

**SKILL DEVELOPMENT TO USE SPATIAL DATA FOR  
NATURAL RESOURCES MANAGEMENT IN  
AGRICULTURE**

**HANDS ON TRAINING OF REMOTE SENSING AND GIS  
USING QGIS  
(29 July-19 August)**



**Centre for Advanced Agricultural Sciences and Technology**



**NATIONAL AGRICULTURAL HIGHER EDUCATION PROJECT COLLEGE OF  
AGRICULTURAL ENGINEERING, JAWAHARLAL NEHRU KRISHI VISHWA  
VIDYALAYA JABALPUR, MP, 482004**

**Project website: [www.nahep-jnkvv.org](http://www.nahep-jnkvv.org)**

## **Chief Patron**

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Honorable Vice-Chancellor, JNKVV, Jabalpur

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## **Program Coordinator**

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## About Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur

Jawaharlal Nehru Krishi Vishwavidyalaya established on October 2, 1964, is a forerunner university located in Jabalpur, Madhya Pradesh. The university is awarded Sardar Ballabh Bhai Patel Outstanding University Award for the year 2018 by the Indian Council of Agricultural Research, New Delhi. The university has various constituent colleges, Agricultural Research Stations, and Krishi Vigyan Kendra's. The University offers Bachelor's, Master's, and Doctoral degrees in the Faculty of Agriculture and the Faculty of Agricultural Engineering. The University also offers diploma courses of two years in "Seed Production" and "Nursery Management" at Horticulture Vocational Education Institute, Garhakota, Sagar, MP.

### About NAHEP

NAHEP is designed to strengthen the national agricultural education system in India with overall objective to provide more relevant and high-quality education to agricultural university students. This programme has been promoting efficiency and competitiveness through changes in working mechanism of agricultural universities, raising the teaching and research standards through improved research and teaching infrastructure and enhanced faculty competency and commitments, and making agricultural education more attractive to talented students. There are four key components under NAHEP, namely; Institutional Development Plan (IDP), Centers for Advanced Agricultural Sciences and Technology (CAAST), ICAR to support excellence in agricultural universities (AUs), and ICAR Innovation Grants to AUs

### **Skill Development to use Spatial Data for Natural Resource Management in Agriculture**

- To build basic capacity for using RS & GIS techniques applied for betterment of Natural Resource Management particularly in Agriculture and allied sectors.
- To identify appropriate techniques for integration of spatial and ground data to realize problems related to land, water and vegetation.
- To develop user friendly spatial data products using identified technologies for policy makers, researchers, field workers and farmers.

## About the Online Hands on Training of Remote Sensing and GIS Using QGIS

Online training on Hands on Training of Remote Sensing and GIS Using QGIS live mentorship and hands on from the subject matter expert having in-depth knowledge of the relevant field. Access to shared resources, helpful in learning and practicing remote sensing and GIS. Recording that can be viewed anytime.

### Address for Correspondence

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### Participants

Number of Teachers/Scientists and Technical staff of JNKVV have been invited to participate in this on line training program. This training program will help them to learn and apply RS and GIS techniques for their research application.

### Registration Details:

Please fill the google registration form for registering on this training

<https://forms.gle/611bdVoZmtE1x82F9>

The registration link will be closed by 5.00 pm at 28.07.2021

### Webex Meeting Details

<https://piicarnahepcaast.webex.com/piicarnahepcaast/j.php?TID=mc164a97939693643ef37c29abeeee98b>

**Please Note:** The training link will only be sent to participants Attendance of participants will be monitored for all the training sessions. 75% of the training attendance & 50% presence per attended session will be necessary for the eligibility of certificate.

## Training Modules

Date	Time	Topic	Faculty
29/07/2021	10.30AM-2.30 PM	Inauguration, Pre-Training Test Introduction to Remote Sensing and applications in Agriculture. Specialized learning Videos	Dr. R. Shivrama Krishanan
30/07/2021	10.30AM-2.30 PM	Satellites, Sensors, and Resolution Visual Interpretation of Satellite Imagery. Specialized learning Videos	Dr.Sourabh Nema
31/08/2021	10.30AM-2.30 PM	Different Geoportals (Earth explorer, Bhuvan, Copernicus ESA etc.). Specialized learning Introduction to GIS, Specialized learning Videos	Dr.Sourabh Nema
2/08/2021	10.30AM-2.30 PM	Introduction of QGIS open-source software. Downloading & Installation of QGIS Software Overview Specialized learning Videos	Dr. P. S. Pawar
03/08/2021	10.30AM-2.30 PM	Georeferencing of Map. Generation of vector features such as Point, Line and Polygon. Specialized learning Videos	Dr. P. S. Pawar
04/08/2021	10.30AM-2.30 PM	Features (Point, Line and Polygon) digitization, filling data in attribute table and area calculation	Dr. P. S. Pawar
05/08/2021	10.30AM-2.30 PM	Downloading of Landsat-8 satellite dataset and about bands information.Specialized Learning	Dr.Umakant Rawat
06/08/2021	10.30AM-2.30 PM	Layer stacking of different bands and clipping of Area of Interest,(AOI) Continue.....	Dr.UmakantRawat
07/08/2021	10.30AM-2.30 PM	Layer stacking of bands and clipping of Area of Interest (AOI).	Dr.UmakantRawat
09/08/2021	10.30AM-2.30 PM	Band combinations for agriculture applications using False Colour Composite (FCC).	Dr.UmakantRawat
10/08/2021	10.30AM-2.30 PM	Introduction in QGIS and Pre- Processing of Landsat 8 using SCP	Dr.UmakantRawat
11/08/2021	10.30AM-2.30PM	Region of Interest (ROI) and Creating Training Dataset	Er. Ankit Yadav
12/08/2021	10.30AM-2.30 PM	Introduction of Classification supervised classification using Minimum distance algorithm	Er. Ankit Yadav
13/08/2021	10.30AM-2.30PM	Supervised classification using Minimum distance algorithm	Er. Ankit Yadav

14/08/2021	10.30AM- 2.30PM	Area Calculation of LU/LC, classified data	Er. Ankit Yadav
16/08/2021	10.30AM- 2.30PM	Map Layout Creation	Er. Ankit Yadav
17/08/2021	10.30AM- 2.30 PM	Presentation by Participants on LU/LC (as prepared during exercise)	Dr UmakantRawat Dr. P. S. Pawar Er. Ankit Yadav
18/08/2021	10.30AM- 2.30 PM	Presentation by Participants on LU/LC (as prepared during exercise)	Dr UmakantRawat Dr. P. S. Pawar Er. Ankit Yadav
19/08/2021	10.30AM- 2.30 PM	Post Training Assessment & valedictory Function	Dr. R.K. Nema Dr.M.K.Awasthi Dr U Rawat Dr. P. S. Pawar Er. Ankit Yadav