

A training programme for Crash Course Training Programme on Hi-Tech Survey operation for Amins of Deogarh, Ganjam, Sambalpur, Subarnpur Districts was organized at ROTI during 9th – 12th April 2016. The objective of the training programme is mentioned below:

- To orient the participants on High Tech Survey Operation.
- To sensitize them on the provisions of Odisha Special Surveys & Settlement Act. & Rules and deliverables thereof.
- High Tech Survey Operation module.
- To familiarize the participants on their role, responsibilities and functions on High Tech Survey Operation management.

❖ **DAY-I: Inaugural Session**

The training programme commenced with registration of Participants followed by the Inaugural session. The participants were welcomed by Smt. Pratibha Dora, Course co-ordinator. She explained about the objective of the Programme. After the inaugural session was over, the training session started.

❖ **Concept of process flow of Hi-Tech Survey Operation :**

The session was taken by Shri Biswaranjan Rath, OAS-I (JB), AD(CLR), where he explained about the roles and responsibilities of different stakeholders during Hi-Tech Survey Operation. Along with it, he narrated on the following issues relating to procedure of the Survey operation.

- Concept of process flow of Hi-Tech Survey Operation : GCP Planning and Monumentation ,Acquisition of raw Images and orthophoto generation, Boundary Fixation, plot Vectorisation ,Obscured / Gharabari areas Survey (ground truthing) , Draft Map preparation including dispute resolution mechanisms, Roles and Responsibilities of different stakeholders during Hi-Tech Survey Operation

❖ **Theory on Hi-Tech Survey Operation:**

Shri Dillip Kumar Mohapatra, Asst. Director S&MP, beautifully explained about the Theory on Hi-Tech Survey Operation, its regulations and highlighted the important provisions of the following topics.

- Concept of DGPS, ETS Hi-resolution satellite imagery and Areal

photography and their acquaintance

The session was very interactive, where the participants took a keen interest to know the technicalities of the process.

DAY- II

❖ Exposure on DGPS and ETS BY Technical Staff of ROTI :

The Forenoon session was taken by Sri Gagan Bihari Tripathy, Head Traverser & other Technical Staff of ROTI. In this session the Technical Staff explained in detail about the operation of DGPS & ETS in field condition. There are several measuring techniques that can be used by GPS survey receivers and should choose the appropriate technique for the application.

Static survey

This was the first method developed for GPS surveying and is used for measuring long base line to establish control point which can be used as reference point for detail survey. By this process three fixed control points in the ROTI premises named (Base –I, Base-II, Base – III) were obtained referring the GCP which was established earlier at village – Kateni By ORSAC. One receiver was placed on a point whose coordinate are known accurately in WGS 84 . i.e GCP known as Reference Receiver and the other receivers are placed in Base –I,Base-II, Base-III simultaneously.

Odisha Survey & Settlement Act. &Rules :

The afternoon Session was taken by Sri Dhiren Kumar Das, Former Collector & DM. He elaborated on the topic very extensively. The Session was very interactive. The Participants got cleared their doubts on this score from the Resource Person.

- Brief over view on Odisha Survey & Settlement Act. 1958 & Corresponding Rules and Odisha survey & Settlement Act. 2012 & Rules with special emphasis on difference in stages of operation, involvement of different stake – holders and methodologies to be followed.

DAY- III

❖ Exposure on DGPS and ETS BY Technical Staff of ROTI :

The Forenoon session was taken by Sri Gagan Bihari Tripathy, Head

Traverser & other Technical Staff of ROTI. In this session following deliberations were made kinematic technique was used for detail surveying and measuring many points in quick succession. The position of moving Rover can be calculated relative to the reference. First the Rover has to perform initialization for (5-10) minutes. If any obstruction in the sky such as bridges, trees, tall buildings etc and less than 4 satellites are tracked, the equipments must be reinitialized. After that Rover can move freely and recorded positions which are taken for detailed Survey.

❖ **Roles and Responsibilities of different stake holder**

The session was deliberated by Shri Chinmya Kumar Acharya OAS-I (JB) A.O, ROTI. He narrated on the salient features of the following topics.

- Roles and responsibilities of different stake holders during Hi- Tech survey operation under Odisha Special Survey Settlement Act. 2012 and corresponding Rules and technical manual for cadastral survey using modern technologies.

DAY- IV

❖ **Exposure on DGPS and ETS BY Technical Staff of ROTI :**

The Forenoon session was taken by Sri Gagan Bihari Tripathy, Head Traverser & other Technical Staff of ROTI. In this session the control points detail survey by Electronics Total station was carried out by the trainees in the campus of ROTI.

The procedure to handle the instrument for centering the GCP with instrument center and labeling the instrument before operating was explained to the trainees.

Field Procedure

Field procedure may be divided in to two parts.

1. Traverse by E Total station to provide and extend the control points for subsequent detail survey.
2. Detail survey by E. total station using provided control points.

Planning

Planning is the first and foremost steps to execute assigned Task effectively. So following steps were planned for execution of the project .

1. Preparation of the rough sketch of the area

2. Selection of control points
3. Detail survey is to be carried out after completion of fixation of control points.

Field work

Setting up the instrument on given known station by centering and leveling properly, checking all parameters i.e., angle units, and scale factors etc. Then going for survey by feeding co-ordinates in the station and entering information of back station and corresponding co-ordinates which is also a known station. This process of observation is to be carried out at each station. to complete the measurement of the project.

❖ Sri Gaganbihari Tripathy, Head Traverser took the afternoon session on Doubt Clearance on the process of DGPS & ETS operation in different stages.

- The List of participants in the Amin Training programme is mentioned as follows.

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Before the valediction, all the Participants were provided with a copy of Group photograph, course Material etc.

The Crash Course Training Programme thus concluded smoothly with the active participation of all concerned.

