

A training programme for Training of Trainers (ToT) on Hi-Tech Survey operation for Master Trainers of Ganjam, keonjhar and Subarnpur Districts was organized at ROTI during 2nd – 7th May 2016. The objective of the training programme is mentioned below:

- To orient the participants on High Tech Survey Operation.
- To sensitize the master trainers 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.

❖ **Odisha Special Survey and Settlement Act :2012**

The session was deliberated by Shri Sribhusan Sukla, OAS,(S) Jt. Director, S&MP . He narrated on the salient features of the following topics.

- Brief overview of Odisha Survey and Settlement Act, 1958 and Details of Odisha Special Survey and Settlement Act. 2012
- Odisha Special Survey and Settlement Rules,2012, difference of new method of survey and Preparation of ROR from previous record.

❖ **Concept of DGPS & ETS :**

The Session was taken up by Shri A.K. Atabudhi, Eng, Asst. ORSAC and Shri P.K. Parida, Scientist, ORSAC. They made aware the participants about the

- Concept of DGPS & ETS, pure ground method of cadastral Survey
- Concept of Arial Photography and High Resolution Satellite Imagery, Hybrid methodology of Cadastral Survey

DAY- II

The Day-II began with recapitulation of proceedings of the previous day by the participants followed by the session as per the Programme.

❖ 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 ground control points, their monumentation, national grid Survey of India, toposheet reference
- Acquaintance with photogrammetric and High Resolution Satellite Imagery in Laboratory

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

❖ 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



DAY- III

❖ Acquaintance With Operation Of DGPS & ETS in field Condition(practical) :

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. The Participants being the revenue officers showed interest to know the operation of the equipments.

❖ **Manner of Recording of Govt. Land :**

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.

- Manner of Recording of Govt., Land (state Govt., & central Govt.) Deity land, wakf land and land of Lord Jagannath, was discussed in detail.

DAY- IV

❖ **Installation of Survey Pillar :**

The Forenoon session was taken by Sri Gagan Bihari Tripathy, Head Traverser & other Technical Staff of ROTI.

Following areas were covered during this practical Session.

- Installation of Survey pillar / peg at one Kilometer grid interval and GPS observation for 1 hour at all points GPS post processing kinematic (PPK) observation of mock Survey area

❖ **Manner of Recording of Private Land :**

Sri Manas Ranjan Samal, OAS,I(SB) Tahasildar, Bhubaneswar deliberated on the following topics in the afternoon session.

- Manner of Recording of private (Rayati) Land with emphasis on recording of status (Swattwa) ,
- Caste including Kissam Niyamabali pertaining to private Land.
- Remarks column entries, principle of assessment of rent.

Thus, The Participants were made aware about the Procedures for recording of Private land.

DAY- V

❖ **Installation of Survey pillar :**

The Forenoon session was taken by Sri Gagan Bihari Tripathy, Head Traverser & other Technical Staff of ROTI. In this session Technical Staff Explained in detail about the ETS (Electronics Total Station). He also clarified the participants about the preparation of field sketch made through ETS.

- Survey using ETS mock Survey area, Preparation of field sketch

❖ **Observation data Processing in Lab Condition and generation of map:**

In the afternoon session Sri A.K.Atbudhi, Eng.Asst. ORSAC and Sri Gagan Bihari Tripathy, Head Traverser explained on the topic to the Participants.

The entire process of the GPS control survey was divided in to 3 segments.

1. Field Observation
2. Downloading
3. Data Processing and adjustment.

Downloading

After completion of the field observation, the field data of TRIMBLE instrument down loaded in to the computer through Trimble Data Transfer for processing of the data.

Data Processing and Adjustment

The data processing for all models in Trimble R6 model -3 GPS instrument were done through TBC (Trimble business center) software. The data were processed under automatic mode from reference point to rover point. After processing of all the base line, a summary was available for scrutinizing the result. All the results should be in fixed solution for short base line like also Horizontal vertical precision error etc. should be within definite permissible limit. The efforts to get the fixed solution of all base line is done by changing mask angle, eliminating the disturbed data of different satellites using session editor and print out of report was obtained.

After processing the data, map can be generated through Arc GIS / Auto CAD software.

DAY- VI

The Day-VI began with recapitulation of proceedings of previous day by the participants followed by the following session.

❖ **Study of digital map :**

The Forenoon session was taken by Sri Jageswar Sahoo, Scientist NIC. During the session discussions was made on the following topic.

Study of digital map in lab and application of bhunaksha software.

- ❖ Sri Biswaranjan Rath, OAS-I (JB), AD(CLR) took the afternoon session on FAQs & Doubt Clearance on the total process of Hi- Tech Survey operation.

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

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

The Training of Trainers Programme thus concluded smoothly with the active participants of all concerned.

