



International Union of Soil Sciences®



# IUSS Bulletin 144

*Centennial Issue  
1924 - 2024*



100  
years of  
**SOIL  
SCIENCE**

*past achievements  
and future challenges*

IUSS Bulletin 144  
Centennial Issue 1924-2024

Centennial Issue 1924-2024  
International Union of Soil Sciences (IUSS)

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# Contents

<b>IUSS Reports</b>	<b>5</b>
Activities of the IUSS Presidents	5
Report from the IUSS Secretariat	6
Stimulus Fund 2024	8
<b>News from National and Regional Soil Science Societies</b>	<b>10</b>
Australian Society of Soil Sciences	10
<b>News from the Divisions</b>	<b>12</b>
Report from Division 1 – Soil in Space and Time	12
Report of Division 2 – Soil properties and processes	13
Report of Division 3 - Soil Use and Management	15
Report from Division 4 – The Role of Soils in Sustaining Society and the Environment	15
<b>Other news from the IUSS</b>	<b>16</b>
<b>Centennial Congress and Celebration</b>	<b>17</b>
Report from the IUSS Secretariat - Centennial Congress and Celebration	19
IUSS Distinguished Service Medal 2024	22
Book of Abstracts	24
Centennial Celebrations side events	24
Congratulations	32
<b>Conference and Meeting Reports January - June 2024</b>	<b>37</b>
<b>Publications</b>	<b>44</b>
<b>In memoriam</b>	<b>52</b>



# IUSS Reports

## Activities of the IUSS Presidents

*President – Edoardo A.C. Costantini*

*President of the IUSS Activities in the First Semester of 2024*

During the first semester of 2024, the President has continued his dedicated service to the International Union of Soil Sciences, focusing on implementing the objectives outlined in the IUSS Strategic Plan 2021-2030. His efforts have been particularly noteworthy in the areas of improving organizational capacity, strengthening member linkages, promoting outreach, and coordinating the upcoming Centennial celebrations.

### Improving Organizational Capacity and Management of the IUSS

The President has made significant strides in enhancing the organizational capacity and management of the IUSS. He conducted monthly meetings with the Presidents and the Executive Committee, ensuring continuous engagement and effective governance. His proactive approach led to the suggestion and support for the creation of two new IUSS awards focused on Communication and Innovation. Furthermore, he played a pivotal role in advocating for and participating in the task force dedicated to celebrating the IUSS World Soil of the Year. Another notable achievement was the selection of Hon. Penelope Wensley as the recipient of the Distinguished Service Award for 2024. In addition, he co-chaired the Organizing Committee for the upcoming Inter-Congress meeting in Nanjing, China, scheduled for October 2024.

### Strengthening Linkages with Full Members of the IUSS

The President has been instrumental in strengthening the linkages with Full Members of the IUSS. He promoted and facilitated the full membership of Moldova, Egypt, and Albania, expanding the IUSS network. To keep members well-informed, he organized an online forum for Council members to provide updates on current IUSS activities. His engagement with international soil science communities was exemplified by delivering an online invited keynote at the Soil Science of Japan's Soil Health Conference and giving an online invited speech at the Regional Conference of East and Southeast Asia hosted by the Vietnamese society. He also conducted online meetings with the British Society of Soil Science (BSSS) to organize a session on soil policy at their Centennial event and arrange a stand. Further, he held an online meeting with the CEO of the Australian Soil Science Society for knowledge exchange and cooperation and engaged with officers of the European Confederation of Soil Science Societies to support the planning of the ECSSS Congress

2025 in Sevilla, Spain.

### Empowering Outreach and Promotion of the IUSS and Its Members

The President represented the IUSS at various international and national meetings, attending the EJP SOIL Annual Science Days & General Meeting in Vilnius, Lithuania, the Italian Soil Hub of the Global Soil Partnership in Rome, Italy, and the European Innovation Partnership EIP-AGRI in Escoril, Portugal, all in person. He also participated online in the European Soil Partnership and the Plenary meeting of the Global Soil Partnership of the FAO.



*Field excursion in Lithuania during EJP-Soil (ph. E.A.C. Costantini)*

In maintaining relationships and fostering collaboration with partner associations, the President worked closely with FAO to ensure participation in the Centennial celebrations and initiated collaboration with UNESCO on integrating soils within landscape management. He has invited by UNESCO to deliver a keynote in person and participate to a round table at the MAB Conference on the theme of Soils at the heart of integrated landscape management, Agadir, Morocco.



*Keynote at the UNESCO Conference of Agadir Morocco, July 1st, 2024 (ph. E.A.C. Costantini)*



Round table at the UNESCO Conference of Agadir, Morocco, July 1st, 2024 (ph. E.A.C. Costantini)

He participated in online meetings with the Coalition for Soil Health, the Sustainable Soils Alliance, and the Save Soil Movement. Additionally, he organized a meeting with the Unions of the International Science Council (ISC) to discuss fundraising issues and involved the Soil Science Society of Chile in ISC-organized events in Santiago. His work with the GeoUnions of the ISC included developing a common position on the new ISC statutes and rules of procedure and participating in the Disaster Risk Reduction group. He also conducted a one-on-one meeting with the ISC Secretariat to address IUSS needs and strengthen relations, examined and approved the ISC account, and appointed IUSS experts to review the Hazard Information Profiles in soil salinity and soil erosion for the UNDRR, as requested by the ISC. Additionally, he submitted a candidature for the ISC nominations governing board.

### Coordinating the Organization of the Centennial of the IUSS

The President has been actively coordinating all aspects of the IUSS Centennial celebrations. His efforts ensured that this milestone event was a success, with meaningful engagement from all stakeholders. His comprehensive approach to organizational management

#### *Past President - Laura Bertha Reyes-Sánchez Global Women's Breakfast*

In response to the invitation of the International Scientific Council for the IUSS to join the Global Women's Breakfast (GWB-2024) convened by the IUPAC to take place in Paris, France, On February 25 to 27, the Global Women's Breakfast of the Standing Committee for Gender Equality in Science (SCGES) was held at the Pierre et Marie Curie facilities at the Sorbonne University and later the Institute Henri Poincaré was visited, where the museum of the Maison des Mathématiques is. The IUSS Past President Laura Bertha Reyes-Sánchez attended those activities, participated in the Webinar on the topic POPULARIZING SCIENCE WITHOUT GENDER

BIAS and had a meeting with representatives of young scientists' organizations at the Sorbonne University with the aim of identifying possibilities for future collaboration between SCGES and young scientists' organizations.



SCGES

### Global Women's Breakfast of the IUSS Young and Early Career Soil Scientists Working Group (YECS)

Under the slogan "Catalyzing Diversity in Science", the IUSS Past President participated online as speaker in the "Global Women's Breakfast Emma Marie Antoine Täuber" (GWB-2024) organized by the YECS, in which she shared space with young scientists from YECS and Dr. Natalia Rodriguez from GSP-FAO. During the event, Dr. Laura Bertha Reyes-Sánchez participated with the presentation: "Emma Marie Antoine Täuber: The history behind."



IUSS YECS

### Report from the IUSS Secretariat Social Media & Website

The first six months of 2024 have been busy indeed for the Secretariat that has been involved in the preparation of the Centennial Congress and Celebration above its usual business.

In this sight, a keen activity on the IUSS social media has been pivotal in promoting the IUSS and the Secretariat many activities. Facebook, as always, leads the way with more than 15.327 followers, almost 500 more than the previous semester, having had an access pinnacle at almost 9.000 on a single post during the Centennial. X

is following steadily right behind with 4.724, with an increase of 340 followers, and LinkedIn really jumped up with 1.065 followers, having had a timid start a little over one year ago with only 30 followers. Moreover, this year the Secretariat has set up a brand new IUSS Group on Facebook, a platform open to subscription that would like to be a meeting arena for all soil scientist to meet and discuss different soil-related topics. The Secretariat has set up, as well, another YouTube channel where it is possible to retrieve the Centennial video and the interviews to the Centennial leading actors. The new website has been aired this last February with many new, interesting features, one of them being our library where it is possible to freely download the IUSS publications and books. Moreover, each Division has now its own space on the Division page to add their posts and other contents (<https://www.iuss.org/soil-publications/>). The events section has been updated, and the IUSS Full Members Map has been added, a useful tool to locate our members all over the World. The Centennial Website will be permanently linked to our website, not to lose any detail of this one-of-a-kind event. Moreover, the Secretariat, as usual business, takes care of the monthly Alert and the Bulletin.

### **IUSS Secretariat Scientific Activity**

#### *January 2024*

The Secretariat appointments during the first six months of the year have been focused on exploring new scenarios. One of which was being involved in the Italy-Japan Forum, a high-profile event under the Patronage of the Senate of the Italian Republic. Giuseppe Corti, Head of the IUSS Secretariat, together with Cristina Giannetti, Head of CREA Press Office and IUSS Communication Manager, and Irene Fabbri, IUSS Secretariat Office Manager, welcomed Luca De Carlo, President of the Senate IX Permanent Commission on Agriculture, Daniele Di Santo, President JIEF, and Takashi Kosaki, Former IUSS President to discuss about research, enterprise, education, training and soil in Italy and Japan. The Forum XI edition was finally back to Rome after 5 years and addressed agriculture and some other pivotal topics such as food safety, climate, environment protection, and geopolitical issues. The event saw the participation, among many others, of the then CREA Special Commissioner, Mario Pezzotti, and Kengo Otsuka, Ambassador of Japan in Rome.



*From left to right: Cristina Giannetti, Giuseppe Corti, Takashi Kosaki, Irene Fabbri (ph. IUSS Secretariat)*



*Ph. I. Fabbri*

#### *April 2024*

In April, the IUSS Secretariat met IES Abroad Rome and welcomed American students at CREA, the Council for Agricultural Research and Economics which hosts the IUSS Secretariat, for a day to talk about internship, the IUSS Centennial Congress and Celebration, soils, agriculture and the future challenges of research. The two partner organizations have been offering for quite some time to American students an internship experience in Rome in the field of agricultural research. The day unfolds with a visit to the historical building which houses the CREA Agriculture and Environment Centre and carries on with lectures on the role of CREA in the European Union and in the international debate on agriculture, research and economy. Moreover, the students had the chance to know in depth the IUSS and the many activities of the Secretariat.





Group picture with IES students and IUSS Secretariat (ph. IUSS Secretariat)

### June 2024

In the beginning of June, the IUSS Secretariat participated in the 12th Plenary Assembly of the Global Soil Partnership (GSP) at FAO headquarters in Rome. Three days of interesting reviews of the many activities and challenges of the GSP. The plenary involved around 900 participants from Academia, NGOs, civil society organizations and UN agencies discussing together about sustainable soil management. The aim of the GSP is to improve the health of at least 50% of the world's soils by 2023. A very ambitious goal indeed highlighted, as well, by FAO Director General Qu Dongyu during his opening speech. Among many interesting moments, the "Deep rooted impact" event was a standout and closed the first day. The exhibition underlined what is achievable through soil health awareness and advocacy showcasing a GSP initiative undertaken in Thailand since 2017.



IUSS Secretariat representatives, from left to right: Maria Grazia Piazzu, Filiberto Altobelli, Irene Fabbri (ph. IUSS Secretariat)

## Stimulus Fund 2024

The first Stimulus Fund call of the year 2024, as always, has been successful. Six applicants have submitted their applications and all of them have gained consensus from the Stimulus Fund task Force Evaluation. As follows, a brief excursus of the winning projects, the full report will be published in the next issue upon completion of the projects.

### Three-Day Workshop on Know Your Soil Program for Youth and Soil Judging Contest

By *Ajay Kumar Mishra, Associate Scientist, Soil Science Sustainable Impact Platform ISARC, Varanasi, UP, India, and Sheetal Sharma, Scientist II- Soil Science Sustainable Impact Platform, New Delhi, India*

The training in Sonbhadra, Uttar Pradesh, India, will take place in an area with diverse soil composition, essential for agriculture:

1. Alfisols: These well-drained and fertile soils are prevalent, supporting a wide range of crops.
2. Red Soils: These iron-rich soils are found mainly in hilly regions and offer unique growing conditions.
3. Alluvial Soils: Deposited by rivers, these fertile soils line riverbanks and are ideal for agriculture.
4. Lateritic Soils: Some areas feature acidic lateritic soils, requiring specific cultivation methods.
5. Black Soils: Though less common, pockets of moisture-retentive black soils can be found.

This soil diversity in Sonbhadra influences crop choices and farming practices. This soil judging contest is expected to equip the participants with diverse knowledge that will help them understand soil characteristics and make them capable of managing it sustainably. Participants will also be exposed to different anthropogenic and natural soil-forming factors. We will also develop standard protocols based on ISRIC – World Soil Information and FAO.

### 6<sup>th</sup> Global Workshop on Proximal Soil Sensing – GPSS-2024

On behalf of the Organizing Committee, *Prof. Abdul M, Mouazen Professor in Site Specific Soil & Crop Management, Ghent, Belgium.*

This four-day event will be fuelled with discussions and networking on Unveiling Advances in Proximal Soil Sensing, under the following themes:

- Novel sensor development
- Modelling and mapping approaches
- Multi-sensor data fusion technologies
- Application of PSS in precision agriculture
- Application of PSS in anthropogenic targets, and Socio-economic, environmental impacts and future adoption potential

## **Encouragement of soil science awareness at the college level in Nsukka, Eastern Nigeria**

*By Prof. Charles L.A. Asadu, Zonal Coordinator NISS SE Zone Department of Soil Science, University of Nigeria, Nsukka (UNN).*

Sensitization visits to secondary schools on “Career Opportunities” sponsored by the Nigeria Institute of Soil Science (NISS) from March 1-7, 2024, revealed that most of the students were not aware of what soil science could offer compared to Crop Science or Animal Science simply because they were more familiar with “Crops” and “Animal” than with “Soil”. However, after our interaction with them and the proposal to form “Soil Science Club” in each school was presented, most were eager to become members of the Club. The clubs were inaugurated in four of the Schools visited namely: Community Secondary School, Alor Uno; Community Secondary School, Nru; Hillview Unique Secondary School, Nru and Nsukka High School, all in Nsukka area of Eastern Nigeria. The stimulus fund will grant us to follow up and encourage the dissemination of soil science at the college level in the zone and achieving the following:

1. Encourage the students to appreciate soil science as the bedrock not only for agriculture but other related environmental sciences
2. Support the already formed clubs in the four schools
3. Engage the students in simple soil tests and grow crops in the school gardens based on the soil test results
4. Galvanize the clubs for purposes of information dissemination to other schools in the southeast of Nigeria.

## **Grounding soils in Southeast Asia: A workshop and strategic roundtable for soil scientists, artists, practitioners, activists, and interdisciplinary researchers in and around Southeast Asia**

*By Dr. Huiying Ng, Rachel Carson Center for Environment and Society, Ludwig-Maximilians University, Germany, and Dr. Dimas D. Laksmana, Department of Sociology, The University of Indonesia, Indonesia.*

This meeting proposal builds on existing networks, including the Participatory Food Systems group, which is based in South and Southeast Asia. We thus plan side meetings for our participants with other scholars and practitioners at the ICAS conference and beyond. In detail, two meetings are planned with the Southeast Asian Neighbourhoods Networks and River Cities Network. As we aim to develop a mutual learning and exchange platform that relies on knowledge and tools that are beyond academia, the collaboration of WAFILab, a local partner that innovates in science communication has been achieved. At WAFILab, hands-on training activities will be carried out, i.e. to make DIY tools (microscope and synthesiser) that can facilitate citizen science methods specifically of tracking, gaining an understanding and in-

terest in soil health, and that motivate public pedagogy. By spending one week together, we aim to develop camaraderie amongst our collaborators, and foster a lively exchange of ideas, inspiration, and experiences that can support long-term remote collaboration in and beyond Southeast Asia. This aligns with the values of grounding our practices in shared activities with soil while working internationally brings in resources of different ways of relating to and through soils, particularly within the IUSS

## **Development of monoliths for environmental education about soils in the southern and Austral macro-zones of Chile**

*By Dr. Jorge Ivelic Sáez, Ingeniero Agrónomo, Magíster Investigador, INLA Kampenaike.*

One of the most striking, clear and reliable method for education are the soil monoliths that presents the vertical soil profile maintaining its morphological characteristics. At this moment there are no such monoliths in the southern and austral zone of Chile due to the scarce knowledge in their extraction and the complicated field work for their creation, due to the extreme edaphoclimatic conditions of these places.

This proposal aims to increase the knowledge of the ecosystem functions of the soil to schoolteachers and children using soil monoliths. Specifically, the objective will be pursued by developing a new extraction method and associated protocols to create monoliths efficiently and systematically to be taught in different instances to the community, as schools, municipalities, governmental services, or others.

## **9th International Symposium on Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM 2024)**

*By Dr. Rota Wagai National Agriculture and Food Research Organization, Institute for Agro-Environmental Sciences, Division of Climate Change Mitigation, Kan-nondai, Tsukuba, Ibaraki, JAPAN.*

The goal of the present congress is to provide a platform for exchange and discussion between scientists from different fields of soil science, soil chemistry, soil biology/microbiology, soil biochemistry, soil physics, ecology and environmental science who are interested not only in the fate of soil organic matter but also in the impact of soil minerals and microorganisms in the respective processes. Approximately, 200 scientists from all continents are expected.

It is intended to attract young scientist and promote their interest in soil science by offering low early-bird registration fees and low-cost accommodation for students. In addition, the Pan Ming Huang award will recognize the work of a – preferentially young scientist – who made significant contributions to advancing the understanding

of the interactions between soil minerals, soil organic matter, and soil organisms.

## News from National and Regional Soil Science Societies

### Australian Society of Soil Sciences

#### A global accreditation for soil scientists

Chief Executive Officer of Soil Science Australia (SSA), Mr Michael Walker, recently chaired a meeting to explore the potential development of an international certification or accreditation for soil science professionals and practitioners.

Delegates from soil science societies were invited to participate in the meeting, which was held on 21 May, in conjunction with the Centenary Celebration and Congress of the International Union of Soil Science (IUSS) held in Florence. The meeting was attended by representatives from several soil science societies, including Britain, Italy, New Zealand, America and Canada.

SSA has appropriate experience in establishing and managing certifications, through administering its long-term accreditation, the Certified Professional Soil Science (CPSS) program and associated specialty Contaminated Soil Assessment and Management (CPSS-CSAM) and Australian Soil Survey (CPSS-AusSS) certifications. The CPSS accreditation is the mark of trust, expertise and excellence in soil science in Australia.

More recently, and with support of the Australian Government, SSA has been delivering Registered Soil Practitioner (RSP) training and accreditation for practitioners who work in areas including soil management, soil carbon and acid sulfate soil. SSA is continuing with developing further specialties such as the RSP erosion and sediment control accreditation.

SSA partners with the Soil Science Society of America which provides the examination platform and is particularly grateful to Dr Dawn Gibas who drafted the initial proposal to establish a working group to examine the demand and feasibility of an international accreditation.

The proposal has already received support from the majority of representatives attending the inception meeting in Florence, and there is also preliminary support for the initiative from IUSS President, Mr. Edoardo Costantini, Secretariat Mrs. Irene Fabbri and also from IUSS Division 1 Chair, Professor Richard Heck.

SSA would be delighted to Chair the Working Group, should the proposal be deemed successful, and welcomes broader support from representatives from other soil science societies who may wish to be involved.

To obtain a copy of the draft proposal to establish an IUSS working group on international accreditation, please contact SSA by emailing [projects@soilscienceaustralia.org.au](mailto:projects@soilscienceaustralia.org.au).



*CPSS logo*

The CPSS accreditation is the mark of trust, expertise and excellence in soil science in Australia.



*RSP logo*

The Registered Soil Practitioner training and accreditation ensures soil practitioners in Australia can implement fit-for-purpose soil sampling and interpretation.

#### Soil Society of Pakistan and Arid Agriculture University (PMAS)

#### Committees of the 20<sup>th</sup> International Congress of Soil Science (ICSS-2024)

*February 20-22, 2024- Rawalpindi-Pakistan*

“Soil Health: A Key to Food Security.” Soil health is a critical and often underrated component of global food security. In an era of growing global population and increasing food demand, the quality and vitality of our soils play a key role in ensuring a sustainable and nutritious food supply. The 20th ICSS-2024 brought together stakeholders including academia, research, industry, and farming community from Pakistan and abroad to share their provocative ideas with fellow soil and environmental scientists in relation with the theme of the congress. <https://www.uar.edu.pk/media/departments/20th%20ICSS%202024-271023.pdf>

## **16<sup>th</sup> International Conference of the East and South-east Asia Federation of Soil Science Societies (ESAFS 2024)**

*March 26<sup>th</sup> – 29<sup>th</sup>, 2024 - Thai Nguyen University, Thai Nguyen City, Vietnam.*

ESAFS conference is a series of scientific meetings organized every two years to share updated experience and knowledge among soil scientists, particularly within East and Southeast Asia countries. It is also a platform to promote R&D and disseminate the acquired knowledge and technology related to soil sciences. This series of ESAFS's conference is organized to fulfil part of the above aims, rotates within member countries thus allowing equal participations of local soil scientists and fair site information exchange. ESAFS 2024 was the first time for Vietnam as an organizer.

<https://esafs2024.tnu.edu.vn/>

## **British Society of Soil Science (BSSS)**

### **Soil Training Course**

The course organized by British Society of Soil Science was a Practical Introduction to Soils in Great Britain.

Registration has opened for the course which will be taking place at Shuttleworth College in Bedfordshire on Wednesday 10 and Tuesday 11 April. This two-day Training Course was led by a team of national experts in soil description, mapping and classification. Delegates learned how soils form, why they differ from one place to another, why and how they are classified, how to identify and record key soil properties, such as texture and structure, and then were taken into the field to practice your newly acquired skills. On the second day, they were able to study a range of different soil types with guidance from the experts.

<https://soils.org.uk/education/soil-training/>

## **Austrian Society for Soil Science (ÖBG)**

### **BODENFORUM ÖSTERREICH - SPRING MEETING 2024**

*May 15, 2024 - May 16, 2024 - Innsbruck, Austria*

The Federal Environmental Agency, the Austrian Society for Soil Science (ÖBG) and the Land of Tyrol invited to the spring meeting of the Austrian Soil Forum took place on 15 and 16 May 2024 in Innsbruck. The Soil Forum has been held twice a year in Austria since 2002 and offers all interested parties an established format for exchanging information, communicating and discussing current soil issues. The Soil Forum creates interfaces to other topics that are important for soil protection, such as spatial planning or geology.

*THEME:* Soil value - total soil value

Healthy and fertile soils are the basis for food produc-

tion and thus for security of supply. Changes caused by climate change, management or soil conditions have an impact on soil productivity. Our floors, and the functions they perform, are a valuable asset. This includes a wide range of technical aspects to address the topic of “soil value”.

[Bodenforum Österreich - Frühjahrstreffen 2024 \(umweltbundesamt.at\)](https://www.bodenforum.at/ueber-uns/veranstaltungen/fruehjahrstreffen-2024)

## **Malaysian Society of Soil Science**

### **International Soil Science Conference 2024**

*May 14 - 16, 2024 - Kuantan, Pahang, Malaysia*

*“Cultivating Earth’s Future: Nurturing Soil Health for Sustainable Agriculture”*

The Soil Science Conference is a conference that is conducted annually, where the MSSS is the main organizer, together with selected research institutions or universities as the co-organizers. It serves as a significant platform for researchers, scientists, academicians, practitioners, and industry experts from around the globe to convene and deliberate on the latest advancements, challenges, and opportunities in the realm of soil science. This conference will foster interdisciplinary collaborations and knowledge exchange, aiming to unlock the hidden secrets of soil and harness its potential for sustainable development.

[E INTERNATIONAL SOIL SCIENCE CONFERENCE 2024 \(iium.edu.my\)](https://www.iium.edu.my/soil-science-conference-2024)

## **Argentinean Soil Science**

### **XXIX Argentinean Soil Science Congress**

*May 21 -24, 2024 - San Fernando del Valle de Catamarca*

*The Argentinean Association of Soil Science (AACS) organises every two years in different locations throughout the country, the Congress of Soil Science.*

The missions of the AACS are: promote and conduct scientific events on soil science; disseminate knowledge through conference proceedings, publications, journals, etc.; create scientific committees to get involved in regional and local soil and environmental issues and to accompany and encourage young professionals in soil science.

The Catamarca, with its rich history, culture and vast landscapes, welcomes you with open arms. We are sure that you will enjoy the hospitality of its people, the beauty of its landscapes and the richness of its natural heritage.

<https://congreso2024.suelos.org.ar/>

## **Japan Society of Soil Science**

### **7<sup>th</sup> international Soil Classification Congress**

*June 3<sup>rd</sup> - 9<sup>th</sup>, 2024 - Hokkaido, Japan*

The IUSS International Soil Classification Congress (ISCC) began in 2001 (Hungary), followed by 2004 (Russia), 2008 (Chile), 2012 (USA), 2016 (South Africa), and 2022 (Mexico). At this international congress, we have discussed the status and problems of soil classification, observing the soil profile of agricultural, uncultivated land and urban soils.

The 7th ISCC was held in Hokkaido, which is a representative agricultural area in Japan, and attractive as the place of pre-tour, 2day's meeting and 3day's excursion. The various types of Andosols, dynamic soil genesis of Andosols, toposequence of soils, such as Histosols, Fluvisols, and Andosols, and impact of agriculture on soil profiles and their soil classification were discussed.

The 7th ISCC is the official conference of Commission 1.4 (Soil Classification) of the IUSS. The official classification systems of the IUSS are the World Reference Base (WRB) and USDA Soil Taxonomy. The contributions on national soil classification systems are invited and welcome. The 7th ISCC was held in Asia for the first time.

[Call for Papers / 7th ISCC \(iscc2024.org\)](https://www.iuss.org/divisions/division-1-soils-in-space-and-time/)

### **Canadian Society of Soil Science CSSS 2024 Conference Soil Functions for Future Generations**

*June 9-13, 2024 - University of British Columbia, Vancouver*

The theme of the 2024 annual conference of the Canadian Society of Soil Science was *Soil Functions for Future Generations*. This theme encourages soil scientists to think about how we can safeguard the vital resource of soil into the future and how we can ensure that the many functions of soil are continued on into perpetuity.

<https://csss2024.landfood.ubc.ca/>

### **Soil Science Society of America SSSA 2024 Summer Conference Common Ground: Soils Beyond Borders**

*June 10-12, 2024 - San Juan, Puerto Rico*

The Soil Science Society of America hosted a summer conference that offered unlimited networking opportunities, innovative scientific abstracts, poster sessions, invited symposia, exhibitors, technical workshops, and professional tours.

[Home | SSSA 2024 Bouyoucos Summer Conference \(sacmeetings.org\)](https://www.sssa.org/2024-summer-conference)

### **Brazilian Society of Soil Science Congresso FertBrasil**

*June 11th -13rd, 2024 - Campinas, Brasil*

The FertBrasil Congress was an important forum on the use and management of fertilisers and its main theme was Innovation in Fertilisers and Inputs for Plant Nutri-

tion in the Tropics. The event covered the use of organic fertilisers, special nitrogen fertilisers, phosphorus sources for Brazilian agriculture, bio-inputs applied to plant nutrition, as well as the global and Brazilian fertiliser scene and issues related to the role of new technologies in the relationship between fertilisers and the environment.

<https://fertbrasil.com/>

## **News from the Divisions**

### **Report from Division 1 – Soil in Space and Time**

#### **Division 1 – Soil in Space and Time**

[www.iuss.org/divisions/division-1-soils-in-space-and-time/](https://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

*Vice Chair IUSS Centennial:* Stefania Cocco/Italy

*1<sup>st</sup> Vice Chair 23rd WCSS:* Ganlin Zhang/China

*2<sup>nd</sup> Vice Chair 23rd WCSS:* Ying Zhang/China

#### **Recent and Scheduled Upcoming Activities**

*IUSS Centennial Celebration and Congress; Florence, Italy; May 19th to 21st, 2024:*

\* The Division 1 Plenary Presentation, entitled “The Evolution of Pedology - Drawing from the Past, Adapting to the Future”, was delivered by Dr. Alex McBratney of the University of Sydney.

\* Members of Division 1 contributed to the organization of ten technical sessions in three of the categories:

*Soils in the Digital Era:* “Application of Proximal Soil Sensing Technologies and Beyond”, “Quantifying and Mapping Soil Functions”, “Digital Soil Mapping and Assessment at Different Scales – Where to go Next?”, “Novel Approaches to Process-Based Modelling in Agricultural Soils”, “Digital Soil Mapping, Decision Support Tools and Soil Monitoring Systems in the EU”, “Soil Information Standards and Systems-Current Initiatives and Advances”.

*Soil Sciences Impact on Basic Knowledge:* “Soil Classification: Past and Present Concepts and Solutions”, “The Bright Future of Pedology”, “Soils of the Past for Present and Future: Marking the 100th Birthday of Dan H. Yaalon”.

*Other:* “Advances in Soil Health Monitoring”.

\* During the Closing Ceremony, the “Chernozem of the

Balti Steppe of Moldova” was proclaimed as the Inaugural IUSS World Soil of the Year, with Dr. Boris Boincean accepting the award on behalf of the Moldovan Society of Soil Science.

### Commission 1.1 – Soil Morphology and Micromorphology

(Chair: Fabio Terribile/Italy; Vice Chair: Adam Csorba/Hungary):

\* “*Archaeological Soil Micromorphology short course*” was held in London, UK; February 10<sup>th</sup> to 17<sup>th</sup>, 2024.

\* “*17th International Conference on Soil Micromorphology (ICoSM)*” will be held in Puno, Peru; December 2<sup>nd</sup> to 10<sup>th</sup>, 2024 ([micromorphology.puno2024.com/](http://micromorphology.puno2024.com/)).

### Commission 1.3 – Soil Genesis

(Chair: Endre Dobos/Hungary; Vice Chair: Yuji Maejima/Japan) & Commission 1.4 – Soil Classification (Chair: Cornelius van Huyssteen/South Africa; Vice Chair: David Badía-Villas/Spain):

\* “*17th International Soil Classification Congress*” was held in Hokkaido, Japan; June 3<sup>rd</sup> to 9<sup>th</sup>, 2024.

### Commission 1.5 – Pedometrics

(Chair: Alexandre Wadoux/France; Vice Chair: Simone Priori/Italy) & Digital Soil Mapping Working Group (Chair: Laura Poggio/Netherlands; Vice Chair: Alessandro Samuel Rosa/Brazil):

\* “*Pedometrics 2024: Addressing the 10 Challenges*” was held in Las Cruces/NM, USA; February 5<sup>th</sup> to 9<sup>th</sup>, 2024.

### Proximal Soil Sensing Working Group

(Chair: Asim Biswas/Canada; Vice Chair: Abdul Mouazen/Belgium):

\* “*6<sup>th</sup> Global Proximal Soil Sensing Workshop, Unveiling Advances in Theory and Practice to Promote Adoption*”, will be held in Ghent, Belgium; October 14<sup>th</sup> to 17<sup>th</sup>, 2024 ([www.gpss-2024.com/](http://www.gpss-2024.com/)).

### Digital Soil Mapping Working Group

(Chair: Laura Poggio/Netherlands; Vice Chair: Alessandro Samuel Rosa/Brazil) & Global Soil Map Working Group (Chair: Dominique Arrouays/France; Vice-Chair Pierre Roudier/Netherlands):

\* “*Soil Mapping for Sustainable Land Use Planning, 3rd Joint Workshop of the IUSS Working Groups Digital Soil Mapping & Global Soil Map*” will be held in Bengaluru, India; January 21<sup>st</sup> to 24<sup>th</sup>, 2025 ([dsm2025.eventsdashboard.in/](http://dsm2025.eventsdashboard.in/)).

**IUSS Division 1** Meeting to be held jointly with the Global Soil Security Conference, as well as the Annual Meetings of the Canadian Society of Soil Science and of the Manitoba Society of Soil Science, in Winnipeg, Canada;

July 20<sup>th</sup> to 23<sup>rd</sup>, 2025.

### Soils For Our Future

A Gathering of Global to Local Perspectives  
July 20-25, 2025 • Winnipeg, Canada

International Joint Meeting of the Global Soil Security Organization, Canadian Society of Soil Science, International Union of Soil Sciences Division 1-Soils In Space and Time, and the Manitoba Soil Science Society

*Save the date*

## Report of 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

*1<sup>st</sup> Vice Chairperson:* Xiaoyuan Yan

*2<sup>nd</sup> Vice Chairperson:* Jianming Xu

*Vice Chairperson Centennial:* Stefano Mocali

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: Silvia Imhoff - Cezary Slawinski

·Commission 2.2 – Soil Chemistry: Karen Vancampenhout – Boris Jansen

·Commission 2.3 – Soil Biology: Alberto Acedo Bécarea - Magdalena Fraç

·Commission 2.4 – Soil Mineralogy: Sofia Lessovaia - Edson Bortoluzzi

·Commission 2.5 – Soil Chemical, Physical, and Biological Interfacial Reactions: Elke J. Noellemeyer - Pablo Cornejo

·Working Group on Hydropedology: Johan van Tol - Xiaoyan Li

·Working Group on International Soil Modeling Consortium: Martine van der Ploeg - Yijian Zeng - Lutz Weiermüller

### Division Chair Report

*Chair:* Giuseppe Corti

Division 2 has a new Commissioner: after a period of vacancy, since March 25, 2024, the Vice-Chair of Commission 2.2., Soil Chemistry, is Boris Jansen from the University of Amsterdam.

The Officers of Division 2 are now 19, from 12 Countries!

All Division, Commissions, Working Groups, and mem-

bers actively contributed to the organization of the Centennial Celebration and Congress of the International Union of Soil Sciences (18-21 May 2024, Rome-Florence) (<https://centennialiu2024.org/>)

In particular, **Giuseppe Corti**

-was part of the Presidential Committee and Scientific Committee of the IUSS Centennial Conference held in Rome-Florence (Italy), 18-21 May 2024

-together with **Lorenzo D'Avino**, organized the 7<sup>th</sup> Plant Fascination Day on 9 May 2024

-was part of the Organizing Committee of the Conference "Scientific Days of Imola", Italy 'From the floods impact to alluvial soils reclamation' held on 2-4 July 2024 -together with **Carmelo Dazzi, Anna Benedetti, and Edoardo A.C. Costantini** edited the book 'Soil Science in Italy', presented at the IUSS Centennial Conference

**Xiaoyuan Yan and Jianming Xu** are involved in the organization of the Inter-Congress meeting in Nanjing, China.

#### Recent activities

•<https://centennialiu2024.org/submitted-sessions/Magdalena-Fraç-and-Alberto-Acedo-Bécares-proposed-and-led-the-session-Soil-Microbiomes-Importance-for-Climate-Resilient-Future-Degraded-Lands-Restoration-and-Plant-health-control>

•**Sofia Lessovaia** and **Edson Bortoluzzi** proposed and led the session "Soil Mineralogy: Current State and Perspectives"

•**Giuseppe Corti, Silvia Imhoff, Karen Vancampenhout, Alberto Agnelli, David Weindorf, and Stefania Cocco** proposed and led the session "Life, Agriculture, and Productive Systems in Soils from Arctic, Antarctic and other Cold Regions"

•**Silvia Imhoff** proposed and led the session "Contribution in the finalization and publication of stories for children presented at the IUSS centennial conference"

On behalf of all Commissioners of Division 2, Giuseppe Corti proposed at the Executive Committee the creation of a new Working Group named *PedoFauna*.

*Pedofauna* considers all animals living in soil, even for a part of their life cycle. Pedofauna forming animal are present in soils of all latitudes and altitudes, under any type of climate. Pedofauna has been scarcely considered in soil science till now. Entire classes of soil fauna belonging to Anellida, Arthropoda, Mollusca, Tardigrada, and Nematoda Phyla and Protozoa Kingdom – and their ecological relationships – are partially known, while it is expected they play a massive role in the soil evolution and fertility. As a matter of fact, knowledge about species, consociation, and interactions with microorganisms, plants, and plant roots is still scarce.

*Pedofauna* is nowadays of great interest since it is necessary to perform several soil functions and processes and is considered able to provide, directly or indirectly, all soil ecosystem services. Because of this it is considered as a proxy for soil health.

It is expected the Working Group will be active starting from Fall 2024.

#### Commission 2.1 – Soil Physics

*Chair:* Silvia Imhoff

*Vice Chair:* Cezary Slawinski

#### Recent activities

Silvia Imhoff – President of AACS (Association Argentina de la Ciencia del Suelo)

-organized monthly meeting organization of the AACS -was in the organizing committee of the XXIX Congress of AACS held in Catamarca, 21-24 May 2024

-Contributed to the organization of the WEBINAR IUSS May 7 – 'Advances in soil fertility and crop nutrition status, cases from different regions of the world' from the AACS

#### Commission 2.4 – Soil Mineralogy:

*Chair:* Sofia Lessovaia

*Vice Chair:* Edson Bortoluzzi

#### Edson Campanhola BORTOLUZZI:

-has been member of the Scientific commission at the 12th SIAL Food Symposium: Sustainability in the Food Industrialization on April 3-5, 2024, Passo Fundo, RS, Brazil (<https://www.rsbc2024.com.br/comissaocientifica/>),

-attended the Symposium "Use of biofertilizers and stonemeal in Cropland under no-till system" on May 2, 2024, at the Federal University of Santa Maria – UFSM

Planned future activities

Edson Campanhola BORTOLUZZI - will attend the scientific event XV Reunião Sul Brasileira de Ciência do Solo. Topic: "Sustainability of soil-plant system" - 15-17 September 2024, Passo Fundo, Rio Grande do Sul State, Brazil

- will attend the workshop "Biological inputs and new fertilizers: impacts in the soil-plant sustainability" – 15-17 September 2024, at the XV Reunião Sul Brasileira de Ciência do Solo on September (<https://www.rsbc2024.com.br/comissaocientifica/>), University of Passo Fundo, Passo Fundo, Rio Grande do Sul State, Brazil

- will attend the mini-course "Soil biodiversity", on August 23-24, 2024, at Sorriso, Mato Grosso, Brazil

#### Working Group - Hydropedology

*Chair:* Johan van Tol

*Vice Chair:* Xiaoyan Li

## Recent activities

-Finalised the Guidelines for integrating Hydopedology in Wetland delegation guidelines and policy for South Africa

## Working Group – International Soil Modeling Consortium (ISMC)

Working Group (<https://soil-modeling.org/>)

*Chair:* Martine van der Ploeg

*Vice Chair:* Yijian Zeng

*Vice Chair:* Lutz Weihermüller

Events (in chronological order starting with the oldest):

-Organization of the 4th International ISMC Conference at Tianjin, China, from 5-10 May 2024

-Organization of the 5th International ISMC Meeting

## Report of Division 3 - Soil Use and Management

### Report of Division 3

Division 3 focuses on how we use the soil and how it links to the knowledge base of Divisions 1 and 2 to ensure that soils are used and managed in a sustainable manner. It contains seven Commissions and three Working Groups. In Centennial IUSS, Division 3 presented a poster in the IUSS booth and had a small meeting on May 21 in the congress venue. Eight officers joined and exchanged the ideas of how to arrange activities annually in each specialized field. Chair and Vice-chair of Commission 3.3 expressed their views as they just hold a webinar of “advances in soil fertility and crop nutrition status, cases from different regions of the world” on May 7. Besides, Division 3 proposes eight parallel sessions which attract more than a hundred participation with presentation or poster. Another point worth mentioning that an invited speaker in plenary session is the Chair of Commission 3.6, who made an outstanding report on soil salinization- a worldwide concern.

### Structure updated:

*Chair:* Renfang Shen, China

*Vice-chair:* Fusuo Zhang, China

*Vice-chair Centennial:* Giuseppe Lo Papa, Italy

Commission 3.1 – Soil evaluation and land use planning

Commission 3.2 – Soil and water conservation

Commission 3.3 – Soil fertility and plant Nutrition

Commission 3.4 – Soil engineering and Technology

Commission 3.5 – Soil degradation control, remediation, and reclamation

Commission 3.6 – Salt-affected Soils

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

Working Group 3.1 – Acid sulphate soils

Working Group 3.2 – Forest soils

Working Group 3.3 – Paddy soils



*Small gathering at the Centennial Celebrations in Florence (ph. R. Shen)*



*Division Chair, Renfang Shen, during the Session (ph. R. Shen)*

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

All Division, Commission and Working Group (WG) Chairs and members actively contributed to the organization of the Centennial Celebration and Congress of the IUSS (May 19-21, 2024, Florence, Italy) (<https://centennialiu2024.org/>). This resulted in the submission, management, and chairing of several, well attended scientific sessions and workshops (>20, just considering those submitted by Commission and WG Chairs and Vice Chairs). An interactive pop-up event, “Soil Dialogues”, that brought together artists from around the world who



are part of the collective Ecoartspace (an international online community exploring the hidden world of soils as art), was also organized. Division IV contributed to the organization of the Centennial Celebration and Congress of the IUSS also sponsoring several invited speakers including Eric Brevik, Claire Chenu, Kentaro Hayashi, Xia (Emma) Liang and Patricia Lea Watts. A similar approach will be used also for the IUSS Inter-congress in October 2024 in Nanjing, China.

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 2024 (April 14-19, 2024, Vienna, Austria; <https://www.egu24.eu/>), and supported the organization of the 22nd Meeting of the International Humic Substances Society “The role of NOM and HS in achieving Sustainable Development Goals (25-30 August, 2024, Rimini, Italy; <https://ihss2024.azuleon.org/welcome>). Particularly active in organizing soil-related events and involving people was also the Young and Early Career Scientists group (YECS) WG (e.g., Global Women’s Breakfast - Catalyzing Diversity in Science, February 27th, 2024).

Finally, Division IV members are working on some open access publications (e.g., review, position paper, letter) on broad topics in order to engage all Commissions and WGs Chairs/Vice Chairs. In particular, Division IV will strongly 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.

## Other news from the IUSS

### Recognition awarded to the IUSS Past

*President Laura Bertha Reyes Sánchez*

The IUSS Past President Laura Bertha Reyes-Sánchez, was invited to attend the inaugural class of the master’s and doctorate in Soil and Water Sciences for Guatemala, Honduras, and El Salvador, which took place on February 19 at the Faculty of Agronomy of the University of San Carlos of Guatemala.

On the framework of this event, Dr. Laura Bertha Reyes-Sánchez received the recognition of Honorary Member of the Guatemalan Association of Soil Science



©Guatemalan Association of Soil Science

### Recognition as Honorary Member to the IUSS Past President

Past President of the IUSS, Laura Bertha Reyes-Sánchez, was invited by the Soil Science Society of Chile to offer the inaugural conference of the 3rd Meeting of Young Researchers in Soil Sciences, and she was working all week with young scientists to strengthen the IUSS WG of Young and early career scientists.

In a session held during the closing of the event Dr. Mónica Antilén, President of the Soil Science Society of Chile, presented her with the Diploma that grants her the recognition of Honorary Member of the Chilean Soil Science Society.



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## Publications

Rubio, J. L.; Reyes-Sánchez, L. B.; Ning, D. Costantini, E.; Horn, R. and Miodrag, Z. 2024. Protecting the Soil is Protecting the Climate: WASWAC and IUSS Position Paper on the Inter Linkages of Soil and Climate Change. 2023. *Soil Security* 14 100124. <https://doi.org/10.1016/j.soisec.2023.100124>

Reyes-Sánchez L. B. 2024. An educational gaze from the International Union of Soil Sciences. *Span. J. Soil Sci.* 13:12208. <https://doi.org/10.3389/sjss.2023.12208>

Reyes-Sánchez Laura Bertha. 2024. *PERFILITO, Un garçon très chanceux. IUSS GOES TO SCHOOL Book*. Second edition. ISBN: 979-8-9895344-3-2. French translation.

Horn, R., Blum, W. & Reyes-Sánchez L. B. (eds.) 2024. *IUSS 1924-2024: A Centennial documentation of its national members*. International Union of Soil Sciences (IUSS). ISBN: 979-12-81552-03-6

Reyes-Sánchez L. B. & Horn, R. (eds.) 2024. *Soil is a Source of Life, water, and Food*. International Union of Soil Sciences (IUSS). *IUSS GOES TO SCHOOL Book*. ISBN: 979-8-9895344-2-5.

# Centennial Congress and Celebration



## Programme overview

May 19, 2024	May 20, 2024	May 21, 2024
<b>Opening and Welcome</b>	08:30-09:00 Plenary Session: The role of soil in the global policies <i>Sahakere, Arno</i>	08:30-09:00 Plenary Session: Future goals of soil sciences <i>Xin Jiao</i>
12:30-14:30 Registration	09:00-09:30 Plenary Session: Protecting soils for future generations: The Development of Soil Policies in Europe and in the World <i>Luca Montanari</i>	09:00-09:30 Plenary Session: Who constitutes the future of soil sciences? – Gender, age, and citizenship among the Young and Early Career Scientists <i>Axel Carré-Gorgé</i>
14:30-15:30 Opening Session <i>IUSS President Welcome - Address</i> <i>SISS President Welcome - Address</i> <i>FAO General Director Welcome - Address</i> <i>Local Authorities Welcome - Address</i>	09:30-10:30 Parallel sessions	09:30-10:30 Parallel sessions
15:30-16:00 Plenary Session: The history of the IUSS <i>Afred Hartmann</i>	10:30-11:00 Coffee Break	10:30-11:00 Coffee Break
16:00-16:30 Plenary Session: The Evolution of Pedology – Drawing from the Past, Adapting to the Future <i>Alex McBratney</i>	11:00-13:00 Parallel sessions	11:00-13:00 Parallel sessions
16:30-17:00 Coffee break	13:00-14:30 Lunch & Satellite Symposia	13:00-14:30 Lunch & Satellite Symposia
17:00-17:30 Plenary Session: Soil properties and processes <i>Gang Guggenberger</i>	13:00-14:00 FAO – The Status of the World Soil Resources Report 2025	13:00-14:00 FAO-GSP work on Global soil mapping and monitoring and the Global soil health index (GSHI)
17:30-18:00 Plenary Session: From Sumerian agriculture to the agriculture of the 3rd-Millennium: Soil salinization, a worldwide concern. The role of IUSS Commission 3.6 <i>Jorge Batlle-Sales</i>	13:00-14:00 BRITISH SOCIETY OF SOIL SCIENCE – Soil Health for people and planet Leveraging policy, integrating governance, exploring collaboration	13:00-14:00 SOILS4MED/SHARINGMED – Land and soil management to improve soil health in the Mediterranean area
18:00-18:30 Plenary Session: The role of soils in sustaining society and the environment: the carbon manus? <i>Clare Chess</i>	14:30-16:30 Parallel sessions	14:30-16:30 Parallel sessions
18:30 Celebration Video	16:30-17:00 Coffee Break	16:30-17:00 Coffee Break
	17:00-18:00 Parallel sessions	17:00-18:00 Parallel sessions
	18:00-18:30 Plenary Session: IUSS Distinguished Service Award <i>The Honourable Penelope Wainley -AC</i>	18:00-19:00 Celebration of the World Soil of the Year and closure of the Congress.

## Centennial Opening Speech

By *Edoardo A.C. Costantini, IUSS President* -

Dear colleagues,

Reporting facts is no longer enough. To engage laypeople and stakeholders we also have to tell a story, and we have a great story to share.

One hundred years ago, on this very day, the 19th of May, our Society was established in Rome during the Fourth International Conference of Pedology. Initially named the “International Society of Soil Science,” it comprised individual members.

It was not until the 16th Congress in Montpellier in 1998 that, following a lengthy debate and strong member support, new statutes were approved by the general assembly. These changes introduced National Soil Science Societies

as the main members of the society. Consequently, the “International Society of Soil Science” was transformed into the “International Union of Soil Sciences,” serving as a union of National Societies or Academies (the Full members) and an organization of soil scientists (the individual members of the national societies).

For one hundred years, first under the ISSS and then the IUSS, our organization has served as the home for soil scientists from all corners of the globe. It has been a large, welcoming, pluralistic, inclusive, and democratic institution where everyone has had the opportunity to advance in knowledge, exchange ideas, propose initiatives, organize events, and gain recognition. This Society brings together specialists from various backgrounds and scientific interests, all united by a passion for understanding the soil in its myriad aspects and applications.

The IUSS aims to advance the development of all soil-related sciences, in all countries on every continent, involving all interested scientists and particularly supporting young people and those who live in relatively less favourable conditions. The objectives of IUSS are to promote all branches of Soil Sciences and to support soil scientists worldwide in their pursuit of scientific activities. The global voice of Soil Sciences, where new ideas are forged and tested by peers.

Dear colleagues, we live in times of change. The IUSS needs continuous improvement to remain up to date and able to cope with the challenges posed by global changes, in a scientific and political arena that sees soil becoming more and more of interest for global institutions, governments, and private companies. We must collaborate with all stakeholders, but well equipped and dynamic, to efficiently support the scientific evidence of the importance of soil as a resource for life, comparable to water and air. Food security, the fight against desertification, combating climate change and loss of biodiversity, improving the well-being and health of citizens and nature, recycling of effluents and organic materials, ensuring hydrogeological protection and water safety, are all global challenges that cannot be achieved without deep scientific soil knowledge. It is our obligation to provide this knowledge in an effective, unbiased, and convincing way, to ensure the proper integration of Soil Sciences into policy decisions at all levels.

The IUSS is a non-profit and non-governmental organization, officially registered in the USA. The IUSS mark and logo hold international copyrights. IUSS operates as an autonomous organization, primarily funded by member contributions. It is free from any external influence or bias, be it from the private or public sector.

The IUSS is built on collaboration among its members, both the individual and the full members, based on voluntary work and strong commitment. We do not have powerful and rich economic Institutions supporting us, important governmental bodies, or big companies, we fully rely upon our in-kind work, but we are free of any conditioning and bias, and anyone within the IUSS is only valued for their work and scientific merit. All IUSS officers and members eagerly spend their time for the IUSS not only for the high reputation that is given by the largest community of soil scientists in the world, but especially for the passion for contributing to humanity’s well-being through the promotion of one of its most important and precious resources.

The IUSS operates democratically and emphasizes teamwork. From the Presidents’ Committee to the Working Groups, all bodies within the IUSS are designed to function as teams of colleagues who share in decision-making and carry out activities, valuing the availability and capabilities of each member. Every IUSS officer, regardless of their level, bears the responsibility of promoting teamwork and engaging their colleagues in the organization’s endeavours.

Currently, the Full members of the IUSS are 76 National Soil Science Societies or Academia, but there is a newcomer, Moldova, and another is on the way, Egypt. The estimated Individual members (through the National Soil Science Societies) are about 50,000. The IUSS holds relationships with 8 regional soil societies and several other scientific organizations. The IUSS is affiliated with the International Science Council and actively collaborates with numerous other international organizations, movements, and initiatives. These entities have endorsed our Centennial Celebration and assisted in promoting it to their members. Here, I wish to express the IUSS’s profound gratitude to all of them for their support and contributions. A special thanks goes to the FAO Director-General, who has sent us a video message for this opening ceremony.

The IUSS structure is based on two pillars, Governance and Science: Governance is made by the Council, the Executive and President’s Committees, and the Secretariat, which is responsible for the management. Science is currently made by 4 Divisions, 21 Commissions, 17 WGs, and the Forum.

In the meetings held in 2018 and 2020, the Council of the IUSS has officially asked the SISS to organize this event to celebrate 100 years of life of our Union. It has been a great challenge. We gratefully thank the Executive Committee and the past Presidents, prof Kosaky Takashi and

prof Laura Bertha Reyes Sanchez, for the support given during these years. We have done our best to give the event the success that it deserves, and I thank the Organizing and Scientific Committees, and the IUSS Secretariat, who have worked really jolly hard to make it a reality and a big event. There were 463 participants in 1924, we are almost 1500 today.

As you know, the program of the Congress includes plenary sessions scheduled for this afternoon, tomorrow, and Tuesday. These sessions will feature keynote presentations by distinguished colleagues representing various aspects of Soil Sciences. They will cover topics such as the history, main achievements, and future expectations, as well as insights from the global scientific community and discussions on policy trends.

Every afternoon we will have special events. Tomorrow, the delivery of the Distinguished Service Medal, given to the honourable Penelope Wensley, and the launch of 3 books published for the Centennial: the Genealogy Book, edited by prof Rainer Horn, the book on soil for children, edited by prof Laura Bertha Reyes Sanchez - and I want here acknowledge her strong dedication and efforts over the years that have produced a significant contribution of the IUSS to soil education - and the book on the contribution of Italy to Soil Sciences, presented by prof Carmelo Dazzi. On Tuesday afternoon we will celebrate our first world soil of the year, just before the closure of the Congress.

In the next two days, we will have a wealth of parallel sessions, organized in themes and subthemes. I want to acknowledge the great work done by the conveners of the sessions in developing ideas, soliciting, and evaluating abstracts, which has been crucial for the success of the Congress. Tomorrow and Tuesday we will also have important side events during lunch time, organized by the FAO, the BSSS, and by international projects.

For the first time, the organization and structure of the Congress follows a bottom-up approach, allowing everyone to suggest sessions, which are then organized based on the number of abstracts received. This process enables a fair allocation of time between sessions and between oral presentations and posters. The system that has been developed could potentially be utilized for future events organized by the IUSS.

We have shaped the themes of the Congress not only around science, which focuses on innovation and future, but also around Knowledge, which incorporates lessons learned from our history, recognizing that our future is rooted in the past. Furthermore, we have valued the in-

sights we can gain from colleagues in other disciplines, including social and education sciences, humanities, and art, who deliver remarkable presentations and exhibitions during the Congress. This holistic approach ensures a comprehensive exploration of Soil Sciences and their broader implications.

All in all, we do believe that this Celebration and Congress represent important contributions to Science as a Global Public Good. The IUSS is proud to contribute to strengthening the importance of trust in science, as science serves as a universal language that promotes dialogue, peace, and global health.

I wish you all a very fruitful and pleasant stay in Florence and an exciting excursion for who are joining the scientific field trips.

Thank you very much for your attention.

Long live the IUSS!



*The IUSS President opens the Congress meeting (ph. IUSS secretariat)*



*IUSS Centennial Video – Celebrating 100 years*

## Report from the IUSS Secretariat - Centennial Congress and Celebration

The beginning of the year 2024 has been busy and challenging as the Secretariat was involved in the setting up of the Centennial Congress and Celebration. The IUSS Communication Manager and Head of CREA Press Of-

office, Cristina Giannetti, with her team set up a media partnerships with GREENACCORD Onlus (<https://greenaccord.org/>) and the Vatican Radio (<https://www.vaticannews.va/en.html>) to guarantee maximum coverage of the event. Both were in Florence too, interviewing the venue leading actors. Moreover, the event “Taking care of soils since 1924: introducing the Centennial Celebration” took place on May 3<sup>rd</sup> at FAO to introduce the IUSS heritage and forthcoming celebrations to a prestigious parterre of guests.



During the event, Maestro Domenico Boscia, a renowned ceramist, presented Prof. Giuseppe Corti, Head of the IUSS Secretariat, with a bespoke opera made for the occasion and later displayed in the Congress venue in Florence. “The FAO through the Global Soil Partnership aim to raise awareness on the pivotal role of soil for the health and sustainability of our Planet (...) as we face global challenges, soil science must be the backbone of policy making and sustainable development (...). Our soils are not only the foundation of agriculture, are the foundation of life itself, they regulate water flows, store carbon, support biodiversity and are the base for food production.” The opening speech of Dr. Lifeng Li highlighted, as well, the past achievements and the future challenges of the IUSS. The Secretariat was fully involved in the setting up of this event to promote the values that have shaped the IUSS throughout its 100 years of history.



*IUSS Secretariat representatives, from left to right: Claudia Fontana, Cristina Giannetti, Francesco Ambrosini, Petra Engel, Maria Grazia Piazza, Irene Fabbri, Silvia Sociarelli, Micaela Conterio (ph. IUSS secretariat)*



*View of the day (ph. Francesco Ambrosini)*

Read more about it:

<https://www.fao.org/global-soil-partnership/resources/events/detail/en/c/1681733/>

In occasion of this event, the Secretariat has taken care of the on-line publication of the 1924 Proceedings of the Fourth International Conference of Pedology (<https://www.iuss.org/1924-proceedings-of-the-fourth-international-conference-of-pedology/>). Over time, these proceedings have become a significant reference point, providing a comprehensive account of the progresses made in soil science up to 1924, and are a valuable resource for researchers, academics, and practitioners alike seeking the historical development and evolution of soil science. It will be a great achievement for the IUSS when the 2024 ones will be published, as it is uncommon for a Scientific Society to have such publications with a 100-year gap. The task of setting up such a monumental event proved both exciting and challenging. The whole Secretariat team has contributed to this work, setting up meetings, managing many different requests from our members, taking care of the publication of the Genealogy Book (<https://www.iuss.org/soil-publications/iuss-publications/iuss-1924-2024/>) a centennial documentation of the IUSS

Members, and organizing the visit at Villa Lubin. The setting is featured in the Centennial video (<https://www.youtube.com/watch?v=2EOXZrsdgTg&t=8s>), a 30 minutes movie by Director Marcello Di Noto, where the history of the foundation of the IUSS is retraced through the magnificent rooms of the Villa and the Parlamentino, now the Plenary Room Marco Biagi, where David Lubin seat still stands and where the first Statute was signed. After the visit, the attendees could experience a tour of the eternal City discovering its many wonders, and ending the day at CREA, the Council for Agricultural Research and Economics, where the IUSS Secretariat is hosted: located on one of the most beautiful roman hills, the Celio, the monumental building that houses the Secretariat dates to the XIII Century.



*The tour participants in the Plenary Room Marco Biagi (ph. Francesco Ambrosini)*

During the Congress, thanks to the social media partnership with GREENACCORD Onlus (<https://greenaccord.org/>) and the Vatican Radio (<https://www.vaticannews.va/en.html>), the topics of the event and its protagonists have been fully covered and their message conveyed through a considerable press release of 43 pages, 12 articles, 12 videos, 4 radio interviews in two languages, English and Italian. The Secretariat Office Manager, Irene Fabbri, took care of the social media publishing daily brief reports of the day highlights, scoring accesses close to 10.000 for a single post.

<https://www.crea.gov.it/en/-/centenario-della-iuss-grande-successo-per-il-congresso-a-firenze>  
<https://www.vaticannews.va/it/mondo/news/2024-05/ambiente.html>

<https://www.vaticannews.va/it/podcast/rvi-programmi/la-finestra-del-papa/2024/05/la-finestra-del-papa-20-05-2024.html>

<https://www.vaticannews.va/en/world/news/2024-05/florence-conference-100-years-soil-science-conference-climate.html>

<https://www.vaticannews.va/en/world/news/2024-05/alex-mcbratney-interview-soil-science-warfare-ai-agricul->

[ture.html](#)

<https://www.vaticannews.va/en/world/news/2024-05/penelope-wensley-interview-soil-science-australia-diplomacy.html>

<https://www.vaticannews.va/en/world/news/2024-05/soil-science-conference-100-years-florence-italy.html>



*IUSS Secretariat, GREENACCORD Onlus, and Vatican Radio Staff and Journalists (ph. Francesco Ambrosini)*

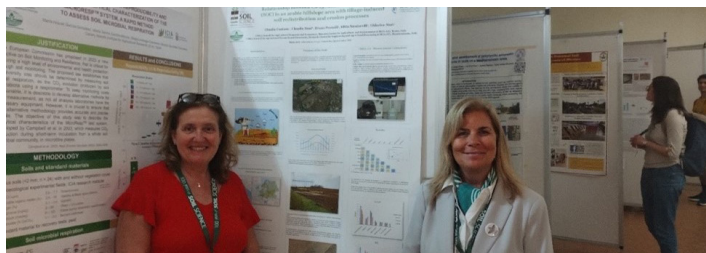
To welcome our guests, around 1.500, the IUSS and SISS (Italian Society of Soil Science) set up a stand where scientific publications, posters, leaflets and gadgets found their right place. Many colleagues volunteered to cover shifts and give information to the attendees.



*SISS-IUSS Stand (ph. F. Ambrosini)*

The Secretariat involvement in the Centennial Congress was an all-round one. The Heads of the Secretariat, Giuseppe Corti and Filiberto Altobelli presented the sessions “Life, Agriculture, and productive systems in soils from Arctic, Antarctic and other cold regions” with the introductory speech of David Weindorf “Cold stories of a warming world”, and “Nature Based solution for sustainable water and soil management” respectively (<https://centennialius2024.org/submitted-sessions/#1687945019576-7796a809-1487>). Claudia Fontana, member of the Secretariat, won the best poster for a work with her colleague Silvia Socciarelli who won the best

e-poster as well.



*From left to right: S. Socciairelli and C. Fontana (pb. IUSS Secretariat)*

The Centennial has proven to be a great success and a big challenge for the newly born Secretariat. Nevertheless, the whole staff of 20 people joined effort to ensure full collaboration to the President, the Executive Committee, and the different Committees that took care of the Scientific and Organizing facets of the event. After a Century, the IUSS is very much alive and kicking and ready to bring forward soil science to the next 100 years.

## IUSS Distinguished Service Medal 2024

*From the IUSS President Edoardo A.C. Costantini introduction*  
“Since 2012, the Presidents’ Committee of the IUSS has recognized outstanding World soil leaders who have translated soil science into action, by awarding the IUSS Distinguished Service Medal.

The IUSS Distinguished Service Medal is a recognition for people who have served the IUSS as a worldwide organization in a way that has been more committed to its goals, having behaved worthy of this distinction.



*The Hon Penelope Wensley A.C.*

The Honourable Penelope Wensley certainly deserves this recognition. Ms. Wensley has had a long and highly distinguished career of public service: as a diplomat for forty years (1968-2008), representing Australia in a wide range of overseas postings and policy positions; as the State Governor of Queensland (2008-2014); and for the past decade (2014-2024), in diverse leadership roles, focused on international relations and protection of the environment.



*UN Conference on Small Island Developing States (Pb. The Hon. P.Wensley A. C.)*

Among her prestigious diplomatic appointments, following early postings to France, Mexico and New Zealand, she served as Consul-General in Hong Kong, Ambassador to the UN in Geneva and New York, Ambassador for the Environment, High Commissioner to India and Ambassador to Bhutan and France. It is worth underlining that in all cases, she was the first woman to be appointed to these roles for Australia.

As High Commissioner to India (2001-2004), she promoted greater scientific collaboration between India and Australia, on soil, water and land management, and as Ambassador for the Environment and to the UN, Ms. Wensley had extensive involvement with the development of national and international policy on environmental and sustainable development matters and played a leading role in the negotiation of the landmark UN Conventions on Climate Change (UNFCCC), Biodiversity (UNCBD) and Desertification (UNCCD). She was Vice-Chairman of the UNFCCC and Co-Ordinator of the Western Group for both the UNCBD and the UNCCD.



*The UNFCCC Negotiations (Ph. The Hon. P. Wensley A. C.)*

In 2001, she was appointed as Officer of the Order of Australia “for distinguished contributions to Australia’s international relations”, she has received Honorary Doctorates from four Australian Universities, is a Grand Officer of the French National Order of Merit, a Fellow of the Australian Institute of International Affairs and in 2014, she was made an Honorary Fellow of the Environment Institute of Australia and New Zealand.

As State Governor of Queensland, she gave strong support to the science sector, and community organizations involved with environmental management, protection and conservation, including as State Patron of Queensland Water and Land Carers and the Queensland Chapter of Soil Science Australia. In 2011 she became the National Patron of Soil Science Australia, a position she continues in today. As the National Patron of Soil Science Australia, she has supported the Society at national and State soil conferences, workshops and symposia, field activities, soil judging competitions, and in the 2015 celebration of the International Year of Soils, including the launch of the Global Soils Biodiversity Atlas.

On completion of her term as Governor, she accepted, among others, the appointment as Australia’s National Soils Advocate (2020-2023). Her appointment as Australia’s National Soils Advocate provided a new, high-level platform for her to undertake soil advocacy in Australia and overseas. Unique to Australia, the role was established to provide strong leadership in advocating for soils, soil health and sustainability, raise awareness on soils value, contribute policymaking progresses, and become a global advocate for expertise and resources on the critical role soils play and meet global challenges, including food security and climate change.

Ms. Wensley’s three years in this role saw many advances, among them the adoption of a National Soil Strategy. A 20-year strategy, with a bold vision, to see Australia’s soils

recognized and valued as a key national asset, it elevated soil to a new level of policy prominence. A National Action Plan for its implementation is under development, and a new National Soil Information System. The Australian Government has acknowledged publicly “the crucial role The Advocate played in bringing parties together to commit to a shared direction for soil” and that “her focus on evidence-based policy supported additional government investment in soils”.

Other notable advances at the national level included the establishment, in 2020, of a Parliamentary Friends of Soil Group in the Federal Parliament, a bipartisan forum to connect scientists, industry groups, farmers, land managers and other soil stakeholders with policymakers on issues relating to the health and maintenance of Australia’s soils; the establishment of a national Soil Health Award, (in the name of Australia’s first National Soils Advocate, General Michael Jeffery), to recognize individuals making an outstanding contribution to improving soil health in Australia and the initiation and hosting of soil policy forums, to bring scientists and policy-makers together.

Among the many international activities, it is worth mentioning that she joined the Global Soil Partnership, and participated in several high-level global symposia on soils, including the 22nd IUSS World Congress in Glasgow.



*The IUSS President awards the Hon. Wensley (Ph. F. Ambrosini)*

In her long career and many leadership roles, Ms. Wensley has had a remarkable impact elevating the profile of soil and soil science and advocating for the preservation and better management of this precious resource. She is a well-deserved recipient of this year’s 2024 IUSS Distinguished Service Medal and it is an honour for me and the



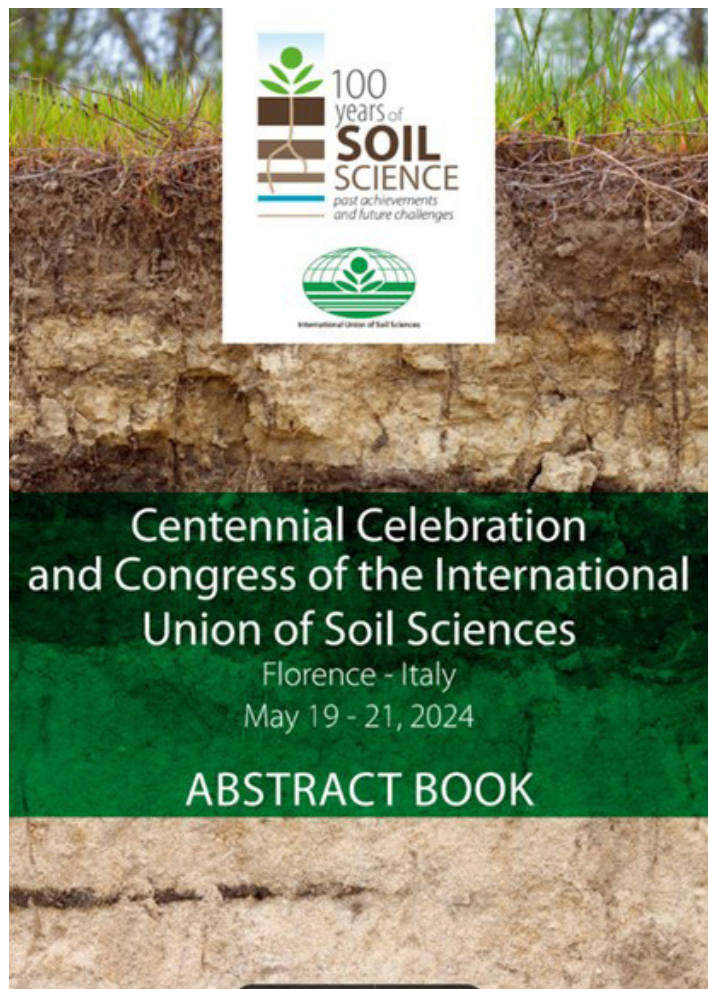
whole IUSS to deliver this Medal during the centennial celebration.

Congratulations Ms. Wensley!”

## Book of Abstracts

The book of abstracts is available at the following link:

[https://drive.google.com/file/d/1mcbITzR1wFY1b4v-LAaceHAyg\\_y\\_K3vzq/view](https://drive.google.com/file/d/1mcbITzR1wFY1b4v-LAaceHAyg_y_K3vzq/view)



## Centennial Celebrations side events

### Engagement of the Soil Science Society of China in Centennial Celebration and Congress of the International Union of Soil Sciences

#### *Chinese scientists' participation*

The Celebration and Congress of IUSS attracted more than 1,400 scientists worldwide to revisit the history of soil science over the past hundred years. People gathered in Florence during May 19-21st to recall the past achievements and to prepare for the future challenges. Almost 200 soil scientists from China are part of them. Four parallel sessions are chaired by Chinese scholars and one of reporter in plenary session is from China. Tens of them are engaged in presentations and posters. They discussed the recent research achievements and thoughts on how to make soils better serve the sustainable development of society and solve the problems of food security, environmental protection and climate change that emerged

along with it.



*Group of Chinese scientists in Congress venue (pb.SSSC)*

## Booth of the Soil Science Society of China (SSSC)

As the organizer of the 23rd World Congress of Soil Science (WCSS 2026), SSSC set up a booth in the exhibition space with various cultural elements, taking this opportunity to introduce the characteristics of Chinese soils and Chinese culture, and welcoming soil scientists to come to Nanjing in June 6-12, 2026, to discuss the soil and the shared future for mankind. Many scientists come to the booth to get more detailed information of the Congress. They expressed their interests in exploring soil classifications and the progress in soil science of China. WCSS 2026 will provide a platform for participants to share the cutting-edge results and applications of soil science, and to discuss the challenges and feasible solutions to global environmental change.



*IUSS president Edoardo at the booth (pb.SSSC)*



*Busy works for advertisement (pb.SSSC)*

## Field trips

Prior to and post the centennial, Chinese soil scientists joined our international colleagues on the excursion trips, to visit the Villa Rubin and the Council for Agricultural Research and Economics (CREA), and to explore soils and viticultural terroir of Central Italy. During the excursion, different soil profiles were studied and research activities carried out by Italian colleagues in different terroirs were introduced. Soil scientists from different countries mingled and explored how human activities modify soil-plant and atmosphere system and affect the soil environmental functionality and suitability for a specific use were.



Participation in excursion (ph.SSSC)

## Young & Early Career Scientists

*Report of the Young and Early Career Scientists at the IUSS Centennial Celebration*

The IUSS Young and Early Career Scientists Working Group (YECS) promoted three key initiatives during the IUSS Centennial Celebration: the session “Youth Digging”, the launch of a multilingual children’s booklet, and the participation in a plenary session.

### Youth Digging Session

The Youth Digging session comprised two days of intriguing contributions by young scientists across Asia, Europe, and the Americas. The session covered topics such as the role of young soil scientists in Nepali academia, models for soil organic carbon in Haiti, and nitrogen emissions by agriculture in Mexico. The contribution from Polish scholars was particularly notable with presentations on soil organic matter transformation in mountainous peatlands of southeastern Poland, soil lamellae transformation in loess soils in southern Poland, and a proposal for tree species that could adapt to future warmer conditions in central European mountainous regions.

### Plenary session: Who constitutes the future of soil sciences?

At the plenary, an analysis of the structure of the YECS members was presented by Axel Cerón (vice-chair of the YECS WG), merely concentrating on gaps and commons due to gender, age, and nationality. Several conditions to become a soil scientist were discussed, and a solid message to continue including young scholars within the IUSS structure was proposed.

### Multilingual Children’s Booklet: “The Mystery of Ancient Soils!”

The multilingual children’s booklet “The Mystery of Ancient Soils!” was presented by Daisy Valera Fernández –coauthored with Axel Cerón and Elizabeth Solleiro from Mexico. The Mystery received funding from the International Union for Quaternary Research and has achieved global collaboration with YECS allies translating the booklet into 15 languages, including Polish thanks to Bartłomiej Głina, Łukasz Uza-rowicz, and Malgorzata Uzarowicz. The booklet will be available in late 2024 in the following languages: English, Spanish, Polish, French, Italian, German, Russian, Portuguese, Dutch, Arabic (Jordan), Hebrew, Turkish, Slovenian, and Mandarin (traditional and simplified). It will be accessible at <https://proyectosuelox.geologia.unam.mx/>

*Authors: Bartłomiej Głina and Axel Cerón (YECS chairs).*

*Photo Credits: Bartłomiej Głina and Axel Cerón*



*Axel Cerón in plenary (ph: D.V. Fernández, A. Cerón González, E. Solleiro Rebolledo, and I. Márquez)*

### The Mystery of Ancient Soils! A children’s booklet to understand the soil of the past

Daisy Valera Fernández presented “The Mystery of Ancient Soils!” at the “Children and young people say present at the IUSS Centenary Celebration” session. This children’s booklet explains the concept of “soil memory” and ancient soils to children and young audiences, aiming to spark curiosity about the stories soils can tell and encourage children to see soils as cultural elements. “The Mystery” received funding for international skill

activities from the International Union for Quaternary Research (INQUA) in 2023.

Originally written in Spanish by Daisy Valera Fernández, Axel Cerón González, and Elizabeth Solleiro Rebolledo —experienced (ancient) soil scientists from the National Autonomous University of Mexico (UNAM) skilled in science dissemination, the booklet was beautifully illustrated by Iran Márquez Rubio, a long-time illustrator of soil educational materials for UNAM. Thanks to a global network of young scientists, the booklet has been translated into 15 languages, covering major languages spoken in the Americas, Europe, the Middle East, and mainland China.

The story follows Peter Pebble (Piotr Ziemiański in Polish or Pedro Pedregulho in Portuguese), an anthropo-morphized soil character who embodies the features of ancient environmental changes as legacies of its journeys across various geological periods.

Peter is discovered by Maria, a young girl from Yucatán and a prominent future soil scientist. The adventures of Peter serve as a conduit for discussing the importance of soils in comprehending the past of the Earth and addressing contemporary environmental issues.

Overall, “The Mystery” represents a significant step towards youth inclusion and international reach. It exemplifies a forward-thinking approach to multilingual science communication in the study of ancient soils, which further supports the vision of IUSS in fostering a well-informed global community committed to soil conservation. “The Mystery” will be available on the Proyecto Suelox website in late 2024: <https://proyectosuelox.geologia.unam.mx/>  
*Authors: Daisy Valera Fernández, Axel Cerón González, Elizabeth Solleiro Rebolledo, and Iran Márquez Rubio*

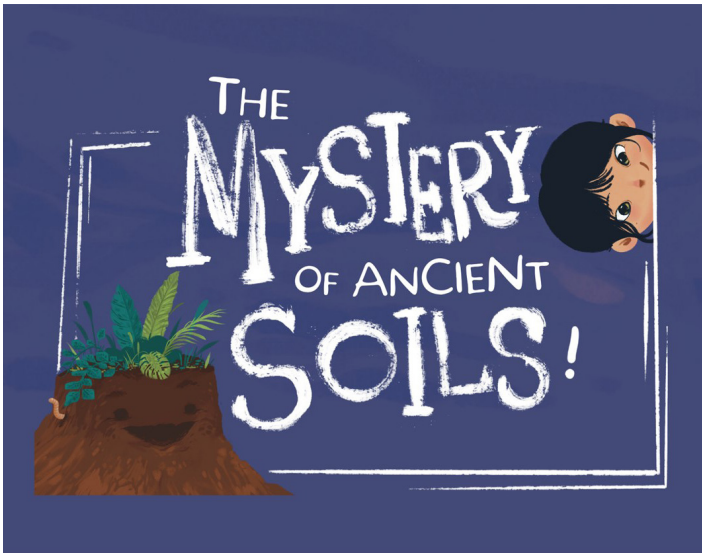
Language	Collaborator
Spanish	Daisy Valera Fernández (National Autonomous Uni. of Mexico) Axel Cerón González (Vrije Universiteit Brussel – KU Leuven) Elizabeth Solleiro Rebolledo (Nat. Autonomous Uni. of Mexico)
English	Adrián Replanski (National Autonomous University of Mexico)
French	Antoine Dorison (Paris 1 Panthéon-Sorbonne University)
Italian	Benedetto Schiavo (National Autonomous University of Mexico)
Polish	Bartłomiej Głina (Poznań University of Life Sciences) Lukasz Uzarowicz (Warsaw University of Life Sciences) Małgorzata Uzarowicz (Warsaw University of Life Sciences)
German	Simon Meyer-Heintze (University of Würzburg)
Russian	Lilit Pogosyan (Institute of Ecology – Mexico)
Portuguese	Lemerson Brasileiro de Oliveira (University of Brasilia)
Dutch	Yannick Devos (Vrije Universiteit Brussel)
Arabic (Jordan)	Ammar Albalasmeh (Jordan University of Science and Technology)
Hebrew	Dafna Casaretto (Ministry of Agriculture and Rural Dev. – Israel)
Turkish	Orhan Dengiz (Ondokuz Mayıs University)
Slovenian	Nejc Suban (Jozef Stefan Institute – Slovenia)
Mandarin (Traditional)	Meihui Li (Vrije Universiteit Brussel)
Mandarin (Simplified)	Meihui Li (Vrije Universiteit Brussel)



*Daisy Valera presenting The Mystery! (ph: D.V. Fernández, A. Cerón González, E. Solleiro Rebolledo, and I. Márquez)*



*Discussing other children’s booklet ideas worldwide (ph: D.V. Fernández, A. Cerón González, E. Solleiro Rebolledo, and I. Márquez)*



*The Mystery! Logo*



*The Mystery! Team from Mexico (ph: D.V. Fernández, A. Cerón González, E. Solleiro Rebolledo, and I. Márquez)*

### **Suelófono: the first podcast on soils in Spanish**

The first podcast on soils in Spanish - supported by an IUSS Stimulus Fund.

Spotify: <https://open.spotify.com/show/1d6UneI71hb-ddE8tdoz5Bl?si=0604f067bba840be>

YouTube: <https://youtube.com/@proyectosuelox-8379?si=V-mKVT9MKwum9nEP>

We are also on Facebook (<https://www.facebook.com/psuelox>) and we are working on bringing together all our materials in a new website (<https://proyectosuelox.geologia.unam.mx/>)

Elizabeth Solleiro Rebolledo presented “Suelófono: How to foster global soil awareness through a Spanish-language podcast” in the “Soil as Cultural Heritage” session. Suelófono, the first podcast in Spanish dedicated to popularizing soil concepts, has been continuously developed since 2021 by the Institute of Geology at the National Autonomous University of Mexico, under the soil education initiative “Proyecto Suelox”. The podcast’s name is a combination of the Spanish word for soils (suelo), and the suffix denoting sound or voice (-fonos), which could be interpreted as “the voice of soils.” Suelófono was awarded one of the IUSS Stimulus Funds in 2021, and its main outcomes across three seasons were presented at the IUSS Centennial Celebration in Florence on May 21, 2024.

Suelófono consists of 20-minute interviews with recognized soil scientists mainly from Mexico. Additionally, we have invited soil scientists from other countries, Peter Schad (Germany), Alberto Hernández (Cuba), and John Galbraith (the US). The podcast has covered a wide range of soil fields including the Soils of the past, Extraterrestrial soils, The Mexican soil museum, and Agro-



*Bartolomiej Glina, Clausio Zaccone and Axel Ceron (ph: D.V. Fernández, A. Cerón González, E. Solleiro Rebolledo, and I. Márquez)*



*Minerva J. Dorantes presenting (ph: D.V. Fernández, A. Cerón González, E. Solleiro Rebolledo, and I. Márquez)*

ecology, among others. The first season (2021) featured soil scientists from the National Autonomous University of Mexico and their research topics. The second season (2022) included participants from the Sixth International Conference on Soil Classification in Mexico.

The third season (2023) focused on Mexican scientists studying soil and environmental issues as well as exploring the link between soils and nutrition. The fourth season (2024) will explore “soil memory” and the role of soils in archaeology.

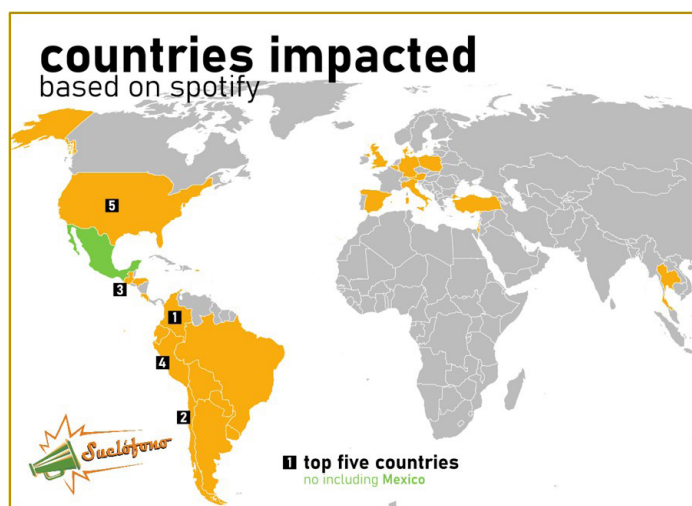
Almost 30 countries have been reached by Suelófono, with listeners in the Americas, Europe, and Asia. Without considering Mexico, the top five listening countries of Suelófono are Colombia, Chile, Guatemala, Peru, and the United States.

The main audience’s age is distributed from 23-27 years old (26.1%) to 28-34 years old (34.9%). Moreover, the audience’s gender comprises 47.9% male, 46.3% female, and 5.8% non-binary individuals. Suelófono is available on Spotify and YouTube, and will be available on the Proyecto Suelox website in late 2024: <https://proyectos-uelox.geologia.unam.mx/>

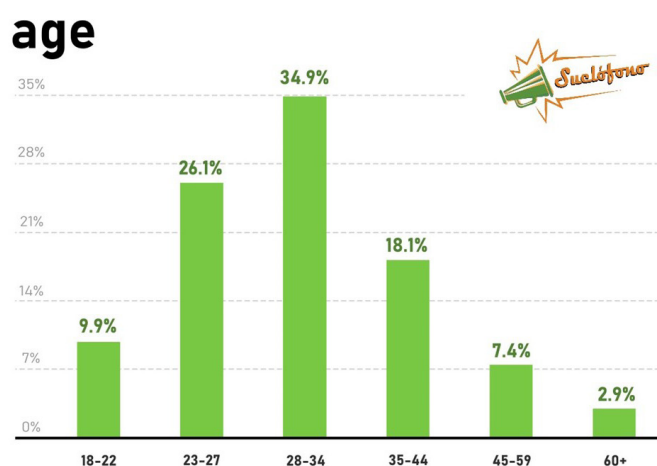
Promotional video: <https://www.youtube.com/watch?v=VWg2FeJymnY>

Authors: *Axel Cerón González, Elizabeth Solleiro Rebolledo, Jesús Aceves Romero, and Alfredo Miguel Sánchez*

First season		
Guest scientists	Interviewer	Topic
Sergey Sedov	Elizabeth Solleiro	What are soils?
Elizabeth Solleiro	Georgina Ibarra	Soils of the past
Pável Martínez	Karla Guillén	Extraterrestrial soils
Christina Siebe	Sol Moreno	Soil science since Dokuchaev
Laura Bertha Reyes	Thania García	Soil education
Silke Cram	Elizabeth Solleiro	Urban soils
Second season		
Guest scientists	Interviewer	Topic
John Galbraith (the US)	Axel Cerón	Soil Evaluation
Daisy Valera	Héctor Cabadas	Calcic soils and global change
Peter Schäd (Germany)	Daniela Bobadilla	Soil classification
Carmen Gutiérrez	Elizabeth Solleiro	Mexican soil museum
Norma García	Elizabeth Solleiro	Soil science in Mexico
Alberto Hernández (Cuba)	Axel Cerón	Cuba: soils, sugar, and revolution
Third season		
Guest scientists	Interviewer	Topic
Pablo Jaramillo	Elizabeth Solleiro	The future of agroecology
Francisco Bautista	Elizabeth Solleiro	Soils in the environment
Felipe García	Georgina Ibarra	Soil biogeochemistry
Thalita Abruzzini	Daisy Valera	Building Technosols
Gilberto Vela	Jaime Díaz	Agriculture in Mexico City
María José Ibarrola	Axel Cerón	A sustainable diet in Mexico



Countries impacted by Suelófono



Suelófono listeners by age

## IUSS Commissions- Centennial Reports

### Commission 3.3 (Soil Fertility and Plant Nutrition and GPI)

During the Centennial Congress, Commission 3.3 organized a Webinar “Matching Food Security and Environmental goals: Phosphorus, a Key Global Element” which took place under Session 4.3 125012, with sponsorship of the Global Phosphorus Institute (GPI)

The webinar was co-convened by Fernando O. García, Luke Gatiboni and Joann Whalen (GPI).

P is a key element, for agriculture and many other process/activities (household, industry, etc.). Its paths in the ecosystems have been intensively discussed in the last years, but how is the status of P in natural ecosystems, and urban and agricultural environments? What is the direction we need to move? How might we match food security and environmental goals? Which are the differences among regions across the world?

P is involved in agronomic, environmental, and social issues across the world, from excess application in ag fields in many countries of the northern hemisphere to defi-

ciencies in many ag fields of Africa and Latin America, with impacts on environment and society under both situations.

Twenty-nine papers were submitted to the session. Fifteen papers were presented as orals, three were pre-sented in the permanent poster's exhibition. Other papers were presented at the general poster exhibition.

### Oral Presentations

Four one-hours slots were assigned for the session:

#### Slot 1

- Phosphorus in the system soil – crops – waters: new insights from a decade of Germany-wide research programs

Dr. Peter Leinweber ([Peter.Leinweber@Stw.De](mailto:Peter.Leinweber@Stw.De))

- Managing legacy phosphorus in soils for maximized crop production with minimized adverse water quality impacts in the Great Lakes basin

Dr. Tiequan Zhang ([Tiequan.Zhang@Agr.Gc.Ca](mailto:Tiequan.Zhang@Agr.Gc.Ca))

- Mapping phosphorus availability at field scale using a combination of Diffusive Gradients in Thin films (DGT) and synchrotron X-ray fluorescence microscopy (XFM)

Dr. Casey Doolette ([Casey\\_Doo@Yahoo.Com](mailto:Casey_Doo@Yahoo.Com))

#### Slot 2

- United States (U.S.) Efforts to Align Soil Test P and K Recommendations: The Fertilizer Recommendation Support Tool (FRST)

Dr. Deanna Osmond

- Effect of Phosphorus-enriched biochar from Real Treated Wastewater (RTWW) on soil-sunflower (*Helianthus annuus* L.) system

Dr. Sofia Maria Muscarella ([Sofiamaria.Muscarella@Unipa.It](mailto:Sofiamaria.Muscarella@Unipa.It))

- Polysaccharide-Coated Apatite Formulations: Enhanced Crop P-Uptake and Reduced Leaching

Mrs. Chen Dayan ([Chenescohen@Gmail.Com](mailto:Chenescohen@Gmail.Com))

- Agronomic and environmental outcomes in response to phosphorus placement in conservation-tillage systems and the role of soil-water and root distribution on phosphorus uptake by corn and soybean

Dr. Fabian Gerardo Fernández ([Fabian\\_G\\_Fernandez@Hotmail.Com](mailto:Fabian_G_Fernandez@Hotmail.Com))

#### Slot 3

- Double-edged sword: Long-term organic fertilizer application promoted the soil P bio-availability and may in-

crease the soil colloidal P loss risk

Dr. Lihong Xue ([Xuelihong@Jaas.Ac.Cn](mailto:Xuelihong@Jaas.Ac.Cn))

- Gradual changes in organic and inorganic soil P forms under different land recovery scenarios

Dr. Pablo Souza Alonso ([Pablo.Souza@Usc.Es](mailto:Pablo.Souza@Usc.Es))

- Unlocking the chemistry of soil legacy phosphorus to maintain sustainable agriculture and a healthy environment

Dr. Jehangir Bhadha ([Jango@Ufl.Edu](mailto:Jango@Ufl.Edu))

- Depth distribution of phosphate 18O isotope values along the Paposo transect

Dr. Xiaolei Sun ([18364539890@163.Com](mailto:18364539890@163.Com))

#### Slot 4

- Phosphorus management in Norwegian agricultural landscape: Regional differences, effectiveness of mitigation measures, and future needs

Dr. Jian Liu ([Jian.Liu@Nibio.No](mailto:Jian.Liu@Nibio.No))

Optimizing Agricultural Phosphorus Sustainability: Insights from Long-Term Fertilization Strategies and Climate Change Impacts in China

Dr. Yu Wang ([Wangyu@Issas.Ac.Cn](mailto:Wangyu@Issas.Ac.Cn))

- Assessing Global Food Security: The Impact of Fertilizer Supply Restrictions on Agricultural Production and Environmental Quality

Dr. Ziqian Gong ([Zgong5@Ncsu.Edu](mailto:Zgong5@Ncsu.Edu))

- Phenology strongly regulates the effect of fertilizers on the plant-soil microbial interactions in wheat

Mrs. Celia Garcia ([cgarciadiaz@Cebas.Csic.Es](mailto:cgarciadiaz@Cebas.Csic.Es))

### Photos from the oral sessions:





ean Patagonia', respectively. The session 'Impact of global trade of food, feed and fibre (3Fs) on soil C and N dynamics, GHG emissions under changes in land use' was convened by Deli Chen, Iain Young, Manfred Lenzen, Gary Feng (Current Chair), and Shu Kee Lam addressing topics on the impacts of global trade of food, feed and fibre on soil C and N dynamics, GHG emissions and land use changes across various agroecosystems and spatial scales. This session included an oral session and a poster session, specifically: 5 oral presentations with more than 150 attendees in total; 5 posters.



(ph. F. Garcia, L. Gatiboni)

### Commission 4.3 - Soils and land use Change

By Gary Feng, Chair; Felipe Zúñiga Ugalde, Vice Chair

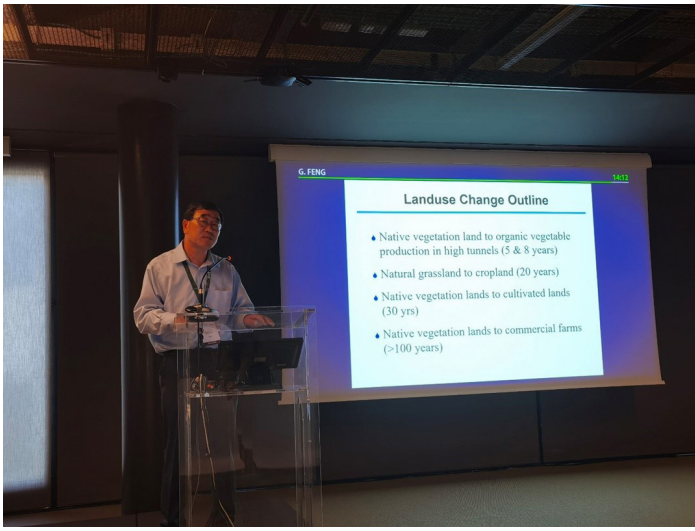
During the Centennial Congress and Celebrations of IUSS, in Florence, Italy, the Commission 4.3 organized three sessions. The session 'Soil Carbon Sequestration and Land Use Change' was convened by Gary Feng (Current Chair) and Felipe A. Zuñiga (Current Vice Chair), which focusing on the effects of land use change on sink/source functions of the soils at global and local scales. This session included an oral session and a poster session, specifically: 12 oral presentations with more than 560 attendees in total; 15 posters, including 4 best posters. The session 'Land use Change Impacts on Soil Health' was convened by Gary Feng (Current Chair), Tingting Chang and Yujie Zhang addressing topics on all aspects of soil health within land use changes all over the world. This session included an oral session and a poster session, specifically: 16 oral presentations with more than 540 attendees in total; 18 posters, including 5 best posters. In addition, Gary Feng (Current Chair) and Felipe A. Zuñiga (Current Vice Chair) made oral presentations titled 'Improve soil and water health and productivity by changing land use' and 'Fragility indices for soils of Chil-



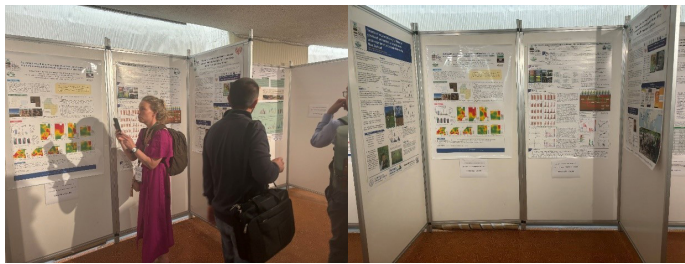
Business Meeting of Division 4 Division Chair and Commission Chairs (ph. G. Feng)



Claudio Zaccone, Chair of Division 4 and Gary Feng, Chair of Commission 4.3 (ph. G. Feng)



Chair Gary Feng Making an Oral Presentation (ph. G.Feng)



Best Poster Presentation (ph. G. Feng)

## Commission 4.5 “History, Philosophy, and Sociology of Soil Science”

### Social sciences, humanities and the arts at the IUSS Centennial

By Anna Krzywoszynska and Alexandra Toland, Co-Chairs Commission 4.5, and Alba Astorina, Noemi Ujhazy, Tamar Law, Jwan Ibbini, Rhonda Janke, Deanna Pindell and Patricia Watts

In her opening speech of the IUSS Centennial, Prof Claire Chenu called for a greater incorporation of social sciences, humanities, and the arts (thereafter soil SSHA) into soil research and soil science. We echo Prof Chenu’s recognition of the crucial importance of SSHA to soil research in the future. This inclusion is necessary not only to enable societal action on soil conservation, but also to diversify and renew scientific research within soil sciences through the inclusion of new hybrid and interdisciplinary research areas.

The IUSS Centennial showcased some of the state-of-the-art research on soils in SSHA, evidencing the growing importance of soils beyond soil sciences. The sessions “Soil, soul and society: transformative pathways in soil care practices” (chaired by Dr Alba L’Astorina and colleagues) hosted eight contributions which explored soils in a transdisciplinary perspective, connecting aesthetics, art history, science, local history, soil knowledge and experience, and nature care. Soils were shown to stand at the core of many transformative processes where several

public, private and third sector actors, engaged in regenerative practices do not just imagine, but rather concretely build, transformative pathways for sustainable futures. The session „Histories of internationalization of soil science” (chaired by Dr Noemi Ujhazy and colleagues) brought the history of international soil science to a new perspective. The presentations raised questions about currently relevant historical aspects of soil science: the identities and backgrounds of soil researchers; the legacies of the Soviet post-Soviet transition in the patterns of scientific knowledge on soils; the British Empire’s geopolitical influence in discourses on tropical soils; and current challenges of decolonizing soil science. We hope this session will open up reflection on the omissions and inequalities of historical knowledge and support trans-disciplinary dialogue on historical legacies of soil science.

The sessions “Epistemologies and Ontologies of Soil: Towards New Politics of Soil Knowledge” (chaired by Dr Tamar Law, Clement Boyer) saw presentations from the history of ideas, landscape design, ecological accounting, science studies, international relations, sociology of science-society relations, art studies, and political ecology. Work in this session explored the contested politics of soil knowledge, examining how soil is constructed as a knowable and manageable object.

The sessions “Soil Health from Multiple Perspectives” (chaired by Dr. Jwan Ibbini, Dr. Rhonda Janke, Deanna Pindell and Patricia Watts) featured artistic research using the “buried cloth technique” a visual/qualitative tool to study soil health. Artists and scientists from several continents investigated soil biodiversity using genomic testing and artistic data visualization to generate dialogue on soil health in different communities, including: animator and illustrator, Jo Pearl (who also presented the work of Cindy Stockton Moore); painter, Andrea Bersaglieri (who also presented the work of Pamela Casper); video artist, Anne Yoncha (who also presented the work of Kim V. Goldsmith); multimedia artist, Deanna Pindell (who also presented the work of Allie Horick); soil scientist and textile artist, Rhonda Janke (who also presented the work of Ruth Wallen), and multimedia artist, Maru Garcia (who also presented the work of Lauren Bon+Metabolic Studio).

The session “Soil as a cultural heritage: the soil knowledge as a heritage for the future generations” (chaired by R. Barbetti, M. Fantappiè, S. Mantel, R.M. Poch, D. Sauer) presented new research on advancing soil literacy and cultural heritage through museums, poetry and storytelling, teaching and podcasts and creative forms of visualization and imagination. A number of significant soil representation experiences for educational and cul-



tural purposes have been reviewed and grouped under the term ‘Terrae Scientia.’ This proposed term encompasses a series of exhibitions that combine crafts, art, and science to explore soil.

Other sessions exploring soils beyond and in dialogue with soil sciences in the Centennial included “Soils in Archaeology” (C. Nicosia, F. Polisca, S. Sauer); “Moving toward diversity, equity, and inclusivity in soil science societies” (B. Reyes-Sánchez, S. Chapman, S. Grunwald, T. Carter, S. Daroub, R.M. Poch). Such a strong participation from soil SSHA was possible due to the unusual format of the Centennial - anyone could propose a panel, including non-IUSS members, and the registration categories (delegate, delegate from developing countries, students) allowed non-IUSS members to attend at reasonable rates. This empowered many SSHA researchers to attend an IUSS event for the first time, many of whom soil science is not their primary disciplinary ‘home’ and whose interests in soil research are therefore not represented by national soil science societies. It is time that the IUSS structures were reformed, as called for by many of its prestigious members, so that interdisciplinarity can flourish at IUSS meetings. We suggest that future World Congresses should consider how to open the program design and the participation to non-IUSS members, e.g. by creating an Affiliate status in registration procedures.

<https://ecoartspace.org/Blog/13374382>



Andrea Bersaglieri and Patricia Watts at the “Soil Dialogues” Exhibition at Il Conventino. (ph. Alex Toland)

## Congratulations

### Congratulations from IUSS Subcommittee, Science Council of Japan

On behalf of the member societies of IUSS Subcommittee, Science Council of Japan (SCJ), I would like to congratulate IUSS on the Centennial Celebration and Congress!! About 20 participants from Japan contributed to organize 3 Sessions, acted as Lead convener/Co-convener, Chairs and presented 11 oral and 14 posters with great success. We also really enjoyed pre- and post-congress tours in Italy.

IUSS Subcommittee, Science Council of Japan (SCJ) is representative body under Japanese Government for national and international matters in relation to IUSS, established when ISSS was reformed to IUSS in 2004, composed of 18\* member societies in Japan, including Japanese Society of Soil Science and Plant Nutrition (JSSSPN) established in 1927.

We have coordinated International and National Conferences, such as Special Symposium with former IUSS Presidents, R. Lal and T. Kosaki, in Tokyo and Shizuoka, September 2019, after Lal’s awarding of Japan Prize, followed by L. Sanchez, and E. Costantini as video lectures. We are currently discussing how to support and interact with IUSS, especially IUSS-related international conferences, such as Inter-Congress of IUSS in Nanjing, October 2024, together with Paddy Soil Working Group of IUSS, 7th International Soil Classification Conference (ISCC) in Hokkaido, June 2024 (Photo), co-operated with Japanese Society of Pedology, one of 18\* member societies in Japan, and 9th International Symposium of Interactions of Soil Minerals, Organic Matter, and Microbes (ISMOM), co-operated with JSSSPN and Japanese Humic Substances Society in Tsukuba, October 2024.

We do hope to continue to strengthen our cooperation with IUSS and to be more collaborative and sustainable in our activities in the future.

Kazuyuki INUBUSHI, Chair of IUSS Subcommittee, Science Council of Japan

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\*Footnote: JSSSPN and other societies; Japanese Society of Soil Microbiology, Japanese Society of Pedology, Japanese Society of Soil Zoology, Japanese Society of Irrigation, Drainage and Rural Engineering, Association of Japanese for Quaternary Research, The Japanese Forest Society, Japanese Society of Soil Physics, Japanese Society of Farm Work Research, Society of Environmental Science, Japan, Crop Science Society of Japan, Japanese Society of Root Science, Japanese Society of Forest Environment, The Japanese Association for Arid Land Studies, Japanese Humic Substances Society, The Japan Society of Tropical Ecology, Japanese Society for Tropical Agriculture (Ref. The International Union of Soil Sciences: A Centennial documentation of its national members, R. Horn, W. Blum, and L.B. Reyes-Sánchez, ed., IUSS, 2024, pp.19-24)



*K. Inubushi with some tour participants (pb. K. Inubushi)*

### **Congratulations from The East and Southeast Asia Federation of Soil Science Societies (ESAFS)**

On behalf of the member societies of The East and Southeast Asia Federation of Soil Science Societies (ESAFS), we would like to congratulate IUSS on its 100th anniversary! The East and Southeast Asia Federation of Soil Science Societies (ESAFS) is a federation of national and regional societies formed to promote information exchange and cooperation among soil science societies in the region. In 1988, a working group (WG) on Paddy Soil Fertility in IUSS held an international symposium on “Paddy Soil Fertility: Past, Present and Future” with 180 participants from 15 countries. The success of this symposium led to the recognition of the importance of holding regular meetings among soil scientists in this region. In 1990, the East and Southeast Asia Federation of Soil Science Societies (ESAFS) was established to promote research in soil and related sciences and disseminate the acquired knowledge and technology for the benefit of the member societies in this region. In 1991, the first conference was held in Osaka, Japan. Since then, international conferences have been held almost every two years in various East and Southeast Asia locations. The number of member societies started at 10 and has continued to grow, and the federation now consists of societies from 15 countries and regions. After the transition from ISSS to IUSS in 2014, ESAFS, as a regional body of IUSS, has been working in collaboration with the various activities of IUSS. Due to the pandemic, the 15th Congress (Kuala Lumpur, Malaysia) scheduled for 2021 was postponed for one year and held in 2022. The 16th Congress was held

for the first time in Vietnam this year, 2024, with over 200 participants, making it a great success (Photo). The next international conference will be held in Nepal in 2027.

We do hope to continue to strengthen our cooperation with IUSS and to be more active in our activities in the future.

ESAFS2024: Vu Nang Dzung, President of Vietnam Society of Soil Science

ESAFS2027: Keshav Raj Adhikari, President of Nepalese Society of Soil Science

ESAFS Support Office: Masanori Saito, Japanese Society of Soil Science and Plant Nutrition



*(pb. ESAFS)*

### **Report of the Centennial and Closing speech**

*Edoardo A.C. Costantini, IUSS President*

The Centennial Celebration and Congress of the International Union of Soil Sciences

From May 19 to 21, 2024, the celebratory conference marking the 100th anniversary of the founding of the International Union of Soil Sciences (IUSS) was successfully held at the Palazzo dei Congressi in Florence. This event was the first world congress of the IUSS to be held in Italy since its foundation in Rome in 1924. The event was jointly organized by the Italian Soil Science Society (SISS) and the IUSS and was sponsored by numerous institutions, scientific societies, and academies, both national and international, as well as various soil movements and associations (<https://centennialiuiss2024.org/testimonials-auspices/>). The congress saw the participation of nearly 1,500 experts from 73 countries (Figs. 4, 5, 6). The largest delegation, after the Italian one, was the Chinese delegation, followed by the United States, and then Germany, Spain, United Kingdom and Mexico. Among the participants were colleagues from Russia and Ukraine, Israel and Iran, highlighting how soil research unites all countries in the world and fosters dialogue between nations, as well as the advancement of knowledge.



*The closing speech of the IUSS President (ph. F. Ambrosini)*

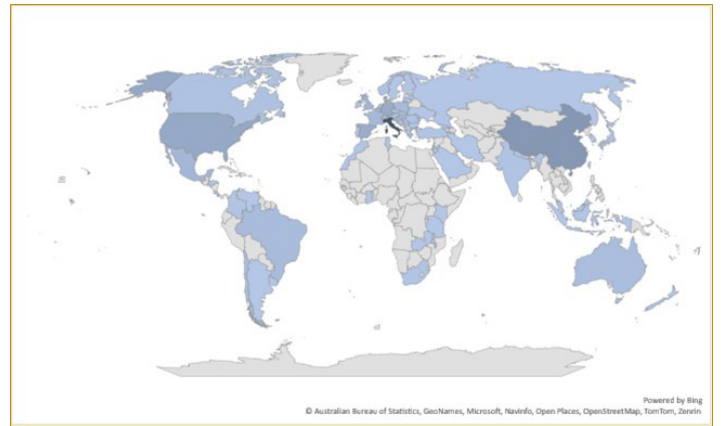
Of particular note was the significant participation of young colleagues, strongly pursued by the IUSS through the awarding of a keynote to a colleague from the early career scientists' group and the provision of 24 grants. Additionally, there were grants funded by the IUSS Divisions.



*Some grants winners with the President and the Secretary (ph. IUSS Secretariat)*



*A moment of the Congress (ph. F. Ambrosini)*



*–Participants from the world...A major part of participants came from China and the USA, besides Italy.*

The Italian participation included approximately 350 people, primarily involving members of the SISS, but also many researchers outside the SISS who collaborate with various soil sciences. Besides presiding over the congress and forming the Organizing Committee and part of the Scientific Committee, the SISS members played a fundamental role in promoting and organizing the scientific sessions and excursions. Special recognition goes to the Centennial Vice-chairs, who also moderated the plenary sessions.

The SISS, together with the IUSS Secretariat, comprised of CREA personnel, organized a booth that was highly visited and appreciated. The Secretariat also managed relations with the press, which allowed for extensive promotion of the Congress both in Italy and internationally. To this end, 20 interviews were conducted in English, French, Spanish, and Italian (Green Accord, Vatican News) and 7 podcasts were produced.

Also noteworthy was the launch event organized by the FAO and the IUSS Secretariat on May 3rd, which received significant publicity, especially the video about the very place where the IUSS was established in Rome in 1924 (Villa Lubin), available on the IUSS YouTube channel (<https://www.youtube.com/watch?v=2EOX-ZrsdgTg>). Furthermore, the proceedings of the 1924 Congress have been digitized and published on the IUSS website (<https://www.iuss.org/1924-proceedings-of-the-fourth-international-conference-of-pedology/>), and three books were specifically published for the Celebration: i) *\*The Genealogy of the IUSS\**, which was printed and freely distributed to the participants, ii) *\*Soil is a Source of Life, Water, and Food\**, available on the web (<https://www.iuss.org/soil-publications/>), and iii) *\*Soil Science in Italy: 1861 to 2024\**, available online (<https://link.springer.com/book/9783031527432>). The three books were presented in a dedicated session of the Congress.

In the 14 plenary sessions and 82 parallel sessions (Fig. 7), papers were presented on seven main topics: i) soil health and sustainable development goals, ii) soil governance, iii) soil in the circular economy, iv) the impact of soil sciences on basic knowledge, v) soil in the digital age, vi) soil and humanity, vii) equity, diversity, and inclusivity in soil sciences.

Centennial figures:

- 14 plenary sessions
- 11 invited speakers
- 1,531 total abstracts
- 82 parallel sessions
- 1,441 presentations
- 42 keynotes
- 705 orals
- 107 best posters
- 576 E-posters
- 4 side events (about 20 presentations)
- 5 excursions (179 participants) + linked art exhibition
- 8 stands
- 24 grants (1 Elsevier) + BSF Springer

The sessions on soil organic matter were the most numerous, followed by those on soil health management, biodiversity, and soil chemistry, which also included topics related to greenhouse gas emissions and soil pollution. Many papers were also presented in sessions on soil conservation, digital soil mapping, urban soil management, and policy-related topics. A more comprehensive review can be found in the book of abstracts, available online on the Centennial website (<https://centennialiu2024.org/>). The proceedings are also planned for publication. During the Congress, four workshops were organized by the FAO (The Status of the World Soil Resources Report 2025 and Global Soil Mapping and Monitoring), the British Society of Soil Science (Invest in Soil Health – Key Practices and Financial Mechanisms), and international projects SOILS4MED – SHARINGMED (Land and Soil Management to Improve Soil Health in the Mediterranean Area).

The Distinguished Service Medal was awarded to Hon. Penelope Wensley, former Governor of Queensland and “National Soils Advocate” for the Australian government, for her dedication and exceptional contribution to the promotion and strengthening of public policies for the conservation, health, and sustainable management of soil resources in Australia and worldwide.

Additionally, the first “Soil of the Year” was presented: the Chernozem of the Balti steppe, the rich and fertile black soil of Moldova.

The congress was preceded by a pre-congress excursion on May 18 to Villa Lubin in Rome, the historical site of the IUSS’s founding. Some attendees also participated in four technical-scientific excursions, which took participants to the soils of the Alps and rice paddies in Piedmont, the paleosols of the Vulsini Mountains in Lazio, several wine-growing terroirs in Chianti, Umbria, Lazio, and Campania, and to appreciate the connections between soil and art through the frescoes and paintings in Palazzo Vecchio. A book of the excursions is in preparation and will be available on the IUSS website.

To summarize some of the main messages that emerged from the contributions to the Congress, it can be said that the interventions highlighted how global challenges such as food security, combating desertification, addressing climate change and biodiversity loss, improving the well-being and health of citizens and nature, recycling effluents, hydrogeological protection, and water security can only be tackled with accurate scientific knowledge of the soil. Numerous contributions were presented on topics such as the selection and use of soil health indicators for monitoring, reporting, and verifying environmental policies, examples of techniques to combat various forms of soil degradation under different environmental conditions, such as erosion, salinization, pollution, and contamination of soils (including urban soils), compaction, loss of organic matter and biodiversity, acidification, loss of soil fertility, and nutrient imbalance.

From the various contributions, it emerged that the countries most actively engaged in soil research are China, the United States, and Australia. In Europe, contributions vary significantly by country but have certainly been stimulated by the recent approval process of the European Union Parliament’s directive for monitoring and safeguarding soil health. A similar increase in soil health research can also be observed in some non-EU countries, notably the United Kingdom and Switzerland.

Among the pressing specific topics, soil contamination by perfluorinated and polyfluorinated alkyl substances (PFAS) emerged as a critical issue. This group of artificial chemicals accumulates in humans and the environment over time. Globally, there are 86,741 potentially hazardous chemicals for human health, of which 42,293 are still in commercial use and have been detected in food in various parts of the world.

In conclusion, it was reiterated that over 95% of the calories necessary for humanity come from the soil, and about 50% of the world’s gross domestic product depends entirely or partially on the soil. Despite this, more than 60% of soils already suffer from one or more forms of degra-

dition, a situation that could worsen due to the expected increase in anthropogenic and climatic pressures. The resilience and functionality of soils globally are therefore in serious danger.

Research conducted by members of the International Union of Soil Sciences is certainly providing a range of knowledge and operational tools to increase soil productivity and reduce its degradation and consumption. However, these tools need to be better known and, more importantly, more widely implemented.

Communication, dissemination, and policies were the three keywords with which the Congress concluded and... long live the IUSS!

## World Soil of the Year

The “Chernozem of the Balti Steppe, Moldova” was officially proclaimed as the inaugural “IUSS World Soil of the Year” during the closing ceremony of the 2024 Centennial Congress and Celebration in Florence. Official nomination of this soil was provided by the Soil Science Society of Poland and the Canadian Society of Soil Science, on behalf of the Moldovan Society of Soil Science. Dr. Boris Boincean received the award from IUSS President Edoardo Costantini, on behalf of the Moldovan Society of Soil Science, and then provided an overview of the Chernozems of the Balti Steppe. This was complemented with a presentation, by Dr. Cezary Kabala (Chair of the IUSS WRB Working Group), on the global significance of chernozemic soils. Further information regarding the 2024 IUSS WSY can be obtained by contacting Dr. Boincean ([bboincean@gmail.com](mailto:bboincean@gmail.com)).

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. It is expected that this will aid in compiling a registry of soil heritage, to recognize the inherent natural and cultural values of soils, thereby helping to open doors for soil science to integrate with environmental protection activities and projects. A dedicated webpage is currently being developed for the WSY program on the IUSS website.

To support promotion of the 2024 IUSS WSY, a special issue of *Geoderma Regional* will be published with a focus on chernozemic soils internationally - this is now open for submissions. Further details can be obtained by contacting Cezary Kabala ([cezary.kabala@upwr.edu.pl](mailto:cezary.kabala@upwr.edu.pl)). Efforts are also currently underway to convert the IUSS WSY Task Force to a regular Working Group within Division 1 – Soils in Space and Time. In the meantime, the call for nominations for the 2025 IUSS WSY is already

open. Inquiries, regarding either participating in the Task Force/Working Group or the 2025 IUSS WSY call, can be directed to the Chair of Division 1, Richard J Heck ([iuss.div1@gmail.com](mailto:iuss.div1@gmail.com)).



*The task force on the first World Soil of the Year 2024; from left to right: Richard Heck, Cezary Kabala, Stephan Mantel; Edoardo Costantini, Boris Boincean, Karl-Heinz Feger. (ph. F. Ambrosini)*



# Conference and Meeting Reports January - June 2024

## International Symposium “Soil Carbon in the Ecological Transition” SoilCET 2024 - FPEN and INRAE

*Date: January 24<sup>th</sup> - 26<sup>th</sup>, 2024*

*Location: Rueil-Malmaison, France*

This event was an opportunity to present and debate the latest scientific advances on four topics:

Session 1: Quantification of soil carbon and characterisation of soil organic matter at plot and regional scales.

Session 2: Stabilisation of soil organic matter: a central process in C-storing agricultural practices.

Session 3: The role of biodiversity in soil organic matter stabilisation and carbon storage.

Session 4: Microbiological, geochemical and matter transfer interactions: an integrated approach.

The Jury composed by Tiphaine Chevallier, Isabelle Kowalewski and Jan Frouz, together with the SoilCET2024 organizing committee was delighted to award for the young researcher:

### Best oral presentation

Sarah Wagon: Rhizodeposition plant-properties and previous land-use control both microbial communities and soil carbon additional storage

### Best poster presentation

Lucas Poullard: Effects of mechanical site preparation techniques in forest plantation context on the soil organic carbon stocks and on the priming effect process

Read more: <https://www.soilcet.com/>  
<https://www.regef.fr/soilcet-2024-soil-carbon-in-the-ecological-transition>

## International Day of Women and Girls in Science OWSD Announces Month-Long Event Series

*Date: February 11<sup>th</sup> - March 8<sup>th</sup>, 2024*

In celebration of the International Day of Women and Girls in Science (11 February 2024) and the International Women’s Day (8 March 2024), the Organization for Women in Science for the Developing World (OWSD) has organized a month-long series of activities, both organized by National Chapters and the OWSD Secretariat. This initiative highlights the importance of promoting gender equality and recognizing the invaluable contributions of women in science globally. This collaborative effort underscores the beauty of our network of 54 Na-

tional Chapters worldwide, each contributing to the advancement of women in science within their respective regions. The OWSD Secretariat side participated in several events organized by partners in Italy.

One such event is an International Conference to celebrate the World Day of Girls and Women in Science jointly organized by the UNESCO Chair on Health Education and Sustainable Development of Federico II of Federico II University and the Network of the Italian UNESCO Chairs (ReCUI). This conference took place February 11, place at the Aula Magna del Centro Congress Federico II in Napoli, presented for the first time at national level the most relevant and outstanding programs promoted by UNESCO to support girls and women in scientific careers. Renowned Italian female scientists in attendance, alongside presentations of emblematic UNESCO programs for gender equality in science.

Website: [Celebrating Women in Science: OWSD Announces Month-Long Event Series](#)

## XXVII Dokuchaev Conference for Young Scientists - “Traditions and innovations in soil science”.

*Date: February 28<sup>th</sup> - March 1<sup>st</sup>, 2024*



The Conference for Young Scientists devoted to the 120th anniversary of the Dokuchaev Central Soil Science Museum and 300th anniversary of the St. Petersburg University in Russia.

The Topics of the conference were:

- oChemical and physical properties of soils and methods for their study;
- oGeography and genesis of soils, features of their classification;
- oInformation technology and GIS in soil science;
- oModern agrotechnology in arable farming;
- oPopularization of soil science
- oSchool session: «Exploring the soil: conference for young researchers».

Website: [dokuchaevskie.ru/?lang=en](http://dokuchaevskie.ru/?lang=en)

## International Lysimeter- & Ecotron-Workshop

Date: March 19<sup>th</sup> - 21<sup>st</sup>, 2024



The workshop has been organized with a scientific session on premises in Hallbergmoos, Germany (Munich Airport Business Park) with lectures, practical demonstrations of latest technology and a complete monolith extraction. Some scientists from Germany, Canada, Mexico, Morocco or the Netherlands held a give a lecture.

Website: [Workshop: Lysimeter & Ecotrons \(ugt-online.de\)](http://Workshop: Lysimeter & Ecotrons (ugt-online.de))

## European Geosciences Union (EGU), General Assembly 2024 – Exhibition

Date: April 14<sup>th</sup> – 19<sup>th</sup>, 2024

Location: Vienna, Austria



The EGU24 General Assembly welcomed 20,979 registered attendees, of which 18,388 made their way to Vienna from 116 countries and 2,591 joined online from 109 countries. It was a great success with 18,896 presentations given in 1,044 sessions. Thereby, 57% of the abstracts were identified as contributions from Early Career Scientists (ECS).

The EGU General Assembly reconvenes at the ACV in Vienna & online as EGU25, 27 April–2 May 2025.

Website: [www.egu24.eu](http://www.egu24.eu)

## 5th Virtual Micromorphology Meeting (ViMi5)

Date: April 24<sup>th</sup> - 25<sup>th</sup>, 2024. Virtual event



The ViMi5 workshop, Organiser OeAW-OeAI HEAS University of Vienna University of Innsbruck, he hosted a Virtual Archaeological Soil Micromorphology Meeting (ViMi5)!

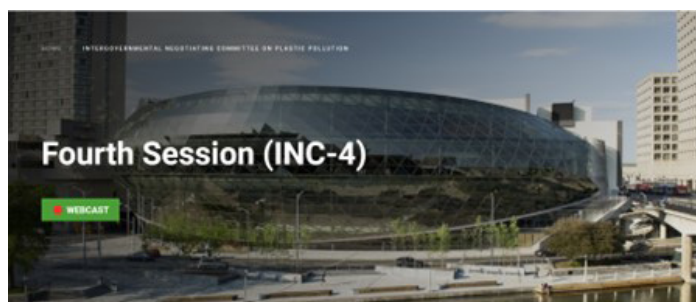
ViMi5 headed a mix of sessions running break-out rooms, live microscopy and methodological presentations and we would like to share some guidelines for each session type. The sessions have been opened by/for students as well non-English.

The session type was organized with one or more chairs who led the discussion in the session. During the Live Microscopy Session, theoretical and technical lessons were held with observations of live thin sections through a microscope camera. Furthermore, methodological presentations were organized where the speaker presented a report on each method to those present.

## Intergovernmental Negotiating Committee: Fourth Session (INC-4)

Date: April 23<sup>rd</sup> – 29<sup>th</sup>, 2024

Location: Ottawa, Canada



In 2022, United Nations Member States adopted a mandate to negotiate an international legally binding instrument to end plastic pollution. The mandate sets out a goal for the plastics treaty to be negotiated before the end of 2024. In April 2024, Member States came together to participate in the fourth session of the Intergovernmental Negotiating Committee (INC) that is tasked with advancing the plastics treaty. INC-4 was held from April 23 – May 1, 2024, in Ottawa, Canada. It serves as the fourth and penultimate session before the negotiations are expected to conclude.

The session has been preceded by regional consulta-

tions on 21 April 2024. The Revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment (UNEP/PP/INC.4/3) is available in all six UN official languages. Side events on 24 and 25 April 2024 were held on the following themes: plastic pollution in the marine environment; approaches to capacity building, financing and financial mechanisms; enable the right transition.

Website: [Fourth Session | UNEP - UN Environment Programme](#)

### The international Symposium “Agriculture, Biodiversity and Food Security: From Commitments to Actions”

Date: April 30<sup>th</sup> - May 2<sup>nd</sup>, 2024

Location: Quebec City, Convention Centre (Canada)



The event was co-organised by Université Laval’s Graduate School of International Studies (ESEI), the Quebec government’s ministère des Relations internationales et de la Francophonie (MRIF), the Food and Agriculture Organization of the United Nations (FAO) and the Secretariat of the Convention on Biological Diversity. Agricultural stakeholders have always played, and will continue to play, a key role in the protection and sustainable management of biodiversity. This Symposium aims to highlight agriculture as a source of solutions to biodiversity-related challenges and will seek to promote and facilitate the collective commitment of all agricultural stakeholders to the implementation of the Kunming-Montreal Global Biodiversity Framework and the transformation of agrifood systems.

Website: [Colloque ABSA 2024 | Home \(quebecconference.org\)](#)

### Africa Fertilizer and Soil Health Summit

Date: May 7<sup>th</sup> - 9<sup>th</sup>, 2024

Location: Nairobi, Kenya, Kenyatta International Conference Centre (KICC)

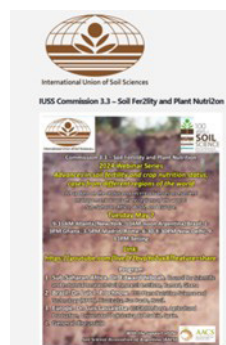
The Objective of the Summit is to bring together all relevant stakeholders to highlight the crucial role of fertilizer and soil health in stimulating sustainable pro-poor productivity growth in African agriculture and to agree on an African Fertilizer and Soil Health Action Plan, as well as the Soils Initiative for Africa. Attended in the event excellent speakers from different regions of the world. All are

outstanding scientists in soil fertility and plant nutrition, to provide current insights in the topic for their regions.

Read more: [Africa Fertilizer and Soil Health Summit | African Union \(au.int\)](#)

### IUSS Commission 3.3 – Soil Fertility and Plant Nutrition 2024 - Webinar Series Advances in soil fertility and crop nutrition status, cases from different regions of the world. Duration: 2 hours.

Date: May 7<sup>th</sup>, 2024



The webinar was carried out through the AACS (Soil Science Association of Argentina) system and made available at IUSS and AACS websites. This webinar provided an update on the status and recent advances on nutrient management across three regions of the world: Sub-Saharan Africa, Brazil, and Europe. The Speakers are outstanding scientists who are willing to share their knowledge and expertise with an open audience: Sub-Saharan Dr. Edward Yeboah. Council for Scientific and Industrial Research- Soil Research Institute, Kumasi, Ghana. Dr. Luis I. Prochnow. CEO Plant Nutrition Science and Technology (NPCT). Piracicaba, Sao Paulo, Brazil is specialist in plant nutrition, phosphorus in agriculture and phosphate fertilizers. Dr. Luis Lassaletta. CEIGRAM/Dept. Agricultural Production, Universidad Politécnica de Madrid. Madrid, Spain. Dr. Luis Lassaletta is an Associate Professor at Universidad Politécnica de Madrid. He is the director for Europe of the International Nitrogen Initiative. He has worked in universities, research centers and public agencies in France, the Netherlands, and Spain.

ing to share their knowledge and expertise with an open audience: Sub-Saharan Dr. Edward Yeboah. Council for Scientific and Industrial Research- Soil Research Institute, Kumasi, Ghana. Dr. Luis I. Prochnow. CEO Plant Nutrition Science and Technology (NPCT). Piracicaba, Sao Paulo, Brazil is specialist in plant nutrition, phosphorus in agriculture and phosphate fertilizers. Dr. Luis Lassaletta. CEIGRAM/Dept. Agricultural Production, Universidad Politécnica de Madrid. Madrid, Spain. Dr. Luis Lassaletta is an Associate Professor at Universidad Politécnica de Madrid. He is the director for Europe of the International Nitrogen Initiative. He has worked in universities, research centers and public agencies in France, the Netherlands, and Spain.

Website: [IUSS Commission 3.3 – Soil Fertility and Plant Nutrition - iuss.org](#)

### Eleventh Latin American and the Caribbean plenary meeting - FAO GSP – Virtual

Date: May 7<sup>th</sup> - 8<sup>th</sup>, 2024





The Latin America and the Caribbean Soil Partnership (LACS) was established in April 2019 by the merging of the South America and the Central America, the Caribbean and Mexico Soil Partnership. The partnership aims to facilitate knowledge exchange and overcome differences in information, capacity, investment and environmental challenges faced by countries across the region.

#### *Agenda 7 May*

Welcome to the meeting. ASLAC activities 2023 – 2024. Adoption of the agenda of the 11th Regional Plenary Assembly. Overall progress of the Global Soil Partnership. Agenda for soil restoration and management in Latin America and the Caribbean. Activities of the Community of Practice (CoP), with the Platform of Latin America and the Caribbean for Climate Action on Agriculture (PLACA). Summary of the Soil Governance workshop held on 16 April 2024. Soil Laboratory Network of Latin America and the Caribbean LATSOLAN: Main developments and proposals. Global Soil Doctors Programme Activities. Presentation of the main activities of the Mes-american/ South American/ Caribbean countries in the 6 areas of action. Other topics of interest to partners and focal points. Q/A. Conclusions and perspectives for the second day. Review and final approval of the updated rules of procedure.

#### *Agenda 8 May*

Summary of the first day and objectives of the remaining activities. Progress of RECSOILMEX. Progress of the SOILFER project. Progress of the SOILCARE project. Soils for Nutrition Project. Other topics of interest to partners and focal points. Q/A. Formation of the steering committee and regional chairs of action areas.

Read more: [Eleventh Latin American and the Caribbean plenary meeting](#)

#### **4<sup>th</sup> ISMC Conference. Advances in Modelling Soil Systems**

*Date: May 7<sup>th</sup> – 10<sup>th</sup>, 2024*

*Location: Tianjin, China*



On May 7-10, the 4<sup>th</sup> ISMC Conference was successfully held in Tianjin, with the theme “Advances in Modelling Soil System Science, Earth System Science, and Beyond.” This conference was hosted by the International Soil Modelling Consortium (ISMC) and organized by the School of Earth System Science, Tianjin University.



The conference featured keynote talks, oral presentations, lightning talks, poster sessions, World Café, and icebreaker activity. With nine sessions, over 70 oral presentations, and nearly 100 poster presentations, the conference facilitated discussions on the latest advancements in soil modelling, pushing the frontiers of fundamental soil science and its applications in Earth system modelling. This contributed to addressing major global challenges such as soil degradation, climate change, and sustainable development.

More than 200 scholars from 16 countries and regions—including Germany, the Netherlands, Italy, Canada, Russia, the USA, Belgium, the UK, Spain, and Austria, as well as from Chinese institutions such as Tsinghua University, Sun Yat-sen University, Wuhan University, Beijing Normal University, China Agricultural University, and the Chinese Academy of Sciences, participated in the academic event.

The 5<sup>th</sup> ISMC Conference is to be held in 2026.

Read more: [The 4th ISMC Conference Convened in Tianjin-Tianjin University: \(tju.edu.cn\)](#)

#### **InterPore will convene its 16<sup>th</sup> Annual Meeting**

*Date: May 13<sup>th</sup> - 16<sup>th</sup>, 2024*

*Location: Qingdao, China*



The Focus Theme of InterPore2024 was “porous media and biology.” This includes occurrence and applications of biology in living organs, plants, and in medicine, as well as in soil, oil and gas reservoirs, including theories and (bio)physics, experiments, imaging, mathematics, and modelling.

Transport phenomena. Swelling and shrinking porous media. Multiphysics-multiphase flow. Reservoir engineering. Soil Mechanics and Engineering. Geothermal energy. CO<sub>2</sub> sequestration. Constitutive modeling. Wave propagation. Energy Storage.

Biotechnology. Biofilms. Thin and nanoscale poromechanics. Fuel cells and batteries. Food. Paper and textiles. Filters, foams, membranes. Fibers and composites. Ceramics and constructions materials. Other porous media applications.

Read more: [InterPore2024 \(13-16 May 2024\): Conference Homepage · InterPore Event Management \(Indico\)](#)

### Plant Fascination Day 2024

*Date: May 18<sup>th</sup>, 2024*



The seventh international day “The Fascination of Plants” will be launched by plant scientists from all over the world under the aegis of the European Plant Science Organization (EPSO).

The goal of this activity was to get as many people as possible around the world fascinated by plants and enthusiastic about the importance of plant science for agriculture and the sustainable production of nutritious foods, as well as for horticulture, forestry and the production of plant products, non-food products such as paper, lumber, chemicals, energy and pharmaceuticals.

Everyone were invited, from schools to producers, to join and contribute to this initiative. Numerous plant institutions, universities, schools, botanical gardens and museums, together with farmers and industries, have opened their doors during past editions of Plant Fascination Day.

Read more: [Fascination of Plants Day 2024 - EPSO \(epsoweb.org\)](#)

### The 9th International Symposium on Soil Organic Matter- SOM 2024

*Date: May 26<sup>th</sup> – 31<sup>st</sup>, 2024*

*Location: Ben Guerir, Morocco*



SOM 2024: The first edition in Africa

It is the 9th International Symposium on Soil Organic Matter (SOM 2024).

This symposium highlighted the latest discoveries on soil organic matter and reinforced its importance in global decarbonization. SOM 2024 features plenary and keynote speeches by renowned scientists, contributed oral talks and posters by participants, awards for the top student contributions and exhibitions by publishers, technical service providers and soil organic matter advisors. Special sessions were led by invited panellists to discuss the complex issues related to the management of soil organic matter for soil health and decarbonization, with a particular emphasis on the situation in Africa. As this is the first time this symposium takes place in Africa, SOM 2024 was a unique opportunity to understand Africa’s vital contribution to our shared global challenges.

Read more: [som2024.um6p.ma](http://som2024.um6p.ma)

### GLOSOLAN-Spectroscopy \_ Spectral Sensing for Soil Contamination: From Ground to Space - FAO GSP

*Date: May 29<sup>th</sup> – 30<sup>th</sup>; June 11<sup>th</sup>, 2024*

*Webinar Virtual: 29 May 2024 (Spanish session#1)*

*30 May 2024 (English session #2)*

*11 June 2024 (English session#3)*



GLOSOLAN-Spectroscopy webinar | Basic aspects of soil analysis using near-infrared spectroscopy 29 May 2024 (Spanish session#1). The seminar proposed to offer an overview of the basic aspects necessary to analyze soils using NIR (Near InfraRed) spectroscopy. The main steps required have been described, from scanning the samples to developing the calibrations. Furthermore, some strategies that can be followed in developing calibrations from spectral libraries have been described, especially depending on the intended use. Advice will be given to avoid unrealistic validation processes, which can offer an incorrect view of the true capacity of the models, since they may apparently seem very accurate if an adequate validation process has not been followed and rigorous.

GLOSOLAN-Spectroscopy webinar | Spectral Sensing for Soil Contamination: From Ground to Space | 30<sup>th</sup>

May at 14:00 (CET). Over the last few decades, promising solutions based on spectral sensing have emerged for monitoring contaminant release, fate and effects on soils and plants, from the field to higher scale applications. A wide variety of approaches coupling sensor-based data to plant and soil sciences have been proposed for detecting and assessing soil contamination directly or indirectly, opening the way to surveying contaminated areas and characterizing the impacts of anthropogenic activities on the environment. This webinar addressed various aspects of soil contamination monitoring over space and time using spectral sensing.

GLOSOLAN-Spectroscopy webinar | Unlocking the Science of Soil and Plant Diagnostics at CIFOR-ICRAF's State-of-the-Art Laboratory | 11th June at 15:00 (CET). During this webinar, participants learned about the revolutionary potential of soil spectroscopy, exemplified by CIFOR-ICRAF's state-of-the-art Soil-Plant Spectral Diagnostics Laboratory (CRAF), renowned for hosting one of the largest soil spectroscopy libraries in the world. Participants learned about its key role in the GLOSOLAN global spectral library initiative with FAO and witnessed the transformative impact of its successful global demonstrations using soil spectroscopy to determine soil properties.

*Read more:* [Aspectos básicos del análisis de suelos mediante espectroscopía de infrarrojo cercano](#); [Spectral Sensing for Soil Contamination: From Ground to Space](#); [Unlocking the Science of Soil and Plant Diagnostics at CIFOR-ICRAF's State-of-the-Art Laboratory](#)

[GLOSOLAN-Spectroscopy webinar | Spectral Sensing for Soil Contamination: From Ground to Space | 30th May at 14:00 \(CET\) | Global Soil Partnership | Food and Agriculture Organization of the United Nations \(fao.org\)](#)  
[GLOSOLAN-Spectroscopy webinar | Unlocking the Science of Soil and Plant Diagnostics at CIFOR-ICRAF's State-of-the-Art Laboratory | 11th June at 15:00 \(CET\) | Global Soil Partnership | Food and Agriculture Organization of the United Nations \(fao.org\)](#)

Twelfth Plenary Assembly of the Global Soil Partnership  
- GSP/FAO

Date: June 3rd - 5th, 2024

Location: FAO headquarters and on zoom for those connecting remotely (hybrid)

The Twelfth session of the Plenary Assembly of the Global Soil Partnership was held from 3 to 5 June 2024 at FAO headquarters in a hybrid format. With over 400 distinguished delegates, technical experts and partners from around the world, the Plenary came together to engage in deliberations and made crucial decisions to advance the global soil agenda and exchange knowledge and expertise in the field of sustainable soil management. The Plenary also served as a platform for the Soil Partners' Day, an event designed to amplify the voices of FAO Members and partners in the global soil agenda.

Read more: <https://www.fao.org/global-soil-partnership/about/plenary-assembly/twelfth-session-2024/en/>

### Annual Science Days 2024 & 5<sup>th</sup> General meeting

Date: June 10<sup>th</sup> - 14<sup>th</sup>, 2024

Location: Artis Centrum Hotels, Vilnius, Lithuania



Scope of the Conference: Presenting, demonstrating, discussing the EJP SOIL results and output with the goal making them spread over into initiatives and policymaking. Plenum session recordings, slides and other relevant material will be available right soon.



Thank you for the fantastic Annual Science Days at LAMMC Vilnius! (ph. EJP SOIL)

June 10<sup>th</sup>:

Presentations. Opening of the event: Claire Chenu - EJP SOIL Coordinator & Anna Besse-Lototskaya - EJP SOIL Co-coordinator. Soil futures - emerging drivers and needs of soil management and soil services: Katharina Helming - EJP SOIL Advisory Board Chair. Strengthening climate preparedness and food security through agroecological soil management: Pablo Tittone.

Breakout Sessions: A1 - Carbon sequestration at national

and European scale & effects of policy and socio-economic factors. A2 - Leveraging different approaches in the development of farmer-friendly tools for sustainable soil practices and schemes. A3 - Publications and open science

June 11<sup>th</sup>

*Breakout Sessions:*

B1 - C-sequestration and trade-offs. B2 - External organic matters for circular economy. B3 - Indicators for soil-ecosystem services. C1 - C-sequestration, roots & amendments.

C2 - Soil biodiversity & ecosystem services. C3 - Sustainable soil management. C4 - Innovation and methods for data acquisition.

Read more: [Annual Science Days 2024 \(ejpsol.eu\)](https://www.ejpsol.eu)

### 13<sup>th</sup> Conference AISTEC “Filiere cerealicole rigenerative. Cambiamenti climatici e nuove esigenze qualitative e nutrizionali”

*Date: June 19<sup>th</sup> - 21<sup>st</sup>, 2024*

*Location: Turin, University of Turin Aldo Moro Complex Auditorium, Turin*



The 13<sup>th</sup> Conference of the Italian Association of Cereal Science and Technology, co-organised by AISTEC, the Council for Agricultural Research and Economics (CREA) and the department of Agricultural, Forestry and Food Sciences (DISAFA) of the University of Turin, took place from 19 to 21 June 2024 at the Aldo Moro Complex Auditorium of the University of Turin.

The conference addressed the topic of the transition of cereal cultivation systems and the food chains connected to them to respond to the need to mitigate and adapt to climate change and to guarantee production in line with the qualitative demands of the processing industry and society.

The Conference aimed to present and debate recent scientific acquisitions relating to cereals from field to table and encourage the transfer of research results to the sector, in the context of oral and poster scientific sessions, with particular reference to the following topics: regenerative

agri-food models; product and process innovations; use value and nutritional quality of raw materials and food products; conscious consumption; communicate and certify new supply chains; process and product traceability and markers; regulatory aspects and economic analysis.

During the conference, thanks to the many years of collaboration with Chiriotti Editori, two prizes were awarded, one of which is named in memory of Giovanni Chiriotti for the best poster on innovative technologies in the sector of cereal transformation and use and one for the best poster on the themes of the conference dedicated to young researchers (max 35 years).

Read more: [www.aistec.it](http://www.aistec.it)

### XXVI IUFRO World Congress 2024: Forests and Society Towards 2050

*Date: June 23<sup>rd</sup> - 29<sup>th</sup>, 2024*

*Location: Stockholm, Sweden*



The 26<sup>th</sup> IUFRO World Congress is over.

It has been the largest World Congress ever with 4300 delegates, 3500 presentations and 70+ showcased innovations and much more. The quest for a sustainable future and forests continues. We'll keep the presentations, posters, livestreams and interviews available for you until the 27<sup>th</sup> IUFRO World Congress in Kenya 2029.

Read More: Congress website: <https://iufro2024.com/>

### Third International Symposium on Climate-Resilient Agri-Environmental Systems ISCRAES 2024

*Date: June 25<sup>th</sup> - 28<sup>th</sup>, 2024*

*Location: ICD O'Brien Centre for Science Dublin, Ireland*



After the successful arrangement of the 1st ISCRAES 2020 (Virtual, 4-6 November 2020) and the 2nd ISCRAES 2022 (in-person, 28-31 August 2022 in Dublin), was held the Third International Symposium on Climate-Resilient Agri-Environmental Systems (ISCRAES 2024) from 25-28 June 2024 at UCD University Club, University College Dublin, Dublin 04. The main theme of the ISCRAES 2024 was “Reframing Strategies for Low Carbon Future in Agro-Farming Systems”, leading to achieving the primary objective of agro-environmental sustainability by tackling the current major environmental, climate, and societal challenges facing by the world.

This conference provided a platform to discuss the scientific and technical aspects of the range of cross-cutting issues associated with the environmental impact of agriculture, including public perception, regulatory and socio-economic factors.

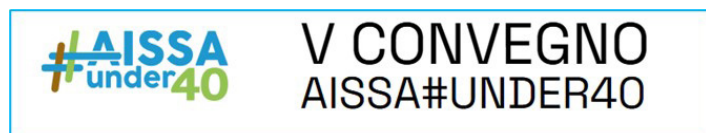
Deadline for submitting full papers to journal special issues: 30 November 2024

Read more: [INTERNATIONAL SYMPOSIUM ON CLIMATE-RESILIENT AGRI-ENVIRONMENTAL SYSTEMS \(iscraes.org\)](https://www.iscraes.org/)

### **AISSA#under40 - “Agricultural Sciences in the Anthropocene: from productivity to the protection of material and cultural heritage”**

Date: June 26<sup>th</sup>-27<sup>th</sup>, 2024

Location: Florence, Italy



This event is also part of the program of initiatives to celebrate 110 years of agriculture in Florence.

The conference is aimed at enhancing the commitment of young researchers from all disciplines relating to science Agricultural, Environmental, Food, Forestry and Animals.

Read more: [Aissa Under 40 | Aissaunder40; aissaunder40@dagri.unifi.it](https://www.dagri.unifi.it/aiissa-under40/)

## **Publications**

### **Soil is a Source of Life, Water and Food**

Celebrating the International Union of Soil Sciences Centenary, as a gift for the children of the world the book “Soil is a Source of Life, Water and Food” was launched

during the IUSS Centennial Congress.



<https://www.iuss.org/soil-publications/iuss-publications/soil-is-a-source-of-life-water-and-food/>

The book containing 30 Crop Cards (all in English, Spanish, German, French and Portuguese), and 11 stories for children (all in English, Spanish, German, and some also in French and Portuguese), was edited by the IUSS Past President Laura Bertha Reyes-Sánchez and Dr. Rainer Horn.

The book is available on the IUSS website in PDF format with an Open Access license,

The IUSS invites all our members to download it and share it with the children and teachers in their family and professional environments.

### **IUSS Genealogy Book**



**IUSS 1924 – 2024**  
A Centennial documentation of its national members



Editors:  
Rainer Horn  
Winfried Blum  
Laura Berta Reyes Sánchez



In the framework of the International Union of Soil Sciences Centennial, the “IUSS Genealogy Book” was launched, as historical recognition to all those who between 1924 and 2024 built and strengthened it. Through this document, the editors Rainer Horn, Winfried Blum, and Laura Bertha Reyes-Sánchez leave for

posterity a written memory of the first hundred years of life of the IUSS.

Due to its importance, the book was given to all attendees to the Centennial celebration, but it can also be freely downloaded from the IUSS webpage.

### **Assessing the phosphorus cycle in European agricultural soils: Looking beyond current national phosphorus budgets**

By: Muntnyler, A., Panagos, P., Pfister, S., & Lugato, E., 2024. *Science of The Total Environment*, 906: 167143.

DOI: <https://doi.org/10.1016/j.scitotenv.2023.167143>

*Process-based biogeochemical models are valuable instruments to monitor the P cycle and predict the effect of agricultural management.*

Read more: <https://esdac.jrc.ec.europa.eu/content/phosphorus-cycle-european-agricultural-soils>

### **Towards multi-model soil erosion modelling: An evaluation of the erosion potential method (EPM) for global soil erosion assessments**

By: *Bezjak, N., Borrelli, P., Matjaž M., Auflič M., Panagos, P., 2024. CATENA 234, 107596.*

DOI: <https://doi.org/10.1016/j.catena.2023.107596>



The applicability of the Erosion Potential Model (EPM) and its modified version (mEPM) for estimating gross and net erosion rates on a global scale is evaluated. Description of the application of EPM model at global scale is described in the manuscript.

Read more: <https://esdac.jrc.ec.europa.eu/content/erosion-potential-method-epm>

### **Cadmium in topsoils of the European Union—An analysis based on LUCAS topsoil database**

By: *Ballabio, C., Jones, A. and Panagos, P., 2024. Science of The Total Environment, 912: 168710.*

DOI: <https://doi.org/10.1016/j.scitotenv.2023.168710>

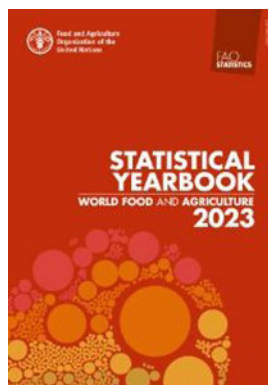
Read more: <https://esdac.jrc.ec.europa.eu/content/cadmium-topsoils-european-union>; [Cadmium in topsoils - ESDAC - European Commission \(europa.eu\)](https://esdac.jrc.ec.europa.eu/content/cadmium-topsoils-ESDAC-European-Commission)



### **FAO Statistical Yearbook – World Food and Agriculture**

By: *FAO. 2023. Rome, Italy. 384 p. ISBN: 978-92-5-138262-2*

DOI: <https://doi.org/10.4060/cc8166en>



This publication offers a synthesis of the major factors at play in the global food and agricultural landscape.

Download: [World Food and Agriculture – Statistical Yearbook 2023 \(fao.org\)](https://www.fao.org/publications/02/04/default.aspx)

### **The Case for Reform of Scientific Publishing**



Publisher: International Science Council, 17/11/2023

DOI: 10.24948/2023.14

URL: <https://council.science/publications/reform-of-scientific-publishing/>

This discussion paper has been developed by the International Science Council as part of the Council's Future of Publishing project and is a companion piece to the “Key Principles for Scientific Publishing” paper.

### **Protecting Science in Times of Crisis**



By: Erin Buisse, Joel Bubbers, Holly Sommers, Vivi Stavrou and Mathieu Denis

Publisher: International Science Council Date: February 2024

DOI: 10.24948/2024.01

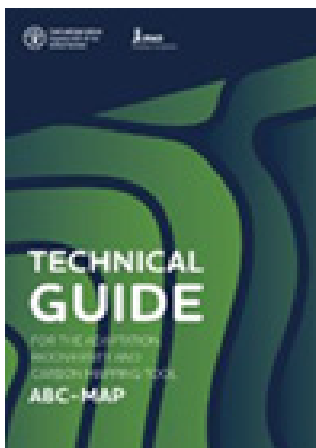
URL: <https://council.science/publications/protecting-science-in-times-of-crisis>

“With this new publication, the Centre for Science Futures ambitions to fill an important gap in the discussions on the protection of scientists and science during crises. The study details options for more effective multilateral policy agenda, as well as action frameworks that science institutions can start collaborating on immediately”

Mathieu Denis, head of the Centre for Science Futures of the International Science Council

### Technical guide for the Adaptation, Biodiversity and Carbon Mapping Tool – ABC-Map

By: Dionisio, D., Audebert, P., Schiattaccate, L.-S., Brierley, I., Tribalet, C. & Bernoux, M.; FAO 2023. Rome, Italy.



ISBN: 978-92-5-137586-0

DOI: <https://doi.org/10.4060/cc4116en>

Read more: [FAO Strategy on Climate Change 2022–2031](#)

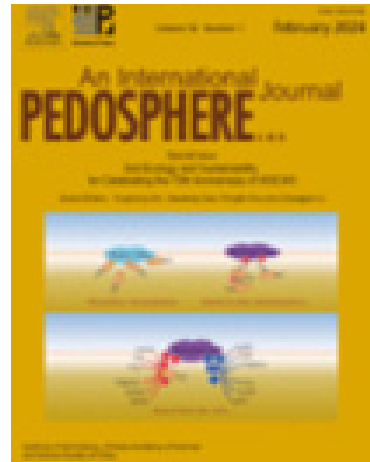
Preface: Special issue on soil ecology and sustaina-

bility for celebrating the 70<sup>th</sup> anniversary of ISSCAS

By: Fusuo ZHANG, *Pedosphere* 34(1): 1–2, 2024

Doi: 10.1016/j.pedsph.2023.10.002

ISSN 1002-0160/CN 32-1315/P, ©2024 Soil Science Society of China, Published by Elsevier B.V. and Science Press



Sciences (ISSAS) was founded in 1953. The institute aims to solve the problems of agricultural development, ecological conservation, and environmental protection and to promote the development of soil science. Maintaining soil health is the only way to achieve sustainable development, healthy food, and healthy life. Important soil-related initiatives in sustainable agricultural development at least include three aspects: 1) maintaining enough arable soil area; 2) improving soil quality and preventing soil degradation; and 3) managing soil sustainably, improving water-holding capacity and nutrient utilization, and achieving food production and quality and ecological security

### Soils in extraterrestrial space: Need for studies under microgravity

By: M. B. KIRKHAM, *Pedosphere* 34(1): 13–14, 2024

Doi: 10.1016/j.pedsph.2023.09.005

ISSN 1002-0160/CN 32-1315/P, ©2024 Soil Science Society of China Published by Elsevier B.V. and Science Press

With the increased interest of plants in space, gravity cannot be ignored when studying soil-plant-water relations. Therefore, it is important to understand the water relations of soils under zero gravity in space or under reduced gravity on the Moon or Mars. This paper outlines the problems of moving water in soils under zero gravity or microgravity, as well as growing plants in these soils. It is suggested that microgravity experiments could be done on Earth using both soils and plants. Results from such experiments could be used to grow plants when

mankind establishes bases on the Moon and Mars.

### New video on soil description and soil classification

Peter Schad and Chris Just from the Technical University of Munich (Germany) made a new video on Soil Description and Soil Classification. It uses the 4th edition of the World Reference Base for Soil Resources (WRB). The description is according to the new WRB Field Guide (Annex 1 of the WRB Manual - replacing for WRB the FAO Guidelines for Soil Description, 2006) and the classification considers the new WRB edition. It is available here: <https://wrb.isric.org/teaching-material/>.

During COVID, the authors were unable to go on field trips with the students and therefore produced some videos: in German the description according to the German field manual and the classification according to the German national soil classification, and in English and Spanish according to the FAO Guidelines for Soil Description (2006) and the 3rd edition of the WRB (2015).

They were published on their university's teaching platform in 2020. In 2022, their institution created a YouTube channel, and they were published there too: <https://www.youtube.com/channel/UC-dL7jrghzwoFfKNLT-wGXxQ>.

### Soil Science in Italy 1861 to 2024



*Editors: Carmelo Dazzi, Anna Benedetti, Giuseppe Corti, Edoardo A.C. Costantini - Publisher: Springer Cham, Edition N. 1, 2024. XX, 676 p. 28 b/w illustrations, 328 illustrations in colour*

DOI: <https://doi.org/10.1007/978-3-031-52744-9>

eBook ISBN: 978-3-031-55583-1 (€ 32.09)

Hardcover ISBN: 978-3-031-52743-2 Published: 04 May 2024

Represents a unique opportunity to preserve the memory of the Italian history of soil science. Bridges between the pioneers of soil science in Italy and the young generation

of researchers. Constitutes a milestone in Italian cultural heritage.

History is generally defined as “the study of past events, particularly in human affairs” and is mostly understood when presented chronologically. That’s why someone also defined it as the ‘chronological record of the past’. Knowing the past is extremely important for any society and human beings. The past gives us insights into our evolving behaviour in many matters of life. The book is seen as a unique opportunity to preserve the memory of the Italian history of soil science. It represents a milestone and a cultural heritage. Moreover, the book is a sort of ideal bridge between the pioneers of soil science in Italy and the young generation of researchers, contributing to spreading awareness of the importance of soil as a fundamental resource.

Agriculture soil is precious and limited resources irreversible degradation of this resource implies not only ruining the main assets of current farmers, but also reducing the farming opportunities of future generations. Therefore, soil protection policies need to have a special focus on sustainable use and management of agricultural soils with a view to safeguarding the fertility and agronomic values of agricultural land. The book has been written in concise and in simple understandable English so that aspirants of competitive examination in soil science specially benefitted. Since soil science is a major discipline in the field of agriculture. The ASRB conducted NET, ARS examination time to time for soil science as a major subject. The Author hopes that the efforts of preparing the book *Soil Science: A Competitive Approach* will be fulfilled as it will help the students of Soil science. This will also prove an important reference for state agriculture universities, institutions, libraries, bookshelves, etc. Edition N.1; Number of Pages XX, 676; Number of Illustrations: 28 b/w illustrations, 328 colour illustrations.

Topics: Agriculture, Cultural Heritage, Geography, general

Read more: <https://link.springer.com/book/10.1007/978-3-031-52744-9#keywords>

### Micro- and nanoplastics in soil ecosystems: Analytical methods, fate, and effects





By: Yu Wang, Leilei Xiang, Wulf Amelung, Martin Elsner, Jay Gan, Stephan Kueppers, Laforsch Christian, Xin Jiang, Joseph Adu-Gyamfi, Lee Heng, Yong Sik Ok, Natalia P. Ivleva, Yongming Luo, Damià Barceló, Andreas Schäffer, Fang Wang, *TrAC Trends in Analytical Chemistry, Volume 169, 2023, 117309*

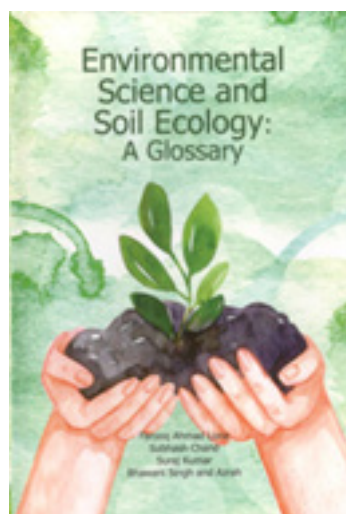
Doi: <https://doi.org/10.1016/j.trac.2023.117309>.

ISSN 0165-9936, Published by Elsevier, December 2023

As emerging contaminants, microplastics and nanoplastics (MPs/NPs) are increasingly widespread in soil environment. The present paper reviews available analytical methods for detecting MPs/NPs in soil and plants and examines the migration processes of MPs/NPs at multiple interfaces as well as the potential toxic effects of MPs/NPs.

### Environmental Science and Soil Ecology: A Glossary

By: Farooq Ahmad Lone, Subhash Chand, Suraj Kumar, Bhanwani Singh, and Azrah Satish Serial Publishing House



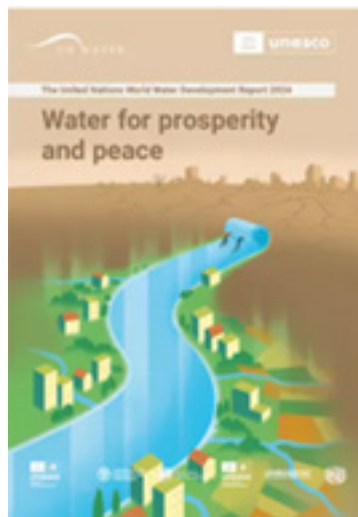
The book contains information about the basic terms and concepts of environmental science and related/allied subjects. The glossary of the different terms has been arranged in alphabetical fashion and explained in brief and lucid manner. The book shall be useful for students

perusing their career in the field of Environmental Science, Soil Science, Agriculture, Horticulture, Biodiversity, Biology, Forestry, Sericulture, Agriculture Engineering, Limnology, Fisheries, Crop Science, Meteorology and other related subjects.

This book shall also be useful for the students preparing for competitive examinations viz., AIEEA, ICAR-UG/PG Scholarships, B.Sc., M.Sc., Ph.D. ASRB, Net, SET, etc. This book shall help the readers to quickly grasp the basic vocabulary and definitions in a systematic manner.

<https://www.satishserial.com/book/9789395700818/environmental-science-and-soil-ecology-a-glossary>

### Un World Water Development Report 2024 (WWDR); 2024 United Nations



Launch of the 2024 UN World Water Development Report: Water for Prosperity and Peace Water for Prosperity and Peace is the title of the upcoming United Nations World Water Development Report. which will be released:

Date: 22 March 2024 - 2:00 pm - 22 March 2024 - 2:30 pm

Location: UNESCO Headquarters, Paris, France  
Room IX Room I; Type: Cat VIII – Symposia; Arrangement type Hybrid

[Launch of the 2024 UN World Water Development Report: Water for Prosperity and Peace | UNESCO](#)

### EUSEDcollab: a network of data from European catchments to monitor net soil erosion by water.

Francis Matthews *et al.*

By: Francis Matthews *et al.*

Ed. Scientific data, August 2023, pp.11

DOI :<https://doi.org/10.1038/s41597-023-02393-8>

A network of researchers releases an open-access database (EUSEDcollab) of water discharge and suspended sediment yield time series records collected in small to medium sized catchments in Europe. EUSEDcollab is compiled to overcome the scarcity of open-access data at relevant spatial scales for studies on runoff, soil loss by water erosion and sediment delivery. Across ten European countries, EUSEDcollab covers over 1600 catchment years of data from 245 catchments at event (11 catchments), daily (22 catchments) and monthly (212 catchments) temporal resolution and is unique in its focus on small to medium catchment drainage areas (median = 43 km<sup>2</sup>, min = 0.04 km<sup>2</sup>, max = 817 km<sup>2</sup>) with applicability for soil erosion research. The aim of uniting people, knowledge, and data through the European Union Soil Observatory (EUSO).

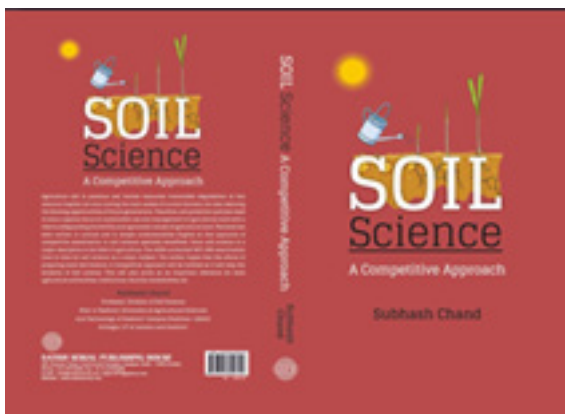
### Modeling arsenic in European topsoils with a coupled semiparametric (GAMLSS-RF) model for censored data



By: Arthur Nicolaus Fendrich *a,b,c,\**, Elise Van Eynde *a*, Dimitrios M. Stasinopoulos *d*, Robert, A. Rigby *d*, Felipe Yunta Mezquita *a*, Panos Panagos

Ed.: Environment International, Published by Elsevier  
DOI: <https://doi.org/10.1016/j.envint.2024.108544>

### Soil Science. A Competitive Approach



By: Subhash Chand, Satish Serial Publishing House  
ISBN: 9789395700740, 2024.

Agriculture soil is precious and limited resources irreversible degradation of this resource implies not only ruining the main assets of current farmers, but also reducing the farming opportunities of future generations. Therefore, soil protection policies need to have a special focus on sustainable use and management of agricultural soils with a view to safeguarding the fertility and agronomic values of agricultural land. The book has been written in concise and in simple understandable English so that aspirants of competitive examination in soil science specially benefitted. Soil science is a major discipline in the field of agriculture.

The ASRB conducted NET, ARS examination time to time for soil science as a major subject. The Author hopes that the efforts of preparing the book Soil Science: A Competitive Approach will be fulfilled as it will help the students of Soil science. This will also prove an important reference for state agriculture universities, institutions, libraries, bookshelves, etc.

<https://www.satishserial.com/book/9789395700740/soil-science-a-competitive-approach>

### Conservation Agricultural Practices for Improving Crop Production and Quality



*agronomy*

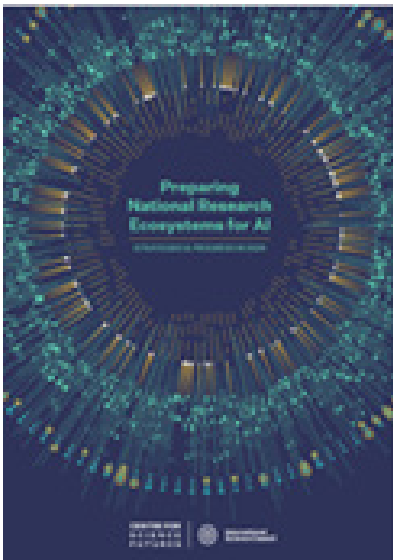
Guest Editors: Mariola Staniak, Ewa Szpunar-Krok and Małgorzata Szostek

Special Issue. The submission deadline is 31 August 2024 and papers may be submitted immediately or at any point until 31 August 2024, as papers will be published on an ongoing basis.

ISSN 2073-4395, Published by Agronomy

Read more on this Special Issue and submission guidelines:  
<https://www.mdpi.com/si/agronomy/H4FE1QROA2>.  
DOI: <https://doi.org/10.1016/j.trac.2023.117309>

### Preparing National Research Ecosystems for AI: strategies and progress in 2024



By: David Castle (project chair), Mathieu Denis, Dureen Samaradar Eweis, with contributions from: Australia: Emma Schleiger, Hayley Teasdale and Alexandra Lucchetti Benin; Ministry of Digital Economy and Communications Brazil: Mariça Ferro, Gilberto Almeida Cambodia: Sirivat Chhem Chile: Rodrigo Durán China; Gong Ke, Liu Xuan India: Moumita Koley, Jibu Elias Malaysia: Nurfadhlina Mohd Sharef Mexico: Dora-Luz Flores Oman: Hamdan Mohammed Al Alwai Uruguay: Lorena Etcheberry, Guillermo Moncecchi Uzbekistan: Abduvaliev Abdullaziz Abduvalievich

URL: <https://council.science/publications/ai-science-systems>

Publisher: International Science Council

Date: March 2024

DOI: 10.24948/2024.06

While advancements in AI have huge implications for national R&D systems, very little is known about how governments plan to accelerate the uptake of AI by science and research institutions. In “Preparing National Research Ecosystems for AI: Strategies and Progress in 2024”, the International Science Council’s Centre for Science Futures addresses this knowledge gap by presenting a review of the existing literature on this topic, as well as a series of country case studies.

Pdf: [Preparing-National-Research-Ecosystems-for-AI-5.pdf \(council.science\)](https://council.science/publications/ai-science-systems)

## Science organizations in the digital age: A series of digital Journey case studies with Members of the International Science Council



By: Nick Scott

Contributor: Zhenya Tsoy

URL: <https://council.science/publications/science-organizations-in-the-digital-age>

Publisher: International Science Council, pages 30, April 2024

DOI: 10.24948/2024.05

This discussion paper, which synthesizes findings from a survey, interviews, and case studies involving ISC Members serves as both a current reflection of the digital status in the science community and a guide for organizations embarking on their digital transition journeys.

## Healing soil: How soil health will save the planet and us



By: Bruce C Ball.

ISBN: 978-1-7395931-0-0 Paperback

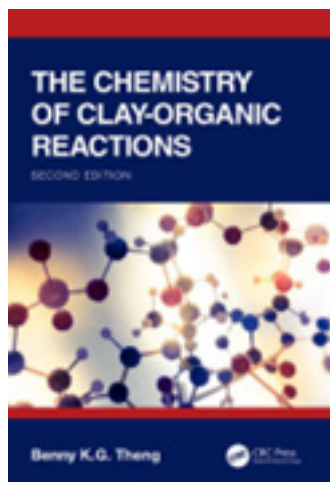
Connecting people to soil for a better future

Using his own artworks and drawing on his soil science research, Bruce Ball reveals the importance of soil to humanity. Structured in three main parts, his book takes us on a journey from the nature of healthy soil, through

the influence of soil on our health and food to its hidden contributions to our society and our planet. In *Healing Soil*, you can discover: How soil works, what makes it healthy and how it affects your health. How healthy soil helps combat climate change, environmental pollution and biodiversity loss while allowing sustainable production of nutritious food. How a soil-based view of the world, and parallels between soil and our lives, can help us arrive at the cultural and spiritual transformation needed for a sustainable society. Your own road to a healthy and sustainable life using practical and meditative exercises on soil, helped by a visual soil health chart and a wealth of references that allow you to reflect and build on what you unearth in the book. Contributions are also included from farmers, former students, scientists, a theologian and a community worker who the author encountered in his esteemed 35-year career in soil science. Professor Pete Smith, University of Aberdeen, award-winning climate change scientist and soils expert, states ‘this labor of love will inform and enchant its readers, be they knowledgeable environmental scientists, or people learning about soil for the first time.

Read more: <https://www.amazon.co.uk/Healing-soil-health-will-planet/dp/1739593103>

## The Chemistry of Clay-Organic Reactions



By: *Benny K.G. Theng*, CRC Press  
Date: May 2024 330pp 91 B/W illustrations  
DOI eBook: 978-1-003-08024-4

This book provides a comprehensive and critical summary of the vast literature on the interactions of clay minerals with organic molecules, including reaction mechanisms, and bonding modes together with their practical and industrial applications. The reader will gain an insight into the formation and properties of complexes between clay minerals and a variety of organic compounds, and the use of such complexes as sorbents and carriers of organic pollutants, pesticides, dyes, and pharmaceuticals.

The book is intended for environmental and industrial chemists, organic geochemists, and soil scientists, and will appeal to academics, researchers, industry professionals, and graduate students.

For more information visit: [www.routledge.com/9780367530389](http://www.routledge.com/9780367530389)

Contact: Taylor & Francis, [orders@taylorandfrancis.com](mailto:orders@taylorandfrancis.com)

## Natural and human-related variability and transformation of Chernozems on a global and regional scale



Guest editors: *Cezary Kabala (Poland), Richard Heck (Canada) and Stephan Mantel (The Netherlands).*

Publisher *Geoderma Regional special issue*

Chernozem is considered an iconic soil, the ‘King of Soils’ as named by V. V. Dokuchaev, due to its spectacular morphology and properties. No other single soil type has such a wide recognisability and appreciation, as well as understanding of its economic and environmental importance, as Chernozem. Chernozems still create among the most productive agricultural zones, crucial for food security. However, Chernozems may suffer from degradation that influences all their crucial functions. Among the most important threats is the decrease in soil organic carbon content and pools, water and wind erosion, irreversible physical destruction of soil profiles, and soil compaction or soil sealing. Considering the importance of Chernozems for the development of soil science as a modern discipline and global economic and environmental services, Chernozem has been selected as the first World Soil of Year in the programme inaugurated by International Union of Soil Sciences at the Centennial Congress of the International Union of Soil Sciences (May 2024, Florence, Italy).

Topics: the Special Issue will focus on the origin and spatial diversity of Chernozems, natural and human-affected transformations, including the degradation phenomena which can impact the crucial services of Chernozems in food production, mitigation of climate change, water, carbon and nutrient cycling, biodiversity protection,

maintaining the cultural and historical heritage, etc. Studies on both the global, regional and local scales are welcome.

The deadline for submissions: November 30, 2024

Read more: <https://www.sciencedirect.com/journal/geoderma-regional/special-issues>

## In memoriam

### Jaume Porta Casanellas (1944-2023)

*It is not possible to talk about Soil Science in Spain and do not talk about Jaume Porta.*



Dr. Jaume Porta Casanellas passed away peacefully on September 22, 2023, at Lleida in Spain at the age of 79. He was born in Barcelona, Spain on August 24, 1944. He was an agronomist engineer by profession with studies in Pedology at

the University of Nancy, France, and a PhD in agronomy at the UPM in Spain. He was the first Rector of the University of the University of Lleida (1993-2003) and Professor Emeritus of that same University. Ex-President of the Spanish Society of Soil Science (2009-2017), Member of the Institut d'Estudis Catalans, Honorary Member of the Latin American Soil Science Society, and Honorary President of the Spanish Society of Soil Science.



The scientific work of Dr. Jaume Porta Casanellas is extensive and an indispensable reference in the study of Soil Science in Spain, Portugal and in Latin America. He was co-founder and secretary of the Editorial Board of the Spanish Journal of Soil Science and author of the "Multilingual Dictionary of Soil Science" written in Spanish, Catalan, Galician, and Portuguese with their equivalents in English and French.

In recognition of his prolific scientific production, since October 2019 the library of the University of Lleida was named the Jaume Porta Library.

During his professional life he received the Agriculture Medal of the Generalitat of Catalonia (1986); Medal of the General Study of Lleida UdL (2004); Medal of the

Catalan Association of Public Universities (ACUP, 2015); Fira de San Miguel Agricultural Book Award (Lleida, in 1986 and 1994); Juan de Asso Award from the General Council of Aragon.

### Dr. Juan Antonio Comerma Gutiérrez



Dr. Juan Antonio Comerma Gutiérrez passed away on November 2023, at the age of 85. Juan Comerma graduated in Agricultural Engineering in 1961 from the Central University of Venezuela. He was a researcher at the Centro Nacional de Investigaciones Agropecuarias (CENIAP) from 1961 to 1995, where he served as National Soil Research Coordinator, Deputy Director and Director of CENIAP, and Member of the Board of Directors of FONAIAP.

His contributions to the development of soil science in Venezuela are innumerable.

As a recognition of his contributions to soil taxonomy, he was awarded with the Guy Smith Medal of the International Union of Soil Sciences in 2016. His scientific production has been collected in more than 80 publications of research articles and papers presented at scientific events.

His contributions to the development of soil science in Venezuela are innumerable.

### Prof. Dr. Klaus Töpfer



(Ph. T.Kosaki)

Prof. Dr. Klaus Töpfer, Waldenburg, 29/07/1938 - Munich. 08/06/2024, recipient of the Distinguished Service Medal of IUSS in 2017 has passed away this June. Prof. Töpfer, a worldwide well recognized and accepted politician, held during his life different important positions, among many, as the Executive Director of the United

Nations Environment Programme (UNEP), and Federal Minister for the Environment, Nature Conservation and Nuclear Safety. From 2009 to 2015, he was Executive Director of the Institute for Advanced Sustainability Studies (IASS) /Potsdam, Germany. Due to his background, he was exceptionally well qualified to bring together representatives from different areas of society, incorporate different forms of knowledge into the development of solutions and bridge conflicting interests. Dr. Klaus Topfer established the World Soil Week project in 2012 and organized annual meetings of soil scientists, policy makers and land managers from around the world. He was a very enthusiastic promoter of soil science and soil protection as well as ecosystem topics besides ocean governance and, finally, greater consideration of the cultural dimensions of sustainability. He will be sorely missed by many.

**Call for expressions of interest in ISC global science-policy work.**

February 7<sup>th</sup>, 2024, Zoom Into Soil Webinar

Call for expressions of interest in ISC global science-policy work. As the International Science Council's work and impact in the multilateral continues to grow, the ISC Secretariat will constitute a roster of experts over the coming weeks pertaining to 20 key areas that are prominent on the United Nations (UN) agenda to be able to provide timely inputs that draw on a wide range of expertise across regions.

Read more: <https://council.science/current/news/expressions-of-interest-global-science-policy-work/>.

