# Training Report

**Program Name:**

Purpose oriented DL program on "**Irrigation Assets Mapping Using GIS**". Information Brochure is enclosed at **Annex-1**

**Duration:**

The program was organised in two batches – Batch I during 05$^{th}$ July 2021 to 09$^{th}$ July 2021and Batch II during 12$^{th}$ July 2021 to 16$^{th}$ July 2021.

**Introduction:**

One of the greatest challenges being faced by the world today is to increase the food production in an efficient and sustainable manner so that growing population can be fed. Irrigation experts are seeking the ways in which the finite water resources can used efficiently and in a sustainable manner. GIS and Remote Sensing technologies have been proved very useful for dealing with complex issues concerning water resources development and management. Mapping of irrigation assets and other features of the command areas in GIS format will help in their proper operation and maintenance and thereby in better monitoring and evaluation of water resources projects.

The aim of this program was to build awareness about GIS technology among water resources professionals and make them capable of creating basic GIS Maps using Open-Source GIS software (QGIS). This training enabled the participants to map the irrigation assets like canal network, various civil structures, irrigation command boundary, administrative jurisdiction, rivers, reservoirs, settlements, transportation networks and present the data in a GIS Map format. The program was designed in such a way that the participants during the training period had to devote only about two/three hours daily, as per his/her convenience. WhatsApp groups of the participantsfor both batches were created for answering queries of participants and their hand holding. Both groups continue to remain active even after completion of the training program.

**Program Contents**

The program comprised of online sessions and covered the following topics:

1. Introduction to Geographic Information System
2. Installation of QGIS 3.xx and sample data
3. Working with Vector data using QGIS
4. Creation of vector data using Digitization process in QGIS
5. Generation of GIS MAP and exporting into printable format.
6. Satellite Image Interpretation
7. Georeferencing of Raster Data
8. Mapping of Irrigation project infrastructures using Remote Sensing Imagery in QGIS
9. Advance Digitization Methods in QGIS
10. Downloadingrelevant open access vector data from internet

**Program Format**

The Training Program contained online lecture modules (series of voice PPTs, Videos of practical hands-on using QGIS 3.xx, Assignments and Discussions using "Google Classroom" as well as Whatsapp group. To facilitate the participants joining the training program, they were asked to register themselves in the "Google Classroom" using their "Gmail Account ".Registered participants were given the Class Code for accessing the training modules. Towards the end of the program participants were asked to complete an online Assessment test consisting of MCQs and Short Answer Questions which were based on the topics covered during the program. Sufficient time was provided to review the video lectures and submit the assessment test. Based upon the level of participation in the 'Google Classroom', submission of Assignment, completion of Assessment Test and feedback/evaluation form, e-certificates were provided to eligible participants.

**Participants List:**

| Batch – I | Batch - II |
|---|---|
| Total Registered Participants: **157** | Total Registered Participants: **156** |
| Number of participants who attended the program in Google Classroom: **165** | Number of participants who attended the program in Google Classroom: **145** |
| Certificates issued to **110** participants | Certificates issued to **94** participants |

List of registered participants is enclosed at **Annex -2.**

**Training Program Schedule & Lecture Material:**

A document containing Session Plan and Training Material is enclosed at **Annex–3** which has youtube links for the corresponding video lecture/Hands-on sessions and the same are downloadable. Other Material circulated during the training program include two presentations on 'Introduction to GIS' and 'Map Projection' and a publication 'CWC Guidelines and Legends for Preparation of Maps, 1997'. They are enclosed at **Annex-4**, **Annex- 5** and **Annex-6** respectively.

**Assessment:**

During the training program one assignment was given to the participants to submit the generated GIS map of Jurala Irrigation Project Command Area in PDF format.  After the completion of the training program one online Assessment test consisting of 20 MCQs and Short Answer Questions was circulated through google form for submission.

The average score in the Assessment Test was   **12 /20** for **99** no. of participants from Batch-I and   **12/20** for **81** no. of participants from Batch-II.

Assessment Test Questions and the Answer Key are attached at **Annex-7**. Reponses of participants from Batch-I and Batch – II are at **Annex -8** and **Annex-9** respectively.

**<u>Feedback:</u>**

Feedback was collected from the participants of both batches through google form. **106** participants of Batch-I and **89** participants of Batch-II have given the feedback. The feedback response is attached at **Annex-10** and **Annex -11** respectively.