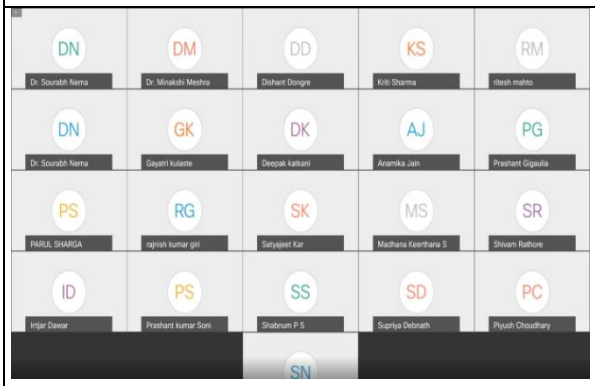
Hand on Training of Remote Sensing and GIS using QGIS & Saga GIS	
Date of Workshop	June 3 to 23, 2021
Time	3.00 PM – 5.00 PM. 10.00 AM – 12.30 PM (Individual student Problems Solving session through "Team Viewer")
Location	CAE, JNKVV, JABALPUR
1. Objective	
Awareness Programme on Remote Sensing and GIS using QGIS & Saga GIS application in Student Research.	
2. Participants	
Technical staff- Dr. S.K. Sharma, Dr. Dr. M.K. Awasthi, Dr. R.K. Nema, Dr. Sourabh Nema, Dr. Umakant Rawat, Er. Ankit Yadav, Dr. P.S. Pawar and Dr. Minakshi Meshram.	
3. Content of Events	
Welcome	A warm welcome to by Dr. Sourabh Nema, discussed about aim of Program, Dr. R. K. Nema Course Coordinator and Dr. M. K. Awasthi Training Coordinator of the programme. Principal Investigator, Dr. R.K. Nema has also addressed the students about remote sensing and GIS application in Agriculture.
Programme Summary	Basic of remote sensing &GIS and working with QGIS software for satellite image processing was covered in this training program in online training mode. The pre and post training evaluation test was conducted for the assessment of training program.
Discussion with participants	Summed – up by Er. Ankit Yadav, and appreciated to the students who tried to understand about Remote Sensing and GIS. Listening to any prominent personality in Awareness programme helps the student to gain information.
Output of programme	Twenty-nine participants registered for the awareness programme and out of these seventeen students have attended on training on the subject. The pre-training assessment test was conducted at the beginning of training session and participants answered on basic RS and GIS questionnaires and secured 70-95% marks. Post assessment was also conducted. The participants score marks between 67 to 96 percent. The overall improvement in individual participants based on pre & post assessment was found 3 to 13 percent

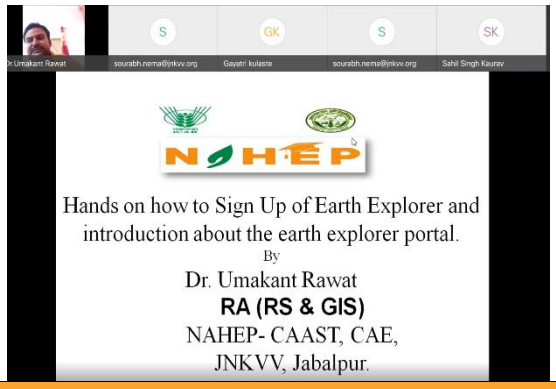
Training Schedule

Date	Topic
03 June 21	Introduction to Remote Sensing, Application of Remote Sensing in Agriculture.
04 June 21	Discuss about Satellites, Sensors, and Resolution.
05June 21	Visual Interpretation of Satellite Imagery.
07 June 21	Details on Geo portals (Earth explorer, Bhuvan, Copernicus ESA etc.).
08 June 21	Hands on how to Sign Up of Earth Explorer and introduction about the earth explorer portal.
09 June 21	Hands on to Downloading Landsat 8 dataset and discuss about bands information.
10 June 21	Downloading and installation of QGIS open source software.
11 June21	Hands on layer stacking of bands and subset the area using QGIS.
12 June21	Hands on Band combinations for specific application such as FCC, true color composite etc.
14 June 21	Hands on Georeferencing of the toposheet.
15 June21	Generation of vector features such as Point, Line, and Polygon.
16 June21	Features digitization, area calculation and attributes.
17 June 21	Introduction, Installing Required Plugins in QGIS and Pre-Processing of Landsat 8 using SCP.
19 June 21	Region of Interest (ROI) and Creating Training Dataset in QGIS.
20 June 21	Downloading and Installation of Saga GIS open sources software.
21 June 21	Classification using Random Forest technique.
22 June 21	Mapping Of classified data in QGIS
23 June 21	Practice test of Evaluation of the student

Distribution of participants

Participants on Hands on training of RS and GIS using QGIS & SAGA GIS									
Number of Participants						% of participants in diff. category			
Gender	UR	SC	ST	OBC	Total	UR	SC	ST	OBC
Male	3	1	2	4	10	30.0	3.3	60.0	6.7
Female	2	2	1	2	7	28.6	7.0	14.3	14.0
Total	**5**	**3**	**3**	**6**	**17**	29.4	10.2	29.4	20.4





NAHEP-CAAST CSDA, COLLEGE OF AGRICULTURAL ENGINEERING, JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA JABALPUR, MP

Training Module

Date	Topic	Time
03/06/2021	Introduction to Remote Sensing, Application of Remote Sensing in Agriculture	3.00-5.00 pm
04/06/2021	Discuss about Satellites, Sensors, and Resolution	3.00-5.00 pm
05/06/2021	Visual Interpretation of Satellite Imagery	3.00-5.00 pm
07/06/2021	Details on Geoportals (Earth explorer, Bhuvan, Copernicus ESA, QGIS etc.)	3.00-5.00 pm
08/06/2021	Hands on how to Sign Up of Earth Explorer and introduction about the earth explorer portal.	3.00-5.00 pm
09/06/2021	Hands on to Downloading Landsat 8 dataset and discuss about bands information.	3.00-5.00 pm
10/06/2021	Downloading and installation of QGIS open source software.	3.00-5.00 pm
11/06/2021	Hands on layer stacking of bands and subset the area using QGIS.	3.00-5.00 pm
12/06/2021	Hands on Band combinations for specific application such as FCC, true color etc.	3.00-5.00 pm
14/06/2021	Hands on Georegrencing of the toposheet.	3.00-5.00 pm
15/06/2021	Generation of vector features such as Point, Line, and Polygon.	3.00-5.00 pm
16/06/2021	Features digitization, area calculation and attributes.	3.00-5.00 pm
17/06/2021	Introduction, Installing Required Plugins in QGIS and Pre-Processing of Landsat 8 using SCP	3.00-5.00 pm
18/06/2021	Region of Interest (ROI) and Creating Training Dataset in QGIS	3.00-5.00 pm
19/06/2021	Downloading and Installation of Saga GIS open sources software.	3.00-5.00 pm
21/06/2021	Classification using Random Forest techniques	3.00-5.00 pm
22/06/2021	Mapping Of classified data in QGIS	3.00-5.00 pm
23/06/2021	Practice test of Evolution of the student	3.00-5.00 pm