

DEVELOPMENT OF THE INTERNATIONAL UNION OF SOIL SCIENCES AND OF REGIONAL ORGANIZATIONS OF THE SOIL SCIENCE COMMUNITY

by

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- I. DEVELOPMENT OF THE INTERNATIONAL SOCIETY OF SOIL SCIENCE (ISSS) AND OF THE INTERNATIONAL UNION OF SOIL SCIENCES (IUSS)**
- II. INTERNATIONAL REGIONAL ORGANIZATIONS UNDER THE UMBRELLA OF ISSS/IUSS**
- III. FUTURE CHALLENGES AND OPPORTUNITIES**

I. The development of the International Society of Soil Science (ISSS) and of the International Union of Soil Sciences (IUSS)

is characterized by 4 different stages:

1. From Budapest to Rome – 1909-1924 – The Foundation of ISSS;
2. The ISSS from 1924-1990;
3. Change from ISSS to IUSS (1990-2002);
4. IUSS since 2002

1. From Budapest to Rome – 1909-1924 – The Foundation of IUSS

Year	Location	Conference	No. of participants.	Topics discussed	Main outcome
1909	Budapest	1st Intl. Conf. of Agrogeology	86	Harmonization of soil classification, standard methods for chem. laboratory analyses	Regularly organize agrogeological conferences
1910	Stockholm	2nd Intl. Conf. of Agrogeology	170	Mechanical analysis, soil colours, chemical extraction methods, cartography, nomenclature and classification, special research topics and pedolog. conditions in various countries	Formation of three Commissions

(van Baren et al. 2000, adapted)

continued

(ctd.) From Budapest to Rome – 1909-1924 – The Foundation of IUSS

Year	Location	Conference	No. of participants.	Topics discussed	Main outcome
1922	Prague	3rd Intl. Conf. of Pedology	50	Mechanical analysis and soil physics, analyt. chemistry, soil bacteriology, soil nomenclature and classification (Sub.-Comm. arid zones), soil cartography, Intl. Soil Science Journal	Formation of six Commissions
1924	Rome	4th Intl. Conf. of Pedology	463	<ol style="list-style-type: none">1. soil physics2. soil chemistry3. soil bacteriology and biochemistry,4. application of soil sci. to agricultural hydraulics & plant physiology as related to soil science5. soil nomenclature and classification6. soil cartography.	Formation of the ISSS

(van Baren et al. 2000, adapted)

2. Administrative and scientific structure of ISSS and its development from 1924-1990

Administration:

- Individual membership with individual financial contributions;
- Executive Committee and General Committee – see list of presidents and secretares-general;

Scientific tasks:

- organization of congresses – see list of congresses;
- publication of a scientific journal (until 1944) – after 1950 only ISSS-Bulletin
- scientific co-operation in commissions, sub-commissions and working groups, see scientific structure 1990.

Structure of ISSS 1990

7 Commissions:

- Soil physics
- Soil chemistry
- Soil biology
- Soil fertility and plant nutrition
- Soil genesis, classification and cartography
- Soil technology
- Soil mineralogy

- Soils and the environment (new in 1994)

7 Sub-Commissions:

- Salt affected soils
- Soil micromorphology
- Soil and water conservation
- Soil zoology
- Forest soils
- Land evaluation
- Soil remediation

continued

Structure of ISSS 1990 (ctd.)

20 Working Groups:

- Acid sulphate soils
- Cryosols
- World Soils and Terrain Digital Data Base (SOTER)
- Soil organic fertilizers and amendments
- Soils and global change
- International Soil Convention
- Land degradation and desertification
- Land evaluation information systems
- Interactions of soil minerals with organic components and microorganisms
- Pedometrics
- Paleopedology
- Paddy soils fertility
- Pedotechnique
- World Reference Base for Soil Resources
- Remote Sensing for Soil Survey
- Rhizosphere
- Soils and geomedicine
- Environmental soil mechanics
- Soil and groundwater pollution
- Soils of urban, industrial, traffic and mining areas

continued

Structure of ISSS 1990 (ctd.)

6 Standing Committees:

- Committee on Statutes and Structure
- Committee on Interdisciplinary Co-operation
- Committee on Standardization
- Committee on Budget and Finances
- Committee on Education in Soil Sciences
- Committee on the History, Philosophy and Sociology of Soil Science

Overview of the 16 ISSS congresses and number of papers presented per commission

Year	Location	Commission								Others	Total
		I	II	III	IV	V	VI	VII	VIII		
1	1927 Washington DC	22	44	50	26	58	22	–	–	8	230
2	1930 Leningrad	25	31	58	41	66	29	–	–	16	266
3	1935 Oxford	22	22	18	35	39	18	–	–	0	154
4	1950 Amsterdam	28	71	27	46	99	12	–	–	0	283
5	1954 Leopoldville	18	30	23	20	65	20	–	–	0	176
6	1956 Paris	53	58	76	68	105	39	–	–	0	399
7	1960 Madison	37	46	38	81	67	35	18	–	0	322
8	1964 Bucharest	53	54	67	107	114	41	36	–	26	498
9	1968 Adelaide	35	23	61	47	62	62	14	–	6	310
10	1974 Moscow	45	73	28	55	129	43	22	–	0	395
11	1978 Alberta	56	64	41	65	94	52	27	–	12	411
12	1982 New Delhi	52	52	41	112	90	77	24	–	19	467
13	1986 Hamburg	113	202	90	217	187	54	55	–	95	1013
14	1990 Kyoto	107	139	120	256	199	103	63	–	69	1056
15	1994 Acapulco	186	273	160	317	288	206	62	–	78	1570
16	1998 Montpellier	194	239	149	312	275	119	69	168	544	2069

Commission I. Soil physics; II. Soil chemistry; III. Soil biology; IV. Soil fertility and plant nutrition; V. Soil genesis, classification and cartography; VI. Soil technology; VII. Soil mineralogy; VIII. Soils and the environment. Commission VII and VIII were established in Paris and Acapulco, respectively.

(H. van Baren et al. 2000, adapted)

Presidents of ISSS/USS between 1924 and 2009

President	Country	Period
J.G. Lipman	USA	1924-1927
K. Gedroiz	USSR	1927-1930
J. Russell	UK	1930-1935
C.H. Edelman	Netherlands	1950
R. Tavernier	Belgium	1950-1954
A. Oudin	France	1954-1956
R. Bradfield	USA	1956-1960
N.C. Cernescu	Romania	1960-1964
E.G. Hallsworth	Australia	1964-1968
V.A. Kovda	USSR	1968-1974
C.F. Bentley	Canada	1974-1978
J.S. Kanwar	India	1978-1982
K.H. Hartge	Germany	1982-1986
A. Tanaka	Japan	1986-1990
A.A. Santelises	Mexico	1990-1994
A. Ruellan	France	1994-1998
S. Theerawong	Thailand	1998-2002
D.L. Sparks	USA	2002-2006
R.S. Swift	Australia	2006- present

Secretaries-General of ISSS / IUSS

between 1924 and 2009

Secretary-General	Country	Period
D.J. Hissink	Netherlands	1924-1950
F.A. van Baren	Netherlands	1950-1974
R. Dudal	Belgium	1974-1978
W.G. Sombroek	Netherlands	1978-1990
W.E.H. Blum	Austria	1990-2002
S. Nortcliff	UK	2002- present

3. Change from ISSS to IUSS 1990-2002

- 1991: questionnaire of the Soil Science Society of America (SSSA) about professional involvement of society members (about 6000); about 1750 answers received: > 70% involved in environmental issues. – Similar development in Europe.
- 1993: full membership of ISSS in the International Council of Scientific Unions (ICSU) – General Assembly in Santiago de Chile.
- 1994: 15th WCSS in Acapulco: Decision to change to a Union – new Commission VIII: Soils and the Environment.
- 1996: Meeting in Moscow – elaboration of a new administrative structure; Council Meeting in Montpellier.
- 1997: postal voting of ISSS members: > 99% in favour of new structure.

continued

3. Change from ISSS to IUSS 1990-2002 (ctd.)

1998: 16th WCSS in Montpellier: conclusion of the new administrative structure = IUSS in place.

1999: Meeting in Vienna on new scientific structure.

2000: Council Meeting in Bangkok, decision in favor of new scientific structure, only English as official IUSS language.

2002: Implementation of the new scientific structure at the 17th WCSS in Bangkok.

2004: Adaptation of the new scientific structure by acceptance of 3 new commissions.

Administrative and scientific structure of IUSS in 2002

1. Administrative structure:

Members: national soil science societies, with about 50000 individual national members

2. Scientific structure:

Division 1 - Soil in Space and Time

COMMISSION 1.1 - Soil morphology and micromorphology

COMMISSION 1.2 - Soil geography

COMMISSION 1.3 - Soil genesis

COMMISSION 1.4 - Soil classification

COMMISSION 1.5 - Pedometrics new (2004)

COMMISSION 1.6 - Paleopedology new (2004)

continued

Administrative and scientific structure of IUSS in 2002 (ctd.)

Division 2 - Soil properties and processes

COMMISSION 2.1 - Soil physics

COMMISSION 2.2 - Soil chemistry

COMMISSION 2.3 - Soil biology

COMMISSION 2.4 - Soil mineralogy

COMMISSION 2.5 - Soil chemical, physical and biological interfacial reactions new (2004)

Division 3 - Soil Use and Management

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

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

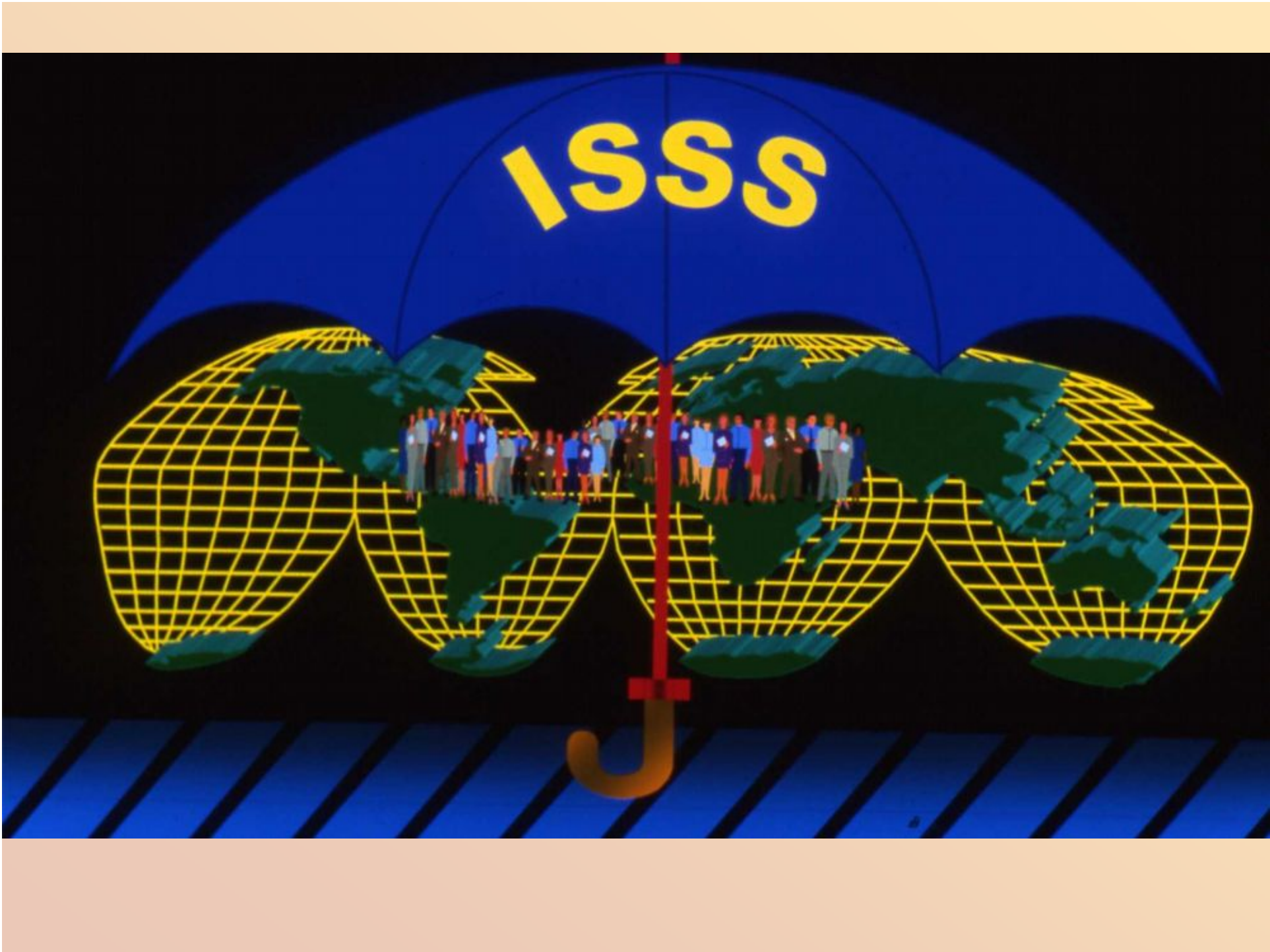
COMMISSION 4.1 - Soils and the environment

COMMISSION 4.2 - Soils, food security, and human health

COMMISSION 4.3 - Soils and land use change

COMMISSION 4.4 - Soil education and public awareness

COMMISSION 4.5 - History, philosophy, and sociology of soil science





IUSS Honorary Members 1924 – 2006

Year	Member	Country
1924	L. Cayeux †	France
	K. Glinka †	USSR
	J. Kopecky †	Czechoslovakia
	E. Ramann †	Germany
	Sir John Russell †	UK
	S. Winogradski †	USSR
1927	P. Treitz †	Hungary
1935	E.A. Mitscherlich †	Germany
	A. d'Sigmond †	Hungary
	J. Stoklasa †	Czechoslovakia
	G. Wiegner †	Switzerland
1950	A. Demolon †	France
	D.J. Hissink †	Netherlands
	W.P. Kelley †	USA
1954	S. Mattson †	Sweden
	E. Truog †	USA
1956	G. Bertrand †	France
	E.C.J. Mohr †	Netherlands
1960	F.A. Bear †	USA
1964	J.A. Prescott †	Australia

continued

IUSS Honorary Members 1924 – 2006 (ctd.)

Year	Member	Country
1968	Hardy †	UK
	W.L. Kubienna †	Germany
	L.A. Richards †	USA
	A.A. Rode †	USSR
1974	R. Bradfield †	USA
	G.V. Jacks †	UK
	Ch.E. Kellogg †	USA
	M.K. Kononova †	USSR
	A. Oudin †	France
	F. Scheffer †	Germany
1978	G. Barbier †	France
	V. Ignatieff †	Canada
	Y. Ishizuka †	Japan
	L. Krolkowski †	Poland
	L. Vettori †	Brazil
	1982	Ph. Duchaufour †
W. Flaig †		Germany
V. Kovda †		USSR
E. Mueckenhausen †		Germany
E.W. Russell †		UK

continued

IUSS Honorary Members 1924 – 2006 (ctd.)

Year	Member	Country
1986	H. Jenny †	USA
	D. Kirkham †	USA
	S.K. Mukherjee †	India
	R. Tavernier †	Belgium
1990	G. Aubert †	France
	E.G. Hallsworth †	Australia
	J.S. Kanwar	India
	P. Schachtschabel †	Germany
	R.W. Simonson †	USA
1998	I. Szabolcs †	Hungary
	G.H. Bolt	Netherlands
	R. Dudal	Belgium
	K.H. Hartge †	Germany
	M. Kutilek	Czech Rep.
	J. Quirk	Australia
	W.G. Sombroek †	Netherlands
	K. Wada	Japan
	D.H. Yaalon	Israel
S.V. Zonn †	Russia	

continued

IUSS Honorary Members 1924 – 2006 (ctd.)

Year	Member	Country	
2002	R.W. Arnold	USA	
	G.V. Dobrovolsky	Russia	
	W. Gardner	USA	
	H.M. Hamdi †	Egypt	
	L.A.L. Sarmiento	Colombia	
	F. Mancini	Italy	
	B.S. Nosko	Ukraine	
	R. Rosell	Argentina	
	A. Ruellan	France	
	A. Tanaka	Japan	
	P.B.H Tinker	UK	
	2006	W.E.H. Blum	Austria
		H.-P. Blume	Germany
J. Bouma		Netherlands	
S.-J. Cho		South Korea	
J. Glinski		Poland	
M.G.H. Jamagne		France	
D.R. Nielsen		USA	
J.H.V. van Baren †	Netherlands		
L.P. Wilding	USA		

II. International regional soil organizations under the umbrella of ISSS/IUSS

- Latin American Society of Soil Science (Sociedad Latinoamericana de la Ciencia del Suelo (SLCS), founded 1969;
- African Soil Science Society (ASSS), founded 1986 in Hamburg, Germany;
- West and Central African Association of Soil Science (WCAASS), founded 1987 in Jaoundé, Cameroon
- East and South East Asia Federation of Soil Science Societies (ESAFS), founded in
- European Confederation of Soil Science Societies (ECSSS), founded 2004 in Freiburg, Germany

III. Outlook – Challenges and Opportunities