SKILL DEVELOPMENT TOUSE SPATIAL DATA FOR NATURAL RESOURCES MANAGEMENT IN AGRICULTURE

Hands on Training on Remote Sensing and GIS Software

(4th July 2023 – 24th July 2023)

NAHEP

Centre for Advanced Agricultural Sciences and Technology

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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.

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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/Acuvq4VAK7Q744YN7

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 26 June 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 (04th July 2023 – 24th July 2023)

Date	10.30–11.30 AM	12.00 PM– 1.30 PM	3.00 PM -5.30 PM
04-07-2023	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**
05-07-2023	Satellites, Sensors, and Resolution **Er. Anjali Patel**	An introduction to different Geoportals (Earth explorer, Bhuvan, Copernicus ESA, etc.). **Dr. Deepak Patle**	Special Lecture **Dr. Sourabh Nema**
06-07-2023	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**
07-07-2023	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**
08-07-2023	Introduction to Image processing **Er. Aniket Rajput**	Downloading process of satellite images **Dr. Sumit kakade**	Practice Session **Dr. Sumit kakade**
09-07-2023	Practical Assignment	Practical Assignment	Practical Assignment
10-07-2023	Layer stacking of different bands **Mr. Om Prakash Prajapati**	Layer stacking of different bands **Mr. Om Prakash Prajapati**	Practice Session **Mr. Om Prakash Prajapati**
11-07-2023	Mosaicing of Satellite Image **Er. Anjali Patel**	Subset satellite data with AOI (Area of Interest) **Dr. Sumit kakade**	Practice Session **Dr. Sumit kakade**
12-07-2023	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**
13-07-2023	Land Use Land Cover Classification (Recoding) **Dr. Umakant Rawat**	Area calculation of classified data and Accuracy Assessment **Dr. Umakant Rawat**	Practice Session **Dr. Umakant Rawat**
14-07-2023	Field Visit for GPS Survey **Er. Krishna Singh, Er. Rachit Nema**	Field Visit for GPS Survey **Er. Krishna Singh, Er. Rachit Nema**	Practice Session **Er. Krishna Singh, Er. Rachit Nema**
15-07-2023	Introduction to Crop Map Classification **Dr. Devendra Vasht**	Crop Map Classification **Dr. Devendra Vasht**	Practice Session **Dr. Devendra Vasht**
16-07-2023	Practical Assignment	Practical Assignment	Practical Assignment
a17-07-2023	Crop Map Classification **Dr. Devendra Vasht**	Crop Map Classification **Dr. Devendra Vasht**	Practice Session **Dr. Devendra Vasht**
18-07-2023	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**
19-07-2023	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**
20-07-2023	Introduction to Crop Yield Estimation using RS & GIS **Er. Anjali Patel**	Crop Yield Estimation **Er. Anjali Patel**	Practice Session **Er. Anjali Patel**
21-07-2023	DEM data processing **Er. Aniket Rajput**	Thematic map preparation (Elevation, Slope, Aspect, contour generation) **Dr. Deepak Patle**	Practice Session **Dr. Deepak Patle**
22-07-2023	Project Work Preparation	Project Work Preparation	Project Work Preparation
23-07-2023	Practical Assignment	Practical Assignment	Practical Assignment
24-07-2023	Post Assessment	Project presentation	Feedback and valedictory