

# Training of Trainers Manual

A Manual for Trainers to conduct GPS Training Program



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# Preface

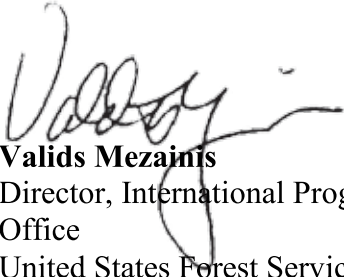
In January 2013, the United States Agency for International Development (USAID), the Bangladesh Forest Department and the United States Forest Service (USFS) began a collaborative project to address capacity needs in geospatial skills for natural resources management for staff of the Bangladesh Forest Department. Through this project, the USFS, together with local partner Center for Environmental and Geographic information Services (CEGIS), developed and carried out a series of workshops and trainings. These manuals consolidate the coursework and materials from three of these trainings:

- 1) Global Positioning Systems (GPS) 1
- 2) GPS 2
- 3) Training of Trainers for GPS

These courses were developed jointly by CEGIS and the USFS and taught by CEGIS. The initial course provided an introduction to maps and hands-on instruction in the use of GPS units. GPS 2 went more in-depth into the GPS technology, providing training in GPS unit operation, data collection, maps, navigation and data storage. The Final course, Training of Trainers, taught a selected group of Bangladesh Forest Department staff how to teach GPS use to their colleagues, with the plan to replicate this training nationwide.

This series of three manuals has been consolidated by CEGIS with input from the Remote Sensing Applications Center (RSAC) and the Flathead National Forest of the USFS. In addition to the course work, the manuals also include valuable reference materials. They can be used as a refresher for participants in these workshops or other workshops on GPS. Students who want to teach themselves about these subjects can also use these manuals as self-guided teaching materials. Finally, these manuals can be used by instructors to teach foresters or others about GPS tools and their applications.

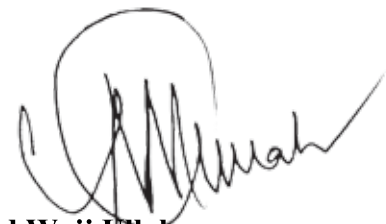
We hope that these manuals are useful to you to refresh and further develop your GPS skills for management and monitoring of natural resources.



**Valdis Mezainis**  
Director, International Programs  
Office  
United States Forest Service



**Janina Jaruzelski**  
Mission Director  
United States Agency for  
International Development /  
Bangladesh



**Md Waji Ullah**  
Executive Director  
Center for Environmental  
and Geographic Information  
Service



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# Introduction

Many teachers/trainers struggle to conduct an effective learning session delivering knowledge and skills matters through a comprehensible presentation or facilitating process. Preparing for delivering a successful learning event to adult audience, presentations and facilitations requires a way of thinking about and engaging the participants in the training process. This is because, only giving information through presentation of learning matters or facilitating the learning sessions do not necessarily mean that the participants will absorb the information with full understanding. A successful learning session through presentation and facilitation ensures that the participants actively participate, share their knowledge, and correctly demonstrate understanding of the subject discussed.

It is expected that the Trainer have strong communication skills, one that are required of a good speaker/lecturer of which ‘making effective presentation’. In addition to that, the Trainer has to facilitate involvement of participants in the learning process; facilitation skill. Therefore, this manual brings together a comprehensive collection of communications strategies for effective presentation and facilitation skills. This manual is divided into four sessions; Setting the Scene for the Training Program, Presentation Skills, Facilitation Skills and General Requirements for the Trainer. In this manual, sessions on the presentation skill and facilitation skill are in general form and describe certain principles and ways how to present and facilitate a lecture, especially the GPS Manual for Forest Management. However Session 4 is specific to GPS where a number of critical, major and general questions on GPS have been dealt with. It is expected that the trainers will have strong grounding in GPS, and have depth of knowledge to accurately answer and explain matters arising from questions on this subject. Though the presentation and facilitation skills are described in general form, however, the trainers should link those skills to present and facilitate the understanding and usage of the ‘Global Positioning Systems (GPS) for Forest Management’ manual. Tips and ideas mentioned here are not intended to put limit on how to teach, rather they are to help the teachers to see and improve their way of teaching. They can grasp the ideas and then deliver their lecture as per their own style.



## Notes to the Trainer

For conducting an effective training session, the following activities need exercised

### 1. Self-preparation

- The 1:3 ratio [‘For every hour of conducting a learning session, there needs to be three hours of preparation’]
- Know the main subject, thoroughly:
  - About GPS and its application; the contents of the manual on GPS usage
  - Do self-tests on the major items in the manual; make your aide notes]
- Know the steps to conduct the training sessions
  - Check with the TOT manual; practice with someone to get a fair feedback;
  - Check the participants’ profile [age, position in job, base territory, gender, experience],
  - Check the presentation slides; check all support items required for session activities;
  - Have a discussion meet with your team of sessions’ Aides
- Check activities and materials required as per checklist;
- Go over the planned activities (before, during and after the sessions) specified for each Aide
- Consider suggestions made by the Aides,
- Check the venue [the physical features of the venue affects training methodology] and adapt the activities of the sessions according to the space available.
- Check functioning of all gadgets to be used in the training session
  - PC- program, multimedia projection, pen drives, instructions to the Aide helping with slide projection, GPS units

### Good to remember

- The training session is of the Trainer and that of the participants. The Trainer, however, being the session administrator, under no circumstances is expected to abandon the training session [due to a participant’s misconduct]

## Good to collect

- Keep a collection of stories /experiences to share with participants where relevant
  - To break monotony in the session
  - To explain a difficult /new concept
  - To encourage response

### 1. Be Confident

- Try not to think too much about the training session you will be conducting.
- Try to overcome any tense feeling by reading a good story from a magazine.
  - Remember, drink only water. Too much sugar from soft drinks/ sweet tea increases glucose level in the blood. This will stress you.
- Be at the training venue at least thirty minutes before the Program start time.
- Check the venue preparation by the Aides.
- Meet as many participants as you can.
  - Get familiar with at least two participants who would be your ‘friendly eyes’ among the participants.

### 2. Start on time.

- Be strict to start all scheduled sessions on time. While this action is practiced by the professional, it is also a self-confidence enhancer.
- Put your best efforts in completing the sessions on time.

**See ToT KIT 1 for suggested Do’s and Don’ts for the Trainer**

# Do's and Don'ts of Training

## ToT KIT 1: Suggested Do's and Don'ts for a Trainer for a Training Session

### DO'S

- Do prepare in advance
- Do provide clear instructions
- Do check to see if your instructions are understood
- Do be patient
- Do speak clearly
- Do speak loud enough
- Do use visual aids
- Do position visuals so everyone can see them
- Do maintain good eye contact
- Do understand the body language of the participants
- Do write clearly and in bold
- Do involve participants
- Do encourage participation
- Do encourage questions
- Do keep the group focused on the task
- Do avoid distracting mannerisms and distractions in the room
- Do summarize
- Do bridge one topic to the next
- Do use logical sequencing of topics
- Do recap at the end of each session
- Do use good time management
- Do K.I.S.S (Keep It Short n Simple)
- Do give feedback
- Do evaluate as you go

### DON'TS

- Don't talk to the flip chart
- Don't block the visual aids
- Don't stand in one spot  
-move around the room
- Don't ignore the participants' comments and feedback (verbal and non-verbal)
- Don't read from curriculum
- Don't shout at participants

## Welcoming the Participants

A representative of the organizing agency or of a participating organization gives a short note of welcome and introduces the Training Expert [TE] and hands over the session to him or her.

- Following that, the Training Expert then takes over.
- The screen to show the Welcome slide
  - Introduce yourself
  - Introduce the Session Aides as your colleagues
- Makes a good humored statement on any relevant topic  
*[Try a personal story on a tradition which is light and funny]*
- Be sensitive to participants' values



## **Session-1:**

# **Setting the Scene for the Training Program**

### **Objective :**

- To make a participant friendly/favorable learning atmosphere
- To know the Participants' expectation from the Training Program
- To develop Team work essence for any assignment

**Duration :** 60 minutes

## Participants get to know each other

Participants get to know each other using an icebreaker method. This is used in an effort to set up a favorable environment for group interaction, and a supportive environment for individual participation.

- Participants introduce each other
  - The TE conducts the introductions
  - The participants to identify themselves as 1 or 2 or 3 or 4, serially, as the TE takes the counting roll starting from the participant on his/her right or left.
  - The participants are given appropriate #Card to pin-on.
  - TE forms pairs of Participants 1 & 2, 3 & 4, serially. If anyone is left without a pair mate, the TE fills in. The Session Aides take part as well.
  - Participants' pairs are given 5 minutes to know
    - each other's nick name
    - one interesting fact, about each other
    - what each finds boring in a training session.
  - TE or the Session Aide announces time over [by gently tinkling a pen /pencil against a water glass]
  - TE then conducts the introduction by pairs. [The Facilitator can start the introduction by talking about his/her pair mate]
  - TE and SA note all the items on what the Participants found to be boring in a training program
  - TE and participants interact on some of the 'stated boring elements' in a congenial manner [See example ToT Kit 2]
  - As the activity ends, every one claps.
  - TE can then ask the Participants to take one deep breath and stretch.

### GETTING STARTED -1

□ Let's get to know each other better

#### ToT KIT 2

##### Elements that make a Training Session Boring

- *Lecture after lunch*
- *Too long session*
- *Oneway - not participatory*
- *Session without fun*
- *Exams in training*
- *Uninteresting methodology*
- *Bad sound system*
- *No practice tasks*
- *Trainer unable to deliver properly*

**Note:** TE needs to keep tab on time. Facilitate responses by gently but firmly stating that the introductions 'to be brief & complete'.

## Goal of the Training Program

- TE invites participants/ engages participants to give their views as to reason why all were attending the program.
- As Participants respond, key words and phrases of their statements are recorded on the flip chart [Session Aide]

### GETTING STARTED-2

#### □ Why are we all here?

□ Good to listen to what is being offered

### Note to TE:

- As time is of essence, take only 4-6 responses.
- There is no ‘incorrect’ answer. All responses are recognized as perception.
- Take care that responses are from participants from all the 4 positions and not just from the seniors.
- Do not make the exercise as if the Participants’ intelligence/ understanding are being scrutinized.
- Remember, adults are very sensitive to ‘being tested’ feelings. Put the respondents at ease with encouraging words and tone of your voice.
- Thank the respondents when their responses have been recorded.
- Take cue from the responses and bridge to the next topic.
- Say why it is important to know what the ToT is offering to the participants using the 3-layered explanation slides [ToT KIT 3A & B].

## ToT KIT 3A

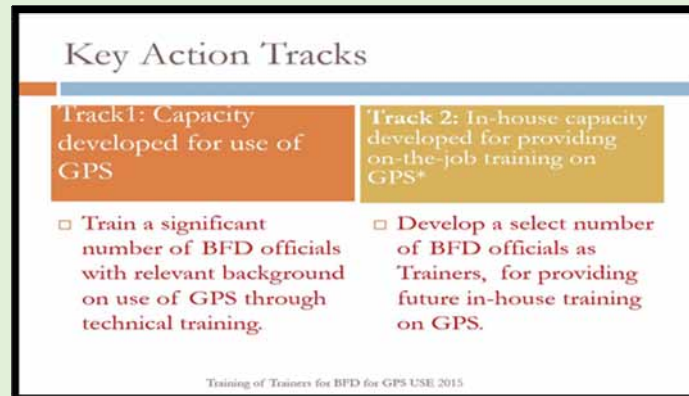
TE explains the purpose of the Training Program. Clearly explain how the result of the ToT fits into the broad scheme of national program for the Forest Department.





## ToT KIT 3B

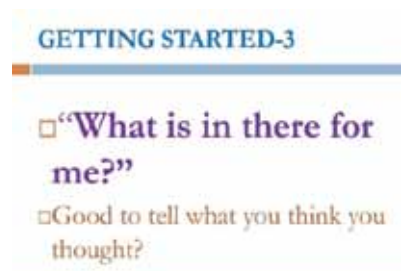
Using example of how drops of water and grains of sand make a mighty and a pleasant land, show how precisely the Participants of ToT will be functioning in the national program



- Explain to Participants their role in sustainability of the training program.
- Involve participants:
  - Invite comments from the Participants on the goal of the ToT Program as presented. [Keep to 3-4 responses]
  - Ask other Participants whether they align with/ add to the comments.
  - Thank the Participants and bridge to the next topic.

### Participants' expectations from the ToT Program

There needs to be harmony between what the Participants expect from the ToT and what is being offered through the ToT program.



- To understand and close gaps if there are any major ones, between Participants' needs/expectation and the ToT contents, the following Group Work is to be undertaken:

- Make 4 groups : 1, 2, 3, 4.
  - Group selects Group’s Spokesperson.
  - Each member of each team is given 3 ‘thought’ cards.
  - Each member writes 1 expectation[from the ToT Program] per card.
  - Writing is to be clear. Can be written in Bangla /English.
  - Announce Time out.
  - Spokespersons read out the cards of their respective Group.
  - TT sorts the cards by contents- and pin the cards on the display board.
  - Analyze the response groups [cards] and classify them [as per number of responses] as **Most – Okay – Also**.
  - We can also give them value by asking Participants to give a value 1, 2 or 3[3 being the highest] to their three response cards. In that way the expectations can be arranged on Value- Popular scale numerically, and check the major gaps [if any] of the training content.
- The Session Aide records the Teams’ expectations on the Flip Chart /or as PPnT slides.
    - TE may ask other team members if they wished to make any observation or comment. [Limit the number of responses]

### **Setting Ground Rules as ‘Good Training Program Management Practice’.**

These are the rules set by involving the participants so that everyone commits to abide by them for a smooth, satisfactory and timely completion of the training session.

TE uses the same 4 Teams of the Participants

- Each team comes up with a list of at least 2 Do’s and 2 Don’ts.[Example: Do not talk to one another during the session; it disturbs others and affects the session]
- Team Spokespersons present their respective Team’s statement.
- Session Aide records on the flip chart.
- TE then uses his/her discretion and finalizes 4 Critical Do’s and 4 Critical Don’ts for everybody to follow during the whole period of the training program.
- The chart with the Ground Rules [GR] is to be posted in a place which has good visibility.

- Participants /the Facilitators [of other Sessions], can return to the GR Chart to remind the necessary rule(s) from time to time or even add a relevant one.
- TE thanks the Participants for their attendance to the subject and attention to details.



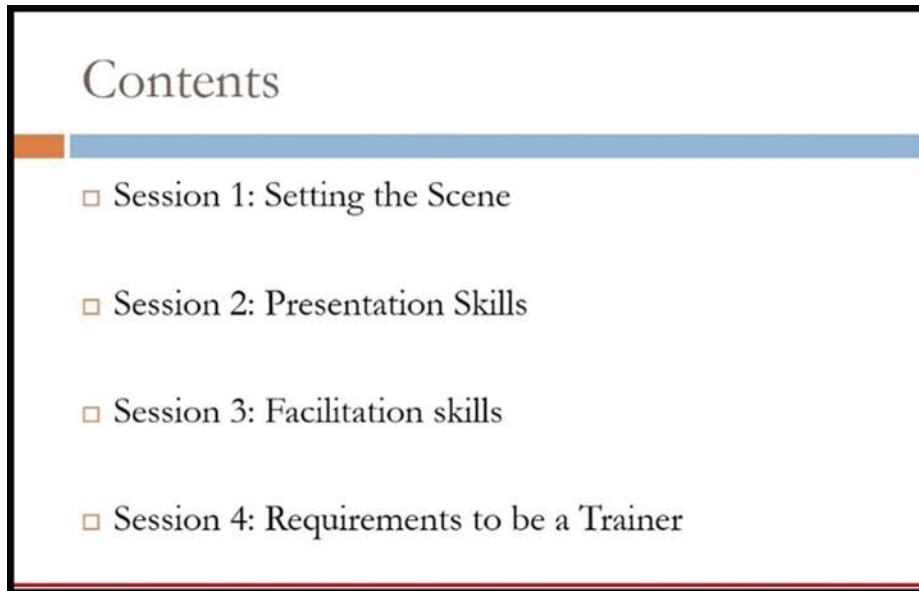
## BRIDGE SESSION

- TE to recap Session 1: Setting the Scene for the Training Program
  - Summarize and take participants' feedback

### □ RECAP: Setting the Scene

- To make a participant friendly/ favorable learning environment for group interaction, and a supportive environment for individual participation.
  - Participants get to know each other
    - Technique : Icebreaker
  - Worked in Pairs: nick name; interesting experience; boring element in training program.
  - To know the Participants expectation from the training program
    - introduction to the goal of the training Program
    - Group work by Participants & Identification of most common expectations
    - To develop team work essence for any assignment
  - Good training program management practice
    - Group work in setting Ground Rules
    - Participants & Training Team commit to abide by the rules

□ TOGETHER WE ACHIEVE MORE



## Contents

- Session 1: Setting the Scene
- Session 2: Presentation Skills
- Session 3: Facilitation skills
- Session 4: Requirements to be a Trainer

- Give an overview of the TOT program detail



## **Lesson-2:**

# **Overview of Geospatial Tools**

<i>Objective.....</i>	<i>2-1</i>
<i>What are Geospatial Tools?.....</i>	<i>2-2</i>
<i>Overview of Geospatial Tools.....</i>	<i>2-2</i>
<i>Overview of Remote Sensing.....</i>	<i>2-3</i>
<i>Overview of GIS.....</i>	<i>2-5</i>
<i>Overview of GPS.....</i>	<i>2-6</i>
<i>Integration of Technologies.....</i>	<i>2-7</i>
<i>Lesson Review.....</i>	<i>2-7</i>

## **Objective**

By the end of this lesson, the participants will be able to:

1. Tell what Geospatial Tools are.
2. Tell the outline of Geospatial Tools, Remote Sensing, GIS, and GPS.

## What are Geospatial Tools?

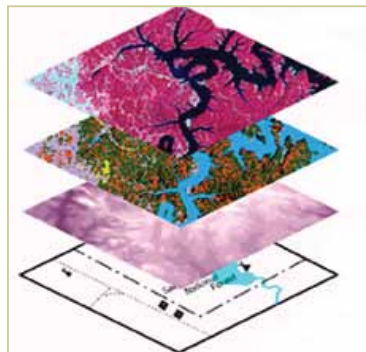
Geospatial technology refers to equipment used in visualization, measurement, and analysis of Earth's features, typically involving such systems as GPS (Global Positioning Systems), GIS (Geographical Information Systems), and RS (Remote Sensing). Its use is well-known and widespread in the military and in homeland security, but its influence is pervasive everywhere, even in areas with a lower public profile, such as land use, flood plain mapping and environmental protection.

Source: <http://www.usnews.com/science/articles/2011/05/11/geospatial-technology-as-a-core-tool>



Remote Sensing

Provides view of the world



Geographic Information Systems

Stores and manages information about the world



Global Positioning Systems

Determines location in the world

## Overview of Geospatial Tools

Integration of Remote Sensing, GIS and GPS plays a key role for forest inventory and identifying deforestation. Now a day's Remote Sensing, GIS and GPS are used in land use and land cover mapping of the forest area of Bangladesh. Bangladesh Forest Department personnel frequently use GPS to delineate the current status of forest area. Following are some examples of application geospatial tools:

- Map forest canopy changes using remotely sensed images
- Navigate and collect site specific information on the ground using a global positioning system (GPS)
- Store boundaries and attributes for a project area in a geographic information systems (GIS)

## Overview of Remote Sensing

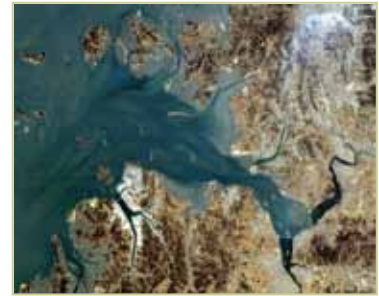
Satellite images with different resolution area used in different projects. Generally coarse resolution satellite image will be used for planning and preparing any proposal. Medium and high resolution satellite image will be used in project work. Aerial photo is not frequently used in forest inventory.



Higher-resolution satellite image



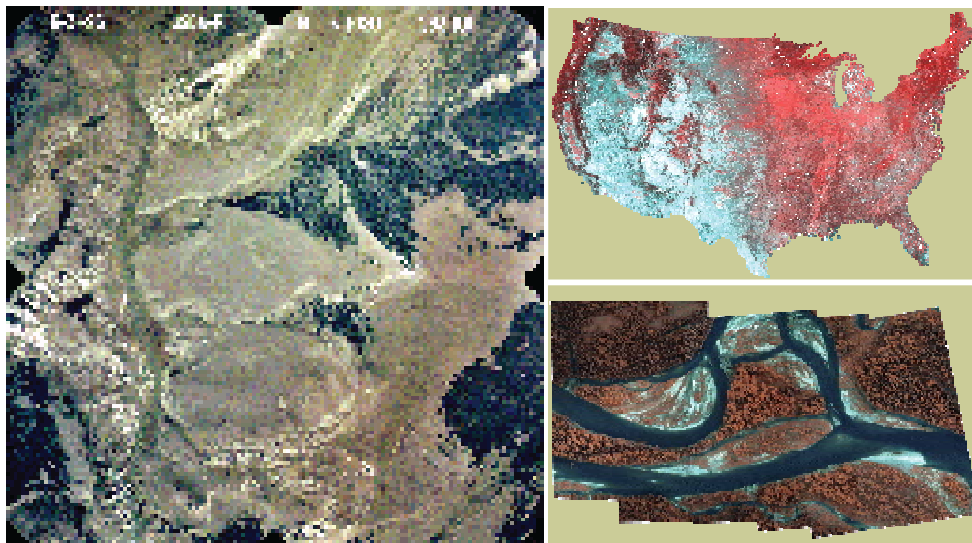
Higher resolution digital camera image collected from aircraft



Moderate-resolution satellite image

### Remote sensing imagery includes:

At present high resolution satellite image like IKONOS, GeoEye, QuickBird is used in different project of Bangladesh Forest Department. Google Earth software is also being used for to extract features. MODIS image is also being used to see the daily variation. Radar image can also be used to identify the deciduous forest. Aerial photography may be in the form of either Black & White, Natural Color or Color Infrared. Digital images may also be captured from aerial platform.

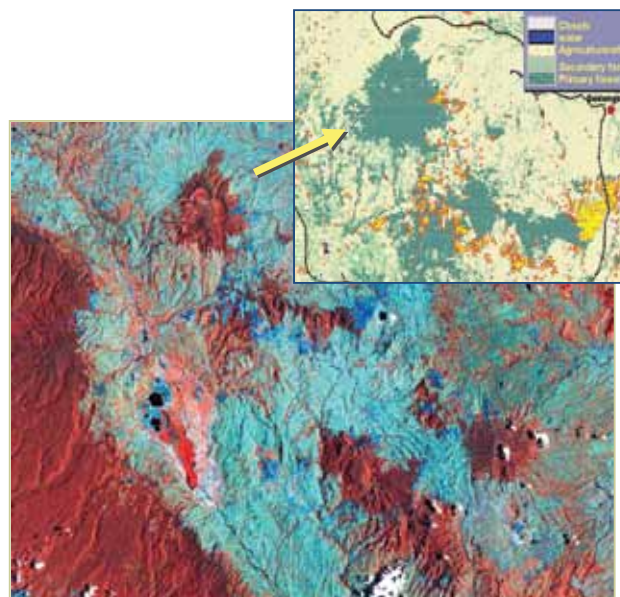




### What does remote sensing imagery provide?

Different time series satellite image is used to assess the land cover change and vegetation change. When you select time series image, you should keep in mind to select the appropriate images to assess the change over time. For example, you want to assess the change in Teak plantation from the years 2000 to 2014. Teak is a deciduous tree and as such sheds all its leaves during dry season, specially, in the months of February and March. Thus, Satellite image of the month of November may be appropriate to assess the changes of Teak Forest from the year 2000 to 2014. Daily MODIS image is helpful to assess the fires in the forest area. In Bangladesh, Radar image is used to assess the flood area. Remote sensing imageries may be used for the following purpose:

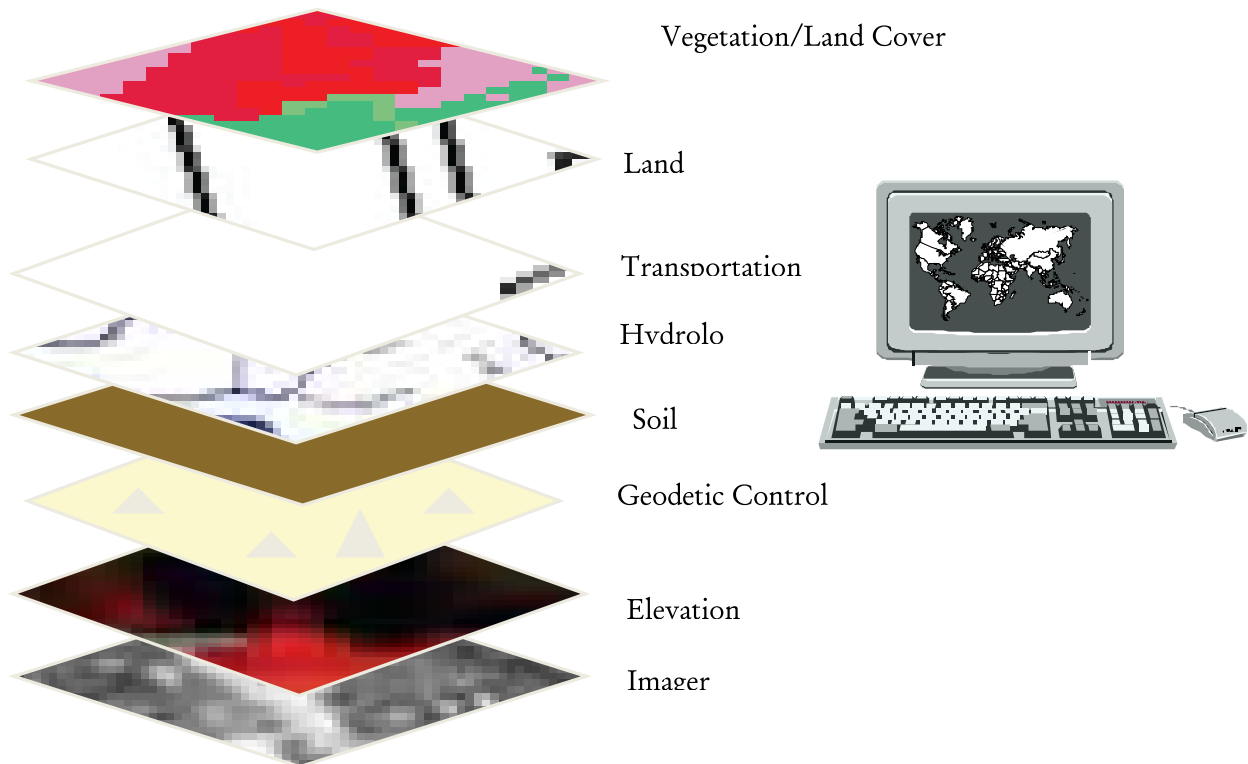
- Map making
  - o Land cover types
  - o Vegetation Map
  - o Tree Canopy Cover
- Temporal change detection
  - o Land cover changes
  - o Vegetation changes
- Monitor and map
  - o Information about fires, floods, and other disasters



Example of satellite image (A) and Derived land cover map (B)

## Overview of GIS

GIS is a system for capturing, storing, manipulating, analyzing, and displaying data which are spatially referenced to the Earth. After extracting data from satellite image, GIS is used to analyze the spatial data. The attribute table of any shape file is useful to explore any information. GIS helps to prepare different maps with legend and scale that helps general people to visualize the real scenario. For example, you want to know the Arsenic distribution in your area. Field survey is performed to identify the arsenic in different points. Interpolation of this GIS data helps to prepare a surface which shows the spatial distribution of arsenic level.



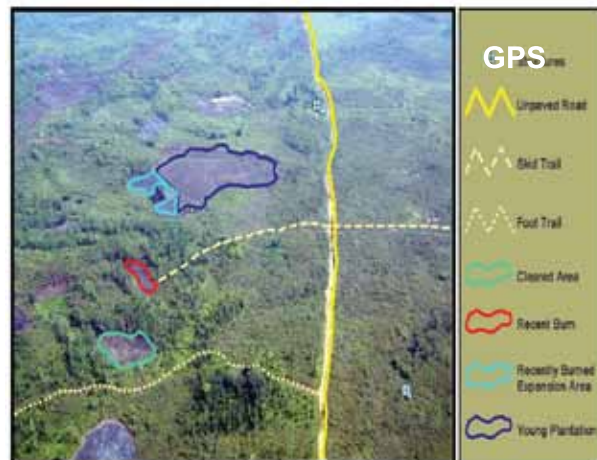
## Overview of GPS

GPS is a navigation system that uses satellites to determine where you are on the ground. Information associated with ground locations may be collected when using GPS and may include:

- Site characteristics: road condition, vegetation type, cause of illegal logging, soil type, etc.
- Photographs, either digital or film. Photos document field conditions and provide a reminder of the area once back in the office.

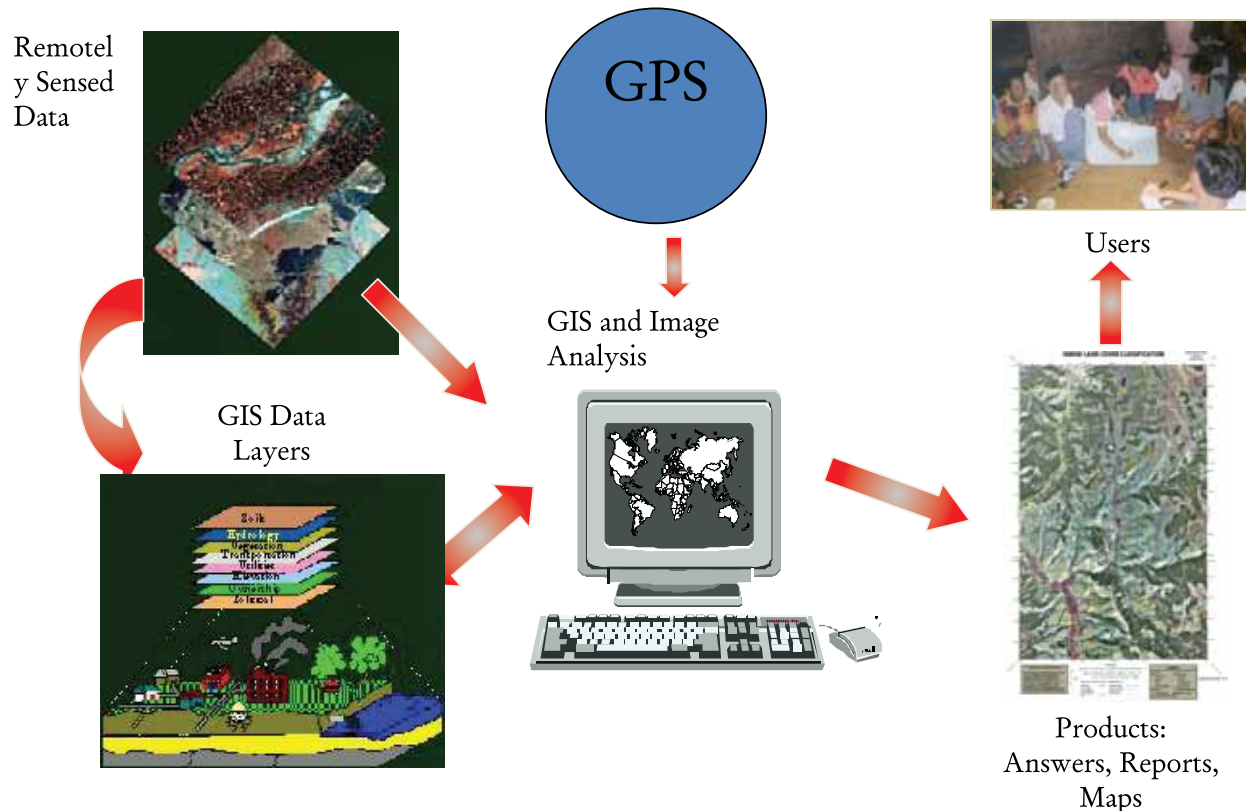


GPS is frequently used in different sectors in Bangladesh like, water resource management, forestry, ecology, agriculture and some more. Different GPS is used for different purposes. Recreation Grade GPS like Garmin 78s, Garmin eTrex are used for collecting latitude, longitude, and elevation. Survey GPS like Trimble Juno, Juno 3d, Juno 5D are used for more accurate data. Also, you can store more information using available function of this survey GPS. GPS data with attributes can be stored and displayed in a GIS.



## *Integration of Technologies*

*In general, Remote sensing provides a view of the world as well as information that can be stored in a GIS; GIS is the container that stores, manages, and provides tools for data analysis and GPS provides location information about where you are in the world. Integration of Remote Sensing, GIS and GPS helps to achieve the objective of your project.*



## **Lesson Review**

- ✓ What are Geospatial Tools
- ✓ Overview of Geospatial Tools, Remote Sensing, GIS, and GPS

## SESSION-2 :

# PRESENTATION SKILLS

### Objective:

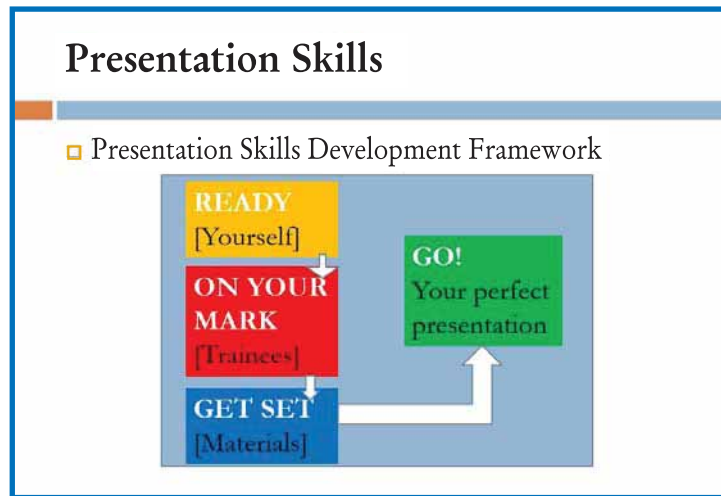
- To know the different presentation methods
- To know the different tips during presentation delivery
- To develop presentation skills of the Trainers by knowledge and skills practice of presentation delivery.

**Duration :** 90 minutes

## Why a Presentation?

A method

- To present [communicate] ideas and information, on topics.
- To ensure that trainees/students listen, understand and remember information.



Presentation Skill Development Framework

## Presentation Method

If you want Participants to			
-Understand	-Do	-Change their Values & Attitudes	-Develop a capacity for creativity
Give them	Give them	Give them	Give them
↓	↓	↓	↓
*Lecture *Diagrams	*Exercise *Case Studies *Role Plays	*Role Plays *Self Analysis Activities	*Brainstorming Activities *Problem Solving Activities
Method Mix:	Applicable to this ToT: * + *		
	Applicable to GPS Training: ***		

## Principles of Good Presenter

- Be prepared and confident  
Avoid such expression: “I think so” or “I’m not sure.”
- Be simple  
Use everyday language rather than jargon
- Establish Eye contact
- Speak loud enough to be heard clearly.  
*Less is more!*

*The best speakers grip an audience by telling a story and showing some slides to support that. (MeinaldThielsch)*

*Note to TE: Check out TOT KIT 2*

## Tips on Presentation delivery

- Instead of using lecture slides only, make a blended use of flipcharts, white boards, and lecture slides to avoid monotony.
- The projected lecture slide should correspond to what you are saying at the moment.
- Use laser or light pointers to guide through the presenting slide
- Before finishing your lecture, open the floor to the participants, inviting ‘questions, comments & observation’
- Prepare yourself for any type of questions from the Participants.
- End your presentation with a strong positive message.

Example: Excellent. I must say, you have all been the most active and diligent audience....[use a positive action verb like ‘active’/‘energetic’ etc.]. I hope you have enjoyed the session(s) as much as I have.

## Knowledge and Skills Practice 1: Presentation Deliver

- ❑ Distribute the handout on **Lesson 1: Introduction of GPS** among the four Teams [refer to manual of **Global Positioning Systems (GPS) for Forest Management**]
- ❑ Give them 20 minutes to go through the lecture slides and prepare them for the presentation of this Lesson using the instruction that they learned from the Presentation Skills session.
- ❑ Every Team must present the lecture slides of **Lesson 1**.
- ❑ Resource Person of this session guides them to successfully present their ideas among the lis















## SESSION-3 :

# FACILITATION SKILLS

### Objective :

- To know what is Facilitation
- To know the different types of Facilitation skills
- To know the different tips during Facilitation.
- To develop facilitation skills of the Trainers by Knowledge and Skills practice of facilitation skills.

**Duration :** 90 minutes

## What is Facilitation

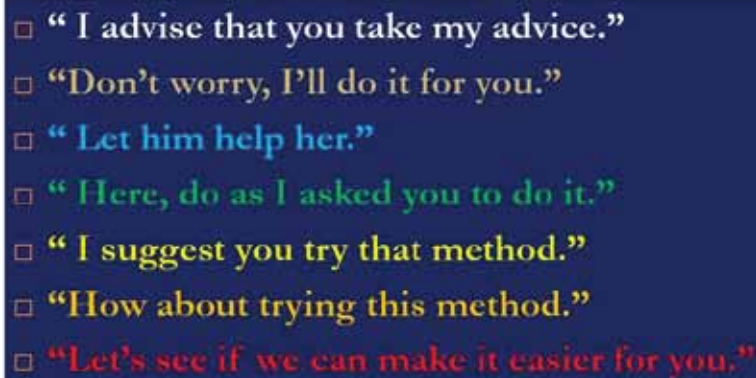
- A process where the facilitator guides the participants to share their ideas, opinions and experience on certain topic.
- Focuses on how people participate in the process of learning or planning, not just on what gets achieved

*To facilitate is “to make easier” or “help bring about.” (Merriam Webster).*

## Facilitation Skills: Exercise

Participants identify facilitator’s language from the following statements:

### Facilitation?

- 
- ❑ “ I advise that you take my advice.”
  - ❑ “Don’t worry, I’ll do it for you.”
  - ❑ “ Let him help her.”
  - ❑ “ Here, do as I asked you to do it.”
  - ❑ “ I suggest you try that method.”
  - ❑ “How about trying this method.”
  - ❑ “Let’s see if we can make it easier for you.”

## Types of Facilitation skills

A Trainer should have following facilitation skills-

- Attending: paying attention to what the participant(s) say.
- Observing: assessing how the training is being received
- Listening: understanding the learner’s perspective.
- Questioning: ensuring involvement of participants [questions play a major role in conducting training]



## Attending

- Be a welcoming person
- Convince the learners that they are your main focus.
- Maintain appropriate eye contact.
- Encourage participation.
- Respect each person.
- Avoid distracting behavior.

## Observing

- Participant's body language. Follow the participant's face, body position, and body movements.

## Listening skills

- Listen to the words being expressed by the participant(s)

### Example:

Always ENCOURAGE Participants to speak up a little louder. Your facial gesture and voice should indicate that you are not being negative or criticizing the participant.

“You have a good voice. Could you speak up a little louder, please?” If the Participant does as requested, then say, “That was good. Thank you.”

- Paraphrasing what was said by Participants to understand their information/Queries.

### Example:

Paraphrasing means saying what someone has said, in your words. This is Facilitator's task to make statements made by Participants clear for others to understand. He/she must be patient as many Participants may not be able to articulate well.

A Participant [say Mizan] asks a question or makes a comment or answers something, and as a Facilitator, you repeat what was said [by Mizan] in your own words. Then check with Mizan “Did I follow correctly what you said Mizan”.

- Show encouragement and support. Use simple gestures or phrases to show you are listening.

**Example:**

You cannot act as if you are listening. You HAVE to listen.

- Go near the Participant /the group.
- Be relaxed. Ask others to listen too.
- Focus on the face of the speaker.
- Nod your head gently as you listen.
- Help the participant if he/she gets stuck for a word, or having articulation problem, by using simple gestures or phrases.
- Say ‘Thank you. That seems to be an interesting ... / a thoughtful...’ Then get the attention of the participants and explain.

## Questioning

- Use positive reinforcement for correct answers.

**Example:**

Facilitator’s use words like ‘Great!’ ‘Wonderful’; ‘Absolutely’; “That’s correct!” as positive reinforcement.

- Acknowledge the effort of the respondent, regardless whether the answer was correct or incorrect.

**Example:**

Facilitator acknowledges the efforts by saying, “We are almost there.”/ “Yes, we doing fine. Let’s try a bit more.” [Calls other Participants and says, “We need a little assistance with this question. We’d appreciate a volunteer.”]

- Minimize potential learner’s embarrassment for incorrect or incomplete answers.

**Example:**

A Facilitator uses “We” when help is needed so that a Participant is not embarrassed. Usually, the friendly pronoun mostly used in sessions is the 3rd person plural: WE, US & OUR

## Tips for Facilitator

- A Facilitator should try not to use ‘absolute terms’:
- You are wrong/ You are not correct/ What you said is not valid/ What you are doing is not expected from your age or experience/ why are you disturbing the session/ I thought I’d meet basically intelligent people’ etc.
- When you finish a topic, sum up what was done, and pause for questions and comments before moving on.
- Ask questions beginning with the words "what" and "how" (open-ended questions). Avoid questions that can be answered with a yes or no
- Encourage participants to share their ideas on the topic.
- Use gentle and appropriate humor to deal with disrespectful behavior of the participants.

### Example:

Disrespectful behavior in a Training Session [judging by the event] is a crisis handling event. Things to find first are:

What caused the Participant(s) to be disrespectful?

A Facilitator has to deal with the cause before dealing with the person(s).

The best way for the Facilitator is to have a rep of the organizing agency and make the best efforts to resolve the crisis without blaming anyone or anything. Session time need not be spared for crisis solution. Participants can be given an early coffee break while the event is taken care of. The Win-Win situation should be ‘Shake up and Make up’ by the time all participants return to the session after the break.

- Make sure everyone has an equal opportunity to participate.

*(Note: There is a section in **Appendix B** where the Trainer will find some questions of different lessons of "Global Positioning Systems (GPS) for Forest Management "manual. In this way Trainer can communicate with students.)*

## Knowledge and Skills Practice 2 : Facilitation skills

- ❑ Distribute the handout on **Lesson 1: Introduction of GPS** among the four Teams [refer to manual of **Global Positioning Systems (GPS) for Forest Management**]
- ❑ Give them 20 minutes to select one Team Spokesperson to present the lesson using the above instruction of Facilitation Skills
- ❑ When a representative of any Team presents their lecture slides, other Team member can ask any question. In this way the session will be more interactive. Also Team Spokesperson gets a chance to show his or her facilitation skills.
- ❑ Resource Person of this session help them to enhance their facilitation skills.

**SESSION-4 :**  
**REQUIREMENT TO BE A TRAINER ON GPS**

**Objective :**

- To know the requirement of a Trainer of GPS Training Program

**Duration :** 60 minutes

## Requirements for TOT (Training of Trainers)

- The Trainer should be familiar with Windows operating system like MS Word, MS excel, MS power point, able to navigate between files, folders, and drives; basic internet skills.
- The Trainer must be able to follow the reference link included in some topics to increase his/her depth of knowledge of the respective topics.
- The Trainer must have proper knowledge on critical questions on GPS and Map

## Question on GPS

There are some questions on GPS. These questions are categorized as critical, major and general. The participants must have proper knowledge on all type of questions. If the participants have proper knowledge on these questions then he or she feels confident to participate any GPS training program as a Trainer.

### Critical:

1. What is almanac?
2. What is ephemeris?
3. What is Pseudo Random Code Noise?
4. How a GPS fixes your position?

### Major:

1. What are the three segments of GPS and how do they work?
2. Give some example of which type of feature represents point, line and polygon?
3. What is waypoint and track?
4. What is the difference between waypoint and average waypoint?
5. What are the methods to collect data for linear feature like nearly straight road or jig jag road?
6. What are the methods to collect data for polygon feature?
7. What is 'Area Calculation Function' and how it is useful in the field work?
8. What is point traverse and hybrid traverse?
9. What is the difference between data quality and accuracy?
10. What could be the most common GPS errors?
11. What is multipath error?
12. What is the importance of standardize file structure?

**General:**

1. What is GPS?
2. Why GPS is required?
3. What is DNR GPS?
4. How to go through ‘Satellite Page’?
5. How to navigate to waypoint averaging function?
6. How to navigate to route planner?
7. What is attribute?
8. Mention about one limitation of GARMIN GPS?

*(Note: The Trainer must have depth knowledge on **Critical/Major questions**)*

**Question on Map**

There are some questions on Map. These questions are categorized as critical, major and general. The participant must have proper knowledge on all type of questions. If the participants have proper knowledge on these questions then he or she feels confident to participate any GPS training program as a Trainer.

**Critical:**

1. What is Datum?
2. What is Ellipsoid?

**Major:**

1. What is the importance of Map?
2. What do you mean by Map Scale?
3. What is longitude and latitude?
4. Do you know which projection system Forest Department used in their maps?
5. What is UTM?
6. What is BTM?

**General:**

7. What is contour
8. What is Topo map?
9. What is Cadastral map?
10. What is Map communication model?

*(Note: The Trainer must have depth knowledge on **Critical/Major questions**)*





## SESSION REVIEW

This manual covers instruction for the Trainer show to start at raining program, present the lectures and undertake facilitation during the training program. In addition, some requirements are addressed that help Trainers such as you, to successfully conduct any GPS training program. There are works outs in the appendices where you will find pre-assessment, post-assessment question and discussion questions for the participant that will be helpful to conduct the GPS training program.

We hope all the trainer shave enjoyed taking this session on the manual.

Best of luck.



## APPENDIX

### Appendix A : Pre-assessment of the Participants

This is the pre-assessment work out for participants of GPS training program. This pre-assessment test is conducted evaluate the knowledge of the participants before the start of training program. This evaluation is meant to assist Trainer to assess knowledge level of the participants' of different lessons of 'Global Positioning Systems (GPS) for Forest Management' manual will be required to conduct this training program successfully.

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

#### Definitions:

1. Define the acronym GPS: \_\_\_\_\_
2. Define the acronym GIS: \_\_\_\_\_

**6 (Six) statements are given below. Each Statements from #1 to #6 has a set of 4(Four) answers. Read the statements and the answers carefully. Put a  $\sqrt{\quad}$  Tick Mark on the answer which is correct:**

1. Which type of feature is the representative of a fallen tree?
  - a) Polygon
  - b) Track
  - c) Line
  - d) Point
2. Which type of feature is the representative of a deforestation area?
  - a) Polygon
  - b) Track
  - c) Line
  - d) Point

3. Which type of feature is the representative of a trail?
  - a) Polygon
  - b) Track
  - c) Line
  - d) Point
  
4. Which is the large Map Scale of the following Map Scales?
  - a) 1:5,000,000
  - b) 1:250,000
  - c) 1:50,000
  - d) 1:100,000
  
5. Which of the following Latitude and Longitude is expressed in “Degrees Minutes Seconds (DMS)”-
  - a) Longitude 32° 30.0’ East; Latitude 13° 45.5’ South
  - b) Longitude 32° 30’ 0” East; Latitude 13° 45’ 30” South
  - c) Longitude 32.5° East; Latitude 13.7583° South
  - d) None of the above
  
6. What is WGS 84?
  - a) Geographic Coordinate System
  - b) Projected Coordinate System
  - c) Both a & b
  - d) None of the above
  
1. The graphical scale of a Topo map show 1 cm = 10 km. What do you mean by this graphical scale **1 cm = 10 km**?

1. Among the three (3) statements given below, some statements are correct, some are not. Read them carefully.

ANSWER: Each of the statements has a set of two symbols: T/F

If the statement is correct then circle the symbol T.

If the statement is not correct then circle the symbol F.

- |   |     |
|---|-----|
| a. Two locations on earth have same latitude and longitude.                                       | T/F |
| b. GPS measures live area of any objects of the earth.  | T/F |
| c. The GPS is a satellite-based radio navigation system provided by the US Department of Defense. | T/F |

## Appendix B:

### Discussion Questions with Participants to be conducted by the Trainer.

There are some discussion questions of every Lesson. Trainer can interact with participants with these questions. It will help the participant to share their knowledge of specific topics with Trainer. It will also help the Trainer to identify the participants' knowledge gaps among participants of any specific topic.

Lesson Title	Discussion Questions with Participant
<i>Lesson 1: Introduction of GPS</i>	<ul style="list-style-type: none"> <li>▪ Ask participants of any experience of GPS uses.</li> <li>▪ Ask participants of any experience of GIS software. Share your [Trainer] GIS software experience with other participants.</li> </ul>
<i>Lesson 2: GPS Technology Basics</i>	<p>After the completion of this lecture, participants will know GPS system consist of three segments like Space segment, Control segment and User Segment. Now ask participants:</p> <ul style="list-style-type: none"> <li>▪ Which segment includes your GPS?</li> <li>▪ How many satellite signals will be required to acquire three dimensional (3D) positioning?</li> </ul>
<i>Lesson 3: Setting Up the Garmin GPSmap78S</i>	<p>Demonstrate setting-up of the device, and basic functionality. Then participants will set up their own device.</p> <p>It may be best to demonstrate during a lecture, before handing out a device to each participant. Then the participants will be paying more attention rather than playing with the device.</p> <ul style="list-style-type: none"> <li>▪ Take time to walk through the menu and familiarize participants with navigation through the device and basic button functions.</li> </ul>
<i>Lesson 4: Data Collection</i>	<ul style="list-style-type: none"> <li>▪ Discuss with participants and give them opportunity to give some example of any point feature related to forest application.</li> <li>▪ Discussion with participants when they collect point by Waypoint Average Function?</li> </ul>

Lesson Title	Discussion Questions with Participant
	<ul style="list-style-type: none"> <li>▪ Discuss with participants and give them opportunity to give some example of any line or polygon feature related to forest application.</li> <li>▪ Discuss with participants and give them opportunity to tell when they use <b>Most Often</b> or <b>Least Often Method</b></li> <li>▪ Discuss with participants and give them opportunity to cite some example of any Polygon feature related to forest application.</li> <li>▪ Discuss with participants how they could calculate Area without GPS.</li> <li>▪ Ask whether there is any traditional method to calculate Area.</li> <li>▪ Give a pictorial explanation how points can make a boundary.</li> </ul>
<i>Lesson 5: Map Use</i>	<ul style="list-style-type: none"> <li>▪ Ask or discuss with participants: What are Features, Types of Features?</li> <li>▪ Specify some scale like 1:50000 or 1:20000. Ask or discuss with participants which is the larger or the smaller scale?</li> </ul>
<i>Lesson 6: Navigation with GPS</i>	<ul style="list-style-type: none"> <li>▪ Ask or discuss with participants: “If GPS shows your destination all the way through a pond or hill or any other obstacles, then should you swim through the pond or cut the hill to navigate your route”</li> <li>▪ A discussion about obstacles, solutions, usefulness of maps and previous idea of that particular area, can be held.</li> </ul>
<i>Lesson 7: Advanced Functionality of Garmin GPS Map 78S</i>	<ul style="list-style-type: none"> <li>▪ Ask or discuss with participants whether they can share their GPS data from Garmin GPS Map 78S with any other GPS Model.</li> </ul>
<i>Lesson 8: GPS Data Quality and Management</i>	<ul style="list-style-type: none"> <li>▪ Make a folder directory for standardize file structure and share or discuss it with the participants.</li> </ul>

Lesson Title	Discussion Questions with Participant
	<ul style="list-style-type: none"> <li>▪ Ask or discuss with participants the attributes of different information that are related to Forest.</li> <li>▪ Ask or discuss with participants the metadata of collected GPS data.</li> </ul>
<i>Lesson 9: Transfer data from GPS Receiver to Computer</i>	<ul style="list-style-type: none"> <li>▪ Discuss with the participants: “Any recommendations for transporting data from Chittagong or any other part of Bangladesh to Dhaka? What are the biggest obstacles to transporting data”</li> </ul>
<i>Lesson 10: GPS Error, Accuracy and Limitation</i>	<ul style="list-style-type: none"> <li>▪ Conduct open discussion with participants to find whether anyone found any limitation of the GPS.</li> </ul>
<i>Lesson 11: GPS Data for Forest Resource Management</i>	<ul style="list-style-type: none"> <li>▪ Conduct open discussion with participants to find whether anyone found any other application of point data for forest resource management.</li> <li>▪ Conduct open discussion with participants to find whether anyone found any other application of line or polygon data for forest resource management.</li> <li>▪ Discuss with participants effect of poor GPS data on forest mapping.</li> </ul>



## Appendix C :

### Post-assessment of the Participants

This is the post-assessment work out for participant of GPS training program. This post-assessment test will help a trainer to evaluate the knowledge of participants after the completion of a training program. This evaluation is meant to assist the Trainer to assess how much knowledge participants gained from the different lessons of “Global Positioning Systems (GPS) for Forest Management” manual as against the pre-assessment knowledge level.

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

#### Definitions:

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2. Define the acronym GIS: \_\_\_\_\_

6(Six) statements are given below. Each Statements from #1 to #6 has a set of 4(Four) answers. Read the statements and the answers carefully. Put a  $\sqrt$  Tick Mark on the answer which is correct:

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  - c) Line
  - d) Point
  
2. Which type of feature is the representative of a deforestation area?
  - a) Polygon
  - b) Track
  - c) Line
  - d) Point

3. Which type of feature is the representative of a trail?
  - a) Polygon
  - b) Track
  - c) Line
  - d) Point
  
4. Which is the large Map Scale of the following Map Scales?
  - a) 1:5,000,000
  - b) 1:250,000
  - c) 1:50,000
  - d) 1:100,000
  
5. Which of the following Latitude and Longitude is expressed in “Degrees Minutes Seconds (DMS)”-
  - a) Longitude 32° 30.0’ East; Latitude 13° 45.5’ South
  - b) Longitude 32° 30’ 0” East; Latitude 13° 45’ 30” South
  - c) Longitude 32.5° East; Latitude 13.7583° South
  - d) None of the above
  
6. What is WGS 84?
  - a) Geographic Coordinate System
  - b) Projected Coordinate System
  - c) Both a & b
  - d) None of the above
  
1. The graphical scale of a Topo map show 1 cm = 10 km. What do you mean by this graphical scale **1 cm = 10 km**?

1. Among the three (3) statements given below, some statements are correct, some are not. Read them carefully.

ANSWER: Each of the statements has a set of two symbols: T/F

If the statement is correct then circle the symbol T.

If the statement is not correct then circle the symbol F.

- a. Two locations on earth have same latitude and longitude. T/F
- b. GPS measures live area of any objects of the earth. T/F
- c. The GPS is a satellite-based radio navigation system provided by the US Department of Defense. T/F

