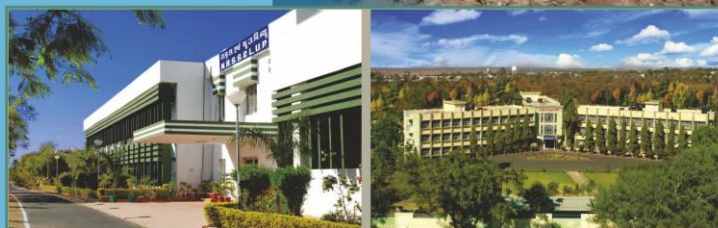




Volume : 02/No. 01
September 2020 - August 2021



e news letter

ICAR-NBSS & LUP

ICAR-National Bureau of Soil Survey & Land Use Planning

Nagpur - 440 033, Maharashtra, India

From the Director's Desk



Greetings from the Bureau! During the last year, we have taken-up some novel initiatives to make our data products available to researchers and policy makers in the shortest possible time. This will be achieved by the hybridization of remote sensing technologies and other advanced tools with traditional soil survey wisdom. On the occasion of the 45th Foundation Day of the Bureau, we are elated to bring out a comprehensive Standard Operating Protocol (SOP) for land resource inventory (LRI) using high resolution remote sensing data. The SOP will help in faster delivery of output for use by the stakeholders. We initiated a flagship project pertaining to LRI and land use planning of Bundelkhand region. Three collaborative ventures under the World Bank-assisted REWARD project for Andhra Pradesh, Karnataka and Odisha have been sanctioned. The Bureau also inked MoUs with M/s Adani Transmission Ltd., M/s Sterlite Technologies Ltd and M/s Neopark Technologies Ltd. The latter is a start-up firm by young engineering students to generate spectral models for characterizing soil properties.

One of the most conspicuous developments in the post-COVID-19 era in scientific circles has been the steady rise in the number of virtual meetings, workshops, webinars and training programmes. The Bureau conducted several such programmes during the last year. Notable among them are the Research Advisory Committee meeting (5 November 2020), Institute Research Council meeting (21-23 January 2021), training programmes/short courses on Soil Survey and Classification (9-13 November 2020), Remote Sensing and Geographical Information System: Technologies and Applications (October 2020) and Soil Analytical Methods for the Determination of Macro- and Micronutrients (March 2021). Besides, online workshops have been conducted for administrators of 27 aspirational districts. Scientists have also participated in various webinars and online training programmes. We were privileged to felicitate and interact with World Food Laureate, Prof. Rattan Lal on 11 September 2020.

Several events were organized with enthusiasm at the Bureau during the last one year in virtual mode and/or by following social distancing protocols. Notable among these are Hindi *Saptah*, International Womens' Day, World Soil Day, World Water Day, *Kisan Diwas*, Vigilance Awareness week, *Swachh Bharat Abhiyaan* and lecture series under the *Azaadi ka Amrut Mahotsav* commemorating the 75th year of Indian Independence.

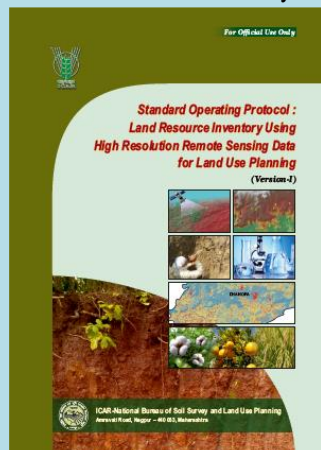
We are unfortunate to have lost several serving as well as retired colleagues during this short span of time. At this crucial juncture, I appeal to the Bureau family to stringently follow COVID-appropriate behavior at all times and remain safe. Together we can overcome this ordeal and further the overall growth of the Bureau.

B.S. Dwivedi

NEW INITIATIVES

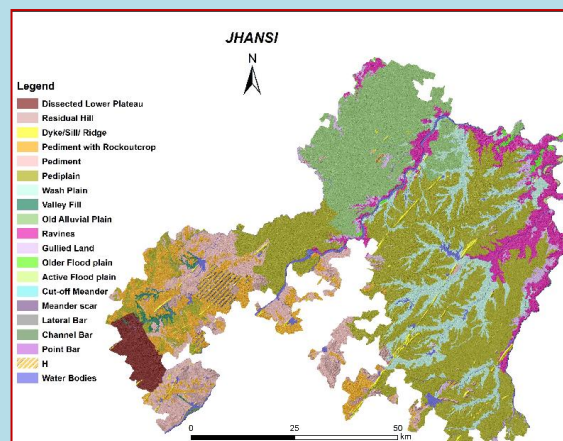
Towards a Streamlined LRI methodology

The Bureau is ready to address the long-felt need to generate district-wise LRI and land use plans in quick time for stakeholders. A comprehensive standard operating protocol (SOP) based on high-resolution remote sensing data and statistically sound soil sampling strategy is being released on the occasion of the 45th Foundation Day.



Land use plans for Bundelkhand

A flagship project on the development of sustainable land use plan for the whole Bundelkhand region was initiated on the premise of available legacy data and need-based soil survey. Landform delineation of four districts of the region were completed through the use of Sentinel-2 imagery and ALOS DEM. Twenty-two representative soil profiles from various landforms in Jhansi (UP) and Datia (MP) districts have been examined for characterization and classification during the first phase.



Landform map of Jhansi

LRI of Morena District, MP

An LRI study was initiated to assess the agricultural potential of ravine-infested Morena district comprising of six blocks, and falling under the Central Highland physiography and Pathar and Bundelkhand Upland sub-physiography region. Ravinous soils are typically coarse textured, rich in siliceous material and are presently uncultivated. Soils of the study area are very deep, sandy loam, silty to clayey in texture with moderate to high productivity potential. Two broad landforms, viz. Alluvium-CpAl and Sedimentary Vindhyan-CpSd, further sub-divided into 25 landforms were delineated for land resource inventory at 1:10,000 scale. About 250 profiles and minipits were examined for detailed description, characterization, classification and soil resource mapping.



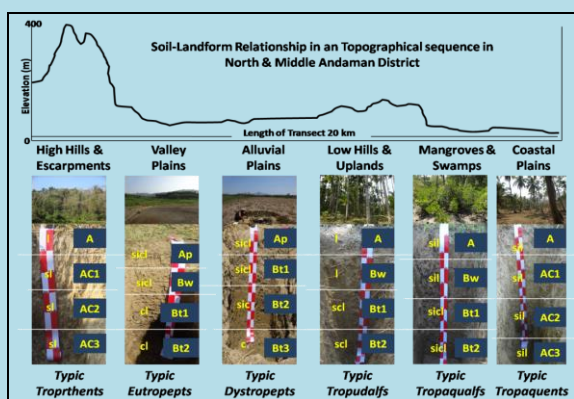
Soils and landscape of Morena district, MP

Digital soil mapping of Maharashtra

The Bureau has planned to generate digital soil maps (DSM) of different states of India for the benefit of academicians, researchers and policy planners. Maharashtra, with five distinct regions has been initially targeted as a pilot study. The DSM will be generated by integrating legacy data, landforms delineated through satellite imageries and DEM, and minimum soil sampling strategy developed by modeling.

COLLABORATIONS

The Bureau has collaborated with ICAR-CIARI, Port Blair for generating the land resource inventory of arable lands of North and Middle Andaman district of Andaman and Nicobar Islands using geospatial techniques for optimizing agricultural land use plan.



SUCCESS STORIES

Showcasing Agricultural Land Use Plan on Lower Gangetic Delta & Coastal Plains of Bengal

Regional Centre, Kolkata collaborated with Sasya Shyamala Krishi Vigyan Kendra (KVK), RKMVERI, Arapanch, South 24 Parganas District, West Bengal in the SCSP programme on “Agricultural Land Use Planning to Enhance Productivity and Livelihood Security of Farming Community of Majherpara Village of Canning-II block, South 24 Parganas District, West Bengal”.

Majherpara village of Canning II block, 24 Parganas (South) district of West Bengal represents

coastal alluvial plains under lower Gangetic delta of West Bengal (AESR 18.5). Based on LRI assessment, a holistic agricultural land use plan involving *rabi* crops, fishery, goat rearing, poultry and duck rearing was suggested and implemented on farmers' fields. Farmers were also trained on vermin-composting procedure. The programme was greatly appreciated by the farmers of the village and nearby areas.

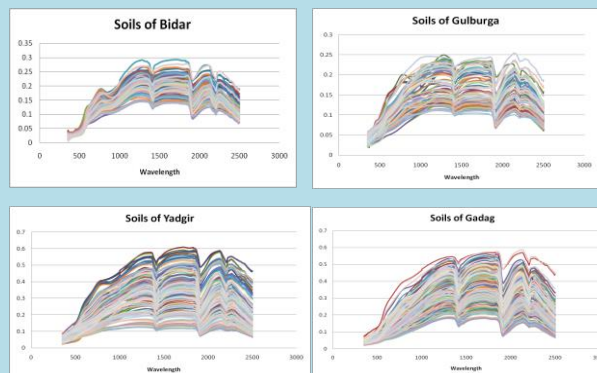


Different activities under SCSP programme

TECHNOLOGY

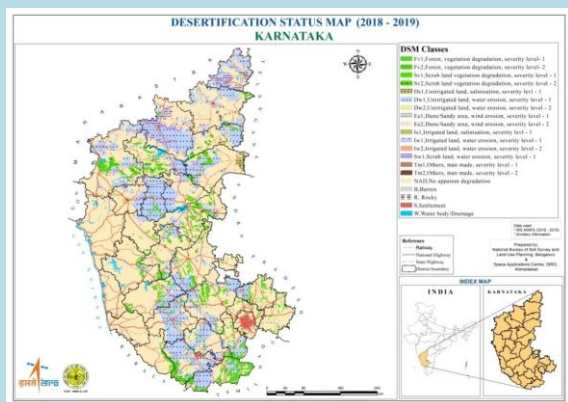
Strengthening soil spectral library

Spectral library of Karnataka soils were developed for 800 soil samples collected under Sujala III project across seven districts of Karnataka (Bidar, Gulbarga, Koppal, Gadag, Yadgir, Tumkur and Chamarajnagar districts)



Reflectance spectra of soil samples collected from different districts

Desertification and land degradation mapping was carried out for the state of Karnataka using 2018-2019 AWIES data at 1: 500 000scale.



The Bureau entered into MoUs with M/s Adani Transmission Ltd., M/s Sterlite Technologies Ltd and M/s Neopark Technologies Ltd. Three collaborative ventures under the World Bank-assisted REWARD project for the states of Andhra Pradesh, Karnataka and Odisha have been sanctioned.

Dr. B.S. Dwivedi took over as Director of the Bureau on 19 November 2020. He was accorded a hearty welcome by the Acting Director, Dr. P. Chandran, and by the scientific, technical, administration and supporting staff.



Dr. S. K. Chaudhari, DDG (NRM) visited ICAR-NBSSLUP, Nagpur on 08 December 2020. He was felicitated by Dr. B.S. Dwivedi, Director and Heads of Divisions, Dr. M.S.S. Nagaraju, Dr. P. Chandran and Dr. N.G. Patil. He interacted with the Scientists regarding ongoing projects and also with administration and finance staff.



Rashtriya Mahila Kisan Diwas was celebrated on 15 October 2020. Thirty farm women participated in the programme organized in Chameli Mini-Aganwadi Centre Chameli village, Katol Taluka, Nagpur, and interacted on intercultural operations, seedlings/ seeds of better crop varieties for higher yields. A talk on role of women in agriculture, weed management and crop production, Government policies for farmers' betterment, and demonstration on pruning and cutting of fruit trees in orchard management were conducted by Regional Centre (RC) Kolkata. More than 100 women of Namdeuri and Kalbari villages, Jorhat participated in essay writing and debate competitions organized by RC, Jorhat, on topics related to role of women in agriculture, impact of flood on agriculture and livelihood and women empowerment. At RC, Delhi, Dr. Jaya N. Surya delivered a talk on role of women in agriculture and related allied sectors, nutrition and income generation and various schemes/ facilities available under *Atma Nirbhar* Bharat program; highlighting various aspects such as

women empowerment, women health and nutrition, and cleanliness and health care during COVID days.



150th Birth Anniversary of Mahatma Gandhi

The Bureau and its Regional Centres organized week-long celebrations involving staff members and children of adopted villages to commemorate 150th Birthday of Mahatma Gandhi on 2nd October 2020. The programme was initiated by Dr. S.K. Chaudhari,

DDG (NRM), ICAR Hqrs, who talked about Gandhian Philosophy. Various events namely Walkathons, Tree plantation, Essay writing, Drawing competitions, extempore etc. were organized. A special webinar on “Gandhian Philosophy on Modern Agricultural Perspectives” was organized. Online virtual lecture on “Gandhian way of farming & its relevance today” was also arranged.



Rajbhasha Activities

Hindi week was observed at Headquarters, Nagpur and its Regional Centres during 16-21 September 2020. During this period Hindi Noting, Writing Competition, Hindi Recitation Competitions and Hindi Gaayan Pratiyogita were organized.

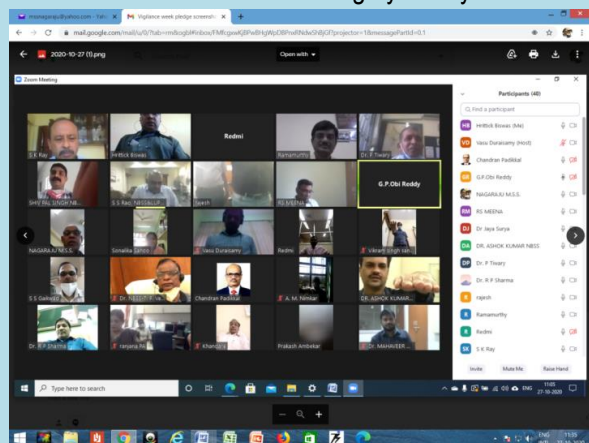
Swachh Bharat Abhiyaan

The institute and its regional centres celebrated ‘Swachhata Pakhwada’ from 16-31 December, 2020. A pledge on Swachhata was taken in both Hindi and English by the staff on 16 December, 2020. Swachhata mission activities involving staff members including cleaning, dusting, weeding, plantations, garbage collection and safe disposal of other biodegradable wastes are regularly carried out in all the laboratories, corridors, premises, library etc in addition to digitization of e-records. The office buildings and premises were regularly sanitized to adhere to COVID-19 protocols.



Vigilance Awareness Week

As per guidelines from the Ministry of Health and Family Welfare, the Vigilance Awareness Week “SATARK BHARAT, SAMRIDDH BHARAT (Vigilant India, Prosperous India)” from October 27 to November 2 2020 was observed. Keeping in view COVID-19 guidelines, the week began with administering of the Integrity Pledge to all officers and staff with the main focus on ‘Integrity-A way of life’



Kisan Goshthi

A Kisan Goshthi was organized by the bureau at Ghubadi village, Katol Taluka on 14th October 2020. The Chief Guest of the goshthi was Padamshri Dr Vikas Mahatme, Member of Parliament, Rajya Sabha. Director, Dr P. Chandran delivered the achievements of the Bureau and benefits and use of soil health cards in improving the productivity of soil and crop production. The Principal Scientists and scientists of the Bureau were also present and interacted with farmers on the occasion



World Soil Day

World Soil Day was celebrated on 05 December 2020 with the theme “Keep Soil alive protect soil biodiversity”. An invited talk was delivered by Dr. Jagdish Prasad, former Principal Scientist and Head, Division of Soil Resource Studies, Nagpur to commemorate the occasion. Dr. Prasad spoke at length on facts, status and ways to conserve soil biodiversity for posterity. He emphasized the historical role played by the Bureau in appraising the academicians, researchers and policy makers about the status of Indian soils, and cautioned that we need to be geared up to provide even faster and accurate information on spatio-temporal changes in soil conditions at large scales. He also suggested a road map for the Bureau scientists for aiding in achieving the targets of Land degradation neutrality. Soil health cards were distributed to 38 farm families of the village, Majherpara village Canning II block, 24 Parganas district (S), West Bengal and in village

Changedi (Fatehnagar) Tehsil Mavli, Distt. Udaipur (Rajasthan).



Photos (clockwise from top left): (a) Different speakers highlighting the importance of World Soil Day theme, (b) a school student (Class-IV) delivering a speech on "Soil", (c) Dr. R.K. Naitam interacting with media, and (d) collage of drawing submitted by school children on the occasion of World Soil Day

Rashtriya Ekta Diwas

ICAR-NBSS&LUP Headquarters and Regional Centres observed Rashtriya Ekta Diwas on 31st October, 2020. The staff took a pledge to protect and preserve national unity.

Azaadi ka Amrut Mahotsav

Bureau and its Regional Centres organized a series of events to celebrate the 75th year of Indian Independence. The programmes ranged from awareness programmes *har med par ped* and balanced fertilization organized at Headquarters to a series of lectures organized by Bengaluru, Delhi and Kolkata Centres.



International Yoga Day

The staff of the Institute Headquarters and Regional Centres celebrated the International Day of Yoga on 21 June 2021 by performing *Yogasanas* as per the directives received from the Ministry of AYUSH, Government of India.



AWARDS/RECOGNITIONS

Dr. N.G. Patil, HQrs, Nagpur awarded Fellow of Indian Society of Soil Survey and Land Use Planning (ISSLUP), Nagpur during 2019-20

Dr. G.P. Obi Reddy, HQ, Nagpur awarded Fellow of Indian Society of Soil Survey and Land Use Planning (ISSLUP), Nagpur during 2019-20

Dr. M.S. Raghuvanshi, HQ, Nagpur awarded PEARL Foundation Best Senior Scientist Award on June 19 2021

Dr. M.S. Raghuvanshi, HQ, Nagpur awarded Agri-Extension Awards 2021 by the Agriculture Today Group

Dr. S. Dharumarajan, RC, Bangalore received Young Scientist award by Indian Society of Soil Survey and Land Use Planning (ISSLUP), Nagpur during 2019-20.

Sh. Abhishek Jangir, RC, Udaipur received Outstanding Young Scientist Award of the Bureau

during 44th Foundation Day Celebrations on Aug 24 2020

Mrs. Ritu Nagdev, Scientist, RC Delhi, received Young Scientist Award from V D Good Technology Factory in the ceremony of International Scientist Awards on Engineering, Science and Medicine during October 17-18 2020 at Kolkata, India

Sh. Bhagwati Lal Tailor, RC, Udaipur received Outstanding Worker (Technical Category-III) Award of the Bureau during 44th Foundation Day Celebrations on Aug 24 2020.

Sh. Sh. Asru Kumar Maitra, RC, Kolkata received Outstanding Worker (Technical Category-II) Award of the Bureau during 44th Foundation Day Celebrations on Aug 24 2020

Sh. Prodeep Kotoky, RC, Jorhat received Outstanding Worker (Technical Category-I) Award of the Bureau during 44th Foundation Day Celebrations on Aug 24 2020

TRAINING PROGRAMMES/WEBINARS

Organized

Goa geoportal and mobile apps for the officials of Department of Agriculture, Goa (RC, Bengaluru), 20-21 Oct 2020

LRI training (3 Nos.) for 68 watershed extension managers (RC, Bengaluru), 4-5 and 17-30 Jan 2021

Online training on Soil Survey and Classification (Nagpur), 9-13 Nov 2020

Participation

Dr. M. Lalitha, RC, Bangalore attended short term training program on basics of remote sensing, GIS and GNSS during 17-22 Aug 2020 by Francis Xavier Engineering College.

Dr. M. Lalitha, RC, Bangalore attended online training program on online course on "Remote Sensing of Land Degradation" conducted by Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun during 01-12-2020 to 07-12-2020

PERSONNEL

Appointments / New Joining

Dr. B.S Dwivedi assumed the post of Director of the Bureau on 19 Nov 2020

Dr. S.K. Gangopadhyay, Principal Scientist joined as Head (Acting) of Regional Centre, Kolkata on 01 Feb 2021

Dr. Uday Shankar Saikia, Principal Scientist joined RC Jorhat upon transfer from ICAR-NEH, Barapani on 11 Feb 2021

Dr. R.S. Meena, Senior Scientist joined as Head (Acting) of Regional Centre, Udaipur on 19 Feb 2021

Shri. Ashwani Garg, SFAO joined Bureau Headquarters, Nagpur on 21 Oct 2020

Shri. Rupesh Kumar Amarghade, STA, joined on 08 Oct 2020

Smt. Reena Yadav, SSS joined Bureau Headquarters, Nagpur on 01 Sept 2020

Smt. Gayatri Chighore, SSS joined Bureau Headquarters, Nagpur on 22 Sept 2020

Shri. Rahul Taksande, SSS, joined Bureau Headquarters, Nagpur on 07 Jan 2021

Selection

Dr. R.A. Marathe, Principal Scientist, Bureau Headquarters joined as Director at National Research Centre on Pomegranate, Solapur

Transfers

Dr. Gulshan Kumar Sharma, Scientist, RC, Jorhat to ICAR-IISWC, RC, Kota on 31 Oct 2020

Shri. Pradeep Kumar, LDC, RC, Jorhat to Bureau Headquarters on 01 Dec 2020

Sh. Abhishek Jangir, Scientist, Bureau Headquarters, Nagpur to RC, Udaipur on 01 Mar 2021

Dr. R.A. Marathe, Principal Scientist, Bureau Headquarters joined as Director at National Research Centre on Pomegranate, Solapur

Smt. Subhashree Satapathy, LDC joined Bureau Headquarters upon transfer from ATARI, Zone-II, Jodhpur

Promotions

Dr. R.S. Meena, Scientist RC, Udaipur to Pay level - 12

Dr. (Mrs.) K.S. Karthika, Scientist RC, Bangalore to Pay level – 11

Shri. P.S. Butte, Headquarters, Senior Technical Officer to Asst Chief Technical Officer

Shri. Rupesh Kumar Amarghade, Headquarters, Senior Technical Assistant to Technical Officer

Shri. V.T. Sahu, Headquarters, Senior Technical Assistant to Technical Officer

Shri. S.C. Kohle, Headquarters, Assistant to Assistant Administrative Officer

Smt. Nirmala Kumar, RC, Kolkata Assistant to Assistant Administrative Officer

Smt. Rohini Watekar, Headquarters, PA to PS

Retirements / Superannuation

Dr. A.K. Sahoo, Principal Scientist & Head (Acting), RC, Kolkata on 31 Jan 2021

Dr. T.P. Verma, Principal Scientist & Head (Acting), RC, New Delhi on 31 Mar .2021

Dr. Dharam Singh, Senior Scientist, RC, New Delhi on 31 Jul 2021

Shri. S.G. Anantwar, Chief Technical Officer, Bureau Headquarters, Nagpur on 30 Sept 2020

NBSS in the Media



Smt. Chandramati P, Chief Technical Officer, RC, Bangalore on 31 May 2021

Shri. C. Bache Gowda, Technical Officer, RC, Bangalore on 31 July 2021

Shri N. Somasekhar, Senior Technical Assistant, RC, Bangalore on 30 Apr 2021

Shri. Makan Singh, Technical Assistant., RC, New Delhi on 30 Apr 2021

Shri. P.S. Choudhary, Tech Asst., RC, New Delhi on 30 Apr 2021

Smt Ranjana Sharma, Personal Assistant, Bureau Headquarters, Nagpur on 31 Oct 2020

Smt. Vaishali Arbat, Personal Assistant, Bureau Headquarters, Nagpur on 31 Jan 2021

Shri N Paramanik, Skilled Supporting Staff, RC, Kolkata on 28 Feb 2021

Obituaries

Shri. M.M. Khan, PS deceased on 02 Sept 2020

Dr. S.S. Rao, Principal Scientist and Acting Head, RC, Udaipur deceased on 15 Feb 2021

Shri. G.C. Sarkar, Senior Technician, RC, Kolkata deceased on 17 Apr 2021

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