TA, Boarding and Lodging

The selected participants will be provided free boarding and lodging in the institute guest house. Food expenses will be borne by the organizers as per ICAR norms. All participants will be reimbursed to and fro travel fare for the journey to Bengaluru by rail or bus by shortest route. Air travel is not allowed. The payment will be made as per the entitled class of travel, but restricted to the maximum of AC-II tier train fare/bus fare (as per actuals). Local participants are not eligible for boarding and lodging, however, they will be provided lunch and inter-session tea. Participants are requested to not to bring family members with them, as the institute has limited hostel facilities. No DA will be paid to participants.

Important Dates

- **Last date for receipt of application: 7-2-2025**
- **Intimation of selection of participants: 14-2-2025**

All correspondence should be addressed to

Dr. S. Dharumarajan

Senior Scientist & Course Director
ICAR- National Bureau of Soil Survey and Land Use Planning
Regional Centre, Bengaluru-560024 Karnataka
Mobile: 7892830286
Email: dharumarajan.s @icar.gov.in or sdharmag@gmail.com

Patron

Dr. V. Ramamurthy
Principal Scientist & Head
ICAR-NBSS&LUP, RC Bengaluru

Dr. N.G. Patil
Director
ICAR-NBSS&LUP, Nagpur

Application Form for Participation In Short Course Training

Organizing Institute: ICAR- National Bureau of Soil Survey and Land Use Planning

1. Full name (In block letters) :
2. Designation :
3. Present employer and address :
4. Address to which reply should be sent :
   Postal address with PIN
   Phone/ Mobile No.
   Fax No. E-mail
5. Permanent address :
6. Date of Birth :
7. Sex (Male/Female) :
8. Marital status (Married/Unmarried) :
9. Teaching/research/professional experience (mention post held during last 5 years and number of publication) :
10. Field of specilization and current area of research/teaching :
11. Mention if you have participated in any Research seminar, Summer/Winter School/Short Course, etc. during the previous years under ICAR/Other organization :
12. Postal order No. ---------- dated ----------of Rs 50/- (non- refundable) in favour of ICAR unit NBSS&LUP, Bengaluru for registration of application :
13. Academic record :

Degree	Subjects	Year of passing	Class ranks/ distinction	University/ Institution	Other information
Ph.D.					
Post Graduation					
Graduation					

14. Recommendation of the Head of the Department/Institute :

Signature & Seal

CERTIFICATE

It is certified that the information has been verified from the office record and is found correct.

Date

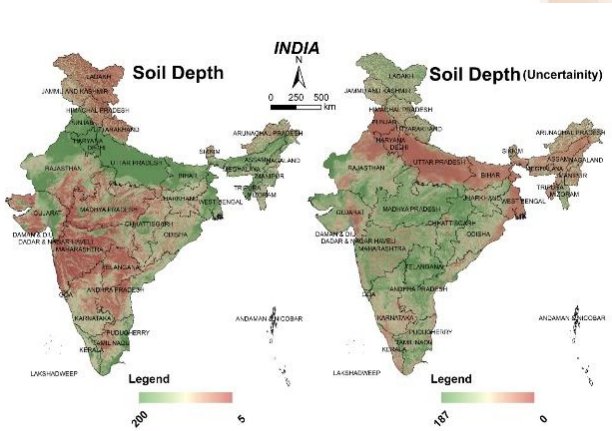
Signature and designation of sponsoring authority

Note: Application may be sent to the Course Director of the training or to The Head, ICAR-NBSS&LUP, Bengaluru.

ICAR SHORT COURSE on

Digital Soil Mapping for Agri-Environmental Management and Sustainability

03-12 March 2025



Course Director

Dr. S. Dharumarajan

Course Co-coordinators

Dr. M. Lalitha
Dr. R. Vasundhara

Sponsored by

Agricultural Education Division
Indian Council of Agricultural Research
New Delhi-110 012

Organized by

ICAR- National Bureau of Soil Survey and Land Use Planning
Amravati Road, Nagpur - 440033, Maharashtra
Tel : +91-712-2500386, 2500545 (O);
Fax: 0712-2522534
Web: https://nbsslup.icar.gov.in

Background

In an era of rapid environmental change and increasing demand for sustainable agricultural practices, effective soil management has become essential for ensuring food security and conserving natural resources. Digital Soil Mapping (DSM) employs advanced technologies and data analysis techniques to create accurate soil maps, enabling better land use planning and agricultural productivity. Digital Soil Mapping involves the integration of geospatial data, remote sensing, and legacy soil data in different machine learning algorithms to produce high-resolution soil property maps. These maps provide critical insights into soil distribution, quality, and functionality, which are vital for informed decision-making in agricultural and environmental management. Accurate soil mapping supports sustainable land use by highlighting areas at risk for erosion and nutrient depletion, enabling the implementation of conservation practices. Understanding soil characteristics assists in developing strategies for climate change adaptation, such as carbon sequestration and soil health improvement.

ICAR-NBSS&LUP is actively engaged in conducting soil surveys and developing soil-based thematic databases and maps at various scales through field surveys, soil analysis, cartography, and the application of remote sensing, GPS, and GIS technologies. To meet the increasing demand for capacity building in digital soil mapping, ICAR-NBSS&LUP in Bangalore is organizing a training program titled **"Digital Soil Mapping for Agri-Environmental Management and Sustainability"** from March 03 to 12, 2025. This course will introduce participants to techniques and software for managing, analyzing, and mapping soil types and properties using the R environment for statistical computing.

Duration of Short Course

Duration of the Short Course Training is 10 days with effect from **03-12 March 2025** (both days inclusive). The participants are expected to arrive at ICAR-NBSS&LUP, Bengaluru latest by the evening of 02 March and can leave after 17:00 hrs on 12 March 2025.

Course Content

- Concepts and Applications of digital soil mapping
- Digital terrain analysis
- Application of R in Basic statistics and Soil data processing
- Pedo and spectrotransfer functions in digital soil mapping
- Machine learning algorithms in digital soil mapping
- Random Forest model, Quantile Random Forest model and Regression Kriging
- Soil properties predictions and uncertainty estimation
- Use of soil spectroscopy and VNIR and SWIR remote sensing in digital soil mapping
- Building a DSM model- Hands on Exercise
- Land suitability analysis using AHP and digital soil maps
- Digital soil resource information for land degradation assessment

Eligibility

- The training programme is open to Scientists/ Assistant Professors /Subject Matter Specialists/Professionals of ICAR Institutes/CAUs/SAUs/KVKs involved in research, development, training, testing and extension programmes.
- The applicant should be working in a position not below the rank of Scientist / Assistant Professor/Lecturer/Subject Matter Specialists or Equivalent in Agriculture and its Allied Disciplines.
- The total number of participants will be restricted to 25. For speedy disbursement of selection letters, participants are requested to apply online at CBP portal of ICAR and provide email ID

Location and Climate

Bengaluru, a sprawling and picturesque capital city of Karnataka, is well connected by air, rail and roadways to different parts of country. Participants travelling by train/bus should alight at Bengaluru railway station/ Bengaluru bus stand from where taxi/ auto-rickshaws can be hired to reach ICAR-NBSS&LUP Campus located near Veterinary college, Hebbal on Bellary road at a distance of 7.3 km from railway station and 7.4 km from Bus Stand. The Kempegowda International Airport is located at a distance of 28 km from the campus. The participants are advised to make their return journey reservations in advance before leaving for Bengaluru.

Application and Registration

Participants are requested to apply online at CBP portal (https://cbp.icar.gov.in/)

A. Create account on CBP portal, if your account is not created on CBP portal:

1. Click on 'Create New Account' link on home page.
2. Fill the form.
3. Click on 'Create Account' button. User will get the message 'Successfully created account' after account is created on the CBP portal.

B. Login on CBP portal:

1. Enter the 'User Id' and 'Password' in the candidate login window on the home page.
2. Click on 'Login' button.

C. Participate in training programme:

1. After login, click on 'Participate in Training' button/menu, list of trainings will be displayed.
2. Click on 'Training Title - "Digital soil mapping for agri-environmental management and sustainability".
3. Click on 'Apply' link.
4. A form will open with all your personal details filled in. In case, user want to change any of these information then click on 'Edit' button and do the desired changes.
5. Click on 'Save' button to save the information then click on 'Next' button
6. Fill the 'Academic details' and 'Experience details information. Click on ' Next button'.
7. Fill 'Draft/Postal' order for Rs. 50/- drawn in favour of ICAR unit NBSS&LUP, Nagpur and click on 'Next' button.
8. Advance Application form will be generated in system and click on 'print' link. Submit this print out copy in your office for approval of competent authority. Click on 'Submit' button, advance copy will be submitted to course director.
9. After approval from competent authority, upload the scanned copy of duly approved application form and click on 'Next' button
10. Click on 'Upload Approved Application File' button to upload signed 'Advance Application form' (Approved Application Form) in pdf/doc/jpg/jpeg/docx and click on 'Submit' button for final submission.

Additionally, interested candidates may send their applications in the prescribed format duly nominated/ forwarded by the competent authority to Dr. S. Dharumarajan, Course Director or The Head, ICAR-NBSS&LUP, Bengaluru.