DECADE OF SOIL SCIENCES FOR SUSTAINABLE DEVELOPMENT 2025-2034

International Union of Soil Sciences

IUSS BULLETIN

IUSS Bulletin **146**

International Union of Soil Sciences (IUSS)

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Summary

IUSS Reports

Report from the Past President

Report on the Activities of the IUSS Past President, Dr. Edoardo A.C. Costantini, January–June 2025

The activities of the Past President began at the start of 2025. His main roles have been chairing the Research Forum and serving as secretary of the Electoral Committee. During the first half of the year 2025, the activities have been focused on the following main tasks.

1) The 2025-2034 Decade of Soil Sciences for Sustainable Development.

Following extensive discussion, the Research Forum has proposed the launch of the 2025-2034 Decade of Soil Sciences for Sustainable Development, under the motto "Healthy Soils for Humanity." This initiative follows the successful Decade 2015–2024 and has been officially endorsed by the Executive Committee. The new Decade has been promoted through IUSS social media channels and is publicized on the webpage https://www.iuss.org/decade-of-soil-sciences-for-sustainable-development/. Its main aim is to prioritize the production, dissemination, and use of actionable scientific knowledge on soil management in support of achieving the Sustainable Development Goals. The manifesto and logo of the Decade have been added to the website and are available for use by members of the Research Forum.

The Decade has received support from international organizations such as the FAO Global Soil Partnership, the International Science Council, the Coalition for Soil Health, the European Society for Soil Conservation, and the "4 per 1000" Initiative. The IUSS Decade is also aligned with the UNESCO Decade of Sciences for Sustainable Development (https://www.un-sciences-decade.org/en), which aims to strengthen global scientific cooperation.

A division-level strategy for contributions and roadmap development has been suggested, together with a broader discussion within the Commissions and Working Groups. These discussions aim to define a shared vision of their research and science: where they currently stand, future directions, emerging issues, and how these elements connect to their participation and contribution to the objectives of the Decade. Division Chairs will coordinate contributions within their divisions, identify coordinators for events, webinars, exhibitions, and publications, oversee inputs from Commissions and Working Groups, and develop vision statements for their respective areas.

Collaboration with UNESCO on the implementation of sustainable soil management in UNESCO sites such as Biosphere areas and Geoparks has already begun, with the participation of some IUSS officers in an event organized by UNESCO in the Schelde Delta Geopark in Antwerp, Belgium, August 2025.

2) Electoral Committee

The guidelines for the 2026 elections have been developed and circulated throughout the IUSS Council, with the assistance of the Secretariat. The open positions among Division and Commissions officers have been examined and announced.

3) Additional activities

i) Representing the IUSS at the General Assembly (GA) of the International Science Union (ISC) and the Global Knowledge Dialogue (GKD) held in Oman 25-31 January 2025 (see reports in bulletin 145)

ii) Representing the IUSS at the General Assembly of the Global Soil Partnership, June 3-5, 2025, at the FAO headquarters in Rome of FAO (see report below)

iii) Participating in the IUSS task forces for secretariat evaluation, event guidelines, and website structure.

iv) Co-chairing the Organizing Committee of the upcoming 23rd World Congress of Soil Science (WCSS), Nanjing, 2026.

v) Co-editing the books of proceedings from the Centennial Congress of the IUSS.

vi) Supporting the organization of 13th conference of SUITMA (Soils of Urban, Industrial, Traffic, Mining and Military Areas) commission of the IUSS and facilitating the collaboration with the FAO's Global Soil Partnership for a joint event.

vii) Contributing to the activities of the Working Group dedicated to the World Soil of the Year initiative to promote awareness of globally significant soils and their importance.

viii) Serving on the Scientific Committee of VII Eurosoil 2025 and maintaining contact with the Organizing Committee.

ix) Liaising with the International Science Council and the GeoUnions, participating in their meetings. Facilitating the participation of IUSS officers in the roundtable of the ISC Early Career Researchers.

x) Maintaining contacts with the Coalition for Soil Health and participating in their meetings.

xi) Providing ongoing support to the Secretary and the Secretariat.

IUSS Participation at the Thirteenth Global Soil Partnership (GSP) Plenary Assembly FAO Headquarters, Rome, Hybrid Format, 3–5 July 2025

The International Union of Soil Sciences (IUSS) participated in the Thirteenth Plenary Assembly of the Global Soil Partnership (GSP), held at the FAO headquarters in Rome and online, from 3 to 5 July 2025. The IUSS was represented by Past President Edoardo A.C. Costantini and Secretary Irene Fabbri.

Past President Costantini gave a presentation during the Partners Day entitled *" The IUSS Decade of Soil Sciences for Sustainable Development – Healthy Soils for Humanity"*. He highlighted the achievements of the 2015–2024 Decade of Soil Sciences, culminating in the Centennial Congress celebration. He also introduced the new Decade of Soil Sciences (2025–2034), which aims to prioritize the production, dissemination, and use of actionable scientific knowledge and promote solutions to support the achievement of the Sustainable Development Goals (SDGs).

Key objectives of the decade are:

1. Promoting actionable research on soils to guide policy, agricultural practices, and land management for sustainability.

2. Supporting interdisciplinary and multidisciplinary collaboration to develop holistic solutions by fostering partnerships with other disciplines, including social, cultural, and artistic research on soils.

3. Enhancing public awareness and education by broadening science communication and dissemination.

4. Engaging the public through citizen science, collaborative knowledge production, and initiatives aimed at increasing soil literacy.

Some milestones:

- World Soil of the Year 2025: Gleysol of the Carpathian Basin, Hungary
- 23rd World Congress of Soil Sciences, June 2026, Nanjing, China

The presentation is available here.

During the GSP Assembly, the Past President proposed to combine the 13th Conference of SUITMA (Soils of Urban, Industrial, Traffic, Mining and Military Areas), a commission of the IUSS, with an upcoming GSP online conference on urban soils. The proposal was endorsed by the General Assembly.

(ph. Irene Fabbri)


(ph. FAO)

Report from the IUSS Secretariat

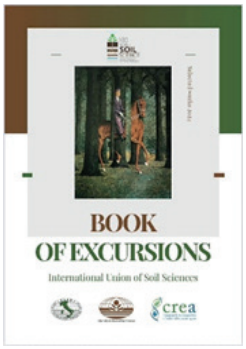
Report from the IUSS Secretariat

During the first six months of 2025 the Secretariat has been busy supporting and managing the many activities of the Union, given also the preparation for the elections of the new Divisions, Commissions, and Standing Committees Chairs in 2026. The year begun with the participation of the Past President and the Secretary into the Global Knowledge Dialogue, and the ISC Third Plenary Assembly in Muscat, Oman. For quite some time now, the Secretary has been working closely with the ISC to convey their many initiatives to our officers and Full Member and, so far, the IUSS has

successfully submitted few candidacies to improve our presence in the global arena to bring forward our instances and mission in promoting and advancing soil sciences (the outcomes and documents of the assembly are available here). Moreover, we contributed to the discussion in the ISC Members Category 1 Forum: important topics were addressed, such as the International Decade of Sciences for Sustainable Development, the future of ISC and its relationship with the International Scientific Unions, and the free circulation of scientists. The event was also a very good chance to meet with the other members of the GeoUnions to discuss common aims and mingle.


(ph. Irene Fabbri)

The Secretary, in addition to supporting the activities- and the logistics when coordinating funds requests and such for events organization- of the Divisions, Commissions and Working Groups, has been increasing her collaboration with the National Societies, providing support in advertising their activities on the IUSS social media accounts.



Moreover, the new year, saw the publication of the Book of Excursions of the Centennial Congress and Celebration, the first step of a much bigger project endorsed by the whole Secretariat: The Book of Extended Abstracts. The work is still ongoing, given the importance and the amount of work and papers this editorial project will hold. It is not common for a Union to see their proceedings published with 100 years gap, the 1924 ones are available and can be freely downloaded on the IUSS website.

In the early days of summers, the Past President, Prof. Edoardo A. C. Costantini, and the Secretary participated into the Global Soil Partnership (GSP) Plenary Assembly, Thirteenth session. A great occasion to discuss the future of soil sciences, given that by 2050 ten billion of people will have to be fed. FAO Director General addressed the attendees reminding them that the time has come to turn challenges into opportunities and visions into actions. During the assembly, the IUSS Past President introduced the 2025-2034 Decade of Soil Sciences for Sustainable Development (DSSSD), and the venue was also the chance to celebrate our collaboration with the GSP for the book contest "Caring for Soils" and the 80 years of FAO.

(ph. Irene Fabbri)

The Head of the Secretariat, Prof. Giuseppe Corti, and the Secretary, Dr. Irene Fabbri were then in Addis Ababa for the Italian Research Day in the World, a unique opportunity to represent CREA, the Council for Agricultural Research and Economics where the Secretariat is hosted and managed, and the IUSS, of course, and open new dialogues with UNESCO and the Scientific-Technological attached at the Italian Embassy on soils in agriculture, soil sciences and sustainable development.

At the end of June, the Head of the Secretariat participated into the press conference "Back to soil" at the Senate of the Italian Republic, the focus of the discussion being the new soil maps of Italy, a pivotal work for agronomists and agriculture field experts.

(ph. Irene Fabbri)

Social media and website

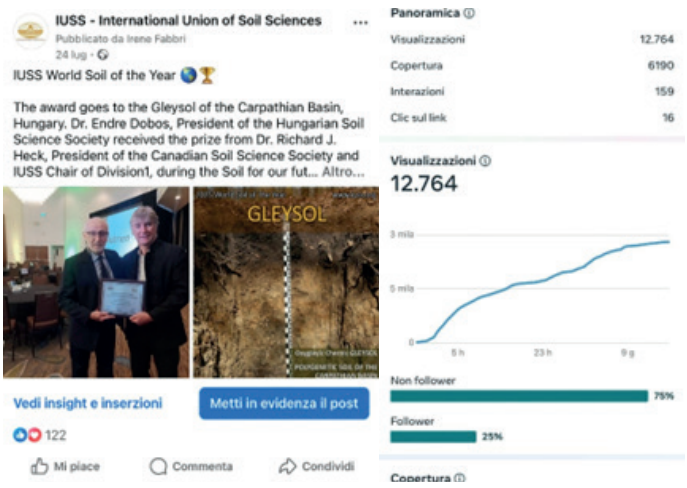
The social media channels are performing exceedingly well and increasing their followers by the day. Facebook, as always, leads the way with 15.658 followers, each post is visualized between 6.000 and 13.000 times, with an average of 150/200 interactions per post. X follows, with 4.969 followers and an average of 75/150 interactions per post. LinkedIn is growing steadily, with 2.182 followers (with an increase of 540 followers in six months). In the first 6 months of the year, the social media channels gained almost 800 followers. The website is growing too, starting from this year, it is going to be possible for members of the scientific community to sign up for a Division, Commission and/or Working Group through the new distribution list. Moreover, new pages are going to be added for the Commissions and Working Groups for our officers to display and promote their activities. In the first six months of the 2025, the website had

20.080 visitors (against the 25.000 for the whole 2024), and 44.515 views (against the 55.000 for the whole 2024).

Stimulus Fund

Stimulus Fund 1 call

The first call of the year as been as successful as ever. As follows, a brief excursus of the winning proposal.



Massey University Soil Society

Dr. Oliver Arnold - President

Its mission is to introduce students to the exciting world of soil science by providing them the opportunity to learn and refine practical soil skills and gain an appreciation of the importance of soils. To achieve this, the club runs events where students are taken out to the field and teach the practical skills required to do soil profile descriptions as well as a range of other soils skills that reinforce and extend what they learn in the soil courses taught at Massey University.

10th International Acid Sulphate Soils Conference (IASSC) Luleå, Sweden, September 15-20, 2025

Dr. Anton Boman, Acid Sulphate Working Group (ASSWG)

The ASSWG is an active group consisting of researchers from all corners of the globe. It organizes regular meetings and conferences to discuss the latest scientific discoveries in the field of acid sulphate (AS) soils.

The IASSC is divided into two parts: presentations (talks and posters) of new scientific discoveries and field excursions. The field excursions are particularly valuable and important, as soils and their characteristics vary depending on their geographical location. The intention with the 10th IASSC is to showcase various types of AS soils typical for the boreal and sub-Arctic regions of Sweden and Finland. The focus will also be on the management of AS soils and how to avoid issues such as corrosion of steel and concrete in infrastructure developments on acid sulphate soils in this region.

International Soil Judging Contest – Nanjing 8-13 June 2025

Dr. John M. Galbraith Co-Chair of the International Soil Judging Contest Working Group

Was for 2.5 days in the field looking with Dr. Fei Yang and Dr. Huang Biao at potential practice and contest sites. Six practice sites and four contest sites were located, described and sampled. The goal was to have one example like each contest pit. Moreover, they discussed adding a few more “show-and-tell” sites to show the variety of soils in the region. The plan is to have three days of practice with morning lectures and afternoon practice of two full pits and one “show-and-tell” (explanation and display with limited description) site. One of the mornings will include a tour of the Institute. The contest will be held in the days prior to the World Congress of Soil Science in June 2026, in Nanjing, China.

Arranging transport for the teams and working group officers from the airport to the selected contest hotel (or advice on how to self-arrange this) would be helpful, given the distance of the airport from the city. Arranging a hotel that is centrally located near practice and contest sites can minimize travel time each day. Hopefully a location for the contest grading can be arranged nearby as well. The lecture time may include a brief overview of the Chinese soil classification system and the history of soil science in China, as well as a brief history of the area and an introduction to the soil forming factors in the region. It would be interesting for the participants to hear about the Chinese soil classification system for the soils to be seen, even though they will not be part of the contest. In the evenings it will be nice to have a social activity at the wall/temple/lake area and possibly a cultural activity (like traditional singing and/or dance performance) on another evening.

Soils for our Future, Conference, a Gathering of Global to Local Perspectives 20-25 July, Winnipeg, Canada.

Dr. Michael J. Walker

This report documents the activities and contributions of the Chair, IUSS International Accreditation Working Group. The event fostered collaboration and advancement of knowledge on accreditation in pedology.

Presentation of International Accreditation Framework

The Chair delivered a comprehensive presentation on the IUSS International Accreditation Framework, including 'Introduction to Soil Science Accreditation', "Developing Accreditation Standards" and "Developing Accreditation Process", focussing on the importance of harmonised standards for soil science education and practice worldwide. The framework was well received, sparking productive discussions on future developments and inter-organizational cooperation.

Sessions and Working Groups Attended

The Chair and Vice Chair actively participated in a broad range of technical sessions and working groups:

"Advances in Soil Morphology and Micromorphology", "Advances in Soil Classification, World Reference Base WG, Universal Soil Classification WG, Advances in Soil Genesis, Advances in Paleopedology", "International Soil Judging Contest WG", "IUSS World Soil of the Year WG", "Advances in Soil Geography", "Advances in Pedometrics", "Digital Soil Mapping WG", "Global Soil Map WG", "Advances in Permafrost-Affected Soils", "Proximal Soil Sensing WG", "Soil Information Standards WG", "International Accreditation WG" and General Conference Sessions and Special Events.

The Chair and Vice Chair also participated in conference workshops "Challenges and Opportunities for the Next Generation of Pedology" and "Meeting the Needs for the Next Generation of Pedology." These sessions highlighted strategies for nurturing emerging talent and addressing future scientific priorities. Attendance at the conference reception provided additional opportunities for networking and informal knowledge exchange with international colleagues.

The Chair and Vice Chair met with representatives from the Soil Science Society of China, Professor Ganlin Zhang and Dr Shunhua Yang, who have agreed to join the International Accreditation WG and requested an abstract be submitted to the 2026 World Congress of Soil Science in Nanjing, China. The Chair also met with Dr Takashi Kosaki, Ex-President IUSS (Japanese representative) who has also agreed to join the WG. The Chair and Vice Chair took the opportunity to draft a working document to be forwarded to WG members i.e. 'Terms of Reference' and 'Standards' and review established accreditations programs in place e.g. Australia, Britain and the USA. It was agreed that the Chair contacted the FAO Global Soil Doctors Program.

From left to right: Dr. Richard J. Heck, Dr. Dawn Gibas, Dr. Michael Walker and the Hon. Penelope Wensley A. C. (ph. M. Walker)

Conclusion

The Chair's and Vice Chair's active engagement across a broad spectrum of sessions and working groups significantly contributed to the advancement of international standards, education, and collaboration in soil science. The conference served as a vital platform for sharing expertise, forging partnerships, and shaping the direction of the international accreditation for soil science in coming years

Other projects funded by the Stimulus Fund first call of 2024 have been carried out:

9th International Symposium on the Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM2024)

Tsukuba (Ibaraki, JAPAN), October 14th -18th 2024

Rota Wagai (National Agriculture and Food Research Organization, Japan)

On behalf of the International Scientific Committee and Local Organizing Committee of ISMOM2024

Overview

Recognizing the growing number of soil-focused programs and projects taking place at both national and international levels (e.g., 4 per mil, Horizon Europe EJP-Soil) towards climate change mitigation, soil C sequestration, soil health, and food security, we organized ISMOM 2024 with the

theme of “From soil organic-mineral interactions to soil carbon policy”. Following past ISMOMs, the symposium was aimed to provide a platform for in-depth discussions on the fundamental aspects of soil organic matter-mineral-microbe interactions. In addition, ISMOM2024 made special emphases on the two linkages (i) between small-scale and macro-scale soil processes, and (ii) between basic soil science and policy making.

We had a successful turnout and lively discussions with 205 participants, including 45 students, from 30 different countries. Of the 205 participants, roughly 70% were researchers or students from overseas. Of the 30 participating countries, largest numbers from the United States, France, Germany, and Taiwan, followed by China, South Korea, and Canada. Most of the participants were from academia with a significant number of participants from industry.

Following the interdisciplinary and inclusive spirit of past ISMOM meetings, we designed a single room symposium – everyone participated in the same oral sessions. To promote “interactions” among the participants and across disciplines, each day ended with “open/panel discussion” for further dialogues. All posters were displayed throughout the entire 3.5 days.

Group picture (Ph. Nagamitsu Maie)

Travel Support grants for Students & Scientists from Low-budget countries were awarded, thanks to the IUSS Stimulus Fund. ISMOM International Scientific Committee (ISC) selected six students/early-career scientists (2 women and 4 men) from four countries (Nepal, India, Thailand, Chile). Their registration plus accommodation fees of the awardees were covered.

Recipients of IUSS supported travel grant:

Abhisek	Shrestha	Nepal	Agriculture and Forestry University
Kiattisak	Sonsri	Thailand	Kasetsart University
Abinash	Das	India	ICAR Indian Institute of Soil Science Bhopal
Jaruwan	Jindawong	Thailand	Dep. of soil science, Kasetsart university
Sabina	Devkota	Nepal	Nepal Agricultural Research Council
Pedro	Mondaca	Chile	Universidad Técnica Federico Santa María, Valparaíso

(Ph. Nagamitsu Maie)

We were also able to invite 12 distinguished speakers from 10 countries. Travel expenses of nine of them were sponsored by OECD Co-operative Research Programme: Sustainable Agricultural and Systems. One speaker’s expenses were supported by IHSS.

Scientific Program

The conference discussed wide aspects of the Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM) by breaking down to six sessions. Each session had 1-2 invited speakers and 5-9 regular oral presentations and 18-42 poster presentations. Here we summarize the highlights.

Session 1 (Fundamental aspect of ISMOM: challenges & opportunities) started with the keynote talk by Jon Chorover (Univ. of Arizona, USA) demonstrating microbe-mineral-organic matter interactions at pore to hillslope scales. The following presentations had focuses on mineral weathering, specific mineral types, mineral controls on C dynamics, and mineral-organic matter interaction at micro to the global scale. The session ended with an open discussion moderated by some of the leading scientists on soil organic matter to further discuss the current debate on “soil C saturation” clarifying known and unknowns as well as future directions.

Session 2 (Soil structure as physical constraints of the interfacial reactions among minerals, organic matter, and microbes) had insightful talks exploring the link between soil structure and microbial activities. The keywords here included microbial habitat, aggregate formation, soil pore network, and spatial heterogeneity. The session ended with an open discussion on new methodological developments on soil structural dynamics and the relevance of adding this complexity into computer

simulation models.

Session 3 (New concepts and approaches: methodological and conceptual advances) was packed with exciting new methodologies that led to new ideas and revealed new aspects of soil functions. The talks included fine-scale spatial organization of soil microbiome, soil enzyme activity analysis at micro scale, multiple advanced imaging techniques to examine mineral, organic matter, (and microbe) interactions that targeted the rhizosphere, bulk soil, and even asteroids!


(Ph. Nagamitsu Maie)

Session 4 (ISMOM and biogeochemical cycling across scales) shifted the focus towards larger scale and different ecosystems. The talks included the importance of landscape and geomorphological perspective, mineral-organic matter interactions in arid to wetland ecosystems, and the global-scale importance of short-range-order minerals on soil C storage.

Session 5 (ISMOM as a basis for soil carbon management) explored the linkage between microbe-mineral-organic matter interaction and management practice such as no/reduced tillage, organic amendment, and biochar application and identified some knowledge gaps. The session ended with an open discussion. We tried an interactive poll where participants used their smart phones to answer questions and identified nearly 50 key research questions in the context of the session.

Session 6 (The role of organo-mineral-microbial interactions in soil management and policy making: Implications for climate change and C credit markets) on the last day started with two keynote speakers who have been actively engaged in soil and climate policies as well as in soil science. Claire Chenu (INRAE, France) discussed EU policy development on soil and pointed out the importance of recognizing soil diversity and developing systematic and collective assessments of soil functions with harmonized methodology to have better impact in policy arena. Asmeret Asefaw Berhe (UC-Merced, USA) reviewed recent U.S. policies on soil C/health for climate, emphasizing the importance of effective communication (with non-soil scientists) on the variability and uncertainty inherent in soil C estimates and future predictions. Following panel discussion with some of the invited speakers recognized the need to have better consensus on key concepts beyond scientific disciplines, designing more coherent research to fill gaps, and further collaboration with agronomists, socio-economic experts, among others.


(Ph. Nagamitsu Maie)

The symposium ended with an inspiring talk by Marco Keiluweit (U of Lausanne, Switzerland), P.M. Huang Prize winner. The selection committee recognized that his studies including the seminal work showing the active exchange of low molecular weight organic acids with previously sorbed organic matter on mineral surfaces has effectively focused the attention of the soil science community on the role of organo-mineral interactions in regulating the global carbon cycle. Marco covered his earlier work to the present, highlighting exciting future directions such as the use of optical photothermal infrared (O-PTIR) microscopy to examine dynamic microbe-mineral-organic matter interactions.

Other important aspects of the symposium

The conference incorporated some thoughtful elements to foster further "interaction". We also provided lunches with Japanese cuisine. Student volunteers (right photo) did great job of explaining Japanese sweets for Coffee breaks and organizing dinner tours as small groups that allowed diverse food exploration for the participants.


(Ph. Nagamitsu Maie)

The conference dinner was held on Oct 16th, started with *"kagami biraki"*, a traditional ceremony of opening sake barrel with wooden mallets and featured a traditional koto music performance. Some participants had a chance to play *koto* by themselves while many others enjoyed sake with the ceder aroma.

We also had two post conference field trips. Trip 1 (2.5 day) went to observe volcanic soil profiles with key tephra layers, traditional shrine of Nikko (world heritage site), hotspring, and bonsai museum. Trip 2 (half a day) went to observe two volcanic soil profiles and the soil museum of NARO,

as well as a short hike to a traditional temple on Mt. Tsukuba foothill where the resident monk greeted us and offered a prayer for peace.

(Ph. Nagamitsu Maie)

1st European Soil Judging Contest (ESJC) for the IUSS, Alicante, 12 September 2025.

By Jorge Mataix-Solera Professor of Soil Science, Universidad Miguel Hernández, Elche, Alicante, SPAIN- Organizer of the 1st ESJ

The 1st European Soil Judging Contest (ESJC) was held in Alcoi, Alicante, Spain, from 1–5 September 2025 in the framework of EUROSOIL. The event was a great success, bringing together 65 participants, including students, coaches, members of the organizing committee, and the scientific committee. Teams from eight countries took part: France, Germany, Hungary, Italy, Latvia, Poland, Portugal, and Spain. The contest provided an excellent environment for participation, learning, and enjoyment, combining theoretical sessions with extensive fieldwork. In total, 10 soil profiles were described, analysed, and classified. For the first time, both Soil Taxonomy and the World Reference Base for Soil Resources (WRB) were mandatory classification systems in the competition. Of the 10 soils profiles, six were used for training and practice, while four were reserved for the contest itself.

(Ph. Kazumichi Fujii)

The results were as follows:

• Team ranking: 1st – Germany, 2nd – Poland, 3rd – Hungary

• Individual ranking: 1st – Damian Murach (Poland), 2nd – Madara Brasava (Latvia),

3rd – João Francisco dos Santos Antunes (Portugal)

Notably, when considering the top 10 individual placements (out of 32 students), representatives from all participating countries were included. In the overall ranking, the

results were: 1st – Poland, 2nd – Portugal, 3rd – Germany. All information, including the

detailed program, materials, handbook, results, presentations, and photographs, is available on the official website: https://esjc.es/

(ph. Antonio Girona-García)

News from National and Regional Soil Science Societies

Brazilian Soil Science Society (SBCS)

The Brazilian Soil Science Society (SBCS) has strengthened its national and international engagement through events, partnerships, and initiatives that promote scientific excellence, sustainable agricultural development, and soil health.

Among recent highlights are the Latin American & Caribbean Soil Carbon Research Symposium (LAC Soil C) 2025, held from June 25 to 28 at the Museum of Tomorrow in Rio de Janeiro. Supported by SBCS, the event brought together researchers, students, and agricultural sector specialists to discuss sustainable agricultural production and the role of soil organic carbon in productivity and climate change mitigation, addressing challenges and opportunities to strengthen sustainable practices in Latin America and the Caribbean. SBCS also participated in the XXIV Latin American Congress of Soil Science (CLACS), held from June 24 to 27, 2025, in Santa Cruz, Bolivia, which gathered more than 400 professionals. With the theme *"United for Soil Health"*, the event featured the participation of former SBCS presidents and current members Gonçalo Signorelli de Farias and Mariangela Hungria, as well as more than 60 Brazilians. The congress also hosted the IX Latin American Symposium on Educational Innovations and Soil Science Teaching, with the participation of the outreach project *Solos Divertidos*, reinforcing SBCS's commitment to training new generations of soil scientists.

Regarding upcoming events, the XXXIX Brazilian Congress of Soil Science (CBCS 2025) will take place in São Luís, Maranhão, from September 21 to 27, under the theme *"Soil Use and Climate Change"*, gathering experts and students to discuss sustainable soil management and climate change adaptation. In 2026, from May 25 to 29, São Paulo will host the first South American edition of the 10th International Symposium on Soil Organic Matter (SOM2026), organized by CCARBON/USP and SBCS, focusing on soil organic matter, soil health, carbon sequestration, and ecosystem sustainability.

At the international level, SBCS has established a strategic partnership with the Soil Science Society of America (SSSA), to promote scientific exchange, training opportunities for researchers and students, and joint research projects and publications. As an initial activity, two live webinars were held, each featuring one speaker from each society and open to the public. Members of both societies are expected to mutually benefit from this collaboration, taking advantage of the opportunities and resources offered by SBCS and SSSA. Through these initiatives, SBCS reaffirms its role in promoting scientific knowledge, international cooperation, and sustainable development, contributing to soil health and productivity in Brazil and across Latin America.

Soil Science Society of China (SSSC)

China's Opportunity in the World Congress of Soil Science

During the 21st World Congress of Soil Science (WCSS) held in Brazil, 2018, Soil Science Society of China (SSSC) successfully won the bid to host the 23rd WCSS in 2026. For the first time, China as a host country invites global soil scientists to explore the centennial journey of soil science.

The 23rd WCSS will be held at the Nanjing International Expo Center from June 7 to 12, 2026 in Nanjing, the capital city of Jiangsu, a leading province in East China. The theme of the congress has been announced as "Soil and the Shared Future for Humanity" with over 130 sessions in five categories. This congress, sponsored by the International Union of Soil Sciences, is held every four years, covers a wide range of topics and is the most authoritative and influential international conference in the field. It is a major platform for scientific and technological professionals in soil science and related disciplines worldwide to engage in academic exchange and collaboration.

The 23rd WCSS will offer a variety of arrangements to present and explore current work in soil science, including poster exhibition, young researcher forum and soil judging contest. Tours will also be organized for participants to visit soil sites in combination with views of the unique landscapes and cultural diversification as China is a vast country with rich soil resources.

With a global population that is projected to exceed 9 billion by 2050, our current and future food

security hinges on our ability to increase yields and food quality using currently available soils. We are responsible for the soils that provide us with food, water and air, and we need to take action today to ensure the maintenance of soil health for a sustainable and food secure future. Our understanding of this important necessity is developing rapidly, and 23WCSS provides a platform to discover the solutions to soil issues and an opportunity to connect all who work with and have interests in soils.

Join and follow via the official website: https://www.23wcss.org.cn/

Malaysian Society of Soil Science (MSSS)

International Soil Science Conference 2025 (SOILS 2025)

Date: 6th – 8th May 2025

Location: Bertam Resort & Water Park, Penang, Malaysia

The Malaysian Society of Soil Science (MSSS) successfully hosted SOILS 2025, welcoming 220 participants from Malaysia and other countries, including Indonesia, Australia, Canada, Singapore, the United States, and Taiwan. With the theme **"Soil Health for Sustainable Future: Bridging Soil, Agriculture and Environmental Stewardship,"** the conference facilitated the exchange of ideas and research in sustainable soil management.

The scientific programme covered eight sessions across two venues: **Casablanca 1:** Soil Survey and Classification, Soil-Water Management, Soil Health and Nutrients, Soil Pollution and Remediation, Soil Microbiomes and Biodiversity. **Mekness Hall:** Soil Carbon, Sustainable Soil Management, Plantation and Forest Soils, Soil Fertility and Nutrition.

The keynote was delivered by **Professor Budiman Minasny** (University of Sydney), with plenary talks by **Prof. Dr. Mohamed Hanafi Musa** (Universiti Putra Malaysia), **Dr. Liew Yew Ann** (Applied Agricultural Resources Sdn. Bhd.), **Datu Dr Lulie**

Joshua Melling (Sarawak Tropical Peat Research Institute), and **Prof. Zeng-Yei Hseu** (National Taiwan University).

The conference recognized outstanding oral and poster presentations and awarded Stimulus Fund Assistance from the **International Union of Soil Sciences (IUSS)** to ten early-career researchers.

On 8 May, a post-conference tour brought nearly 80 participants to TKPM Mayfield, the National Rice Gene Bank at MARDI, and Kampung Agong agro-tourism park.

Acknowledgements

MSSS thanks the **Penang Convention & Exhibition Bureau (PCEB), IUSS, AAR, AMI, Surechem, the Department of Agriculture Malaysia, FRIM,** and **MARDI** for their generous support.

Exhibitors included **Gasmet Technologies, Anton Paar Malaysia, OMYA Malaysia, Gerhardt Malaysia, MSI Technologies Malaysia,** and **RGS Corporation.**

Group photo of part of SOILS 2025 participants in Casablanca

The Importance of Soil Classification and Evaluation in Malaysian Agriculture

Malaysian Society of Soil Science (MSSS), in collaboration with the Department of Agriculture Malaysia and the University of Malaya, organized a Soil Classification and Evaluation Course for Agriculture on 25-26 February 2025. This course focused on understanding soil classification and its evaluation methods, which are crucial for ensuring optimal land use in the country's agricultural sector. The Department of Agriculture is the primary agency providing soil survey services and is the 'custodian' of national soil data. The objective of the course was to provide participants with a fundamental knowledge of soil surveys and evaluation. In efforts to boost agricultural productivity and ensure the sustainability of land resources, understanding soil classification and evaluation plays a vital role. Malaysia has two general soil classifications: (1) mineral soil and (2) organic soil as well as 12 soil groups categorized based on parent material formation. Due to factors such as topography, environment, and parent rock materials, there are 11 soil limitations that must be understood before determining crop suitability for a given area. Examples of these limitations include

compacted layer depth, drainage, slope, nutrient imbalance, stoniness, salinity, texture, woody layers, acid sulfate layers, and human activity influence. Therefore, the knowledge gained from this course helps participants understand the potential and limitations of soil in the agricultural context, enabling more efficient and effective land management planning. During the two-day course, participants were introduced to three types of soil with different limitations (e.g. stoniness, drainage, and acid sulfate depth). The course also provided an opportunity for participants to share their experiences and expertise in their respective fields. Through this interaction, researchers, agricultural officers, and farm operators can develop more effective strategies to enhance national agricultural yields with lower management costs. According to the President of the Malaysian Society of Soil Science, Associate Professor Dr. Rosazlin Abdullah, this course aligns with the society's objective to disseminate knowledge to soil scientists in Malaysia. It is hoped that participants will strengthen their foundation in soil science through this course and apply it to their respective agencies. In conclusion, understanding soil classification and evaluation is a critical aspect that cannot be overlooked in the development of Malaysia's agricultural sector. With more efficient land use based on scientific data, we can ensure sustainable agricultural growth, increase the sector's global competitiveness, and contribute to national food security.

(Ph. R. Abdullah)

Romanian National Society for Soil Science (S.N.R.S.S.)

June 17 marks the World Day of Combat Desertification and Drought. In 2025, the theme of the event was "Restore the land. Unlock opportunities". In this context, the National Research and Development Institute for Soil Science, Agrochemistry and Environment – ICPA Bucharest, Romania, in collaboration with Romanian Academy of Agricultural and Forestry Sciences have launched a book entitled "Combating Desertification and Land Degradation".

It consists of 22 chapters, covering different aspects such as: the problem of drought, aridization and possible desertification, greenhouse gas emissions, soil degradation, measures of mitigation and combating drought, land degradation and desertification, actual quality of environmental resources in Romania and its tendency, crisis which affect the future of mankind, etc.

On June 18, 2025, the national symposium "Improving soil quality through different agricultural and fertilization systems in the context of climate change" was organized by the Romanian National Branch of the International Scientific Center for Fertilizers CIEC, in collaboration with the Romanian National Society for Soil Science (S.N.R.S.S.), affiliated with the International Union of Soil Science Societies (I.U.S.S.), as well as with the National Research and Development Institute for Soil Science, Agrochemistry and Environmental Protection (ICPA Bucharest).

The main objective of the symposium was to analyze and promote strategies to improve soil quality by implementing various agricultural systems, in the context of global climate change. The presented studies covered different aspects: effects of fertilization and amendments on soil health; evolution of soil physical and chemical properties under different agricultural systems (conservative and intensive ones); implementing environmentally friendly agricultural practices adapted to climate changes to maintain and improve soil health, etc.

(Ph: SNRSS)

Restoring and maintaining healthy soils is a major challenge, because life on earth depends on healthy soils. One centimeter of soil is formed in hundreds of years, but it can be easily lost by using wrong agricultural management practices.

Slovak and Czech soil scientists in Slovenia

by Jaroslava Sobocká, chair of the Soil Science Society of Slovakia

Slovenian Soil Science Society organized professional pedological field excursion across Slovenia led by prof. B. Vrščaj for members of Soil Science Society of Slovakia (13 participants) and Czech pedological Society (16 participants). Seven institutes were invited to excursion organization. In

field survey 9 soil pits were dug and described in WRB 2022:

• soils of Slovenian Istria Calcaric Skeletic Regosol (Clayic, Aric, Escalic),

• soils of the Pokljuka plateau – Albic Podzol (Loamic),

• soils of the Dobravlje karst plateau – Rhodic Cambisol (clayic),

• soils of hop plantations (Savinja River Valley) – Endogleyic Pantofluvic Fluvisol (Loamic, Aric).

Several other events: sightseeing of Ljubljana, olive grove, Sečovlje Salina Nature Park, planina Zajavornik, hop plantation, etc. Detailed information can be found here: https://www.pedologia.sk/ or https://pedologie.czu.cz/

The event supported international cooperation among soil scientists and contributed to the planning of further possible activities in the field of pedological disciplines.

Soil pit digging (Ph. J. Sobocká)

Rhodic Cambisol (clayic) (Ph. J. Sobocká)

Members of the Slovak and Czech soil science societies participants

British Society of Soil Science (BSSS)

A Practical Introduction to Soils in Great Britain

The course "A Practical Introduction to Soils in Great Britain (Coleg Cambria, Llysfasi)", organized by the British Society of Soil Science, has taken place on Wednesday 30 April – Thursday 1 May 2025 in Llysfasi, Wales.

This two-day course was targeted at people who wanted to improve their field soil description and identification skills. It included introductory presentations, practical sessions on soil description techniques, and field visits to demonstrate a range of soil types and to hone profile description skills.

Participants during one of the course's practical activities (www.soil.org.uk)

Soil Matters - Soil science podcast

The BSSS announces the launch of our new podcast, Soil Matters, a platform dedicated to bridging the gap between cutting-edge scientific research and real-world applications.

Each episode will feature leading experts, researchers, and practitioners discussing the latest findings, innovations, and challenges in soil science.

From exploring soil's role in climate change mitigation to sustainable agriculture and biodiversity, Soil Matters aims to engage listeners with accessible, thought-provoking content that highlights the importance of soil in shaping our planet's future. This podcast is open to researchers, policymakers, or simply curious about the ground beneath your feet, and offers something for everyone passionate about soil science. The program is to host 6 episodes throughout the year covering new and current topics all about soil.

The first episode features soil scientists Professor Fred Coulon and Professor Tony Gutierrez, speaking on behalf of the EBNet project, as they outline their current research and their plans for the future. Also, Past-President, Professor Jack Hannam, will be speaking about the new art exhibition at London's Somerset House.

You can listen to the first episode **here** and the podcast will also be available on all the main streaming platforms including Apple, Spotify and Amazon

Soil Training Courses

These Working Soil training courses are a great opportunity to update your knowledge and practical

skills.

Date: Wednesday 2 - Thursday 3 April 2025

Location: Bedfordshire

Title: An Introduction to Soil Classification

This course is held over two days, with the first day on-line and the second in the field. It is aimed at researchers and others who want to gain a perspective of how their local field experimental sites and their results fit into the current picture of soil variation in the UK and on global scales. You can find out more about the course: British Society of Soil Science - Authorization required.

Canadian Society of Soil Science (CSSS)

The SOILS FOR OUR FUTURE 2025 brings together three conference events: 5th Global Soil Security Conference, Canadian Society of Soil Science Annual Meeting, and International Union of Soil Sciences Division 1 - Soils in Space and Time Meeting. Hosted by the Soil Conservation Council of Canada and the Manitoba Soil Science Society. With over 700 researchers, industry members, leaders of farmer organizations, graduate students and other attendees, SOILS FOR OUR FUTURE 2025 provides a global perspective to today's research to sustain our future. Spanning five days, the conference provides attendees of the events to meet in plenary/technical sessions with their individual organizations and for all to come together in keynote sessions, tradeshows, posters, workshops and field tours.

The Organizing Committee of the SOILS FOR OUR FUTURE (SFOF) 2025 International Joint Meeting of the Canadian Society of Soil Science (CSSS), the International Union of Soil Sciences - Division 1 - Soils in Space and Time (IUSS Div 1), and the 5th Global Soil Security (GSS) Conference, hosted by the Soil Conservation Council of Canada (SCCC) and the Manitoba Soil Science Society (MSSS), would like to remind all that Abstract Submissions for CSSS and IUSS Division 1 joint sessions or GSS plenary sessions are open until March 31, 2025.

U.S. National Committee for Soil Sciences (USNC/SS)

Soils Speak: Communicating Science through Storytelling, Artificial Intelligence, and Modern Visualization with the U.S. National Committee for Soil Sciences

Date: April 30th, 2025

Location: 2:00PM - 3:30PM ET

The U.S. National Committee for Soil Sciences will host a webinar on communicating soil science through storytelling, artificial intelligence, and modern visualization.

Storytelling can significantly enhance the understanding of soil science by making complex concepts more accessible, relatable, and engaging to a wider audience. By humanizing scientific concepts and framing them within narratives, abstract ideas become more tangible and memorable. Stories can provide historical context, illustrating how our understanding of soil has evolved over time and highlighting its importance in human civilization and cultural development. This approach can effectively demonstrate the interconnectedness of soil science with other disciplines such as archaeology, ecology, and agriculture, helping people appreciate the far-reaching impacts of soil health. Incorporating various storytelling mediums like literature, art, and digital media can make soil science accessible to people with different learning preferences and backgrounds.

Read more: https://www.nationalacademies.org/event/44615_04-2025_soils-speak-communicating-science-through-storytelling-artificial-intelligence-and-modern-visualization-with-the-u-s-national-committee-for-soil-sciences

Dutch Soil Science Society (NBV)

NBV Celebrates 90 Years – Upcoming Anniversary and Recent Activities

In 2025, the Dutch Soil Science Society (NBV) celebrates its **90th anniversary**. To mark this milestone, a special event will be held on **October 31** at Wageningen University & Research (WUR), themed **"Soil and Society"**. The day will focus on the development of soil science since NBV's

75th anniversary and explore the role of soil in addressing societal challenges such as sustainable agriculture, water quality, climate resilience, and heritage preservation.

The central concept is **"soil literacy"**—increasing public understanding and application of soil knowledge. The morning program will include keynote lectures, while the afternoon will feature interactive workshops (e.g., soil & art, youth education, World Soil Museum visit, and profile pits). The day will close with a **networking dinner**.

NBV Board Update

After over 8 years of dedicated service, **Chantal Hendriks** has stepped down from the NBV board. We warmly thank her for her commitment and contributions to society. The newly appointed NBV board for the upcoming term consists of:

- **Everhard van Essen**, Chair
- **Arjan Reijneveld**, Co-chair
- **Esther**, Secretary
- **Erwin van der Klooster**, Treasurer

Publications & Contributions

Two special articles have been submitted to the Dutch language journal *Bodem* to reflect on soil science developments over the past decades and look ahead to the future of Dutch soils.

Other Key Events

- **April 18**: Excursion to the Soil of the Year 2025 locations in the Dutch province Limburg.
- **May 23**: Thematic day on soil and water in rural development, held at HAS Green Academy.
- **September 1–5**: WUR's "Lab Skills Course for Assessing Soil Functions."
- **December 4**: Announcement of Soil of the Year 2026.

News from the Divisions

Division 1 – Soil in Space and Time

www.iuss.org/divisions/division-1-soils-in-space-and-time/

Division 1 deals with the soil body in the landscape context. The commissions and working groups coordinate, and harmonize research activities on observation, genesis, classification and mapping of the soil body and landscapes and communicate results to the soil science community, soil users and the general public.

Chair: Richard J. Heck/Canada

Past Chair: Erika Micheli/Hungary

1st Vice Chair 23rd WCSS: Ganlin Zhang/China

2nd Vice Chair 23rd WCSS: Ying Zhang/China

Recent Activities

"Soils For Our Future Conference: A Gathering of Global to Local Perspectives", held in Winnipeg, Canada; July 20th to 25th,2025:

- This six-day joint conference of IUSS Division 1, the Canadian Society of Soil Science, and the Global Soil Security community, was hosted by the Manitoba Society of Soil Science and the Soil Conservation Conference of Canada. Despite a last-minute venue change, due to the need to accommodate wildfire evacuees, the conference was a success with approximately 450 attendees from Canada and around the world.
- The Conference program included three technical workshops (including the 6th Workshop of the International Network for Black Soils), 46 scientific sessions, 3 soil tours and a student soil judging contest. Keynote presentations were given by Dr. Budiman Minasny (Australia) on *"AI and its Applications in Soil Science"*, by Dr. Fabio Terribile (Italy) on *"Turning Knowledge into Action: Operationalizing Soil Science for Policy Impact"*, and by the Honourable Penelope Wensley AC on "The Changing Landscape for Soil Advocacy".
- Six sessions were also organized by IUSS Division 1 under the theme of *"Pedology 2025 & Beyond"*. Representatives of each Commission and Working Group of Division 1 presented overviews of the state-of-the-art and emerging aspects of their science,

techniques & technologies, as well as their challenges and opportunities, with specific consideration for the IUSS Decade of Soil Science for Sustainable Development. Special presentations were also delivered by Dr. Yuxin Tong (FAO, Italy) on *"Boosting the Practice of Sustainable Soil Management",* by Dr. Alex McBratney (University of Sydney, Australia) on *"Global Soil Security: Harness and Rethink the Power of Pedology"*, and by Dr. Christine Morgan (Soil Health Institute, USA) on *"Pedology and Soil Health"*. Two discussion sessions focused on the *"Challenges & Opportunities for the Next Generation of Pedology"* and *"Meeting the Needs for the Next Generation of Pedology"*.

- During this conference, the 2025 IUSS Distinguished Service Medal was awarded to Canadian Senator Robert Black, for "Dedication and outstanding contribution to the promotion and development of legislation and public policies for the recognition, protection, conservation and enhancement of soils across Canada".
- The 2025 IUSS World Soil of the Year award was also presented to Dr. Endre Dobos, President of the Hungarian Soil Science Society, for the "Gleysol of the Carpathian Basin, Hungary" (www.talaj.hu/wsy-2025/).

Commission 1.1 – Soil Morphology and Micromorphology

Chair: Fabio Terribile/Italy

Vice Chair: Adam Csorba/Hungary

- "Archaeological Micromorphology Short Intensive Course" was held at the UCL Institute of Archaeology in London, UK; February 15th to 21st, 2025.
- "Archaeological Soil and Sediment Micromorphology Course" was held in the American School of Classical Studies at Athens, Greece; May 19th to 23rd, 2025.
- A perspective presentation on Commission 1.1 'Soil Morphology and Micromorphology' presented by Dr. Rosa Poch, Spain, is available online (www.youtube.com/watch?v=pwEew38xtO8&feature=youtu.be).
- April 2025 Newsletter of Commission 1.1 is available on the Commission website.
- "There is Still Room for Soil Micromorphology? Unveiling the Invisible for a Sustainable Future", presentation by Rosa Poch at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Website: www.soilmicromorphology.net

Commission 1.2 – Soil Geography

Chair: Sergey V. Goryachkin/Russia

Vice Chair: Eduardo Guimarães Couto/Brazil

- "Soil Geography: Advances and Prospects", recorded presentation by Sergey Goryachkin at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Commission 1.3 – Soil Genesis

Chair: Endre Dobos/Hungary

Vice Chair: Yuji Maejima/Japan

- "Advances in Soil Genesis - potential contribution to the division-level strategy for roadmap development", presentation by Endre Dobos at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Commission 1.4 – Soil Classification

Chair: Cornelius van Huyssteen/South Africa

Vice Chair: David Badía-Villas/Spain

- "Soil Classification for the Future", recorded presentation by Cornie van Huyssteen at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Commission 1.5 – Pedometrics

Chair: Alexandre Wadoux/France

Vice Chair: Simone Priori/Italy

* "Pedometrics- An Overview of the State-of-

the-Art and Emerging Aspects", recorded presentation by Alexandre Wadoux at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Website: www.pedometrics.org

Commission 1.6 – Paleopedology

Chair: Maria Bronnikova/USA,Russia

Vice Chair: Elizabeth Solleiro-Rebolledo/ Mexico

- "Earth Surface Systems in Time: Why Study the Past?", presentation by Maria Bronnikova at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Website: sites.google.com/view/paleopedology/newsletters?authuser=0

Joint Commission 1.7/3.8 – Permafrost-Affected Soils

Chair: Aleksei Lupachev/Russia

Vice Chair: Adrian Unc/Canada

- "Earth's Cryosphere Puzzles", international conference held in Puschino, Russia; May 12th to 16th, 2025.
- "Commission 1.7/3.8: Permafrost Affected Soils", presented by Adrian Unc for the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Digital Soil Mapping Working Group

Chair: Alessandro Samuel Rosa/Brazil

Vice Chair: currently vacant

- With the Dr. Laura Poggio being selected as Chair of the Global Soil Map Working Group, Dr. Alessandro Samuel Rosa has been selected as the new Working Group Chair.
- "Digital Soil Mapping: Actionable Knowledge for the Next Decade of Soil Science", prepared by Alessandro Samuel Rosa for the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Global Soil Map Working Group

Chair: Laura Poggio/Netherlands

Vice-Chair Pierre Roudier/Netherlands

- With the passing of Dr. Dominique Arrouays, Dr. Laura Poggio has been selected as the new Working Group Chair.
- "WG Global Soil Map", presented by Laura Poggio at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

International Accreditation Working Group

Chair: Michael Walker/Australia

Vice Chair: Dawn Gibas/USA

- This Working Group was officially established in 2024.
- "Developing an International Accreditation for Soil Science: Establishing global standards for soil science professionals", presented by Michael Walker at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

International Soil Judging Contest Working Group

Chair: Erika Michéli/Hungary

Vice Chairs: Brian Needelman & John Galbraith/USA

- Commission Officers have been working with organizers of the 2026 International Soil Judging Contest to be held in Nanjing, China, during the 23rd WCSS. This has included a site visit by Commission Vice-Chair John Galbraith. Call for registration for national student teams is open until December 31, 2025.
- "Developing an International Accreditation for Soil Science: Establishing global standards for soil science professionals", presented by Michael Walker at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.
- Commission Vice-Chair John Galbraith par-

ticipated in the 2025 student soil judging contest organized as part of the 'Soils For Our Future Conference' in Winnipeg, Canada.

- Commission Chair Erika Michéli and Vice-Chair John Galbraith will participate in the 1st European Soil Judging Contest to be held in Alcoy, Spain, as part of EUROSOIL 2025.
- Ongoing virtual Working Group meetings are also focussing on issues including simplified versions of Soil Taxonomy and WRB for soil judging contests, standard methodology, and communications

Proximal Soil Sensing Working Group

Chair: Asim Biswas/Canada

Vice Chair: Abdul Mouazen/Belgium

- "IUSS Working Group on Proximal Soil Sensing: Evolution and achievements as a Working Group (WG) and Future as a Commission", presented by Asim Biswas at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

Website: www.proximalsoilsensing.org/

Soil Information Standards Working Group

Chair: Fenny van Egmond/Netherlands

Vice Chair: Rainer Baritz/Denmark

- "WG on Soil Information Standards", recorded presentation by Fenny van Egmond at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.

World Reference Base Working Group

Chair: Cezary Kabala/Poland

Vice Chair: Stephan Mantel/Netherlands

- An extension of the mandate of the World Reference Base Working Group, to 2030, has been approved by the Division 1 Committee and the Executive Committee.
- "World Reference Base Working Group", presented by Cezary Kabala at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.
- The WRB Documentation Centre was recently updated, this can be accessed online at: www.sciencedirect.com/special-issue/10DN2FD3R02
- Lecture notes, Typifying pedons and Historical reviews of the WRB Reference Soil Groups are available through the WRB Documentation Centre at: ees.kuleuven.be/soil-monoliths/wrb-documentation-centre/

Website: www.isric.org/explore/wrb

World Soil of the Year Working Group

Chair: Stephan Mantel/Netherlands

Vice Chair: José João Lelis Leal de Souza/ Brazil

- The 2025 IUSS World Soil of the Year Award recognized the "Gleysol of the Carpathian Basin, Hungary", nominated by the Hungarian Soil Science Society. Information regarding this soil can be obtained at: www.talaj.hu/wsy-2025/
- World Soil of the Year – 2025: www.youtube.com/watch?v=_fk_7kOkrCA
- "World Soil of the Year Working Group", presented by Cezary Kabala at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.
- Nominations for the 2026 IUSS World Soil of the Year Award are being received until November 30, 2025 (forms.gle/7dGE3APpN8ZF2rcD8)

Website:www.iuss.org/world-soil-of-the-year/

Universal Soil Classification Working Group

Chair: Budiman Minasny/Australia

Vice Chair: Jinhji Huang/USA

- "IUSS WG Universal Soil Classification", presented by Budiman Minasny at the 'Pedology 2025 & Beyond' session of the 2025 Soils For Our Future Conference in Winnipeg, Canada.
- An R function is available to allocate any unknown soil profiles to the Comprehensive Soil Classification System 2.0 system: github.com/soilsensingmonitoring/CSCS2.0 .

Upcoming Activities

Pedometrics 2026:

This conference is to be organized by Commission 1.5 Pedometrics, in Bali, Indonesia, during June of 2026.

International Field Workshop on Paleopedology:

On the theme of "Deciphering the ancient anthropic landscape transformation in the southern Maya lowlands in Mexico", this workshop will be held in Palenque, Mexico, during the period of February 19th to 25th of 2026.

Division 2 – Soil properties and processes

Division 2 – Soil properties and processes

Division 2 deals with "how" the fundamental science behind our discipline and the understanding of fundamental processes

Structure and officers:

Chair: Giuseppe Corti/Italy

1st Vice Chairperson: Xiaoyuan Yan/China

2nd Vice Chairperson: Jianming Xu/China

Vice Chairperson Centennial: Stefano Mocali/Italy

The Chair is responsible for communication with the Commissions, Working Groups and Vice Chairs. Vice Chairs are responsible mostly for the organization of the Centennial Celebration and Congress of the IUSS.

IUSS Division 2. Commissions and Working Groups:

- Commission 2.1 – Soil Physics

Chair: Silvia Imhoff/Argentina

Vice Chair: Cezary Sławiński/Poland

- Commission 2.2 – Soil Chemistry

Chair: Karen Vancampenhout/Belgium

Vice Chair: Boris Jansen/The Netherlands

- Commission 2.3 – Soil Biology

Chair: Alberto Acedo Bécares/Spain

Vice chair:Magdalena Frąc/Poland

- Commission 2.4 – Soil Mineralogy

Chair: Sofia Lessovaia/Russia

Vice Chair: Edson Campanhola Bortoluzzi/ Brazil

- Commission 2.5 - Soil Chemical, Physical, and Biological Interfacial Reactions

Chair: Elke J. Noellemeyer/Argentina

Vice Chair: Pablo Cornejo/Chile

- Working Group on Hydropedology

Chair: Hans-Jörg Vogel/Germany

Vice Chair: Johan van Tol/South Africa

- Working Group on International Soil Modeling Consortium

Chair: Martine van der Ploeg/The Netherlands

Vice Chair:Teamrat Ghezzehei/USA

Division Chair Report

Chair: **Giuseppe Corti/Italy**

1. For the incoming change of Division 2 Officers, we have received the following offers to become Commission Chair:
   - Commission 2.2 (Soil Chemistry): Boris Jansen in place of Karen Vancampenhout
   - Commission 2.3 (Soil Biology): Magdalena Fraç in place of Alberto Acedo Becares
   - Commission 2.4 (Soil Mineralogy): Edson Campanhola Bortoluzzi in place of Sofia Lessovaia
   - Commission 2.5 (Soil Chemical, Physical and Biological Interfacial Reaction): Pablo Cornejo in place of Elke Noellemeyer
2. In February 2025, Division 2 organized a series of webinars that have been so well attended and participated, with nice discussion at the end. Another series of webinars will be held in October/ November 2025.
3. Division 2 Commissioners have presented 16 sessions to the 2026 World Congress of Nanjing.

4. Divion 2 has Commissioners from 12 Countries: six are European Countries (Italy, Belgium, Germany, Netherlands, Poland, Spain), six are not European Countries (Argentina, Brasil, Chile, China, Russia, South Africa). With the aim to reinforce relationships among Colleagues and Commissions (and, perhaps, Divisions) of any Countries, the Commissioners have recently discussed about the possibility to present projects in which people from different Countries and Continents can participate. The idea is to take under observation European calls that eventually consider eligible extra-European Countries. At the same time, to explore the possibility to get funds from ASEM, Asia-Europe Meeting (https://en.wikipedia.org/wiki/Asia%E2%80%93Europe_Meeting).

All the Commissioners of Division 2 have been involved in so many National and International activities. Summarizing:

1. National Congresses and Conferences in 12 Countries
2. International Congresses in 4 Countries
3. National and International activities dealing with soil teaching
4. National and Intergovernmental activities dealing with soil
5. FAO activities

Commission 2 Working Group - Pedofauna

International "Antonio Berlese" Summer School (ABSS) Soil Fauna: Applied Ecology and Systematics – First edition

(Ph. L. D'Avino)

The first edition of the Antonio Berlese summer school on systematics and applied ecology of pedofauna took place from 1 to 5 September. Organised by the Pedofauna IUSS Working Group and by the Italian Society of Soil Science (SISS) and the Council for Agricultural Research and Economics (CREA), it was hosted it at the newly renovated headquarters of the experimental farm in Fagna (Scarperia, Florence, Italy).

The attendees were 17, mainly from Italy, but also from other countries. The participants followed all the activities with great interest and actively participated in: i) sampling excursions, ii) laboratory activities for extraction and identification, and iii) lessons. All the lessons were given in English, and always included a discussion phase with the lecturers, who were well-recognized international experts on pedofauna. At the end, all the attendees passed the final exam, albeit with different scores. The examination consisted of 37 challenging multiple-choice questions on all the topics discussed.

For the field and laboratory activities, they were divided into these six groups:

1) Constancio (Tony) Asis, Debora Barbato, Abdalhadi M.A. Abulebda
2) Cristina García Hernández, Francesco Bigaran, Anna Rita Bernadette Cammerino
3) Junwei Hu, Sara Di Lonardo, Silverio Abati
4) Romina Iglesias Castro, Michela Ingaramo
5) Clotilde Fatima Nhancale, Edoardo Verga, Chiara Poesio
6) Pau Solé Boronat, Lorena Losurdo, Federico Stotani

The first day, the introduction covered the interactions between pedology and pedofauna with Giuseppe Corti, Roberto Barbetti, Giovanni L'Abate, and a presentation given by Sauro Simoni on the great entomologist Antonio Berlese (1863-1927). Then, soil ecology was discussed with Tancredi Caruso, Cristina Menta, Augusto Zanella, and Paolo Nannipieri. On a sunny afternoon, each group was provided of a guide for the excursions, and each one sampled microarthropods in ideal soil conditions, under the supervision of Lorenzo D'Avino, Carlo Jacomini, and Miguel Angel Gambelli. Alessandro Campanaro and Alice Lenzi explain and set up six pitfall traps and introduced the use of iNaturalist (ABSS 2025 project, expressly created for the school). Sampling took place on alfalfa meadow, in a deciduous grove, and in a bamboo grove. The above mentioned pedologists described in detail a soil profile in alfalfa meadow and interactions with soil fauna. At the end of the day, we relaxed with a party under the farm's portico.

The second day it was raining, so we moved Maria Viketoft's lectio on nematode ecology and postponed part of the excursion to the long-term experiments in the afternoon. Silvia Landi illustrated the sampling and extraction of nematodes in the lab-

(Ph. D. Barbato)

oratory (one mesh for each group). Then we attended lectures by Letizia Modeo, Stefan Geisen, Diego Fontaneto, and Barbara Manachini on the main roles of microfauna. Attendees interacted with them with many questions.

The third day focussed on mesofauna. There were lessons from Carlo Jacomini, Loris Galli, Celine Pelosi, and Zoe Lindo, as well as the presentations on the research conducted by Gaia Bigiotti, Elena Tondini, and Martina Coletta. The practical activity involved an exercise on calculating QBS-ar and QBS-ar_BF. In the evening, we discussed the future of the school and the possibility of holding this innovative event elsewhere, for example in the Netherlands or Brazil, to make the school more international and permanent.

(Ph. L. D'Avino)

The fourth day, as soon as we got up under a beautiful sunny sky, we learnt how to sample earthworms (hand-sorting) with the fundamental help of George Brown and Federico Gavinelli, again divided into groups. We also retrieved the pitfall traps and analysed the captured animals in the laboratory with the trap experts we had met on the first day. Back in the classroom, we studied some key groups of macrofauna with Alessandro Minelli, Alberto Masoni, Luca Bortoluzzi, George Brown, and Anna Loy. In the evening, we all went out for dinner together and explored a nearby village of Scarperia, stumbling upon dozens of julid millipedes at night.

On Friday, we devoted the day to the three labs: identifying nematodes with Fabio Gatti, microarthropods and earthworms with the experts, who monitored and supervised all ABSS activities. In the evening, after an interesting discussion and QBS-e presentation by Federico Gavinelli, it was time for the final exam and then farewells. The course was very intensive, aiming to bring together experts from different groups to consider soil ecology and the importance of not only individual characteristics, but also the relationships between organisms... including the fruitful relationships between researchers.

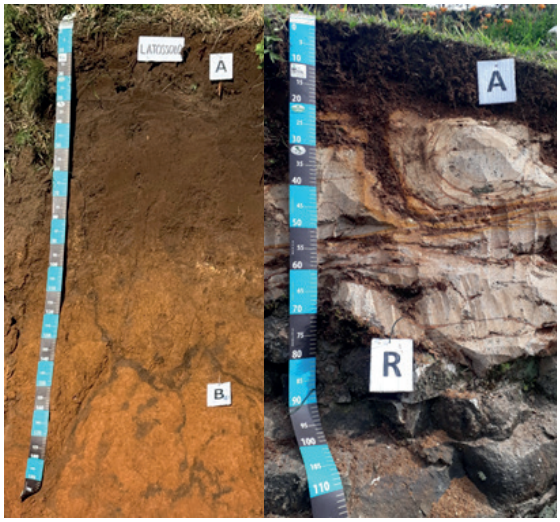
(Ph. Abdalhadi M.A. Abulebda)

Commission 2.4 Soil Mineralogy

Vice Chair Edson Campanhola Bortoluzzi/Brazil

Recent activities

Red to Black Soil Trip, Southern Brazil, Agronomy-UPF 2025.



Ferrasol (Sx) and Regosol (Dx).
Credits: Edson Bortoluzzi (2024)

Planned future activities

He has been a member of the Scientific Commission 5º International Congress of Hydro Sedimentology. 1-3 September, 2025, Porto Alegre, RS, Brazil. (https://www.5hidrossed.com.br);

He will attend the scientific event Encontro Gaúcho de Agropecuária Regenerativa. Topic presentation: "What are the soil remineralizers? O que são os remineralizadores e para quê servem?" GRUPO ASSOCIADO DE AGRICULTURA SUSTENTÁVEL(GAAS) - 7-8 August 2025, Ijuí, Rio Grande do Sul State, Brazil;

Division 3- Soil Use and Management

Division3 focuses on how we use the soil and how it links to the knowledge base of Divisions1 and 2 to ensure that soils are used and managed in a sustainable manner. The Division is concerned with both soil use and management in terms of agricultural production, forestry, grazing lands, and the broader environmental context. Activities to remediate degraded soil, arising from the agricultural misuse of soil or contaminations resulting from agricultural or non-agricultural activities are part of the scientific area of this Division. The aim of this Division is to ensure that through our knowledge and understanding of soil properties and processes and the distribution of soils within the landscape soils and soil quality are maintained and improved.

Chair: Renfang Shen/China

Vice Chair: Fusuo Zhang/China

Vice Chair Centennial: Giuseppe Lo Papa/Italy

To facilitate Divisional management, a Nomination Committee comprising nine officers has been established. This committee is responsible for discussing divisional affairs and evaluating candidates for the upcoming IUSS elections 2026-2030. The Chair, Renfang Shen, who also serves as a member of IUSS Electoral Committee, will collaborate with the IUSS Secretariat to support the election process.

The 23rd World Congress of Soil Science will be held from June 7-12, in Nanjing, China. The call for session proposals has been announced, and Division3 has contributed to 16 sessions. Registration and abstract submission opened in July, and opportunities for Sponsorship & Exhibition became available in August.

In alignment with the principles of fairness and reasonableness, Divisional budget has allocated funding to support two symposiums, covering costs for local organization and speaker invitations. This funding opportunity is open to all Commissions and Working Groups within the division.

Commission 3.3 – Soil fertility and plant Nutrition

Chair: Fernando O. Garcia/Argentina

Vice Chair: Luciano Colpo Gatiboni/Brazil

- Webinar on "Advances in soil fertility and crop nutrition status, cases from different regions of the world" is schedule on October 22 through ZOOM meeting of North Carolina State University system. Three speakers are invited.

  1- Dr. Ping He. Professor in Plant Nutrition from Institute of Agricultural Resources and Regional Planning Chinese Academy of Agricultural Science (CAAS), Beijing, China.

  2- Dr. Himanshu Pathak. Director General, International Crops Research Institute for the Semi-Arid Tropics. Hyderabad, India.

  3- Dr. Tom Bruulsema. 4RPN Consulting, Guelph, Ontario, Canada.

- Commission3.3 has contributed twice for IUSS publication alert on January and May issue.

Commission 3.4 – Soil engineering and Technology

Chair: Yuanfang Huang/China

Vice Chair: Taku Nishimura/Japan

- In collaboration with Soil Engineering Working Committee of Soil Science Society of China, IUSS Commission on Soil Engineering and Technology organized a symposium with theme "Cultivated Land Productivity Improvement and Soil Engineering" on June 27-29 in Mudanjiang, China.

Commission 3.5 – Soil degradation control, remediation, and reclamation

Chair: Stefan Norra/Germany

Vice Chair: Anna Karczewska/Poland

Commission 3.5 gathered at "2nd Workshop on Soil Degradation Control, Remediation and Reclamation" that was held in June9-11, 2025 in Sofia, Bulgaria. This workshop was organized by Institute of Soil Science, Agrotechnologies and Plant Protection Nikola Poushkarov (ISSAPPNP), Agricultural Academy in cooperation with the Potsdam University and Wrocław University of Environmental and Life Sciences. Around 50 scientists participated.

Announcement of a new homepage https://iuss-commission35.wordpress.com/.

Commission 3.7 – Soils of urban, industrial, traffic, mining and military areas (SUITMA)

Chair: Kye-Hoon John Kim/Korea

Vice Chair: Przemysław Charzyński/Poland

Call for proposals to host SUITMA14. The proposals consist of vision, host city, preliminary date for the conference, hosting organization, brief overview of relevant experience in SUITMA research, and ideas for field sessions. (Submission deadline: September 15. Online voting: September 16-30. Host announcement: SUITMA13 in October).

SUITMA13, October 5-9 in Pisa, Italy. Topics are SUITMAs as sinks and source of pollutants, SUITMAs to conserve and improve soil quality and biodiversity, SUITMA improvers and ecosystem services, and SUITMA challenges for the future. The scientific program is now available.

Working Group 3.1 – Acid sulphate soils

Chair: Anton Boman/Finland

Vice Chair: Vanessa Wong/Australia

Acid Sulfate Soils Working Group are currently finalizing the preparations of the 10th International Acid Sulfate Soils Conference, 15-17 September in Luleå, Sweden. There will be a pre-excursion on Sunday 14 September, and a post-excursion 18-20 September. (Know more here)

Fertilizar Asociacion Civil

The 17th edition of the Fertility Symposium, organized by Fertilizar AC and the IUSS Commission 3.3, will take place on 7th–8th May 2025 in Rosario, Argentina. The event offers a comprehensive overview of the current knowledge of soil fertility and crop nutrition management and of new technologies and advances towards a responsible management of field crop ecosystems.

The Symposium starts with an analysis of the current state of Argentine soils, and the impact of agricultural use over the years. Critical topics will be discussed, such as technological innovations like precision agriculture, artificial intelligence, and the digitalization of agriculture, which are revolutionizing the way production systems are managed. Furthermore, sustainability will be a cross-cutting theme, analyzing agricultural practices that guarantee soil conservation, with special emphasis on the relationship between crop nutrition and human nutrition. The development of biological and specialty crops, their advantages, and adoption rates will also be addressed.

The Symposium will include panels on the role of fertilization in livestock systems, a key aspect for improving efficiency in forage production. Likewise, national and international experts will share their views on the current and future state of crop nutrition and fertilizer use in different regions.

The proceedings of the Symposium will be available on the Fertilizar AC website (www.fertilizar.org), where it will also be possible to watch the videos of the individual presentations.

This event is positioned as an unmissable event for producers, advisors, and agricultural stakeholders interested in boosting productivity with sustainable practices in a challenging environment that requires innovation and applied knowledge.

Division 4 – The Role of Soils in Sustaining Society and the Environment

Division 4 takes the responsibility for making the connections, transfer and outreach of our soil knowledge to society where soil and soil science needs to be understood and appreciated. It takes the information generated in the other three Divisions and the developing new scientific information, addressing the public literacy in soil science, its education, international conventions, consequences of human activities on soil ecosystem services, policy issues, food security, and history of the discipline. As the capstone Division it integrates the science, scientists, policy makers, and the wider community to become more aware of soil as an essential natural resource.

Structure and officers

Chair: Claudio Zaccone/Italy

1st Vice Chair: Yongguan Zhu/China

2nd Vice Chair: Xin Song/China

/USS Division 4. Commissions and Working Groups:

- Commission 4.1 – Soils and the Environment
- Commission 4.2 – Soils, Food Security, and Human Health
- Commission 4.3 – Soils and Land Use Change
- Commission 4.4 – Soil Education and Public Awareness
- Commission 4.5 – History, Philosophy, and Sociology of Soil Science
- Working Group - Cultural Patterns of Understanding

- Working Group - Young and Early Career Scientists

Division Chair Report

Chair: Claudio Zaccone/Italy

All Division, Commission and Working Group (WG) Chairs and members actively contributed to the organization of the 23rd World Congress of Soil Science (WCSS2026) (June 7-12, 2026, Nanjing, China) (https://www.23wcss.org.cn/). This resulted in the submission of almost 40 scientific sessions, covering the topics reported in table below:

Code	Topic	Number
401	Soils and the environment / Soil Environment / Soil Ecology	3
402	Soils, food security, and human health	5
403	Soils and land use Change	2
404	Soil education and public awareness/Soil Science Education	3
405	History, Philosophy, and Sociology of Soil Science	4
406	Young and Early Career Scientists/Youth	2
407	Nitrogen	1
408	Soil Health	3
409	Carbon Neutrality and Global Change	13
502	Cultural Patterns of Soil Understanding/Soil Science Popularization	3

Division IV members also contributed to the co-organization and chairing of few, co-sponsored sessions (EGU-IUSS) at the European Geosciences Union General Assembly 2025 (April 27 – May 2, 2025, Vienna, Austria; https://www.egu25.eu/), including SSS4.6 "*Dynamics of new and traditional amendments and other sustainable practices in the soil-plant-microorganism system*" | Conveners: Claudio Zaccone, et al.

Members of Division IV also supported the organization of the EUROSOIL 2025 (8-12 September 2025, Sevilla, Spain; https://eurosoil2025.eu/), both being involved in the scientific committee and in terms of session/abstract submission, and session chairing.

Finally, Division IV members are working on some open access publications (e.g., reviews, position papers, letters, guidelines) on broad topics to engage all Commissions and WGs Chairs/Vice Chairs. Division IV is scientifically and economically supporting the editorial initiative "*The Language of Soil – A Handbook for Transdisciplinary Soil Research*", promoted by Commission 4.5. This book is proposed as a glossary of concepts and tools for transdisciplinary collaboration in soil research, addressed at scholars and students of social sciences, humanities, arts and natural sciences interested in soils; soil practitioners; transdisciplinary researchers; soil educators: communicators; and policy makers. Although its objectives are clearly in line with the overall remit of Division IV, this book will be a novel and highly influential publication and will increase the recognition of and engagement with the IUSS across disciplines.

Planned future activities

- Further contribute to the organization, definition and success of the 23rd World Congress of Soil Science to be held in Nanjing, China, on June 7-12, 2026 (https://www.23wcss.org.cn/). Division IV will support such a meeting both in terms of session/abstract submissions and sponsoring the registration fees for 1 invited speaker for each commission/WG (7 in total). A similar approach was used also for the IUSS Centennial meeting.
- Sponsor some open access publications (e.g., reviews, position papers, letters, books) on broad topics to involve all Commission/WG Chairs/Vice Chairs.
- Sponsor events at national and international level.

Commission 4.1 – Soils and the Environment

Chair: Miriam Muñoz Rojas/Spain

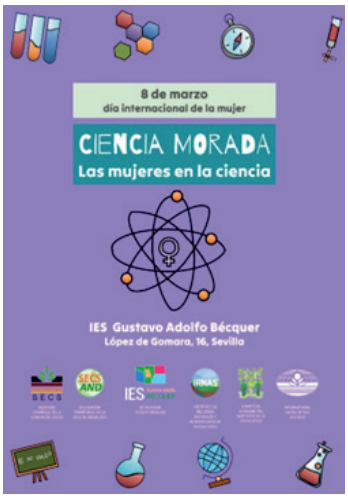
Vice Chair: Nobuhide Fujitake/Japan

This Commission looks at the soil as part of the ecosystem. Human activities have a strong impact on the ecosystems and the soil and environment interactions in relation to humans are particularly important. Soils – a major component of the biosphere at the interface between the lithosphere, atmosphere, and biosphere – are investigated through several international programs such as IGBP; in the same way the soil plays a considerable role in the carbon sequestration (UN Convention on Climate Change) and is the habitat for several species covered by the Biodiversity Convention.

Recent activities/events

- on March 8th, International Women's Day,

the IES Gustavo Adolfo Bécquer (Seville) hosted "*Purple Science: Women in Science*", an event dedicated to highlighting and celebrating the contributions of women to scientific research and knowledge. The initiative was supported by several institutions, including the Spanish Society of Soil Science (SECS),



the Andalusian Delegation of SECS, the Institute of Natural Resources and Agrobiology of Seville (IRNAS, CSIC), the Instituto de la Grasa (CSIC), and the International Union of Soil Sciences (IUSS). Through this event, students and participants had the opportunity to learn about the essential role of women in science, their achievements, and the ongoing efforts to promote gender equality in research and education. Members of IUSS Division 4, Commission 4.1 – Soils and the Environment gave talks in this event to highlight the key role of Women in Soil Science.

The "Purple Science: Women in Science" event (Ph. Antonio Jordan)

Planned future activities

- Participation in a special symposium "*Soil matters: effective restoration via improved harnessing of soil biodiversity*" during the Ecological Society of Australia Conference in Adelaide, Australia (https://esa2025.org.au/).
- Organization of a session at EUROSOIL2025 on Soil Biology (https://eurosoil2025.eu/).

Commission 4.2 – Soils, Food Security, and Human Health

Chair: Taru Sandén/Austria

Vice Chair: Takuro Shinano/Japan

In most countries soils are essential for food production. Consideration that one third of the land area is presently used for agriculture, and the world population is increasing, creating additional pressures on agricultural land, providing enough safe and nutritious food will be an ongoing challenge. Amount the conservation of agricultural land, the role of the soils in a changing world in relationship to human health.

Recent activities/events

- Takuro Shinano becomes the President of Japanese Society of Soil Science and Plant Nutrition (2025-2027).
- Conversation on Agroecology 7 - Lifelong Learning and Micro-credentials within AKIS – January 29th, 2025.
- Conversation on Agroecology 8 - The role of Policy for agroecological transition – February 26th, 2025.
- The 100th Anniversary Project of the Japanese Society of Soil Science and Plant Nutrition Public Symposium Series: "*Soil and Plant Science for a Sustainable Future*" – March 2nd, 2025.
- Conversation on Agroecology 9 - Building knowledge for agroecology: understanding evidence and conceptualizing monitoring approaches – March 26th, 2025.
- Conversation on Agroecology 10 - Agroecology living labs to transform food

systems – April 30th, 2025.

- Conversation on Agroecology 11 - Monitoring agroecological transition - from theory to practice – May 28th, 2025.
- Conversation on Agroecology 12 - Networks of Agroecology in Africa – June 25th, 2025.
- Symposium titled "*What is Soil Health? Understanding, Maintaining, Improving, and Sharing Soil Health*" organized by the Japanese Society of Soil Science and Plant Nutrition on July 26th, 2025, and co-hosted with the Science Council of Japan.

The Symposium "What is Soil Health? Understanding, Maintaining, Improving, and Sharing Soil Health" (Ph. T. Shinano)

Planned future activities

- Monthly (except July and August) Conversations on Agroecology, organised as part of the AGROECOLOGY Partnership: Conversations on Agroecology — Agroecology Partnership. The Conversations on Agroecology will enhance the strengthening of agricultural knowledge and innovation systems (AKIS) for agroecology transition by facilitating linkages actors across regions and scales. They enable online mobilisation and networking of agroecology actors across.
- Organization of the 10th International Nitrogen Conference (N2026), to be held in Kyoto in November 2026, will focus on the theme "*Sustainable Nitrogen Management for Future Generations*". Bringing together scientists—including soil sciences—along with policymakers, industry, and civil society, N2026 will present the latest knowledge on nitrogen and the environment (https://n2026.org/).

Commission 4.3 – Soils and Land Use Change

Chair: Gary Feng/USA

Vice Chair: Felipe Andrés Zúñiga Ugalde/ Chile

Soils play a large role as source and sink of greenhouse gases. In a context of global sustainability. This Commission will investigate how the source/sink functions of the soils can be managed and controlled to mitigate the impact of climate change. Of interest to all are significant changes in land use, including the effect of urbanisation, forest conversion and productive land being allocated to other uses. Such changes fall under the auspices of this Commission.

Recent activities/events

- The 105th American Meteorological Society Annual Meeting was held from January 12 to 16, 2025 in New Orleans, Louisiana, USA. The theme was "*Towards a Thriving Planet: Charting the Course Across Scale*". This is the world's largest yearly conference for the weather, water, and climate science community (https://annual.ametsoc.org/2025/).
- Commission 4.3 Chair Gary Feng at USDA-ARS was invited by University of Melbourne to make a presentation entitled "*Experiences, benefits, challenges and solutions of cover crops and soil amendments in agricultural system*". He visited laboratories of Soil and Environment Research Group, School of Agriculture, Food and Ecosystem Sciences at University of Melbourn and the Institute of Agriculture at University of Sydney from Jan 20-Feb 5, 2025. Discussed and developed strategic plan on using emerging cutting-edge advanced technologies to measure soil health indicators and evaluate soil health status on site in real-time.
- AAAS 2025 Annual Meeting was held from February 13 to 15, 2025 in Boston, MA, USA (2025 AAAS Annual Meeting | American Association for the Advancement of Science (AAAS)).

- Participation in Global Soil Doctors Programme as a trainer in Chile "*Aysén region*" (March 11-12, 2025 | link).
- The International Symposium on Soil and Human Health was held in Chengdu from March 31 to April 3, 2025. The symposium focused on soil environmental governance, soil and plant nutrition, soil ecosystem functions, and organic agriculture development, with over 200 participants.
- The 6th Nitrogen Biogeochemical Cycle Academic Forum was held in Nanjing, China, from April 11 to 13, 2025. Hosted by the Nitrogen Working Group of the Chinese Society of Soil Science, the forum focused on "*Nitrogen Cycling and Planetary Boundaries*". Over 600 participants from 206 universities, research institutes, and businesses attended the forum.
- The 162nd annual meeting of the National Academy of Sciences was held from April 25 to 27, 2025 (https://www.nasonline.org/annual-meeting/).
- Participation in Senate Agriculture Committee in topic "*Soil Law*" on May 28th, 2025 (link).
- The 16th annual National Soil Moisture Workshop explored the theme "*Making Soil Moisture Science Actionable*" was held June 3-5, 2025, at Colorado State University in Fort Collins, Colorado, USA. The workshop was hosted by the U.S. Department of Agriculture Agricultural Research Service and NOAA's National Integrated Drought Information System (NIDIS), in partnership with the U.S. Forest Service and Colorado State University (2025 National Soil Moisture Workshop | June 3, 2025 | Drought.gov).
- The 2025 National Cooperative Soil Survey Conference was hosted by Oregon State University virtually from June 23 to 25, 2025. The conference organized by Natural Resources Conservation Service, USDA, convenes every two years to discuss and develop solutions to issues of concern to the National Cooperative Soil Survey program. The theme of this year's conference was "*Welcome to the Neighbourhood: Living and Working with Partners on the Land*" (2025 NCSS National Conference | Natural Resources Conservation Service).

Planned future activities

- Commission 4.3 Chairs Gary Feng and Felipe A. Zuñiga along with Dr. Tingting Chang in the host country developed 4 sessions for the 23rd World Congress of Soil Science which will be held in Nanjing, China, on June 7-12, 2026 (https://www.23wcss.org.cn/). The 4 sessions are: 102003 "*Soil Structure and Ecosystem Functioning in Earth's Critical Zone*"; 403001 "*Healthy Soil Uses for Humankind*"; 403002 "*Land Use and Management Effects on Soil Health and Environmental Quality*" and 408003 "*Soil Management Practices on Soil Health in Plastic Greenhouses*" (https://www.23wcss.org.cn/topic/index.html). They have designed the following flyer and started disseminating it to call abstract submission.

  Poster of the call for abstracts of the sessions belong to IUSS Commission 4.3 (photo credits: Tingting Chang, Gary Feng, and Felipe A. Zuñiga).

- Participation in the XV Chilean Soil Science Conference held in La Serena between October 27 to 30, 2025.

Commission 4.4 – Soil Education and Public Awareness

Chair: Martha M. Bolanos Benavides/Colombia

Vice Chair: Juan C. Rey/Venezuela

This Commission deals with teaching methods and the development of soil scientists – but also how soil-related knowledge is presented to other interested parties, as well as the information provided to the public and related general public awareness. A well-informed public is needed so that the importance of soils is understood by all.

Recent activities/events

- The Soil Health Conference took place at

the Ramkota Hotel and Event Center in Watertown, South Dakota (USA), on January 15-16, 2025. This in-person gathering featured a robust program including speaker sessions, producer panels, awards, engagement with sponsors, and networking opportunities. The event aimed at convening a varied audience, from regenerative agriculture practitioners to extension educators, and at advancing soil health through sharing best practices in no-till, cover cropping, integrated livestock systems, and innovative conservation strategies.

- The Central Nebraska Soil Health Conference, hosted by the University of Nebraska (Lincoln), was held in Central Nebraska on January 29th, 2025. Led by experts including Dr. Meagan Schipanski, the conference brought together faculty, students, alumni, agricultural professionals, and the public to highlight sustainable agriculture and innovative soil management practices. Key features included panels, on-farm research presentations, and a focus on knowledge exchange in support of environmental stewardship and productivity.

- Regional conference on Agroecology in Latin America and the Caribbean, bringing together partner organizations of Groundswell International from Guatemala, Mexico, Honduras, Haiti, and Ecuador, was held in Ecuador (March 24-28, 2025). This event combined field visits, peer learning, and strategic planning focused on soil as the foundational element of agroecological systems. Participants explored regenerative practices such as organic fertilization, soil cover techniques, erosion control through living barriers, and the role of soil microorganisms. The conference emphasized the synergies between ancestral knowledge, agroecology, and soil health, reflecting on gender, youth engagement, and community resilience as critical dimensions of sustainable land care in the region.

- Workshop "*Equipo Modular de Compostaje: Integrating Ancestral Knowledge and Technology to Nourish the Earth – Part One*". On April 1st, 2025, AGROSAVIA conducted a participatory workshop in the community of Achintikua, located in the Sierra Nevada de Santa Marta, Valledupar, Cesar. This event brought together around 50 participants, including young students, producers, and indigenous authorities representing the Arhuaco, Kankuamo, Kogui, and Wiwa communities. The objectives of the workshop were to foster dialogue between ancestral indigenous practices and agroecological science, demonstrate the use of AGROSAVIA's Modular Composting Equipment (covering pre-composting and vermicomposting modules), and encourage sustainable soil management through both theoretical instruction and hands-on demonstration. The event provided a culturally grounded and technically robust platform for soil education and conservation.

- A field day in Vista Hermosa, Meta, focused on soil management, pasture establishment, and nutritional management of dual-purpose cattle, organized by AGROSAVIA, was held on April 14th, 2025. Coordinated under an agreement with Parques Nacionales Naturales de Colombia and financed by KfW, approximately 150 small scale livestock producers attended the event. The initiative provided both theoretical and practical sessions on soil and forage analysis in producers' plots, interpretation of laboratory NIR (Near-Infrared) results, and the formulation of strategic supplements for cattle. This training sought to improve pasture quality, boost animal productivity, and promote sustainable production in the context of livestock systems.

- The European Union Mission "A Soil Deal for Europe" organized the event "*Mission Soil, Living Labs and Soil Literacy: Empowering Communities for Healthy Soils*" which took place on June 11th, 2025. The event was held online with hybrid participation across Europe. The objective was to showcase how living laboratories and citizen-driven initiatives can be used to enhance soil education, strengthen collaboration among scientists, educators, and local communities, and provide tools for sustainable soil management. The program included presentations of methodologies, educational strategies, and examples of soil education actions already underway in different regions. This initiative aimed to bridge the gap between science and society by engag-

ing teachers, students, NGOs, and policymakers in joint action for soil health.

- The "*Mission Soil Living Labs and Soil Literacy: Empowering Communities for Healthy Soils*" event was held on Wednesday, June 11th, 2025, as a hybrid gathering in Turin, Italy, with both in-person and online participation. This thematic engagement session was organized by SOILL Startup together with the ECHO projects and aimed at stimulating interest and support among land managers, researchers, soil educators, communicators, NGOs, public authorities, extension services, and creative sector representatives toward developing Soil Health Living Labs under the Horizon Europe 2025 Mission Soil call. The core objectives were to raise awareness about the Mission Soil initiative and associated funding opportunities, enhance understanding of soil health as a crucial catalyst for systemic change, provide participants with methodologies, tools, and examples for promoting soil education within living lab contexts, and inspire cross-sector stakeholders to co-design impactful proposals addressing the Mission Soil goals.

- The CURIOSOIL Community of Practice (CoP) Summer Meeting, titled "Awakening Soil Curiosity to Catalyse Soil Literacy", took place online as part of a wider European network initiative on June 6th, 2025. The event celebrated and reinforced collaborative efforts in advancing soil literacy across the continent. Participants included educators, communicators, and project partners engaged in soil education innovation. A key feature of the meeting was presenting the outcomes of the "*Why I Teach Soil*" campaign, which had run during the first half of 2025. The event also introduced a beta version of the CURIOSOIL Curiosity Kit and provided educators with outdoor activity plans to facilitate hands-on soil education in classrooms and field settings.

- The XXIV Latin American Congress of Soil Science was held in Santa Cruz de la Sierra, Bolivia, from June 24th to June 27th, 2025. AGROSAVIA played a central role in advancing Soil Education and Public Awareness through keynote lectures and research presentations. Ph D Senior researcher Dr. Martha Marina Bolaños Benavides emphasized the critical importance of soil biodiversity, explaining its functions, limitations, and sustainable management strategies, while also showcasing AGROSAVIA's applied research in crops such as avocado, cocoa, guava, plantain, and pastures. Complementing this, it was highlighted sustainable strategies for drought-tolerant bean production, as well as studies on soil fertility in post-conflict cocoa systems and productive reconversion in páramo buffer zones. Together, these contributions not only shared cutting-edge scientific results but also reinforced the value of educating diverse audiences: farmers, policymakers, and researchers; about the role of soils in food security, ecosystem services, and sustainable territorial development.

- As part of the AGROSAVIA project "*Sustainable soil management towards productive reconversion through farmer-to-farmer training*", funded by the Ministry of Agriculture and Rural Development (MADR), a module of the Global Soil Doctors Program (GSDP) was implemented. In this initiative, 11 professional trainers from AGROSAVIA (three women and eight men) trained 58 farmers —19 women and 39 men— to become Soil Doctors. These newly trained Soil Doctors, in turn, replicated the knowledge acquired in their territories, each training between 3 and 5 additional farmers. As a result, the number of final beneficiaries increased, reaching between 174 and 290 farmers trained in sustainable soil management practices. The process was carried out in six departments and twelve municipalities of the country: La Guajira (San Juan del Cesar, Urumita, and Dibulla), Bolívar (Zambrano and Córdoba), Córdoba (Cereté and Lorica), Santander (Cimitarra), Cundinamarca (Tibacuy), and Nariño (La Cruz, Colón, and Cuaspud).

Planned future activities

- The 4th Colombian Congress of Ecology (CCE2025), titled "Traces of biodiversity, sustainability, and development", will be carried out in Cali, Colombia, from September 2nd to September 5th, 2025. Organized by Arasarí Conservation & Research, it will host keynote sessions, symposia,

and workshops. While primarily ecological in scope, several thematic tracks, such as community strategies for biodiversity management and ecosystem connectivity, likely intersect with soil awareness and stewardship, particularly in sections addressing ecosystem services and landscape integrity.

- The conference "The Soil Re-Union: Science for Healthy Soils", bringing together global experts in soil science, will take place on October 20th to 23rd, 2025. Organized by an international consortium of soil research institutions, the event will emphasize cutting-edge research on soil biodiversity, soil ecosystem services, and sustainable management practices. One of the conference's key objectives will be to advance soil education by making the latest scientific knowledge accessible to farmers, educators, and policymakers, thereby raising awareness of the critical role of soils in food security and environmental sustainability.
- The First National Meeting of Agroecological Youth of Colombia is scheduled to take place at the University of Caldas in Manizales in October 2025. Organized by the Movimiento Agroecológico Colombiano (MACO), the event aims to convene youth advocates from agroecology, rural education, and environmental networks. While its primary focus is agroecological practices, the event also spotlights how soil stewardship and literacy feature in broader sustainable land governance and youth-led environmental action across the country.

The Global Climate-Smart Agriculture Conference will be held in Brasília, Brazil, ahead of the COP30 negotiations, from November 5th to 7th, 2025. Organized by the Coalition for Soil Health and supported by regional partners, the event will bring together scientists, policymakers, businesses, and farmer organizations. A significant portion of the agenda is dedicated to soil education and awareness, focusing on how improved soil management practices can build resilience to climate change. The conference seeks to equip stakeholders with practical tools and communication strategies to promote soil conservation as a climate action priority.

Commission 4.5 – History, Philosophy, and Sociology of Soil Science

Chair: Alexandra Toland/Germany

Vice Chair: Anna Krzywoszynska/Finland

This Commission deals with our past. It links the study of what has happened in history and how soils can be used to help explain the past changes. This Commission is not just a record of history but the use and understanding of soil information and its relationship to human development and history.

Recent activities/events

- Commission 4.5 members involved in the advisory board for the Horizon Europe Mission Soil Deal for Europe led the work on the report "*Social sciences, humanities, and the arts in the EU Mission - A Soil Deal for Europe*". This report includes an introduction to social sciences, humanities, and the arts (SSHA) in the field of soil research and advises on how to incorporate SSHA into (EU) soil research funding structures (https://mission-soil-platform.ec.europa.eu/resource-library/social-sciences-humanities-and-arts-eu-mission-soil-deal-europe).

Planned future activities

- Division IV also decided to scientifically and economically support the editorial initiative "*The Language of Soil – A Handbook for Transdisciplinary Soil Research*", promoted by Commission 4.5. This book is proposed as a glossary of concepts and tools for transdisciplinary collaboration in soil research, addressed at scholars and students of social sciences, humanities, arts and natural sciences interested in soils; soil practitioners; transdisciplinary researchers; soil educators: communicators; and policy makers. Although its objectives are clearly in line with the overall remit of Division IV, this book will be a novel and highly influential publication and will increase the recognition of and engagement with the IUSS across disciplines.
- Commission 4.5 Vice Chair Anna Krzy-

woszynska will co-convene the session '*Carbon Creations and Creative Carbons: The Politics of Carbon in Land Management and Restoration*' at the Royal Geographical Society's annual conference on 26th August at the University of Birmingham. The guiding question is: what is carbon "good for" and for whom is carbon "good for"? On the one hand, we note that carbon-led policy and market initiatives are inherently creative, as they seek to both abstract carbon from complex socio-ecological systems and to reconfigure established land management practices. The science of soil management and restoration ecology, moreover, is not uniform and readily available to inform policy and market-making, but is itself contested, experimental, and evolving. On the other hand, we contend that climate policy objectives may also be creatively adapted and strategically reinvented by diverse actors at different scales, as they incite longer-standing debates over specific socio-economic objectives, values, and justice. Finally, the measurement and valuation of carbon through these reworked scientific and management practices, which can underpin its commodification, is also co-produced by the complex and dynamic nature of soil biomes themselves and their interactions with associated ecosystems and the atmosphere.

Working Group Cultural Patterns of Soil Understanding

Chair: Nikola Patzel/Austria

Vice Chair: Eric Brevik/USA

- On behalf of Commission 4.5 and the Cultural Patterns of Understanding Working Group, Eric Brevik organized a symposium titled "*Communication, education, and diversity in soil science through history*" at the 27th International Congress of History of Science and Technology in Dunedin, New Zealand. Speakers: Eric Brevik ("*Diversity in the Soil Science Profession in the United States of America*"), Lisa Lobry de Bruyn (University of New England; "*The framing of soil knowledge sharing to advance sustainable land management*"), and Natasha Pauli (University of Western Australia; "*Local knowledge of soil biology and ecology: a synthesis of global trends*"). A panel discussion followed presentations.

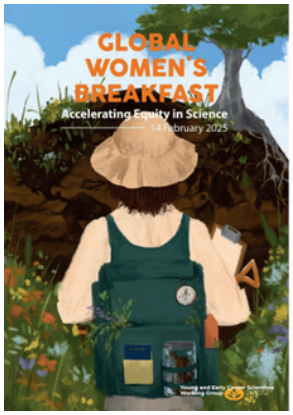
Working Group Young and Early Career Scientists

Chair: Axel Cerón González/Mexico

Vice Chair: Dawid Kupka/Poland

Recent activities/events

- Global Women's Breakfast 2025 in honour of Diana Wall: Our YECS members Arabela Vega (Costa Rica), Kamila



Kluczek (Poland), and Leila Jahanbazi (Iran) lead the online event, featuring outstanding soil scientists from Brazil, Türkiye, Malawi, and Mexico. The main discussions focused on the linguistic barriers to building a global research career for non-native English speakers, the low representation of women in soil disciplines that require fieldwork, and the importance of soil education at early stages.

- **First YECS-Elsevier cohort**: At the beginning of 2025, the first cohort of YECS members officially joined the Early Career Researcher (ECR) Editorial Board at selected Elsevier soil journals.

Suelófono: Cerámica prehispánica (photo credits: Axel Cerón González and Elizabeth Solleiro Rebolledo).

- **Pre-Hispanic Ceramics Podcast**: The latest *Suelófono* episode focuses on pre-His-

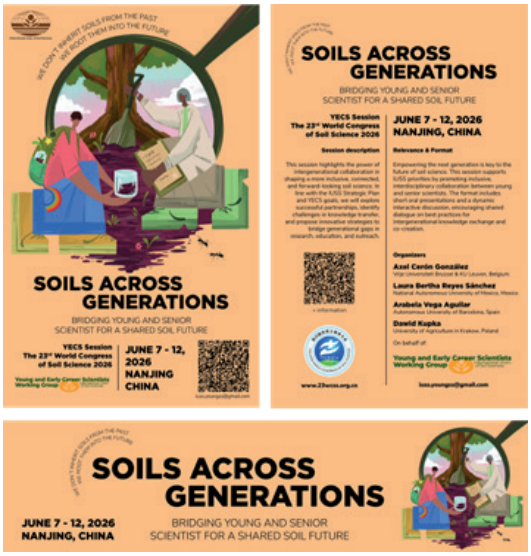
panic ceramic technology and the use of soils as raw materials. All episodes are available at: https://proyectosuelox.geologia.unam.mx/.

Planned future activities

- **YECS at the WCSS2026**: The flagship activity for our working group will be "*Bridging young and senior scientists for a shared soil future*", which aims to bring generations of soil scientists to collaborate, share, and inspire. This session particularly focuses on the collaborative efforts and experiences of young and senior scientists in teaching, disseminating, and conducting research on and around soils.

  We have developed a survey to connect early with those interested.

  Connect early form: https://forms.gle/mGEn8nkZnPwoHmbx8



Soils Across Generations - YECS Session at the WCS2026 flyer (photo credits: Iran Márquez Rubio, Axel Cerón González, Laura Bertha Reyes Sánchez, Arabela Vega Aguilar, and Dawid Kupka)

- **YECS will collaborate with a Terrace Session at the WCSS2026**: Additionally, YECS members from Mexico and Belgium are collaborating to organize a terrace soils session during the next WCSS. The event also aims to establish a global network of researchers working on terrace soils.

Global trends on historic agricultural terraces flyer (photo credits: Iran Márquez Rubio, Axel Ce-rón González, Javier Toxqui Roldán, Yannick Devos, and Ma. Del Carmen Gutiérrez Castorena)

Other News from the IUSS

IUSS Division, Commissions Officers and Members of the Standing Committees Election 2026

The process for the election, of the new Divisions and Commissions Officers and Members of the Standing Committees, has officially started, the IUSS Members have been notified by the Secretary and provided with the Guidelines for the procedure, the list of the available positions and the official nomination form. The elections will be completed at the very beginning of the new year, and the names and positions will be published on the IUSS Alert.

Nominations are being received until October 15 for the positions of Division Chair, as well as the Chair and Vice Chair positions for all the Commissions of each Division. Elected Officers will serve from January 1, 2027, to December 31, 2030. Individuals elected as Commission Vice-Chairs will have the option to transition directly to Commission Chair, starting January 1, 2031.

The nominations for the Standing Committees members must be forwarded to the Secretary (iuss.secretariat@crea.gov.it) within **November 15, 2025.**

They will be then evaluated by the Executive Committee within November 30, 2025, and then voted by the National Societies.

Election Calendar and Deadlines

Nomination of the candidates by the National Societies: outcomes to be sent to the Divisional Committee within **October 15, 2025**

Divisional Committees scrutiny of the candidates: October 31, 2025

Standing Committees candidacies: within **November 15, 2025**

Executive Committee evaluation of the candidacies for the Standing Committees: November 30, 2025

Electoral Committee scrutiny of the candidates: November 30, 2025

Opening of the voting system for your society members: December 20, 2025

Closing of the voting system for your society members: March 20, 2026

Notification to the Electoral Committee and Secretariat: within April 30, 2026

Winners' announcement: within May 31, 2026

To download the templates to submit the nomination, click here to find them on the IUSS Alert.

2025 Fertility Symposium "Nourish the Soil, Feed the Future"

7th-8th May 2025

The 17th edition of the Fertility Symposium, organized by Fertilizar AC and IUSS Commission 3.3, offers a comprehensive overview of the current knowledge of soil fertility and crop nutrition management and of new technologies and advances towards a responsible management of field crop ecosystems.

The symposium took place in Rosario, Argentina.

5th International Soil Judging Contest

June 2 – 6, 2026

The 5th International Soil Judging Contest will be held in Nanjing, China as an event prior to the 23rd World Congress of Soil Science. This unique event will showcase the diversity of soils and landscapes of the region, offering a significant training and networking opportunity to undergraduate and graduate students.

Program

The event will consist of three days of technical training followed by a one-day contest. The training will consist of lectures and practical field experiences, led by an international team of soil scientists. Local experts will introduce the landscape and soils of the competition area. Participants will apply their knowledge and practical skills to describe, understand, and interpret soil characteristics in the field. Participants (both in teams and individually) will describe a series of competition soil profiles using basic field tools, selected standards, and provided guidelines. The winners will be those who most accurately describe and classify each soil, assess its possible functions, and interpret its capacity to perform under different land uses and management practices.

Background

This event follows the successful International Soil Judging Contests held in Jeju, Korea (2014), Gödöllő, Hungary (2015), Seropédica, Brazil (2018), and Glasgow, Scotland (2022).

Participation

Up to 16 teams are expected to compete, totaling as many as 64 student participants with representation from every continent except Antarctica.

Organization

Excavating soil profiles for the preparation of the contest venue (from left to right: Dr. Jinlong Dong, Prof. John Galbraith, Prof. Biao Huang, and Dr. Fei Yang) (Ph. Soil Science Society of China, Jin Yang and Fei Yang)

The contest is being organized by the Soil Science Society of China and the IUSS International Soil Judging Working Group.

The registration deadline is December 25, 2025. For more information including program, eligibility, and registration see: https://www.23wcss.org.cn/fe/index.html

Excavating soil profiles for the preparation of the contest venue (from left to right: Dr. Jinlong Dong, Prof. John Galbraith, Prof. Biao Huang, and Dr. Fei Yang) (Ph. Soil Science Society of China, Jin Yang and Fei Yang)

Prof. John Galbraith and Prof. Biao Huang are describing soil profiles (Ph. Soil Science Society of China, Jin Yang and Fei Yang)

2nd Workshop n Soil degradation control, remediation and reclamation

Organized by: Commission 3.5 of the International Union of Soil Sciences, Institute of Soil Science, Agrotechnologies and Plant protection Nikola Poushkarov (ISSAPPNP), Agricultural Academy in cooperation with the Potsdam University and Wrocław University of Environmental and Life Sciences.

The workshop took place from 9 to 11 June in Sofia (Bulgaria).

2nd Workshop on Soil degradation control, remediation and reclamation

Date: 9th -11th June, 2025

Location: Sofia, Bulgaria

The workshop was organized by Commission 3.5 of the International Union of Soil Sciences, the International Union of Soil Sciences Institute of Soil Science, Agrotechnologies and Plant protection Nikola Poushkarov (ISSAPPNP), Agricultural Academy in cooperation with the Potsdam University and Wrocław University of Environmental and Life Sciences. Participants were invited to submit their contributions to the special issue “Control, Remediation, and Restoration of Soil Degradation” of the Journal of Soils and Sediments, Springer Nature.

Commission 3.5 of the International Union of Soil Sciences works in the field of “soil degradation, remediation, and restoration” and is committed to developing solutions to overcome these challenges. This special issue brought together researchers, engineers, and consultants working on different aspects of soil degradation, remediation, and restoration to fill interdisciplinary gaps and create a synergistic vision for the management and mitigation of degraded soils resulting from various causes, such as mining, industrial pollution, ur-

ban development, or agricultural overexploitation.

A warm welcome to the new GSP Secretary

Thorunn Wolfram Petursdottir is the new Secretary of the Global Soil Partnership.

With more than 20 years of experience in natural resource management, sustainable land use planning, policy development and multi-stakeholder cooperation, she has worked with colleagues in several countries to promote science-based solutions for sustainable land and soil management and soil restoration.

The GSP, established in late 2012 following the approval of its Statute by FAO members at the 145th FAO Council, is a beacon of hope for soils for two fundamental reasons:

- First, as a voluntary partnership, it unites governments, international and regional organizations, institutions, and stakeholders, fostering collaboration and coordinating actions to safeguard soil resources. Today, more than 165 FAO Members have nominated a GSP focal point, and 662 additional partners worldwide actively contribute to and advance GSP's mission.
- Secondly, the GSP Secretariat is hosted by FAO due to its global mandate, benefiting from FAO's credibility, technical expertise, and policy influence. This ensures that soil health is fully integrated into sustainable development, climate resilience, and the transformation of agrifood systems worldwide.

This is also a particularly special time to join FAO, as this year marks the Organization's 80th anniversary.

Throughout its history, FAO has consistently prioritized soil health, recognizing its essential role in achieving better production, better nutrition, a better environment, and a better life, leaving no one behind.

Soil Science Society of Poland new website

The Soil Science Society of Poland has launched a new and improved website.

The new site has been designed with user convenience in mind; it is modern, intuitive, and responsive across various devices.

Here, you will find the latest information about PTG's activities, scientific events, publications, and updates from the world of soil science.

Check it out here: https://ptgleb.pl/en/

FAO -ITPS Soil Letter #10 FAO

The Intergovernmental Technical Panel on Soils (ITPS) has just released its latest letter, highlighting how soil contaminants seep into groundwater, affecting water quality, ecosystems, and human health.

Read more: Soil pollution on the move – How leaching causes groundwater pollution

Video The global workshop on "Enhancing Capacities for Soil Health Development and Nutritious Food Production (S4N)"

The global workshop on "Enhancing Capacities for Soil Health Development and Nutritious Food Production (S4N)" was organized by FAO and its Global Soil Partnership with support from the German Federal Ministry of Food and Agriculture (BMEL). It took place as part of the World Soil Day celebration and was later presented as a side event at the International Soil and Water Forum (ISWF) in Thailand from 9 to 11 December. This participatory workshop brought together national promoters of the Global Soil Doctors Programme (GSDP) from Burkina Faso, Colombia, Mexico, and Thailand. It aimed to foster collaboration and exchange experiences, emphasizing the direct link between healthy soils and nutritious food production.

Watch the video: Key moments of the Global Workshop on Soils for Nutrition

EU Soil Law, (provisional) Agreement between the European Parliament and the Council

The European Soil Monitoring Law takes a step forward. The Council of the Union, which brings together representatives of the Member States, has reached a provisional agreement with representatives of the EU Parliament. This is a shared text of the directive which, in the objectives of the Commission that proposed it, will have to help achieve the goal of restoring continental soils to health by 2050.

The directive will have the task of establishing a framework for soil monitoring, capable of improving resilience, and managing the risks of contaminated sites. It will also define the principles of mitigation of soil consumption, with particular attention to sealing and soil removal.

Poland holds the rotating presidency of the Council and Paulina Hennig-Kloska, Polish Minister for Climate and Environment said: "With the agreement reached, we have established the first ever EU framework for soil assessment and monitoring across Europe. It is time to act, as more than 60% of Europe's soils are unhealthy, and their condition is deteriorating. Healthy and resilient soil is crucial to ensuring healthy and nutritious food and cleaner water for future generations." The agreement also pleases the EU Commission which says: "This is an important step to address the urgent challenges related to soil health that impact all European countries, the resilience of our food chain and the economy in general. The new law will also help strengthen soil resilience to natural disasters, heatwaves and extreme weather events, as well as other critical environmental challenges, such as erosion, contamination and biodiversity loss."

Read more: Directive on Soil Monitoring and Resilience

Russell Review on Artificial Intelligence

The European Journal of Soil Science recently published a highly anticipated Russell Review on "Artificial Intelligence in Soil Science" written by Alexandre M.J.-C. Wadoux.

The paper was written on invitation as part of the EJSS 75th anniversary celebrations and provides a fascinating insight into Artificial Intelligence (AI) and its role in soil science.

Read more: EJSS Russell Review explores how AI will transform soil science - British Society of Soil Science

The Soil Museum of Pertosa (Italy) – "Exploring the soil – a hidden world underground"

By Vincenzo Michele Sellitto – Soil Museum Director

I'd like to introduce you to a truly remarkable place. A special place for those who love soil, for those who want to understand it, and for those who are committed to protecting it. Because beyond research and awareness, one essential element remains: sharing and transferring knowledge. This is exactly the spirit in which the Soil Museum was born - a one-of-a-kind museum in Italy and among the very few in the world entirely dedicated to soil. A real museum, designed to explain, tell, reveal, and immerse visitors in a world that is as real as it is fascinating.

A place where soil is explored from its birth — its genesis — to its formation, its uses, and the ways to treat, preserve, and respect it. Together. The museum was inaugurated on April 22, 2016, on Earth Day, and is in Campania, in the province of Salerno, between the municipalities of Auletta and Pertosa, inside a broader museum and nature complex nestled in the Alburni Mountains, at the heart of the Cilento Geopark. The Soil Museum covers 1,500 square meters of indoor exhibit space, with connected outdoor paths. It offers an extraordinary adventure to experience with all five senses — a journey into the "black box" of the ecosystem, exploring the various layers of soil and the processes that make it a vital resource to know, protect, and preserve, just like air and water. Beneath our feet, chemical, physical, and biological processes are constantly at work — processes on which the landscapes we live in, the food we eat, and our very survival depend. The museum tells the story of soil formation, its relationships with ecosystems, living communities, landscapes, and long-term interaction with human societies.

The Soil Museum Exhibit Sections

Life beneath the surface

Across the different soil layers, key functions vital to the entire ecosystem take place. From videos about leafcutter ants and their complex social organization, to exploring humus, roots, and clay, it's an immersive journey into the living world of soil.

The micro and macro world

Soil genesis

Thanks to specialized equipment, visitors can observe the invisible life of the soil in action. Thin soil sections, when magnified under a microscope, reveal stunning patterns that resemble abstract artwork.

The 3D virtual journey

Three-dimensional models of mites, scorpions, ants, and millipedes are displayed in interactive holographic cases. Visitors can rotate, zoom in,

and explore these soil-dwelling creatures. In the large Soil Theater, a spectacular immersive video takes you deep into the heart of the Earth.

The Pertosa-Auletta caves

Next to the museum lies a true natural treasure: the Pertosa-Auletta Caves, one of the most fascinating karst cave systems in southern Italy. Located along the left bank of the Tanagro River, at an altitude of 263 meters above sea level, they are the only caves in Italy where visitors can navigate an underground river — the Negro, which flows through the cave system for hundreds of meters. The cave complex stretches for about 3,000 meters beneath the Alburni Mountains, offering a unique journey through galleries rich with stalactites and stalagmites. The river's name, "Negro," comes from the Latin *niger*, meaning "dark," referring to the hidden and mysterious nature of this underground world. The caves are composed of three main branches. The northern branch is open for guided tours, while the central and southern branches offer a more rugged, speleological experience. The Spring Branch is entirely traversed by the underground river, which resurfaces at the cave entrance. But there's more: the caves also preserve the remains of a pile-dwelling village from the 2nd millennium BCE, unique in Europe for both its preservation and archaeological setting. This inspired the creation of a speleological-archaeological museum, telling the story of the ancient human presence in the Pertosa-Auletta caves, once inhabited and considered sacred.

Pertosa Caves: Underground boat and Waterfall

Representative soil profiles of some pedological zone of the Campania region

An integrated enhancement system

The entire museum complex is managed by the MIdA Foundation, which works to promote and enhance local environmental and cultural resources, supporting scientific research and knowledge sharing through an innovative, inclusive approach. Its model of sustainable heritage management has been recognized nationally as an example of excellence. This is an experience that combines nature, science, culture, and territory, engaging schools, families, researchers, and curious visitors in a fascinating journey beneath Earth's surface.

Photos credit: Williams Lamattina

Soil Museum

Location: Pertosa (SA), at the MIdA Foundation

Address: Via Muraglione, 18/20, 84030 Pertosa SA, Italy

GPS Coordinates: 40.6005° N, 15.4478° E
Opening Hours: Every day from 10:00 AM to 5:00 PM (reservation recommended)
Email for bookings and info: info@fondazionemida.it

Phone: +39 0975 397037

World Soil of the Year 2025: Gleysol from the Carpathian Basin

The"Gleysol - Hydromorphic soil supporting forest growth in the steppe region from the Carpathian Basin" has been officially named the World Soil of the Year 2025. This soil was proposed by the Hungarian Soil Science Society.

Dr. Endre Dobos, President of the Hungarian Soil Science Society received the prize from Dr. Richard J. Heck, President of the Canadian Soil Science Society and IUSS Chair of Division1, during the Soils for Our Future Conference 2025 in Winnipeg, Canada.

Various activities are planned and already carried out throughout the year to celebrate this achievement, including educational programs, community workshops, and conservation initiatives that promote awareness of the ecological significance of Gleysols.

More information on the World Soil of the Year 2025 can be found here: https://talaj.hu/wsy-2025/

You can watch the video introducing the World Soil of the Year 2025 here: https://www.youtube.com/watch?v=_fk_7kOkrCA

World Soil of the Year 2026 – Deadline Submission

In recognition of the success of many national programs, the IUSS WSY one has been implemented to enhance soil literacy across different countries and on a global scale. The aim is to draw up a registry of soil heritages, to acknowledge the natural and cultural value of soils, and to open doors for soil science to integrate with environmental protection activities and projects.

The deadline for the nomination of the World Soil of the Year 2026 is November 30, 2025. For more information: https://www.iuss.org/world-soil-of-the-year/

2025 Distinguished Service Medal Award

Canadian Senator Robert Black receives the 2025 IUSS Distinguished Service Medal

During the 2025 *Soils For Our Future: A Gathering of Global to Local Perspectives Conference*, held this past July in Winnipeg, Canada, the Honourable Robert Black, Canadian Senator, was awarded the 2025 *IUSS Distinguished Service Medal*. Senator Black was nominated by the Canadian Society of Soil Science (CSSS) for his contributions as Chair of a two-year Senate study examining the status of soil health in Canada, which led to the 2024 report entitled *Critical Ground: Why Soil is Essential to Canada's Economic, Environmental, Human, and Social Health* (sencanada.ca/content/sen/committee/441/AGFO/reports/2024-06-06_Critical-Ground_e.pdf), as well as for his on-going efforts to promote the report and develop government policies regarding soil health. The IUSS recognizes and supports such initiatives that enhance awareness about the critical role that healthy soils playing in supporting food security and, consequently, social, economic and political stability, as well as their essential role in maintaining health ecosystems and mitigating global climate change. As such, the IUSS appreciates the important contributions and on-going commitment of Senator Black to the recognition of soil as a strategic asset and essential resource, and to the protection, conservation and enhancement of soil capacity across Canada. Senator Black is also an Honorary Life Member of the CSSS.

2025-2034 Decade of Soil Sciences for Sustainable Development

Healthy Soils for Humanity - Manifesto

The International Union of Soil Sciences (IUSS) is the global organization of soil researchers (https://www.iuss.org/). The IUSS aims to advance all areas of soil sciences and its applications, foster connections among researchers and practitioners involved in soil sciences, encourage and support the implementation of soil research, and promote soil in education. The IUSS states that healthy soils underpin healthy societies: healthy soils are the foundation of social, ecological, and economic sustainability. IUSS therefore advocates for soil health to be included in all areas of sustainability research. Societies depend for their sustainability on healthy and well-functioning soil ecosystems, which can underpin biodiversity and the quality of air and water. Soil provides essential ecosystem services such as flood and erosion control, pest and disease regulation, climate change mitigation, waste recycling, water purification, biodiversity support, cultural heritage preservation, food security, material provision, and development space. To ensure the continuation or restoration of those services, sustainable management of the soil needs to become part of all areas of social action. This means maintaining or enhancing soil health and protecting it from destruction, pollution, and exploitation in all social activities, including extensive urban development. The IUSS has successfully concluded the Decade of Soils 2015-2024, culminating in the celebration of its Centennial. This period has led to various initiatives and publications, including those made in collaboration with the FAO and other international organizations and societies. The primary objective of the decade was to increase awareness regarding the significant roles that soils play in addressing contemporary environmental, health, and social challenges faced by humanity. According to the United Nations and the Food and Agriculture Organization, the progress towards achieving most of the Sustainable Development Goals is lagging. One contributing factor is the lack of sufficient focus on sustainable soil management and protecting areas from sealing and other forms of destruction. Regenerative and sustainable soil management is essential for sus-

tainable development. Without addressing the impact of human activities on soil health, achieving most of the targets set by the United Nations Sustainable Development Goals is unfeasible. In August 2023, the United Nations General Assembly proclaimed the International Decade of Sciences for Sustainable Development (IDSSD) led by UNESCO (https://www.un-sciences-decade.org/en) aimed at strengthening worldwide scientific cooperation. In consideration of the need to prioritize production, dissemination and use of actionable scientific knowledge to achieve the targets of the SDGs, the IUSS has launched the 2025-2034 Decade of Soil Sciences for Sustainable Development (DSSSD). The Research Forum of the IUSS, in collaboration with the Executive Committee and the Council, will play a crucial role in enabling activities during this period. The overall objectives of the decade are:
• Create a strong science-policy-society interface on soil health and protection for sustainability
•Advance practical understanding on soil sciences for sustainable development.
•Support scientific research and innovation in integrating sustainable soil management in all areas of social action.
•Promote initiatives which engage society with soil research, including citizen science, knowledge co-production, science communication, and soil in education.
•Foster meaningful cooperation between soil research and society to enhance trust in science
•Diversify and strengthen social, cultural, and artistic research on soils.
•Strengthen international collaborative and transdisciplinary and multidisciplinary research initiatives.

Planned specific activities during the decade comprise the following:
•Publishing review papers on tracking the relationships between soil and SDG
•Issuing policy briefs on the recent advances in all fields of soil sciences
•Promoting selected papers dealing with actionable scientific knowledge to achieve the targets of the SDGs
•Hosting thematic Webinars on these topics
•Organizing one or more Sessions on the connections between SDGs and soils at the next WCSS in Nanjing 2026
•Publishing thematic books on the contribution of Soil Sciences to sustainable development
•Working with UNESCO, FAO, ISC, and other organizations for the implementation of IDSSD initiatives at various levels, including national soil science societies
•Collaborating with UNESCO's initiatives focused on leveraging the organization's designated sites as monitoring points for soil, water, landscape, and biodiversity impacts associated with climate change and land degradation.
•Proclamation of the World Soil of the Year (WSY). In recognition of the success of various national programs, the IUSS WSY program has been implemented to enhance soil literacy across numerous countries and on a global scale.

A milestone of the DSSSD is the 23rd World Congress of Soil Sciences which will be held in Nanjing, China in June 2026. The general theme of the Congress is "Soil Health for Humanity". Therefore, improving soil health for humanity is the first focus of the decade's initiative. The 2025-2034 Decade of Soil Sciences for Sustainable Development is a strategic initiative highlighting soil's critical role in achieving sustainable global development. By fostering scientific collaboration, advancing research, and engaging with policymakers and the broader society, the IUSS aims to ensure that soil management remains a top priority in global sustainability efforts. DSSSD will contribute to a future where healthy soils support resilient ecosystems, food security, and sustainable development worldwide through structured activities, knowledge dissemination, and international cooperation. To keep informed on the DSSSD initiative visit the IUSS website (https://www.iuss.org/) and the linked socials.

Supporting Partners

IUSS Participation in UNESCO meeting "Rooted in Resilience II: Soil Sentinel Sites for land degradation, climate and biodiversity action"- 25-28 August 2025.

As a result of a joint initiative developed through the collaboration of IUSS and UNESCO, within the aims of the new Decade of Soil Sciences for Sustainable Development (DSSSD), and of the IUSS Forum, the IUSS has participated in the UNESCO meeting "Rooted in Resilience II: Soil Sentinel Sites for land degradation, climate and bio-

diversity action" with his officers Prof. Abdul M. Mouazem (Guelph University, Canada), and Prof. Asim Biswas (Ghent University, Belgium).

Around 40 participants took part in this venue, among those theUNESCO Biosphere Reserve and Global Geopark Site managers and experts from Europe, North America, Latin America, Africa and Asia; the Global Soil Partnership, Land and Water Division, Food and Agriculture Organization (FAO), Italy; the Centre for International Forestry Research – World Agroforestry (CIFOR-ICRAF), Kenya; the European Commission's Directorate-General for Agriculture and Rural Development (DG-Agri); the EU Soil Observatory (EUSO), the IUSS and many others (for more information click here).

The IUSS experts has contributed to the dialogue to kickstart a partnership that will improve soil awareness, and monitoring in UNESCO sites around the world.

Soils are essential for food security, biodiversity, ecosystem services, and global economic stability, yet they remain undervalued, degraded, and poorly managed. Pressures from human activity and climate change are intensifying, with UNESCO sites already reporting soil erosion, land degradation, and other threats.

To address these challenges, UNESCO convened the "Rooted in Resilience" Conference (1 July 2024), which emphasized soil's critical role in tackling climate change, biodiversity loss, pollution, and ensuring sustainable livelihoods. Experts identified four global priorities: (1) closing knowledge gaps on soil health, especially in UNESCO sites; (2) enhancing soil protection and rehabilitation under climate stress; (3) raising awareness and soil literacy through education and traditional knowledge; and (4) developing national soil management plans and policy guidelines.

UNESCO will leverage its scientific programmes and network of Biosphere Reserves and Global Geoparks to establish "UNESCO Soil Sentinel Sites." These sites will test and scale solutions to improve soil resilience, support local communities, and inform national and international policies. An expert group will guide implementation, share lessons learned, and convene its first meeting in the Schelde Delta UNESCO Global Geopark in July 2025.

The IUSS is willing to contribute to the global dialogue on such pivotal issues and will take part in the future venues organised by UNESCO in its areas to implement the UNESCO Soil Sentinel Sites Program.

(Pictures credits www.unesco.org)

World Soil Day

The World Soil Day, initiated by the IUSS under the leadership of the Kingdom of Thailand and within the framework of the Global Soil Partnership (FAO), is celebrated in many countries around the world each 5th December since 2002. It is a recurrent highlight on the Global Agenda of the United Nations since 2014 focussing attention on the importance of healthy soils and advocating for the sustainable management of soil resources.

The date 5th December, birthday of H.M. Bhumibol Adulyadej, former King of Thailand, was chosen as a tribute to recognize his essential role in the activities promoting the establishment of the WSD.

Glinka World Soil Prize

The search for the new 2025 soil hero has been launched. The call for applications closed on September 15, 2025.

About the prize

The prize comes in the form of a USD 15 000 check and a Glinka gold-plated medal. It aims to raise awareness among policy makers and the general public about possible solutions to tackle acute national and local problems of soil degradation, and to encourage all stakeholders and soil practitioners to engage in field-oriented work, with direct contributions to the preservation of the environment, food security and poverty alleviation as specified in the Revised World Soil Charter.

Who could submit nominations?

Candidates can only be nominated by a FAO Members' focal point to the GSP or the permanent rep-

resentations to FAO, following the established procedures endorsed by the Thirteenth Plenary Assembly of the Global Soil Partnership (Revised rules of procedure of the Glinka World Soil Prize). Self-nominations or nominations by individuals are not accepted. Nominations can be submitted in English, French, Spanish, Russian, Arabic or Chinese.

Who can be nominated?

Nominees should have made outstanding achievements in implementing the principles and recommended actions of the revised World Soil Charter adopted by the FAO Conference in June 2015, and the achievement should contribute to the GSP action areas (a proven impact at the field level will be considered an added value).

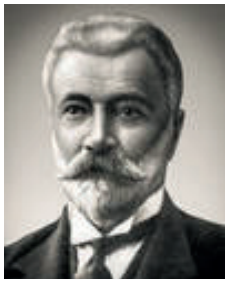
How does the nomination process lead to a Laureate?

The GSP Secretariat examines the submitted nominations. A shortlist of the most qualified nominees is then submitted to the World Soil Prize Selection Committee for evaluation and final decision.

The Glinka World Soil Prize Selection Committee is composed of several members: a representative from the Russian Federation, a representative of the GSP Secretariat, the Chair or Vice Chair of the Intergovernmental Technical Panel of Soils (ITPS), the Chair or Vice Chair of the 13th GSP's Plenary Assembly.

The Laureate will be announced during WSD on 5 December, and the selected individual or institution will receive the prize at the global WSD celebration organized by FAO and the GSP. The Laureate will also be given the opportunity to deliver a lecture during the opening of the following GSP Plenary Assembly.

Who was Konstantin D. Glinka?



Konstantin Glinka (1867-1927) was a prominent Russian soil scientist who is credited for his unique contribution to understanding the principles of the geographical distribution of soils and extensive activities on the exploration, mapping and assessment of vast areas of Siberia, the Far East and Central Asia, as well as his important studies in the areas of soil mineralogy, chemistry and paleopedology.

Read more: Glinka Prize | World Soil Day, 5 December | Food and Agriculture Organization of the United Nations

Conference and Meeting Reports

The International Scientific Conference XXVI-II Dokuchaev Conference for Young Scientists «Information capacity of knowledge about soil»

Date: 27th, February – 1st, March 2025

Location: St. Petersburg, Russia

St Petersburg University and the V.V. Dokuchaev Central Museum of Soil have hosted the 28th Dokuchaev's Youth Readings, an international scientific conference. It brought together about 150 participants from various regions of Russia and foreign countries, including Uzbekistan, Belarus, Turkmenistan, Serbia, Bulgaria, and Ecuador.

The Dokuchaev's Youth Readings have been held annually since 1998 and are timed to coincide with the birthday of Vasily Dokuchaev, an outstanding naturalist, and founder of soil science. The conference traditionally serves to fulfil an urgent task: the formation of knowledge about soil from the origins of soil science to the present day. This year, the event is dedicated to the Decade of Science and Technology in Russia and the celebration of the 80th anniversary of the nuclear industry.

The topic of the Dokuchaev's Readings this year is "The information capacity of knowledge about soil".

Elena Sukhacheva is Professor in the Department of Soil Science and Soil Ecology at St Petersburg University and Director of the V.V. Dokuchaev Central Museum of Soil. She noted that issues that were considered at the Dokuchaev's Youth Readings in 2025 are related to the chemical composition, properties and functions of soils, soil databases as the basis for soil and environmental monitoring, issues in accumulation of radionuclides and heavy metals in ecosystems, as well as digital soil mapping, and the use of geographical information systems in soil science.

"The Dokuchaev's Youth Readings play an important role in discussing scientific issues, exchanging experiences between students, doctoral students, and early-career researchers, testing research materials, acquiring communication skills with the audience, and shaping the educational environment," Elena Sukhacheva emphasised.

She added that St Petersburg University is an important scientific centre for soil scientists all over the world. In the Assembly Hall of the Twelve Collegia building in 1883, Vasily Dokuchaev defended his doctoral thesis "The Russian chernozem".

(Pictures credits www.unesco.org)

Students from schools in St Petersburg and other Russian cities have traditionally become active participants in the Dokuchaev's Readings. "The participation of school students in the conference is an element of the end-to-end environmental education system and contributes to the development of an ecological worldview, broadening horizons and professional orientation in the field of environmental studies and protection," Elena Sukhacheva said.

A special place in the conference was occupied by the school section "From school to science", where participants aged 11 to 16 were able to consolidate their knowledge of the basics of soil science, agricultural chemistry, and soil ecology.

International Lysimeter and Ecotron Workshop. "Measurement Methods for Environmental Monitoring"

Date: March 24th-26th, 2025

Location: Hallbergmoos, Germany

All over the world, ecosystems are confronted with numerous global environmental changes. This affects everything: Agriculture, urban planning, groundwater. Lysimeters and Ecotrons accurately measure these changes and help to better understand soils, waters and plants.

You can use our lysimeter technology for studies on the water balance of ecosystems, the evapotranspiration of the site or the water requirements of irrigated plants. You can also use our mini-laboratories to simulate different types of land use and how certain ecosystems react to different climatic conditions.

The more information of the workshop and the scientific lectures is available at: Review of the Lysim-

eter & Ecotron Workshop | Umwelt-Geräte-Technik GmbH

European Geosciences Union (EGU) General Assembly

Date: April 27th to May 2nd, 2025

Location: Vienna, Austria & Online

The EGU General Assembly 2025 brings together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary, and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience.

The EGU General Assembly 2025 welcomed 20,984 registered attendees, of which 18,646 made their way to Vienna from 120 countries and 2,338 joined online from 104 countries. It was a great success with 18,934 presentations given in 1,102 sessions. Thereby, 56% of the abstracts were identified as contributions from Early Career Scientists (ECS).

Thank you to all participants for your attendance.

The EGU General Assembly reconvenes at the ACV in Vienna & online as EGU26, 3–8 May 2026.

Read more: **https://www.egu25.eu/**

13th Plenary Assembly of the Global Soil Partnership – FAO

Date: June 3rd -5th, 2025
Location: Plenary Hall at FAO headquarters and online

The Thirteenth Plenary Assembly of the Global Soil Partnership (GSP) was held from 3 to 5 June at FAO headquarters in Rome. As the decision-making body of the GSP, the Assembly seeks to exchange knowledge and experiences, take crucial

decisions, and shape the global soil agenda. This year, the event coincided with FAO's 80th anniversary and featured high-level speakers from around the world. The opening ceremony also featured the launch of a new video, "LAND & SOIL - A legacy of action for a food secure and resilient future," showcasing FAO's eight decades of commitment to sustainable soil and land management.

The Plenary brought together a total of 162 partners in person - 110 delegates and 52 GSP partners, along with 795 online participants. These participants represented a wide range of stakeholder groups, including academia, NGOs, farmers' associations, and UN agencies.

FAO Director-General QU Dongyu opened the Plenary Assembly with inspiring remarks, highlighting the importance of the GSP in advancing sustainable soil management: "It *is through strong alliances like the Global Soil Partnership that we have turned challenges into opportunities, and vision into action to improve agricultural production and sustainability*." The opening also featured high-level speakers from Brazil, the People's Republic of China, Thailand, the Islamic Republic of Iran and Zimbabwe as well as representatives from UNESCO and UNCCD. Together, they emphasized the critical role of healthy soils in building a future that is sustainable, productive, resilient, and inclusive.

Following the opening, two high-level roundtables convened key experts and decision-makers to exchange experiences and insights on advancing the global soil and land agenda. The discussions fostered collaboration and promoted innovative, data-driven, and impactful strategies for sustainable land use and soil conservation.

During the three-day discussions, the Plenary addressed several key topics, including the work of the Intergovernmental Technical Panel on Soils (ITPS), the status of the implementation of the GSP Action Framework, soil governance, and soil awareness and literacy. Updates were provided by the chairs of the Regional Soil Partnerships and GSP technical networks. Key decisions included agreement on a robust soil health indicator system to track global progress, endorsement of the members of the fifth Intergovernmental Technical Panel of Soils (ITPS) for 2025–2028 and the establishment of the Technical Network on Soil Erosion.

For the third time, the GSP also organized a dedicated soil partners' day. Officially opened by Mr Lifeng Li, Director of FAO's Land and Water Division, the event served as a platform to foster collaboration, create new synergies, and promote innovative and impactful solutions. Mr Li empha-

sized the significance of the moment: "*this year holds special meaning for us, as we celebrate FAO's 80th anniversary. It is a moment not only to reflect on our shared accomplishments but also to look ahead and set out a course of action for the future*". Discussions were structured around three major thematic areas: science and innovation, data and technology, and impactful solutions on the ground.

The event saw participation from prominent institutions and organizations, including the Gates Foundation, CIFOR-ICRAF & the Coalition of Action 4 Soil Health (CA4SH), ISRIC, the Joint Research Centre of the European Commission, the Nanjing Institute of Geography and Limnology (Chinese Academy of Sciences), Catholic Relief Services (CRS), Kingenta Ecological Engineering Group Co., Ltd. (China), Soil Week Australia/Local Food Connect, and the former President of the International Union of Soil Sciences.

Throughout the Plenary, an exhibition was held in the atrium of FAO Headquarters to commemorate FAO's 80th anniversary. The display celebrated key achievements in soil conservation and sustainable land and soil management, highlighting the contributions of both FAO and land and soil scientists, managers and decision-makers worldwide over the past eight decades.

A special moment on the first day featured young artist Silvio Coiante, who created an artwork on site celebrating FAO's legacy. His layered piece symbolized eight decades of cumulative progress representing how today's achievements build upon years of collective effort. Coiante generously donated the artwork to FAO.

The assembly concluded on 5 June, with delegates and stakeholders appreciative of successful deliberations and ambitious plans for 2025-2026. (Photo credits: FAO website)

Read more: Global Soil Partnership website.

The Sustainability Research and Innovation Congress, SRI 2025

Date: June 16th -19th, 2025

Location: Chicago, USA and online

+ 1400 Partecipants; + 80 Countries; + 100 Sessions; +500 Speakers; + 10 Excursions/Special Events; 20 M Media Impressions

The Sustainability Research and Innovation Congress celebrated its fifth anniversary in Chicago, Illinois, held from 16-19 June 2025 at the Sheraton Grand Chicago Riverwalk hosted by the University of Illinois System. SRI2025 brought together global leaders, innovators, and changemakers to chart pathways toward a sustainable future.

Renowned experts shared insights on climate action, sustainable development, and innovative solutions.

SRI is an annual convening focused on action-forward, knowledge-based and inclusive approaches to sustainability. SRI2025 was the first time the Congress was held in the United States.

SRI2025 spotlighted Pathways to Sustainability Solutions, sharing implementation strategies and legacies of successful approaches to critical sustainability concerns facing Chicago, the United States, and the globe. It also provided opportunities to overcome engagement, policy, resourcing, and other hurdles that slow our transformation to more resilient and equitable futures.

Read more: SRI2025

Publications

2024 Centennial Congress and Celebration

The Book of Excursions

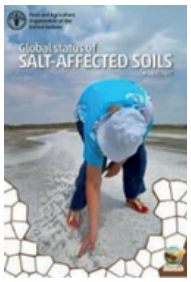
The Book of Excursions of the Centennial Congress and Celebration depict the pre and post Conference activities. From the visit to Villa Lubin where it all started, to the Alpine Soils and rice paddies, from soil and art explored during a scientific trip to Palazzo Vecchio, to soils and viticultural terroir of Central Italy and the paleosols in the Vulsini Volcanic District. A trip across Italy and the role soils play in our life.

ISBN: 979-8-9862451-4-0

https://www.iuss.org/wp-content/uploads/2025/05/Book-of-excursions-.pdf

Global status of salt-affected soils - Main report

By FAO 2024 Rome



Salt-affected soils, characterized by high soluble salts (saline) or exchangeable sodium (sodic), impact plant growth and occur globally, especially in arid and coastal regions. Salinization stems from natural causes (e.g. climate change, sea level rise) and human actions (e.g. poor irrigation practices, excessive water use). FAO's Global Map of Salt-Affected Soils reveals that over 1 381 million hectares, 10.7 percent of global land, are affected, with Australia, Argentina and Kazakhstan among the most impacted countries. Increasing aridity and water demand amplify soil degradation risks, particularly in developing regions. Climate change and water scarcity threaten agricultural productivity, with substantial crop yield losses observed in saline areas. Halophytes and salt-tolerant crops provide a foundation for saline agriculture, yet many salt-affected soils remain unprotected and inadequately regulated. FAO's INSAS (International Network of Salt-Affected Soils) underscores the need for updated data, harmonized salinity measurements, and sustainable management practices, with enhanced training and policy frameworks. Mitigation strategies like improved drainage, soil amendments, and the cultivation of salt-tolerant plants are recommended. Key recommendations include scaling sustainable practices, investing in salt-tolerant crop markets, improving data collection and water quality monitoring, conserving ecosystems, and fostering cross-sector collaboration. Such integrated efforts aim to boost food production and resilience in affected regions while protecting vital ecosystems.

ISBN: 978-92-5-139307-9

DOI:https://doi.org/10.4060/cd3044en

Download: https://openknowledge.fao.org/server/api/core/bitstreams/32d3b78b-d720-4f54-9163-70f55039dbb9/content

Bauern, Plaggen, Neue Böden - 1000 Jahre Plaggenwirtschaft in Nordwestdeutschland

By Klaus Mueller, 2025, Ed. Springer Spektrum Berlin, Heidelberg; 253 p., 276 fig.

Plaggen farming was a form of agriculture practiced for over 1000 years, which shaped the entire northwest German region in a unique way. Evidence of this land use, such as fertile soils, esker edges and extensive heathland, can still be found in the landscape today. In addition to agricultural development, land use, and typical landscape forms, it also had a significant influence on the way people felt, thought, acted and lived together at that time. This book presents the first generally understandable overview of all aspects of the plaggen economy in northwest Germany. It is aimed not only at farmers, soil scientists, geographers and archaeologists, but above all at readers who are interested in the rural past of the people and its socio-cultural character in Lower Saxony, North Rhine- Westphalia, Schleswig-Holstein and parts of Mecklenburg.

ISBN: 978-3-662-68914-1

Report: A Vision for Agriculture and Food

Shaping together an attractive farming and agri-food sector for future generations

European Commission document outlining the future of the sector on the continent for the next 15 years. Launched as a priority initiative for the first 100 days of the new Commission, the Vision "aims to ensure the competitiveness and long-term sus-

tainability" of a key sector.

Download: 33467d24-3123-4118-816e-1782f4872c3d_en

Report: Social sciences, humanities, and the arts in the EU Mission "A Soil Deal for Europe"

The aims of this document are to:

• enhance the understanding of the relevance of social sciences, humanities, and the arts (SSHA) in soil research;

• review the integration of SSHA in the work of the Horizon Europe Mission 'A Soil Deal for Europe' to date;

• provide recommendations on strengthening the integration of social sciences, humanities, and the arts in future research under the Horizon Europe Mission 'A Soil Deal for Europe'.

Download: *Social sciences, humanities, and the arts in the EU Mission "A Soil Deal for Europe"*

Regenerative Agriculture Ecology and Precision Tools

By Parmeet Singh, Monessa Bashir, Shayista Fayaz, Subhash Chand, 2025, Ed. Satish Serial Publishing House.

Regenerative agriculture offers a pathway to restore ecosystems, improve soil health, and enhance biodiversity. This book provides an insight on the philosophy of regenerative agriculture and tools and technologies for promotion in ecologically fragile and finite ecosystems. It offers a deep dive into the essence of regenerative agriculture, exploring its principles and practices, and uncovering how it can address the complex challenges facing modern farming. Regenerative agriculture is a knowledge-intensive, systems-based approach grounded in ecological thinking. The future of agriculture is not just in the yield-it's in fostering ecosystems with precision tools that make every plant, drop of water, and inch of soil count. Rising temperatures and unpredictable weather, driven by climate change caused by human activity, make agriculture highly vulnerable. Traditional farming methods, relying on chemicals, monocultures, and soil-degrading practices, worsen the issue. The remedy is, any farm, whether certified organic or not, can borrow from organic models to introduce a set of practices that regenerate soil life by focusing on biodiversity above and below ground. So, a holistic approach is required for optimum utilization of ecological resources and processes to reap nutritious food without harming soil and animal health. This book is classified into 5 units in 28 Chapters. All the important aspects of regenerative agriculture like Ecological resources, Nutrient management, Precision tools, Soil health, Biotic and Abiotic stress management have been deliberated with references.

ISBN: 9789353878887

Read more: https://www.satishserial.com/book/9789353878887/regenerative-agriculture-ecology-and-precision-tools

Soil Science: An Extension Perspective

By Sanjay Kumar Raina, Subhash Chand et al., 2025, Ed. Satish Serial Publishing House, SSPH.

"Soil Science: An Extension Perspective" offers a comprehensive exploration of soil science principles, management practices, and extension education strategies designed to empower farmers, landowners, and communities in making informed decisions for sustainable soil management and agricultural development. By providing practical guidance, case studies, and success stories, this book serves as an invaluable resource for extension professionals, educators, policymakers, and individuals passionate about promoting soil health and environmental stewardship. Through its rich content, the book aims to inspire action, foster collaboration, and facilitate knowledge exchange to address the challenges and opportunities in soil conservation and sustainable agriculture. Whether you are a seasoned extension agent seeking new insights or a novice farmer eager to learn, "Soil Science: An Extension Perspective" offers a wealth of information and inspiration to guide you on your journey towards building resilient and productive soil ecosystems for future generations.

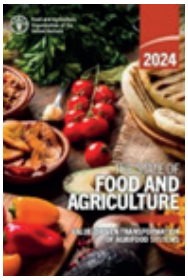
ISBN: 9789353875473

Read more: https://www.satishserial.com/book/9789353875473/soil-science-an-extension-perspective

The State of Food and Agriculture 2024

Value-driven transformation of agrifood systems

By FAO, Ed. FAO, 2024



Uncovering the true cost of food is the first step in making agrifood systems more inclusive, resilient and sustainable. As The State of Food and Agriculture 2023 revealed, agrifood systems activities generate significant benefits for society, but also have negative impacts on economic, social and environmental sustainability. The quantified hidden costs of agrifood systems amount to around 10 percent of global gross domestic product. Therefore, strategic action is necessary, and all agrifood systems actors from producers and agribusinesses to consumers and governments have a crucial role to play. While transforming agrifood systems would yield a net global gain, the benefits and costs would be unevenly distributed among stakeholders and countries over time. The State of Food and Agriculture 2024 builds on the findings of the 2023 edition, delving deeper into the use of true cost accounting assessments of agrifood systems and identifying policy interventions aimed at transformation. Using updated global datasets, the report confirms previous estimates of the quantified hidden costs of agrifood systems and provides a detailed breakdown of the hidden costs associated with unhealthy dietary patterns and non-communicable diseases for 156 countries. These findings are analysed through the lens of six agrifood systems categories to consider various outcomes and hidden costs that require different policy interventions. Case studies offering in-depth assessments of country, local and value chain contexts illustrate the economic, social and environmental impacts of current practices to guide policy interventions. Crucial to all contexts is the need for inclusive stakeholder consultations to inform interventions and reconcile power imbalances and trade-offs.

ISBN: 978-92-5-139140-2

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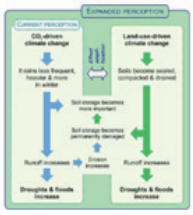
HESS Opinions: Floods and droughts – are land use, soil management, and landscape hydrology more significant drivers than increasing CO_2?

By Auerswald, K., Geist, J., Quinton, J. N., and Fiener, P., Hydrol. Earth Syst. Sci., 29, 2185–2200.



The rising frequency of heatwaves, droughts, floods, and flash floods is commonly attributed to CO_2-driven climate change, what can be called the "current perception." However, an opinion paper published in Hydrology and Earth System Sciences presents an "expanded perception," arguing that human-induced soil degradation, such as compaction, sealing, and drainage, can produce similar hydrological effects.

The paper emphasizes that the causal relationship between climate change and these extreme events should not be assumed without robust, quantitative evidence. It cautions against reversing cause and effect: the occurrence of droughts and floods does not confirm CO_2-driven climate change.

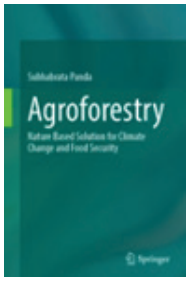
According to this perspective, the meteorological impacts of CO_2-induced climate change appear too weak to fully account for the observed extremes. In contrast, widespread soil degradation offers a plausible and immediate explanation. Moreover, this view opens the door to hope: if soil damage is a major contributor, then local measures to protect and restore soil health could significantly reduce the risks of droughts and floods.

DOI: https://doi.org/10.5194/hess-29-2185-2025

Read more: https://hess.copernicus.org/articles/29/2185/2025/

Agroforestry - Nature Based Solution for Climate Change and Food Security

By Subhabrata Panda; Springer Nature, Singapore; Published: June 2025



This book deals with the impacts of agroforestry on soil health and thereby on sustaining crops and tree productions. Thus, the practice of agroforestry on improving soil health is a two-way process of serving the sustainability of livelihoods and food security.

DOI: https://doi.org/10.1007/978-981-96-6855-7

Read more: https://link.springer.com/book/10.1007/978-981-96-6855-7

Pollution of coal mine soils: Global reference concentrations of chemical elements

By Alekseenko A.V., Machevariani M.M., Bech J., Karthe D.; Environmental Earth Sciences, 84, 286 (2025).

This meta-study provides a reference dataset for evaluating soil transformation in coal minescapes. Identification, screening, eligibility check, and extraction of data from articles published in peer-reviewed journals between 2000 and 2022 yielded a comprehensive dataset on the chemical composition of 13,925 soil samples from 55 mined coal fields in 32 countries of Eurasia, Africa, Australia, and the Americas. These carefully handpicked records allowed the calculation of mean concentrations for 41 chemical elements, alongside total organic carbon and a total of 15 rare-earth elements. The resulting dataset is of both fundamental geochemical and policy-relevant significance. The maximum enrichment of contaminated soils with As, Bi, Hg, Sb, and Se reveal the role of coals as the source of highly coalphile elements. Remediation guidelines can benefit from the dataset, e.g., for arsenic whose world average contents fall below the standards of Canada, Russia, and the USA. Regional soil quality criteria incorporate these figures to update threshold levels for mining sites. Finally, for the areas of discovered coal reserves, the question “to mine, or not to mine” can be answered with higher certainty owing to the predicted levels of pollutant burden.

DOI: https://doi.org/10.1007/s12665-025-12160-0