

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



**Onsite Training of Agroforestry in Watershed area**

**Completion Report**

**June 2021**

## **Content**

<b>No.</b>	<b>Subjects</b>	<b>Pages</b>
1	Introduction	1
2	Objectives	1
3	Training Period	2
4	Training Place	2
5	Opening Ceremony	2
6	Invited Persons	2
7	Training Courses	2
8	Field Training	2
9	Trainers	3
10	List of Trainees	3
11	Summary of Training	3
12	Discussion	5
13	Cost for Training	6
14	Travel Arranging	6
15	Preparing Ceremony	6
16	Hospitality	6
17	Documentary	6
18	Conclusion	7
	Appendix (1)	
	Appendix (2)	
	Appendix (3)	
	Appendix (4)	
	Appendix (5)	

**Integrated forest ecosystem management and demonstration project**  
**In greater Mekong sub-region (Myanmar)**  
**Completion Report on Onsite Training of Agroforestry in Watershed area**  
**Period (3.6.2021 to 5.6.2021)**

**Introduction**

1. With the funded of Asia-Pacific Network for sustainable forest management and rehabilitation (APFNet), Forest Research Institute (FRI) is implementing the integrated forest ecosystem management and demonstration project in greater Mekong sub-region (Myanmar) in Paung Laung reserve forest and FRI. Paung Laung integrated watershed plantations are being established with the community participation.
2. It is need to share knowledge and information to cultivate agroforestry methods at Taungya plantations of local people in Paung Laung watershed area, making organic compost and the effect of organic compost, the income of systematic agroforestry methods.

**Objectives**

3. This training was established for the following objectives.
  - a. To reduce the soil degradation in watershed plantation and Taungya system by systemic cultivation.
  - b. To know sound effect and making the natural organic fertilizer in seasonal crops, perennial crops and forest trees.
  - c. To improve the living standards of local people.

**Training Period**

4. The training was held 3.6.2021 to 5.6.2021.

**Training Place**

5. The training was held Lein Li village, Paung Laung town, Pin Laung Township.

**Opening ceremony of the training**

6. The detail agenda of the training is attached in the appendix (1).

**The person who are invited to the training**

7. The list of invited person to the training is attached in the appendix (2).

**Organizing the training**

8. The following persons are assigned to organize the training.

- |                        |               |
|------------------------|---------------|
| 1. U Tin Than Myo      | Chairman      |
| 2. Dr. Thant Shin      | Vice-chairman |
| 3. Dr. Tual Cin Khaing | Member        |

4.	U Aung Zaw Moe	Member
5.	Dr. Mu Mu Aung	Member
6.	Dr. Yu Ya Aye	Member
7.	Dr. Ei Ei Swe Hlaing	Secretary

### **Training Courses**

9. Training courses are followings-
  - a. Demonstration how to plant in watershed area
  - b. Demonstration how to systematically plant Konjac.
  - c. Explanation how to make the natural organic compost.
  - d. Explanation and demonstration to plant long-term crop plantation and ladder farming in watershed area
  - e. Explanation to develop the economy of local people.

Time table of training will be attached in Appendix (3).

### **On ground training**

10. Practice how to systematically plant in watershed area and how to create A Farm method along Contour due to the condition of soil and slope of the hill.
11. **Dr. San Win** participated in the training as a Trainer.

### **List of Trainees**

12. Project chose 60 participants who are participated in establishing watershed agroforestry plantations and trained the only 20 participants for single day. The detail participant lists are attached in the appendix (4).

### **Summary of Training**

13. (A) For Konjac planting in agroforestry of watershed area, the distance should be 20 inches  $\times$  20 inches or 2 feet  $\times$  2 feet systematically should avoid Konjac planting around the seasonal crop farmland. Top soils in Taungya Plantations are about 4 inches, therefore, 2 Pyi (0.32 cubic feet) of organic compost should be filled before planting as roots of Konjac plants are growing into the soil. Konjac can grow well if organic compost will be filled during planting. Before planting, vinegar product from bamboo should be used to eliminate insects that kill roots in the ground and produce fertilized bacteria for plants. In making natural compost, leaves, bamboo leaves, branches, soil, animals feces (like feces of goat, cow, horse and buffalo) and vinegar have to be mixed in planting pit of 10'  $\times$  10'  $\times$  1'. After putting, close all over the pit and press with some weight for two months. Natural compost should be already prepared before planting. Making natural compost include the essential nutrients for plants and low cost. So, yield of crops will be increased. For planting farmlands on the deep slope of hill, bamboos should be cultivated with the distance of 9' $\times$ 9' at the base of the slope. Konjac should be planted in wet places with the distance of 20" $\times$ 20" or 2' $\times$ 2' above the base of the slope. Turmeric should be planted at the middle of the slope. At the top of the hill, drought tolerant trees species like

Padauk, should be planted and at the base, water resistant tree species like banana, Ma-U ( Ma-U- lat- tan- to and Ma- U- lat- tan- shae) should be cultivated. Ladder farming is the most suitable farming in the mountain farming. Ladder farming can reduce soil erosion and collect or deposit the top soil that running out with water. In ladder farming, long term plants and paddy can be cultivated.

(b) Although agriculture is the main economy of local people, most of them have not enough effort in cultivation and they cannot use well the natural forest products. So, the trainer encourage the participants to develop their socio-economic by making live-stocks, cultivating intercropping, producing products of bamboos (bamboo shoots) and Na-Nwin for export quality, making broom sticks and producing fish paste.

(c) Increasing ecotourism like establishing restaurants, petrol stations, selling the local products is one of the ways to develop the living standards of local people.

## **Discussion**

14. Local people asked the project to support the vinegar from bamboo and feces of cow, to provide loan for livestock farming and to provide technology for producing export quality of local products and the project will provide the turmeric grinding machine for packing the export quality of turmeric. And then, in the third budget year of the project, 2021-2022, the project will arrange the craft training and will support the inter-crop species to plant in Taungya Plantations.

## **Cost for Training**

15. Training cost was funded by the integrated forest ecosystem management and demonstration project in greater Mekong sub-region (Myanmar), APFNet.

## **Travel Arranging**

16. Travelling to Leinli village of trainers, training supervisors and project staffs were arranged by hiring car.

## **Preparing Ceremony**

17. Local people from Leinli village had managed for backdrop, seating plan and audio devices arranging.

## **Hospitality**

18. Hospitality for training was arranged by U Tin Shwe, the villager of Leinli village.

## **Documentary**

19. Photo documentary and training records were taken by Project Assistant of FD- APFNet (IFEM) Project.

- (1) Making name list. Group of recording name list was making the attendance of trainees and giving the update information of training.
- (2) Documentary. Group of documentary was taking photos and note records. Photo records will be attached in Appendix (5).

## **Conclusion**

20. 70% of Myanmar people are living in rural area and most of them are depending on forest resources and agriculture. This training will help to develop the socio-economic, living standards and job opportunities of local people in watershed area and to recover watershed forest by planting Taungya plantation.

**"Onsite Training of Agroforestry in Watershed area "**

**Agenda for Opening Ceremony  
3-6-2021 (Thursday)**

<b>.No</b>	<b>Time</b>	<b>Agenda</b>
1	09:00-09:30	<b>Agenda for Opening Ceremony</b>  (1) Announcing for opening ceremony  (2) Talking opening speech by Director of FRI  (3) Announcing for ending of opening ceremony  (4) Photo Documentary  (5) Tea Break

**“Onsite Training of Agroforestry in Watershed area ”****Invited Persons**

	<b>Name</b>	<b>Department</b>	<b>Number</b>
1	Director, Deputy Directors and Assistant Directors	Forest Research Institute, Yezin	5
2	Range Officers, Rangers and Forest Staffs from Forest Department, Pinlaung Township		5
3	Trainees	Leinli Villagers	20
<b>Total</b>			<b>30</b>

**“Onsite Training of Agroforestry in Watershed area ”**

**Time Table (3-6-2021 to 5-6-2021)**

Date/Time	09:00-10:00	10:00-11:00	11:00-12:00		13:00-14:00	14:00-16:00
2021-6-3 (Thursday)	Introduction about project and training	Explanation and demonstrationon planting methods in Watershed area and making organic compost			Explanation and demonstration of systematically Konjac planting	Explanation and demonstration to plant long-term crop plantation and ladder farming in watershed area and explanation to develop the economy of local people
2021-6-4 (Friday)	Explanation and demonstration on planting methods in Watershed area and making organic compost				Explanation and demonstration of systematically Konjac planting	Explanation and demonstration to plant long-term crop plantation and ladder farming in watershed area and explanation to develop the economy of local people
2021-6-5 (Saturday)	Explanation and demonstration on planting methods in Watershed area and making organic compost				Explanation and demonstration of ,systematically Konjac plantingExplanation and demonstration to plant long-term crop plantation and ladder farming in watershed area and explanation to develop the economy of local people	Discussion

**Appendix (4)****“Onsite Training of Agroforestry in Watershed area ”****List of Trainees**

Date: 2021-6-3

<b>.No</b>	<b>Name</b>	<b>Address</b>
1	U Maung Aye	Leinli Village
2	U Myint Than	Leinli Village
3	U Win Thu	Leinli Village
4	U Kyaw Than	Leinli Village
5	U Than Win Kyi	Leinli Village
6	U Hla Win -2	Leinli Village
7	Daw Thae	Leinli Village
8	U Zaw Min Htwe	Leinli Village
9	U Zaw Min Latt	Leinli Village
10	U Toe Lin Oo	Leinli Village
11	U Aung Ngwe	Leinli Village
12	U Thein Htike	Leinli Village
13	U Myint Swe	Leinli Village
14	U Chit Oo	Leinli Village
15	U Kyaw Soe Min	Leinli Village
16	U Kyaw Soe Win	Leinli Village
17	U Yae Khae	Leinli Village
18	Daw Tin Ngwe	Leinli Village
19	U Kyaw Win	Leinli Village
20	U Maung Htay	Leinli Village

**“Onsite Training of Agroforestry in Watershed area ”**

**List of Trainees**

Date: 2021-6-4

<b>.No</b>	<b>Name</b>	<b>Address</b>
1	Daw Thin Thin Nwe	Leinli Village
2	Daw Aye Chan May	Leinli Village
3	U Aung Myint Kyi	Leinli Village
4	U Zarni Aung	Leinli Village
5	Daw Thuzar Win	Leinli Village
6	Daw Khin Moh Mon Htay	Leinli Village
7	Daw Chit Sabel	Leinli Village
8	U Aung Tin Phyo	Leinli Village
9	U Tin Aung	Leinli Village
10	U Khin Maung Myint	Leinli Village
11	Daw Hla Yi	Leinli Village
12	U San Min Htike	Leinli Village
13	U Naw Lin Aung	Leinli Village
14	U Soe Khaing	Leinli Village
15	U Maung Htay	Leinli Village
16	U Thet Naing Oo	Leinli Village
17	U Swe Hlaing Htun	Leinli Village
18	Daw Wah Kyi	Leinli Village
19	Daw Tin Pyo	Leinli Village
20	U Myo Myint Aung	Leinli Village

**“Onsite Training of Agroforestry in Watershed area ”**

**List of Trainees**

Date: 2021-6-5

<b>.No</b>	<b>Name</b>	<b>Address</b>
1	Daw Mya Win Kyi	Leinli Village
2	U Aung Ko Lin	Leinli Village
3	Daw Sandar Htay	Leinli Village
4	U Khin Maung Win	Leinli Village
5	U Hla Myo	Leinli Village
6	U Kyaw Hmwe	Leinli Village
7	U Aung Kyi	Leinli Village
8	U Soe Naing Oo	Leinli Village
9	U Than Htwe	Leinli Village
10	Daw Than Kyi	Leinli Village
11	U Tin Win-2	Leinli Village
12	U Soe Win	Leinli Village
13	Daw Soe Nandar Kyaw	Leinli Village
14	U Myint Than	Leinli Village
15	U Chit Moe Swe	Leinli Village
16	U Maung Aye	Leinli Village
17	U Chin Lay	Leinli Village
18	U Nyunt Win	Leinli Village
19	U Win Thu	Leinli Village
20	U Kyaw Min Naing	Leinli Village

**Photo Documentary**



**Going to Taungya Plantations**



**Explaining about topography and soil situation of Taungya Plantations**



Demonstrating about A Frame method for ladder plantation on the slope





Demonstrating digging along contour lines for ladder planting





Demonstrating how to make organic compost



Discussing to improve living standard and socioeconomic of local villagers



Photo Documentary