

# Proceedings of

Training Workshop  
on

## Technology Extension through Field Demonstration of Forest-based Livelihood Options

13<sup>th</sup> March, 2016

Venue - Gournagar, Khowai  
Khowai District Tripura



Organized by



### **CENTRE FOR FOREST-BASED LIVELIHOODS & EXTENSION**

SHAL BAGAN FOREST CAMPUS, P O – GANDHIGRAM, AGARTALA - 799012, TRIPURA

A Unit of Rain Forest Research Institute, Jorhat (Assam)

*In Collaboration with*

### **PANCHAI FARMERS' CLUB**

Guchamura, P.O- Bamutia, Sub-Div- Sidhai Mohanpur, Tripura (West), 799211.



## INTRODUCTION

Centre for Forest-based Livelihood & Extension (CFLE), Agartala is an organization under RFRI (ICFRE) that imparts training to utilize the natural resources found in an area/region in a sustainable manner, to help the people residing in those remote areas to generate their livelihood.

The training workshop was organized by CFLE in collaboration with Panchai Farmers' Club, Guchamura. The content and activities of the workshop was designed in such a way that it encourages the rural farmer to earn the livelihood from natural resources in sustainable eco-friendly manner.



## ABOUT THE TRAINING WORKSHOP:

The attempt was to help the farmers realize their potentialities which can be tapped and nurtured through scientific interventions. The main aim was to guide and provide training to the farmers in the remote in-situ areas through hands on training and field demonstration with the help of field level expert team.

Farmers learn best when they find interest in what they are being demonstrated with. Agriculture is the essence of farmers in their profession. It is in this way that the farmers explore and relates to the actual market demand. The workshop intended to provide a stress free training environment, where the farmers learn through two-way learning process expressing themselves in more casual and liberal state of communication with the trainers.



VENUE OF THE TRAINING WORKSHOP

: Gournagar, Khowai Tripura.

TRAINING WORKSHOP CONDUCTED BY

: Centre for Forest-based Livelihood & Extension in collaboration with Panchai Farmers' Club.

RESOURCE PERSONS

: Pawan K Kaushik, Regional Director, and Atanu Saha, DCF, CFLE, Agartala.

DATE OF WORKSHOP

: 13th March 2016

NUMBER OF PARTICIPANTS

: 60 Participants.

NUMBER OF MALE PARTICIPANTS

: 41

NUMBER OF FEMALE PARTICIPANTS

: 19

## **PROGRAM OBJECTIVES**

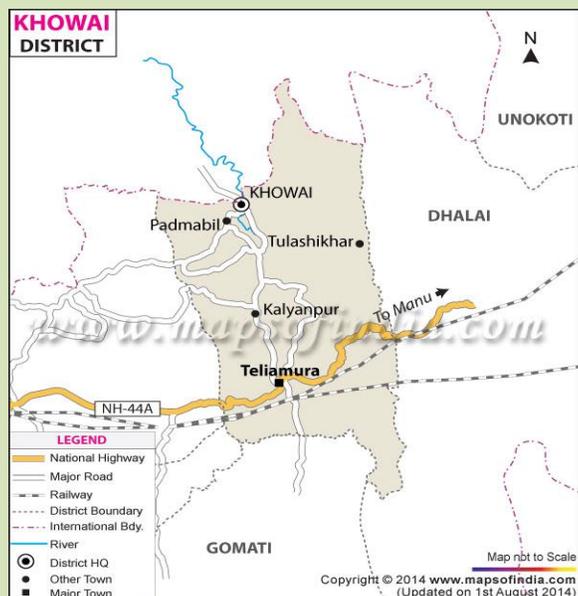
- Enhance understanding of poverty and available livelihood options
- Income generation through readily available natural resources
- Conservative and scientific usage of natural resources for sustainable livelihood
- Creating revenue generating opportunities through use of NTFPs
- Encouraging self determination through entrepreneurship development
- Usage and promotion of locally available medicinal herbs and plants

## **SCHEDULE OF TRAINING WORKSHOP**

- ❖ **Congress of the Training Workshop: 9.00 am**
- ❖ **An oration by Regional Director, CFLE, Agartala**
- ❖ **Visual Presentation on the issues related to the Training Workshop**
- ❖ **Class on the technology of producing vermicompost**
- ❖ **Practical demonstration on Low Cost Vermicomposting**
- ❖ **Tiffin break: 11.00-11.30 am**
- ❖ **A speech by the technical experts, CFLE on Bamboo Treatment**
- ❖ **Practical demonstration on bamboo treatment**
- ❖ **A lecture on Bamboo Propagation & Bamboo Nursery**
- ❖ **Field demonstration on bamboo propagation**
- ❖ **Lunch break: 14.00-14.45 pm**
- ❖ **Lecture on medicinal plants and their benefits**
- ❖ **Practical demonstration by developing an herbal garden**
- ❖ **A lecture on Broom Grass cultivation**
- ❖ **Practical demonstration on broom grass cultivation**
- ❖ **Encouragement and motivation for entrepreneurship development**
- ❖ **Interactive session**

## PROFILE OF PARTICIPATING COMMUNITIES

**Khowai** is a town located in the Indian state of Tripura and a recent nagar panchayat forming into a Khowai Municipal Council in newly formed Khowai district of the state with a geographical area of 1378.28 km<sup>2</sup>. The city lies on the banks of Khowai River and hence from the name of the river, the city gets its name. Located near the Bangladesh border it has international boundaries with it on its entire Southern part. As of 2001 India census, Khowai had a population of 17,621. Males constitute 51% of the population and females 49%. Khowai has an average literacy rate of 86%, higher than the national average of 59.5%: male literacy is 88%, and female literacy is 85%. The town mainly consists of Bengalis and Tripuris, predominance of both Bengali and Kokborok language is there.



The technical aspects of training have wide scope to be extended in the both rural and urban areas of the district. The communities are also observed to be receptive to the new ideas and techniques for their livelihood development.

Total number of participants was 57 under different categories as detailed below:

Sl. No.	Caste	Number of Participants
01.	OBC Bengali/ Manipuri	34
02.	ST Munda/ Jhara	20
03.	SC Bengali	05
04.	UR Bengali	01

## GENDER PROFILE OF PARTICIPANTS

Sl. No.	Particular	Number of trainee
1.	Male	41
2.	Female	19

## **ASPECTS OF THE TRAINING PROGRAM**

The training workshop was on **Technology Extension through Field Demonstration of Forest-based Livelihood Options in Khowai District of Tripura**. The main aim of the training workshop was to promote the sustainable use of readily available natural resources as a pro-poor livelihood activity of the people in the remote areas. In collaboration with PFC (Panchai Farmers' Club) the training was organized at Gournagar, Khowai Tripura. It was envisaged to invite farmers, bamboo growers, craftsmen, from different villages of the district to participate in the workshop and encourage them to share their experiences on producing vermicompost, bamboo treatment process, propagation of bamboo, etc. on their farm lands. During the program, information sharing was given by Regional Director, CFLE, Agartala and DCF, CFLE outlining the objectives of the training workshop. Both audio and video presentations were made during the demonstration session.

The various aspects covered in the program are -

- Low-Cost Vermicomposting
- Processing & Treatment of Bamboo
- Bamboo Propagation Techniques
- Broom Grass Cultivation
- Conservation of Medicinal Plants
- Encouraging Entrepreneurship Development

The workshop was designed in such a way that it directly helps the trainees to earn a sustainable livelihood from natural resources. The training workshop also provided a platform to exchange ideas and sharing of experiences among the experts and farmers in a two-way communication process. The training workshop showcased technologies on the above aspects.

This training workshop also initiated a thought-process amongst scientists and farmers to provide solutions through research and improvised capacity building programme. It also provided an opportunity to bring the farmers, bamboo and medicinal plants growers in a common platform and facilitate them to promote organic agriculture and agroforestry models, commercial cultivation of NTFPs (Non-Timber Forest Products), and other tree farming models in the State. The information about the traditional knowledge of above mentioned activities by the farmers was found to be very useful.

## **LOW-COST VERMICOMPOSTING:**



Vermicompost is an organic fertilizer made from piling various kind of organic waste like cow dung, tree leaves, banana stem etc in a container and then releasing earthworms into the mixture. The earthworms feed on the various ingredients and convert it into a valuable organic product known as ‘vermicompost’. Earthworm consume the dead organic matter, which they grind in their gizzards, thereby increasing its surface area and promoting microbial activity as it passes through their intestine, resulting in microbial degradation of the organic matter under aerobic conditions provided by the earthworms, and hence compost is formed as a stable final product. The earthworms are needed to be reared in proper way and maintaining pH, temperature and moisture is essential to enhance their activity.



The whole process of obtaining manure in this form was demonstrated by the experts through visual aids. A practical demonstration was also given so that the beneficiaries can have a first-hand experience on how to make vermicomposting a cost effective.

## **BAMBOO TREATMENT TECHNIQUE:**

In this process a desired length of bamboo measuring 2 ft to 10 ft is taken and with the help of a pressure based Boucherie machine, CCB chemical is pumped in order to insert into the bamboo culm wall to replace the sap inside.

The process helps in increasing the longevity of the bamboo as it protects from termites and other insects that might eat through and spoil the bamboo. The whole process of bamboo treatment was practically demonstrated and explained by the DCF, CFLE, Mr. Atanu Saha and his technical assistants. The livelihood need based training would help the farmers in earning additional income besides conservation of bamboo resource in the locality.



## **BAMBOO PROPAGATION TECHNIQUES:**

The resource persons explained the bamboo propagation techniques through practical demonstrations for setting up a bamboo nursery during this session. The important steps and necessary precautionary measures that need to be taken to manage a successful bamboo nursery were also explained through visuals. The farmers were explained and demonstrated in detail and following three methods of bamboo propagation were explained to them:

1. through branch cuttings,
2. culm cuttings and



### 3. macroproliferation techniques.

The Producer Group as proposed by the club will provide a platform for the Bamboo Growers to establish Community Livelihood Nurseries (CLNs). These CLNs will also be helpful to supply other plant materials for agroforestry models, commercial cultivation of NTFPs in the locality in future.



#### **BROOM GRASS CULTIVATION:**

This part of the training was primarily targeted towards the women participants mainly housewives so that they can generate an additional source of income for their families. Women were encouraged to cultivate the broom grass on small patches of lands near households so that at least they can manufacture brooms for their own use and market the surplus material if any for an additional profit. While conducting this part of the training, we noticed an avid interest among the female participants present in the training workshop.

#### **CONSERVATION OF MEDICINAL PLANTS:**

Training was also imparted on the cultivation and conservation of medicinal plants. Local healthcare remedies were encouraged. This knowledge of medicinal uses of herbs has been passed on through generations and thus needs to be preserved. Plants such as *Aloe vera* have already proven their potential in national and international markets. Thus, apart from the usage of medicinal plants to cure various ailments, it was also stressed that cultivation of medicinal plants can also be a huge source of income generation in the near future. Finally, the training was ended by planting a few herbal plants like *Aloe vera*, *Emblica officinalis*, *Bryophyllum spp.* etc. in a local home garden.

#### **ENCOURAGING ENTREPRENEURSHIP DEVELOPMENT:**

All the aspects that were discussed and pondered upon in the training workshop, ample stress was given to the idea of entrepreneurship development. Considering the present situation in the state which unfortunately lacks sufficient employment opportunities, entrepreneurship can prove to be a boon to the local populace. For a person to become an entrepreneur he/she needs certain specific skill sets, opportunities to receive financial support, a clear goal in mind and finally the support of family and friends. It is believed, this training programme would provide skills to the participants

that might encourage entrepreneurship. Details and guidelines were also provided to the participants regarding various state and central government schemes that might help them realize their goals. The success stories on efforts taken for developing market linkages for vermicompost, bamboo craft, etc were also presented through audio visuals. The farmers expected prior notice on events such as trade fairs and handloom fairs where in they could showcase their locally produced products.

## **FEEDBACK**

Feedback from participants was sought after the Q & A session, regarding their willingness to adopt some of the technologies that were demonstrated to them during the training workshop. The encouraging, ecstatic expression among the participants was significantly observed. Hence the willing participants who were interested to take up various technological options were listed and made into different groups based on their preferences. The CFLE team negotiated with them for role and responsibilities of all the participating groups.

- ✓ Low cost Vermicomposting: interested participants were assured of getting plastic sheets and earthworms from CFLE, Agartala. Rest of the materials and labor for fabrication and raw materials for operationalization have to be managed by the beneficiaries of their own as decided.
- ✓ Bamboo treatment and propagation: Beneficiaries were assured of the setting up of a Bamboo Treatment Centre in the area by CFLE by installing Boucherie machines. The low cost treatment tanks will be installed by the group.
- ✓ The group interested in bamboo propagation techniques would be helped by providing starting material in form of bamboo mother plants etc.
- ✓ Medicinal plants: The group interested in medicinal plants was assured of necessary technical support regarding setting up of Herbal Gardens by providing plant materials and other knowhow.
- ✓ Broom grass cultivation: The women who showed great enthusiasm regarding the broom grass cultivation were assured to provide with plant materials.

**DETAILS OF THE REGISTERED PARTICIPANTS**

<b>Sl.no.</b>	<b>Name of the participants</b>	<b>Address</b>	<b>Contact number</b>
01.	Amak Kumar Datta	Gournagar	9402132332
02.	Kulachandra Datta	Gournagar	
03.	Sanjoy Roy	Gournagar	
04.	Bhada Munda	Gournagar	
05.	Sukra Munda	Gournagar	
06.	Laxminarayan Roy	Gournagar	
07.	Sima Deb Roy	Majunderpara	9612315136
08.	Dilip Munda	Gournagar	
09.	Krishna Kumar Datta	Gournagar	
10.	Sumari Munda	Gournagar	
11.	Bodhini Munda	Gournagar	
12.	Jharna Deb	Gournagar	
13.	Monuranjan Deb	Gournagar	
14.	Ujjala Sarkar	Gournagar	
15.	Sushil Munda	Gournagar	
16.	Pancham Singh	Gournagar	
17.	Nimay Sharma	Gournagar	9774251853
18.	Mongal Jhara	Gournagar	
19.	Prakash Singh	Gournagar	
20.	Surala Datta	Gournagar	
21.	Sani Jhara	Gournagar	
22.	Bhada Munda	Gournagar	

23.	Dilip Munda	Gournagar	
24.	Sishu Munda	Gournagar	
25.	Fani Singh	Gournagar	
26.	Sima Debroy	Gournagar	
27.	Nibaran Munda	Gournagar	
28.	Suma Rani Rudra Paul	Gournagar	
29.	Kalpana Sarkar	Gournagar	
30.	Sabritri Sarkar	Gournagar	
31.	Dhabini Munda	Gournagar	
32.	Rekha Munda	Gournagar	
33.	Maya Munda	Gournagar	
34.	Jayanta Deb	Gournagar	
35.	Banka Bihari Sen	Gournagar	
36.	Niresh Singh	Gournagar	9862962778
37.	Ajit Sarkar	Gournagar	8730033054
38.	Nileshwar Sharma	Gournagar	
39.	Hiranmoy Datta	Gournagar	9862627659
40.	Mahato Munda	Gournagar	
41.	Sanjit Munda	Gournagar	
42.	Jhata Munda	Gournagar	9774772747
43.	Ananda Kumar Datta	Gournagar	9862825525
44.	Tapan Kumar Datta	Gournagar	9436515937
45.	Rahul Datta	Gournagar	8974336928
46.	Gourchandra Singh	Gournagar	7085148185
47.	Biku Singh	Gournagar	
48.	Ajit Singh	Gournagar	

49.	Sukra Munda	Gournagar	
50.	Basanti Sarkar	Gournagar	
51.	Menaka Datta	Gournagar	
52.	Swapan Datta	Gournagar	
54.	Karuna Datta	Gournagar	
55.	Amita Datta	Gournagar	
56.	Sarala Datta	Gournagar	
57.	Bhupendra Datta	Gournagar	
58.	Dipankar Roy	Gournagar	
59.	Rina Muda	Gournagar	
60.	Khukan Jhara	Gournagar	

**WILLINGNESS OF THE PARTICIPANTS TO FORM VARIOUS GROUPS OF DIFFERENT LIVELIHOOD OPTIONS**

<b>Sl.No</b>	<b>Vermicompost Producer Group</b>	<b>Bamboo Plant Material Producer Group</b>	<b>Treated Bamboo Producer Group</b>
01.	Manuranjan Sarkar	Mongal Jhara	Rekha Munda
02.	Dilip Munda	Kula Ch. Roy	Maya Munda
03.	Bhada Munda	Sushil Munda	Sukra Munda
04.	Amal Kumar Datta	Sanjit Munda	Ujjala Sarkar
05.	Dhabani Munda	Ajit Sarkar	Sumari Munda
07.	Nibaron Munda	Jatha Munda	Sima Deb Roy
08.	Mahato Munda	Sishu Munda	Kalpana Sarkar
09.	Jayanta Deb	Biku Singh	Basanti Sarkar
10.		Rahul Datta	Rina Munda