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

HANDS ON TRAINING OF REMOTE SENSING AND GIS USING QGIS

(25 Aug-15 Sep 2021)

NAHEP

Centre for Advanced Agricultural Sciences and Technology

Chief Patron

Dr. P.K. Bisen

Honorable Vice-Chancellor, JNKVV, Jabalpur

Patrons

Dr. R.C. Agrawal

National Director, NAHEP, ICAR, New Delhi

Dr. Prabhat Kumar

National coordinator, NAHEP, ICAR, New Delhi

Dr. Dhirendra Khare

Dean Faculty of Agriculture

Dr. G. K. Koutu

Director Research Services

Dr. D. P. Sharma

Director Extension Services

Dr. Abhishek Shukla

Director Instructions

Convener & Course Director

Dr. R. K.Nema

PI, NAHEP CAAST

Program Organizer

Dr. M. K. Awasthi

Co-PI NAHEP (Skill Development)

Program Coordinator

Dr. S. K. Sharma

Co-PI NAHEP (Research)

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

Dr. Sourabh Nema, Research Associate**,** NAHEP

Er. **Ankit Yadav,** Research Associate, NAHEP

Dr. Minakshi Meshram, Senior Research Fellow**,** NAHEP

Email: sdnahep@gmail.com

Contact No: +91-9930081190/8462814361

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/KULi2iVm87a2cp7N8

The registration link will be closed by 5.00 pm at 28.07.2021

Webex Meeting Details

https://piicarnahepcaast.webex.com/piicarnahepcaast/j.php? MTID=ma04836165ef2464456dfa82d1e8a95ec

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.

CENTRE FOR ADVANCED AGRICULTURAL SCIENCE AND TECHNOLOGY
SKILL DEVELOPMENT TO USE SPATIAL DATA FOR NATURAL
RESOURCES MANAGEMENT IN AGRICULTURE
NATIONAL AGRICULTURAL HIGHER EDUCATION PROJECT (NAHEP)
COLLEGE OF AGRICULTURAL ENGINEERING, JNKVV, JABALPUR

Training Title: "Hands on Training on Remote Sensing and GIS Using QGIS"
(25 Aug 2021 – 15 Sep 2021)

Course Coordinator: Dr. R. K. Nema
Training Coordinator: **Dr. S. K. Sharma**

Date	Time	Topic	Faculty
25/08/2021	10.30AM-11.00 AM	Inauguration	Dr. R. K. Nema Dr. M. K. Awasthi
	11.00 AM-12.00PM	Introduction to Remote Sensing and applications in Agriculture.	Dr. Suresh Kumar Scientist IIRS Dehradun
	12.00 PM- 1.30 PM	Pre-Training Test	
	2.30 PM-5.30 PM	Specialized Learning	
26/08/2021	10.30AM-1.30 PM	Satellites, Sensors, and Resolution Visual Interpretation of Satellite Imagery	Dr. Sourabh Nema.
	2.30 PM-5.30 PM	Special Lecture	Dr. N R Patel (Scientist IIRS, Dehradun)
27/08/2021	10.30AM-1.30 PM	Different Geoportals (Earth explorer, Bhuvan, Copernicus ESA etc.). Introduction to GIS	Dr. Sourabh Nema
	2.30 PM-5.30 PM	Special Lecture	Dr. N R Patel (IIRS Dehradun)
28/08/2021	10.30AM-1.30 PM	Introduction of QGIS open-source software. Downloading & Installation of QGIS Software Overview	Dr. P. S. Pawar
	2.30 PM-5.30 PM	Practice Session	
31/08/2021	10.30AM-1.30 PM	Georeferencing of Map. Generation of vector features such as Point, Line and Polygon.	Dr. P. S. Pawar
	2.30 PM-5.30 PM	Practice Session	
01/09/2021	10.30AM-1.30 PM	Features (Point, Line and Polygon) digitization, filling data in attribute table and area calculation.	Dr. P. S. Pawar
	2.30 PM-5.30 PM	Practice Session	
02/09/2021	10.30AM-1.30 PM	Downloading of Landsat-8 satellite dataset and about bands information. Practice Session	Dr. Umakant Rawat
	2.30 PM-5.30 PM		
03/09/2021	10.30AM-1.30 PM	Layer stacking of different bands and clipping of Area of Interest (AOI) **Continue…..**	Dr. Umakant Rawat
	2.30 PM-5.30 PM	Practice Session	
04/09/2021	10.30AM-1.30 PM	Layer stacking of bands and clipping of Area of Interest (AOI).	Dr. Umakant Rawat
	2.30 PM-5.30 PM	Special Lecture	
06/09/2021	10.30AM-1.30 PM	Band combinations for agriculture applications using False Colour Composite (FCC).	Dr. Umakant Rawat
	2.30 PM-5.30 PM	Practice Session	

Date	Time	Topic	Faculty
07/09/2021	10.30AM-1.30 PM	Introduction in QGIS and Pre-Processing of Landsat 8 using SCP	Dr. Umakant Rawat
	2.30 PM-5.30 PM	Practice Session	
08/09/2021	10.30AM-1.30 PM	Region of Interest (ROI) and Creating Training Dataset	Er. Ankit Yadav
	2.30 PM-5.30 PM	Practice Session	
09/09/2021	10.30AM-1.30 PM	Introduction of Classification, Supervised classification using Minimum distance algorithm	Er. Ankit Yadav
	2.30 PM-5.30 PM	Practice Session	
10/09/2021	10.30AM-1.30 PM	Supervised classification using Minimum distance algorithm	Er. Ankit Yadav
	2.30 PM-5.30 PM	Practice Session	
11/09/2021	10.30AM-1.30 PM	Area Calculation of LU/LC classified data	Er. Ankit Yadav
	2.30 PM-5.30 PM	Special Lecture	
13/09/2021	10.30AM-1.30 PM	Map Layout Creation	Er. Ankit Yadav
	2.30 PM-5.30 PM	Practice Session	
14/09/2021	10.30AM-1.30 PM	Presentation by Participants on LU/LC (as prepared during exercise)	Dr Umakant Rawat Dr. P. S. Pawar Er. Ankit Yadav
	2.30 PM-5.30 PM		
15/09/2021	10.30AM-1.30 PM	Post Training Assessment &Valedictory Function	Dr. R. K. Nema Dr. M. K. Awasthi Dr. S. K. Sharma Dr Umakant Rawat Dr. P. S. Pawar Er. Ankit Yadav
	2.30 PM-5.30 PM		