



International Union of Soil Sciences

100 years of IUSS: history and perspectives

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Budapest, 5 December 2024

The foundation of the IUSS



International Union of Soil Sciences®

The establishment of the International Society of Soil Science (IUSS) occurred during the Fourth International Conference of Pedology in Rome on May 19, 1924, in the International Agriculture Institute housed in Villa Lubin.



The founders



- 463 adherents: 21 official delegations, 3 governments without official representation, 303 members from 39 countries, 120 scientific Institutions, and 16 economic and industrial institutions.

- | | | |
|---------------------------------|------------------------------------|----------------------------|
| 1. Italy 122 | 14. France 10 | 27. Dantzig 2 |
| 2. Germany 47 | 15. Belgium 8 | 28. Peru 2 |
| 3. Czechoslovakia 46 | 16. Egypt and Soudan 7 | 29. Principate of Monaco 1 |
| 4. Hungary 23 | 17. Dutch East Indies and Ceylon 6 | 30. Yugoslavia 1 |
| 5. Great Britain and Ireland 20 | 18. Finland 5 | 31. Latvia 1 |
| 6. Russia 20 | 19. Japan 5 | 32. Malte 1 |
| 7. the Netherlands, 18 | 20. British Indies 5 | 33. Macao 1 |
| 8. Romania 17 | 21. Austria 4 | 34. Palestine 1 |
| 9. the United States 16 | 22. Greece 4 | 35. Portugal 1 |
| 10. Sweden 14 | 23. Norway 4 | 36. Puerto Rico 1 |
| 11. Switzerland 4 | 24. New Zealand 4 | 37. Rhodesia 1 |
| 12. Poland 12 | 25. Argentine 3 | 38. Sierra Leone 1 |
| 13. Denmark 11 | 26. South Africa 3 | 39. Uruguay 1 |

The protagonists

ASSOCIATION INTERNATIONALE DE LA SCIENCE DU SOL

Membres d'honneur

1. Prof. Dr. E. RAMANN, Munich.
2. Prof. Dr. L. CAYEUX, Paris.
3. Prof. Dr. K. GLINKA, Leningrad.
4. Prof. Ing. J. KOPECKY, Prague.
5. Prof. Dr. G. MURGOCI, Bucaresti.
6. Sir J. RUSSELL, Rothamsted.
7. Prof. Dr. S. WINOGRADSKY, Paris.

Premier Président

Prof. Dr. J. G. LIPMAN, New Brunswick.

Faisant fonctions de premier président

Dr. D. J. HISSINK, Groningen.

Vice-Présidents

Prof. G. DE ANGELIS D'OSSAT, Rome. — Dr. Benj. FROSTERUS, Helsingfors.

Le représentant de l'Institut International d'Agriculture sera désigné par cet Institut même.

Secrétaire-général

Dr. D. J. HISSINK,

Herman Colleniusstraat, 25 - Groningen (Holland).



Ramann



Cayeux



Glinka



Kopecky



Russell



Vinogradskii



Murgoci

The main officers



International Union of Soil Sciences®



David Hissink



Jacob Lipman



Gioacchino De Angelis D'Ossat

The Hungarian participation



International Union of Soil Sciences®

10 ACTES DE LA IV^{ème} CONFÉRENCE INTERNATIONALE DE PÉDOLOGIE

COMITÉ HONGROIS.

Président.

Prof. Dr. ALEXIUS A. J. VON 'SIGMOND, Budapest.

Secrétaire.

Ing. EMIL SCHERF, Budapest.

Membres.

Dr. R. BALLENEGGER, Budapest.	Dr. A. ZÖHLIS, Budapest.
Dr. M. BITTERA, Magyaróvár.	Dr. G. LÁSZLÓ, Budapest.
Dr. BERNÁTSKY, Budapest.	Dr. J. NYIREDY, Budapest.
Dr. B. BRESZTOVSKY, Budapest.	M. Z. PINKERT, Budapest.
M. A. CZAKÓ, Budapest.	Dr. Z. RÓNA, Budapest.
Dr. CHOLNOKY, Budapest.	M. S. ROHRINGER, Budapest.
M. J. DICENTY, Budapest.	Dr. F. SÁVOLY, Budapest.
Dr. K. EMSZT, Budapest.	Dr. L. SZALACZ, Budapest.
M. S. FÄBER, Kezsthely.	Dr. L. SZÉLL, Debrecen.
M. S. FLODERER, Magyaróvár.	Dr. F. SCHAFARZIK, Budapest.
M. I. HAYDIN, Inarcs-Kakucs.	Dr. G. SZABÓ, Budapest.
M. S. HERKE, Magyaróvár.	M. J. SZEMIAN, Budapest.
Dr. H. HORNITSKY, Budapest.	M. T. TIMKÓ, Budapest.
Dr. R. KÁROLY, Budapest.	M. E. TOMKA, Budapest.
M. K. KERPELY, Budapest.	M. P. TREITZ, Budapest.
M. T. SZONNTAGH, Budapest.	Dr. O. VARGA, Budapest.
Dr. M. LÖW, Budapest.	Dr. A. VENDL, Budapest.

M. E. VICZIÁN, Budapest.



The scientific sessions



International Union of Soil Sciences®

280 communications, within 6 thematic sessions on:

- Mechanical and physical study of the soil, application of pedology to agricultural hydrology
- Soil chemistry
- Bacteriological and biochemical study of the soil
- Soil nomenclature and classification
- Cartography
- Study of plant physiology in relation to pedology.



Main scientific outcomes of the Conference



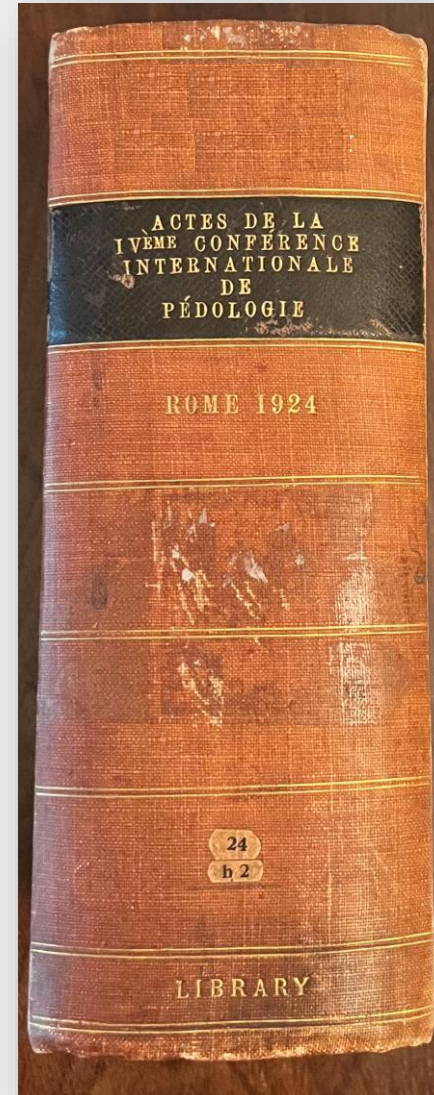
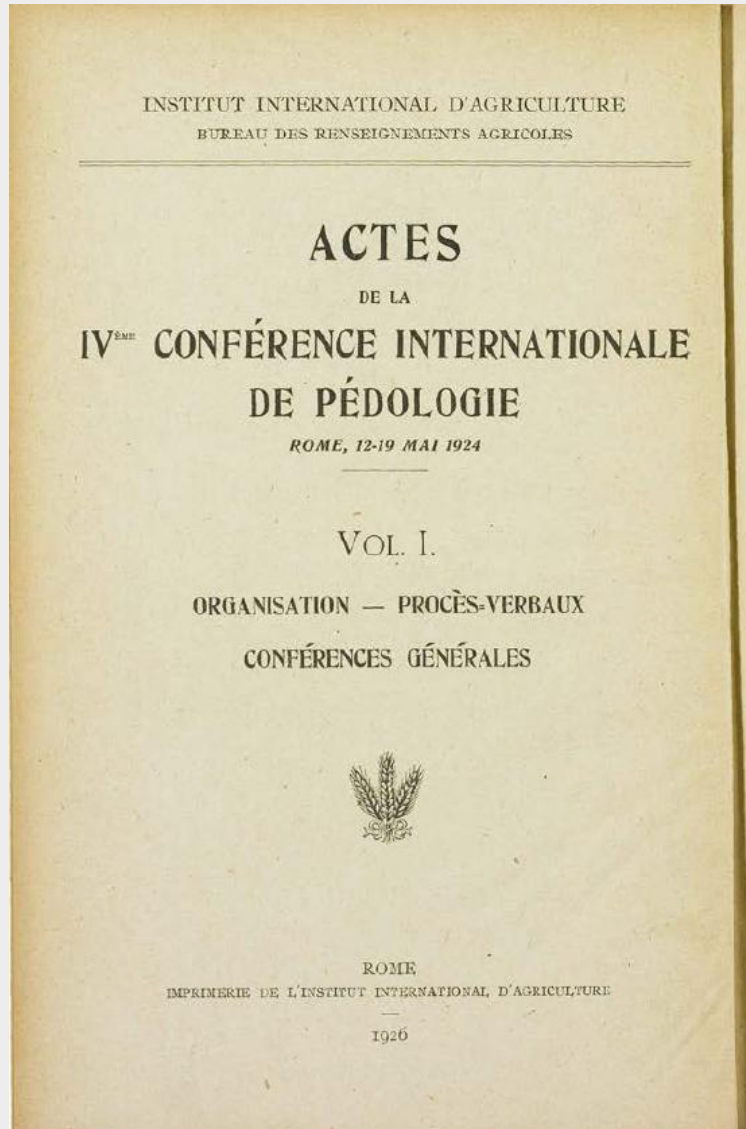
Six commissions : (I) soil physics, (II) soil chemistry, (III) soil biology, (IV) nomenclature and classification of soils, (V) soil cartography and (VI) plant physiology in relation to pedology.

- 1) Standardization of the methods of soil analysis.
- 2) Standardization of soil microbiological research.
- 3) Study program to establish a nomenclature and a definitive soil classification.
- 4) Development of an international agro-geological map of Europe.
- 5) Organization of soil studies in countries where they do not yet exist.
- 6) Introduction of the study of pedology in the curriculum of middle and higher schools.
- 7) Definitive constitution of the sixth Commission: Plant physiology in relation to soil.
- 8) Convening of the First International Congress of Soil Science in the USA.

The Proceedings



International Union of Soil Sciences®



Editor: Renato Perotti

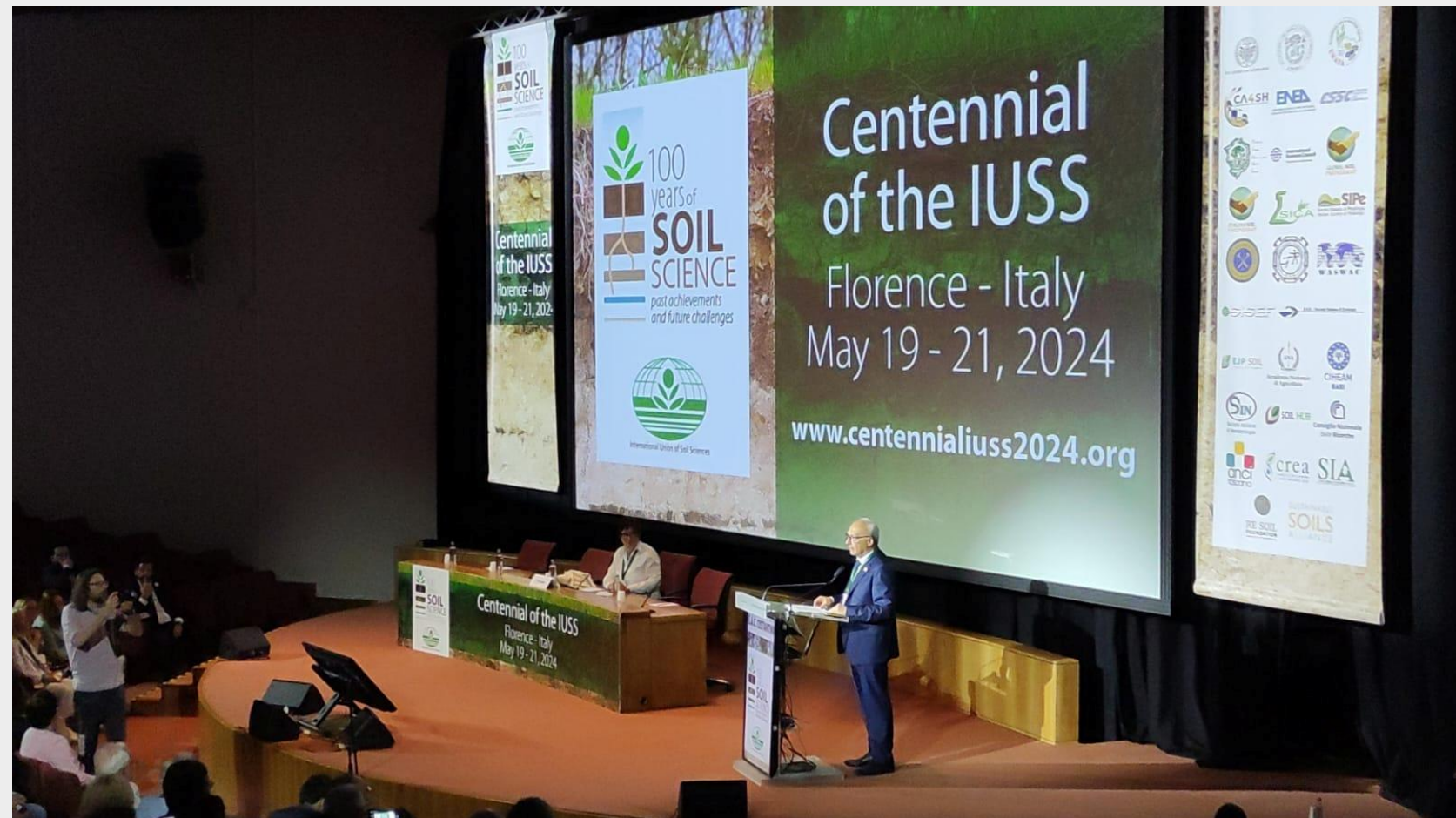
1. 1927 - Washington DC
2. 1930 - Leningrad
3. 1935 - Oxford
4. 1950 - Amsterdam
5. 1954 - Leopoldville
6. 1956 - Paris
7. 1960 - Madison
8. 1964 - Bucharest
9. 1968 - Adelaide
10. 1974 - Moscow
11. 1978 - Alberta
12. 1982 - New Delhi
13. 1986 - Hamburg
14. 1990 - Kyoto
15. 1994 - Acapulco
16. 1998 - Montpellier
17. 2002 - Bangkok
18. 2006 - Brisbane
19. 2010 - Philadelphia
20. 2014 - Seoul
21. 2018 - Rio de Janeiro
22. 2022 – Glasgow
23. 2026 – Nanjing

The WCSS

1924 - 4th Pedological Congress – Rome
2024 - Centennial Congress – Florence



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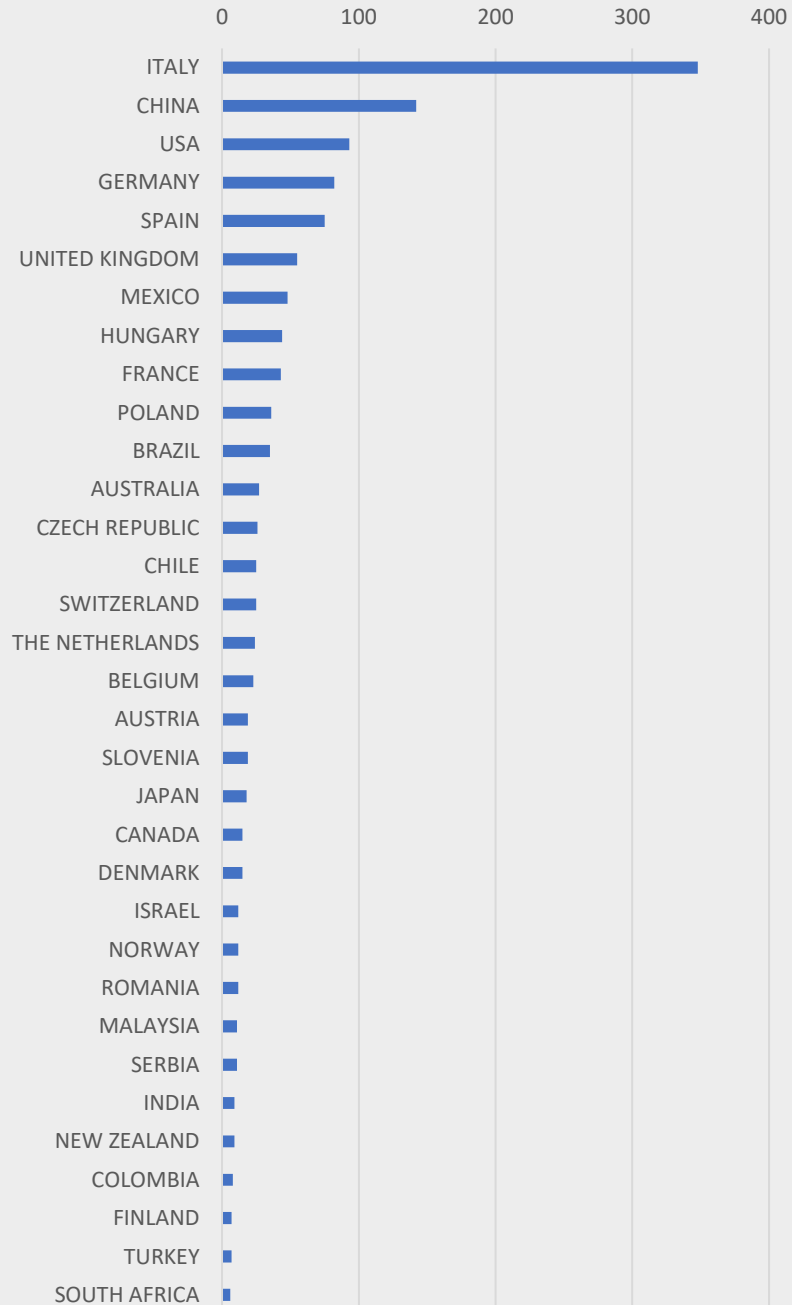


Some figures

- 1449 paying participants
- 73 countries
- 14 plenary sessions
- 11 invited speakers
- 1531 total abstracts
- 82 parallel sessions
- 1441 presentations
- 42 keynotes
- 705 orals
- 107 best posters
- 576 E posters
- 4 side sessions
- 5 excursions
- 8 stands + linked art exhibition



Participants by country



- SOUTH KOREA
- BULGARIA
- CROATIA
- GEORGIA
- INDONESIA
- RUSSIA
- LITHUANIA
- MOROCCO
- PORTUGAL
- SLOVAK REPUBLIC
- BOSNIA AND HERZEGOVINA
- ESTONIA
- HONDURAS
- SWEDEN
- TUNISIA
- URUGUAY
- ALBANIA
- GREECE
- IRELAND
- LATVIA
- TAIWAN
- ZAMBIA
- ARGENTINA
- Congo, Democratic Republic of the
- COSTA RICA
- GHANA
- GUAM
- IRAN
- JORDAN
- KENYA
- LEBANON
- LUXEMBOURG
- MALAWI
- MOLDOVA
- NEPAL
- SAUDI ARABIA
- TANZANIA
- TRINIDAD - TOBAGO
- UKRAINE
- VENEZUELA



The developments: from the ISSS to the IUSS



International Union of Soil Sciences

- In 1924, a Secretary General was elected and a President from the hosting country of the next WCSS
- In 1998, new Statutes and name were declared at the 16th Congress in Montpellier decoupling the position of the president from the organization of the World Congress of Soil Science.
- The IUSS continued to have a Secretary General and a Deputy Secretary General until 2014.
- The IUSS has an elected president who serves for 6 years (2 years as President-Elect, 2 years as President and 2 years as Past President) and a Vice President WCSS.
- From 2015 to 2022, the IUSS had a permanent secretariat based in Vienna, and since 2023 in Rome.
- The scientific duties have been taken over by the presidential committee, whereas the administrative duties are handled by the secretariat and the treasurer.

What is the IUSS now?



- The IUSS is an NGO and No-Profit organisation officially registered in the USA
- It is a free and autonomous organisation, financed primarily by member contributions

The IUSS is based on two pillars:

- it is a union of national societies or academies (the Full members),
- it is an organisation of soil scientists (the Individual members).

The IUSS mobilising capacity and structure



- The Full members of the IUSS are **79 National Soil Science Societies or Academia.**
- The estimated number of individual members (through the National Soil Science Societies) is about **50,000**
- The IUSS holds relationships with **8 regional societies**

- **Governance:** the Council, the Executive and President's Committees, the Secretariat and the full time Secretary - Council meeting every year, Forum of the Full Members
- **Science:** 4 Divisions, 25 Commissions, 19 WGs, and the Forum.

The IUSS Divisions and Commissions



International Union of Soil Sciences®

Division 1 – Soils in Space and Time

C1.1 Soil Morphology and
Micromorphology

C1.2 Soil Geography

C1.3 Soil Genesis

C1.4 Soil Classification

C1.5 Pedometrics

C1.6 Paleopedology

C1.7 Permafrost Affected Soils

Division 2 – Soil Properties and Processes

C2.1 Soil Physics

C2.2 Soil Chemistry

C2.3 Soil Biology

C2.4 Soil Mineralogy

C2.5 Physical/Chemical/Biological
Interfacial Reactions

The IUSS Divisions and Commissions



International Union of Soil Sciences

Division 3 – Soil Use and Management

C3.1 Soil Evaluation and Land Use Planning

C3.2 Soil and Water Conservation

C3.3 Soil Fertility and Plant Nutrition

C3.4 Soil Engineering and Technology

C3.5 Soil Degradation Control, Remediation, and Reclamation

C3.6 Salt-Affected Soils

C3.7 Soils of Urban, Industrial, Traffic, Mining and Military Areas (SUITMA)

C3.8 Permafrost Affected Soils (Joint with Division 1)

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

C4.1 Soil and the Environment

C4.2 Soil, Food Security, and Human Health

C4.3 Soil and Land Use Change

C4.4 Soil Education and Public Awareness

C4.5 History, Philosophy, and Sociology of Soil Science

The IUSS WGs

Division 1

1. Digital Soil Mapping
2. Global Soil Map
3. Proximal Soil Sensing
4. Soil Information Standards
5. Universal Soil Classification
6. World Reference Base
7. International Soil Judging Contest
8. International Accreditation
9. World Soil of the Year

Division 2

1. Critical Zone System
2. Soil Modelling Consortium
3. Pedofauna

Division 3

1. Acid Sulphate Soils
2. Forest Soils
3. Land Degradation
4. Modelling of Soil and Landscape Evolution
5. Paddy Soils

Division 4

1. Cultural Patterns of Soil Understanding
2. Young and Early Career Scientists



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The international collaborations



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- International Science Council
 - Geounions
 - Standing Committee for Disaster Risk Reduction
 - Standing Committee for Gender Equality in Science
- Global Soil Partnership (FAO)
- UNESCO
- WASWAC The World Association of Soil and Water Conservation
- European Society for Soil Conservation (ESSC)
- CA4SH Coalition for Soil Health
- Save the Soil
- Sustainable Soils Alliance

- Full members: Representative for International Affairs

The IUSS main outputs



International Union of Soil Sciences

The collaborative platform:

- Every 4 years: WCSS + 1 inter-congress + Special congress: Centennial
- Every year: **About 40 scientific events** organized by Divisions, Commissions and WGs

The recognition and promotion of excellence:

- The Dokuchaev Award and Von Liebig Award, for basic and applied research;
- The Jeju Award for young and mid-career soil scientists;
- The IUSS Distinguished Service Medal, for world soil leaders who have translated soil science into action;
- The Emma Marie Antoine Täuber Award for early career soil scientists
- The Award for Innovation
- The Award for Communication
- Eleven other awards and prizes are given by Divisions, Commissions, and WGs.
- Election of max 10 Honorary members every 4 years
- Promotion of individual members by other scientific organizations, such as the ISC

Direct support to scientific activities:

- Seed money for Division's activities, Stimulus Funds for activities and for projects

Dissemination and Communication:

- **Over 2000 events** organised for World Soil Day on the 5th of December, in collaboration with the FAO
- ✓ 2 Bulletins and 12 Alerts (**3,126 email contacts**)
- ✓ 1-2 Books, also open source
- The IUSS website and socials (**15,327 Facebook followers**)

The World Soil of the Year

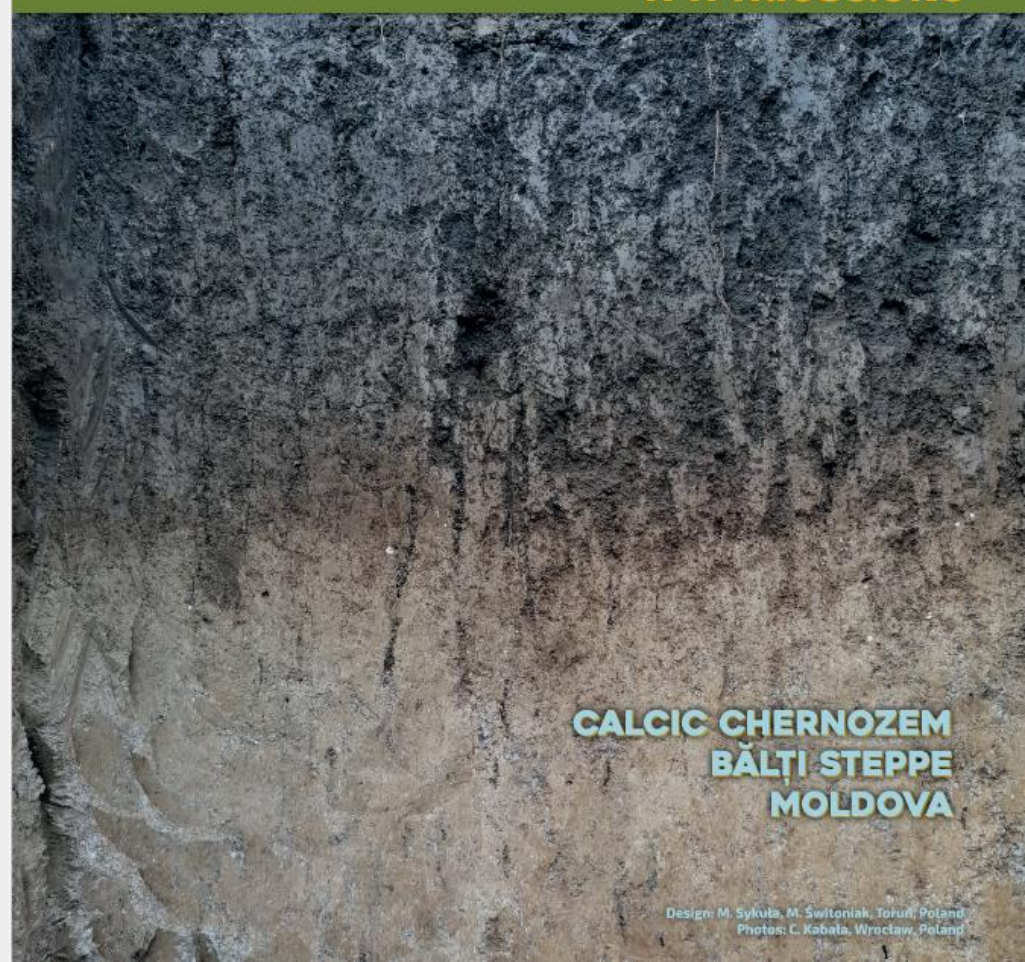
WSY 2024: Chernozem of the Balti steppe in Moldova



2024 WORLD SOIL OF THE YEAR

CHERNOZEM

WWW.IUSS.ORG



CALCIC CHERNOZEM
BĂLȚI STEPPE
MOLDOVA

The way ahead



- Keep promoting the reputation of its members by recognizing scientific excellence and offering opportunities for collaboration.
 - ✓ Not only awards but also roles as officers in IUSS bodies → call for new positions will be launched next year.
 - ✓ The IUSS thrives on the dedication and commitment of its members
- Focus on inclusivity: bridging the technological, economic, and social gaps between different regions of the world by fostering international partnerships, facilitating access to stimulus funds and grants, giving a support for project creation and involvement, and supporting D&C, also through open-access publications



Long live the IUSS!

