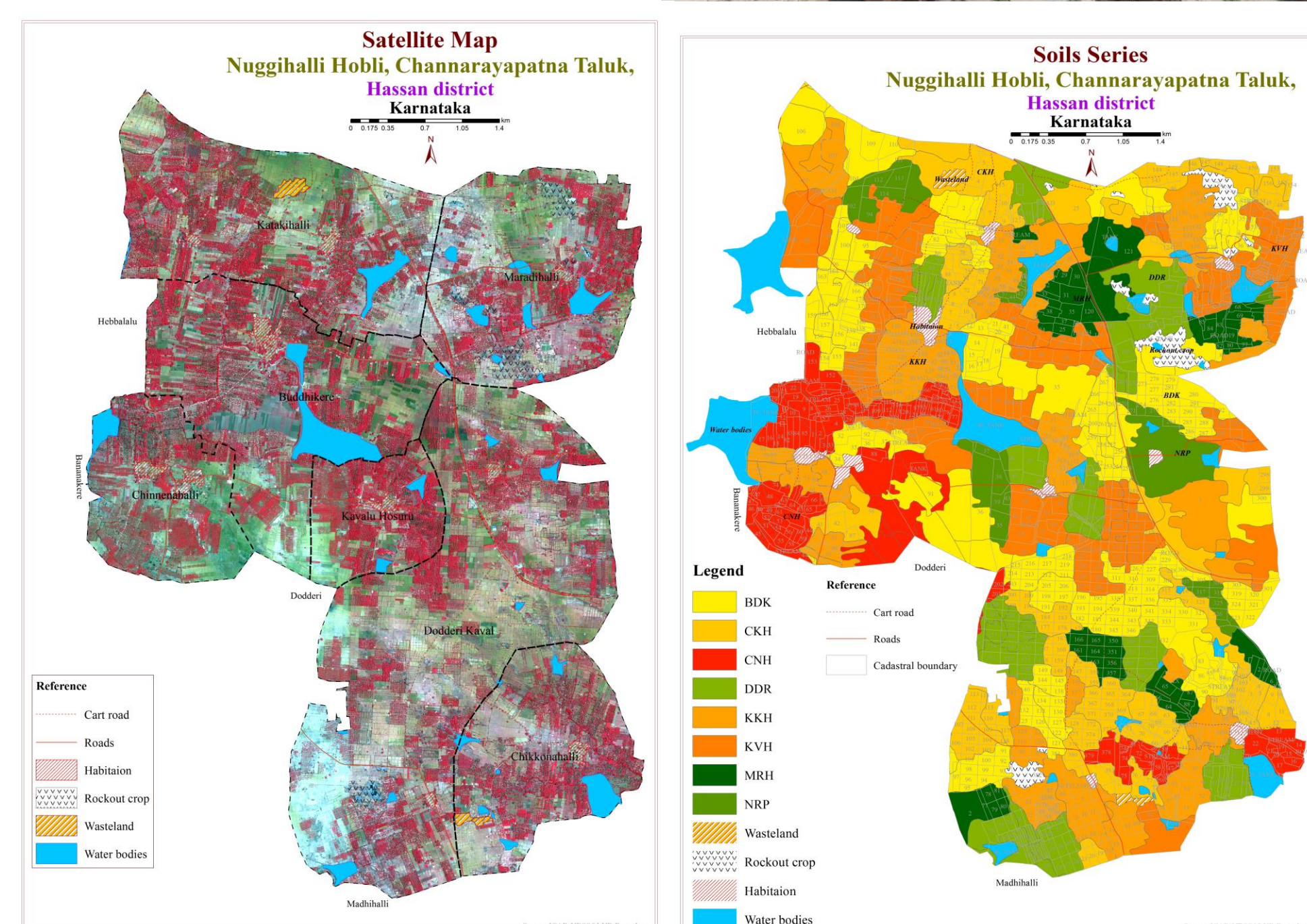


# Soil Survey and Mapping using Remote Sensing & GIS

November 29 – December 19, 2023



**ICAR-National Bureau of Soil Survey and Land Use Planning (NBSS&LUP), Amravati Road, Nagpur - 440 033, India**

## ABOUT THE TRAINING PROGRAMME

The program on Soil survey and Mapping focuses on understanding and characterizing soil formation, evolution, and the theoretical and practical frameworks. It pays particular attention on morphology and the geographic distributions of soils, and the placement of soil bodies into larger temporal and spatial dimensions and develops systems of soil classification and theories for characterizing temporal and spatial interrelations among soils. Systematic soil survey has been carried out for over one hundred years. Soil surveys are an important basic for effective technology transfer. They are needed for transferring the knowledge from agricultural research labs into agricultural fields. Soil surveys allow us to identify and delineate areas have similar soils which respond uniformly to given set of technologies. Soil surveys also identify the important soil characteristics, major limitations and qualities of the soil for the effective transfer of technologies. With the availability of farm scale information and grid based soil nutrients recommendations, integrated with geospatial and computing technologies, enable us to adopt precision farming.

Capacity building of human resources at different levels, from decision makers to working professionals, academia and the people at grass root level, is recognized as a critical element for effective use of the wealth of information generated by the soil survey organizations. Keeping this requirement in view, ICAR NBSS&LUP supports capacity building activities in the country so that the benefits of the soil mapping reach the society at large.

## COURSE CONTENT

Participants shall be trained extensively on theory and practical aspect on Pedology concept and application, Rock and Minerals, Geology, Geomorphology, Landform analysis, Soil survey, Application of Remote Sensing, Image interpretation, Base map preparation, Soil mapping, Application of GIS, ground truth observation (Field traversing, Selection of transects and soil profile studies & identification of master profiles), sample collection, Laboratory characterization of soil samples, Soil mapping & correlation, Soil classification, LCC & LIC, FCC, Land use planning, Soil degradation and mapping, Soil and Water conservation planning, Crop soil suitability evaluation and Economic evaluation of land resources.

## OBJECTIVES

Creating awareness and understanding about Pedology, Soil Survey, Remote Sensing, GIS, Soil Mapping, Land Evaluation and Crop Suitability Assessment. Train the Research scholar, faculty members in agriculture universities and line departments of different states on the essentials of soil survey, mapping and land use planning.

## COURSE DURATION AND STRUCTURE

The course is of 3 weeks duration (21 days). It comprises of two weeks theory and one week field work.

## TARGET PARTICIPANTS

The course is designed for professionals from Central/ State Govt./Universities / ICAR Institutes / State Departments /Private Industry / Organizations/NGO engaged in agriculture and environmental planning as well as soil mapping. The course is also meant for students & researchers engaged in these fields.

## ELIGIBILITY CRITERIA

- M.Sc./M.Tech. in Agriculture/ Soil Science/ Agronomy/ Environmental Sciences/ Civil Engg./ Horticulture/ Agric. economics or equivalent
- M.Sc./M.Tech. in Remote Sensing and GIS/ Geoinformatics/ Geomatics or its equivalent with specialization in Agricultural applications.

**Note:** Candidates nominated by the Govt. organizations & professionals working in the field of Soil survey and mapping using Remote Sensing & GIS Applications in Agriculture will be given preference.

## NUMBER OF SEATS

- 20 (all seats for Indian nationals only)

## PROCESS OF APPLICATION

- Only Online Applications will be considered. Refer course flyer on ICAR-NBSS&LUP website (<https://nbsslup.icar.gov.in/>) for submitting application <https://forms.gle/yqmnnaCrrxAPHyKp7> and additional details.
- Application Fee: Nil

## COURSE FEE

- ❑ Rs. 20,000/- (Tuition Fee + Registration & Other Charges).
- ❑ Boarding & lodging charges in ICAR-NBSS&LUP, Regional Centre, Bangalore Hostel are extra (Rs. 400/Bed/day and food Rs. 350/ day) and will have to be paid by the candidate as per the ICAR rules & regulations.
- ❑ Not interested candidate may make their own arrangement of Boarding & lodging.

## MODE OF TRAINING

The course includes lecture as well as practical hands-on sessions delivered by distinguished NBSS&LUP faculty as well as eminent guest faculties.

## HOW TO APPLY

Please fill up the online application form available in NBSS&LUP website (<https://forms.gle/yqmnaCrrxAPHyKp7>). Offline applications shall not be considered. The last date to apply for the course is October 15, 2023 [17:30 hrs] Govt.-sponsored candidates must submit the Nomination Form from the Competent Authority of their parent organisation/institute at the time of submitting the online application. The template of the Nomination Form can be downloaded from <https://nbsslup.icar.gov.in/>.

## ACCOMMODATION

Participants will be provided accommodation in NBSS&LUP guest house. All rooms are semi furnished and are allotted on 2 persons per room. Local candidates will be considered for hostel accommodation, only if available. Indian cuisine is served in the guest house mess. The expenditure towards boarding and lodging will have to be borne by the participants as actual rates of ICAR. No accommodation will be provided to the accompanying person/ children.

## IMPORTANT DATES

- Application starts on: 01.09.2023
- Last Date to Apply: 15.10.2023
- Announcement of selection List: 20.10.2023
- Last date for course fees paid: 31.10.2023
- Course Start date: 29.11.2023
- Course End Date: 19.12.2023

## ABOUT NBSS & LUP

The National Bureau of Soil Survey and Land Use Planning (NBSS & LUP) is a premier Institute of the Indian Council of Agricultural Research (ICAR), was set up in the year 1976 to prepare soil resource maps at state and district level and to provide research inputs in soil resource mapping, and its applications, land evaluation, land use planning, land resource management and database management using GIS for optimizing land use on different kinds of soils in the country. The Bureau has been engaged in carrying out agro-ecological and soil degradation mapping at the country, state and district level for qualitative assessment and monitoring the soil health toward viable land use planning. The research activities have resulted in identifying the soil potentials and problems, and the various applications of the soil survey with the ultimate objective of sustainable agricultural development. The Institute is also imparting training in the area of soil survey, land evaluation, soil survey interpretations for land use planning



Regional Centre, NBSS&LUP, Bangalore



## LOCATION & ACCESSIBILITY

ICAR-National Bureau of Soil Survey & Land Use Planning (NBSS&LUP), Regional Centre, Bangalore located in Veterinary college campus, Hebbal near to Lokayukta police station. From Bangalore Majestic bus stand/ railway station 7 km and from Hebbal bus stand is 1 km. The city is famous for several tourist parts and other entertainment and religious locations.

*For more information's and clarifications, please write to*

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