# **Global Soils Conference 2024**

## **Caring Soils Beyond Food Security:** *Climate Change Mitigation & Ecosystem Services*

19-22 November 2024

NASC Complex, New Delhi



## Organized by







Indian Society of Soil Science, New Delhi under the aegis of International Union of Soil Sciences, Italy in collaboration with Indian Council of Agricultural Research, New Delhi National Academy of Agricultural Sciences, New Delhi

## About the Conference

World population reaches 9.1 billion by 2050, about 34% higher population than today. According to UN reports, food insecurity is one of the major problems facing the world today. About 95% of food is produced directly or indirectly from soil resource. Therefore, sustainable soil resource management is one of the key socio-economic and environmental issues across the globe. In many parts of the world there is considerable difference between potential and actual yield resulting in food shortage, poverty and malnutrition. It is inevitable that the quantity and quality of the food produce to sustain the present and future generation mostly depends upon the soil fertility. Several researchers and policy makers have made considerable efforts to address soil quality issues for sustainable development. Notwithstanding these efforts, still unprecedented nutrient mining and soil degradation issues creep to upset the sustainability in production system and ecosystem services. In the coming decades, soil science will remain at the focal point of discussion for food production and environmental conservation, but it will be equally essential for devising strategies for issues such as climate change adaptation and mitigation, protection of biodiversity, essential ecosystem services, water quality, poverty alleviation and sustainable development. Thus, it is necessary to maintain and improve soil health to produce more food, fuel and fibre with less land without affecting the soil biodiversity and natural ecosystem services under changing climate scenario across the world. This 'Global Soils Conference 2024' is addressing all these important issues, which will be held during November 19-22, 2024 at NASC Complex, New Delhi, India.

Global Soils Conference 2024 will be a significant and prestigious event to be organized by the Indian Society of Soil Science, New Delhi in collaboration with International Union of Soil Sciences and supports from many national and international organisations with a motivation to provide an excellent international platform with renowned keynote and plenary speakers from all over the world. The main objective of the conferences is 'Caring soils beyond food security: Climate Change mitigation and Ecosystem Services". This conference aims to address various challenges, issues and concerns/ importance of soils and the latest technology developments in sustainable soil/resource management in the light of the global issues such as food security, soil health improvement, enhancing input use efficiency through new fertilizers, rapid soil assessment techniques, land degradation, environmental quality, biodiversity protection and climate change adaptation and mitigation. The event will enable to assemble a diverse array of stakeholders, including scientists, policymakers, industry leaders, farmers, and environmental advocates, to engage in a comprehensive dialogue about the importance of soils beyond traditional agricultural perspectives. By examining the latest scientific research, sharing innovative management practices, and exploring policy frameworks, the conference will illuminate how caring for soils can lead to far-reaching benefits for the planet. The discussions and collaborations fostered here are poised to catalyze a paradigm shift in how soils are perceived and managed globally, promoting an integrated approach that recognizes and leverages their multifunctional capabilities.

Industry interface meeting, Farmers' interaction and Students' meet will be organized in this occasion to ensure larger participation from all the stakeholders during this conference. The conference will also provide an ideal and global platform to discuss various challenges faced by agriculture sector *vis-à-vis* food and nutritional security area with the global experts. The conference is expected to result in:

- A comprehensive set of recommendations for global sustainable soil management, climate change mitigation and ecosystem services.
- Enhanced international cooperation and partnerships in soil-related research and policymaking.
- A global network of soil scientists and practitioners for ongoing collaboration.
- Increased public and policymaker awareness of the critical role of soils beyond food production.

## Themes and Sub-Themes of the Conference

## Theme 1: Soil Health and Ecosystem Services

Sub-theme 1.1: Assessment of Soil Health & Ecosystem Services Sub-theme 1.2: Soil Biodiversity and Nutrient Cycling

#### Theme 2: Climate Change and Soil Health

Sub-theme 2.1: Climate Change and Soil Health Sub-theme 2.2: Impact of Climate Change on Carbon, Water, Nitrogen and Energy Foot Prints Sub-theme 2.3: Climate Change Adaptation and Mitigation Strategies

#### Theme 3: Sustainable Soil Management

Sub-theme 3.1: Degraded Soils & Innovative Restoration Practices Sub-theme 3.2: Soil Management in Challenged Ecosystems Sub-theme 3.3: Agricultural and Industrial Waste and Waste Water Utilization Sub-theme 3.4: Soil Pollution and Remediation

#### Theme 4: Nature Positive Soil Management

Sub-theme 4.1: Tree-based Ecological Restoration Sub-theme 4.2: Natural and Organic Farming System

#### Theme 5: Digital Soil Science and Precision Resource Management

Sub-theme 5.1: Soil Survey, Digital Soil Mapping & Land Use Planning Sub-theme 5.2: Digital Tools and Artificial Intelligence for Sustainable Soil Management and Decision Making

#### Theme 6: Soil Education and Awareness

Sub-them 6.1: Innovative Soil Science Education

#### Theme 7: Policy and Governance for Soil Management

Sub-theme 7.1: National and Global Soil Management Policies and Implications Sub-theme 7.2: Community Engagement and Local Governance in Soil Care Sub-theme 7.3: Public-Private Partnership for Advancing Sustainable Soil Management

## Call for Paper

Original contributions are invited related to any of the theme areas listed above for presentation in the conference. Abstracts to be submitted in MS word format limited up to 300 words. Abstract may be submitted through abstracts submission portal (<u>https://isss-india.org/gsc2024/</u> <u>delegate\_login.aspx</u>). All invited lead and keynote presentations will be published in the special issue of *Journal of the Indian Society of Soil Science (JISSS)* or in special publication either by *Springer or Elsevier*. Conference abstract book (in soft copy only) and certificate of presentation will be distributed to the conference participants. For more details, please visit the website (<u>https://isss-india.org/gsc2024/</u>).

## **Oral Presentation**

A copy of the presentation is required to be submitted by the participants. The organizing committee reserves the right to decide the mode of presentation depending on the content of the abstract, number of papers and merits of paper based on originality/novelty of research work on the themes of conference.

## **Poster Presentation**

The size of the poster shall be 100 cm length × 75 cm width briefly showing Title, Introduction, Methodology, Significant Findings (along with not more than three tables/figures/photographs) and bulleted Summary. The poster shall be made attractive, brief, composed on a single sheet with appropriate colour scheme so that the content is readable from a distance of at least one meter. The poster display requires conforming to the above standards and pasting of several small pieces of black and white A4 papers should be avoided. A two-page handout (say 50 copies) on the poster may be brought for the visitors. A soft copy of poster is to be submitted to the organizer for making it accessible to the participants either through email or available onsite in a pen drive during the conference.

## Exhibition

An Exhibition will be organized during the conference to showcase different natural resources management technologies for improving soil health and resource use efficiency in agriculture.

Language: Official language of the conference and deliberation will be in ENGLISH.

Receipt of Abstracts Deadline	:	30 August 2024
Acceptance of Papers/Posters	:	16 September 2024
<b>Regular-Registration</b>	:	17 September to 17 November 2024
<b>On-site-Registration</b>	:	18-22 November 2024

## **Conference deadlines**

Categories	Regular-Registration (17 September to 17 November 2024)	On-site-Registration (18 November 2024 Onward)		
INDIA (INR)				
Delegates (Members, ISSS/Other Societies	s) <b>10000</b>	12000		
<b>Delegates</b> (Students/JRF/SRF)	5000	6000		
Accompanying Person	5000	5000		
SAARC COUNTRIES (USD)				
Delegates	250	300		
Delegates (Students)	150	200		
Accompanying Person	150	150		
OTHER COUNTRIES (USD)				
Delegates	500	600		
Delegates (Students)	300	400		
Accompanying Person	200	200		

Registration

The registration fee covers local transportation in New Delhi between the place of stay and the Conference hall and workshop, publications including the proceedings and Conference kit, and coffee/tea/snacks during the forenoon and afternoon breaks, and lunch for **3 days** (19-21 November 2024).

Registration may be done through online portal (https://isss-india.org/gsc2024/ registration.aspx).

Registration fee may be deposited to the following bank account.

**Account details** 

Beneficiary name: Indian Society of Soil Science A/c No. : 90292010000393 IFSC : CNRB0019029 Bank : Canara Bank Branch : I.A.R.I., Pusa Campus, New Delhi



## **Conference Venue**

The Conference is being organised at the National Agricultural Science Centre (NASC) Complex, Dev Prakash Shastri Marg, New Delhi - 110 012, India. This complex spread over an area of around 9.0 hectare with multi-dimensional state of the art facilities like a National Agricultural Museum, Symposia Complex, large underground parking, offices of the International and national organizations of agricultural research, National Academy of Agricultural Sciences (NAAS), Indian Agricultural Universities Association, *etc.* (*Please use the QR code to reach the Venue*)





Accommodation

The Conference venue is located at the heart of the National Capital. A wide range of hotels are available within a short distance from the Conference venue. First-time visitors to India may find it more convenient to stay at the hotels which are within reasonable distance from the Conference venue. The tariff varies from INR 2,500/- to 15,000/- (US\$ 50 to US\$ 300) per room per day.

About New Delhi

New Delhi is an urban district of Delhi, which serves as the *Capital of India*. The foundation stone of the city was laid by Emperor George V during the Delhi Durbar of 1911. It was designed by British architects, Sir Edwin Lutyens and Sir Herbert Baker. New Delhi is home to several historic sites and museums. Some of them are National Museum, Indira Gandhi Memorial Museum, National Gallery of Modern Art, National Museum, National History, National Rail Museum, National Handicrafts and Handlooms Museum, National Philatelic



Museum, Nehru Planetarium, Shankar's International Dolls Museum India Gate, Gandhi *Smriti, Janatar Mantar* and many more. The climate of New Delhi is a monsoon-influenced *humid subtropical climate* bordering a *hot semi-arid climate* with high variation between summer and winter in terms of both temperature and rainfall. The temperature varies from 46°C (115°F) in summers to around 0 °C (32 °F) in winters. Summers are long, extending from early April to October, with the monsoon season occurring in the middle of the summer. Winter starts in November and peaks in January. The annual mean temperature is around 25 °C (77 °F); monthly daily mean temperatures range from approximately 14 to 34 °C (57 to 93 °F).

## Cultural Programme

Cultural programme will be arranged for the registered delegates and accompanying members on the evening of **19<sup>th</sup> November**, **2024** to provide insights into diverse and rich tradition of Indian culture by the trained professional and artists.

Organizing Secretariat			
Patron	:	Dr. H. Pathak, Secretary (DARE) & Director General (ICAR), & President, ISSS, New Delhi 110012	
Chairman	:	Dr. S.K. Chaudhari, Deputy Director General (NRM), ICAR, New Delhi 110012	
Organizing Secretary	:	Dr. Ranjan Bhattacharyya, Secretary, Indian Society of Soil Science, New Delhi 110012. E-mail: isss193 <u>4@gmail.com</u>	

## **International Advisory Committee**

### Chairman

Dr. H. Pathak, Secretary (DARE), Director General (ICAR) & President, ISSS, New Delhi

#### **Co-chairman**

Dr. S.K. Chaudhari, Deputy Director General (NRM), ICAR, New Delhi

### Members

Dr. Jacqueline d'Arros Hughes, Director-General, ICRISAT, Hyderabad, India Prof. Edoardo Costantini, President, International Union of Soil Sciences (IUSS) Prof.Victor OkechukwuChude, President-Elect, International Union of Soil Sciences (IUSS) Prof. Ratan Lal, Past President, International Union of Soil Sciences (IUSS) & Director, CMASC, USA Dr. Qu Dongyu, Director General, FAO, Italy Prof. Ram C. Dalal, School of Agriculture & Food Sciences, The University of Queensland, Brisbane, Australia Prof. Keith Paustin, Colorado State University, USA Dr. Xavier LeRoux, CNRS-INRA, University of Lyon-1, France Dr. Tim Clough, Lincoln University, New Zealand Prof. Nick Ostle, Lancaster University, UK Dr. Alan J. Franzluebbers. USDA-Agricultural Research Service / North Carolina State University, USA Dr. Emir Sahinoviæ, NextGen Plant Science Network, GFAR, Norway Dr. A.K. Singh, Agri. Commissioner, DAC &FW, New Delhi Dr. Alok K. Sikka, IWMI India Representative, New Delhi Dr. John Dixon, ACIAR, Australia Mr. Aly Abousabaa, Director-General, ICARDA, Beirut, Lebanon Dr. Bram Govaerts, Director-General, CIMMYT, Mexico & Chief Executive Authority of BISA Dr. Arun K. Joshi, Managing Director of BISA Dr. Ravi Naidu, Global Innovation Chair & Director, GCER, Australia Dr. Nandi S Bolan, University of Newscastle, Southwales, Australia Dr. Megharaj Mallarapu, Professor, Environmental Biotechnology, The University of Newcastle, Australia Prof. Juan Lucas Restrepo, Director General, Alliance of Bioversity International and CIAT Prof. Jennifer Dungait, University of Exeter, UK Prof. Christopher Collins, Coordinator NERC Soil Security Programme, University of Reading, UK Prof. Michael A. Fullen, The University of Wolverhampton, UK Dr. Dave Chadwick, Bangor University, UK Dr. Ellen R. Graber, Israel Dr. Peter de Ruiter, The Netherlands Dr. Lucia Helena Cunhados, Anjos, Brazil Dr. David Allen Lobb, Canada Dr. Megan Balks, New Zealand Dr. Kaushik Majumdar, Director General, African Plant Nutrition Institute (APNI), Morocco Dr. Shaikh Mohammad Bokhtiar, Executive Chairman, Bangladesh Agricultural Research Council, Bangladesh Dr. Tapas K. Biswas, CSIRO, Canberra, Australia

#### **Member Secretary**

Dr. Ranjan Bhattacharyya, Secretary, Indian Society of Soil Science, New Delhi

## National Advisory Committee

#### Chairman

Dr. H. Pathak, Secretary (DARE), Director General (ICAR) & President, ISSS, New Delhi

#### **Co-Chairman**

Dr. S.K. Chaudhari, Deputy Director General (NRM), ICAR, New Delhi

#### Members

Dr. B.S. Dwivedi, Member, ASRB, New Delhi Director, IARI, New Delhi Dr. Udham Singh Gautam, Deputy Director General (Ext.), ICAR, New Delhi Dr. A.K. Singh, Vice Chancellor, Rani Lakshmi Bai Central Agricultural University, Jhansi Dr. P.L. Patil, Vice Chancellor, University of Agricultural Sciences, Dharwad Dr. A.K. Shukla, Vice Chancellor, RVSKVV, Gwalior Dr. Indra Mani, Vice Chancellor, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani Dr. A. Velmurugan, ADG, ICAR Dr. Rajbir Singh, ADG, ICAR Dr. Ch. Srinivasa Rao, Director, ICAR-NAARM, Hyderabad Dr. K.S. Reddy, Director, ICAR-National Institute of Abiotic Stress Management, Baramati Dr. Pradip Dey, Director, ATARI, Kolkata Dr. O.P. Yadav, Director, ICAR-Central Arid Zone Research Institute, Jodhpur Dr. N.G. Patil, Director, ICAR-National Bureau of Soil Survey and Land Use Planning, Nagpur Dr. M. Madhu, Director, ICAR-Indian Institute of Soil and Water Conservation, Dehradun Dr. R.K. Yadav, Director, ICAR-Central Soil Salinity Research Institute, Karnal Dr. S.P. Datta, Director, Indian Institute of Soil Science, Bhopal Dr. Parveen Kumar, Director, ICAR-Central Coastal Agricultural Research Institute, Goa Dr. Anup Das, Director, ICAR-ICAR Research Complex for Eastern Region, Patna Dr. Arjamadutta Sarangi, Director, ICAR-Indian Institute of Water Management, Bhubaneswar Dr. V.K. Singh, Director, ICAR-Central Research Institute for Dryland Agriculture, Hyderabad Dr. Sunil Kumar, Director, ICAR-Indian Institute for Farming System Research, Modipuram Dr. J.S. Mishra, Director, ICAR-Directorate of Weed Research, Jabalpur Dr. V.K. Mishra, Director, ICAR Research Complex for NEH Region, Barapani Dr. A. Arunachalam, Director, ICAR-Central Agroforestry Research Institute, Jhansi Dr. K.G. Mandal, Director, ICAR-Mahatma Gandhi Integrated Farming Research Institute, Motihari Dr. Gouranga Kar, Director, CRIJAF, Barrackpore Dr. Alok K. Srivastava, Director, NBAIM, Mau Dr. I.P. Abrol, Former President, Indian Society of Soil Science, New Delhi Dr. N.N. Goswami, Former President, Indian Society of Soil Science, New Delhi Dr. G. Dev, Former President, Indian Society of Soil Science, New Delhi Dr. M. Velayutham, Former President, Indian Society of Soil Science, New Delhi Dr. G. Narayanasamy, Former President, Indian Society of Soil Science, New Delhi Dr. J.S. Samra, Former President, Indian Society of Soil Science, New Delhi Dr. J.C. Katyal, Former President, Indian Society of Soil Science, New Delhi Dr. A.K. Singh, Former President, Indian Society of Soil Science, New Delhi Dr. B.P. Singh, Former President, Indian Society of Soil Science, New Delhi Dr. R.K. Rattan, Former President, Indian Society of Soil Science, New Delhi Dr. Jagdish Prasad, Former President, Indian Society of Soil Science, New Delhi Dr. A.K. Patra, Former President, Indian Society of Soil Science, New Delhi Dr. D.R. Biswas, Former President, Indian Society of Soil Science, New Delhi Dr. Soumitra Das, Director, Asia Pacific Zinc Nutrient Initiative, International Zinc Association Dr. Shashikant N Bhende, Managing DirectorNaveen has a account, Mosaic India Pvt. Ltd., Gurgaon Dr. Debashis Mandal, Head, Division of Soil Science and Agril. Chem., IARI, New Delhi

#### **Organizing Secretary**

Dr. Ranjan Bhattacharyya, Secretary, Indian Society of Soil Science, New Delhi

## **Organizing Committee**

## Patron

Dr. H. Pathak, Secretary (DARE), Director General (ICAR) & President, ISSS, New Delhi

## Chairman

Dr. S.K. Chaudhari, Deputy Director General (NRM), ICAR, New Delhi

## Members

Dr. A.K. Sikka, Former DDG (NRM) & IWMI India Representative, New Delhi Dr. J. Rizvi, Regional Co-ordinator, South Asia, ICRAF, New Delhi Dr. A.K. Patra, Former President, Indian Society of Soil Science, New Delhi Dr. D.R. Biswas, Former President, Indian Society of Soil Science, New Delhi Dr. P.P. Mahendran, Vice President, Indian Society of Soil Science Dr. A.K. Biswas, Vice President, Indian Society of Soil Science Dr. Ch. Srinivasa Rao, Director, ICAR-NAARM, Hyderabad Dr. K.S. Reddy, Director, ICAR-NIASM, Baramati Dr. R.K. Yadav, Director, ICAR-CSSRI, Karnal Dr. Pradip Dey, Director, ICAR-ATARI, Kolkata Dr. Sunil Kumar, Director, ICAR-IIFSR, Modipuram Dr. V.K. Singh, Director, ICAR-CRIDA, Hyderabad Dr. S.P. Datta, Director, ICAR-IISS, Bhopal Dr. Debashis Mandal, Head, Division of Soil Science & Agril. Chemistry, ICAR-IARI, New Delhi Dr. P.S. Brahmanand, Project Director, Water Technology Centre, ICAR-IARI, New Delhi Dr. S.N. Pillai, Head, Division of Agricultural Physics, ICAR-IARI, New Delhi Dr. S.S. Rathore, Head, Division of Agronomy, ICAR-IARI, New Delhi Dr. P.K. Sahoo, Head, Division of Agricultural Engineering, ICAR-IARI, New Delhi Dr. M.L. Jat, ICRISAT, Hyderabad Director General, FAI, New Delhi Dr. Soumitra Das, Director, Asia Pacific, Zinc Nutrient Initiative, International Zinc Association, New Delhi Dr. Naresh Prasad, FAI, New Delhi Dr. U.S. Awasthi, Managing Director, IFFCO Shri Rajan Chowdhry, Managing Director, KRIBHCO Dr. Shashikant N Bhende, Managing DirectorNaveen has a account, Mosaic India Pvt. Ltd., Gurgaon Dr. Manoj Shrivastava, Joint Secretary, Indian Society of Soil Science Dr. Shrila Das, Assistant Secretary, Indian Society of Soil Science Dr. Biraj Bandhu Basak, Treasurer, Indian Society of Soil Science

## **Organizing Secretary**

Dr. Ranjan Bhattacharyya, Secretary, Indian Society of Soil Science, New Delhi