

BRIEF CURRICULUM VITAE**Dr. Ashok K. Patra***FNASc, FNAAS, FAScT, FISSS, FRMSI***Emeritus Scientist & Former Director****ICAR-Indian Institute of Soil Science, Bhopal 462 038, India**Mob 09811733465/9713464733; <https://iiss.icar.gov.in>*E-mail: patraak@gmail.com, ashok.patra@icar.gov.in***Educational Background**

- ✦ Ph. D (Soil Science & Agril Chem), ICAR-Indian Agricultural Research Institute (IARI), New Delhi (1989)
- ✦ M. Sc (Soil Science & Agril Chem), ICAR-Indian Agricultural Research Institute (IARI), New Delhi (1985)
- ✦ B. Sc (Agri), Banaras Hindu University, Varanasi, India (1983).

Employment/Research Experience: (1989 onwards): 34 Years +

- ✦ **Emeritus Scientist**, ICAR-Indian Institute of Soil Science, Bhopal (January 2023 – till date)
- ✦ **Director**, ICAR-Indian Institute of Soil Science, Bhopal (May 2014–September 2022) **(8 years 5 months)**.
- ✦ Principal Scientist (2006-2014) & Senior Scientist (1999-2006), ICAR-IARI, New Delhi
- ✦ Senior Scientist, ICAR-Central Institute of Fisheries Education (CIFE), Mumbai (1998-1999);
- ✦ Scientist, ICAR-Indian Grassland & Fodder Research Institute (IGFRI), Jhansi, India (1990-1998)
- ✦ Scientist Trainee, ICAR-NAARM, Hyderabad & ICAR-IISS Bhopal (1989-1990).

Teaching & Guiding post-graduate students (1998-2014) >16 Years

- ✦ Taught and supervised MSc & PhD students at ICAR-CIFE, Mumbai & ICAR-IARI, New Delhi. Supervised 6 MSc and 5 PhD students (as Major/Co-guide). Acted as Member in the Advisory Committees of more than 20 students in Soil Science and allied Disciplines at IARI, New Delhi.
- ✦ Taught Soil Science courses ('Soil Biology & Biochemistry'; 'Soil Resource Management'; Integrated Nutrient Management & Sustainable Agriculture; Soil Fertility & Plant Nutrition; Radio Tracers Techniques in soils & Fertilizers) courses for MSc and PhD students at IARI
- ✦ Students are recipients of Fulbright Fellowship, IPNI Scholar Award, Jawaharlal Nehru Award, IARI Gold Medals, Best Papers/Posters, etc. at IARI, New Delhi (1999-2014).

International Experience (including the international projects and work with GSP/FAO, Rome): >10 Years

- ✦ Visiting Fellow (2008-2009), University of Notre Dame, Indiana, USA
- ✦ Postdoctoral Fellow (2001-03) Ecologie Microbienne, UMR-CNRS, Université Claude Bernard, France.
- ✦ Visiting Scientist (1996), Institute of Grassland & Environmental Research, North Wyke, Exeter, UK
- ✦ Postdoctoral Scientist (1991-1993), ICRISAT (CGIR Institute), Hyderabad, India.
- ✦ Member, Intergovernmental Technical Panel on Soils (ITPS), GSP, UN FAO, Rome (2018-2021). (<https://www.fao.org/global-soil-partnership/intergovernmental-technical-panel-soils/itps-experts-july-2018/en/>)
- ✦ Member, Editorial Board for "World's Soils Resources Report 2025", GSP, FAO, Rome (2021-2022).
- ✦ Member, Scientific Committee, Global Symp. on Salt-Affected Soils (GSAS21), 20-21 Oct. 2021, FAO.
- ✦ Member, Working Group, South-East Asia Laboratory Network (SEALNET), FAO, Rome (2017-2020).
- ✦ Member, Technical Committee, Global Soil Laboratory Network (GLOSOLAN), FAO, Rome (2021-22).
- ✦ Other professional visits: UK (1996, 2003, 2017), Germany (1996, 2018), Italy [2018, 2019 (2), 2022], Indonesia (2017), USA (2016), Australia (2011), (Spain 2017), Tokyo (1997, 2016) The Netherlands (2002), Kuwait (2010), ICRAF, Nairobi (2014).

Honors/Awards/Recognitions

- ✦ UN FAO Glinka World Soil Prize 2022 (<https://www.youtube.com/watch?v=ApH558kmDAQ>).
- ✦ Recognised one among 13 soil scientists of the world (Food Tank, USA) on World Soil Day 2017. (<https://foodtank.com/news/2017/12/sustainable-soil-scientists/>)
- ✦ Rafi Ahmed Kidwai Award of ICAR for Outstanding Research in Agricultural Sciences 2021.
- ✦ Platinum Jubilee Commemoration Award of the Indian Society of Soil Science (2022).
- ✦ ICAR - IARI Hooker Award (2013).
- ✦ International Plant Nutrition Institute (IPNI)-FAI Award 2018
- ✦ Dr. Sushil Kumar Mukherjee Commemoration Award (ISCA, Kolkata), 2017-18.
- ✦ Bioved Agri-innovation Award -2015; FAI-Dhiru Morarji Memorial Award 2011

- ✚ Prof. J.N. Mukherjee ISSS Foundation Lecture Award 2023; Dr. G.S. Sekhon Memorial Lecture Award 2012; Dr. N.S. Randhawa Memorial Lecture Award 2018; Dr. MV Rao Memorial Lecture Award 2019.
- ✚ DBT Biotechnology Overseas Associateship Award (2008)
- ✚ Other Honours/Awards/Recognitions: **40 (Best posters/papers/prizes, etc. of various professional societies)**

Fellowship of Academies

- ✚ Fellow of the National Academy of Sciences (NASI), India (2020)
- ✚ Fellow of the National Academy of Agricultural Sciences (NAAS), India (2010)
- ✚ Fellow of the West Bengal Academy of Science & Technology (2017)
- ✚ Fellow of the Indian Society of Soil Science (ISSS) (2013)
- ✚ Fellow of the Range Management Society of India (RMSI) (2007)

Institutional Awards (National & International) received during my leadership as Director

- **UN FAO King Bhumibol World Soil Day Award 2020 to ICAR-IISS, Bhopal.** The award had a Medal, cash prize of US \$15,000 (≈ Rs. 12 Lakh) & a Visit to Bangkok, Thailand.
- **Sardar Patel Outstanding ICAR Institution Award 2018.** The award had a cash prize of Rs.10.00 lakh (≈ US\$ 12000) and a Citation.
- **Krishi Sansthan Samman Award** (National Award Winner) (2016) by *Mahindra Samridhi* (Mahindra & Mahindra). The award had a cash prize of Rs. 2.11 lakh (≈ US\$ 2600) for the Institute and a Citation.
- **“Cashless (Digital) ICAR Institute Award 2017”** for cashless transaction- The award had a cash prize of Rs. 5.00 lakh (≈ US\$ 6200) and a Citation.
- **ICAR-IISS Ranked 12th among 93 ICAR Institutes participated.**

Scientific Leadership

- ✚ President, Indian Society of Soil Science (ISSS), New Delhi (2019 to 2021).
- ✚ President, Indian Science Congress Association (Agriculture & Forestry Sciences), (2016 & 2017).
- ✚ Vice-President, Indian Society of Soil Science, New Delhi (2016 & 2017)
- ✚ President, Delhi Chapter of the Indian Society of Soil Sci., New Delhi (2012 to 2014)
- ✚ Joint Secretary, Indian Society of Soil Science, New Delhi (2013 & 2014).
- ✚ Councillor of ISSS (2005 & 2006).
- ✚ Member of Academic and Policy-framing Bodies (e.g., Chairman/Advisor/IMC Member, etc.): **30 Nos.**

Life Member of Professional Societies

1. National Academy of Sciences, Allahabad, India
2. National Academy of Agricultural Sciences, India
3. West Bengal Academy of Science & Technology, Kolkata
4. Indian Society of Soil Science, New Delhi
5. Range Management Society of India, Jhansi
6. Indian Science Congress Association, Kolkata
7. Soil Conservation Society of India, New Delhi
8. Clay Minerals Society of India, New Delhi
9. Journal of Potassium Research, Gurgaon

Area of research and selected achievements

- My scientific career spanning more than thirty-three years of research, education, and extension, contributed to over 380 publications and participated in various national and international events. Worked in 47 research projects (nationally/internationally funded/consultancy), on different aspects of basic and applied research and management on nutrient cycling, soil fertility maps, fertilizers use, climate change and mitigation, carbon sequestration, conservation agriculture, rapid recycling of organic wastes, soil biodiversity, remediation of soil pollution and soil spectroscopy.
- Made significant contributions to the improvement of food and nutritional security through understanding of nutrient cycling, soil nutrient management, and the effect of long-term fertilizer applications, particularly integrated nutrient management on India's major soils, and addressed the emerging challenges of soil resources

with a clear focus on sustainable soil management and biodiversity while uplifting the research standards of the Institute (ICAR-IISS) to the global level.

- Played a significant role in developing the *Mridaparikshak* Mini Soil Laboratory, which has provided soil testing, and soil health cards and fertilizer recommendations to millions of Indian farmers.
- With my leadership as Director, I gave expert support to bring numerous external funded projects. These include the development of rapid composting techniques, GIS-based soil fertility maps, and the use of soil spectroscopy to generate large databases of soil information needed for decision making. During my term as Director of ICAR - IISS, I have expanded the network of the institute under various projects, and guided hundreds of students, research scholars, young scientists and large farming community.
- In my capacity as Director of ICAR-IISS, a Member of the Intergovernmental Technical Panel on Soils (FAO/GSP), President of Indian Society of Soil Science and Fellow of national academies, I have contributed to the development of numerous documents, guidelines and standard operating procedures at national and international levels.
- In addition, I worked to generate public interest in soil science through awareness campaigns, demonstrations and exhibitions of soil technologies, presentations on radio and television programs, and writing popular articles. Under my leadership, ICAR-IISS received the King Bhumibol World Soil Day Award 2020 of UN FAO, Rome. I also won the global Glinka World Soil Prize 2022 of FAO for my contribution towards sustainable soil management in India and worldwide.

Contribution to Institutional Developments and National/International Collaboration/Coordination:

- In the capacity of Director (2014-2022), I have developed many international linkages of the institute; such as with University of Oxford, U.K. and John Innes Centre, Norwich under INDO-UK virtual N-Fixation centre; initiated for the establishment of Soil Water Tissue laboratory in African countries under India-Africa Forum Summit-III, and working to harness the scope of Mid Infrared Spectroscopy (MIR) in rapid soil characterization and use of biochar with World Agroforestry Centre (ICRAF), Nairobi; and climate change, adaptation and mitigation strategies for different crops with ICARDA, Morocco.
- Since 2017 closely worked with FAO through Global Soil partnership (GSP) programme and contributing through Intergovernmental Technical Panel on Soils (ITPS) in which I was a member (2018-2021), for scientific and technical advice and guidance on global soil issues (such as developing voluntary guidelines for sustainable soil management; international Code of Conduct for the sustainable use and management of fertilizers; etc.) to the GSP primarily and to specific requests submitted by global or regional institutions. I have also contributed to addressing sustainable soil management in the different sustainable development agendas of GSP (FAO).
- Contributed as a member in the Editorial Board (ITPS) for the document: FAO and UNEP. 2021. Global assessment of soil pollution - Summary for policy makers. Rome, FAO. (<https://doi.org/10.4060/cb4827en>).
- FAO Recognized ICAR-IISS, Bhopal as “Champion Laboratory on Soil Spectroscopy” in the Asia region.
- Global Soil Laboratory Network (GLOSOLAN), GSP (FAO) recognized ICAR-IISS, Bhopal as National Referral Lab in India.
- Contributed by providing data to GSP, FAO, Rome to develop Global Soil Carbon (GSOC) Map in collaboration with NBSS&LUP to address the issue of global problem of declining soil carbon.
- Being a Member in the working group (2017 onwards), actively involved with the South - East Asian Laboratory Network (SEALNET) under GSP, FAO (Rome) towards standardization and harmonization of soil analytical methods, their interpretation and implementation in the South-East Asia region. The 2nd SEALNET Meeting *cum* Workshop was organised by me at ICAR-IISS, Bhopal during 19-23 November 2018, where 16 South East Asian Countries, and representatives from FAO, and France participated.
- Led the Institute as focal point of SAARC on IPNS and as expert in International South-South Exchange program on soil protection and rehabilitation, and capacity building of technical personnel of Africa under Feed -The Future-India Triangular Training with the aid of USAID.
- Contributed in the Indo-UK International Collaborative Project funded by DIFD, UK, on “Forage production and utilization”- on “Nutrient Cycling” issues operated at IGFRI, Jhansi during 1995-1998.
- Developed 4 new laboratories and facilities to undertake frontier areas of research on nanotechnology, conservation agriculture, precision agriculture and soil biodiversity.

- 62 externally funded projects to address various issues related to sustainable management of soil resources have been brought and mobilized more than Rs. 94 crores (US\$ 11.5 millions), and strengthened the research facilities, international training and visits, and human resources of the institute.
- As Director of ICAR-IISS I have facilitated various activities of 3 All India Coordinated Research Projects (AICRPs) and 1 All India Net Work Project (AINP) operating from the institute, having 83 centers located in different parts of the country addressing specific soil constraints and promoting best soil management to enhance soil health and agricultural production through demonstration and adoption of technologies in the farmers' fields in different agro-ecological regions of the country.
- To address the sustainable management and restoration of soil resources of the country, with a team of scientists I have contributed (as Director of ICAR-IISS) to develop and execution a Consortium Research Platform – Conservation Agriculture (CRP-CA). This inter-institutional collaborative research platform launched in 2014 at ICAR- IISS, Bhopal as lead center with 11 other ICAR institutes and more than 30 scientists. The CRP-CA programme is working to mainstream conservation agriculture and developing human resources for adoption of this new practice in India.
- Strengthened collaborative and synergistic research/education/development by signing 17 Memorandum of Understandings (MOUs) with State Agricultural Universities (SAUs)/Non-Governmental Organisations (NGOs) (e.g., SOLIDARIDAD, ITC) and other institutions.
- Provided strong support to Department of Agriculture Cooperation and Farmers Welfare, Govt of India, and Farmer Welfare & Agriculture Department, Govt of Madhya Pradesh and other states/NGOs of India through intensive training, demonstration, exhibition, and meetings for accomplishing various tasks related to Soil Health Card (SHC) mission of the Government of India and enhancing agricultural production through sustainable restoration/ regenerative management of soil resources.
- Significantly contributed to make the Institute branded with new Logo, ISO 9001:2015 certification, Transparency (A+ with 97.5% score from CIC, New Delhi), and highest scholarly output (Scopus-SciVal of Elsevier) among ICAR Institutes during my tenure as Director.

Scholarly accomplishments

Publications*:

Summary of publications (seminars/symposia/conferences not included)	
Refereed Journals with Clarivate Analytics IF (NAAS Rating > 6)	162
Refereed Journals without Clarivate Analytics IF (NAAS Rating < 6)	66
Books Authored/Edited	18
Manuals, Bulletins, Book chapters, Popular articles, etc.	135
Total No. of Publications	381
Total Citations: (Google Scholar).	8220

*Publications in refereed journals can be seen at

<https://scholar.google.com/citations?user=H323OB4AAAAJ&hl=en&oi=ao>

Editorial Advisor

- Associate Editor: European Journal of Soil Science, 2014-contd.
- Editor, Journal 'Range Management & Agroforestry', 1996-1998
- Editor, Journal of the Indian Society of Soil Science, 2013-2014
- Associate Chief Editor, International Journal of Bioresource and Stress Management, 2012-contd.
- Editor (Honorary), Green Farming, 2017-contd.
- Reviewer of International Journals: >20 different journals.

My profile can also be seen at:

<https://www.linkedin.com/in/ashok-k-patra-phd-01ba4945/>; <https://www.researchgate.net/profile/Ashok-Patra-2>
<https://www.youtube.com/watch?v=oYLDxr3-8Y>

For list of publications, projects handled, more details of research achievements, list of seminar/symposium/conferences organized, please email: patraak@gmail.com