

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

Hands on Training on Remote Sensing and GIS
Software

(15th Sept 2023 – 5th Oct 2023)



Centre for Advanced Agricultural Sciences and Technology



NATIONAL AGRICULTURAL HIGHER EDUCATION PROJECT
COLLEGE OF AGRICULTURAL ENGINEERING,
JAWAHARLAL NEHRU KRISHIVISHWA VIDYALAYA
JABALPUR, MP, 482004

Project website: www.nahep-jnkvv.org

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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

Objectives:

- 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 policymakers, researchers, field workers and farmers.

About the 21 Days Hands-on training on RS & GIS using QGIS

The Offline training is intended to cover the basics of RS & GIS as well as empowering participants to efficiently do the hands-on on RS & GIS software's and prepare the important thematic maps which can be very useful for various agriculture planning purposes.

Address for Correspondence

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Participants

This training for PG & PhD students, Teachers/Faculty Members/Scientists/Technical staff are invited to participate in this offline training program. This training program will help them to apply basic RS and GIS application techniques in Agriculture.

Registration Details

The candidates have to confirm their interest for attending the training on following link: <https://forms.gle/GB2dCsJtgRUEFvya8>

In case of any difficulty in uploading the Nomination, the interested candidate can send their nomination at sdnahep@jnkvv.org

The last date to fill this registration form will be 13 Sept 2023 at 5.00 pm. After that, applications will not be considered.

Terms and Conditions

- Only nominated candidate will be considered for this 21-Days training program
- Training seats are limited; the selection of participants will be finalized by project administration based on their eligibility and experience
- NO TA will be provided by NAHEP Project
- Attendance of participants will be monitored for all the training sessions. 75% of the training attendance will be required for Certification



Training Title: Hands-on Training on Remote sensing and GIS Software

(21 Day training schedule (15th Sept 2023 – 05th Oct 2023))

Date	10.30–11.30 AM	12.00 PM– 1.30 PM	3.00 PM -5.30 PM
15-09-2023	Registration and Inauguration Pre-Assessment	Basics of Remote Sensing and its application in agriculture Dr. R.K. Nema	Introduction to GIS Dr. S.K. Sharma
16-09-2023	Satellites, Sensors, and Resolution Er. Anjali Patel	An introduction to different Geoportals (Earth explorer, Bhuvan, Copernicus ESA, etc.). Dr. Deepak Patle	Digital Image processing Dr. Sourabh Nema
17-09-2023	Practical Assignment	Practical Assignment	Practical Assignment
18-09-2023	Georeferencing of Map in GIS software Dr. P.S. Pawar	Generation of vector features such as Point, Line, and Polygon, Dr. P.S. Pawar	Practice Session Dr. P.S. Pawar
19-09-2023	Process to fill data in the attribute table and area calculation. Dr. P.S. Pawar	GIS vector operations Dr. P.S. Pawar	Practice Session Dr. P.S. Pawar
20-09-2023	Introduction to Image processing Er. Aniket Rajput	Downloading process of satellite images Dr. Sumit Kakade	Practice Session Dr. Sumit Kakade
21-09-2023	Layer stacking of different bands Mr. Om Prakash Prajapati	Layer stacking of different bands Mr. Om Prakash Prajapati	Practice Session Mr. Om Prakash Prajapati
22-09-2023	Mosaicing of Satellite Image Er. Anjali Patel	Subset satellite data with AOI (Area of Interest) Dr. Sumit Kakade	Practice Session Dr. Sumit Kakade
23-09-2023	Lecture on Introduction to Land Use Land Cover Classification Dr. Umakant Rawat	Land Use Land Cover Classification (Process) Dr. Umakant Rawat	Practice Session Dr. Umakant Rawat
24-09-2023	Practical Assignment	Practical Assignment	Practical Assignment
25-09-2023	Land Use Land Cover Classification (Recoding) Dr. Umakant Rawat	Area calculation of classified data and Accuracy Assessment Dr. Deepak Patle	Practice Session Dr. Deepak Patle
26-09-2023	Field Visit for GPS Survey Er. Krishna Singh, Er. Rachit Nema & Mr. Prashant Sinoriya	Field Visit for GPS Survey Er. Krishna Singh, Er. Rachit Nema & Mr. Prashant Sinoriya	Practice Session Er. Krishna Singh, Er. Rachit Nema & Mr. Prashant Sinoriya
27-09-2023	Introduction to Crop Map Classification Dr. Devendra Vasht	Crop Map Classification Dr. Devendra Vasht	Practice Session Dr. Devendra Vasht
28-09-2023	Crop Map Classification Dr. Devendra Vasht	Crop Map Classification Dr. Devendra Vasht	Practice Session Dr. Devendra Vasht
29-09-2023	Creation of Map layout in Arc GIS software Er. Aniket Rajput	Creation of Map layout in Arc GIS software Er. Aniket Rajput	Practice Session Er. Aniket Rajput
30-09-2023	Introduction to Proximal Remote Sensing Dr. Shiva Rama Krishna	Demonstration of different instrument used for spectral measurement in Field Dr. Sumit kakade, Mr. Om Prakash Prajapati	Demonstration of different instrument used for spectral measurement in Field Dr. Sumit kakade, Mr. Om Prakash Prajapati
01-10-2023	Practical Assignment	Practical Assignment	Practical Assignment
02-10-2023	Introduction to Crop Yield Estimation using RS & GIS Er. Anjali Patel	Crop Yield Estimation Er. Anjali Patel	Practice Session Er. Anjali Patel
03-10-2023	DEM data processing Er. Aniket Rajput	Thematic map preparation (Elevation, Slope, Aspect, contour generation) Dr. Deepak Patle	Phenomics to genomics for crop improvement through remote sensing Dr. Ashish Kumar
04-10-2023	Project Work Preparation	Project Work Preparation	Project Work Preparation
05-10-2023	Post Assessment	Project presentation	Feedback and valedictory