**Training Report**

**Program Name:**

Purpose oriented DL program on “Drainage & Watershed delineation using GIS”

**Introduction:**

The aim of this Distance Learning training program was to give awareness regarding GIS technology and learn its use to create a basic GIS MAP using Open-Source GIS (QGIS 3.12). This training would enable the water professionals to delineate watersheds/catchments and other parameters based on location of hydrological data collection sites and in the presentation of data in a GIS MAP format which would provide an efficient and effective method to view and analyse the spatial data. The program was designed in such a way that the participants would have to devote only about their two hours daily, as per his/her choice, during the training period and would not affect much in their day to-day official work. A WhatsApp group of the participants was also be created for clarifications and hand holding by the experts for some period.

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**Program Contents**

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

1. Installing QGIS 3.12 and sample data
2. Working with Vector data and Raster Data
3. Clipping and merging the data
4. Map composer, Designing the user defined symbols using QGIS.
5. Downloading and processing sample data (later participant may be asked to download DEM of their jurisdiction)
6. Symbology and viewing the DEM using QGIS.
7. Watershed modeling
* Create a depression less DEM.
* Create flow direction.
* Create flow accumulation.
* Create watershed Pour Points.
* Delineate watersheds.
* Delineate Drainage
* calculates area, relief etc. of the watershed.
1. Download national, state and district boundaries (village, if available) and Download road/rail network
2. Generation of final GIS MAP and exporting into printable format.

**Program Format**

Program contained online lecture modules (series of voice PPTs, Videos of practical hands-on using QGIS 3.12 and Quizzes) and Discussions using “Google Classroom”. For facilitating to join the training, the participants had registered themselves in the “Google Classroom” using their email. The Registered participants were given the Class Code by this Institute, on entering which they accessed to the training modules. Participants were required to complete an online Assessment/assignment through Multiple Choice Questions (MCQ) and specific GIS task based on the topics covered in the program.

**Participants List:**

 Participants Registered: 67

 Participants really participated: 44

 The Final List of participants are attached at **Annex -1**

 **Training Program Schedule & material:**

The Training Program Schedule is enclosed at **Annex-2**. It also has links for the corresponding lecture videos which can also be download using the link.

**Quiz & Assignment:**

 A quiz was taken in the end of the training program to access the performance of the trainees. It consisted 20 questions of MCQs, sort and long answer type. the average score of the quiz was 12/20 for 44 no. of participants (min marks = 3/20; max Marks =18/20). The quiz question &answers and its response is attached at **Annex-3** and **Annex -4** respectively.

Participants were also asked to submit the final GIS MAP in pdf format as assignments. It was found that most of the participants were able to export the GIS MAP in pdf map with good symbology, north arrow, legends, scalebar etc.

**Feedback:**

Feedback was collected from the participants inform of google form. Only 12 participants have given the feedback. The feedback response is attached at **Annex-5**