



## REPORT

# Specialized Training on the Application of Modern Tools and Techniques in Forestry

31<sup>st</sup> October-06<sup>th</sup> November 2022

Assam Forest Guard School,  
Makum, Tinsukia, Assam



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## 1. Acknowledgement

Training is one of the important aspects for the knowledge and skill upgradation of the staff to carry out their functions effectively towards achieving the aspired targets to reach the broader goals of the organization. Assam Forest Guard School has a broader goal to train the Forest Guards and other field-implementing units with the skills necessary to address issues of conservation and protection of forestry and wildlife. The training has helped the Forest Guards to get acquainted with Modern tools and technologies, their relevance in the field of conservation along with the recent developments important to the sector.

We would like to sincerely thank the APFBC project, supported by AFD-India (Agence Française de Développement), for their guidance and for the funding to hold the training program on Specialized Training on the Application of Modern Tools and Techniques in Forestry and providing the needed fund from APFBC project.

Moreover, we would like to express our gratitude to Shri K.S.P.V. Pavan Kumar, IFS, Additional Principal Chief Conservator of Forests, Biodiversity, and Climate Change, as well as Project Director-Project Management Unit (PD-PMU), Assam Project on Forest and Biodiversity Conservation (APFBC) Society, for his direction, support, and guidance that helped the training program be completed successfully.

The accomplishment of this training would not have been possible without the regular guidance, suggestion, and direction of Dr. Sonali Ghosh, Chief Conservator of Forests -Research, Education and Working Plan (REWP) Division. We offer our gratitude for her kind support and input.

Additionally, we would like to express our thanks to all the faculty members, including Mr. M.K. Goswami, DFO, Govt. T.T. & S. Plant, Makum, Ms. Papor Khatoniar, F.R., Dibrugarh Division, Ms. Kasturi Sule, IFS, ACF, Digboi Division, Mr. M.C. Phukon, F.R.(Retd.), and Mr. P. Sharma, F.R. (Retd.). Mr. Mayurakshya Bharadwaj, F.R., AFGS, Makum, Mr. M.P. Bania, Fr-I, AFGS, Makum, Mr. Gyan Sharma, Institutional Development Specialist, APFBC, Mr. Jiten Goswami, Deputy Ranger, AFGS, Makum, and all other personnel who were directly or indirectly involved with the training sessions.

Further, we would like to express our gratitude to Director, Assam Forest School, Jalukbari and his team for providing the necessary communication to spread the word about our program via Twitter.

We would like to express our appreciation to all the AFGS staff and other members for their assistance and cooperation during the training process.

Superintendent,  
Assam Forest Guard School,  
Makum, Tinsukia, Assam

## **2. Background**

The employee in the organization is accountable for a variety of duties and obligations, which might vary from simple chores to complicated operations. As a result, every employee needs to understand the organization's goals, culture, and operational processes via-a-vis their job descriptions, and responsibilities. Some of the obligations assigned to the individual may even necessitate the usage of specialized talents. In addition, the employees must have the correct mindset to carry out their responsibilities.

Organizations must make provisions to educate, develop and enhance the skills of their employees through various training programs. The Assam Forest Guard School aims to provide Forest Guards, foresters, and other employees with the necessary skills to address issues of conservation and protection of forests and wildlife.

The Assam Forest Guard School was established in 1980 and is situated in the industrial city of Makum, Tinsukia, Assam. The goal of this training school is to provide training to the front-line employees of the forest department. Since its inception, the school has trained about 2,889 Forest Guards and Game Watchers. The Research Education and Working Plans (REWP) Division, Forest Department of Assam oversees the administrative functions of the Forest Training Institutes, whereas the Superintendent oversees the Assam Forest Guards School. The Assam Forest Guard School runs a number of specialized training programs as and when required. Specialized training in the application of modern tools and techniques in forestry was conducted recently from 31<sup>st</sup> October to 06<sup>th</sup> November 2022. The training report is prepared to explain the details of the training program conducted.

## **3. Specialized training in the Application of Modern Tools and Techniques in Forestry**

The Assam Forest Guards School in Makum conducted specialized training on the use of contemporary and modern tools and techniques in forestry (3<sup>rd</sup> batch) from 31<sup>st</sup> October to 06<sup>th</sup> November 2022, for the Forest Guards and Game Watchers. A total of 16 forest guards/game watchers participated in the above-said training program. The funding for this training was sourced from the APFBC Phase II.

The main objectives of this training were:

- Awareness on issues and challenges pertaining to the conservation of forests and wildlife
- Sensitize on the recent technological interventions, use of technology
- Hands-on experience with applications of modern tools and techniques

The training included lecture sessions from the senior forest officials of the department having extensive knowledge and experience in forestry-related topics and practical know-how. The training included an overview of forest policy and law, contemporary forestry instruments, Global Positioning System (GPS), computer applications, knowledge of digital callipers, weather meters, and the importance of drone technology for aerial surveillance, among others.

For hands-on experience in GPS application training, the participants visited Lakhpathar Range in Digboi Division. On their way to the Kherjan Beat Office, the trainees also stopped by the Digboi Museum and War Cemetery. The participants learned how to seize stumps, logs, and other hammer imprints. As part

of the field trip, visits to the Dhola-Sadiya and Barekuri village were also conducted. The detailed day-wise session of the training program is presented in this report. The training module for specialized training is placed in Annexure - 1 for reference.

#### 4. Participants in the training

16 participants (Forest Guards: 16) from 14 divisions participated in the training program (the list of participants is placed in Annexure II for reference).

#### 5. Resource Persons' Profile

The resource person's team comprised departmental experts, retired foresters, and an APFBC project representative. Given below is a brief description of the resource persons along with the sessions conducted by them (See Annexure - 1 for Module for Specialized Training).

*Table 1: Resource person profile*

Sl. No	Name of the Facilitator	Designation	Session Title
			Registration
1	Mr. Saidul Alam	Superintendent, Assam Forest Guards School, Makum	Welcoming the participants and Inaugural session Group discussion and feedback
2	Mr. M. K. Goswami	DFO, Govt. T.T. & S. Plant, Makum	Introductory session – basic knowledge of modern tools and their importance in forestry Forest Conservation Act 1980/Minor Mineral Concession Rule 2013
3	Mr. Mayurakshya Bharadwaj	F.R., AFGS, Makum	Practical session: working with GPS at Lakhpathar RF under Digboi Division
4	Ms. Paporri Khatoniar	F.R., Dibrugarh Division	Brief knowledge of digital calliper and weather-meter Field Practical: working with the digital callipers, weather meter, and GPS at Dihing Patkai National Park (supported by Mr. Mayurakshya Bharadwaj)
5	Mr. Gyan Sharma	Institutional Developmental Specialist, APFBC	Team Building and Motivation
6	Ms. Kasturi Sule	IFS, ACF, Digboi Division	Computer application and downloading of data from GPS to PC Brief knowledge of Densimeter Importance of drone technology in terms of aerial surveillance of forest areas and

Sl. No	Name of the Facilitator	Designation	Session Title
			demonstration
			Field visits and training on the operation of drones.
			A brief session on routine maintenance of modern tools to increase their lifespan
7	Mr. Jiten Goswami	Deputy Ranger, AFGS, Makum	Field practical working with GPS and Densimeter at Charaipung Range under Digboi Division (supported by Mr. Mayurakshya Bharadwaj)
8	Mr. M. C. Phukon	Forest Ranger (Retd.)	Role play on implementation of Forest Law along with case study
			Field visit to Dhola-Sadiya to study riverine ecological succession
9	Mr. P Sharma	Forest Ranger (Retd.)	Wildlife Protection Act 1972
10	Mr. M. P. Bania	Fr-I, AFGS, Makum	Field visit to Kherjan beat office for learning seizure procedure of stumps, logs & various hammers and enroute visit to Digboi museum (supported by Mr. Rekibuddin Ahmed, Deputy Ranger, Digboi Range)
			Computer application and downloading of data from GPS to PC.
	Valedictory function		

## 6. Venue and Date

The training was organized at Assam Forest Guards' School, Makum from 31<sup>st</sup> October to 06<sup>th</sup> November 2022.

## 7. Training methodologies

The following training methodologies were used in the training program:

- Lecture and group discussions
- Group exercises and group assignments
- Individual exercises
- Powerpoint presentation

## 8. Proceedings

The day-wise proceedings of the training are mentioned below

**Day 1: 31 October 2022**

### **Session I: Registration of Trainees and Inaugural Session**

The inaugural session began with the registration of the trainees, handing over the reading materials and the welcome kit.



*Picture 1: Registration and welcoming of trainees*

### **Session II: Introductory Class on Modern Tools & importance in forestry. Basic knowledge of the application of GPS**

Resource Person: Mr. M.K. Goswami, DFO, Govt. T.T. & S. Plant, Makum



*Picture 2: Introductory session on Modern Tools*

The participants were introduced to the recent technological advancement and cutting-edge modern tools and equipment utilized in the fields of forestry and wildlife conservation, during this session. Additionally, they received a fundamental and theoretical explanation of the utilization of GPS.

#### **Key takeaways from the session:**

- Relevance of modern tools and techniques in present-day forestry
- Their use and maintenance.

### **Session III: Field Practical - Working with GPS at Lakhipather RF under Digboi Division**

Resource Person: Mayurakshya Bharadwaj, F.R., AFGS, Makum; Mr. Angshuman Bhuyan, F.R., AFGS, Makum



*Picture 3: Practical application of GPS at field location*

The trainees were given hands-on experience in the use of GPS in the field for collecting waypoints and tracks in this session.

#### **Key takeaways from the session:**

- Recording a location's latitude and longitude.
- Making route-specific tracks.
- Using GPS to arrive at a predetermined point.

#### **Day 2: 01 November 2022**

### **Session I: Forest Conservation Act 1980/Minor Mineral Concession Rule-2013**

Resource Person: Mr. M.K. Goswami, DFO, Govt. T.T. & S. Plant, Makum.

The trainees were given a brief overview of the Forest Conservation Act of 1980 act throughout the session on how the act helped to safeguard the forest, together with its flora, wildlife, and other various biological components, while conserving and preserving the integrity and territory of the woods.

#### **Key takeaways from the session:**

- Roles of the central government, state government, and other authorities to take any decisions related to forestry
- Penalties in case of violations and other related aspects



*Picture 4: Session on Forest Conservation Act 1980*

## **Session II: Brief knowledge of Digital Calliper and Weather meter**

Resource Person: Paporri Khatoniar, F.R., Dibrugarh Division



*Picture 5: Session on calliper and weather meter*

The session covered various calliper types as well as how to use callipers to measure a tree's diameter at breast height precisely. The benefits and drawbacks of using the callipers were also discussed with the trainees. Also highlighted was the use of weather meters to research the microclimate of forests.

### **Key takeaways from the session:**

- Proper handling, maintenance, and usage of the equipment
- Discussion of several measurement units
- Taking precise measurements of a tree's diameter at breast height

### **Session III: Field Practical: Working with Digital calliper, Weather meter, and GPS at Maguri Beel, Tinsukia WL Division**

Resource Person: Paporí Khatoniar, F.R., Dibrugarh Division, and Mayurakshya Bharadwaj, F.R., AFGS, Makum

The participants used callipers to measure the diameter of trees at breast height. Both the traditional tree callipers and the digital calliper's accuracy were evaluated. The appropriate and hands-on operation and upkeep of the equipment were experienced by the trainees.



*Picture 6: Practical session on use of Digital Calliper*

#### **Key takeaways from the session:**

- Proper handling, maintenance, and usage of the equipment
- Discussion of several measurement units
- Taking precise measurements of a tree's diameter at breast height

**Day 3: 02 November 2022**

**Session I: Computer application and downloading of data from GPS to PC**

Resource Person: Ms. Kasturi Sule, IFS, ACF, Digboi Division



*Picture 7: Computer application and downloading of data*

The different computer components, their functions, as well as the use of computer applications in general and in the forestry sector, in particular, were covered in the session. The participants were also shown how to use GPS and mobile-based apps to capture and record the tracks and footprints of the places they patrol and transmit the data to the computer.

**Key takeaways from the session:**

- Learning and understanding different computer components and their functions
- Using computers in the forestry industry
- Using GPS and mobile-based location monitoring and tracking applications

**Session II: Downloading of data from GPS to PC. Brief knowledge of Densimeter**

Resource Person: Ms. Kasturi Sule, IFS, ACF, Digboi Division



*Picture 8: Downloading of data from GPS to PC*

This session covered the various components of computers, their functions, and the use of computers in general and forestry in particular. The trainees were also shown how to use GPS and mobile applications to record the locations they patrol and then download the information to a PC. A brief knowledge of Densiometer was also provided to the trainees to make them understand how to calculate the percentage of canopy cover

**Key takeaways from the session:**

- Learning about the parts of a computer & their uses
- Application of computers in the Forestry sector
- Use of GPS and mobile-based location-tracking apps
- Canopy cover

**Session III: Field Visit to Barekuri village- the abode of Hoolock Gibbon to study its characteristics and efforts of locals for its conservation and session on working with GPS and Densiometer**

Resource Person: Jiten Goswami, Deputy Ranger, AFGS, Makum, and Mayurakshya Bharadwaj, F.R., AFGS, Makum. Miss Paporri Khatonier also accompanied the visit



*Picture 9: Field visit to Barekuri village*

The trainees were told to use GPS and mobile applications to record the footprints/ tracks of the regions they patrol and to send the data to a PC. They learned how to measure the density of the forest canopy using a Densiometer. A brief discussion was held on the habitat and characteristics of Hoolock Gibbon.

**Key takeaways from the session:**

- Learn on the conservation efforts of locals towards Hillock Gibbon.
- Using GPS and mobile-based location monitoring applications
- Measuring forest canopy density using a Densiometer
- The significance of these tools and technology in forestry

## Day 4: 03 November 2022

### Session I: Role Play on implementation of Forest Law

Resource Person: Mr. Mayurakshya Bharadwaj, F.R., AFGS, Makum

The trainees received an introduction to the various laws governing and related to forest conservation and protection in the session, along with details of their key provisions and case studies.

#### Key takeaways from the session:

- Knowledge of the various laws pertaining to forests
- Key sections and practical applications of the laws during relevant situations
- Case studies and real-life scenarios to help trainees learn how to apply forest rules



Picture 10: Role play on implementation of forest law

### Session II: Role Play on implementation of Forest Law along with Case study

Resource Person: Mr. Mayurakshya Bharadwaj, F.R., AFGS, Makum

The various laws governing forests were explained to the trainees in this session, along with their key provisions and different real-life case studies.

#### Key takeaways from the session:

- Learning various laws governing forests.
- Important sections and how to apply them in relevant situations.
- Case studies and stimulating real-life scenarios for a better understanding of the application of forest laws.



Picture 11: Case study discussion on Forest Law

### Session III: Field visit to Dhola- Sadiya to study riverine ecological succession

Resource Person: Mr. Jiten Goswami, Deputy Ranger, AFGS, Makum; Mr. Mayurakshya Bharadwaj, F.R., AFGS, Makum; Mr. Angshuman Bhuyan, F.R., AFGS, Makum.

The trainees were instructed on how species in a particular region gradually adapt and evolve in response to their environment until equilibrium is attained. They also learned about how geography, environment, and other physical variables influence the process of soil genesis.

### Key takeaways from the session:

- Ecological succession and idea on pioneer species, seral community, and climax community.
- Process of soil formation and its profile, structure, texture, etc.



*Picture 12: Field visit to Dhola-sadiya*

**Day 5: 04 November 2022**

### Session I & II: Wildlife Protection Act 1972

Resource Person: Mr. P Sharma, F.R. (Retd.).



*Picture 13: Discussion on Wildlife Protection Act 1972*

The objective of safeguarding the many varieties of flora and animals (across the country) was explained to the trainees. They were instructed on the many definitions provided by the Act, including those for hunting, trophies, animal articles, etc. They were instructed on the process followed for the declaration of

any National Parks and Wildlife Sanctuaries in accordance with this act, as well as the accompanying penalties, for any offenses.

**Key takeaways from the session:**

- Important definitions as per the act.
- Provisions on Prohibition of hunting.
- Declaration and Protection of Wildlife Sanctuaries and National Parks.
- Constitution of Various Bodies
- Schedules under the Act

**Session III: Field visit to Kherjan Beat Office for learning seizure procedure of stumps, logs & various hammers and Enroute visit to Digboi Museum.**

Resource Person: Mr. Angshuman Bhuyan, F.R., AFGS, Makum and M.P. Bania, Fr-I, AFGS, Makum



*Picture 14: Field visit at Digboi Museum*

The field visit helped the trainees to identify various types of hammers in the department, their proper use, seizure procedure, etc.

**Key takeaways from the session:**

- Proper use of hammers for making various markings
- Safekeeping of hammers
- How to conduct search and seizure

**Session I: Importance of Drone technology in terms of aerial surveillance of Forest areas & demonstration.**

Resource Person: Ms. Kasturi Sule, IFS, ACF, Digboi Division.



*Picture 15: Importance of Drone technology*

The different drone components, including rotors, propellers, and frames, were taught to the trainees. The launch, navigation, and landing of the drone using remote controllers were shown. Different types of drones were also discussed. A briefing on the different applications of a drone, including search and rescue, surveillance, weather monitoring, firefighting, drone-based photography, videography, etc. was also taught to the trainees.

**Key takeaways from the session:**

- Learning about the parts of drone & their uses
- Application of drones in the Forestry sector
- Hands-on experience in using remote controls to launch, navigate and land the drone

**Session II: Field demonstration and training on the Operation of Drones.**

Resource Person: Ms. Kasturi Sule, IFS, ACF, Digboi Division.

The launch, navigation, and landing of the drone using remote controllers were demonstrated. A briefing on the different applications of a drone, including search and rescue, surveillance, weather monitoring, firefighting, drone-based photography, videography, etc. was also given to the trainees.

**Key takeaways from the session:**

- Learning about the parts of a drone & their uses
- Application of drones in the Forestry sector
- Hands-on experience in using remote controls to launch, navigate and land the drone



*Picture 16: Hands on experience of Drone technology*

### **Session III: Motivation for Forest Guard and Game watcher**

Resource Person: Mr. Gyan Sharma, APFBC

The session covered soft skill aspects such as understanding self through the Johari Window, Problem-solving mechanisms and needs, characteristics of the team, and team building in the forestry sector.



*Picture 17: Session on team building*

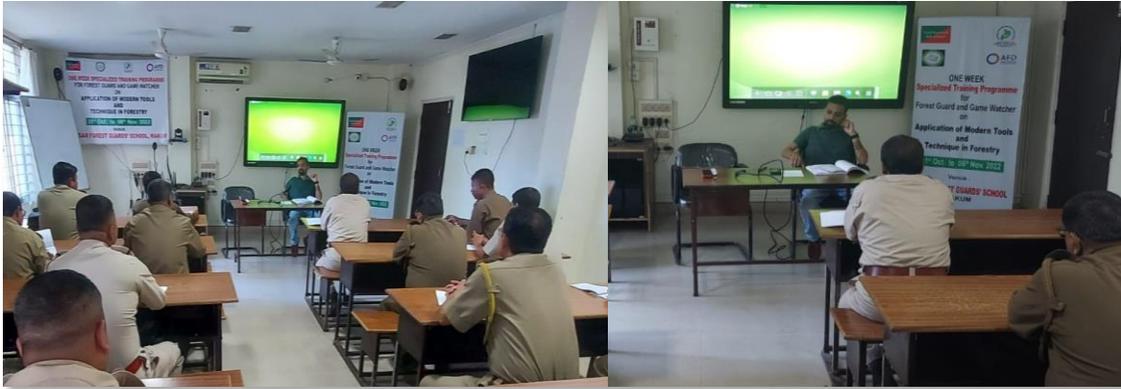
#### **Key takeaways from the session:**

- Need to understand self to better understand others.
- Importance of out of the box thinking in problem-solving aspects
- Understanding team, and team building process
- Role of team building in the forestry sector

Day 7: 06 November 2022

### Session I: Brief introduction to Silviculture

Resource Person: Mr. Angshuman Bhuyan, F.R., AFGS, Makum.



*Picture 18: Introduction to Silviculture*

The trainees were taught about the art and science of growing forest crops. The various methods of raising tree crops, their growth and after care up to the time of final harvesting were discussed.

#### Key takeaways from the session:

- Enhancing forestland productivity and timber production
- Maintaining financial profitability of forest products industries
- Promoting social well-being via employment opportunities which, in turn, help forest-dependent communities maintain stability.

### Session II: Group Discussion and feedback

The session was held to understand the group's understanding of different sessions and their usefulness in their daily chores of work-life, and how the training program has helped them to evolve and work more efficiently. It was followed by the gathering of feedback from the participants



*Picture 19: Group discussion session with the participants*

**Session III: Valedictory function.**

Chief Guest: Mr. Saidul Alam, Superintendent, AFGS, Makum.

The session was concluded with a closing ceremony speech by the Chief Guest of the training session followed by certificate distribution to the participants of the training.



*Picture 20: Valedictory Function*

## 9. Other Activities

Every morning, PT sessions were conducted to maintain the physical fitness of the trainees.



*Picture 21: P.T. sessions*

## 10. Feedback of Trainees

The trainees were instructed to complete the feedback form questions on a scale of 1-3, with 1 being the lowest/average and 3 being the highest/excellent or outstanding. The following conclusions were drawn from the trainees' responses to the following points.

### General Feedback

#### Before the training:

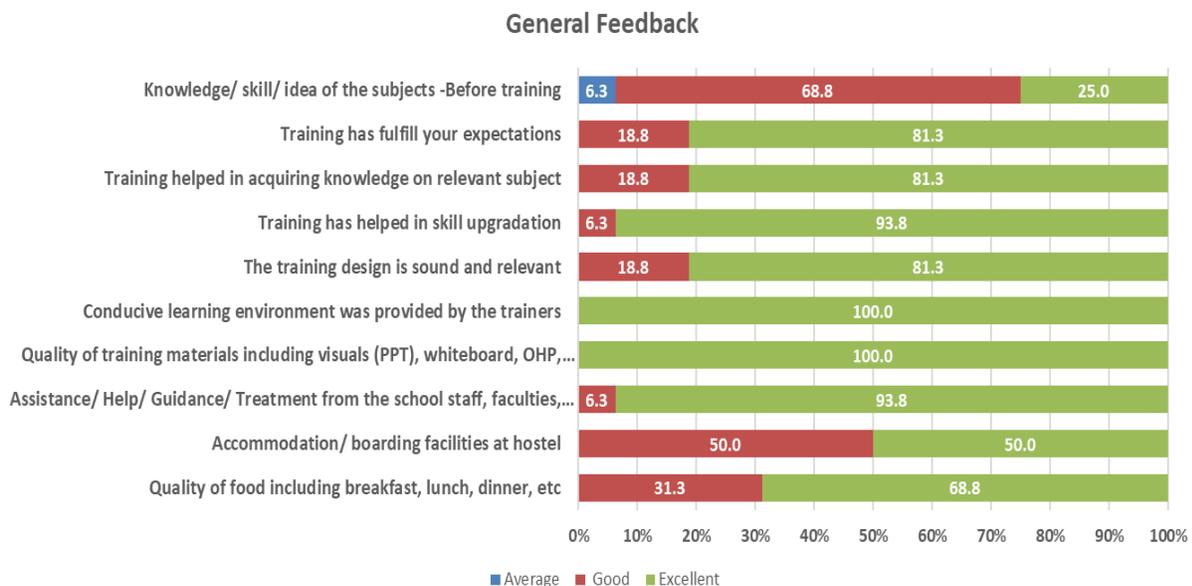
- ▶ Before the course, 73 percent of the participants rated themselves to be skilled and informed about the subject. However, only 25 percent of the participant rated their knowledge as excellent before the training sessions

#### After the training:

- ▶ 93 percent of participants assessed the training program as outstanding in terms of developing their Knowledge, skills, and abilities.
- ▶ According to 94 percent of participants, the training meets their expectations and assists them in acquiring knowledge on the relevant subject.
- ▶ The training design was sound and beneficial for 94 percent of participants, and it received an outstanding rating from 81 percent of those who attended.

#### Assistance and support

- ▶ 100 percent of participants stated the learning atmosphere was good and positive, and they all agreed that the schools' assistance in the form of PPTs, OHPs, handouts, and other materials was excellent.
- ▶ 93 percent of participants regarded the assistance or help and direction provided by the institute's staff, faculty, and administrators as outstanding.
- ▶ The accommodations and boarding amenities were assessed as outstanding by 50 percent of respondents and good by the other 50 percent.
- ▶ Similarly, 69 percent of participants said the food was of the highest quality, while another 31 percent said it was of good quality.

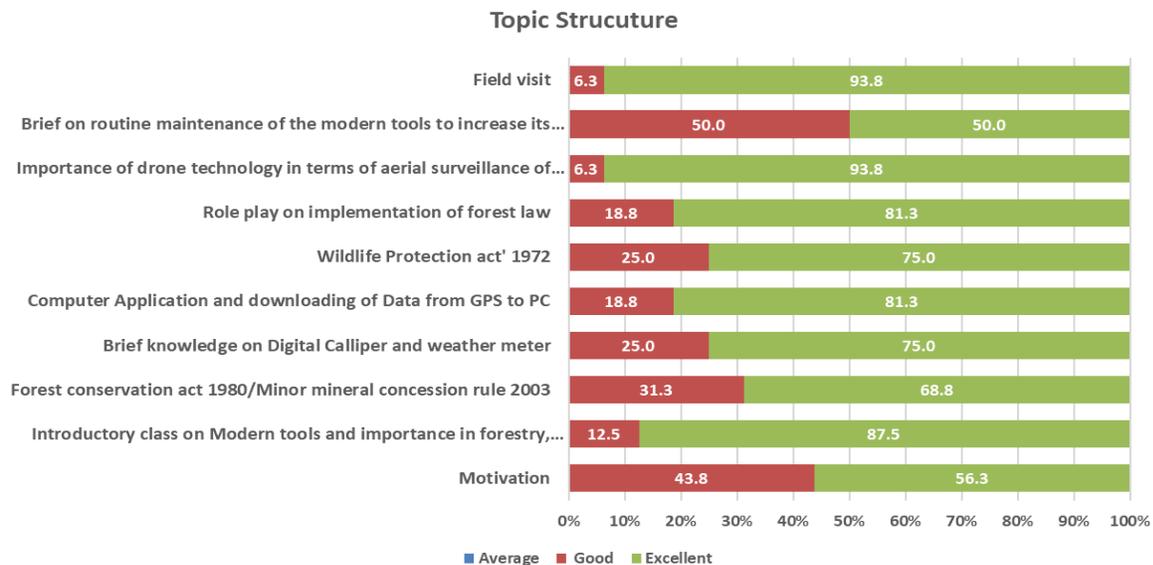


## Sessions Feedback

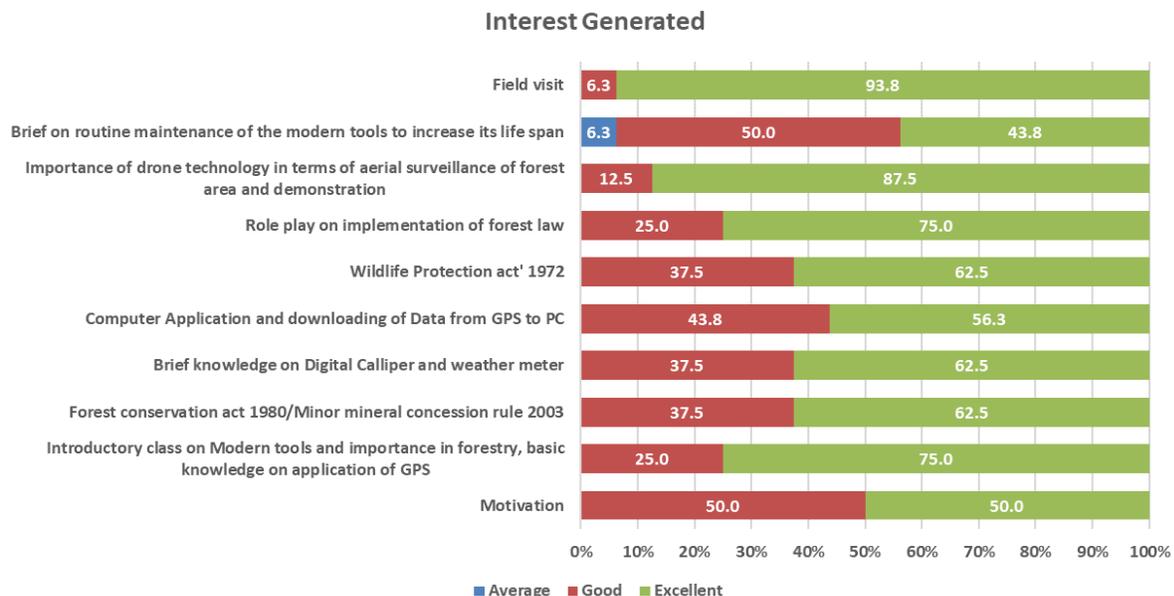
The feedback from each session was gathered in terms of the topic's structure, the interest generated, lecture delivery, reading materials provided, and overall knowledge improvement from the session. The following are the results of the session's feedback:

### Topic structure:

- ▶ All the sessions were rated excellent by 50 percent or more participants
- ▶ "Field visit" and "Importance of drone technology in terms of aerial surveillance," received ratings of excellent from more than 93 percent of participants
- ▶ Session on "Introduction to modern tools and their importance in forestry," received ratings of excellent from 87 percent of the staff.
- ▶ Almost 82 percent of participants evaluated "Computer application and downloading of data from



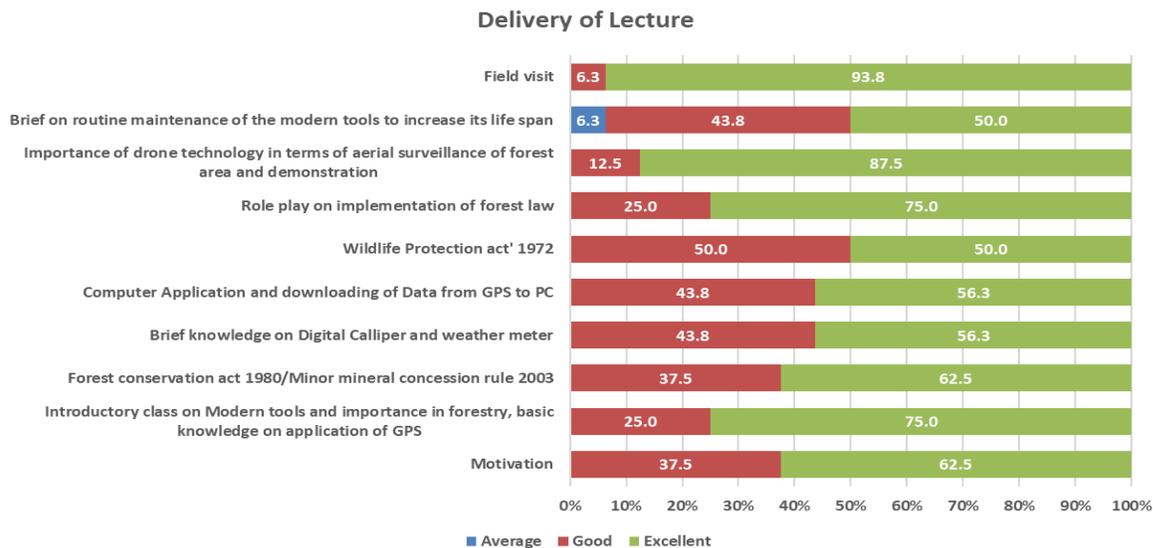
"GPS to PC" and "Role play on the implementation of forest law" as excellent.



## Interest Generated

- ▶ In terms of interest generated, the most popular sessions were "Field visit" (94 percent of participants) and "Importance of Drone technology in terms of aerial surveillance" (88 percent of attendees).
- ▶ Other sessions were scored outstanding by 50-75 percent of participants, except for the "brief on routine maintenance of the modern tools," which was rated excellent by nearly 44 percent of participants.

## Delivery of lecture

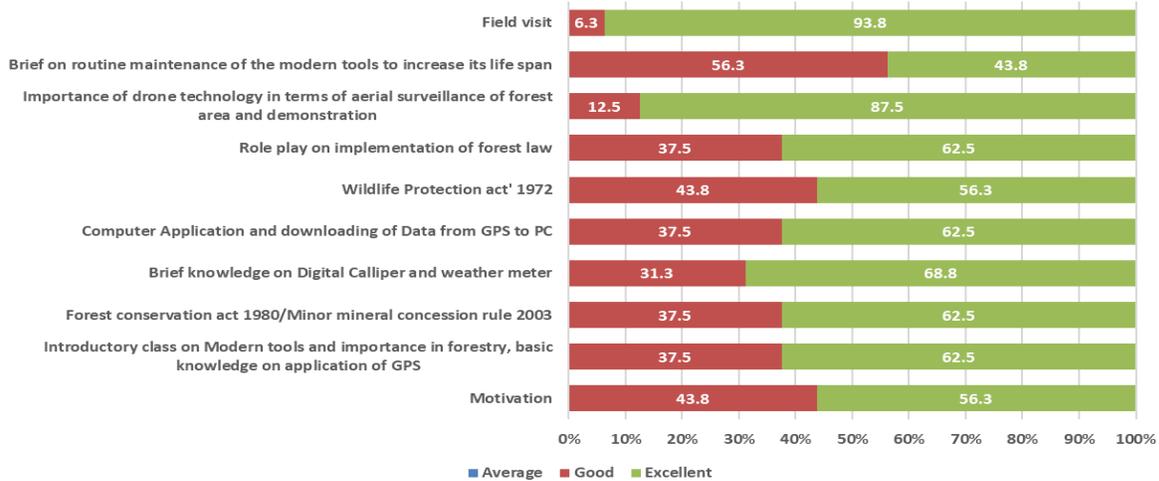


- ▶ Almost all the sessions were rated excellent by 50 percent or more participants in terms of lecture delivery
- ▶ 93 percent of the participants rated the session on "Field visit" as excellent followed by 87 percent of the participant who rated "Importance of drone technology in terms of aerial surveillance" as excellent.
- ▶ Sessions on "Introductory class on modern tools and their importance in forestry" and "Role play on implementation of forest law" were rated excellent by 75 percent of the participants
- ▶ All other sessions were rated excellent by 50-62 percent of the participants

## Reading Materials

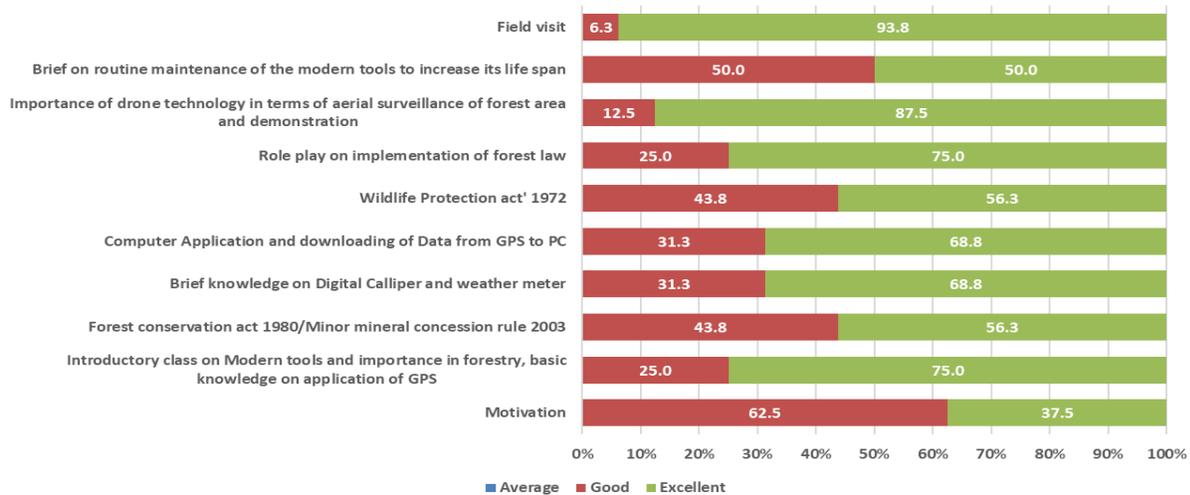
- ▶ The participants rated all of the sessions as either good or outstanding
- ▶ 93 percent of the participants rated the session on "Field visit" as excellent followed by 87 percent of the participant who rated "Importance of drone technology in terms of aerial surveillance" as excellent.
- ▶ "Brief on routine maintenance of modern tools" was rated excellent by 44 percent of the participants
- ▶ All other sessions were rated excellent by 56-63 percent of participants in terms of reading materials

### Reading Materials



### Overall Understanding

#### Overall Understanding



- ▶ The participants assessed all of the sessions as good or outstanding
- ▶ 94 percent of the participants rated the session on “Field visit” as excellent. followed by 88 percent of the participant who rated “Importance of drone technology in terms of aerial surveillance” as excellent
- ▶ The “Motivation” session was rated excellent by 38 percent of participants with the remaining 62 percent rating it good
- ▶ All other sessions were rated excellent by 50-75 percent of the participants

### Voices of the Foresters

- ▶ Raghu Ram Kalita of the Kamrup West Division believes that 'this type of training should be organized in the future as well, which is highly beneficial.'

- ▶ 'I am extremely delighted about the instruction and also the setting,' shared by Md. Ator Ali of Nagaon WL Division.
- ▶ Pallab Saikia, Division. of Dibrugarh (T), stated that 'the short-term training program is effective. However, aspects such as TA, uniforms, and PT outfits must be added in due course.'
- ▶ Jiasuddin Ahmed of Kamrup East Division, Basistha, Ghy-29 stated that 'the training course is quite important at the moment.'
- ▶ Suresh Timung, Northern Afforestation Division. Diphu Karbi Anglong, Santanu Phukan, Tinsukia WL division. Munindra Ch. Rajbongshi, Ghy WL division., Moonjyoti Swargiary, Northern Afforestation division. Hills, Diphu Karbi Anglong , and others shared similar sentiments.

## Summary

- ▶ According to the feedback received, all of the sessions were evaluated extremely well by the participants (more than 2.4 out of 3). Almost every session received an 82 percent or higher rating.
- ▶ 'Importance of Drone Technology' and 'Field Visit' were judged extremely effective by over 98 percent of respondents in almost all parameters. The drone, being a new technology, was commended by the majority of the participants since they were able to immerse themselves in the technology while flying it during their practice session.
- ▶ 'Introductory lesson on modern tools and their importance in forestry' and 'Role play on forest law implementation' received 88 percent and above acceptance in all parameters from participants. Similarly, 'Basic understanding of GPS application' achieved 85 percent or higher acceptability from participants in all parameters. These were the other seminars that received high marks from the participants.
- ▶ Participants praised the session on 'Brief understanding of digital calliper and weather meters', 'Forest conservation act 1980/Minor Mineral Concession rule 2003, and 'Computer application and downloading of data from GPS to PC.'
- ▶ Though the session on 'Motivation and Team building' and 'Wildlife Protection Act' 1972' also scored above 85 percent in most aspects by the participants, both sessions were comparatively rated lower than other sessions.
- ▶ Despite receiving more than 80 percent in nearly all parameters, the 'brief on routine maintenance of modern tools to increase its life span was the lowest rated sessions

## 11. Conclusion

The Forest Guards' seven-day specialized training on the use of modern tools and technologies took place at the Makum Campus. The instruction was given offline. Forest officials and other specialists with in-depth knowledge of forestry imparted the training session to the participants. Topics such as - an introduction to modern forestry equipment, utilizing GPS, forest policy and legislation, computer applications, familiarity with digital callipers, and weather meters, and the significance of drone technology for aerial surveillance were covered in the course. Field visits were organized to provide participants with hands-on experience with GPS applications, drones, callipers, the process of capturing stumps, logs, hammer imprints, and others for their skill building.

The Forest Guards expressed their satisfaction through feedback mechanisms on the training content, methodology, and delivery of the trainers. They were highly satisfied with the entire training event. The participants responded positively to the training sessions such as using drones, digital callipers, and other tools. The field trips also helped in enhancing their knowledge and skilling using the tools and equipment.

## Annexure- I: Module of Specialised training

Programme for one week specialised training on 'Application of Modern Tools and Technique in Forestry' for Forest Guards' School, Makum								
Under APFBC Scheme, Nos. of Trainees -20 each batch								
Date	Time 8-00 am To 8-30 am	Session-I 8-45 am to 10-15 am	Time 10-15 am To 10-30 am	Session-II 10-30 am to 12-00 Noon	Time 12-00 Noon To 1-00 pm	Session-III & IV 1-00 pm to 4-00 pm	Time 4-00 pm To 5-00 pm	Time 8-00 pm To 9-00 pm
31-10-2022	Break fast	Registration and Inaugural Session (S. Alam, Suptd.)	T E A B R E A K	Introductory Class on Modern Tools & importance in forestry- Basic knowledge on application of GPS (M.K. Goswami, DFO, Govt. T.T.&S. Plant, Divn.)	L u n c h B r e a k	Field Practical : Working with GPS at Lakhimpur RF under Digboi Division (M. Bharadwaj, FR/J. Goswami, Dy. Ranger)	E v e n i n g T e a	D i n n e r
01-11-2022		Forest Conservation Act' 1980 / Minor mineral Concession Rule -2013 (M.K. Goswami, DFO, Govt. T.T.&S. Plant, Divn.)		Brief knowledge on Digital Caliper and Weather meter (B.V. Sandeep, IFS, DFO, Dibrugarh Division)		Field Practical : Working with Digital caliper , Weathermeter and GPS at Dihing Patkai NP (M. Bharadwaj, FR/J. Goswami, Dy. Ranger/ M. Bania, Fr-I/ M. Gogoi, Fr-I )		
02-11-2022		Classroom activity : Computer application and downloading of data from GPS to PC (Kastauri Sule, IFS, ACF, Digboi Division )		Classroom activity : Downloading of Data from GPS to PC . Brief knowledge of Densitometer (Kastauri Sule, IFS, ACF, Digboi Division )		Field Practical : Working with GPS and Densitometer at Lokai RF under Dibrugarh Division (M. Bharadwaj, FR/J. Goswami, Dy. Ranger/ M. Bania, Fr-I/ M. Gogoi, Fr-I )		
03-11-2022		Role Play on implementation of Forest law (M.Bharadwaj, FR )		MOTIVATION (Gyan Sarmah, APFBC Office, Guwahati)		MOTIVATION (Gyan Sarmah, APFBC Office, Guwahati)		
04-11-2022		Wild Life Protection Act ' 1972 (P.Sharma, FR, Retd.)		Wild Life Protection Act ' 1972 (P.Sharma, FR, Retd.)		Field visit for seizure procedure of stumps, log & various hammer impression . (M. Bharadwaj, FR/J. Goswami, Dy. Ranger)		
05-11-2022		Brief on routine maintenance of the modern tools to increase its life span (T.C. Ranjith Ram, IFS., DFO, Digboi Division)		Importance of Drone technology in terms of aerial surveillance of forest area & demonstration (T.C. Ranjith Ram, IFS, DFO, Digboi Division)		Field Practical : Operation of Drone . (T.C. Ranjith Ram, IFS, DFO, Digboi Division)		
06-11-2022		Role Play on implementation of Forest law alongwith Case Study (M.Bharadwaj, FR)		Group Discussion & feedback (S. Alam, AFS, Suptd./M. Bhardwaj, FR/J. Goswami, Dy. Ranger)		Valedictory function		

N. B. The programme is subject to change considering convenience of Resource Persons.

  
 (Saidul Alam, AFS)  
 Superintendent,  
 Assam Forest Guards' School, Makum

**Annexure- II: List of Participants**

<b>Sl. No.</b>	<b>Name of Participant</b>	<b>Designation</b>	<b>Division</b>
1	Sri Palakh Bhuyan	Forest Guard	Dhemaji Division
2	Sri Lolit Doley	Forest Guard	Dhemaji Division
3	Sri Nasiruddin Ahmed	Forest Guard	Nagaon Division
4	Sri Moonjyoti Swargiary	Forest Guard	N A Division, Diphu
5	Sri Suresh Timung	Forest Guard	N A Division, Diphu
6	Sri Pallab Saikia	Forest Guard	Dibrugarh Division
7	Sri Kushal Kr Bora	Forest Guard	EAWL Division
8	Sri Santanu Phukan	Forest Guard	Tinsukia WL Division
9	Sri Pradip Senapati	Forest Guard	Genetic cell Division
10	Sri Abdul Rahim	Forest Guard	Guwahati SF Division
11	Sri Munindra Ch Rajbongshi	Forest Guard	Guwahati WL Division
12	Sri Rajendra Singha	Forest Guard	Guwahati WL Division
13	Sri Golap Ch Kalita	Forest Guard	Nagaon South Division
14	Sri Ator Ali	Forest Guard	Nagaon WL Division
15	Sri Gaisuddin Ahmed	Forest Guard	Kamrup East Division
16	Sri Raghu Ram Kalita	Forest Guard	Kamrup West Division

## Annexure- III: Feedback Format

### FEEDBACK FORM

Specialized Training on “Application of Modern Tools & Technique in Forestry” for  
Forest Guards & Game Watcher

At Assam Forest Guards’ School, Makum

**With effect from 15-09-2022 to 21-09-2022**

(Rate the following activities/subjects with A= Excellent, B= Good, C= Average)

1. General impression/Idea about the content of the Course before training :

A	B	C

2. Does this training fulfil your expectations:

A	B	C

3. Does this training help in acquiring knowledge on relevant subjects:

A	B	C

4. Does this training help in skill up-gradation :

A	B	C

5. Whether the training design is sound and relevant :

A	B	C

6. Whether a conducive learning environment was provided by the trainers :

A	B	C

7. Quality of training materials including visuals (PPT), whiteboard, OHP, handouts, etc. :

A	B	C

8. Assistance/ help/guidance/treatment from the School Staff, Faculties, and Officials of the Institute:

A	B	C

9. Accommodation/Boarding facilities at the Hostel :

A	B	C

10. Quality of food including breakfast, lunch, dinner, etc. :

A	B	C

**Subject-wise rating :**

(i) Motivation Class

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(ii) Introductory class on modern tools & importance in forestry. Basic knowledge on the application of GPS :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(iii) Forest Conservation Act'1980/Minor mineral Concession Rule-2003 :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(iv) Brief knowledge of Digital calliper and Weather meter

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(v) Computer application and downloading of data from GPS to PC :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(vi) Wild Life Protection Act'1972

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(vii) Role Play on implementation of Forest law :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(viii) Importance of Drone technology in terms of aerials surveillance of Forest areas & demonstration :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(ix) Brief on routine maintenance of modern tools to increase their life span :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

(x) Field Visit :

Topic Structure			Interest Generated			Delivering lecture			Reading materials			Overall Understanding		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

Any other comment

.....  
 .....

Name:.....Division.....

**Annexure- IV: Certificate format**

Forest Department,  
Govt. of Assam

ASSAM FOREST GUARDS' SCHOOL

অসম চৰকাৰ  
GOVERNMENT OF ASSAM

ASSAM PROJECT ON  
FOREST & BIODIVERSITY  
CONSERVATION

AFD  
AGENCE FRANÇAISE  
DE DEVELOPPEMENT

**GOVT. OF ASSAM  
ASSAM FOREST GUARDS' SCHOOL, MAKUM  
CERTIFICATE**

This is to certify that .....

S/o.....

Under ..... has attended  
one week Specialized Training Course of Frontline Staffs (Forest Guards / Game  
Watchers) from 31-10-2022 to 06-11-2022.

(Dr. Sonali Ghosh, IFS)  
Chief Conservator of Forest  
Research, Education and Working Plan  
Assam, Guwahati

(Saidul Alam, AFS)  
Superintendent  
Assam Forest Guards' School, Makum



**For more Information**  
Assam Forest Guard School,  
Makum, Tinsukia, Assam