Proceedings of the training of survey enumerators, and quality assurance and quality control team members for the socio-economic component of the Bangladesh Forest Inventory

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The Forest Department of Bangladesh leads actions to improve forest management and conservation, adopting forward thinking, innovative approaches in its management of approximately 1.55 million hectares of land across the country.

In 2015, the Forest Department began a process to establish a National Forest Inventory and Satellite Land Monitoring System for improved forest and natural resource management. The process supports national objectives related to climate change mitigation and provides information in support of the UN-REDD programme aimed at Reducing Emissions from Deforestation and Forest Degradation (REDD+). The process also addresses domestic information needs and supports national policy processes related to forests and the multitude of interconnected human and environmental systems that forests support.

The activities implemented under the Bangladesh Forest Inventory process are collaboration between several national and international institutions and stakeholders. National partners from multiple government departments and agencies assist in providing a nationally coordinated approach to land management. International partners, including the United Stated Agency for International Development (USAID) and the Food and Agriculture Organization of the United Nations (FAO) are supporting the development of technical and financial resources that will assist in institutionalizing the process.

The results will allow the Forest Department to provide regular, updated information about the status of trees and forests for a multitude of purposes including for assessment of role of trees for firewood, medicines, timber, and climate change mitigation.

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Executive Summary

The Bangladesh Forest Inventory (BFI) aims at regularly assess the status of trees and forest nationally. The BFI is considered a multi-purpose process and will provide sound baseline information on forest and tree resources and related socioeconomic data and will assist the establishment of a long-term monitoring system of forests. The BFI will address domestic information needs as well as international reporting requirements, by improving the availability and provision of necessary data and information (both at national and international level) on timely and regular basis.

With a view to achieve the goal of BFI, A five-day (December 12-14, 2017) training of survey enumerators, and quality assurance and quality control team members for the socio-economic component of the Bangladesh Forest Inventory was organized at Bangladesh Bureau of Statistics (BBS). The objective was to provide intensive training to the enumerators and quality assurance and quality control (QA/QC) members for quality data collection from the field as well as capacitate to do the works. A total of 49 participants (male-37 and female-12 from Center for Natural Resources Studies CNRS (CNRS is hired for conducting the socioeconomic survey through competitive process), Bangladesh Forest Department (BFD), Bangladesh Bureau of Statistics (BBS), Arannayk Foundation, Khulna University, Chittagong University and FAO) attended the five days training. The training was organized in 12different sessions and the agenda is provided in annex 1. Enumerators were trained about field data collection through paper and tablet form from the household interview, interview techniques, using the GPS for locating household to interview, map reading, land cover class, ecosystem services from tree and forest resources. In addition, eight QA/QC members were trained to ensure quality check during the data collection through paper and tablet form. The training materials will be available as a book titled "Training materials for the socio-economic component of the Bangladesh forest inventory-concepts, planning and procedures".

Training to the socio-economic enumerators is important for the effective data collection as well as ensuring the quality of data. The enumerators learned about quality data collection through using paper and tablet form. The QA/QC will perform quality assurance and quality control of present socioeconomic survey as well as contribute in future

Contents

Acronyms

BBS	Bangladesh Bureau of Statistics
BFD	Bangladesh Forest Department
BFI	Bangladesh Forest Inventory
CNRS	Center for Natural Resource Studies
ES	Ecosystem Services
FAO	Food and Agriculture Organization
GPS	Global Positioning System
QA/QC	Quality Assurance and Quality Control
REDD+	Reducing Emission from Deforestation and Forest Degradation
USAID	United States Agency for International Development

1. Introduction

Trees and forests play an important role for the livelihoods of people by providing numerous ecosystem services (ES) such as food, timber, energy, fodder, water and recreation (ref). At present, the available resources and demand for tree and forest products and services in Bangladesh are not well known, and thus are not properly reflected in the country's national accounting system. To quantify the value of ES and interaction between people and tree/forest resources, a consistent, replicable and cost-effective approach is required. In this context, the Bangladesh Forest Department (BFD), with the technical support of Food and Agriculture Organization of the United Nations (FAO) and financial support from the United States Agency for International Development (USAID), is implementing a project named "Strengthening National Forest Inventory and Satellite Land Monitoring System in support of REDD+ in Bangladesh". Under this project, BFD has launched the Bangladesh Forest Inventory. The BFI aims at regularly assess the status of trees and forest nationally and will provide sound baseline information on forest and tree resources and related socioeconomic data as well as assist the establishment of a long-term monitoring system of forests.

With the objective to well understand the dynamics between natural resources, forest and the people, the BFI data collection is based on two components (i) biophysical, i.e. the inventory of tree and forest resources, and (ii) socio-economic, i.e. socio-economic survey. Integration of biophysical and socio-economic information will provide better understanding on the ES and the functional relationship between people, tree and forest resources, and thus contribute to national policy and strategy processes and forestry planning.

The biophysical data and information are currently being collected through a comprehensive nationwide inventory of forest and tree resources by dividing the whole country into five forest zones, namely, Hill, Sal, Coastal, the Sundarbans and Village. The socio-economic survey will be conducted in the same zones to a total of 6400 households. The survey will also include 100 focus group discussion (FGD).

For conducting the socio-economic survey, FAO has hired the Centre for Natural Resource Studies (CNRS) as the Service Provider (SP) through a competitive bidding process. The SP will do the survey with five teams, each containing four enumerators and a team leader.

To monitor the work of the survey teams and the progress of the socio-economic survey as well as to maintain the high quality of data collected, five teams with two experts in each team are formed for quality assurance (QA)/quality control (QC) are formed. The team members come from the Bangladesh Bureau of Statistics (BBS), Bangladesh Forest Department (BFD), Dhaka University (DU), Chittagong University (CU), Sylhet University, Khulna University, and Arannayk Foundation (AF).

FAO has organized a training event for the socio-economic survey and QA/QC team members so that they can carry out their respective tasks efficiently. The training agenda is presented in Annex 1.

2. Objectives of the training

The objectives were to:

- Inform the socio-economic survey enumerators and team leaders as well as and QA/QC team members their respective roles and responsibilities;
- Train the enumerators and team leaders to do the household (HH) surveys and FGDs, and submit the collected data and information to FAO efficiently and in a transparent manner, and;
- Train the QA/QC team members on how to do their tasks.

This proceedings reflect the training activities provided to the socioeconomic survey enumerators and QA/QC members during 10-14 December 2017 by Food and Agriculture Organization (FAO) in collaboration with Forest Department held at BBS. The training sessions are described below.

3. Activities

3.1. Day 1: Opening session, survey objectives, and organization of the survey

Date: December 10, 2017 (1st half)

The five days training session was started with a welcome speech by Nikhil Chakma, Socioeconomic consultant and described the objectives of the training. Further he mentioned the agenda of the training and participants introduced themselves. Representative from CNRS, BBS, Forest Department and FAO were attended at the opening session. Mr. Abdullah Al Mamun Chowdhury presided over the opening training session.

During the opening session, Anatoli mentioned that Bangladesh Forest Inventory has two major components (1) biophysical and (2) socioeconomic. Biophysical already started to collect the field data from different five zones (Sal, Hill, Coastal, Sundarbans and Villages) and socioeconomic data will be collected from the same zones. In addition, land cover and GHG component is also important for the Bangladesh Forest Inventory. Further she mentioned to receive the socioeconomic training to the enumerators so that quality data collection can be ensured.

Mr. Abdul Kadir Miah (Director, BBS) expressed sincere gratitude to forest department and FAO to organize the socioeconomic training session at BBS and mentioned that BBS has outstanding experiences regarding the socioeconomic data collection as well as national entity to disseminate the statistics. He instructed the enumerators the use of quality data and data collection from the field. He further expressed forest related socioeconomic data will assist to calculate the contribution of forestry sector at GDP.

 Mr. Anisul from CNRS welcomed and gratitude to the forest department and FAO for selecting as service provider to conduct the national socioeconomic survey of Bangladesh Forest Inventory. He mentioned that CNRS has long history for conducting socioeconomic survey related to tree and forest resources as well as ensuing the quality data collection. He further expressed that enumerators will be trained through this session and CNRS will also provide training in depth for detail understanding.

Dr. Abdullah Al Mamun Chowdhury, from FAO welcomed to the participants to receive the socioeconomic training. He mentioned both indoor and outdoor training session will be provided to the participants. New

technology will be used to collect the socioeconomic data collection. For examples, OpenForis software using tablets, GPS for locating HH interview, land cover map to identify from where tree and forest products are collected. There is no way to collect fake data from the field as we are tracking the HH location using GPS, data submission through tablet etc. Further he hoped that CNRS will collect quality data to fulfill the project objectives as well as mitigate the demand for tree and forest resources data in Bangladesh. Finally, he thanked the participants to attend the training session and opened the training session.

After basic and introduction session, Mr. Nikhil briefed about training course, objectives of Bangladesh forest inventory, socioeconomic survey objectives. Then Mr. Rajib Mahamud described ecosystem services from the tree and forest resources. The participants learned about different types of ecosystem services (provisioning) from the tree and forests. Survey design, zones, organization of the survey, duties and responsibilities of enumerators also illustrated during the 1st of Day 1.

During the second half of day responsibilities of QA/QC members, definition and concept of socioeconomic survey variables were discussed. In addition, field survey protocol, general instructions to fill in the survey questionnaires were discussed.

3.2. Day 2: Survey questionnaire, use of GPS, land cover class and data integration

Mr. Rajib briefed the day 2 programme after facilitating the day 1 recap. Then survey manual and questionnaire were handed over to the participants. Mr. Nikhil facilitated how to fill in the survey questionnaire according the identified criteria following the survey manual. The paper form survey questionnaire including zone specific questions were intensively discussed during the 1st half of day 2.

At the second half, Mr. Rajib introduced how to use GPS for locating the HH location, how to navigate, inserting GPS coordinate into the GPS device as well as maintenance. Participants were able to use GPS for navigating the coordinates. Then Mr. Rashed took training session on map reading, components of maps as well as identifying land cover in the map. After training the session, participants exercised to identify land cover, map scale and map coordinates.

Participants also informed use of field data, data integration and operation of tablet for field data collection. Mr. Falgoonee facilitated the use of
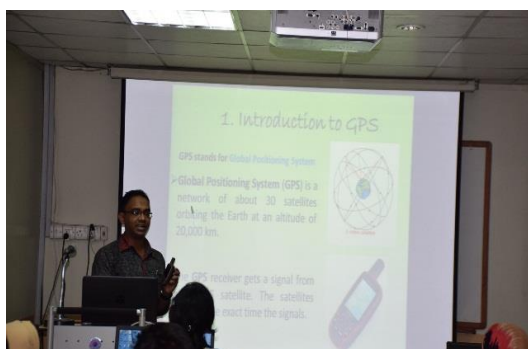

Figure 2: Mr. Rajib is showing how to use GPS device to the participants in the training program

Figure 1: Mrs. Shrabanti Hira is presenting different land cover class to be used for socioeconomic data collection during the training session

OpenForis software through tablet survey, importance of tablet survey. The participants learned use of tablet for socioeconomic data collection.

3.2. Day 3: Data collection through tablet

Mr. Falgoonee facilitated the day 2 session before going to day 3 session. He briefed discussed again operation of OpenForis in the tablet. Then enumerators exercised OpenForis data collection using tablet. Then participants spent 1st half of the session for attending the launching ceremony of socioeconomic survey of BFI where team leaders of survey enumerators received training materials from the Guest of Honors.

During the 2nd half of the 20 tablets were distributed to the enumerator for intensive exercises along with paper based form. Both English and Bengali version questionnaire were provided for in-depth understanding. The enumerators were well known to both paper and tablet survey form. They also learned how to extract survey data from the tablets and submit to data into OneDrive /Dropbox or stored in memory sticks.

3.2. Day 4: Practical exercise in the field

Field visit was organized at Mirzapur union of Gazipur sadar, Gazipur to acquire the practical knowledge of socioeconomic field data collection using both paper and tablet survey. The enumerators were divided into 5 groups. During the first half Mirzapur union and land cover maps (including GPS coordinates) were supplied to the groups. Participants were able to identify their location using GPS in the map, navigate the survey location before going to the present GPS coordinates. After learning the GPS in the field, then enumerators went to survey location point through navigation and found the location.

Then each group went to the households for interviewing. QA/QC team also participated during the household interview. Each group practiced both paper and tablet survey in the field. The enumerators gathered practical knowledge for socioeconomic data collection through using paper and tablet form. In addition, spot instructions were provided to each enumerator for data collection.

Figure 3: Identifying the coordinates in the field through GPS device

Figure 4: Household interview through using tablet in the field

3.2. Day 5: Feedback session

Day 4 recap was facilitated by Nikhil. The enumerators shared the field experiences on socioeconomic data collection. Experiences of FAO field survey was also shared to the participants. QA/QC members also shared their experiences. After sharing the field experiences question and answer session (both paper and tablet) was carried to avoid any confusion during the data collection.

Feedback session continued before movement plan session. During the movement plan session, the participants understood how to prepare movement plan. After discussion of movement plan, a closing session was held where representative from enumerators (1-male and 1-female) gave their speech about trainings, learning methods and experiences. Mr. Modasser representative from CNRS talked about CNRS experiences about socioeconomic data collection and ensured to collect and submit quality data to FAO and Forest Department. Mr. Abdul Kadir Miah representative from BBS mentioned important of trainings for quality data collection and expressed sincere gratitude to FAO and Forest Department to organize the training programme at BBS and ensured to assist the whole survey implementation. Mr. Nikhil from FAO thanked all the participants including QA/QC members, Forest Department, CRNS and BBS for attending the training session and closed the 5-day training session.

4. Recommendation for next steps

Participants provided some recommendation for smooth implementation of socioeconomic survey, as follows-

- Latest Bengali version of land cover class
- Issue letter from Forest Department for field data collection
- To provide additional GPS to the survey enumerators
- To make some changes of the OpenForis data for smooth operation of tablets Involvement ofBFD people with data management should be increased
- Addition training will be provided by CNRS

5. Conclusion

Socioeconomic survey is one of the important components of Bangladesh Forest Inventory. Effective training to the enumerators and QA/QC members are necessary for quality data collection. The training programme was important where enumerators learned about quality data collection through using paper and tablet form. This training program was beneficial to develop a pool of expertise in the forest department and other institutions (CNRS, Chittagong University, Khulna University, Arannayk Foundation), who will perform quality assurance and quality control of present socioeconomic survey as well as contribute in future. The participants expressed a lot of interest in learning as well as the experts also tried their best in teaching.

Annex 1: Agenda

Time	Subject	Resource persons	Goal/Comment
Day 1: 10 December			
9.30 – 9.45	Inauguration	Laskar, Nikhil	Guests and CNRS
9.45-10.00	Introduction of the participants	**Nikhil,** Rajib and Falgoonee	
10.00 – 10.30	Brief on training course, ground rules	**Nikhil and Rajib**	Enumerator teams formed
10.30 – 11.00	Bangladesh Forest Inventory Project: What is it about, objectives, biophysical and socio-economic components, time frame	**Nikhil and Rajib**	
11.00 – 11.15	Tea break		
11.15 – 11.45	Ecosystem services: concept and link with socio-economic survey	**Rajib and Nikhil**	
11.45 – 12.10	Socio-economic survey: what is it about, objectives, link with biophysical component, scope, design	**Nikhil, Rajib**	
12.10 – 1.00	Organization of survey implementation, duties and responsibilities of team leaders and field enumerators, what is expected from them	**Nikhil,** Rajib, Falgoonnee	
13.00 – 14.00	Lunch and prayer		
14.00 – 14.30	QA/QC: Duties and responsibility ties of QA/QC experts	**Nikhil,** Rajib and Falgoonee	
14.30 – 15.00	Definition and concept of survey variables	**Nikhil**, Rajib	
15.00 – 15.30	Field survey protocol: how to carry out HH survey	**Nikhil**, Rajib, Falgoonee	Discussion
15.30 – 16.00	How to fill in the HH questionnaire-General instructions	**Rajib and Nikhil**	Discussion
16.00 – 16.30	Information on Day 2	**Rajib**, Nikhil	Discussion
16.30 -	Tea and prayer		
Day 2: 11 December 2017			
9.00 – 9.15	Recap of Day 1	Enumerators	
9.15 – 9.30	Introduction to Day 2 program	**Rajib,** Falgonnee and Nikhil	
9.30 – 10.00	Fill in HHs questionnaire: Criteria 1 and 2	**Nikhil**, Rajib, Falgoonee	Discussion on each question and role play
10.00-11.00	Fill in HH questionnaire: Criteria 3	**Rajib and Nikhil**	Discussion on each question and role play
11.00 – 11.15	Tea		

Time	Subject	Resource persons	Goal/Comment
11.15 – 12.00	Fill in HH questionnaire: Criteria-4, 5, 6, 7 and 8	**Rajib, Nikhil**	Discussion on each question and role play
12.00-12.30	HH zone specific questions	**Rajib and Nikhil**	Discussion on each question and role play
13.00 – 14.00	Lunch and prayer		
14.00 – 14.30	Use of GPS	**Rajib** and Falgonee	To identify the HH location
14.30 – 15.00	Land cover classes	**Rahsed,** Hira, Nikhil, Rajib	Enumerators will learn how to identify land cover classes
15.00-15.30	Map reading	**Rahsed,** Hira, Nikhil, Rajib	Enumerators will learn how to identify land cover classes
15.30– 16.00	Integration between biophysical and socio-economic information	**Rajib** and Nikhil	
16.00-16.45	Introduction of tablet and Open Foris and uses	**Falgoonee**	Team exercise
16.45 -	Tea and prayer		
Day 3: 12 December 2017			
9.00 – 9.15	Recap of Day 2	Enumerators	
9.15 – 10.30	Doing HH survey with tab	**Falgooni,** Rajib	Team exercise; Enumerators will fill in questionnaire using tabs for practice
10.30 – 13.15	Launching of the socio-economic survey	**Nikhil,** Dr Mamun and Dr Laskar	To be held at the Korobi, Bana Bhaban, Agargaon, Dhaka,
13.15 – 14.00	Lunch and prayer		
14.00 – 14.45	Doing HH survey with tab	**Falgoone**e, Nikhil	
14.45 – 15.45	Role play of HH interview paper based	**Nikhil and Falgoonee,**	
15.45 – 16.45	Role play of HH survey tablet based	**Falgoonee** and **Nikhil**	
16.45 -	Tea and prayer		
Day 4: 13 December 2017			
7.30 – 17.30	Trail of socio-economic survey by enumerator teams, and QA/QC	**Nikhil,** Laskar Falgooni, Mariam, Zaheer, Kris	In Gazipur; Each team will identify survey points using GPS and HHs, do HH

Time	Subject	Resource persons	Goal/Comment
			surveys. Lessons learned will be compiled by enumerators; QA/QC will be carried out by experts
Day 5: 14 December 2017			
9.00 – 9.15	Recap of Day 4	Enumerators	
9.15 – 11.00	Sharing of lessons learned by enumerators and challenges	Enumerators	To be done in teams
11.00 – 11.15	Tea		
11.15 – 11.30	Lessons from field testing done by FAO	**Nikhil,** Falgoonee	
11.30 – 12.00	Lesson learned from QA/QC expert	QA/QC expert	
12.00 – 13.00	Questions and answer regarding the questionnaire and tablets	**Falgoonee,** Nikhil	
13.00-14.00	Lunch and prayer		
13.00 – 15.00	Questions and answer regarding the questionnaire and tablets	**Falgoonee,** Nikhil	
15.00 – 15.30	Movement plans	**Falgoonee,** Nikhil	Enumerator teams will do movement plan for the survey
15.30-16.00	Training ending formalities	**Nikhil**, Kris, Falgoonee	
16.0-16.30	Tea and end of the training program		

Annex 2: List of Participants

Sl#	Name of participants	Gender	Designation and organization	Mobile number	Email address	Signature
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49	Srabanti Hira	F	FAO			

Sl#	Name of participants	Gender	Designation and organization	Mobile number	Email address	Signature
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