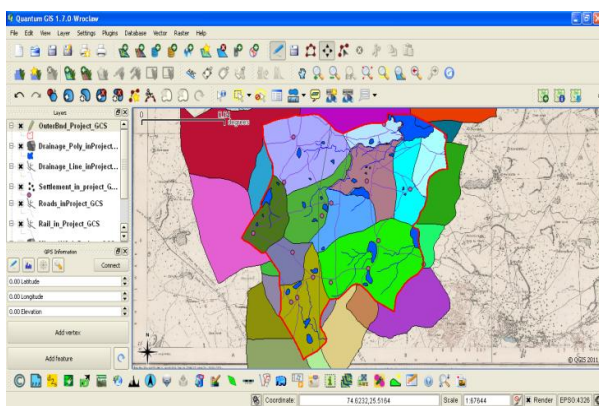
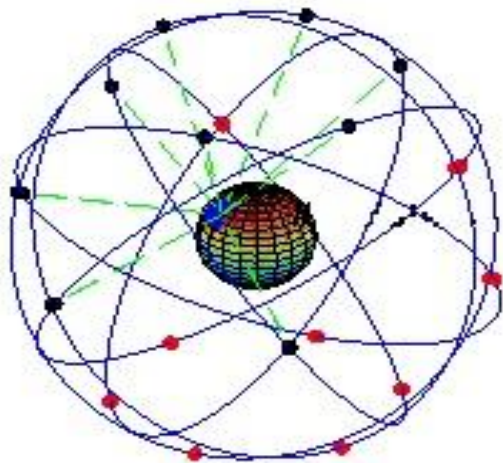


Training Course on  
**Applications of Handheld GPS  
for Watershed & MGNREGS  
using Open Source GIS Tools**



**(07-10 Oct, 2013)**

**At**



**National Institute of Rural Development  
Jaipur Centre  
(Ministry of Rural Development, GOI)  
Chaupal Near Railway Station, Jaipur-06  
Website: [www.nird.org.in](http://www.nird.org.in)**

**Course Directors**

**Er. H K Solanki, Assistant Professor, NIRD-JC**

**Need:**

Watershed Management programme and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) are two flagships of Ministry of Rural Development, Government of India to empower the unemployed and enhances

the livelihood security of the people in rural areas by generating wage employment through works that develop the infrastructure and assets for the area. Most of the activities are related to land and water and the earth's features. These activities require a host of inter-related information on natural resources and terrain. For this purpose, data from Global Positioning System (GPS) and remotely sensed data provides valuable and up to date spatial information on all Parameters of earth's features.

The Global Positioning System (GPS) is a space-based satellite navigation system that provides location information of GPS receivers in all weather conditions. The system provides critical capabilities to the area/location based schemes/programmes. It is maintained by the United States government and is freely accessible to anyone with a GPS receiver.

In Watershed & MGNREGS programmes it has become necessary to record location information of each created asset under the schemes. Watershed Departments at State levels and DoLR at Nation level is trying to incorporate these location based information in their MIS. Under MGNREGS also, it has become a part of their National MIS to enter coordinates of created assets. This will ensure transparency, avoid duplication and help in proper information dissemination.

As receiving and processing GPS signals are free, it is not a proprietary matter and there is tough competition in the market in various companies and eventually the cost of the GPS instruments have come down. The cost of instrument remains negligible in comparison to expenditure being made on these two schemes (Watershed & MGNREGS). Moreover these instruments will last long and can be used in any other scheme also, being implemented by the concerned department/office.

The GPSs, being purchased by respective departments are of different makes and having different internal data formats. These data are to be converted in simple and widely used common format to use with GIS environment & Google Earth etc. for different purposes including overlay, addition, editing etc.

The vendors related to the instruments generally concentrate on sale only and cover very short duration trainings (may be of one day or of some hours). This is limited to the instrument's specific technicalities only, including capture of data and transfer to computer in its native format, which is not sufficient to handle the data with other available data in different formats. Further it is not covering the basic needs of the schemes

and the GIS environment in which the final data is to be used and processed.

In view of this, the Training Course proposed, aims at exposing the participants in the use of handheld GPSs for Watershed & MGNREGS, using Open Source GIS tools for Planning, Implementation and Monitoring of Natural Resource in General and Watershed & MGNREGS schemes in particular in a cost effective, timely and scientific manner.

#### **TRAINING OBJECTIVES:**

- Introducing basics of Global Positioning System
- Imparting working knowledge of handling GPSs
- Hand-holding on import/export of GPS data to/from computer and working in GIS Environment
- Demonstrate various application potential of GPS data in Watershed & MGNREGS Planning Implementation and Monitoring.

#### **COURSE CONTENT:**

The course would cover introduction to GPS technology, various makes available, price and accuracy comparison, suitability to Watershed and MGNREGS, introduction to Open Source QGIS software and GPS related tools.

It will cover real data capture using various makes of GPS and import of data in Open Source GIS, use of data to overlay, edit etc. and generation of various thematic maps etc.

A one-day field visit will be made to observe real data capture/asset inventory through GPS.

The operating methodologies would be taught and various inbuilt features would be covered, to use GPS in local level planning and decision making processes of Watershed & MGNREGS.

#### **TRAINING METHODS:**

Training methods would be in learning by doing mode with paralleled sessions of lectures and exercises.

#### **PARTICIPANTS LEVEL:**

Project, District and State level officials engaged in MGNREGS, Watershed, Forest, Agriculture; Faculties/Scholars of University/Training Institutes and representatives of Reputed NGOs.

Participants are advised to bring their laptops and GIS data if they possess, so that they can use their systems continuously. Minimum knowledge of computer operations is required.

#### **LODGING AND BOARDING:**

The participants will be provided free board and lodge (AC rooms) at NIRD Jaipur Centre, Chaupal Building, Near Railway Station, Jaipur-302006. Participants can report/leave a day before and a day after the course duration, as per their travel convenience. Attending the course with families is discouraged.

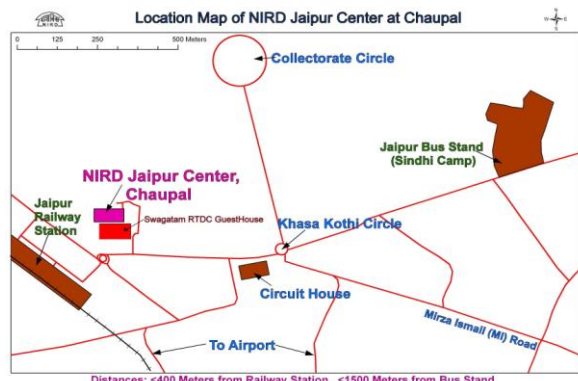
#### **LOGISTICS:**

The participants are requested to report on their own to **NIRD Jaipur Centre, Chaupal Building, Near Railway Station, Jaipur-302006**. However their return drop to Bus stand, Airport will be arranged, if required. A formal return travel plan should be placed to course director well in advance in this regard.

#### **LOCATION & FACILITIES:**

NIRD Jaipur centre is located near main Railway Station of Jaipur in a building named locally as Chaupal, behind Swagatam RTDC hotel. Map is shown below for reference and use. It is at **walking distance (400 meters) from main Railway station, 1.50 kms from main Sindhi Camp bus stand and around 11 Kms from Airport**.

The centre is well equipped with a Computer Lab with latest computers and Internet facility and a Gymnasium.



#### **Please apply to:**

**Er. H K Solanki**

Assistant Professor

National Institute of Rural Development

Chaupal, Near main Railway Station

Behind Swagatam RTDC Hotel

Jaipur -302 006

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