေသကြီးအတွင်း CF များ တည်ထောင်မှု တင်ပြချက်

လှမျိုးအောင်  
ဦးစီးအရာရှိ  
သစ်တောဦးစီးဌာန  
မြောင်းမြခရိုင်၊ မြောင်းမြမြို့

## နိဒါန်း

- MYA/ 99/ 008 (UNDP/FAO) သည် ၁၉၉၉ မှ ၂၀၀၂ ခုနှစ်အတွင်း မြောင်းမြခရိုင်နှင့် ဖျာပုံခရိုင်တို့တွင် အသုံးပြုသူ များအဖွဲ့ (၃၈)ဖွဲ့အား အစုအဖွဲ့ပိုင် သစ်တောတည်ထောင်ခွင့် လက်မှတ်များ ထုတ်ပေးခဲ့ပါသည်။
- ၁၉၉၉ ခုနှစ်တွင် လှပူတာ မြို့နယ်တွင် ကျေးရွာပေါင်း (၆၅)ရွာ (၂၁၇၄၇.၅) ဧက နှင့် သိုကလေး မြို့နယ်တွင် ကျေးရွာပေါင်း (၃၃) ရွာ (၄၀၈၃.၈) ဧက တို့ဖြစ် ပါသည်။
- သို့ရာတွင် အများစုမှာ နာဂစ် မှန်တိုင်းကာလအတွင်း လုံးဝပျက်စီးခဲ့ ရပါသည်။
- ဧရာဝတီတိုင်းဒေသကြီး၊ ဟင်္သာတခရိုင်၊ မြန်အောင်မြို့နယ်ရှိ အစုအဖွဲ့ပိုင် သစ်တောသည် စစ်တပ်မှ စစ်သား (၄၀၀) ဖြင့် ဖွဲ့စည်းထားပြီး ထူးကြီး မှ မယ်လေကုန်း သွားကားလမ်းဘေးတွင် တည်ရှိပါသည်။
- ယူကလစ်ပင်အနည်းငယ် တွေ့ရှိပြီး သီဟိုလ်သရက် ပင်များကို ထွက်ကြားစိုက်ပျိုး ထားပါသည်။ အပင်များကြား ကွက်လပ်တွင် ပိစင်းငုံ များကိုသာ အဓိကထားစိုက်ပျိုးကြောင်းတွေ့ ရပါသည်။
- ၂၀၁၁ ခုနှစ် မိုးရာသီကာလတွင် ယူကလစ်ပင်အနည်းငယ်ခန့် ဖျာထေးခဲ့သော်လည်း အစုအဖွဲ့သည် ပျက်သည့် အနေအထားတွင် ရှိကြောင်း ခွရင့်သစ်တောအရာရှိမှ မှတ်ချက်ပြုထား ပါသည်။ ပုံမှန်တင်ပြရမည့် အစီရင်ခံစာများကိုလည်း တင်ပြနိုင်ခြင်းမရှိပါ။

### (က) တည်ထောင်ထားခဲ့သော အရေအတွက်/ ဧက

စဉ်	ပြည်နယ်/တိုင်းဒေသကြီး	ခရိုင်	ကြီးပိုင်း/ကာကွယ်တော (ဧရိယာ)	ကြီးပြင်ကာကွယ်တော (ဧရိယာ)	စုစုပေါင်း (ဧရိယာ)	အသုံးပြုသူများအဖွဲ့ (အရေအတွက်)	အသုံးပြုသူများအဖွဲ့
၁	ဧရာဝတီ	မြောင်းမြ	၁၆၉၁၆.၁၅		၁၆၉၁.၁၅	၃၃၅၄	၅၈
၂		ဖျာပုံ	၃၃၇၃.၇၈		၃၃၇၃.၇၈	၁၄၅၇	၃၁
၃		ဟင်္သာတ	၃၄၁.၂၅		၃၄၁.၂၅	၄၀၀	၁
<b>ဧရာဝတီတိုင်းစုစုပေါင်း</b>			<b>၂၀၆၁၁.၁၈</b>	<b>၃၇၂၄၉.၆၇</b>	<b>၈၅၇၂၁.၀၅</b>	<b>၂၈၁၃၃</b>	<b>၄၆၃</b>

မှတ်ချက်။ ဧရာဝတီတိုင်းဒေသကြီးအတွင်း နာဂစ် မုန်တိုင်းတိုက်ခတ်ပြီးနောက် လုံးဝ ပျက်စီးခဲ့ရပြီးနောက် ယခုအခါ CF Certificate ထုတ်ပေးနိုင်ခဲ့သော အရေအတွက် တစ်ခု မျှမရှိသေးပါ။

### JICA မှ ဆောင်ရွက်လျက်ရှိသည့် CF များ

စဉ်	မြို့နယ်	ကြီးပိုင်း	အကွက်	CF ကျေးရွာ	အိမ်ထောင်စုပေါင်း	ဧရိယာ (ဧက)
၁	ဘိုကလေး	ပျဉ်းခရယ်	၁၇	ရွှေပြည်သာ	၅၀	၄၉.၉
၂	ဖျာပုံ	ပျဉ်းခရယ်	၆၆	ထောင်ကြီးတန်း၊	၁၅၇	၁၅၆.၅
၃	ဖျာပုံ	ပျဉ်းခရယ်	၆၄	ဂေါ်ခူ	၅၀	၄၉.၅
၄	လပွတ္တာ	ပြင်အလန်း	၅၇၊၅၅	သာယာကုန်း၊	၁၀၅၁	၁၀၅၁.၃
၅	လပွတ္တာ	ပြင်အလန်း	၅၇၊၅၈	ညောင်တပင်၊	၆၉၃	၆၉၃.၃
၆	လပွတ္တာ	ကြာကန်ကွင်းပေါက်	၂၂၊၂၆	ကွက္ကလေး	၂၀၂	၂၀၁.၆
					<b>၂၂၀၃</b>	<b>၂၂၀၂.၁</b>



## တွေ့ကြုံရသော အခက်အခဲများ

### (က) Users' Group များ၏ စိတ်ဝင်စားမှု

- CF တည်ထောင်ရန် လိုအပ်သော စုစည်းမှုအားနည်းခြင်း၊ သေချာစွာ နားမလည်ခြင်း၊
- (နားမလည်ခြင်းကြောင့် လျာထားချက်မပြည့်မီခြင်း၊ အချိန်မီမပြီးစီးခြင်း၊ အရေအတွက် သာရှိ၍ အရည်အချင်းမပြည့်မီခြင်း၊)
- CF တည်ထောင်ရန် နည်းပညာဆိုင်ရာ ဗဟုသုတ အားနည်းခြင်း၊
- ဆင်းရဲနွမ်းပါးခြင်း၊ အသိပညာနည်းပါးခြင်း၊ လူဦးရေတိုးတက်ခြင်း၊ နေ့စဉ်လူနေမှု ဘဝ အတွက် အမြဲတမ်းလှုပ်ရှားဆောင်ရွက်နေရသဖြင့် အခက်အခဲများရှိခြင်း၊
- CF တည်ထောင်ရန် ကိစ္စတိုင်းကို မလိုအပ်ဘဲ အချိန်ကြာရှည်စွာ ညှိနှိုင်းဆွေးနွေးရခြင်းနှင့် မှန်ကန်စွာ ဆုံးဖြတ်ဖို့ အားနည်းခြင်း၊
- အဖွဲ့အစည်းအတွင်းအများစုလိုက်နာနိုင်မည့် စည်းမျဉ်းစည်းကမ်းများ စနစ်တကျ တိကျစွာ ရေးဆွဲရန်လိုအပ်ခြင်း၊
- ပုံမှန်အစည်းအဝေးများကျင်းပနိုင်မှုမရှိခြင်းနှင့်မှတ်တမ်းမှတ်ရာများ ထာရှိမှုအားနည်းခြင်း
- အဖွဲ့အတွင်းစည်းကမ်းဖောက်မှုများအပေါ် အရေးယူရန် အခက်အခဲရှိခြင်း၊
- အစုအဖွဲ့အတွင်း သဘောကွဲလွဲမှု နှင့် ပြဿနာများခြင်း၊
- အစုအဖွဲ့အတွင်းဖြိုကွဲ၍ CF တည်ထောင်မှု အားလုံးဆုံးရှုံးနိုင်ခြင်း၊

## တွေ့ကြုံရသော အခက်အခဲများ

### (ခ) နည်းပညာရပ်များ

- အစုအဖွဲ့ပိုင်သစ်တောစိုက်ခင်းများကိုကောင်းမွန်စွာထိန်းသိမ်းနိုင်ခြင်း မရှိ။
- ပြည့်စုံလုံလောက်သောအသိပညာနှင့် အတွေ့အကြုံဗဟုသုတ များမပြည့်စုံခြင်း၊ ဆင်းရဲသောကြောင့် နေ့စဉ်ဘဝရပ်တည်မှု ခက်ခဲ။
- စိုက်ပျိုးထားသည့် အပင်များအပေါ် ပေါင်းနှင့် ခြံနွယ်များ ရှင်လင်းရန်ခက်ခဲ။
- စိုက်ပျိုးထားသော သစ်ပင်များ၏ ကြီးထွားမှုသည် အသုံးပြုသူများအဖွဲ့ အတွက် လုံလောက်မှု မပြည့်စုံသောကြောင့် အစုအဖွဲ့ပိုင်သစ်တောလုပ်ငန်းများ ဆက်လက်ဆောင်ရွက်ရန်မှာ ...

## တွေ့ကြုံရသော အခက်အခဲများ

### (ဂ) သစ်တောဦးစီးဌာန၏ပံ့ပိုးမှု

- ၁။ သစ်တောဦးစီးဌာနသည် CF တည်ထောင်ခြင်းကို အထောက်အပံ့ ပေးရန် အတွက် နှစ်စဉ် လျာထားချက် (သို့မဟုတ်) ဘဏ္ဍာရေးခွင့်ပြုမိန့် မရှိသောကြောင့် ပျိုးပင်များ ပြည့်စုံလုံလောက်စွာ ထောက်ပံ့ပေးနိုင်မှု မရှိပါ။
- ၂။ ပျိုးပင်များကို သယ်ယူပို့ဆောင်ပေးရန် လောင်စာဆီ (သို့) လောင်စာဆီဝယ်ရန် ဘတ်ဂျက် ပြည့်စုံလုံလောက်မှု မရှိသောကြောင့် CF များ တည်ထောင်လျှက်ရှိသည့် ကျေးရွာများသို့ သွားရောက်ရန် အလွန်ခက်ခဲသောကြောင့် အစုအဖွဲ့များကို ကြီးကြပ်ကွပ်ကဲရန်နှင့် အထောက်အပံ့ပေးရန်မှာ အလွန်ခက်ခဲပါသည်။
- ၃။ ပျိုးဥယျာဉ်တည်ထောင်ပေးခြင်းနှင့် ပျိုးထောင်နည်းစနစ်များ လေ့ကျင့်သင်ကြားပေးခြင်းကို ဆောင်ရွက်ပေးရပါမည်။
- ၄။ ဒေသခံများအတွက် CF တည်ထောင်ခြင်းနှင့်အတူ ပြည့်စုံလုံလောက်သော မက်လုံးများ (Incentives) များပေးနိုင်ခြင်းမရှိပါ။

## တွေ့ကြုံရသော အခက်အခဲများ

### (ဃ) ဝန်ထမ်းဆိုင်ရာအခက်အခဲ

- ပြည်နယ်/တိုင်းဒေသကြီး/ခရိုင်/မြို့နယ်များရှိ ဝန်ထမ်းအဆင့်ဆင့်မှာ သစ်တောလုပ်ငန်းများ၊ အထွေထွေ လုပ်ငန်းများ၊ အချိန်ပြည့်ဆောင်ရွက်နေကြရ၍ CF တိုးတက်ရေးအတွက် အားစိုက်အကောင်အထည်ဖော်ရန် အခက်အခဲရှိနေပါသည်။
- CF လုပ်ငန်းသည် ပြည်သူလူထုနှင့် ဆက်ဆံဆောင်ရွက်ရသော လုပ်ငန်းများ ဖြစ်ခြင်းကြောင့် အခြား သစ်တောလုပ်ငန်းများနှင့် မတူထူးခြားနေသဖြင့် ကျွမ်းကျင်မှု ရှိသည့် စည်းရုံးဆောင်ရွက်တတ်ပြီး လေ့ကျင့်ထား သောဝန်ထမ်းများဖြင့်သာ ဆောင်ရွက် နိုင်ပါသည်။ ထိုဝန်ထမ်း များရရှိရန် ခက်ခဲပါသည်။
- CF လုပ်ငန်း ဆောင်ရွက်ရန်တာဝန်ချထားသော ဝန်ထမ်းများကို သီးခြားပံ့ပိုးမှု ပေးနိုင်ပါက လုပ်ငန်း ပိုမို အောင်မြင်မည် ဖြစ်ပါသည်။
- ကြီးကြပ်စစ်ဆေးမှုနှင့် ကူညီဖြေရှင်းပေးမှုအားနည်းခြင်း၊
- စီမံအုပ်ချုပ်မှု အစီအစဉ်အတိုင်း လုပ်နာခြင်းမရှိသော အသုံးပြုသူများအဖွဲ့ဝင်များအား စစ်ဆေးခြင်းနှင့် အရေးယူခြင်း နှင့် ထုတ်ပယ်မှုဆောင်ရွက်ခြင်း အားနည်းခြင်း၊ စီမံအုပ်ချုပ်မှု ကော်မတီ၏ အစီရင်ခံစာများ ပုံမှန်တင်ပြနိုင်ရေး ကူညီပေးမှုမရှိခြင်း။
- အရေးယူခြင်းနှင့် တည်ထောင်ခွင့်လက်မှတ် ပြန်လည်ရုတ်သိမ်းခြင်း၊

### တွေ့ကြုံရသော အခက်အခဲများ

#### (ဃ) မြေနေရာ ပိုင်ဆိုင်ခြင်း အငြင်းပွားမှု

- CF တည်ထောင်ဆဲ/ ပြီး လျော့နည်း ဆုံးရှုံးလာခြင်း။
- တစ်နိုင်ငံလုံး၏ မြေကိုနိုင်ငံတော်ကပိုင်၊ မြေနှင့်ပတ်သက်လာလျှင် စိုက်ပျိုးရေး ကို ဦးစားပေးလေ့ရှိ။ CF လုပ်ငန်းအတွက် သင့်တော်သောမြေရရှိရန်ခက်ခဲ။
- CF တည်ထောင်သော UG' s ငွေကြေး/လုပ်အား ဆုံးရှုံးခြင်း။
- CF နှင့် FD အပေါ် ယုံကြည်မှု ကျဆင်းလာခြင်း။ (ဥပမာ ဂေါ်ဒူရွာ)
- ဦးတည်ချက်ထားရှိသော CF ကျေးရွာဆိုသည့် အယူအဆကို အကောင်အထည် ဖော်နိုင်မှု မရှိခြင်း။

### တွေ့ကြုံရသော အခက်အခဲများ

#### (င) ငွေကြေးဆိုင်ရာ အကျိုးအမြတ် ပြဿနာ

- CF မှ ချက်ချင်း ဝင်ငွေမရရှိနိုင်ခြင်း၊ (တိုက်ရိုက်ထက် သွယ်ဝိုက်အကျိုးကပိုကြာ)
- CF မှ ရမည့်ဝင်ငွေ ပမာဏ သည် မိသားစုနေ့စဉ် သုံးစွဲနေမှုပေါ် လွှမ်းခြုံနိုင်မှုမရှိခြင်း နှင့် အမြဲတမ်းရရှိနိုင်ရန် မသေချာခြင်း၊
- ရေရှည်လုပ်ငန်း၊ ပျက်စီးမှု(သို့မဟုတ်) တောမီးနှင့်ပိုးမွှားဖျက်ဆီးခံ ရမှုရှိနိုင်ခြင်း၊
- နေ့စဉ်/အချိန်တိုဝင်ငွေ ရရှိနိုင်မှုမရှိ၍ အခြေခံလူတန်းစားများ အနေဖြင့် စိတ်ဝင်စားမှု နည်းပါးခြင်း၊
- ခိုင်မာသော ရန်ပုံငွေ မရှိသဖြင့် စီမံချက်ရေးဆွဲထားသည့်အတိုင်း သစ်တောလုပ်ငန်း များကို ရေရှည် ဆောင်ရွက်ရန်ခက်ခဲခြင်း၊

### (စ) အဖွဲ့အစည်းအတွင်းအငြင်းပွားမှု

#### စ-၁ ၊ အငြင်းပွားမှုဖြစ်ပေါ်ရခြင်းအကြောင်းရင်း

- ပြင်ပမှ အဆင်မပြေမှုများ အဖွဲ့အတွင်းသို့ သယ်လာခြင်း၊
- အဖွဲ့အစည်းဖြင့် ဆောင်ရွက်ရန် အတွေ့အကြုံဗဟုသုတ နည်းခြင်း၊
- ခေါင်းဆောင်မှု ညံ့ဖျင်းခြင်း၊
- စားဝတ်နေရေးအဆင်မပြေခြင်း၊လက်လုပ်လက်စားများဖြစ်၍ ဆင်းရဲခြင်း၊
- တိုးချဲ့ပညာပေးမှုအားနည်းခြင်းနှင့်ကြီးကြပ်ကွပ်ကဲမှုအားနည်းခြင်း၊
- တာဝန်ယူခြင်းနှင့် အကျိုးအမြတ် ခွဲဝေရာတွင် ညီမျှမှုမရှိခြင်း၊

### (စ) အဖွဲ့အစည်းအတွင်းအငြင်းပွားမှု

#### စ-၂၊ အငြင်းပွားရခြင်းကြောင့် ဖြစ်ပေါ်လာသောအခက်အခဲများ

- ညှိနှိုင်းဆောင်ရွက်ရန်ခက်ခဲခြင်း၊
- MP ပါလုပ်ငန်းများကို စနစ်တကျလုပ်ကိုင်နိုင်မှုမရှိခြင်းနှင့် အချိန်မီ မပြီးစီးခြင်း၊
- MP ကို အချိန်နှင့် တပြေးညီ ဆောင်ရွက်ရန် ခက်ခဲခြင်း၊
- မကြာခန အသုံးပြုသူအဖွဲ့ဝင်များ နှုတ်ထွက်ခြင်း၊
- MC အချင်းချင်းအုပ်စုဖွဲ့အားပြိုင်မှုကြောင့် စည်းလုံးညီညွတ်မှု ပြိုကွဲခြင်း၊
- MC ချို့ယွင်းအားနည်းမှုကြောင့် CF တည်ထောင်ခွင့် ဆုံးရှုံးသည်အထိ ဖြစ်ပေါ်လာစေခြင်း၊

### (စ) အဖွဲ့အစည်းအတွင်းအငြင်းပွားမှု

#### စ-၃၊ လျော့ပါးသက်သာစေမည့်နည်းလမ်းများ

- ပွင့်လင်းမြင်သာသော အစည်းအဝေးများကျင်းပခြင်း၊
- FD အနေဖြင့် Extension နှင့် Human Resource Development များကို တွန်းအားပေးလုပ်ဆောင်စေခြင်း၊
- MC ကော်မတီအဖွဲ့ဝင်များ နှင့် သင့်လျော်သော အဖွဲ့ဝင်များကို ဖွံ့ဖြိုးတိုးတက်အမြင်ကျယ်ပြန့်လာစေရန် လေ့ကျင့်သင်တန်းပေးခြင်း၊
- MP ပါလုပ်ငန်းလျာထားချက်များကိုပြီးစီးနိုင်ရေးအတွက် တွန်းအား ပေးခြင်းနှင့် ကြီးကြပ်စစ်ဆေးခြင်း၊
- တည်ထောင်မှုအစကတည်းကပင် အကျိုးအမြတ်များ ခွဲဝေပေးရေး ညှိနှိုင်းထားပေးခြင်းနှင့် ဧရိယာအလိုက် ခွဲဝေသတ်မှတ်ပေးခြင်း၊
- အဖွဲ့အစည်းများကို ဖွဲ့စည်းရာတွင် အများဆန္ဒဖြင့် အသုံးပြုသူများအဖွဲ့နှင့် အုပ်ချုပ် လုပ်ကိုင်မှု ကော်မတီ ကို စနစ်တကျဖွဲ့စည်းခြင်းနှင့် လိုအပ်ပါက ပြန်လည်ဖွဲ့စည်းပေးခြင်း၊
- သစ်တောဦးစီးဌာနက အဖွဲ့အစည်းဖွဲ့စည်းခြင်းနှင့် ပတ်သက်၍ လိုအပ်သလို ပံ့ပိုးဆောင်ရွက်ပေးခြင်း။

### (ဆ) အခြား

#### ဆ-၁၊ ပြောင်းရွှေ့ဝင်ရောက်လာသည့် အကြောင်းရင်း

- လူဦးရေတိုးတက်လာခြင်း၊
- ဆန်စပါးစိုက်ပျိုးမှု တိုးချဲ့ခြင်း၊
- တာဝန်ရှိသူများက ကြိုးပိုင်းအတွင်း ကျူးကျော်မှုကို တိုက်ရိုက်/သွယ်ဝိုက်အားပေးခြင်း၊
- ထင်းမီးသွေးများစွာ ထုတ်လုပ်ခြင်း နှင့် အလုပ်သမားများ အခြေချနေထိုင်လာခြင်း၊
- ဒီရေတောများ၏ တန်ဖိုးနှင့် ဂေဟစနစ်တန်ဖိုးကို နားမလည်ခြင်း၊
- တရားဥပဒေ စိုးမိုးမှု နှင့် သစ်တောဥပဒေ အဏာသက်ရောက်မှု အားနည်းခြင်း၊
- ပုဇွန်ကန်များ ကြိုးပိုင်းအတွင်း တိုးချဲ့ဝင်ရောက် စခန်းချခြင်း၊
- ဒေသခံများသည် ဆင်းရဲကြုံခြင်း၊

**အခက်အခဲများအတွက် ဖြေရှင်းခဲ့သော နည်းလမ်းများ**

**(က) Users' Group များ၏ စိတ်ဝင်စားမှု**

- Extension & Education to UG's
- UG's & MC နှင့်အဖွဲ့ဝင်များမှ သင့်လျော်သောသူများကို သင်တန်းပေးခြင်း၊
- ပညာရှင်များ၊ကျွမ်းကျင်သူများကဟောပြောပို့ချခြင်းနှင့်လွတ်လပ်စွာ ဆွေးနွေး ခြင်း၊
- IEC Material , Pamphlets, Posters, များဖြန့်ဝေပေးခြင်း၊
- လက်တွေ့ (ရေတို) အကျိုးခံစားရမည့် ဝင်ငွေတိုးလုပ်ငန်းများ၊ သီးနှံ+ သားငါး + သစ်တော လုပ်ငန်း၊ အသေးစားငွေချေးလုပ်ငန်း ဆောင်ရွက်ပေးခြင်း၊

Developing Financial... ..

**အခက်အခဲများအတွက် ဖြေရှင်းခဲ့သော နည်းလမ်းများ**

**(ခ) နည်းပညာရပ်များ**

- Aqua- Agroforestry စနစ်ကို ကျင့်သုံးခြင်း၊
- သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့် သွယ်ဝိုက်အကျိုးကျေးဇူးများ အရေးပါမှုကို တိုးချဲ့ ပညာပေးခြင်း၊
- ရေမြေဒေသနှင့် ကိုက်ညီသော ကြီးမြန်သစ်ပင်များ တိုးချဲ့စိုက်ပျိုးခြင်း၊
- လှည့်ပတ်ရန်ပုံငွေ၊ အသေးစား ချေးငွေလုပ်ငန်း၊ ဝင်ငွေတိုးလုပ်ငန်းများ နှင့် ဝင်ငွေရ ( Cash for work) လုပ်ငန်းများ ဆောင်ရွက်ပေးခြင်း၊
- ကိုင်းချိုင့်ခြင်း၊ ပင်ကြပ်နှုတ်ခြင်း နှင့် သစ်စေ့ကောက်စုဆောင်ခြင်း ကဲသိသော ( Intermediate Yield) ရအောင် ဆောင်ရွက်စေခြင်း၊

**အခက်အခဲများအတွက် ဖြေရှင်းခဲ့သော နည်းလမ်းများ**

**(ဃ) မြေနုရှာ ပိုင်ဆိုင်ခြင်း အငြင်းပွားမှု**

- အာဏာပိုင်အဖွဲ့အစည်းများ၏ ပံ့ပိုးမှုဖြင့် မြေနုရှာသေချာအောင် ကြိုးပမ်း ခြင်း။
- UGs နှင့် အခြားရွာသားများအကြား မြေပိုင်ဆိုင်မှု ပြဿနာရှိခြင်း။
- FD နှင့် သက်ဆိုင်ရာအဖွဲ့အစည်းများ၏ CF တည်ထောင်ခြင်းကို အဆုံး အဖြတ်ပေးနိုင်သူတို့ နားလည်အားပေးရန် ရှင်းလင်းတင်ပြခြင်း။
- အခြားအကြောင်းကြောင့် CF မြေနုရှာကို အခြားမြေအသုံးချမှုသို့ ပြောင်းလဲရန် ဖြစ်ပေါ်လာခဲ့ပါက အကြေအလည် ညှိနှိုင်း ရှင်းလင်း ဆောင်ရွက်ခြင်း၊
- CF တည်ထောင်သောမြေနုရှာဆုံးရှုံးခဲ့ပါက လျော်ကြေးငွေ ညှိနှိုင်း တောင်း ဆိုပေးခြင်းနှင့် မြေနုရှာအစားထိုးပေးခြင်း၊
- CFI -1995 ကို ညွှန်ကြားချက်အဆင့်မှ နည်းဥပဒေ၊ ဥပဒေဖြစ်အောင် ကြိုးစား ဆောင်ရွက်ပေးခြင်း၊

**အခက်အခဲများအတွက် ဖြေရှင်းခဲ့သော နည်းလမ်းများ**

**(င) အဖွဲ့အစည်းအတွင်း အငြင်းပွားမှု**

- အဖွဲ့ဝင်များအတွင်း CF တည်ထောင်မှုကို အပြည့်အဝနားလည်နိုင်မှုမရှိခြင်း။
- By Law ခေါ်စည်းမျဉ်းစည်း ကမ်းများကို လိုက်နာမှုမရှိခြင်း။
- ရေးဆွဲပြီးဖြစ်သော CF-MP ကို အုပ်ချုပ်မှု ကော်မတီဝင်များ (MC) သည်တွင်ပင် လျှင် အပြည့်အဝ နားလည်နိုင်ခြင်း မရှိသေးခြင်း။
- CF အသုံးပြုသူများအဖွဲ့အတွင်း စည်းလုံးညီညွတ်မှု အားနည်းခြင်း နှင့် အစု အဖွဲ့ဖြင့် လုပ်ကိုင်တတ်မှု အားနည်းခြင်းနှင့် ဓလေ့မရှိခြင်း။
- CF အသုံးပြုသူများသည် စာတတ်ကြသော်လည်း စီမံချက်များကို ရေးသားပြုစုနိုင်မှု မရှိ ကြခြင်း။
- Management Plan အုပ်ချုပ်လုပ်ကိုင်မှုအတိုင်း ရေးဆွဲထားသော ဆောင်ရွက်မည့် လုပ်ငန်း များကို အဖွဲ့ဝင်များက အပြည့်အဝ

**အခက်အခဲများအတွက် ဖြေရှင်းခဲ့သော နည်းလမ်းများ**

**စ) ငွေကြေးဆိုင်ရာ အကျိုးအမြတ်ပြဿနာ ဖြေရှင်းနိုင်မည့်နည်းလမ်းများ**

- Management Plan များအတိုင်း အောင် မြင်အောင် အကောင်အထည်ဖော်ခြင်း၊
- ဒီရေတောများ ရှိခြင်း၏ အကျိုးကျေးဇူးကို နားလည်အောင် တိုးချဲ့ပညာပေးခြင်း၊
- အစုအဖွဲ့ပိုင်သစ်တောများ ကို ပိုမိုတည်ထောင်ရန် တွန်းအားပေးဆောင်ရွက်ခြင်း၊
- ထင်းအစား အခြားလောင်စာများ နှင့် ထင်းကုန်ကျမှုများ လျော့ချခြင်း၊
- Aqua-Forestry နည်းစနစ်များ ဝင်ငွေတိုး၊ အသေးစားဈေးငွေ၊ လှည့်ပတ်ရန်ပုံငွေ၊ လုပ်ငန်းများဖြင့် ကျေးလက်ဒေသ ဖွံ့ဖြိုးတိုးတက်အောင်ဆောင်ရွက်ခြင်း၊
- အဏာပိုင်အဖွဲ့အစည်းများနှင့် သက်ဆိုင်ရာ ဌာန/အဖွဲ့အစည်းများ ပူးပေါင်းဆောင်ရွက်မှု ရရှိအောင်ဆောင်ရွက်ခြင်း၊
- စိုက်ပျိုးရေး၊မွေးမြူရေး နှင့် ရေလုပ်ငန်းတိုးတက်အောင် ခေတ်မီ နည်းပညာများ အသုံးပြု နိုင်အောင် ဆောင်ရွက်ပေးခြင်း၊

**အခက်အခဲများအတွက် ဖြေရှင်းခဲ့သော နည်းလမ်းများ**

**ဆ-၂၊ ပြောင်းရွှေ့အခြေချမှု များလာခြင်းကြောင့်ဖြစ်ပေါ်လာသောအခက်အခဲများ**

- သစ်တောဧရိယာ လျော့နည်းခြင်း၊
  - သစ်တောအတန်းအစား ကျဆင်းခြင်း၊
  - ဒီရေတော ဂေဟစနစ်ပျက်စီးခြင်း၊
  - တောမရှိစပါးစိုက်ရန်မဖြစ်နိုင်တော့သည့်ကွက်လပ်ဧရိယာများ၊များပြားခြင်း၊
  - သစ်တောဧရိယာ ပြန်လည်တည်ထောင်ရန် ၊ ထိန်းသိမ်းရန်၊
- (ဇ) အခြား** ပြန်လည်ရန် ခက်ခဲလာခြင်း
- နာဂစ်မှန်တိုင်း အပြီးတွင်စားဝတ်နေရေးပြေလည်စေမည့် ဝင်ငွေတိုးလုပ်ငန်းများ ကို အကောင် အထည်ဖော်နိုင်မှု မရှိခြင်း။



### CF ဖွံ့ဖြိုးမှု အလားအလာ အပေါ် သုံးသပ်ချက်များ

- CFI (၁၉၉၅) ကိုထုတ်ပြန်ခဲ့သည်မှာ ၂၀၁၂ ခုနှစ်တွင် နှစ်ပေါင်း (၁၇) နှစ်နီးပါး ရှိခဲ့သော်လည်း တိုးတက်အောင်မြင်မှု နည်းပါး သည်ကို တွေ့ရှိရပါသည်။
- ဧရာဝတီတိုင်းဒေသကြီးအတွင်း ဒီရေတောများ ပြန်လည် ဖွံ့ဖြိုး တိုးတက်ရေးတွင် UNDP/FAO နှင့် INGOs ၏ စီမံကိန်းများသည် CF တည်ထောင်ခြင်းကို အတိုင်းအတာတစ်ခုအထိ ပြည်သူလူထုအကြား စိမ့်ဝင်ခဲ့ပြီး တိုးတက်မှုအချို့ကို ရရှိခဲ့သည်မှာ ငြင်း၍မရသော ရလဒ်တစ်ခုအဖြစ် အချိန်များစွာ ရပ်တည်နိုင်ခဲ့ ပါသည်။
- သစ်တောဦးစီးဌာနနှင့် ဒေသခံပြည်သူများ အကြား လုပ်ငန်းဆောင်ရွက်ကြရင်း မြေအသုံးချမှုကိစ္စနှင့်ပတ်သက်၍ ယုံကြည်မှုများ အားနည်းခဲ့ပါသည်။

### CF ဖွံ့ဖြိုးမှု အလားအလာ အပေါ် သုံးသပ်ချက်များ

- ဒေသခံပြည်သူများတွင် အဖွဲ့အစည်းနှင့် နည်းပညာဆိုင်ရာ အားနည်းချက်အချို့ရှိခဲ့။
- သစ်တောဦးစီးဌာနဝန်ထမ်းများတွင် CF နှင့်ပတ်သက်၍ နားလည်သဘောပေါက်မှု၊ အတွေ့အကြုံနည်းမှုများ အားနည်းချက်များရှိခဲ့။
- စံအဖြစ် သတ်မှတ်ထားသည့် CFI -1995 သည် အောင်မြင်မှုအပြည့်အဝ မရရှိနိုင်ခဲ့။
- သစ်တောဦးစီးဌာနမှ ဒေသခံများ အပြည့်အဝယုံကြည်နိုင်လောက်အောင် ဦးဆောင်နိုင်ခြင်း မရှိခဲ့။
- ဒေသခံပြည်သူလူထု၏ အဖွဲ့အစည်းဆိုင်ရာ တိုးတက်ဖွံ့ဖြိုး အောင်ဆောင်ရွက်ပေးရန် အားနည်း ခဲ့ပြီး သစ်တောလုပ်ငန်းများပေါ်တွင်သာ အလေးအနက်ထား ဆောင်ရွက်ခဲ့ကြကြောင်းတွေ့ရှိရ။
- CFI -1995 ကို ဒေသခံပြည်သူ အစုအဖွဲ့ပိုင်သစ်တောလုပ်ငန်း၏ အဖွဲ့အစည်းဆိုင်ရာ မူဘောင် (Institutional Framework) တစ်ခု အဖြစ်သစ်တောဦးစီးဌာနမှ ဝန်ထမ်းများက မှတ်ယူမှု အားနည်းခဲ့။

### CF ဖွံ့ဖြိုးမှု အလားအလာ အပေါ် သုံးသပ်ချက်များ

- ဆင်းရဲတွင်းနက်နေကြသော ဒေသခံများသည် အဖွဲ့အတွင်း စိတ်အားထက်သန်မှု အပြည့်ဖြင့် ပူးပေါင်းဆောင်ရွက်နိုင်ခြင်းမရှိသလို ပြဿနာများသည်လည်း အများ အပြားရှိခဲ့။
- ယနေ့အထိ မြစ်ဝကျွန်းပေါ်ဒေသတွင် ခြောက်ပြစ်ကင်း သဲလဲစင်သော CF မျိုးကို တွေ့မြင်ရဖို့ခက်ခဲ။
- နှစ် (၃၀) ကြာမြေရရှိနိုင်မှု အခြေအနေမှာ မသေချာခဲ့သည့်အပြင် မြေအသုံးချမှုများ သည် တည်ငြိမ်ခြင်းမရှိခဲ့ကြောင်းတွေ့ရှိခဲ့ရ။
- ဥပဒေ နှင့် လုပ်ထုံးလုပ်နည်း၊ ညွှန်ကြားချက်များသည် ဒေသဆိုင်ရာအာဏာပိုင် များနှင့် အုပ်ချုပ်သူလူတန်းစားများအတွင်း လိုက်နာရန် ခက်ခဲခဲ့ပြီး ပြည်သူ့အားလုံး ကို လွှမ်းမိုးနိုင်ရန် ခိုင်မာမှုမရှိခဲ့ကြောင်းတွေ့ရှိ ခဲ့ရ။

### အကြံပြုချက်များ

- CFI -1995 ကို ပြန်လည်ပြင်ဆင်မွမ်းမံရမည်ဖြစ်ပြီး ညွှန်ကြားချက်အဆင့်မှ ဥပဒေ တစ်ရပ်အဖြစ်ပြဋ္ဌာန်းနိုင်အောင် ကြိုးစားဆောင်ရွက်သင့်။
- CFI -1995 ကို ထုတ်ပြန်ခဲ့သည် မှာ (၁၇)နှစ်ကြာခဲ့ပြီ ဖြစ်သော်လည်း လက်တွေ့အားဖြင့် တိုးတက်အောင်မြင်မှု နည်းပါးခဲ့သည်ကိုတွေ့ ရှိရ။
- UNDP/FAO မှ ၁၉၉၃ ခုနှစ်မှ ၂၀၀၀ ပြည့်နှစ်အတွင်းဆောင်ရွက်ခဲ့သော HDI စီမံကိန်း များတွင် အသင့်အတင့်တိုးတက်အောင်ဆောင်ရွက်နိုင်ခဲ့ပြီး အဓိကအချက်တစ်ချက်မှာ တိုးချဲ့ ပညာပေးဝန်ထမ်းများ ကို သီးခြားတာဝန်ပေးနိုင်ခြင်းကြောင့်ဖြစ်။
- အပူပိုင်းဒေသအတွင်း ဆောင်ရွက်ခဲ့သော COMFORT စီမံကိန်းများကဲ့သို့ ဝန်ထမ်းများ ကိုသာမက ဒေသခံပြည်သူများကိုပါလေ့ကျင့်သင်ကြားပေးပြီးမှ CF များကို အကောင်အထည် ဖော်မှသာ တိုးတက်မှုအောင်မြင်မှုများ ရရှိလာနိုင် မည်ဖြစ်။

### အကြံပြုချက်များ

- နှစ်ပေါင်း (၁၇) နှစ်အတွင်း အတွေ့အကြုံများအရ CF တည်ထောင် ရာတွင် မြေနေရာ သေချာစေရေးအတွက် စီစဉ်ပေးသင့်။
- ဒေသခံပြည်သူလူထု၏ ဆင်းရဲမွဲတေမှုကို လျှော့ချမှုအစီအစဉ်များ နှင့် အတူ စွမ်းဆောင်ရည်တိုးတက်လာစေရန် ဆောင်ရွက်ပေးသင့်။
- ဒေသခံများ၏ စီးပွားရေး၊ ပညာရေး၊ လူမှုရေး အခြေအနေတို့ကို မြှင့်တင်ပေးနိုင်မှ သာလျှင် CF များအောင်မြင်နိုင်မည် ဖြစ်ကြောင်း သုံးသပ်တင်ပြ အပ်။

အထူးကျေးဇူးတင်ရှိပါသည်

## Attachment 2-2: Progresses and Issues Related to JICA/FD Mangrove Project



 **Ministry of Environmental Conservation  
and Forestry**  
**Forest Department** 

**The Integrated Mangrove Rehabilitation and Management  
Project through Community Participation in the  
Ayeyarwady Delta**

**Mangrove Conservation as a part of Coastal  
Management in Myanmar**

Presented By  
U Khin Maung Lwin  
(Field Project Manager)  
October 2, 2012

18 11 2011

### Introduction: Brief description on Project

- **Overall Goal** : “The mangrove forests are sustainably managed and poverty is alleviated among the communities in the Ayeyawady Delta”
- **Project Purpose** : “The communities and the mangrove forests co-exist in a sustainable manner in the selected areas where project activities were implemented within the Ayeyawady Delta.”
- **Project title**: The integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta

**Introduction: Brief description on Project**

**Project duration**  
April, 2007 - March, 2013 (6 years)

**Target area**  
Four Reserved Forests (Kyakankwinpauk, Pyinalan, Kadonkani, Pyindaye) in the Ayeyarwady Delta

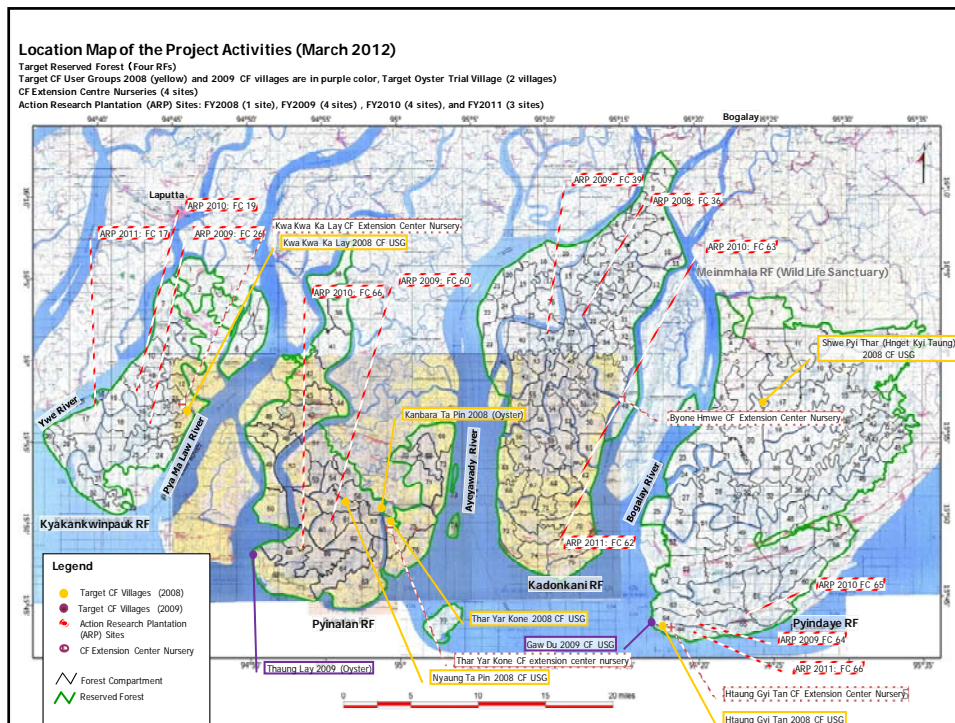
**Target group**  
Communities practicing community forestry in the four Reserved Forests (Kyakankwinpauk, Pyinalan, Kadonkani, Pyindaye) in the Ayeyarwady Delta

Japan – JICA , Myanmar – Forest Department ( DOF, MAS, SLRD)

**Project input**  
Japan Side - ¥ 750 Million, Myanmar Side- K 100 Million

**Outputs of the Project**

- Output (1)** • Practice Sustainable CF in the selected community
- Output (2)** • Establish effective CF Management and support system for the Forest Department
- Output (3)** • Integrate silvicultural techniques for Project area
- Output (4)** • Establish a coordination mechanism among key sectors
- Output (X)** • Promote recovery from damages of Cyclone Nargis
- Output (0) :** • Related activity of project management and public relation



## Progress of Output 1 Activities

- Village Selection: six villages re-selected for CF
- Baseline survey of socio-economic conditions were conducted.
- Updating bylaws within CFUGs based on necessity .
- Organization/ reorganization of old CFUSG
- Six CF management plans were prepared.
- Certificates for six CFUSGs were handed by ceremonies on 18<sup>th</sup> , 20<sup>th</sup> ,22<sup>th</sup> and 24<sup>th</sup> September 2012.
- Assisting to six CFUSGs in implementing of CF
- Income generating activities: Oyster culture trial and aqua-agroforestry , but not achieve success of large scale.
- Monitor and evaluate on CF Management Plans.
- Impact survey of CF on the livelihoods of the members of the CFUSGs to be conducted.

<b>Establishment of Community Forest Plantation</b>						
Sr.	Township	Name of CF	Number of HH	2007-2012		Area of CF (Acre)
				Planted Area	Natural Forest	
1	Bogalay	Shwepyithar	106	35	15	50
2	Laputta	Kwakwakalay	39	172	30	202
		Tharyakone	59	708	343	1052
		Nyaungtabin	68	476	217	693
3	Pyarpon	Gawdu	83	45	5	50
		Htaunggyitan	63	87	70	175
<b>Total</b>			<b>382</b>	<b>1523</b>	<b>680</b>	<b>2203</b>





## Progress of Output 2 Activities

- Majority of activities have been already completed.
- Confirmation of MCFTF's task, roles/ responsibilities, training needs related to CF management and support.
- Development of training material and programmes for CF
- Implementation of "Short Training on Basic Skills for Community Forestry Development"
- Maintenance of 4 CF Extension Center and Nursery (CFECN)
- Provision of extension services and support to the CFUSGs
- Public awareness creation through distribution of public information
- Preparation of Draft CF-SOP ( Standardized Operational Procedure) Reflecting modifications in CFI
- Support implementation of action plans prepared during CF Extension Planning Workshop

9

## Community Forestry Extension Center & Nursery



### Progress of Output 2 Activities

**Training to FD staff**

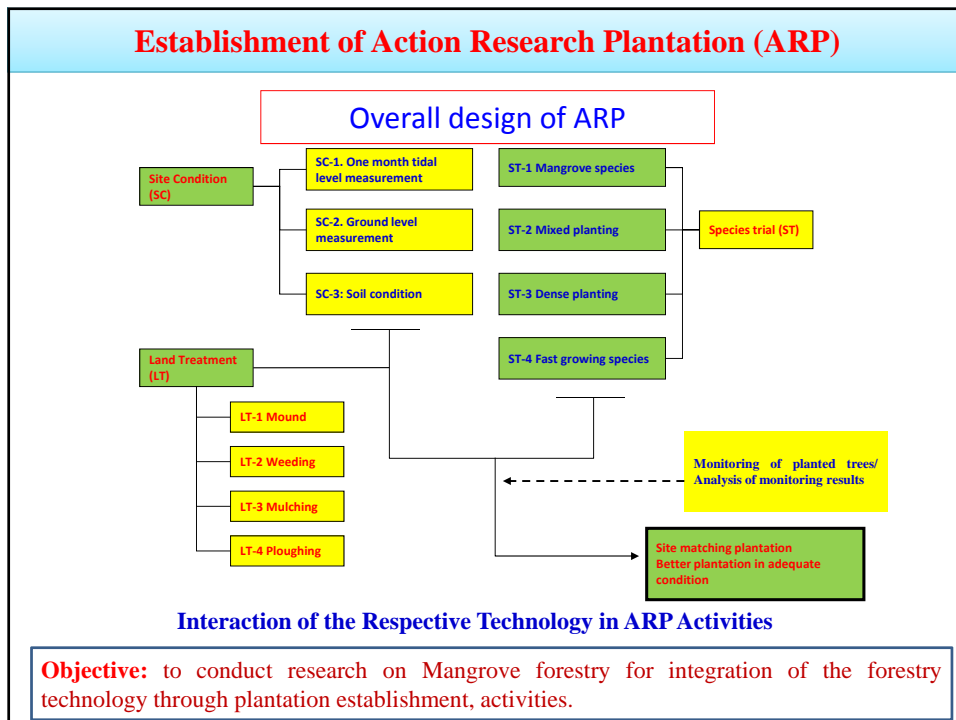
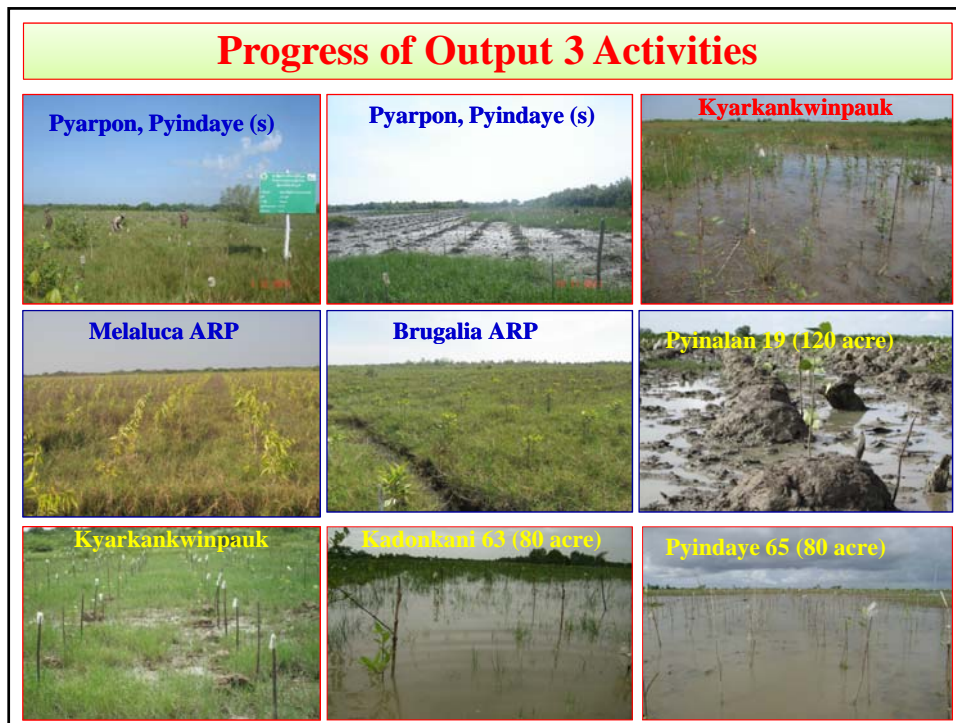
- ARP Residential Meeting, CFDTC (3-8-2011 to 5-8-2011)
- CF-SOP Residential Meeting, CFDTC (24-8-2011 to 26-8-2011)
- Project Cycle Management Training (24-11-2011 to 25-11-2011)
- CF Short Training (MM & BGL) (2-2-2012 MM& 7-2-2012BGL)
- CF Extension Planning Workshop, TGT (21-2-2012 to 25-2-2012)
- Training on Basic Skill for CF Development ( 22-10-2012 to 30-10-2012)

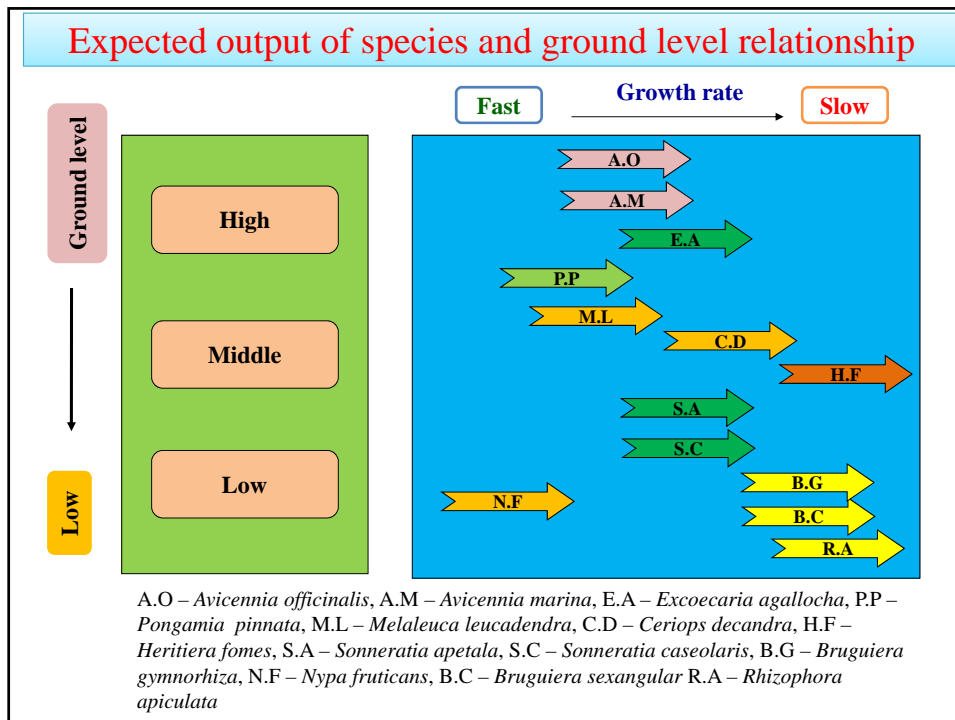


### Progress of Output 3 Activities

- ARP focuses to confirm applicable cum practical objective/ goal-wise silvicultural technologies
- ARP intended to improve the methodologies to identify the tree species suitable for planting in the Delta area.
- Monitoring and Assessment of ARP activities (1401 acres)
- Installation of ARP plot design sign boards, and etc.
- Monitoring, Compilation and analysis of ARP results by JICA and FD.
- Preparation of draft technical report and technical guidelines

12





- Progress of Output 4 Activities**
- Organization of an inter-agency coordinating meeting [(Bogalay Township Hall (7-11-2011))]
  - Revision of up-date the land use information on periodic basis based on the up-to-date satellite images
  - Holding of Mangrove Seminars (BGL,8-11-2011)
  - Holding of District level Donor / NGO Coordination Meeting (BGL,22-11-2011) (LPT,10-12-2011)
  - Two district level donors/ NGO coordination meetings were hold on 27 , 31 July 2012.
  - Regional Level Coordination Meeting
  - Mangrove seminar to be held
- 16

## Progress of Output 4. Activities

### Regional Coordination Meeting & Mangrove Seminar

- Regional Coordination Meeting (7-11-2011)
- **Mangrove Seminar (8-11-2011)**
- District Level Donors/NGOs Coordination Meeting Bogalay (22-11-2011), Laputta (10-12-2011)
- 2<sup>nd</sup> District Level Donors/NGOs Coordination Meeting (Laputta) (27<sup>th</sup> July 2012)
- 2<sup>nd</sup> District Level Donors/NGOs Coordination Meeting (Pyarpon) (31<sup>th</sup> July 2012)



## Progress of Output X Activities

- Preparation of Hazard Map in August 2009
- Rapid Damage Survey and four Recovery Monitoring Surveys were conducted in periodical basis from 2008 to 2010.
- Village Profile Survey was conducted in 2009-2010
- Recovery survey of mangrove vegetation was conducted (42 survey plots located at 5 locations )
- Rehabilitation of CFECN was conducted.
- **Material supply for recovery work was conducted on timely manner (coconut distribution, etc.).**
- Public awareness activities on disaster prevention was carried out in the Target Area.

18

## Progress of Output 0 Activities

- 0-1: Organize JCC at least once a year
- 0-2: Develop Detail Plan of Operation (DPO: finished)
- 0-3: Develop Annual Plan of Operation (APO: finished)
- 0-4: Develop Annual Report for JCC
- 0-5: Organize Internal Project Meetings regularly
- 0-6: Monitor the achievement of the Indicators periodically
- 0-8: Follow up the recommendations of the review/ evaluation
- 0-9: Conduct public relation for the Project  
(project brochures, etc.)

19

## Conclusion

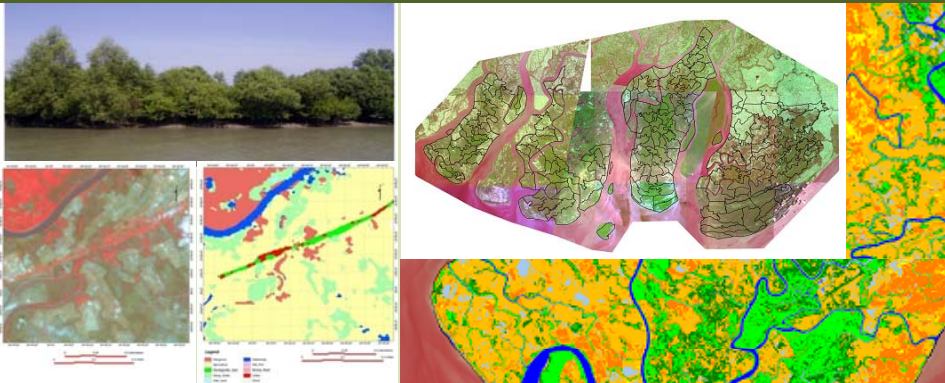
- Community Based Mangrove Forests in the Ayeyarwady Delta area are sustainably managed in future.
- Poverty of local residence will be alleviated among the communities by their efforts with supporting from JICA in the Ayeyarwady Delta.
- Soon, the communities and the mangrove forests will coexist together in a sustainable manner within the Ayeyarwady Delta.
- Some silvicultural techniques for the rehabilitation of degraded and the management of the mangrove are already accomplished between not only JICA and FD, but also FD and Local UGs.
- An inter- disciplinary committee already established among key departments including FD, MAS, DOF and SLRD to address the underlying causes of mangrove deforestation in the Ayeyawady Delta.



Attachment 2-3: Recent Mangrove Forest/ Land Use Status in the Project Area (English and Myanmar)



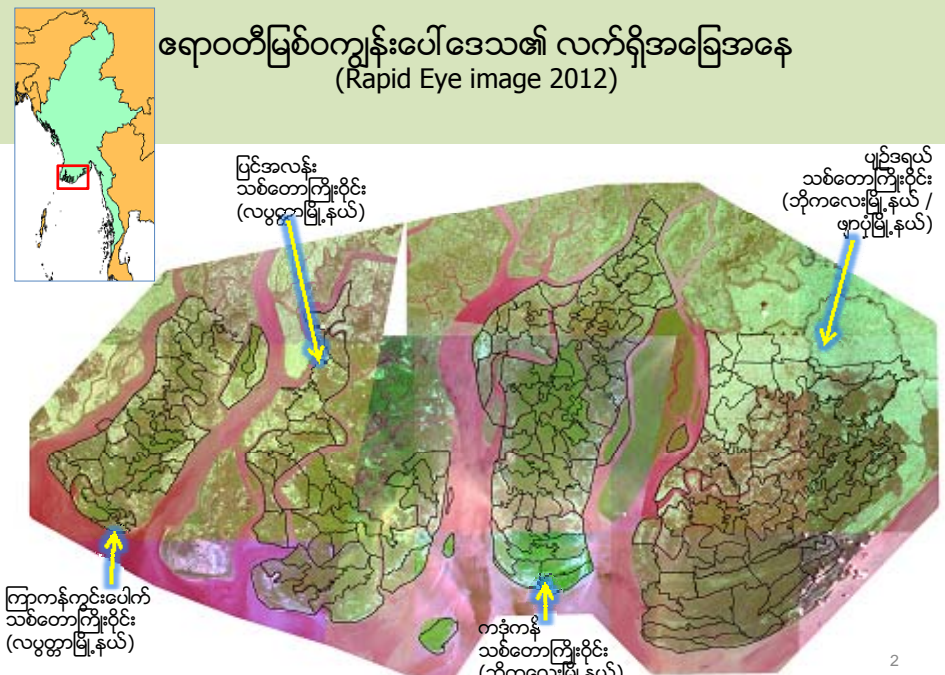
**ဒေသခံပြည်သူလူထု၏ ပူးပေါင်းပါဝင်မှုဖြင့် ဧရာဝတီမြစ်ဝကျွန်းပေါ်ဒေသရှိ ဒီရေတောများအား ဘက်စုံစီမံအုပ်ချုပ်လုပ်ကိုင်ခြင်း နှင့် ပြန်လည်စိုက်ပျိုးခြင်း စီမံကိန်း**



**စီမံကိန်း ဧရိယာအတွင်း မကြာသေးမီကာလက ဒီရေတော / မြေအသုံးချမှု အခြေအနေ တိုင်းဒေသကြီးဆိုင်ရာ ညှိနှိုင်းအစည်းအဝေး သစ်တော / ရှိုက်ကာ ဒီရေတောစီမံကိန်း**

1

**ဧရာဝတီမြစ်ဝကျွန်းပေါ်ဒေသ၏ လက်ရှိအခြေအနေ (Rapid Eye image 2012)**



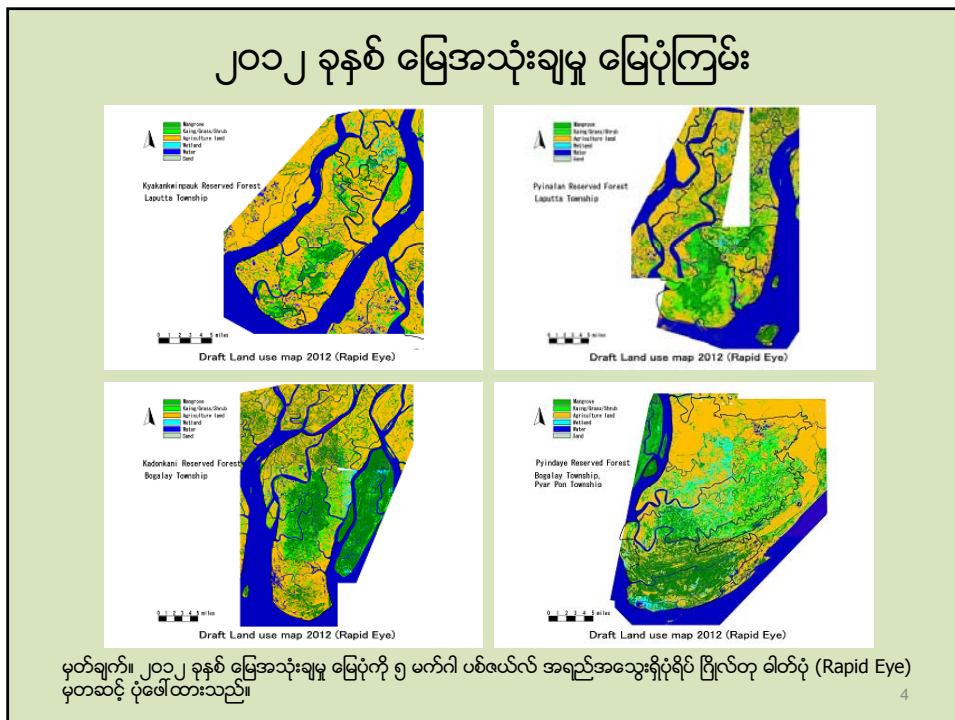
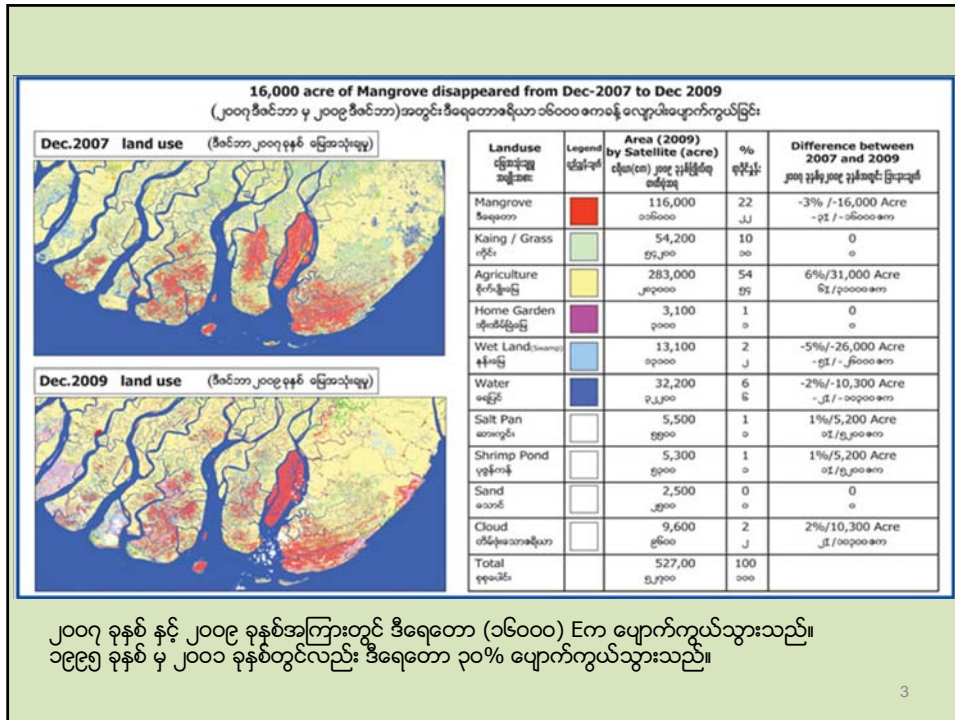
ပြင်အလန်း သစ်တောကြီးစိုင်း (လပွတ္တာမြို့နယ်)

ပျဉ်အရယ် သစ်တောကြီးစိုင်း (ဘိုကလေးမြို့နယ် / ဧရာဝတီမြို့နယ်)

ကြာကန်ကင်းပေါက် သစ်တောကြီးစိုင်း (လပွတ္တာမြို့နယ်)

ကန်ကန် သစ်တောကြီးစိုင်း (ဘိုကလေးမြို့နယ်)

2



### မြေအသုံးချမှု ပြောင်းလဲခြင်း (၂၀၀၉-၂၀၁၂)

စဉ်	အတန်းအစား အမည်	၂၀၀၉ ခုနှစ် Eရိယာ (ဟက်တာ)	ရာခိုင် နှုန်း %	၂၀၁၂ ခုနှစ် Eရိယာ (ဟက်တာ)	ရာခိုင် နှုန်း %	ယခင်နှင့်ယခု အကြား အချိုးအစား ပြားနားမှု (အကြမ်း)	ရာခိုင် နှုန်း %
၁	ဒီရေတော	၅၃,၉၃၃	၂၅	၄၆,၇၆၇	၂၂	၅၅,၆၇၂	၂၆
၂ & ၄	ကိုင်းပင် / မြက် / ချုံပုတ်	၂၁,၁၀၄	၁၀	၂၁,၉၉၁	၁၀	၂၈,၄၈၁	၁၃
၃	လယ်ယာစိုက်ပျိုးရေး	၁၀၃,၈၉၅	၄၉	၁၁၄,၆၆၀	၅၄	၈၀,၆၂၅	၃၈
၇	ဥယျာဉ်ခြံ & ဓနိ	၄၆၉	-	၁,၂၈၉	၁	(၁)	-
၈	စိမ့်တော	၁၅,၀၂၅	၇	၅,၂၈၈	၂	၁၆,၂၇၇	၈
၁၀	ရေ	၁၇,၇၅၉	၈	၁၃,၀၃၁	၆	၃၀,၀၆၆	၁၄
၁၂	မြို့ပြ	၂၇၀	၀	၉၇၂	၀	(၁)	-
၁၃ & ၁၄	ဆားကျင်း / ပုစွန်ကန်	၇၆၉	၀	၄,၃၅၁	၂	(၂)	-
၁၅	သဲ	၂၉	၀	၁,၀၀၇	၀	၁,၄၃၂	၁
၁၆	မခွဲခြားထားသော / အခြား	-	-	၃,၈၉၉	၂	၆၇၄	၀
	စုစုပေါင်း	၂၁၃,၂၅၄	၁၀၀	၂၁၃,၂၅၄	၁၀၀	၂၁၃,၂၅၄	၁၀၀

(၁) ဥယျာဉ်ခြံ & ဓနိ နှင့် မြို့ပြ Eရိယာများသည် ကျေးရွာ အချက်အလက်များအား အခြေပြု၍ ပုံရိပ် အဓိပ္ပာယ်ပြန်ဆိုချက် အရ သတ်မှတ်ပြဋ္ဌာန်းသင့်သည်။  
(၂) ၂၀၁၂ ခုနှစ် မြေအသုံးချမှု မူကြမ်းတွင် ဆားကျင်း / ပုစွန်ကန်တို့အား လယ်ယာစိုက်ပျိုးမြေ အဖြစ် အမျိုးအစား ခွဲခြားကောင်း ခွဲခြားနိုင်သည်။

5

### ပြောင်းလဲမှု ရှာဖွေတွေ့ရှိချက် (၂၀၀၉-၂၀၁၂) (ဒီရေတောမျိုးသာ)

သစ်တောကြီးပိုင်း (မြို့နယ်)	ကြီးပိုင်း Eရိယာ ဟက်တာ (Eက)	ဒီရေတော (၂၀၀၇) ဟက်တာ (Eက)	ဒီရေတော (၂၀၀၉) ဟက်တာ (Eက)	ဒီရေတော (၂၀၁၂) ဟက်တာ (Eက) အကြမ်း	ဒီရေတော Eရိယာ၏ ပြားနားမှု (၂၀၀၉-၂၀၁၂) (%) (အကြမ်း)
ကြာကန်ကွင်းပေါက် (လပွတ္တာ)	၂၈,၄၈၆ (၇၀,၃၈၇)	၄,၇၃၀ (၁၁,၆၈၈)	၃,၈၇၃ (၉,၅၇၀)	၄,၆၉၃ (၁၁,၅၉၆)	- ၁%
ပြင်အလန်း (လပွတ္တာ)	၄၁,၈၈၁ (၁၀၃,၄၈၅)	၁၃,၄၅၈ (၃၃,၂၅၄)	၁၁,၅၈၅ (၂၈,၆၂၆)	၁၂,၉၆၃ (၃၂,၀၃၁)	- ၄%
ကန့်ကန် (ဘိုကလေး)	၆၄,၅၂၁ (၁၅၉,၄၂၈)	၁၃,၅၇၄ (၃၃,၅၇၄)	၁၁,၆၂၅ (၂၈,၇၂၅)	၁၈,၃၂၇ (၄၅,၂၈၅)	၃၅%
ပြင်ဒရယ် (ဘိုကလေး၊ ဖျာပုံ)	၇၈,၃၆၈ (၁၉၃,၆၄၃)	၂၂,၁၇၁ (၅၄,၇၈၄)	၁၉,၆၈၃ (၄၈,၆၃၆)	၁၉,၆၉၀ (၄၈,၆၅၃)	- ၁၁%
စုစုပေါင်း Eရိယာ	၂၁၃,၂၅၄ (၅၂၆,၉၄၃)	၅၃,၉၃၃ (၁၃၃,၂၆၇)	၄၆,၇၆၇ (၁၁၅,၅၆၀)	၅၅,၆၇၂ (၁၃၇,၅၆၄)	+ ၃%

6

### ၂၀၁၂ ခုနှစ်တွင် မြေအသုံးချမှု မြေပုံ၏ အကျိုးရလဒ်များ

- ၁) သစ်တောကြီးဝိုင်း လေးခုတွင် ဒီရေတော ၁၃၈,၀၀၀ ဧက (၂၆%) မျှော်လင့်စွာ တည်ရှိပါသည်။ ၂၀၀၇ ခုနှစ်မှ ၂၀၁၂ ခုနှစ်အထိ ၁% ခန့် အနည်းငယ် တိုးပွားလာသည်။
- ၂) လက်ရှိအချိန်တွင် သစ်တောကြီးဝိုင်း လေးခုတွင် လယ်ယာစိုက်ပျိုးမြေ ၁၉၉,၀၀၀ ဧက (၃၈%) ဖုံးလွှမ်းနေပါသည်။
- ၃) အချို့သော မြေအသုံးချမှုများ (ပုစွန်ကန်၊ ဆားကျင်း၊ မြို့ပြဧရိယာ နှင့် ဥယျာဉ်ခြံ & ဒန်) သည် လယ်ယာစိုက်ပျိုးမြေ နှင့် ယာယီအားဖြင့် ရောနှောနေပါသည်။



မြေအသုံးချမှုမြေပုံအား ၂၀၁၂ ခုနှစ် ဒီဇင်ဘာလတွင် ကွင်းဆင်းတိုင်းတာပြီး ပုံရိပ် ဘာသာပြန်ဆိုချက်မှတစ်ဆင့် အပြီးသတ် ပုံဖော်သွားပါမည်။

### မကြာသေးမီကာလက သစ်တောကြီးဝိုင်း၏ အခြေအနေ

- သစ်တော / ဂျိုက်ကာ ဒီရေတော စီမံကိန်းသည် သစ်တောကြီးဝိုင်း အတွင်း၌ သာဖြစ်ပါသည်။
- ၎င်းသည် "သစ်တောအတွက် သီးသန့်ချန်လှုပ်ထားခြင်းနှင့် သစ်တောပညာ သုံးပုံသုံးနည်း"ကို ဆိုလိုသည်။
- သစ်တောဥပဒေ၏ အဓိပ္ပာယ်ဖွင့်ဆိုချက်အရ သစ်တောကြီးဝိုင်းအတွင်း၌
  - သစ်တောမဟုတ်သော မြေအသုံးချမှုကို တားမြစ်သည်။
  - လူများအခြေချ နေထိုင်ခြင်းကို ခွင့်မပြုပါ။
  - သစ်တောဦးစီးဌာနသည် သစ်တောဥပဒေကို အသုံးပြုနိုင်သော အာဏာပိုင် ဖြစ်သည်။



မြေအသုံးချမှုမြေပုံကို လက်ရှိအခြေအနေအတိုင်းပြုလုပ်ထားခြင်းမှတစ်ဆင့် "သစ်တောကြီးဝိုင်းတွင် ပိုမိုရပ်ထွေးသော မြေအသုံးချမှုနှင့် ဖွံ့ဖြိုးမှုလုပ်ငန်းများ" သတ်မှတ်ဖော်ပြနေဆဲဖြစ်သည်။

### ဆွေးနွေးရမည့်၊ ဝေမျှရမည့် အကြောင်းအချက်များ(၁)

- လက်ရှိ စီမံကိန်း Eရိယာသည် သစ်တောကြီးဝိုင်း Eရိယာအဖြစ် အမှတ်ထားသော်ငြားလည်း ကွဲပြားခြားနားပြီး ရှုပ်ထွေးလှသည့် မြေအသုံးချမှုရှိသည်။
- ကြီးမားသော ပမာဏရှိသည့် လူများအခြေချနေထိုင်မှု နှင့် သစ်တောမဟုတ်သည့် လုပ်ငန်းများကြောင့် သစ်တောကြီးဝိုင်း Eရိယာတွင် သေချာသော အကြောင်းအချက်များ နှင့် အဟန့်အတားများ တည်ရှိသည်။
- ကွဲပြားခြားနားသော မြေအသုံးချမှု နှင့် ဖွံ့ဖြိုးမှုလုပ်ငန်းများကြောင့် သစ်တောဦးစီးဌာန သာလျှင်မဟုတ်ဘဲ အခြားသော အစိုးရဌာနများနှင့် အဖွဲ့အစည်းများသည်လည်း သစ်တောကြီးဝိုင်း Eရိယာတွင် မြှင့်မားစွာ ပါဝင်နေကြသည်။

### ဆွေးနွေးရမည့်၊ ဝေမျှရမည့် အကြောင်းအချက်များ (၂)

- ယခုအချိန်အခါအထိ သစ်တောကြီးဝိုင်း Eရိယာနှင့် သက်ဆိုင်သည့် စီမံချက်များ၊ နည်းဗျူဟာများ၊ ချဉ်းကပ်ပုံများကို တစ်ဖွဲ့နှင့်တစ်ဖွဲ့ ဝေမျှရန် သက်ဆိုင်ရာ အစိုးရဌာနများ / အဖွဲ့အစည်းများ အကြား အခွင့်အလမ်းများ များစွာမရှိပါ။
- သစ်တော / ဂျီပီကော ဒီဇေတော စီမံကိန်းသည် သတင်းအချက်အလက်များ ဝေမျှခြင်းအတွက် ကနဦး အစုအဝေး တစ်ခုအဖြစ် နှင့် သက်ဆိုင်ရာ အစိုးရဌာနများ / အဖွဲ့အစည်းများ အကြား နောက်ထပ် ပူးပေါင်းဆောင်ရွက်မှုများ ရယူရန် ရည်မှန်း၍ ဤအစည်းအဝေးအား တိုးချဲ့လိုပါသည်။

## သင်၏ အတည်ပြုချက် & ရှင်းလင်းဖော်ပြချက် အတွက်!!

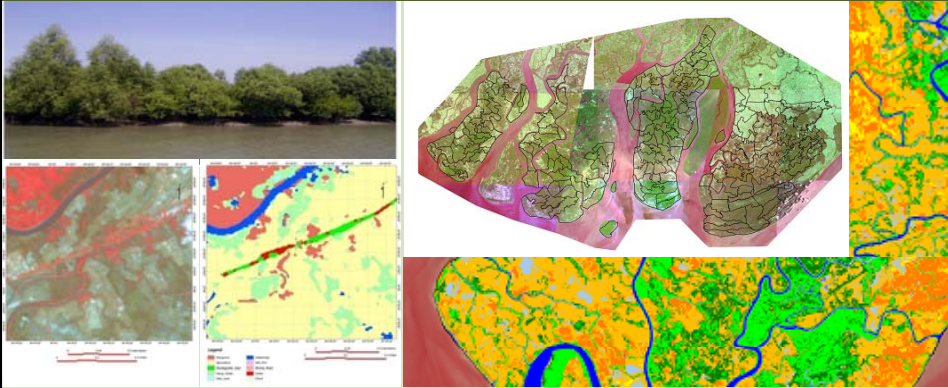
ဤအစည်းအဝေး၏ ဆွေးနွေးမှုအပိုင်းကာလအတောအတွင်း အကယ်၍ ပါဝင် တက်ရောက်သူများက ဤအစည်းအဝေး၏ မျှော်မှန်းသော ရည်မှန်းချက်ပန်းတိုင်များ ပြီးမြောက်အောင်မြင်ရန် တက်ကြွစွာ ပါဝင်ဆောင်ရွက်နိုင်ပါက ဂျူနီယာ ကျွမ်းကျင်ပညာရှင်အဖွဲ့က နက်နက်ရှိုင်းရှိုင်း လေးစားတန်ဖိုးထားပါသည်။

- သက်ဆိုင်ရာ အဖွဲ့အစည်းများအကြား သစ်တောကြီးပိုင်းဆီသို့ အသီးသီးသော နည်းဗျူဟာများ နှင့် ချဉ်းကပ်ပုံများ အကြောင်း ပါဝင်တက်ရောက်သူများက ဝေမျှပေးပါရန်။
- ဒီရေတောများ ထိန်းသိမ်းရေးအတွက် ဖြစ်နိုင်သော ပေါင်းစပ်လုပ်ဆောင်မှု နှင့် သစ်တောကြီးပိုင်း Eရိယာ၏ စဉ်ဆက်မပြတ် ဖွံ့ဖြိုးတိုးတက်မှု အကြောင်း ပါဝင်တက်ရောက်သူများက ဆွေးနွေးရန် နှင့် ဝေမျှပေးပါရန်။



သင်၏ အာရုံစိုက်မှုအတွက် ကျေးဇူးတင်ပါသည်။

**The Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta**

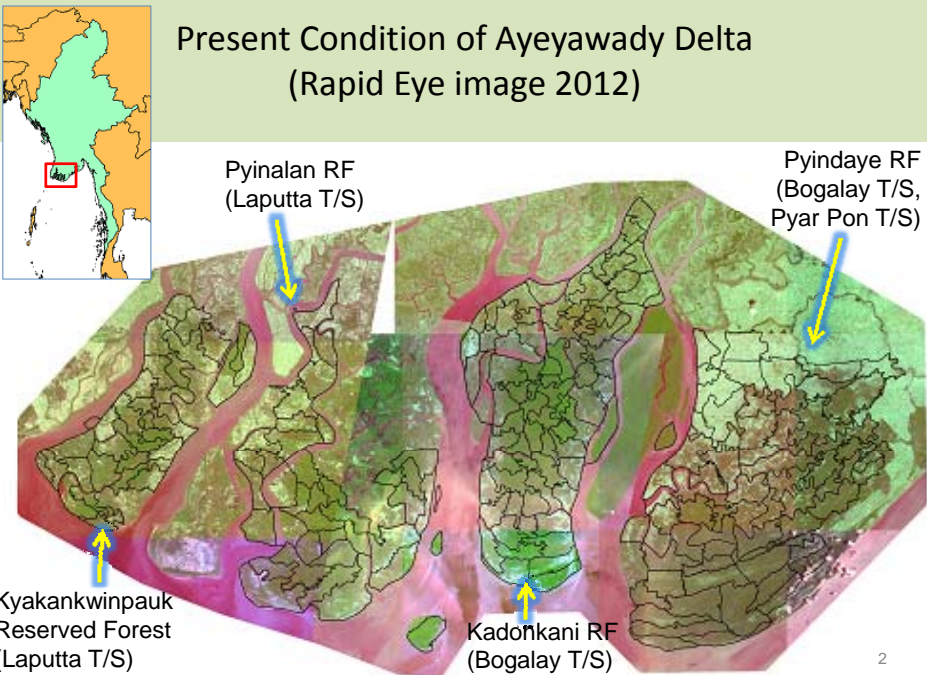


**Recent Mangrove Forest / Land Use Status in the Project Area**

Regional Mangrove Coordination Meeting  
JICA/FD Mangrove Project

1

**Present Condition of Ayeyawady Delta  
(Rapid Eye image 2012)**



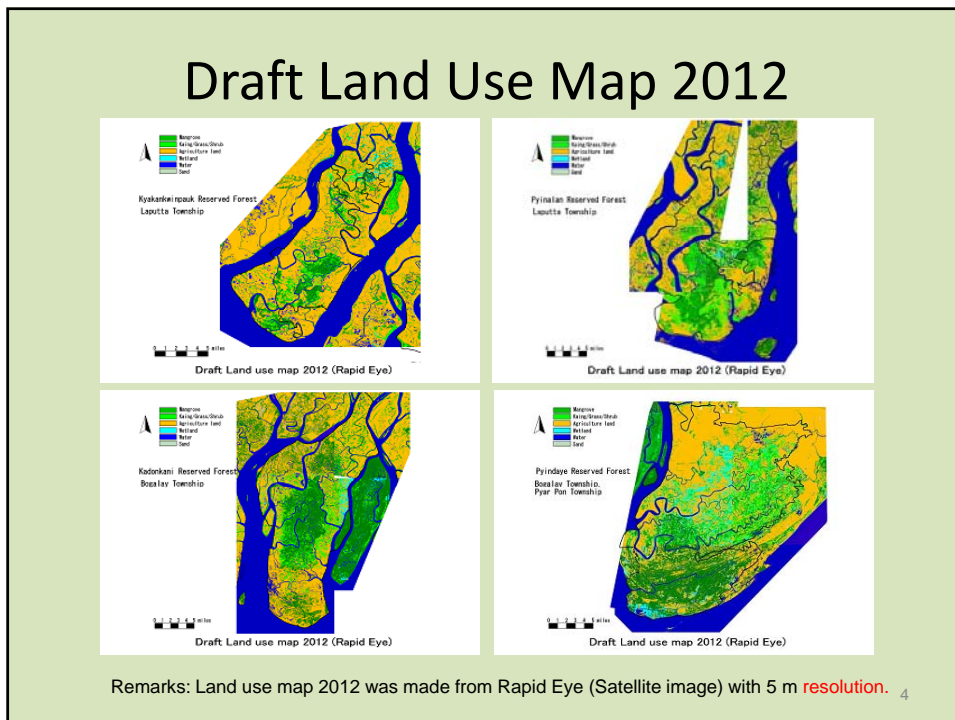
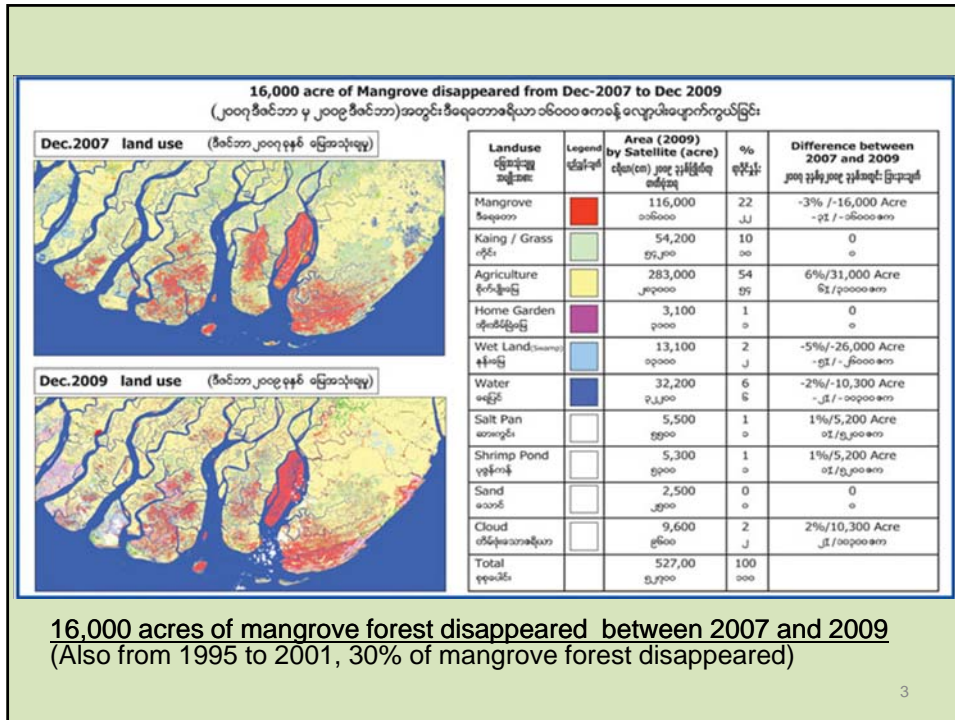
Pyinalan RF (Laputta T/S)

Pyindaye RF (Bogalay T/S, Pyar Pon T/S)

Kyakankwinpauk Reserved Forest (Laputta T/S)

Kadohkhani RF (Bogalay T/S)

2





## Land Use Change 2009-2012

No.	Class Name	2007 Area (Ha)	%	2009 Area (Ha)	%	2012 Area (Ha) <b>Draft</b>	%
1	Mangrove	53,933	25	46,767	22	55,672	26
2 & 4	Kaing / Grass/Scrub	21,104	10	21,991	10	28,481	13
3	Agriculture	103,895	49	114,660	54	80,625	38
7	Home Garden & Dani	469	-	1,289	1	(1)	-
8	Wet Land	15,025	7	5,288	2	16,277	8
10	Water	17,759	8	13,031	6	30,066	14
12	Urban	270	0	972	0	(1)	-
13&14	Salt Pan/Shrimp Pond	769	0	4,351	2	(2)	-
15	Sand	29	0	1,007	0	1,432	1
16	Unclassified / others	-	-	3,899	2	674	0
	<b>Total</b>	<b>213,254</b>	<b>100</b>	<b>213,254</b>	<b>100</b>	<b>213,254</b>	<b>100</b>

(1) Home Garden & Dani and Urban should be defined by image interpretation based on Village information.  
 (2) Salt Pan /Shrimp pond might be categorized as agriculture land in draft land use 2012.

5

## Change Detection 2009-2012

(mangrove forest only)

Reserved Forest (Township)	RF area ha (acre)	Mangrove In 2007 (acre)	Mangrove In 2009 (acre)	Mangrove In 2012 (acre) <b>Draft</b>	Difference of mangrove area 2007-2012 <b>Draft</b>
Kyakankwinpauk (Laputta)	28,486 (70,387)	4,730 ha (11,688)	3,873 (9,570)	4,693 (11,596)	-1%
Pyinalan (Laputta)	41,881 (103,485)	13,458 (33,254)	11,585 (28,626)	12,963 (32,031)	-4%
Kadonkani (Bogalay)	64,521 (159,428)	13,574 (33,574)	11,625 (28,725)	18,327 (45,285)	35% <b>(under checking)</b>
Pyindaye (Bogalay, Pyar Pon)	78,368 (193,643)	22,171 (54,784)	19,683 (48,636)	19,690 (48,653)	-11%
<b>Total area</b>	<b>213,254</b> <b>(526,943)</b>	<b>53,933</b> <b>(133,267)</b>	<b>46,767</b> <b>(115,560)</b>	<b>55,672</b> <b>(137,564)</b>	<b>+3%</b>

Since , satellite images and land use forest cover classifications differ among three years, above comparison are tentative and currently under scrutiny !!

6

## Results of Draft Land Use Map in 2012

Though results indicated are not the final figures:

- 1) Around 138,000acre (26%) of “mangrove forest” seems to exist in four Reserved Forests. It looks slightly increasing(1%) from 2007 to 2012.
- 2) Around 199,000acre(38 %) of “agriculture land” covers in four RFs at present.
- 3) Other types of land use(shrimp pond, salt pan, urban (settlement) area and home garden & dani) exists in mixed with agriculture land.



The land use map will be finalized through field survey and image interpretation in December 2012.

## Recent Status of Reserved Forest(RF)

- JICA/FD Mangrove Project Area is all inside RF.
- By the definition of the forest law, at inside RF
  - Reserved for Forest and Forestry Usage
  - Non forestry land use is prohibited
  - Human Settlement is not allowed
  - FD is the law enforcement authority



However, through updating land use map, existence of “more complex land use and development activities in RF ” are still identified .

8

## Issues to be Shared and Discussed(1)

- Current Project Area has diverse as well as complex land-use, even though the area is regarded as the RF area.
- Due to large-scale human settlement and non-forestry activities, certain issues and constraints exist in the RF area.
- Due to diverse land-use and development activities, not only FD, but other departments and agencies are also highly involved in RF area.

## Issues to be Shared and Discussed (2)

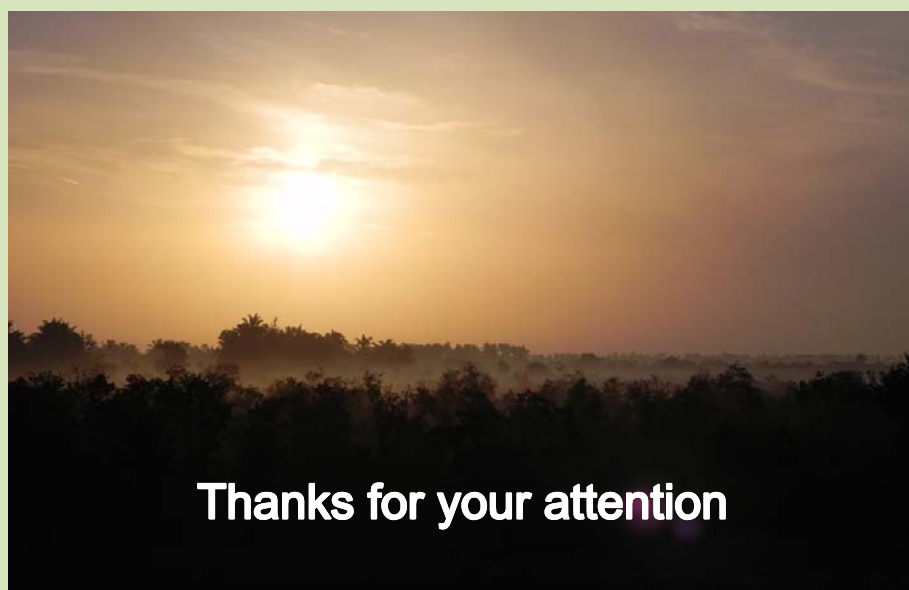
- Up to now, there were not much of opportunities among relevant departments/ agencies to share each others strategies, approaches, plans related to RF area.
- The JICA/FD Mangrove Project would like to extend this meeting as an gathering for information sharing and seeking further collaborations among relevant departments/ agencies.

10

## For your Confirmation & Clarification!!

During the discussion session of this meeting, the JICA Expert Team would deeply appreciate, if participants can actively participate to achieve the expected goals of this meeting:

- Participants to share about respective strategies and approaches among relevant agencies toward reserved forest area.
- Participants to discuss and share about possible synergy for mangrove conservation and sustainable development of the reserved forest area.



12

## Attachment 3: Presentation Materials for Mangrove Seminar (Pathein)

- Attachment 3-1: Progresses and Issues Related to JICA/FD Mangrove Project
- Attachment 3-2: Mangrove Forest Status and Achievement/ Lessons learnt from ARP
- Attachment 3-3: CFUSG Formation, CF Management Plan Formulation and Livelihood Activities by CFUSG
- Attachment 3-4: CF Support/ CF-SOP

Attachment 3-1: Progresses and Issues Related to JICA/FD Mangrove Project



 **Ministry of Environmental Conservation  
and Forestry**   
**Forest Department**

**The Integrated Mangrove Rehabilitation and Management  
Project through Community Participation in the  
Ayeyarwady Delta**

**Mangrove Conservation as a part of Coastal  
Management in Myanmar**

Presented By  
U Khin Maung Lwin  
(Field Project Manager)  
October 2, 2012 18 11 2011

### Introduction: Brief description on Project

- **Overall Goal** : “The mangrove forests are sustainably managed and poverty is alleviated among the communities in the Ayeyawady Delta”
- **Project Purpose** : “The communities and the mangrove forests co-exist in a sustainable manner in the selected areas where project activities were implemented within the Ayeyawady Delta.”
- **Project title**: The integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta

**Introduction: Brief description on Project**

**Project duration**  
April, 2007 - March, 2013 (6 years)

**Target area**  
Four Reserved Forests (Kyakankwinpauk, Pyinalan, Kadonkani, Pyindaye) in the Ayeyarwady Delta

**Target group**  
Communities practicing community forestry in the four Reserved Forests (Kyakankwinpauk, Pyinalan, Kadonkani, Pyindaye) in the Ayeyarwady Delta

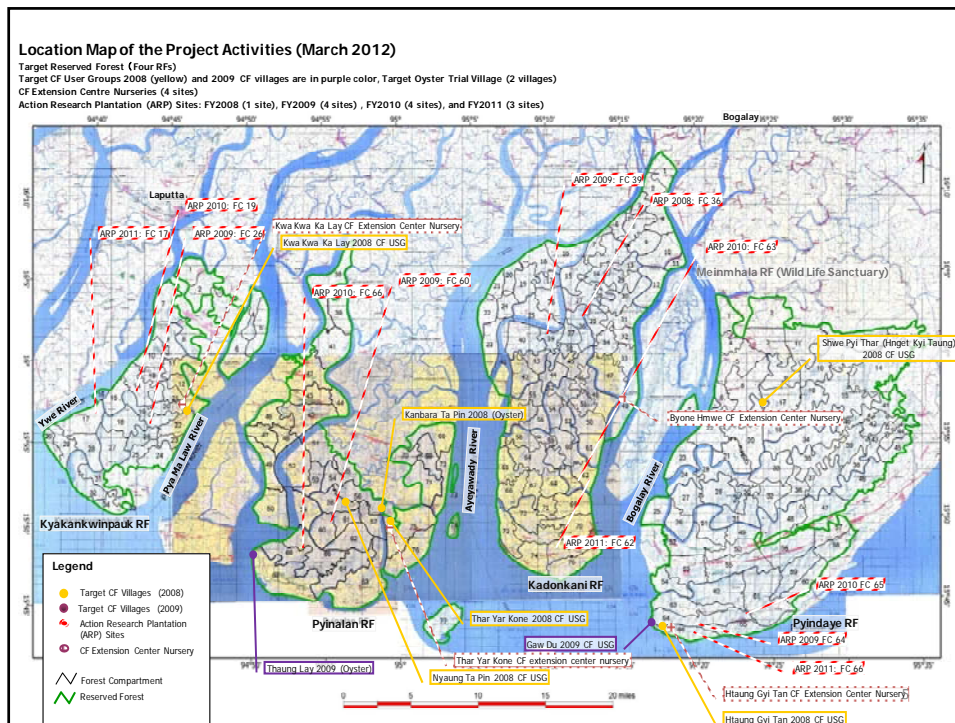
Japan – JICA , Myanmar – Forest Department ( DOF, MAS, SLRD)

**Project input**  
Japan Side - ¥ 750 Million, Myanmar Side- K 100 Million

**Outputs of the Project**

- Output (1)** • Practice Sustainable CF in the selected community
- Output (2)** • Establish effective CF Management and support system for the Forest Department
- Output (3)** • Integrate silvicultural techniques for Project area
- Output (4)** • Establish a coordination mechanism among key sectors
- Output (X)** • Promote recovery from damages of Cyclone Nargis
- Output (0) :** • Related activity of project management and public relation





## Progress of Output 1 Activities

- Village Selection: six villages re-selected for CF
- Baseline survey of socio-economic conditions were conducted.
- Updating bylaws within CFUGs based on necessity .
- Organization/ reorganization of old CFUSG
- Six CF management plans were prepared.
- Certificates for six CFUSGs were handed by ceremonies on 18<sup>th</sup> , 20<sup>th</sup> ,22<sup>th</sup> and 24<sup>th</sup> September 2012.
- Assisting to six CFUSGs in implementing of CF
- Income generating activities: Oyster culture trial and aqua-agroforestry , but not achieve success of large scale.
- Monitor and evaluate on CF Management Plans.
- Impact survey of CF on the livelihoods of the members of the CFUSGs to be conducted.

<b>Establishment of Community Forest Plantation</b>						
Sr.	Township	Name of CF	Number of HH	2007-2012		Area of CF (Acre)
				Planted Area	Natural Forest	
1	Bogalay	Shwepyithar	106	35	15	50
2	Laputta	Kwakwakalay	39	172	30	202
		Tharyakone	59	708	343	1052
		Nyaungtabin	68	476	217	693
3	Pyarpon	Gawdu	83	45	5	50
		Htaunggyitan	63	87	70	175
<b>Total</b>			<b>382</b>	<b>1523</b>	<b>680</b>	<b>2203</b>



## Progress of Output 2 Activities

- Majority of activities have been already completed.
- Confirmation of MCFTF's task, roles/ responsibilities, training needs related to CF management and support.
- Development of training material and programmes for CF
- Implementation of "Short Training on Basic Skills for Community Forestry Development"
- Maintenance of 4 CF Extension Center and Nursery (CFECN)
- Provision of extension services and support to the CFUSGs
- Public awareness creation through distribution of public information
- Preparation of Draft CF-SOP ( Standardized Operational Procedure) Reflecting modifications in CFI
- Support implementation of action plans prepared during CF Extension Planning Workshop

9

## Community Forestry Extension Center & Nursery



### Progress of Output 2 Activities

**Training to FD staff**

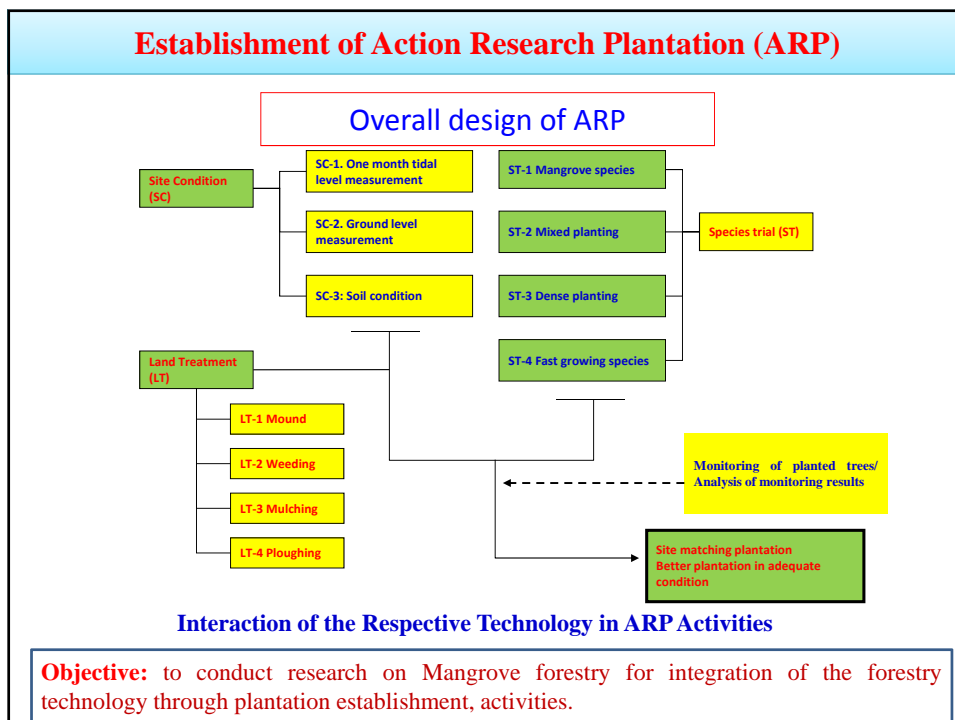
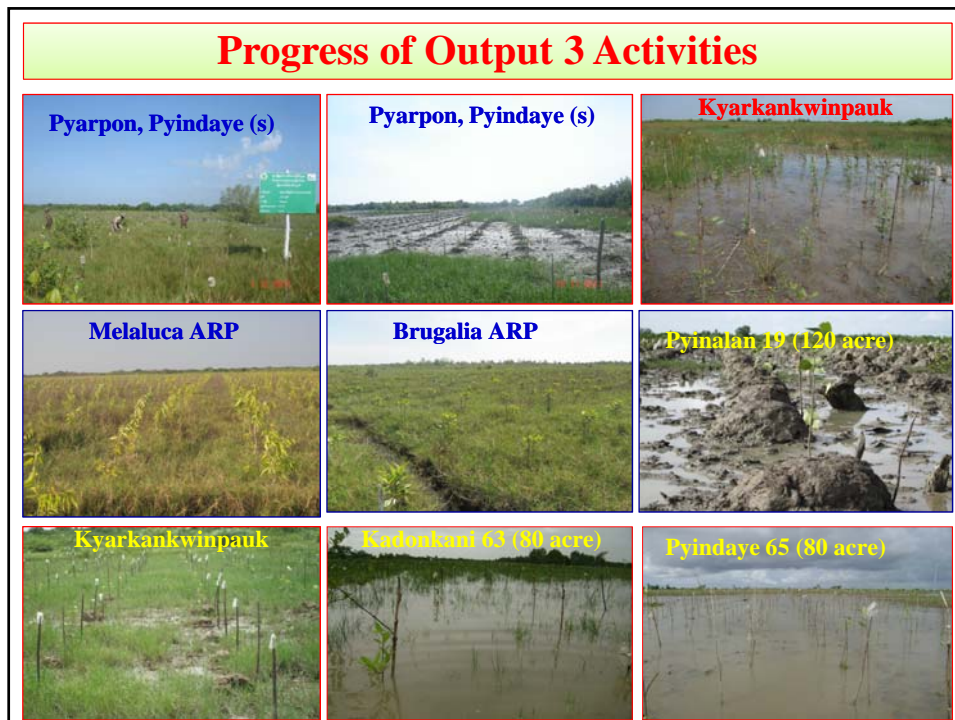
- ARP Residential Meeting, CFDTC (3-8-2011 to 5-8-2011)
- CF-SOP Residential Meeting, CFDTC (24-8-2011 to 26-8-2011)
- Project Cycle Management Training (24-11-2011 to 25-11-2011)
- CF Short Training (MM & BGL) (2-2-2012 MM& 7-2-2012BGL)
- CF Extension Planning Workshop, TGT (21-2-2012 to 25-2-2012)
- Training on Basic Skill for CF Development ( 22-10-2012 to 30-10-2012)

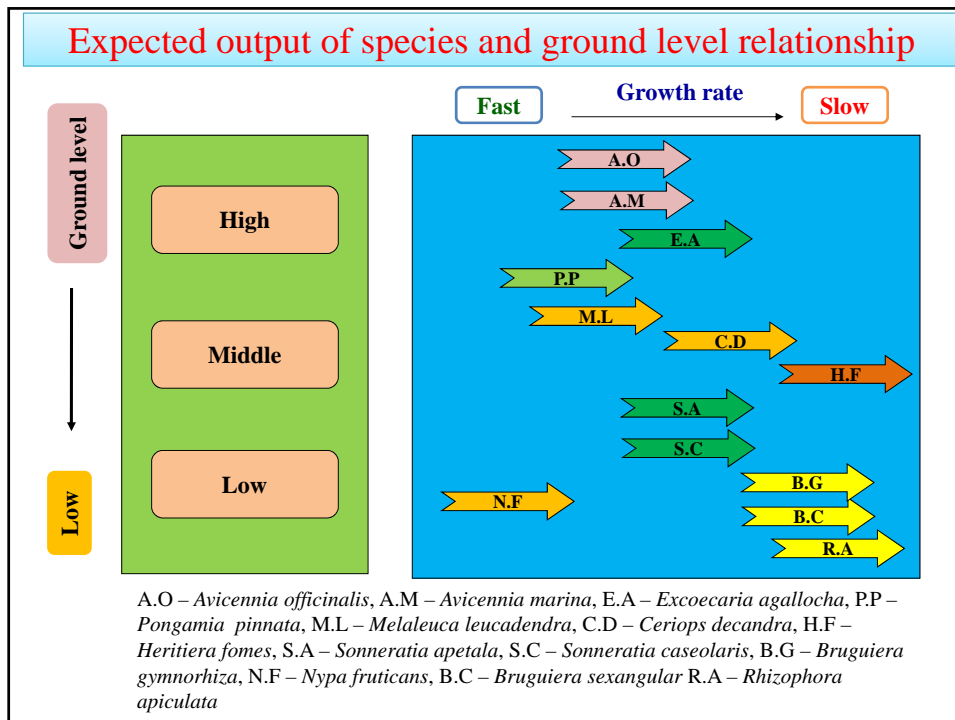


### Progress of Output 3 Activities

- ARP focuses to confirm applicable cum practical objective/ goal-wise silvicultural technologies
- ARP intended to improve the methodologies to identify the tree species suitable for planting in the Delta area.
- Monitoring and Assessment of ARP activities (1401 acres)
- Installation of ARP plot design sign boards, and etc.
- Monitoring, Compilation and analysis of ARP results by JICA and FD.
- Preparation of draft technical report and technical guidelines

12





- Progress of Output 4 Activities**
- Organization of an inter-agency coordinating meeting [(Bogalay Township Hall (7-11-2011))]
  - Revision of up-date the land use information on periodic basis based on the up-to-date satellite images
  - Holding of Mangrove Seminars (BGL,8-11-2011)
  - Holding of District level Donor / NGO Coordination Meeting (BGL,22-11-2011) (LPT,10-12-2011)
  - Two district level donors/ NGO coordination meetings were hold on 27 , 31 July 2012.
  - Regional Level Coordination Meeting
  - Mangrove seminar to be held
- 16

### Progress of Output 4. Activities

#### Regional Coordination Meeting & Mangrove Seminar

- Regional Coordination Meeting(7-11-2011)
- **Mangrove Seminar (8-11-2011)**
- District Level Donors/NGOs Coordination Meeting Bogalay (22-11-2011), Laputta (10-12-2011)
- 2<sup>nd</sup> District Level Donors/NGOs Coordination Meeting (Laputta) (27<sup>th</sup> July 2012)
- 2<sup>nd</sup> District Level Donors/NGOs Coordination Meeting (Pyarpon) (31<sup>th</sup> July 2012)



### Progress of Output X Activities

- Preparation of Hazard Map in August 2009
- Rapid Damage Survey and four Recovery Monitoring Surveys were conducted in periodical basis from 2008 to 2010.
- Village Profile Survey was conducted in 2009-2010
- Recovery survey of mangrove vegetation was conducted (42 survey plots located at 5 locations )
- Rehabilitation of CFECN was conducted.
- **Material supply for recovery work was conducted on timely manner (coconut distribution, etc.).**
- Public awareness activities on disaster prevention was carried out in the Target Area.

18

## Progress of Output 0 Activities

- 0-1: Organize JCC at least once a year
- 0-2: Develop Detail Plan of Operation (DPO: finished)
- 0-3: Develop Annual Plan of Operation (APO: finished)
- 0-4: Develop Annual Report for JCC
- 0-5: Organize Internal Project Meetings regularly
- 0-6: Monitor the achievement of the Indicators periodically
- 0-8: Follow up the recommendations of the review/ evaluation
- 0-9: Conduct public relation for the Project  
(project brochures, etc.)

19

## Conclusion

- Community Based Mangrove Forests in the Ayeyarwady Delta area are sustainably managed in future.
- Poverty of local residence will be alleviated among the communities by their efforts with supporting from JICA in the Ayeyarwady Delta.
- Soon, the communities and the mangrove forests will coexist together in a sustainable manner within the Ayeyarwady Delta.
- Some silvicultural techniques for the rehabilitation of degraded and the management of the mangrove are already accomplished between not only JICA and FD, but also FD and Local UGs.
- An inter- disciplinary committee already established among key departments including FD, MAS, DOF and SLRD to address the underlying causes of mangrove deforestation in the Ayeyawady Delta.





Attachment 3-2: Mangrove Forest Status and Achievement/ Lessons learnt from ARP

**The Integrated Mangrove Rehabilitation and Management Project through  
Community Participation in the Ayeyawady Delta**



Mangrove Forest Status and Achievement/ Lessons Learnt from ARP

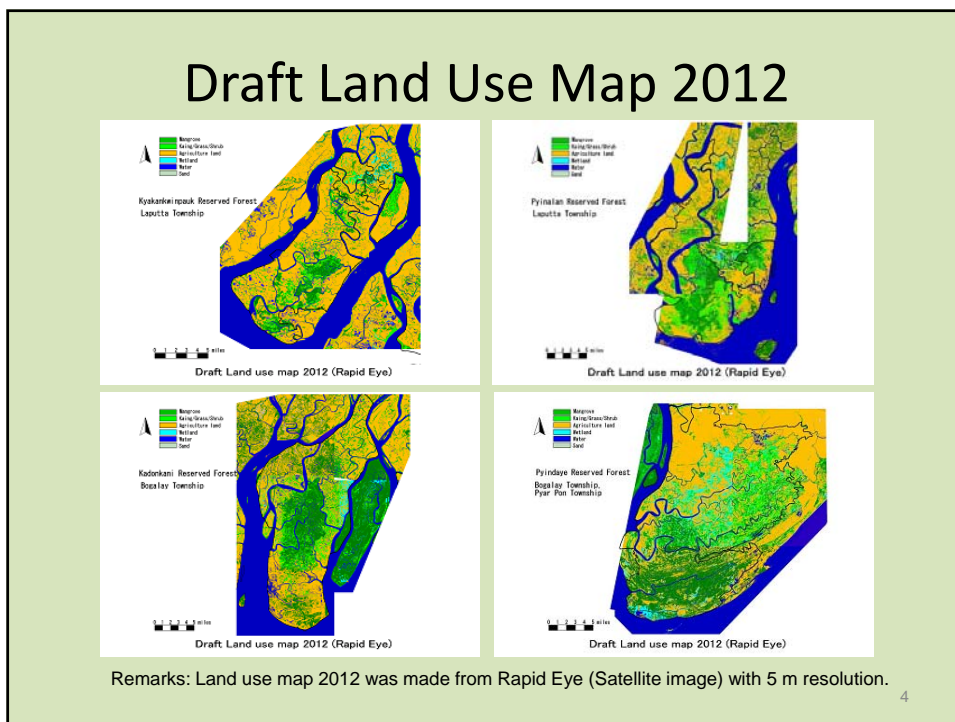
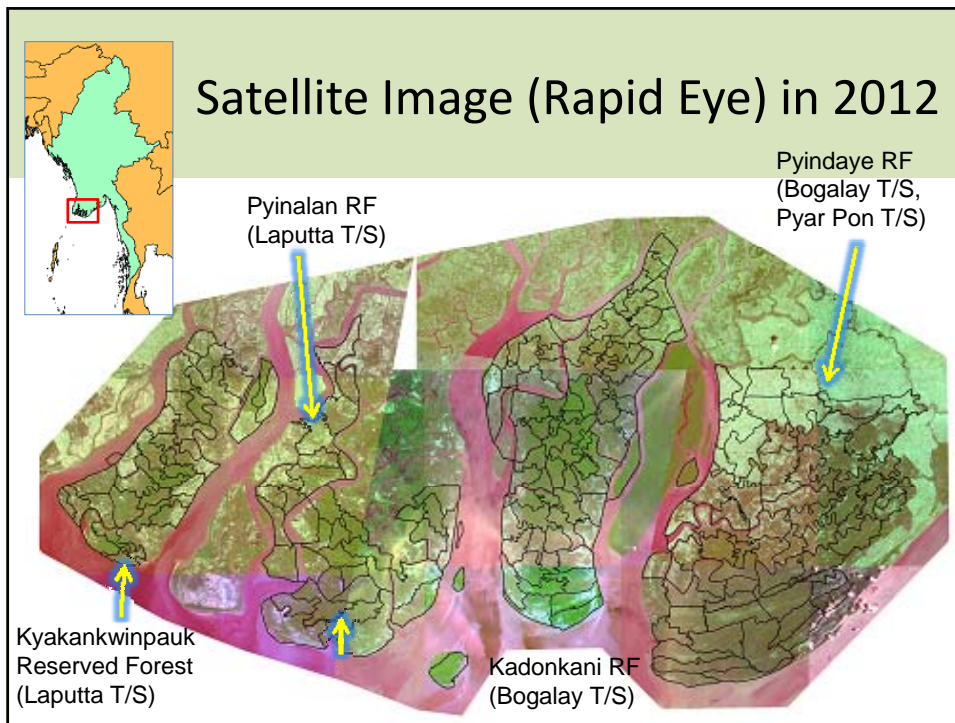
Mangrove Seminar 2012  
JICA/FD Mangrove Project

### **1. Mangrove Forest Status & Achievement**

- Updating Land use map using latest satellite images(Rapid Eye) in 2012.
- Confirmation of mangrove forest status from 2007 to 2012.

### **2. Lessons Learnt from ARP**

- Location and outline of Action Research Plantation(ARP)
- Result of monitoring survey in 2012
- Preparation of Technical Guideline and Report



## Land Use Change 2009-2012

No.	Class Name	2007 Area (Ha)	%	2009 Area (Ha)	%	2012 Area (Ha) <b>Draft</b>	%
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(1) Home Garden & Dani and Urban should be defined by image interpretation based on Village information.  
 (2) Salt Pan /Shrimp pond might be categorized as agriculture land and water in draft land use 2012. 5

## Change Detection 2009-2012

(mangrove forest only)

Reserved Forest (Township)	RF area ha (acre)	Mangrove In 2007 (acre)	Mangrove In 2009 (acre)	Mangrove In 2012 (Draft)	Difference of mangrove area 2007-2012 <b>Draft</b>
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Kadonkani (Bogalay)	64,521 (159,428)	13,574 (33,574)	11,625 (28,725)	18,327 (45,285)	35% <b>(under checking)</b>
Pyindaye (Bogalay, Pyar Pon)	78,368 (193,643)	22,171 (54,784)	19,683 (48,636)	19,690 (48,653)	-11%
<b>Total area</b>	<b>213,254</b> <b>(526,943)</b>	<b>53,933</b> <b>(133,267)</b>	<b>46,767</b> <b>(115,560)</b>	<b>55,672</b> <b>(137,564)</b>	<b>+3%</b>

Since , satellite images and land use forest cover classifications differ among three years, above comparison are tentative and currently under scrutiny !!

6

## Results of Draft Land Use Map in 2012

Though results indicated are not the final figures:

- 1) Around 138,000acre (26%) of “mangrove forest” seems to exist in four Reserved Forests. It looks slightly increasing(1%) from 2007 to 2012.
- 2) Around 199,000acre(38 %) of “agriculture land” covers in four RFs at present.
- 3) Other types of land use(shrimp pond, salt pan, urban (settlement) area and home garden & dani) exists in mixed with agriculture land.



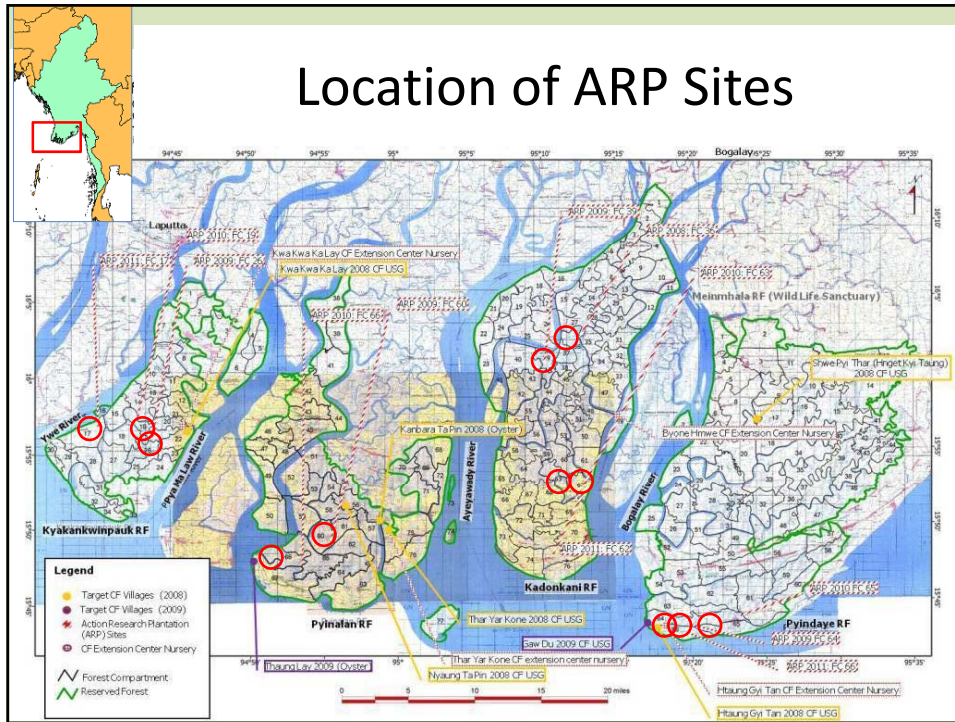
The land use map will be finalized through field survey and image interpretation in December 2012.

### **1. Mangrove Forest Status & Achievement**

- Updating Land use map using latest satellite images(Rapid Eye) in 2012.
- Confirmation of mangrove forest status from 2007 to 2012.

### **2. Lessons Learnt from ARP**

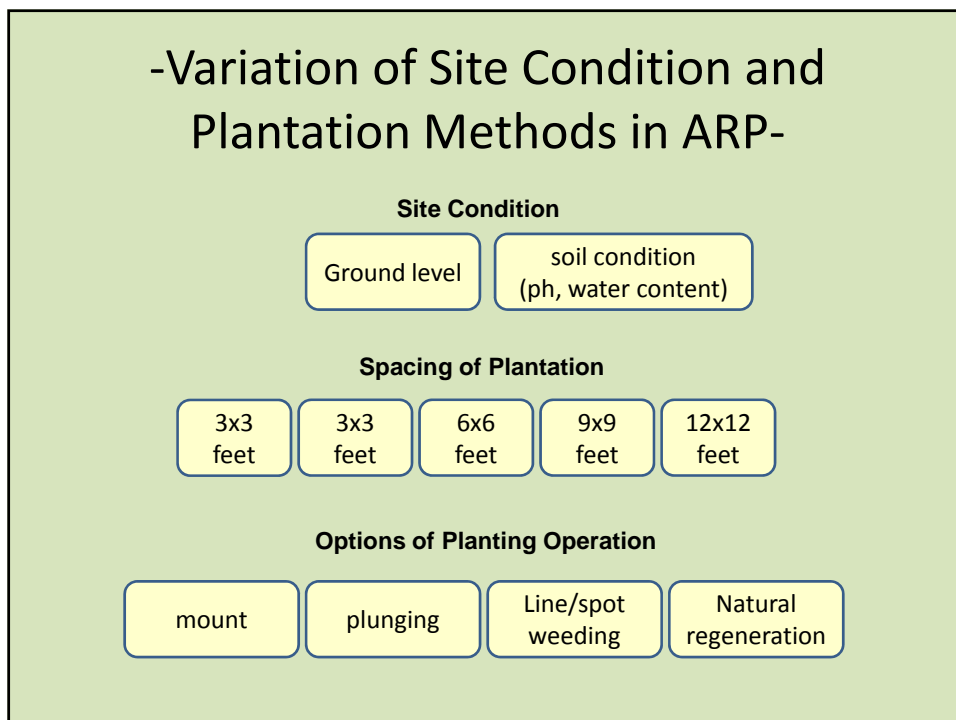
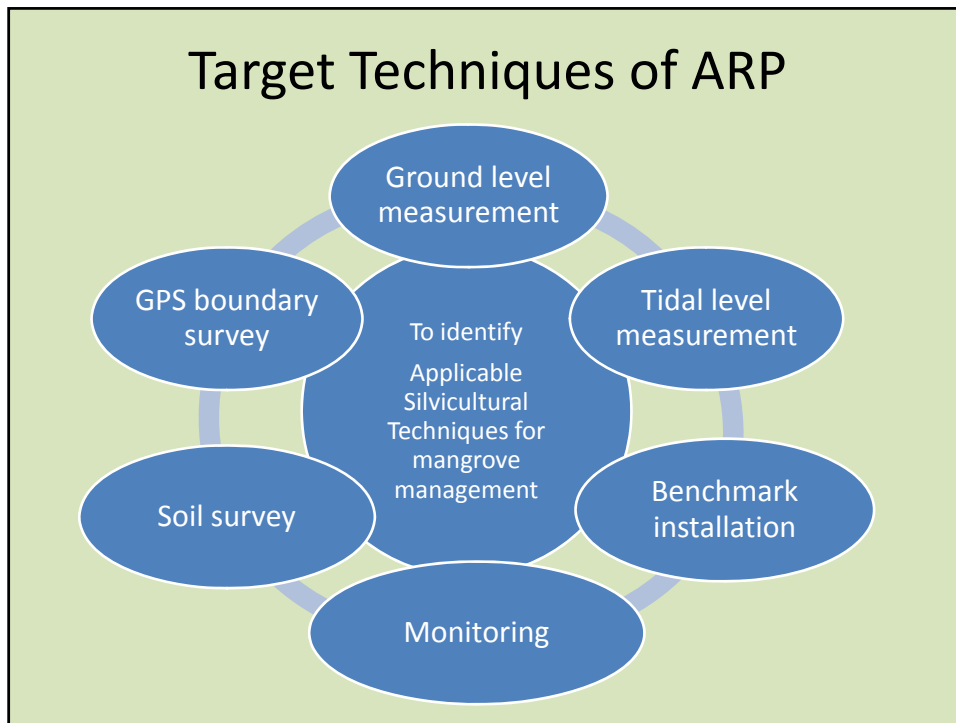
- Location and outline of Action Research Plantation(ARP)
- Result of monitoring survey in 2012
- Preparation of Technical Guideline and Report



### List of ARP Sites

Reserved Forest (Township)	Forest Compartment	Planted year
Kyakankwinpauk (Laputta)	(1) FC26	FY2011
	(2) FC17	FY2010
	(3) FC19	FY2009
Pynalan (Laputta)	(4) FC17	FY2009
	(5) FC19	FY2010
Kadonkani (Bogalay)	(6) FC36	FY2008
	(7) FC39	FY2009
	(8) FC63	FY2010
	(9) FC62	FY2011
Pyindaye (Bogalay, Pyar Pon)	(10) FC64	FY2009
	(11) FC65	FY2010
	(12) FC66	FY2011

*Source: JET, 2012*





## -Variation of Species in ARP-

Mangrove Species

<i>Avicennia alba</i>	<i>Avicennia marina</i>	<i>Avicennia officinalis</i>	<i>Aegiceras corniculatum</i>
<i>Amoora cucullata</i>	<i>Bruguiera sexangula</i>	<i>Bruguiera gymmorrhiza</i>	<i>Ceriops decandra</i>
<i>Ceriops decandra</i>	<i>Excoecaria agallocha</i>	<i>Heritiera formos</i>	<i>Kandelia candel</i>
<i>Lumnitzera racemosa</i>	<i>Nypa fruticans</i>	<i>Pongamia pinnata</i>	<i>Rhizophora apiculata</i>
<i>Rhizophora mucronata</i>	<i>Sonneratia Apetala</i>	<i>Sonneratia caseolaris</i>	<i>Sonneratia griffithii</i>
<i>Xylocarpus moluccensis</i>	Non-mangrove species	<i>Casuarina equisetifolia</i>	<i>Melaleuca leucadendron</i>

Remarks; Based on Monitoring survey records, JET, 2012

## -Monitoring Activities-

<Field work>



Measuring tree height & girth



Labeling



Staking post at four corners of monitoring plot for GPS

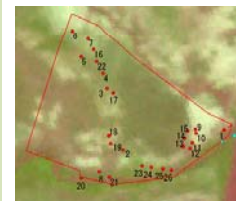


Recording

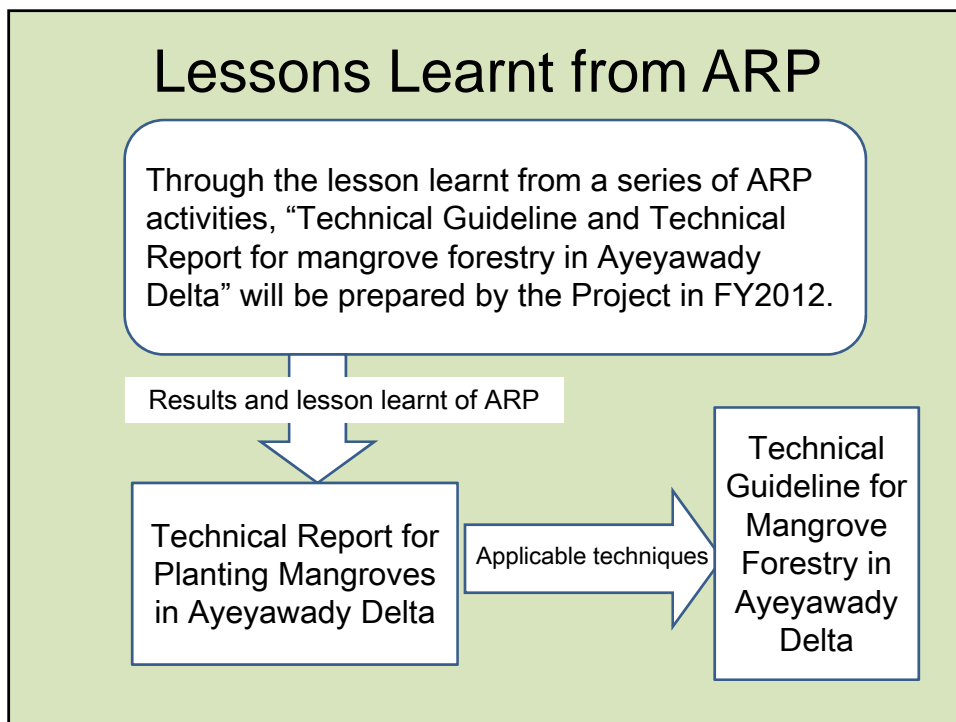
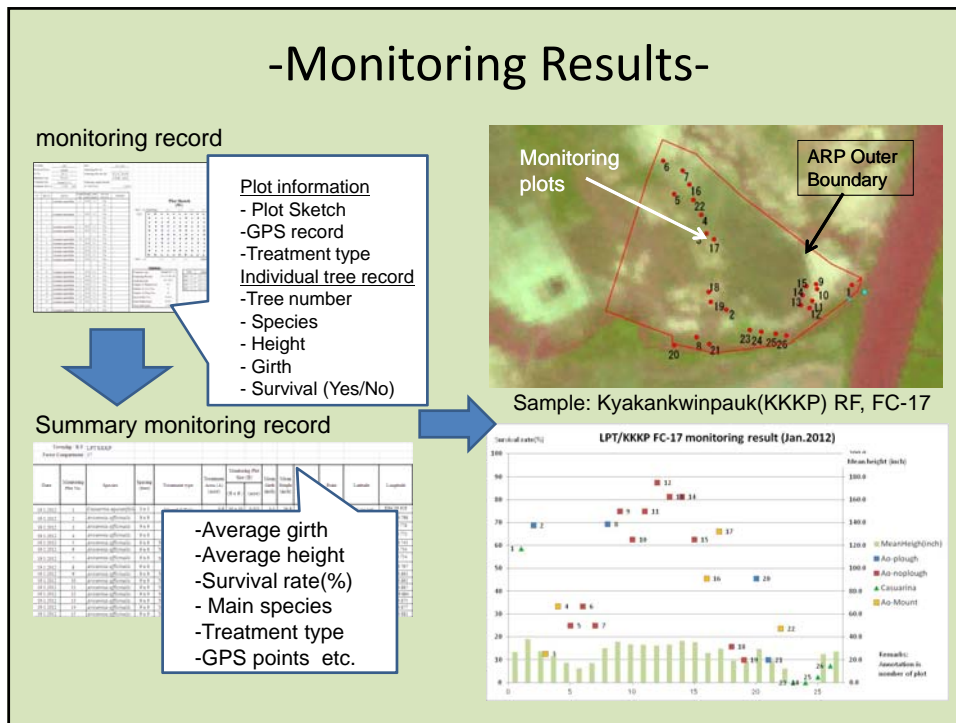
<Office work>



Data input



GIS analysis



## Contents of Technical Report (under restructuring)

- **Study/Survey Methods for Preparatory Works to Determine the Applicable Silvicultural Techniques and Species**
  - Tidal Level Measurement
  - Ground Level Measurement
  - GPS boundary survey
  - Soil Conditions
- **Results of Action Research Plantation and Recovery Monitoring Survey**
  - Species Trial
  - Land Treatment
  - Natural Forest Operation Regeneration
  - ARP Area Design
- **Forestry Inventory Development**
- **Mangrove and Non-Mangrove Species for Forestry Operations etc.**

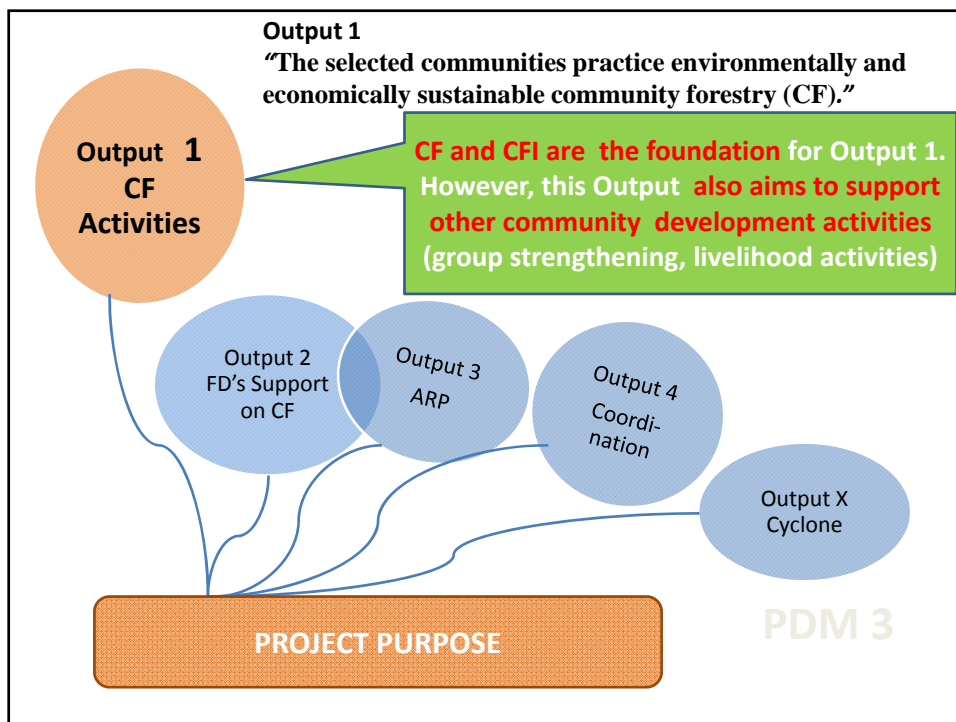
## Contents of Technical Guideline (under restructuring)

- **Ground Level**
- **Species-Site Matching in Respect to Ground Levels**
- **Objective (Goal) -Wise Types of Plantations/ Natural Forests to be considered**
- **Applicable Silvicultural Operations for Plantations/ Natural Forests to be considered**
- **Applicable Nursing Techniques to for Seedlings to be Utilized**
- **Monitoring of Forestry Operation etc.**



Thanks for your attention

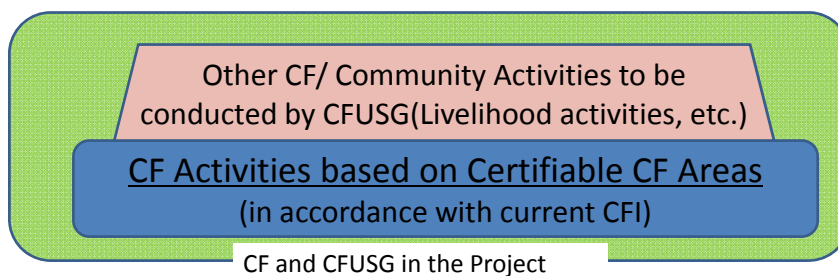
**Attachment 3-3: CFUSG Formation, CF Management Plan Formulation and  
Livelihood Activities by CFUSG**



### Current Output 1 Framework (FY2011 -)

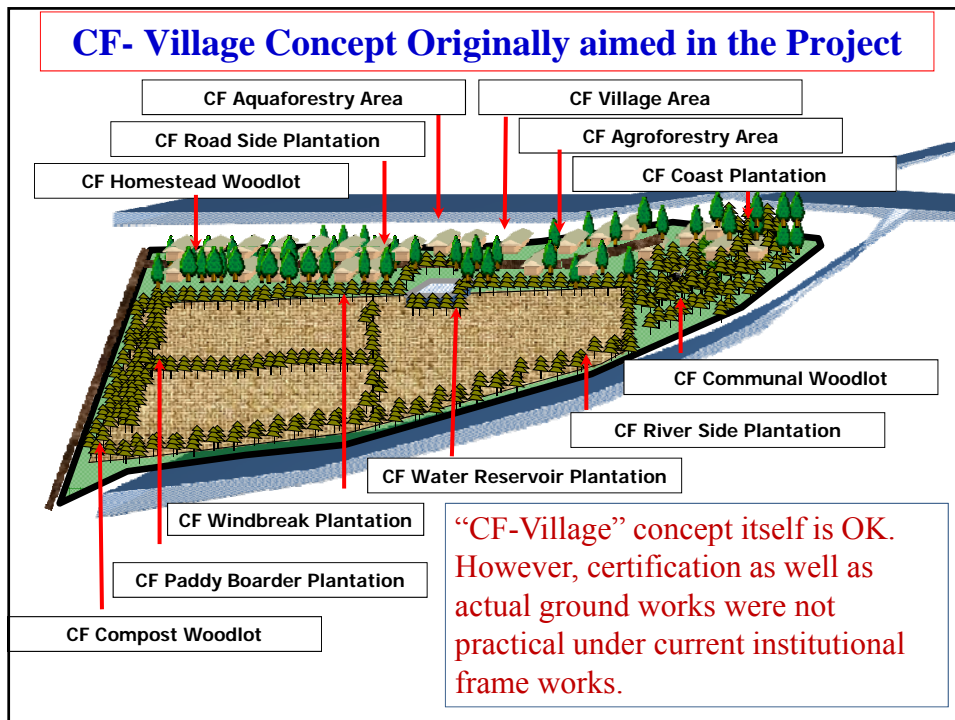
Though “CF – Village Concept” was originally considered (2007-2010), currently, CF is defined as follows in the Project;

- CFUSG and CF as per current Community Forestry Instruction (CFI)
- Aims “CF (Mangrove) Management” and “CFUSG Capacity Strengthening” through approach indicated in below diagram



### Major Issues Related to Output 1 (FY2007 - FY2010)

- 12 CFUSGs have been organized, management plans for 11 CFUSGs were formulated. **Not Certified**
- However, **most of prepared CF Management Plans were not fully shared / understand even among with Management Committee (MC) members.**
- After Cyclone Nargis, the selected **USGs were not stable and activities stagnated.**
- Livelihood improvement activities associated to this output could not be carried on fully after Cyclone Nargis.
- So-called “**CF- Village concept**” **was not applicable .**



### Original consideration on CF management map

Nyaung Ta Pin CFUSG CF Management Map 2003

Image of New Nyaung Ta Pin CFUSG CF Management Map

- ✓ above right: Image of new CF management map. Key points are;
  - Delineation of village area (thick red line)
  - Delineation of CF area (CF paddy, CF agroforestry, CF plantation, etc). In addition, CF river bank, CF school woodlot etc can be delineated based on needs

CF-Village type map preparation was possible but not practical/functional



### Current Output 1 Framework (FY2011 -)

Based on Recommendations made by Mid-term Review (Mar 2011),

1. Target number of villages: 22 villages in PDM1.  
12 villages were already selected. However,

Reduced target to 6 villages, in order to:

- improve quality of CFUSG activities and management plan through more participatory approaches,
- improve CFUSG capacity strengthening

Reselection of target villages was conducted based on

- available resources of FD and JET to support CFUSGs
- avoiding internal village conflicts and other problems difficult to solve by the Project.

Reselected 6 villages:

Laputta: Kwa Kwa Lay (KKKL), Thar Yar Kone (TYK), Nyaung Ta Pin (NTP)  
Bogalay: Shwe Pyi Thar (SPT)  
Pyar Pon: Htaung Gyi Tan (TGT), Gaw Du (GAD),

### Output 1 Progresses (April 2011 –)

- 1-1: Village Selection: (6 villages re-selected for CF, May 2011)
- 1-2: Conduct baseline survey on the basic socio-economic conditions of the selected 6 villages (May 2011 to June 2012)
- 1-3: Organization/ reorganization of CFUG (Completed June 2012)
- 1-4: 6 CF management plans were prepared: (Completed June 2012)
- 1-5: Certification/ Re-certification of 6 CFUGs: (Certified 31 July 2012, CF Certification Ceremonies September 2012)
- 1-6: Assist the CFUGs in implementing the certified CF Management Plans. (to support after certification)
- 1-7: Income generating activities: Oyster culture trial and aqua-agroforestry. (Oyster culture and aqua-agroforestry trial on-going. Provides information for other activities are considered)
- 1-8: Monitor and evaluate the implementation of the certified CF Management Plans. (To be conducted during second half of FY2012)
- 1-9: Conduct impact survey regarding the effects of CF on the livelihoods of the members of the CFUGs (To be conducted during second half of FY2012) .

8

### 1.3 : CFUSG Capacity Development

#### **It took nearly one year to re-organize 6 CFUSGs and finalize CF Management Plans!**

- Management Plans re-drafted upon reselection of CFUSG (May 2011)
  - All CFUSGs did not have a copy of their latest management plan
  - In general, the content of plans were not well confirmed / shared even between FD (officer s in charge) and Management Committee members.
  - Some management plans attached old CFUSG member lists (before cyclone Nargis)
  - **Locations as well as boundaries of some CF areas had certain discrepancies** between CF maps and ground situations/ CFUSG understandings.
- Therefore, **CFUSG workshops were scheduled** in each target village for reconfirmation/ finalization of CF management plans as well as preparation of bylaws.

### 1.3 & 1.4: CFUSG & CF Management Plan Related 2

- Originally , it was expected to finalize CF management plans and by-law by not later than end of 2011.
- However, CFUSG workshops were conducted for five times from July 2011 to January 2012. **And additional confirmations were required.**

It took much more time to confirm and settle following issues:

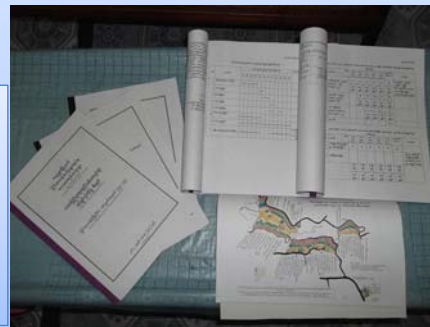
- **Who are MC members/ CFUSG members?**
- **CF area problems (boundaries, locations, area, conflicts with other interest groups)**
- **Difference in understanding about By-law (within CFUSG, by FD)**

10

### 1.3 & 1.4: CFUSG & CF Management Plan Related 3

- Moreover, further confirmations were required between February to June 2012 in following aspects:
  - \* Documentation of CF management plans
  - \* CF area finalization
- After all, CF management plans were finalized in June 2012

- The management plans include CFUSG by-law (probably **one of very few management plans with by-law attached**)
- To be certified by August 2012



Finalized CF management plans

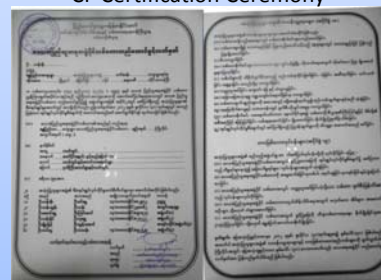
### 1.5: CF Certification

- 6 CF management plans were **certified on 31 July, 2012**.
- CF certification ceremonies (including group management training) were conducted in 4 locations of the project area during September, 2012.



CF Certification Ceremony

- Certificates include, **duration of the land use right for CF areas, and roles/responsibilities of CFUGs**



Finalized CF Certificate (SPT)

### 1.7: CFUSG Livelihood Improvement Activities 1

- After Cyclone Nargis, oyster culture/ aqua-agroforestry trials are very few livelihood activities continued by target CFUSGs
- Though the Project will terminate during this fiscal year, additional livelihood activities by CFUSGs were considered since FY2011-12
- New livelihood activities selected based on intentions of CFUGs, existing resources and possibilities for value-adding/ distribution, followings activities became candidate

Additional Activities related to Livelihood (FY2011/12 - )

Activity	Laputta	Bogalay
1. Crab fattening	○	○
2. Nipa	○	—
3. Firewood (Charcoal)	○	○
4. Pole	○	○

Support by JICA/FD Mangrove Project to new livelihood activities :

- 1) Preparation of information booklets/ brochures for new livelihood activities
- 2) Distribution of material to CFUG members.

### Progress of Output 1. CF activities



CFUG 1<sup>st</sup> Workshop, TYK (4-7-2011)



CFUG 2<sup>nd</sup> Workshop, TGT (15-9-2011)



CF Certification Ceremony (18-9-2012)



Group Mgmt Training KKKL (18-9-2012)

### Issues in Planning Stage of CF

- Application of CFI is not much flexible ( Heavily influenced by existing statements and format determined in CFI)
  - Management plans mainly covers forestry activities.
  - Plans and activities for livelihood and capacity development are seldom included.
  - Even though some livelihood activities are considered by subgroups, linkage with entire CFUSG are not much considered / examined
- Even if CFUSGs try to prepare CF Management Plans in accordance with CFI, there are so many issues/ discrepancies to be settled
  - Obtaining technical data/ information
  - Preparation of CF Maps
  - Making duplicates/ copies of CF management plans

15

### Issues in Implementation Stage of CF

- Livelihood activities are rather done separately or individually, and not always regarded as activities by CFUSG
- CFUSG by-law mainly covers more general administration/ management issues of entire CFUSG, and necessity for subgroup by-law.
- If in case there are benefits from livelihood activities, benefit sharing / distribution are not fully discussed/ determined yet.
- Since most livelihood activities require initial investment, target groups tend to become depended on outside support. May also cause unnecessary conflicts among CFUSGs members

16

### Difficulties for CF Planning and Implementation

- ◆ Timely information sharing between FD frontline staff and CFUSGs
- ◆ Timely information sharing/ distribution within CFUSG
- ◆ Limited understanding of CFUSGs members toward CF (CF = planting tree)
- ◆ Limited Group Consolidation experience for CFUSG
- ◆ Internal Conflicts
- ◆ External Conflicts

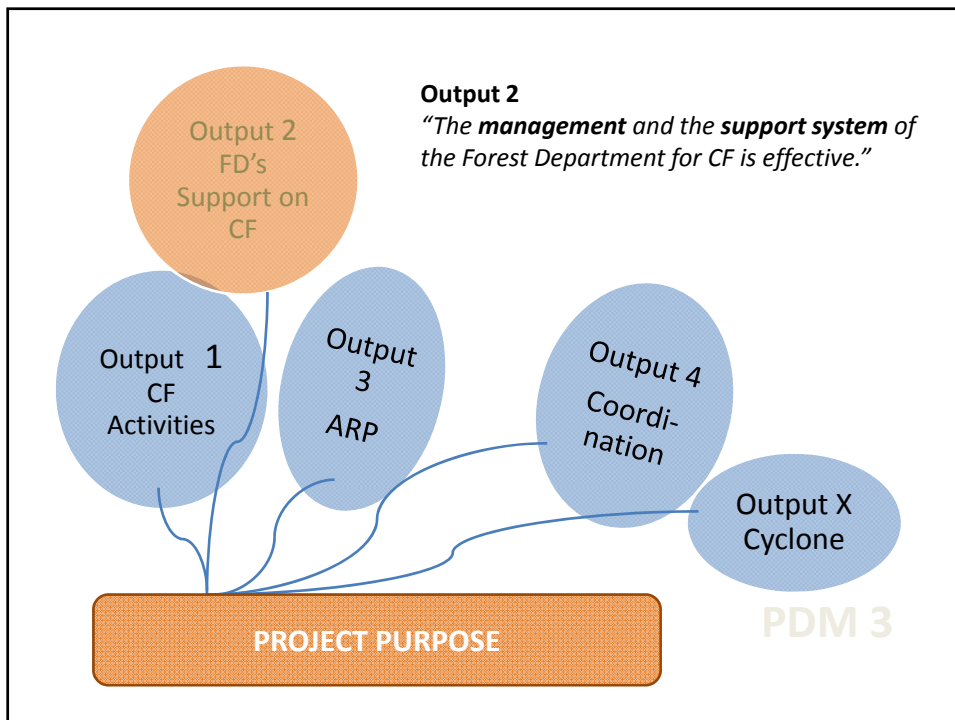
### Issues and Things to be Considered for Further CF Activities

- CF activities based on existing Community Forestry Instruction (CFI) more emphasize on “Forestry Component” and **relationships/ linkages with livelihood and capacity development of CFUSG are rather weak.**
- Even within in FD, **various interpretations/ understanding toward CF** (such are heavily based on each officer’s experience. Consensus or standard procedures are not well established)
- Application of CFI is **not much flexible** ( content of CF Certificate/CF Management Plan)
- Not well organized yet for FD to implement/ supervise CF (organizational/ institutional / budgetary arrangements)
- Currently **majority of CF implementation relies on donors/NGOs**
- NGOs conduct their **own style of CF** (providing various incentives)



Attachment 3-4      CF Support/ CF-SOP

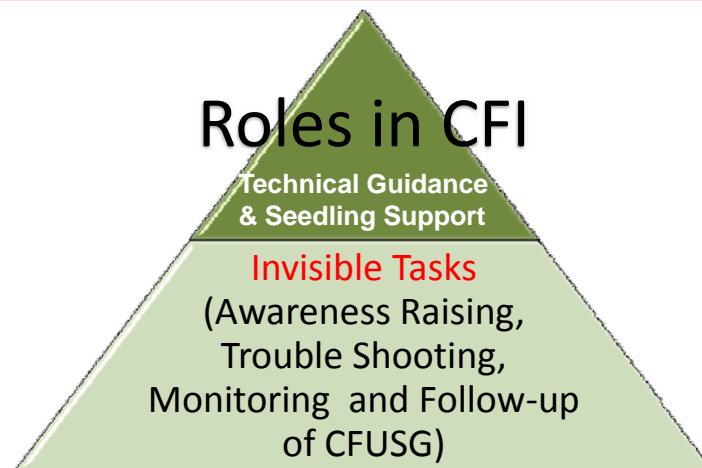




### Difficulties for CF Planning and Implementation

- ◆ Timely information sharing between FD frontline staff and CFUSGs
- ◆ Limited Group Formulation/ Capacity Strengthening experience for both FD frontline staff and CFUSGs
- ◆ Limited Livelihood Improvement support experience by FD frontline staff
- ◆ Getting Secure Land for CF
- ◆ Taking Longtime to Yield Profit
- ◆ Migration in Delta RF Area
- ◆ Internal Conflicts
- ◆ External Conflicts

### Necessity of CF Standardized Operation Procedure (CF-SOP)



Many CF Support Tasks are in the Shadow....

### Issues in Supporting Planning Stage of CF

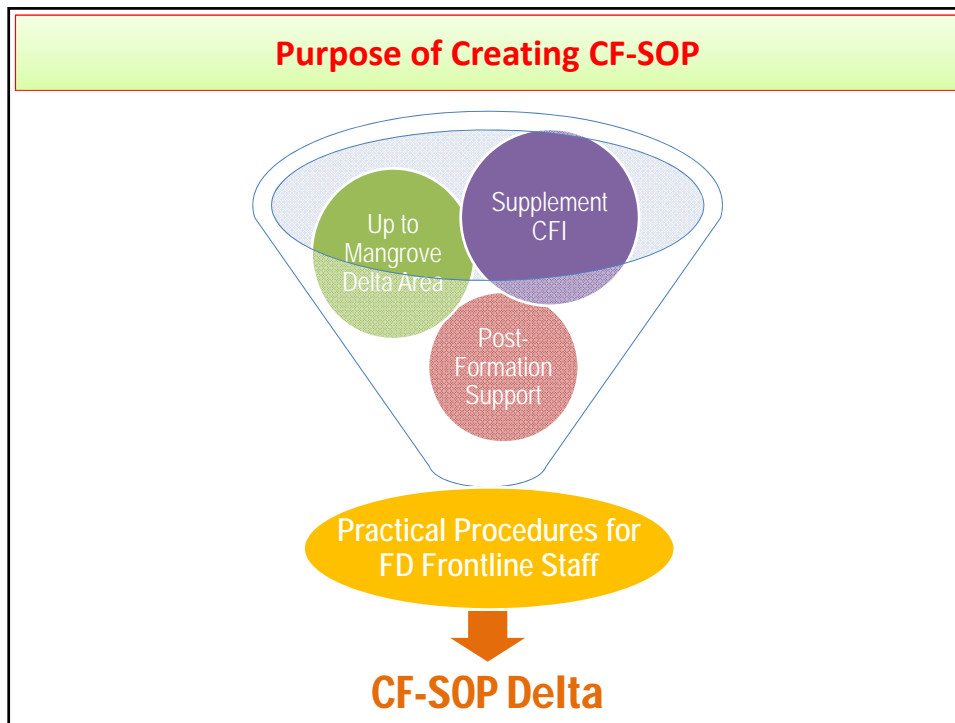
- Contents of CFI is not fully recognized by majority of FD front-line staff
  - Knows CFI but not about the details of the content
- Supports for preparation/ planning heavily rely on existing statements and format determined in CFI
  - Even though some livelihood activities are considered by subgroups, linkage with entire CFUSG are not much considered / examined
- However detail procedures are not fully shared or have consistency among concerned FD staff. There are so many issues/ discrepancies to be settled
  - Obtaining technical data/ information
  - Preparation of CF Maps, by-laws
  - Making duplicates/ copies of CF management plans

5

### Issues in Supporting Implementation Stage of CF

- CFUSG by-laws are seldom prepared / reviewed.
- Checking & Monitoring of CF sites/ activities are seldom done.
- Progress Reports (Annual Reports) are not prepared by CFUSGs and support by FD for the preparation rarely happens.
- If in case there are benefits from livelihood activities, benefit sharing / distribution are not fully discussed/ determined yet.

6



### CF-SOP 3<sup>rd</sup> Draft: Table of Contents (1)

- **Chapter 1: Introduction**
- 1.1 Mangrove Forest in Delta Area
- 1.2 Community Forestry (CF) in Delta Mangrove Area (DMA)
- 1.3 CF Standardised Operation Procedure (SOP) for DMA
- 
- **Chapter 2: An Overview of the CF Process and Approach for DMA**
- 2.1 The Context
- 2.2 CFI 1995 – Our Guiding Principle
- 2.3 Stakeholders in CF in DMA – Roles and Responsibilities
- 2.4 CF and Livelihood – Creating Conducive Environment for Community Participation and for Sustainability
- 
- **Chapter 3: Preparatory Stage**
- 3.1 An Overview
- 3.2 Awareness Raising – Entering the Community
- 3.3 Situational Analysis
- 3.4 Formation of Community Forestry Users' Group (CFUG) and Management Committee (MC)
- 3.5 Application to Establish a CF Area
- 
- **Chapter 4: Planning Stage**
- **Chapter 5: Implementation Stage**
- **Chapter 6: Towards Creating an Enabling Environment for CF in DMA**

### CF-SOP 3<sup>rd</sup> Draft: Table of Contents (2)

- **Chapter 1: Introduction**
- **Chapter 2: An Overview of the CF Process and Approach for DMA**
- **Chapter 3: Preparatory Stage**
- 
- **Chapter 4: Planning Stage**
- 4.1 An Overview
- 4.2 Management Planning – Step by Step
- 4.3 Submission of CFMP to FD
- 4.4 Issuance of CF Certificate by FD
- 4.5 Livelihood Activity Planning
- 
- **Chapter 5: Implementation Stage**
- 5.1 An Overview
- 5.2 CF Related Activities
- 5.3 Group Management
- 5.4 Livelihood Related Activities
- 5.5 Reporting by FD
- 5.6 Revision of CFMP
- 5.7 Withdrawal of CF Certificate
- 
- **Chapter 6: Towards Creating an Enabling Environment for CF in DMA**
- 
- 6.1 Allocating Suitable Land for CF
- 6.2 CF Extension Activities

### **CF-SOP 3<sup>rd</sup> Draft: List of Annex**

- Annex 1: **CFI 1995**
- Annex 2: Sample Letter of Land Confirmation
- Annex 3: How to carry out PRA Exercises for CF in DMA
- Annex 4: Points which should be analysed in Organising CFUG
- Annex 5: CF and Livelihood Security Enhancement – Approach for DMA
- Annex 6: CF Management Plan Formulation Guidelines (2000)
- Annex 7: Technical Guideline for Preparing Maps
- Annex 8: Sample: Community Forestry management Plan – Nyaung Ta Pin
- Annex 9: Form - Yearly Schedule for Plantation/ Natural Forest Conservation
- Annex 10: Form: Yearly Activity Schedule
- Annex 11: How to Prepare Harvesting Plan
- Annex 12: Sample: By-Laws of CFUG: Shwe Pyi Thar Village,
- Annex 13: Evaluation of CF Application
- Annex 14: Sample: To Issue CF Certificate
- Annex 15: Form: CF Certificate adopted in DMA
- Annex 16: CF Management Calendar for DMA
- Annex 17: Training Material - Essential Skills for Group Management
- Annex 18: Sales Voucher, Sales Register and Removal Pass
- Annex 19: Form – Progress Report (Annual Report)
- Annex 20: Suggested Training Modules on CF for FD Staff
- Annex 21: Suggested CF Field Extension Programmes

### **Post-Formation Support Required for USG**

- ◆ **Support Formulating/ Updating By-laws**
- ◆ **Checking CF Sites/ Activities**
- ◆ **Enforcement of Law against Encroachers**
- ◆ **Monitoring of CF Site/ Activities**
- ◆ **Collecting and Commenting on Progress Report (Annual Report)**
- ◆ **Revision of CF Management Plan**

### Issues and Things to be Considered for Further CF Activities

- CF activities based on existing Community Forestry Instruction (CFI) more emphasize on “Forestry Component” and **relationships/linkages with livelihood and capacity development of CFUSG are rather weak.**
- Even within in FD, **various interpretations/ understanding toward CF** (such are heavily based on each officer’s experience. Consensus or standard procedures are not well established).
- Application of CFI is **not much flexible yet** (content of CF Certificate/CF Management Plan).
- Not well organized yet for FD to implement/ supervise CF (organizational/ institutional / budgetary arrangements)
- Currently **majority of CF implementation relies on donors/NGOs**

13

