

Hands-on training on Remote Sensing & GIS using QGIS for Faculty

21 days “Hands-on Training on Remote Sensing and GIS Using QGIS” was organized from 21th September to 11th October 2021 for faculty from Agriculture colleges and KVK’s of JNKVV Jabalpur. The objective of this training was to introduce the participants to use RS and GIS software. The topics covered were: - a) Introduction to Remote Sensing and its applications in Agriculture. b) Satellites, Sensors & Resolution, Visual Interpretation of Satellite Imagery, Different Geo-portals. c) Introduction and installation of QGIS software, Geo-referencing of map, and generation of vector features. d) Acquiring satellite data, basics of image processing, bands information, band combination, FCC formation and clipping of Area of Interest (AOI) in QGIS environment. e) Pre-Processing of Landsat-8 dataset using SCP plugin, Creating training dataset, Satellite image classification, LULC area calculation and map layout creation. The training was attended by forty-eight participants includes 8 Assistant professors, 2 Professors, 34 scientists and 4 technical staff.

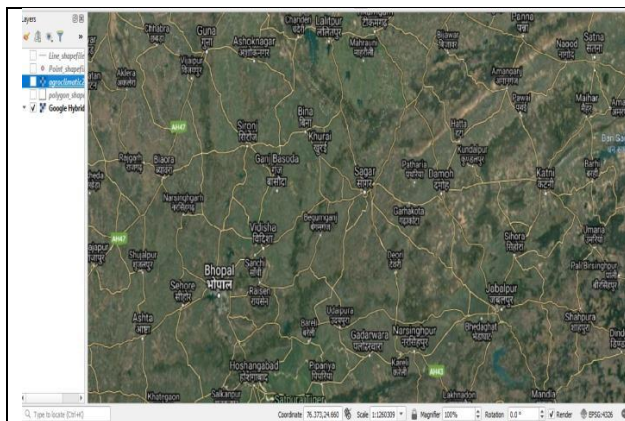
Detailed Training schedule of Hands on training on Remote Sensing & GIS for Faculty

Date	Topic
21/09/2021	Introduction to Remote Sensing and applications in Agriculture, Pre-Training Test, Specialized learning
22/09/2021	Satellites, Sensors, and Resolution, Visual Interpretation of Satellite Imagery Special Lecture
23/09/2021	Different Geoportals (Earth explorer, Bhuvan, Copernicus ESA, etc.). Introduction to GIS, Special Lecture
24/09/2021	Introduction of QGIS open-source software. Downloading & Installation of QGIS Software Overview, Practice Session
25/09/2021	Geo-referencing of Map, Generation of vector features such as Point, Line and Polygon, Special lecture
27/09/2021	Features (Point, Line and Polygon) digitization, filling data in the attribute table and area calculation. Practice Session
28/09/2021	Downloading of Landsat-8 satellite dataset and about bands information. Practice Session
29/09/2021	Layer stacking of different bands and clipping of Area of Interest (AOI) Practice Session
30/09/2021	Layer stacking of bands and clipping of Area of Interest (AOI). Practice Session
01/10/2021	Band combinations for agriculture applications using False Colour Composite (FCC). Practice Session
04/10/2021	Pre-Processing of Landsat-8 using SCP. Practice Session
05/10/2021	Region of Interest (ROI) and Creating Training Dataset. Practice Session
06/10/2021	Introduction of Classification, Supervised classification using Minimum distance algorithm. Practice Session
07/10/2021	Supervised classification using Minimum distance algorithm, Practice Session

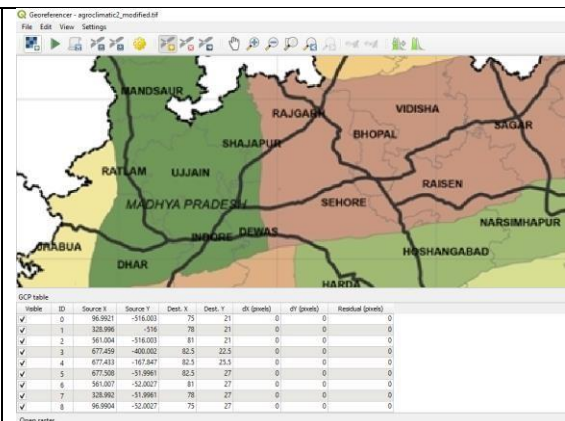
08/10/2021	Area Calculation of LU/LC classified data, Practice Session
09/10/2021	Map Layout Creation, Special lecture
11/10/2021	Presentation by Participants on LU/LC (as prepared during exercise) Post Training Assessment & Valedictory Function

Gender wise & category wise details of participants is presented below

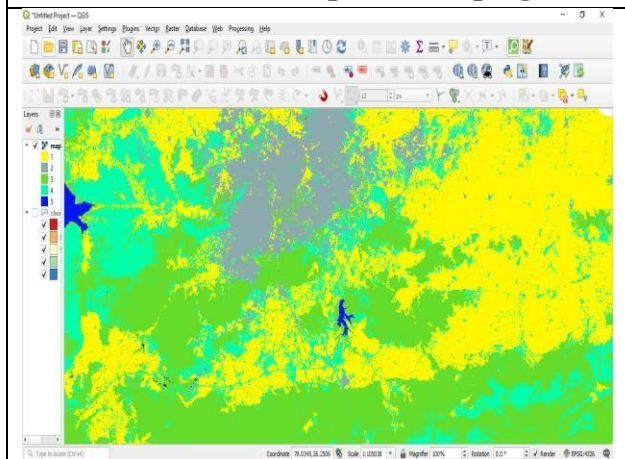
Participants in Hand on Training of Remote Sensing and GIS using QGIS										
Gender	Number of Participants					Percentage of participants				
	SC	ST	OBC	UR	TOTAL	SC	ST	OBC	UR	TOTAL
Male	5	2	6	28	41	12	5	15	68	85
Female	0	0	0	7	7	0	0	0	100	15
Total	5	2	6	35	48	10	4	13	73	100



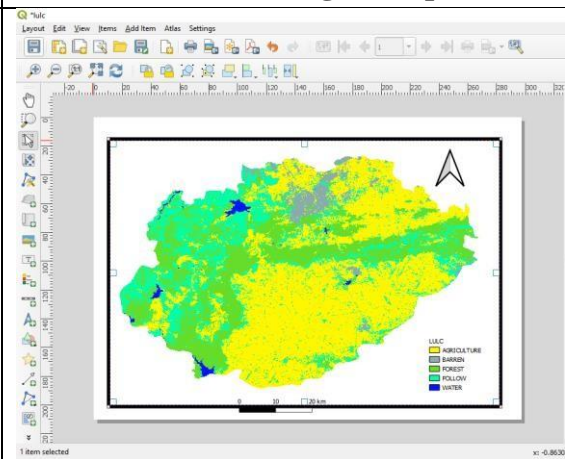
Use of Quick Map Services plugin



Georeferencing of Map



Land use land cover classification



Map Layout Creation