



Bulletin

of the International Union of Soil Sciences

No. 102

2002/2

INTERNATIONAL UNION OF SOIL SCIENCES

Founded as International Society of Soil Science (ISSS): 19-05-1924.

Full Members, Associate Members, Individual Members and Sustaining Members since: August 1998.

A scientific union member of ICSU since: 1993.

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Bulletin

of the International Union of Soil Sciences

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ISSN: 0374-0447

Copyright: IUSS, Gregor Mendel-Str. 33
A-1180 Vienna/Austria

Printed by: Facultas AG
A-1090 Wien, Berggasse 5
Tel: +43-1-3105356-0
Fax: +43-1-3197050

Layout: Facultas AG
A-1090 Wien, Berggasse 5
Tel: +43-1-3105356-0
Fax: +43-1-3197050

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Price of a single copy: 25.00 US\$

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EDITORIAL

This is the last issue of the IUSS Bulletin edited by the Secretariat-General in Vienna, which published 24 IUSS Bulletins between 1990 and 2002.

In these twelve years, several important decisions have been taken, especially regarding the development of our organization from the International Society of Soil Science (ISSS) to the International Union of Soil Sciences (IUSS).

In 1993, ISSS joined the International Council for Science (ICSU, at that time still the International Council of Scientific Unions), as a Full Union Member. Through this, soil science was accepted as a full member by the world-wide family of natural sciences.

In 1998, the change from ISSS to IUSS could be concluded, by the adoption of new rules and bye-laws.

In 2002, the new scientific structure of IUSS was put into vigour by the election of chairpersons for the 4 Divisions, 18 Commissions, and 3 Standing Committees.

Therefore, the last 24 issues of the Bulletin are proofs of the many new developments within international soil science. - Science is part of the society and therefore has to adapt accordingly with time. For soil science, this task could be achieved. - All this was only possible by an excellent co-operation within the international soil science family and we can all be proud of what we have achieved.

The coming issues of this Bulletin will appear on the Website of IUSS, which was installed and will be developed by the new Deputy Secretary-General of IUSS, Dr. Alfred Hartemink, at the International Soil Reference and Information Centre (ISRIC) in Wageningen, The Netherlands, in close co-operation with the new Secretary-General of IUSS, Dr. Stephen Nortcliff, in Reading, UK.

Only those IUSS members who subscribed the Bulletin, such as libraries, national soil science societies and the IUSS Life Members, as well as those members who subscribed personally (see last pages of this Bulletin) to receive a hardcopy of the Bulletin, will receive the printed version further on.

I would like to thank all of you, also in the name of the co-editor, Drs. Hans van Baren, for 12 years of excellent co-operation and wish you all the best for a successful future.

Winfried E. H. Blum
Past Secretary-General of IUSS

VISIT THE NEW IUSS HOMEPAGE:

[HTTP://WWW.IUSS.ORG](http://www.iuss.org)

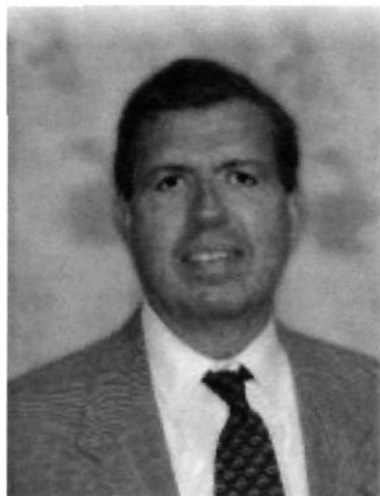
IMPORTANT NOTICE:

This Bulletin (No. 102) is the last one which will be sent to former individual members of ISSS. From now on, only National Soil Science Societies, IUSS Life Members, and libraries will receive the IUSS Bulletin further on automatically. Those persons who still want to receive the IUSS Bulletin have to subscribe to it at a price of 25 US\$ per year (2 issues), see subscription form at the end of this Bulletin.

NEW IUSS OFFICERS

Donald L. Sparks

new President of IUSS



Dr. Donald L. Sparks, S. Hallock du Pont Chair, is chairman of the Department of Plant and Soil Sciences. He has served as chairman of the department since 1989. Dr. Sparks has joint appointments in the Department of Chemistry and Biochemistry, Department of Civil and Environmental Engineering, and College of Marine Studies.

He received his Doctorate in Soil Physical Chemistry from Virginia Polytechnic Institute and State University in 1979, a M.S. degree in Soil Science from the University of Kentucky in 1976, and a B.S. degree in Agronomy from Kentucky in 1975.

Dr. Sparks is nationally and internationally recognized for his research on the kinetics of soil chemical reactions and the application of state-of-the-art molecular scale spectroscopic and microscopic techniques to elucidate reaction mechanisms. He and his group have been leaders in employing synchrotron-based spectroscopy to study metal, metalloid, and nutrient reactions on soil minerals, soils, and biosolids.

Dr. Sparks is a prolific researcher, writer, and lecturer having authored two books, edited 35 books, authored 32 chapters for major books and 130 refereed papers, presented 88 invited papers at national and international symposia and meetings and been a visiting professor at over 50 universities, laboratories, and institutes in North America, Europe, Asia, Africa, and Australia. This past year he was a McMaster Fellow at universities and CSIRO laboratories throughout Australia.

Dr. Sparks has received numerous honors and awards. He was named Distinguished Professor in 1994 and T.A. Baker Professor in 2001. He also received UD's prestigious Francis Alison Award in 1996 and was the first recipient of the UD Doctoral Advising and Mentoring Award. Other awards he has received are: Fellow of the American Society of Agronomy, Soil Science Society of America, and American Association for the Advancement of Science; the M.L. and Chrystie M. Jackson Award, the Soil Science Society of America's Research Award, and the College of Agriculture and Natural Resources F.D. Chesters Distinguished Service Award.

Dr. Sparks has very successfully mentored 36 graduate students and 16 postdoctoral fellows. These advisees have been placed in universities, industries, and governmental agencies throughout the world and been the recipients of national and university dissertation prizes, fellowship, and awards.

Dr. Sparks has served as President of the Soil Science Society of America and is President of the International Union of Soil Sciences. He has also served on National Academy of Science/National Research Council Committees and is on the editorial boards of seven international journals and serial reviews. His research grant awards total nearly \$4 million.

Gary Petersen

new Vice-President of IUSS



Dr. Petersen is a Distinguished Professor of Soil and Land Resources and Co-Director of the Office for Remote Sensing of Earth Resources at The Pennsylvania State University. His research interests have been primarily in the areas of soil characterization, soil interpretations, soil-water relationships, land use, geographic information systems, and remote sensing. He has worked very closely with the Natural Resources Conservation Service in the areas of soil mapping, correlation, characterization, and interpretation. Dr. Petersen has taught courses in soil characterization, classification, and morphology, as well as mapping, remote sensing, and land use.

Dr. Petersen is a Fellow of the American Society of Agronomy and the Soil Science Society of America. He is a recipient of the Gamma Sigma Delta Awards for Outstanding Teacher and for Outstanding Researcher in the College of Agriculture; the Teaching Award and Research Award of the North-eastern Branch of the American Society of Agronomy; the Alex and Jessie C. Black Award for Excellence in Research; and the President's Award for Excellence in Academic Integration. Dr. Petersen has served as President of the Soil Science Society of America and is the Vice-President of the International Union of Soil Sciences.

Stephen Nortcliff

new Secretary-General of IUSS



Dr. Stephen Nortcliff is Reader in Soil Science and currently Head of the Department of Soil Science at the University of Reading, United Kingdom. In addition he is Adjunct Professor in Soil Science at Clemson University, South Carolina.

Dr. Nortcliff has been Honorary Secretary of the British Society of Soil Science since 1989. Dr. Nortcliff's doctorate investigated the nature and patterns of soil variability and a paper arising from this work, published in *Journal of Soil Science*, was awarded the British Society of Soil Science Silver Jubilee Medal and Prize in 1978. Dr. Nortcliff has worked on the development, nature and patterns of soils in Temperate, Mediterranean and Tropical environments. Within the tropics the principal areas of research have been in the Brazilian Amazon investigating soil response to deforestation. From the initial focus on tropical forests the work in the tropics has extended to investigate many aspects of land management in relation to annual and perennial crop production and to aspects of agroforestry and the addition of organic residues to soils. In the last two decades Dr. Nortcliff has been involved with soil quality and the standardisation of methods for determining soil quality. This has included major involvements with the International Standardisation Organisation and their work on Soil Quality. Since 1994 he has chaired the ISSS/IUSS Standing Committee on Standardisation, and in addition to ensuring a soil science input in the development of soil standards, through this position he has been actively involved in the transition from ISSS to IUSS and the development of the structure, statutes and by-laws to make this possible. Arising from the work in soil quality and the work on organic amendments to soils, Dr. Nortcliff has become active in the area of composts and the use of composts as soil amendments and soil forming materials, having recently completed a study on the 'Beneficial Use of Composts' for the Austrian Government. Educating the general public about the importance of soils has been a key activity in recent years, with the production of booklets and work sheets for school children and the public, and the presentation of public lectures, highlighting the importance of soils in the every day lives of all members of the world's population. Dr. Nortcliff has published extensively and variedly on a wide range of topics in soil science and soil management.

Dr. Alfred E. Hartemink

new Deputy Secretary-General of IUSS



Alfred Hartemink is a soil scientist at the International Soil Reference and Information Centre (ISRIC) in Wageningen, The Netherlands. At ISRIC he is responsible for the soil science education and extension programme. He is guest lecturer at Wageningen, University, Larenstein Deventer and the international courses at IHE in Delft and supervises MSc and PhD students. Prior to his current position he was lecturer in soil science in Papua New Guinea, and has worked as soil surveyor and soil fertility specialist in Tanzania, Zaire, Indonesia and for ICRAF in Kenya. His research focuses on the assessment and quantification of soil chemical degradation as a result of permanent cropping, nutrient dynamics in short-term fallows and root and tuber crops, the effects of bio-invasive species on soil chemical and physical properties, and the sustainability of agricultural plantations in tropical regions. Recently he completed a study on trends and developments in scientific publishing with an emphasis on soil science. Dr. Hartemink is editorial board member of *Geoderma* and *Outlook on Agriculture* and founding editor of *Soil Science Reviews*. He is secretary-treasurer of the Dutch Society of Soil Science. In his IUSS position he is amongst others responsible for the development of the IUSS website (www.iuss.org).

THE 17th WORLD CONGRESS OF SOIL SCIENCE

The 17th World Congress of Soil Science took place in Bangkok, Thailand, from August 14-21, 2002, organized by the Soil and Fertilizer Society of Thailand.

In total, about 2250 participants took part (about 700 of them from Thailand), coming from more than 100 countries world wide. The Congress started with plenary lectures, followed by 65 Symposia, with oral and poster presentations.

The Congress was very well organized by the Thai colleagues and ran smoothly and harmoniously, with excellent scientific contributions. Plenary papers and abstracts of the Symposia contributions were printed and distributed to all participants at the beginning of the Congress. Moreover, an excellent social programme was organized by the Thai colleagues, which contributed to the understanding of national customs, traditions and the Thai culture in general.

At the Congress, 5 Council Meetings were scheduled, during which important decisions were taken regarding the further development of the International Union of Soil Sciences.

The new scientific structure was discussed and adapted where necessary and new officers (President, Vice-President, Secretary-General and Deputy Secretary-General) were elected, see this Bulletin. - Moreover, 11 new Honorary Members were elected (see this Bulletin).

Two new IUSS prizes and awards, which will be bestowed for the first time at the 18th World Congress of Soil Science in Philadelphia, in 2006, were discussed and finally accepted:

- the IUSS Dokuchaev Award for Basic Soil Science (see also IUSS Bulletin 98, pp 39-40 and a note in this Bulletin);
- the IUSS Liebig Award for Applied Soil Science (see also IUSS Bulletin 99, pp 44-45 and a note in this Bulletin).

For these two new awards and prizes, an Award Committee was appointed, chaired by the Past Secretary-General Winfried E.H. Blum.

Two new co-operating journals were accepted by the Council of IUSS:

- Australian Journal of Soil Research (CSIRO Publishing, Melbourne, Australia).
- Journal of Soils and Sediments (Ecomed Publishers, Landsberg, Germany);

The Resolutions Committee, chaired by Prof. George Varallyay, Hungary, discussed and prepared four resolutions, which were accepted and officially presented at the closing ceremony of the Congress (see also this Bulletin).

Before and after the Congress in Bangkok, very interesting excursions were organized by the Thai colleagues. They gave excellent insights into soils, landscapes and soil use in Thailand and adjacent countries.

With the election of Chairpersons for the new scientific structure, the Divisions, Commissions, and Standing Committees (see list "Addresses of IUSS Officers and Chairpersons" in this Bulletin), the restructuring of ISSS into IUSS was successfully concluded.

Finally, it is a pleasure to thank the Thai colleagues, especially the Vice President, Prof. Irb Kheorunome and his team, as well as many Thai colleagues, who acted as vice-chairpersons of the 65 Symposia, and also the President, Mr. Sompong Theerawong, for their outstanding work and organization of this Congress, which definitely contributed to the progress of international soil science.

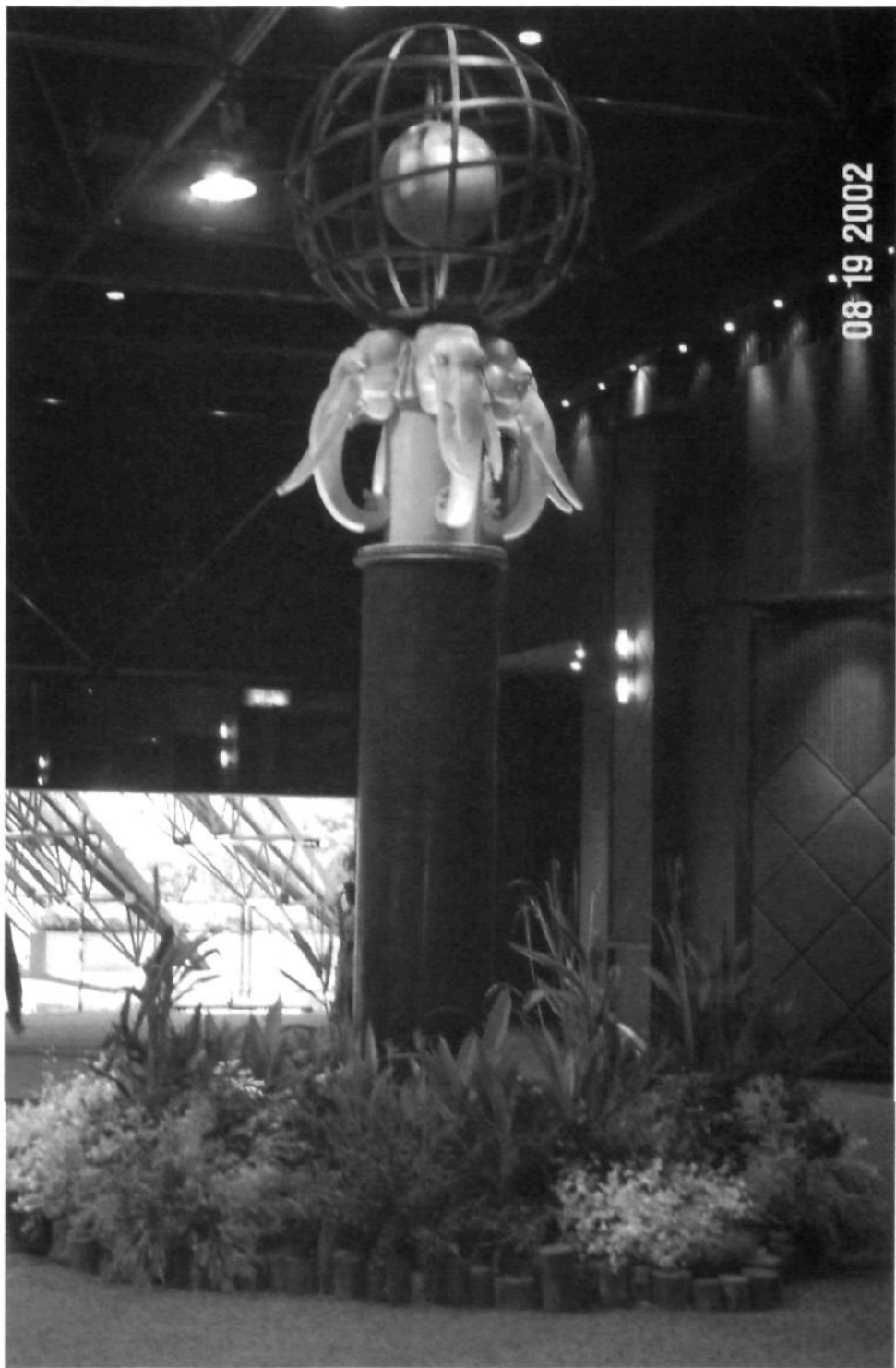
The 18th WCSS will take place in Philadelphia, USA, from July 10-16, 2006. – The venue of the 19th WCSS in 2010 will be Brisbane, Australia.

In the following, some pictures taken by Prof. Lee Sommers, Colorado State University, USA, allow glimpses of this excellent Congress.

Winfried E.H. Blum
Past Secretary-General of IUSS



View of downtown Bangkok from the Queen Sirikit Convention Center



Entrance hall of the Queen Sirikit Convention Center



The Congress welcomes its participants



Technical-administrative facilities for the participants



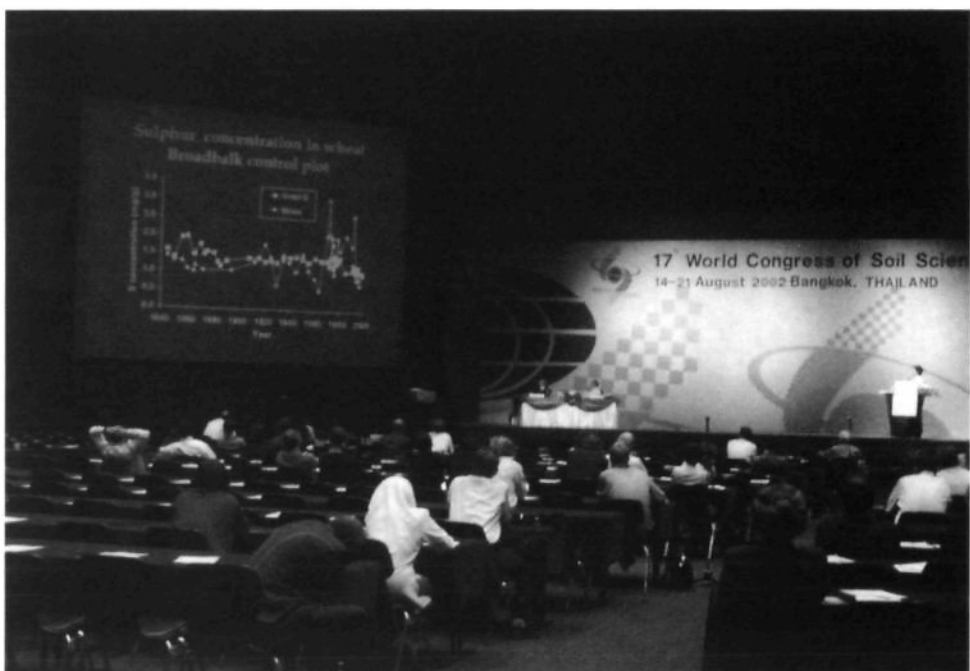
A look at the Thai exposition during the Congress



Booths of different organizations at the Congress



Booths of different organizations at the Congress



During the Symposium lectures



The Thai exposition with different soil use projects funded by His Majesty the King.



Part of the exposition of Thai soils

Echo from Tour B2 to Northeast Thailand and Laos.

On 22nd of August the bus with around 30 Thai and foreign tour participants from 10 countries, set off for the post-congress tour to the northeast of Thailand and half a day in Laos. It was a most memorable tour, guided by our well-informed Thai colleague soil scientists, especially our tour leader Mr. Wichaidit Pichai, who were assisted by two helpful Thai students. This group did their utmost to give us relevant information about soils and land use, social and economical conditions, agricultural practices, possibilities to adjust agricultural production in view of market demands, etc., and about a great variety of tourist attractions, religious buildings, markets, silk production, weaving, and clothing.

We traveled through the lowlands from Bangkok eastwards, leaving the area with paddy rice - which was just being planted - to the upland regions in the east and north, where maize, sorghum, cassava, mung and other beans, sugarcane, oil palm and rubber are important. The crops indicate the great variation in climatic conditions. For an introduction we had access to the informative book entitled "The Soil Resources of Thailand", written by Pisoot Vijarnsorn and Hari Eswaran, which was published on the occasion of the Congress, and the 1 to 1,2 M Soil Map of Thailand, also published in 2002.

There were a variety of well-prepared profiles, described and analysed, and explained and discussed by Thai soil and other scientists and local farmers. Participating was also the interested public from the villages.



The participants of the tour



Scene from the tour

Science was important, but the social and cultural happenings were of importance too! The hotels were very good, the food was usually hot and tasteful, the atmosphere during the whole trip was brilliant, but the performances of the karaoke songs could have been better – especially by the foreigners, including myself! The drinks and cleaning and cooling towels during the whole trip were aids to our well being. I especially liked the visits to the musea, including the Dinosaur museum, the so called “salt farming” from a salt dome near to the surface, and the prehistoric sites with well-preserved rock paintings.

In all, we all look back to a very nice and interesting trip, and on behalf of the participants I should like to express my sincere thanks to the organizers, guides and assistants and the careful bus driver!

Hans van Baren

NEW IUSS HONORARY MEMBERS

Dr. Richard Warren ARNOLD, USA

Prof. Arnold is retired Senior Soil Scientist, Natural Resources Conservation Service, USDA. He played a prominent role in the IUSS as Vice-Chair and Chairman of Commission V from 1978-1986. He is a member of two IUSS Working Groups.

Prof. Gleb V. DOBROVOLSKY, Russia

Prof. Dobrovolsky is professor of soil science at the Faculty of Soil Science, Moscow State University. He is Academician of the Russian Academy of Sciences, President of the Dokuchaev Soil Science Society of Russia, and editor-in-chief of the well-known journal "Eurasian Soil Science".

Prof. Wilford GARDNER, USA

Dr. Gardner was Dean of the College of Natural Resources, and Director of the Agriculture and Natural Resources Programme, at the University of California at Berkeley. Dr. Gardner was chairman of Commission I of IUSS from 1968-1974 and has been chairman of the IUSS Standing Committee on Budget and Finance; he has been involved in a number of IUSS Working Groups.

Prof. Hassan M. HAMDI, Egypt

Dr. Hamdi was professor of soil science at the Ain Shams University and Dean of its Faculty of Agriculture. He was head of the committee that prepared the Soil Map of Egypt and was elected a member of the Egyptian Academy of Sciences. Internationally, Dr. Hamdi was active in a number of Arab countries.

Prof. Luis Alfredo LEÓN SARMIENTO, Colombia

Dr. León was professor of soil chemistry, soil fertility and management of saline and alkaline soils at the Colombian Institute of Agricultural Research (ICA). He also worked for IFDC and CIMMYT. He was president of the Colombian Society of Soil Science as well as president of the Latin American Society of Soil Science.

Prof. Fiorenzo MANCINI, Italy

Dr. Mancini was active in soil science for about 50 years. From 1964 to 1997 he was professor of applied geology at the University of Florence. He was president of the Italian Society of Soil Science and was elected Honorary President in 1996. Dr. Mancini directed soil surveys in several regions in Italy and in 7 other countries.

Prof. Boris S NOSKO, Ukraine

Dr. Nosko was Director of the Soil Science and Agrochemistry Research Institute for a long time, and President of the Ukrainian Soil Science Society. He is a distinguished scientist in the field of soil phosphorus in relation to crop yield. Dr. Nosko took part in 5 IUSS congresses, where he presented his work.

Prof. Ramón ROSELL, Argentina

Dr. Rosell was professor of soil science at the Universidad Nacional del Sur, Bahía Blanca and Professor of Graduate Courses in soil science at the University of Buenos Aires. He has actively participated in various soil science fields in Latin America and was visiting professor in Germany, Chile and Argentina.

Prof. Alain RUELLAN, France

Dr. Ruellan was professor of soil science, Director General of ORSTOM and Director of CNEARC. Within the IUSS, he has been very active in Working Groups and Commissions and as Chairman of Commission V. He was President of the IUSS from 1994-1998 and presided over the Organizing Committee of the WCSS in Montpellier.

Prof. Akira TANAKA, Japan

Dr. Tanaka was professor of plant nutrition at Hokkaido University. He has been actively involved in a number of international activities. Regarding the IUSS he is well known as its President from 1986-1990, preceding the Congress in Kyoto.

Prof. Philip Bernard H. TINKER, UK

Dr. Tinker was Professor of Agricultural Botany at Leeds University, Deputy Director of Rothamsted Experimental Station and Director of Terrestrial and Freshwater Sciences, NERC. He was Chairman of Commission III and for the last 12 years Chairman of the Standing Committee on Statutes and Structures. This resulted in our new organizational and scientific structure.

RESOLUTIONS

Resolution of the 17th World Congress of Soil Science, Bangkok/Thailand, August 14-21, 2002

World Soils Agenda

- Recognizing that land users are unable to tackle the challenges of sustainable land management solely on their own initiative;
- Concerned by the fact that soil and land degradation remains a largely unresolved problem of global environmental change;
- Encouraged by numerous local to national actions undertaken in many parts of the world;
- Convinced of the need for concerted international action that addresses soil issues at a global level;

the IUSS decides to actively promote the "World Soils Agenda" of its Working Group "International Actions for the Sustainable Use of Soils" (IASUS), and in particular the following tasks:

1. Assessing the status and trends of soil degradation at a global scale;
2. Defining impact indicators and tools for monitoring and evaluation;
3. Developing principles, technologies and approaches, and enabling frameworks for sustainable land management, with attention to more field research (soil survey and related activities);
4. Identifying an international, multi-disciplinary network for soil issues;
5. Establishing an international (inter-governmental) panel on soils;
6. Providing guidance to develop and implement national soil policies;
7. Promoting initiatives for sustainable land management;
8. Ensuring inclusion of soil-related issues in development programmes;
9. Providing guidance for national and local action.

Resolution of the 17th World Congress of Soil Science, Bangkok/Thailand, August 14-21, 2002

Soil Inventories for Combating Food Insecurity

Recognizing

that matching crops and practices to soils and weather conditions is possible through crop simulation models provided reliable assessment of soil and climate is locally available, and

that developments of pedotransfer functions, geostatistics, applied time series, and regionalized variable analysis in soil science now provide rapid, cost-effective methods for making reliable local assessments of soil and climate,

The IUSS with its historical record of achievement and world-wide leadership should take advantage of its new scientific structure of divisions, commissions and workgroups

to initiate and sustain a world-wide multidivisional project to accelerate the development of appropriate spatial and temporal soil inventories that match local and regional crop production requirements, and

to cooperate with ICSU and other international organizations and agencies for combating food insecurity in all nations.

In this context, it recognises the good efforts made by the IUSS Working Group on Global and National Digital Data Bases on Soil and Terrain Conditions (SOTER; see report on Symposium 44 at this Congress) in cooperation with FAO and other international organizations, and their application in promoting world-wide food security; it recommends that the SOTER efforts be accelerated, with the full use of new technical methods [as outlined above], and with increased financial resources such as to be made available in the framework of the Task Force on Hunger that forms part of the UN Millennium Development Goals Program.

Resolution of the 17th World Congress of Soil Science, Bangkok/Thailand, August 14-21, 2002

GLOBAL ENHANCEMENT OF SOIL ORGANIC MATTER

Given

that enhanced soil organic matter reduces the net rate of increase in greenhouse gases, increases plant productivity, and improves environmental quality,

that soil organic matter is a key component in nutrient cycling for crop production and environmental quality, and is an important determinant of soil physical, chemical and biological characteristics,

that our soils, along with water, air and sun are the major resources that sustain our food supply and terrestrial ecosystems, and

that global climate change, food security and environmental quality are interrelated issues of importance to all nations and our planet, and these can be favorably and simultaneously addressed by global enhancement of soil organic matter,

the IUSS resolves that soil organic matter is a resource that must be restored and increased globally to reduce the net rate of increase in greenhouse gases, to increase plant productivity and improve environmental quality.

Resolution of the 17th World Congress of Soil Science, Bangkok/Thailand, August 14-21, 2002

DAY OF THE SOIL

**THE IUSS RESOLVES THAT THE RESPONSIBLE WORLDWIDE ORGANIZATIONS
ARE ADDRESSED TO INSTALL AN ANNUAL DAY OF THE SOIL**

(preferably December 5)

ANNOUNCEMENTS

**International Union of Soil Sciences
Dokuchaev Society of Soil Scientists
Russian Academy of Sciences
Russian Academy of Agricultural Sciences**

2nd International Conference and Field Workshop on

SOIL CLASSIFICATION 2004

Petrozavodsk, Karelia, Russia, August 3-9, 2004

Preliminary program:

The conference will be divided into the following sections:

1. the development of the WRB
2. the development of national soil classification systems
3. classification of anthropogenic soils
4. numerical and applied soil classifications
5. indigenous soil classifications

Each section will include invited oral presentations, extended poster sessions for volunteer participants, and discussions. A limited number of volunteer papers may be accepted for oral presentation.

Preliminary schedule of the conference:

| | |
|----------|---|
| August 3 | plenary session and 1 st section <i>Joint meeting of the WRB Working Group and the Commissions on Soil Classification and Soil Genesis of IUSS.</i> |
| August 4 | 2 nd and 3 rd sections |
| August 5 | 4 th and 5 th sections, closing ceremony |
| August 6 | 1 st field trip: Gleyic Albeluvisols, Rustic and Haplic Podzols (Kivach National Park); |
| August 7 | 2 nd field trip: Albeluvisols without glossic features, Cambisols (Southern Karelia); |
| August 8 | 3 rd field trip: "endemic soils" formed on shunghite (carbonaceous) shales and their derivatives (Khizi island); |
| August 9 | 4 th field trip: Ombric and Rheic Histosols (Middle Karelia) |

For further information, please contact:

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You are invited to contribute to a new book of the
WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION
(Date of publication: 2004)

**Monitoring and Evaluation
of Soil Conservation and Watershed Development Projects**

An introduction to the subject and rationale for a book

Many soil conservation and watershed development projects have been undertaken in several forms in different countries. These projects have usually aimed at reducing soil erosion and preventing watershed degradation and at the same time increasing agricultural productivity. To reach these objectives a multitude of activities have been undertaken, ranging from terracing, gully control, reforestation and fruit tree planting to zero-grazing, irrigation, off-farm employment and various other means of socio-economic support. When evaluating these projects at their completion, or afterwards, it has often been found that no firm conclusions can be drawn because insufficient attention was paid to the monitoring of project activities.

Monitoring can be considered as an internal project activity and the responsibility of the project management. Information should be collected continuously or at regular intervals about the various project activities and the conditions surrounding these activities, in order to ascertain whether these are contributing to project objectives and so that timely adjustments can be made if necessary. Evaluation, on the other hand, is best done by an external organization and can only be properly done if activities have been carefully monitored.

In setting up a monitoring system for subsequent evaluation, one looks at the project cycle. The project objectives can be derived from the project identification and preparation reports. To be able to verify the extent to which the activities in the implementation phase contribute towards the objectives, clearly defined indicators need to be established for these objectives. Since objectives often relate to physical factors, such as erosion and hydrological status, and to socio-economic factors, such as costs, benefits and participation rates, a wide range of direct or proxy indicators has to be established.

The project has then to create an organizational unit and a monitoring system to collect information about these indicators, starting with initial or baseline values and followed by progress values at regular intervals. The system can make use of various tools: for the determination of scores on physical indicators, such as erosion rates and hydrological features, measurement devices or research plots should be installed, while for socio-economic indicators various types of interview rounds and participatory methods should be arranged. While the above seems logical, monitoring and evaluation can be hampered by various pitfalls. When project objectives are not clearly defined, it is hard to establish the right indicators and monitoring systems may then either become insignificant or yield too much data for a proper evaluation.

This book seeks to illustrate how monitoring and evaluation could be undertaken theoretically and how it has been undertaken in practice by various projects and development organizations in different agro-ecological conditions in the world. The lessons drawn in this book about the various ways and means of conducting monitoring and evaluation will enable future projects and programs to establish proper M&E systems, which eventually will improve project performance.

To contribute or learn more about this project you may contact:

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On the Dokuchaev Legacy

Vasili Vasilievich Dokuchaev (1846-1903) commenced the recognition of soils as a separate body of nature in a widely known and classical book *Russian Chernozem* published in 1883 as a Report to the Imperial Free Economic Society (FES) in St. Petersburg which generously supported his almost annual expeditions to various regions in Russia. He became known as the main founder of what is now known as *pedology* - the science of the origin and distribution soils. His other publications are much less known even though he was a prolific writer. A list of his works published in 1903 in *Pochvovedenie* No 4 (by N. Krishtafovich, p. 431-441) includes 137 items from 1871 to 1902, including voluminous expedition reports and popular articles, all in Russian, except for six items in French or English. Even this is incomplete as indicated in the collected papers republished 1949-61 in nine volumes in Moscow.

At least two full length biographies of Dokuchaev were published in Moscow, by I. and L. Krupenikov in 1950 and by S.V. Zonn in 1991. His bearded picture became a familiar addition to the numerous memorials, celebratory anniversaries or some critical reviews. The first 100 volumes of *Pochvovedenie* have 90 such articles on Dokuchaev. He became a cult figure jointly with the pioneers of Russian science, worthy a large fine bust in the ceremonial alley at the prestigious Moscow State University, and having leading research Institutes named after him. In Russia he became a true cult figure and hardly any pedological paper is published without first mentioning the contribution of Dokuchaev to the topic.

It is interesting to look closer at the few publications by Dokuchaev originally published in French or English. What were they? It includes a 1879 preliminary report to the FES (70 pp) of the subsequent Russian Chernozem book, as it was the custom of the FES, which acted as a kind of Academy to encourage agriculture (cf. J.A. Prescott, *Agric. History* 51:503-512, 1977), to publish both in French and Russian. In 1890 Dokuchaev became a foreign member of the Belgian Geological Society and submitted translated papers reporting the methodology of his soil mapping work in the Nizhni Novgorod region wherein he suggested that in detailed agro-geological mapping pedological properties should be taken into account. The papers were not printed but the chairman of the Belgian Society reviewed them orally and in writing and showed the maps at a session followed by discussion and oral presentation by another Russian soil-geologist, Loewinson-Lessing of his soil classification (*Bull. Soc. Geol. Bel.* 4:113-116, 1890). Subsequently Dokuchaev presented to the Belgian Geol. Soc. another paper 'Note sur le loess' *Bull. Soc. Geol.* 6:97-101, 1892 pointing out its glaciogenic source during last stages of deglaciation, opposed by two Belgian discussants recognizing the eolian origin of loess.

A better known paper, including a discussion of the soils, is titled the 'Russian Steppes in the Past and in the Present'. It was presented in French to the 1892 International Archaeological Congress in Moscow and in English to the 1893 World's Columbian Exposition in Chicago, where a collection of soils was also exhibited. It was accompanied by a detailed explanatory text of its properties and suggested classification, prepared by Dokuchaev and Sibirtzev (cf. R.W. Simonson, *Soil Survey Hor.* 30:41-42, 1989). The next French publication was a 1895 summary report (28 pp) of the 1894 Forestry Department Expedition. When *Pochvovedenie* was founded in 1899, Dokuchaev published in this journal just two papers in 1900, a soil classification table and on the soils of Bessarabia [now Moldova], which he visited with expeditions several times since 1877 (cf. I. Krupenikov, V.V. Dokuchaev on Bessarabia, Chisinau [Kishinev], 1996). Whether these few topics were considered more important to present in a foreign language than others is now difficult to determine, but no doubt Dokuchaev himself did not contribute much to the spread of his ideas just as did not summarize his wideranging observations and conclusions in book form. This was left to others.

His most celebrated pupil N. Sibirtzev presented in French in 1897 a long paper at the 7th International Geological Congress in St Petersburg, published in the Proceedings during 1899, pp. 73-125, indi-

cating that it is based on the pioneering investigations of Dokuchaev. Subsequently a much shortened translation in English by P. Fireman, titled *Russian Soil Investigations* was published in *Experimental Station Record* 12: 704-712 and 807-818, 1901, reduced to 1/3 of its original length. Both were little noticed in the West, though it influenced strongly the soil surveyor G.N. Coffey at the USDA (*Proc. Amer.Soc.Agr.* 3:115-129, 1911). The spread of these new ideas was indeed painfully slow and cumbersome because of language barriers.

Dan H. Yaalon (Israel)

(With thanks for information supplied by Dr. Rudi Dudal, Louvain)

LIEBIGIANA

Next year is the 200th anniversary of the birth of the influential founder of agricultural chemistry Justus von Liebig (1803-1873) as a separate branch of science. The anniversary year will be celebrated in Germany by a number of public functions. In Giessen, where he was Professor of Chemistry at the *University (1824-1852), which is now named after him, there will be several exhibitions commemorating his work and specialized jubilee symposia.* His original Institute of Chemistry, which in 1920 was opened to the public as the Liebig Museum, was renovated after the war in 1952 and again expanded in 2001, will contribute from its collections. Giessen is also the seat of the Justus Liebig Society which has in recent years republished many of Liebig's original publications and continues to promote his memory together with a Society of Friends of the History of Natural Sciences in Ludwigshafen.

There are many books and biographies on Liebig. William Brock published the best recent biography of him in English - *Justus von Liebig: the Chemical Gatekeeper* (1997, 374pp, Cambridge University Press, UK). It is now in 2002 republished as a paperback by the same C.U.Press. W.H. Brock is professor of history of science at the *University of Leicester, England.*

Since the broad outlines of Liebig's biography are well known, it need not be repeated here. Liebig's leading role in the establishment of agricultural chemistry as a separate branch of science and its foremost promoter and entrepreneur for the extension of chemistry to agronomy and other fields remains unchallenged. He was a true leader garnering many honors. His role in formulating in soil chemistry the Law of Minimum is now shared by Liebig with Carl Sprengler (1787-1859) who independently researched and formulated the significance of the mineral nutrition of plants thus reversing the previous humus hypothesis (cf. R.R. van der Ploeg et al., *SSSAJ* 63: 1055-1062, 1999).

I wish to thank Dr. W. Ziehen, Giessen and the late Ing. W. Lewicki, Ludwigshafen for information supplied.

Dan Yaalon (Israel)

NOTEWORTHY

CD-ROM FROM THE 17th WORLD CONGRESS OF SOIL SCIENCE AND ALL RELATED PUBLICATIONS FREE!!

The 17th World Congress of Soil Science in Bangkok is over and there is still a number of CD-ROMs and other related publications, including books of abstract and keynote papers. As they could be of interest to institutions or organizations that did not participate, the organizers are pleased to offer this highly informative material to any institution, organization or individual, at no cost, from its premises in Bangkok. A postage and handling charge (Asia: US\$ 25; the rest of the world: US\$ 40) has to be paid to send the material to foreign countries. Send your request and applicable postage/handling charge to the following address:

Soil and Water Conservation Society of Thailand,
c/o Land Development Department,
Chatuchak District, Bangkok 10900,
Thailand.

E-mail: swest@ldd.go.th.

Soil Properties Database for Humanitarian Demining: A Proposed Initiative

This article is a summary of a paper presented to the Council of the IUSS at the 17th World Congress of Soil Science, August 2002, Bangkok, Thailand. The full paper can be found at http://www.ccmat.gc.ca/TechReports/ReportsPDF/Bangkok_wsc.pdf. Our purpose is to inform the world soil science community of a proposed initiative to establish a soil properties database for humanitarian demining applications. Acknowledging the enormous effort, technical expertise and international cooperation that would be required to realize this objective, it is recognized that the initiative would necessarily rely on the IUSS and other related international scientific organizations as a foundation. We are optimistic that relevant research and database development programs already underway could provide vital momentum toward realizing the proposed scientific-humanitarian initiative.

Human suffering caused by landmines left over from previous conflicts has received considerable public exposure in the past few years. Although research on how to detect and deal with buried landmines was initiated at least as early as the Second World War, the search for solutions still continues. This lack of success is a result of the very complex nature of the problem and the high degree of effectiveness required. The extreme variability of soil properties both spatially and temporally is clearly a major obstacle.

Landmines are typically buried within the top 0-30 cm of soil. As described in the full paper, numerous physical, chemical and electromagnetic properties of this near-surface layer will potentially affect the wide range of technologies being researched worldwide for detecting and dealing with landmines. Although there is information related to conventional soil classification that addresses agricultural and environmental issues, such as the FAO-UNESCO soil map of the world, little or no information exists in a form directly useful in landmine detection. There is, thus, a general need for the development of an information database devoted to relevant soil properties. However, even if the geographic scope were limited to landmine-affected countries, the development of such a comprehensive database would likely be beyond resources available to the demining research community. With that in mind, a poten-

tial initiative of much restricted scope but of immediate and direct use to humanitarian demining operations as well as research is discussed in the rest of this article.

In spite of the many technologies being researched and developed, the metal detector remains a widely used detection tool in humanitarian demining. The operation of the metal detector is based on the principle of electromagnetic induction. It is generally known that magnetic susceptibility and, to a lesser degree, electrical conductivity of the host soil influence the operation of the metal detector. The adverse effects of some soils on metal detectors were known as early as the Second World War. Unfortunately, the demining community seems to have forgotten these lessons during the intervening period. Users are once again finding that certain soils (1) can reduce the sensitivity of detectors to an extent that they cannot detect targets to desired depths; (2) can cause false targets; and (3) in extreme cases can render some detectors totally unusable. This so-called "Soil Problem" is worse now because antipersonnel landmines containing a minimal amount of metal are more prevalent. Currently many models of metal detectors, with widely varying capability, are being marketed to the humanitarian demining arena. The ability of a detector to detect targets in "problem" soils is currently of great importance and impacts heavily on the selection of new detectors by demining organizations. Although certain soils are known to be problematic, there is much confusion in the user community and even in the research community about what causes the problem and how to characterize it. The scientific community can do the following to assist:

1. provide further clarification of the effect of magnetic susceptibility and electrical conductivity of soils on metal detectors;
2. suggest measurement protocols and practical instrumentation to characterize these properties both in the field and in the laboratory;
3. suggest a methodology to relate detector performance to soil properties measured as per the above step; and
4. provide data on magnetic susceptibility and electrical conductivity of soils present in landmine affected countries.

The work described under items 1, 2 and 3 above would involve analytical and experimental research *in the areas of interest to the R&D community working in electromagnetic induction technology*. However, major involvement and assistance from the soil sciences and other branches of the earth sciences would be needed and are being sought to carry out the work under item 4, that is, the development of a database of the relevant soil properties.

The resulting database in conjunction with work described under items 1, 2 and 3 would support the following activities:

1. prediction and comparison of detector performance in various soil types expected worldwide;
2. establishment of laboratory test lanes having variable and representative soil conditions;
3. planning and equipment selection for international, regional and national demining operations in landmine-affected countries;
4. manufacturer-based improvement of off-the-shelf metal detectors; and
5. research, development and performance evaluation, of novel detector technologies.

The full paper includes suggestions, specific to humanitarian demining, that could help reduce the magnitude of the task of developing the desired database while still providing useful data.

It is hoped that this article will generate sufficient interest among soil scientists to encourage them to take steps, including the possible formation of an IUSS Working Group, to address and contribute to the proposed database initiative. Further information may be obtained from:

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The Global Environment Facility (GEF) adds Land Degradation as Focal Area.

The second Assembly of the Global Environment Facility (GEF), which met in Beijing, China from 16-18 October 2002, adopted a recommendation to designate land degradation as one of its focal areas. Hama Arba Diallo, Executive Secretary of the UN Convention to Combat Desertification (CCD), commended the decision, noting that the World Summit on Sustainable Development had hailed it as an important step.

The decision has been under discussion for several years and followed the recommendation by the GEF Council on 15 October 2002. The GEF Council is expected to finally endorse this decision in May 2003, following a report by the GEF Secretariat on the operational modalities for the new focal area. The sixth Conference of the Parties to the Convention to Combat Desertification is also expected to endorse this recommendation in September 2003, after

which country Parties may apply directly for GEF funding. The GEF Assembly decision also declares the GEF's availability to serve as a financial mechanism for the Convention, should the Parties so decide. Negotiations for the third replenishment of the GEF trust fund concluded in August 2002 with commitments for USD 2.97 billion to cover GEF operations and activities from 2003-2006, including the land degradation focal area.

For links to further information, see the GEF website: <http://www.gefweb.org>.

THE INTERNATIONAL FOUNDATION FOR SCIENCE

CALL FOR RESEARCH GRANT APPLICATIONS FROM DEVELOPING COUNTRY SCIENTISTS

The International Foundation for Science (IFS) provides support to young scientists of merit in developing countries by awarding research grants and providing grantees with additional services such as travel grants and purchasing assistance.

The IFS supports research related to the renewable utilisation of biological resources in areas such as crop and animal production, forestry, food science, natural products, and fisheries, as well as research on the sustainable utilisation and conservation of natural ecosystems, including themes such as water and biodiversity. Proposals for projects may address biological, chemical, or physical processes as well as social and economic relationships important in the conservation, production, and renewable utilisation of the biological resource base.

Research grants are awarded up to a maximum value of USD 12,000 for a period of one to three years and may be renewed twice. They are intended for the purchase of equipment, expendable supplies, and literature. Applicants must be citizens of, and carry out the research in, a developing country. They should be attached to a university or national research institution in a developing country. Specifically excluded are countries in Europe, including Turkey and Cyprus, as well as countries of the former

Soviet Union. Argentina and Uruguay are also not eligible to receive support. As well as being under the age of 40 (under 30 for applicants from China) and at the start of their research career, candidates must possess a higher academic degree, which should be at least an MSc or equivalent.

Applications are made on the application form, in English or French, which is available from the IFS Secretariat or can be downloaded from the website.

IFS, Grev Turegatan 19, S-114 38 Stockholm, Sweden
Fax: +46-8-54581801 Email: info@ifs.se Website: www.ifs.se

SOIL MAP OF URUGUAY

Dear colleagues and friends,

I wish to announce the publication of the soil map of Uruguay with a legend prepared in terms of the USDA Soil taxonomy (1999). The map is a compilation of the Reconnaissance Soil Map of Uruguay at the scale of 1:1 000 000, in which 99 soil associations were delineated and the legend was written in terms of the Uruguayan soil classification system, virtually unknown in other countries. With the purpose of improving the knowledge of Uruguayan soils within the international Soil Science specialists the new map was developed by a simplification of the original map. Only 22 mapping units are shown and the legend includes the dominant soils of each delineation, at the Great Group level. A text is attached to the map, with a brief description of the climate, soil parent materials and natural vegetation of Uruguay and a list of the Soil Orders, Suborders, Great Groups and Subgroups identified in the country. This text is still tentative and at present is available only in Spanish. We expect to prepare a definitive version, with some minor changes, and written both in Spanish and English for a better understanding of foreign soil scientists. The map and the text can be consulted at the web site of the Soil Group of our Faculty:

[www:fagro.edu.uy/suelos](http://www.fagro.edu.uy/suelos)

and will soon be available also at the web site of the Ministry of Agriculture/Soils Division. Both the map and the attached text were prepared by the following authors:

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Any comments will be most welcome and helpful to develop the definitive version of this work.

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Subcommission A: Salt Affected Soils

- Chairperson: Dr. S. Arunin, Soil Salinity Research Section, Land Development Dpt., Pahon Yotin Rd., Chatuchak, Bangkok, 10900, Thailand <arunin@mozart.inet.co.th>.

Subcommission E: Forest Soils

- Chairperson: Dr. P.K. Khanna, CSIRO, Div. of Forest Research, P.O. Box 4008, Queen Victoria Terrace, Canberra, ACT 2600 Australia.

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Working Group CR:

- Chairperson: Prof. S. Goryachkin, Institute of Geography, Russian Academy of Sciences,

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Working Group RZ:

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Working Group SG:

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Working Group SU:

Chairperson: Prof.Dr. W. Burghardt, Univ. GH Essen, Inst. of Ecology, Universitätsstr.5, 45117 Essen, Germany, <wolfgang.burghardt@uni-essen.de>

IUSS-COMMITTEES AND REPRESENTATIVES

Committee on Budget and Finances (CBF), instead of ad-hoc committees at Congresses.

Chairperson: Prof. Robin Harris, 263 Soils Bldg., Observatory Drive, Madison, WI 53706, USA; rfharris@calshp.cals.wisc.edu.

Members: Prof.Dr. Ladislau Martin Neto (Brazil); Prof.Dr. Juan Herrero (Spain), Prof.Dr. Nanak Pasricha (India), Prof.Dr. Shixue Zheng (China), Prof.Dr. David Smiles (Australia), Prof.Dr. Lamourdia Thiombiano (Burkina Faso), Dr. Peter Luescher (Switzerland), Dr. Stephen Nortcliff (UK).

Committee on Statute and Structure (CSS), to ensure correct application of Statutes and Bylaws of IUSS, and to propose changes in the organizational structure as required.

Chairperson: Dr. John Kimble, USDA/NRCS/NSSC, Fed. Bldg. Room 152 MS 34, 100 Centennial Mall North, Lincoln, NE 68508-3866, USA.

Members: Prof.Dr. Larry Wilding (USA), Prof.Dr. G. Narayanasamy (India), Dr. Christan DeKimpe (Canada), Dr. Stephen Nortcliff (UK).

Committee on Prizes and Awards (CPA), to distinguish outstanding scientists in the field of basic soil science (Dokuchaev Award) and applied soil science (Liebig Award), and to raise the profile of soil sciences within the scientific community.

Chairperson: Prof.Dr. Winfried E.H. Blum, Inst. of Soil Science, Univ. of Agric. Sciences, Gregor Mendel-Str. 33, 1180 Vienna, Austria, E-mail: winfried.blum@boku.ac.at.

Members: Prof.Dr. H.P. Blume (Germany), Prof.Dr. György Varallyay (Hungary), Prof.Dr. Sergey Goryachkin (Russia), Prof.Dr. Lynette Abbott (Australia).

IUSS Representatives in Committees/Commissions of International Organizations:

ICSU-SCOPE Scientific Committee on Problems of the Environment:

Prof.Dr. Keith Sayers, and Prof.Dr. E. Frossard, Switzerland.

ICSU-CODATA *Committee on Data for Science and Technology*:

Prof.Dr. Marc van Meirvenne.

ACTIVITIES OF DIVISIONS, COMMISSIONS, SUB-COMMISSIONS, AND WORKING GROUPS

International Symposium on Sustainable Use and Management of Soils in Arid and Semiarid Regions

Cartagena, Murcia, Spain, 22nd-26th September, 2002

This symposium was part of the inter-congressional activities of the Division I "Soil in Space and Time" of the IUSS. The symposium was organized jointly by the Department of Agricultural Production of the Polytechnic University of Cartagena, together with the Department of Agricultural Chemistry, Geology, and Pedology of the University of Murcia. More than 250 delegates from about 20 countries have participated in the symposium.

The province of Murcia is one of the driest regions of Europe and currently facing many problems associated with agriculture and environment, including scarcity of water, urbanisation, salinization, soil erosion, and desertification. Explosion in greenhouse cultivation within the last two decades in the region, using advanced plantation technologies, created new challenges regarding the use and management of soils under arid and semiarid conditions. Sometimes new agricultural developments in Murcia were in response to external demand rather than taking into account the suitability of the soil to produce appropriate crops. For example, most of the products are not used locally and shipped immediately to North European markets. New agricultural practices have sometimes created many soil and environmental problems that may be restorable. The region has reached a critical level that requires to a through examination of the water use efficiency under new sets of conditions.

The objective of this symposium was to bring together an expert group for consultation to identify strategies, priority issues, and technical options for the sustainable use of arid lands when used for intensive agriculture.

The symposium was consisted of invited lectures, scientific sessions with oral and poster presentations, and field excursions. Three different midweek scientific excursions took place in 25th of September 2002: excursion 1 Campo de Cartagena, excursion; 2 Mula-Valle del Guadalentin-Sierra Espuna, and excursion 3 polluted soils by mining and industrial activities in the Campo de Cartagena County, Murcia. All these excursions included the examination of the major soils, geology, vegetation of the region and visiting the newly established green houses in Campo de Cartagena. Very lively scientific discussions took place in the field. The scientific excursions have ended with an evening festival in the soccer stadium. The participants have watched the battle between the ancient Roman and Cartagenesians.

The Local Organizing Committee has managed to publish two excellent volumes of the proceedings. The first volume was devoted to invited lectures and the second one was extended summary of all the oral and poster papers. These volumes can be obtained: Prof. Dr. Ángel Faz Cano, Secretary SUMASS2002, Department of Agricultural Production, The Polytechnic University of Cartagena; Paseo Alfonso XIII, 48. 30.203 Cartagena. Murcia. Email: sumass2002@upct.es Phone: 34-968 32 54 40; Fax: 34-968 32 54 35 Web Page: <http://www.upct.es/sumass2002>; <http://www.um.es/sumass2002>.

Oral and poster papers, up to a standard scientific level, will be reviewed published in the monograph series, *Advances in Geocology* (probably No 37) by CATENA VERLAG, likely in late 2003.



Opening session by the Polytechnic University of Cartagena.



Delegates during the break



Some delegates enjoying the field trip (del Guadaleñin-Sierra Espuna).

Angel Faz Cano, A. R. Mermut and R. Ortiz

The First Meeting of the Latin-American Working Group of the Paleopedology Commission INQUA-IUSS.

The first meeting of the Latin-American Working Group on paleopedology (recently formed during the VI International Symposium and Field Workshop, Mexico, Oct. 2001) took place on November 21-23 in Anillaco, La Rioja province, Argentina - a town famous for being the birthplace of Argentinean ex-president Carlos Menem. The meeting venue was in CRILAR - Regional Centre of Research and Technology Transfer of La Rioja - a well equipped and comfortably arranged institution involved in a number of investigation and education programs in various branches of geosciences and biology.

The Meeting was organized by Dr. Martín Iriondo (chairperson of the Working group), Dr. Daniela Kröhling (full member of the INQUA Paleopedology Commission); and by Dr. Claudio Carignano (CRILAR). It was linked to the workshop of GEC (Quaternary Research Group of South America) devoted to the results of the INQUA project "Quaternary and Present Climates of the Paraná and Uruguay Basins, SE South America" led by M.Iriondo.

16 participants from Argentina, Chile, Brazil and Mexico presented their results orally during 2 session days. The session on November 21 led by Martín Iriondo and Daniela Kröhling was devoted to the presentations related to the INQUA project. After the welcome of the CRILAR director Dr. D. Gorla 8 talks on various aspects of South America Quaternary geology, paleogeography and geomorphology were given. Martin Iriondo and Jorge Adamoli spoke about the dynamics of alluvial process-

es in the Paraná and Uruguay river basins. José Luis Cavallotto and Roberto Violante presented an exiting results about the evolution of coastal, deltaic and marine sedimentation linked to Late Quaternary eustatic sea level changes on Argentinean shelf in the area of Rio de la Plata. Violante noticed the probable recovering of a buried paleosol from the middle Argentine platform. Marina Aguirre studied the molluscs of Argentinean Atlantic coast as a source of paleoclimate information. Andres Laguens and Adán Tauber considered the regional aspects of the Late Pleistocene-Early Holocene environmental change as related to fauna evolution and first human occupation. Marcela Cioccale presented the Geomorphology and Quaternary of elevated small blocks of the Pampean ranges, with special reference to loess profiles.

The November 22 session, led by Sergey Sedov, was fully devoted to paleopedology and related problems of paleoenvironmental and geomorphological research in various regions of Latin America. Elizabeth Solleiro and Sergey Sedov reported the results from volcanic paleosols and pedosediments of Central Mexico and discussed the possibility to use them as Quaternary paleoclimate proxy. The data on stratigraphy, chronology and paleoenvironmental significance of late Quaternary buried paleosols in eolian (loess, sand dunes) and fluvial sequences of Argentina were presented by Claudio Carignano and Daniela Kröhling. Francisco Ladeira and Marceline Dos Santos used paleopedological objects to study geomorphological evolution in San Paulo province, Brazil on different time scales from Mesozoic to recent. They inspired the audience with their discovery of well preserved Late Pleistocene buried paleosols in the regions with humid tropical climate and active denudation. Reynaldo Charrier and Sofia Rebolledo spoke about geomorphological processes in Chile, in relation to plate tectonics and considering the possibilities for prognosis of geological hazards. Margarita Osterrieth presented nicely illustrated set of results on biominerals in paleosols and modern soils of southeastern Pampa and outlined perspectives of their use for paleoenvironment and geoarchaeological research. Finally Martín Iriondo gave an impressive overview of the state-of-art in Latin-American paleopedological research. With this talk the Working Group business meeting started. The following directions of the Group future activities were proposed:

to find the researchers interested in paleopedological research in Latin America (both from Latin-American countries and abroad) and try to incorporate them in the Group.

to formulate the scientific problems of larger scale which could attract the interest of various group members and serve as a basis for international co-operation and development of joint projects.

to prepare the international paleopedology course for postgraduate students in one of Latin-American countries.

To propose a minor discussion room on particularities of latinamerican paleosols linked to the main Paleopedology Commission activities in the INQUA Congress to be held in Rheno.

As the nearest task the participants considered the necessity to develop the Group homepage in the Internet.

Martín Iriondo was re-elected as the Working Group chairperson and Elizabeth Solleiro - as the Group secretary.

On November 23 the Meeting participants went on one day field trip, led by Claudio Carignano and Adán Tauber to the piedmont of Sierra de Velasco and Valle de Arauco. There, in the present day arid landscape formed by the eolian geoforms and alluvial fans we observed the relicts of more humid paleoenvironments with shallower water table: carbonate crusts with precipitated silica, ryzoliths and horizons with strong gleyic features.

The Meeting in Anillaco was of major importance for the consolidation of the Latin-American working group and is supposed to be a prologue for its future active work.

Sergey Sedov, UNAM, Mexico

RZ – Rhizosphere Working Group of IUSS – RZ-WG

Past and future activities

The Rhizosphere Working Group (RZ-WG) of the IUSS (at that time ISSS) was founded 16 years ago, in Hamburg (Germany) during the 13th WCSS in August 1986. By then, Prof A. Jungk (University of Göttingen, Germany) organized a 'Satellite Symposium' entitled 'Nutrient dynamics in the rhizosphere' who gathered prestigious speakers (H. Marschner, P. H. Nye, C.J. Asher, P.B. Barraclough, S.A. Barber and A. Jungk) and a sizeable audience. Such a success encouraged Prof A. Jungk to launch and chair the RZ working group which was approved by the Board of Officers of ISSS. At the 14th WCSS in Kyoto (Japan), Prof A. Jungk organized and convened with Prof Tadano a first RZ-WG symposium entitled 'Chemical and Physical processes in the soil-root system and active role of plant roots'. This gathered again a sizeable audience and a remarkable number of posters which further justified the foundation of RZ-WG. Upon Prof A. Jungk's suggestion, Prof P.J. Gregory (University of Reading, UK) was then nominated as the new Chairperson of the RZ-WG. No RZ-WG symposium was then organized at the 15th WCSS in Accapulco, but a symposium entitled 'Rhizosphere microbiology and plant growth and health' was organized by Commission III of ISSS.

At the 16th WCSS in Montpellier in August 1998, Prof P.J. Gregory and myself organized another RZ-WG symposium entitled 'New approaches to studying chemical and physical changes in the rhizosphere' which gathered a considerable audience (200-300 delegates) and +40 contributions. Fourteen of these were latter published in a Special Issue of the refereed journal 'Plant and Soil' (vol. 211 no. 1 in 1999, with P.J. Gregory and P. Hinsinger as Guest Editors). During the 16th WCSS, Prof P.J. Gregory suggested that I should take over as new Chairperson of the RZ-WG. Several issues were then discussed at the RZ-WG meeting, including the prospect for launching a Rhizosphere COST Action at the European level, as proposed by Prof W.W. Wenzel 'University of Agricultural Sciences, Vienna, Austria) : as the new Chairperson of the RZ-WG, I suggested that we should create a rhizosphere email discussion list to encourage further interactions between soil scientists dealing with rhizosphere research. This was launched in 1999 and is presently gathering 85 subscribers, some of which are not soil scientists. This email discussion list has however not been very active so far and I take this opportunity to encourage people to subscribe (see the procedure below) and to make it more lively by sending emails for announcements (job positions, meetings) and technical or scientific questions or any other issue related with rhizosphere research.

At the 17th WCSS in Bangkok in August 2002, I convened with Prof Tongchai Mala (Kasetsart University, Thailand) a RZ-WG symposium entitled 'New challenges for rhizosphere research at the entrance of the 21st Century' (Symposium 64) which comprehended 7 oral contributions and 10 posters, among the 35 abstracts initially submitted. Thanks to the excellent quality of the talks and discussion we had, the audience was again very satisfying (roughly 200-300 delegates), although a concurrent symposium entitled 'Composition of soil microbial and fauna communities : new insight from new technologies' certainly attracted part of the expected delegates. The success and quality of this symposium should be reflected in another Special Issue of 'Plant and Soil' that I am currently preparing with Kluwer Academic Publishers. One of the major issues that we addressed during the discussion on the new challenges of rhizosphere research during Symposium 64 in Bangkok was how to make this research more integrated, applied, down-to-earth ? How to make use of the accumulated knowledge ? In that respect, after the completion of the symposium, I have been approached by F. van Dunne (Kluwer AP) who suggested that we should write an applied book on the management of the rhizosphere. We agreed, Prof V. Römheld (University of Hohenheim, Germany) and myself, to try to come up with such a proposal in the future.

A RZ-WG meeting was subsequently organized in Bangkok during the WCSS, which unfortunately was attended by only few delegates. The major issues that we addressed were the following :

- to make more publicity for the Rhizosphere email discussion list (through links on various Rhizos-

- phere-related web sites), in order to make it more lively, i.e. an active, efficient tool to interact with each other,
- to prepare the 18th WCSS in Philadelphia, which will require to identify soon a potential co-convenor in the USA to help organizing the next RZ-WG symposium,
 - to get involved in the organisation of a rhizosphere session during the forthcoming ICOBTE (International Conference on the Biogeochemistry of Trace Elements) in Uppsala (Sweden) June 2003 (see <http://www-conference.slu.se/7thICOBTE>), together with PM Huang, F Courchesne, G. Gobran, W.W. Wenzel and myself,
 - to get further involved in the creation of a European Network of Excellence if approved by the 6th Framework Program to the European Commission. In June 2002, a project entitled 'Understanding and Utilising Plant-Soil-Microbe Interactions in the Rhizosphere' has been sent as an Expression of Interest (this project can be found at the following site : http://eoi.cordis.lu/search_form.cfm). If successful, this project coordinated by Prof W.W. Wenzel (University of Vienna, Austria) would gather about 500 scientists from 100 different European institutions. To date, the RZ-WG has been involved in the writing of this proposal (Expression of Interest).
 - to take an active part in the organisation of a first International Rhizosphere Conference '2004 – a hundred year of Rhizosphere', as a tribute to L. Hiltner who first introduced the concept in 1904. This should be held in Europe (most likely Germany) in two years time. Updated information will be found soon on the website of the COST 631 Action managed by Prof. W.W. Wenzel (see <http://www.descience.net/cost631/>).

The RZ-WG has thus got several challenging perspectives ahead. In order to face these various issues, Prof. F. Courchesne (University of Montreal, Canada) and Prof W.W. Wenzel (University of Agricultural Sciences, Vienna, Austria) have agreed to act as Vice-Chairpersons of the RZ-WG that I will go on chairing until 2004 or 2006. Year 2004, beside being the centenary of the 'rhizosphere' concept, will be an important step for our RZ-WG as : (i) the WGs of the IUSS will be reviewed by then and (ii) a final decision of IUSS will be taken regarding the settlement and structure of the new Commission C2.5 within Division 2 'Soil/Physical/Chemical/Biological Interfacial Interactions' in which I think the RZ-WG would perfectly fit.

To subscribe to the rhizosphere email discussion list, please write to : sympa@listes.inra.fr
Do not provide any 'subject' and simply write, as a message :

SUBSCRIBE rhizosphere firstname surname

If you have a signature, please write QUIT on a separate line at the bottom of your message.

New messages should be sent at the following address: rhizosphere@listes.inra.fr

Dr Philippe Hinsinger
Chairperson of the RZ-WG

REPORTS OF MEETINGS

International Conference “Soils under Global Change, a Challenge for the 21st Century” Constanta, Romania, September 3 – 6, 2002

The Conference tried to offer scientists an opportunity of emphasizing the importance of soil quality and of the risks for its degradation, as well as of discussing solutions for prevention and/or mitigation of these processes and for a sustainable use of soils. The major items included were: water and wind erosion, landslides, waterlogging and flooding, aridization, salinity and sodicity, compaction and structure deterioration, humus and nutrients deficiencies, acidification and alkalization, pollution with various contaminants, as well as problems related to drought, climate change, greenhouse gas emission, carbon sequestration and desertification and relations of these problems to soil quality and soil degradation. The European Union new strategy for agriculture and environment was presented and discussed. As the Conference was organized in a country now changing from one economic system to another one, and as many of the participants came from other countries being in the same situation, specific and often difficult problems related to such changes were considered.

More than 200 scientists from 31 countries were registered for the Conference, and 130 abstracts of papers were published. The Programme of the oral sessions included 56 papers, of which 11 papers from leading scientists from different countries, and the one of the poster sessions 74 papers. The Proceedings of the Conference, with the full-text papers, will be published in the next future.



Participants of the Conference

Results presented and discussions taking place during the Conference proved that various soil degradation processes are present all over the World, in any climatic and landscape environment, in developed, developing and undeveloped countries. Further spread of soil degradation and lack of rehabilitation were shown to represent a serious risk for food security, for development of a clean environment, and finally even for social and political stability. Solutions to deal with soil degradation, of great interest for both farmers and decision makers, should certainly be different, specific to each of the local

particular conditions. Such technical solutions should certainly also take into consideration macro-economic, social and political elements.

The official dinner at the end of the Conference took place in a local club, well known for its traditional Romanian meals, music and dance. One of the Conference participants, Professor Winfried Blum, proved to be not only a leading scientist, but also an excellent dancer, able to learn quickly a not too easy Romanian dance, and he was awarded one of the prizes for his performance.

A mid-conference tour allowed the participants to know the Valu lui Traian Agricultural Research & Development Station, 70 years old. Long term field experiments on mineral and organic fertilization and use of dried waste mud from swine feedlots, as well as more recent experiments on conservation tillage and soil compaction, were visited and discussed. The post-conference tour (September 7 – 10, 2002) allowed the participants to visit the National Research & Development Institute of the Danube Delta, and the delta itself, one of the largest wetlands still existing in Europe. A recently reclaimed and drained polder in the Danube Floodplain was visited, and problems concerning salt-affected soils were presented at the Central Research & Development Station for Saline Soils Improvement Braila. Areas with various soil erosion problems were examined at the Central Research & Development Station for Soil Erosion Control in Perieni.

The origin of this Conference was coming from two earlier European Union Concerted Actions on Subsoil Compaction (under the FAIR and respectively the INCO-COPERNICUS Programmes), even if a much larger scope was included here. The organizers are acknowledging the support offered by the European Union, as well as the one of the Romanian Ministry for Education and Research.

A. Canarache
Research Institute for Soil Science and Agrochemistry,
Bucharest, Romania

NEWS FROM REGIONAL AND NATIONAL SOCIETIES

Annual Meeting of the Canadian Society of Soil Science, Banff, Alberta, May 18-21, 2002

The Canadian Society of Soil Science (CSSS) held its Annual Meeting at the Banff Centre in Banff, Alberta, Canada, May 18 - 21, 2002. The Banff Centre is located in the Banff National Park, a UNESCO World Heritage Site. The conference was held in cooperation with the Canadian Geophysical Union (CGU). The joint conference included scientific presentations covering all aspects of geophysics and soil science.

A special theme for the conference was "Carbon cycling in earth systems (pedosphere/lithosphere/hydrosphere/ biosphere)". A number of joint (CSSS/CGU) and separate (CSSS) sessions and symposia were held on a range of topics including carbon cycling, sub-surface hydrology, land-water interface, pedology and its future in environmental research, nutrient management, and open sessions. A total of 399 delegates (CGU 249 plus CSSS 150) from Canada, USA, Australia, Germany, and Japan participated in this joint meeting. At the CSSS meeting, 140 papers were presented including 80 posters. David W. Eaton, President CGU opened the plenary session. May 18 gave us perfect weather for the "Rocky Mountain Highlights and Dirt Tour".

The tour included four primary stops: (1) geology and soil stop near Exshaw (2) Mount Kidd viewpoint; lunch stop near Spray Lakes (3) short hike to Grassi Lakes, and (4) Tunnel Mountain viewpoint.

We discussed Devonian, Mississippian, Pennsylvanian-Triassic rocks and Quaternary deposits, variation in climate and paleogeography in this region for all of these times, natural history, extinctions, Global Positioning System and had a running positioning of the field trip, and seismic figure of a Leduc reef. Charles M. Henderson did an excellent job explaining geology. I learnt more geology in this 7-hour tour than I would have learnt in a million years on my own (see, I have already started expressing time in "million years").

The Ice Breaker Reception on Saturday night to meet old chums and establish new contacts was a networking goldmine. The BBQ on Sunday evening was a casual and relaxing event with plenty of good food at the Wild Bill's Legendary Saloon in downtown Banff. The Pub Crawl on Monday night was quite an experience. Over the last three decades I have participated in several national and international meetings around the globe. This, however, was the first meeting where I had the opportunity to participate in this social event. One of the bars that we patronized in this excursion had 35 different types of beer on tap (decisions, decisions, decisions!). I found out that the students are as dedicated to pub crawl as they are to presenting excellent oral and poster papers.

The CGU presented the J. Tuzo Wilson Medal at the Awards Banquet on Tuesday night along with the Best Student Paper Awards. The CSSS awards included the Student Travel Awards, Student Book Awards, Bentley Student Presentation Awards, President's Student Poster Awards, and the Overseas Travel Awards. Ben Gadd, the banquet guest speaker, gave a witty and uplifting 20-minute talk on "Conservation, from Chaucer to Smokey the Bear".

At the CSSS Annual Business Meeting, President Martin Carter passed on the gavel to Ahmet Mermut. Ed Gregorich is our President Elect. Members of the CSSS Organizing Committee (Gary Kachanoski, David Chanasyk, and Barb Kishchuk) are to be congratulated on an excellent program. I am grateful to the CSSS for one of the three Overseas Travel Awards to assist me in participating in the 17th World Congress of Soil Science in Bangkok, Thailand and for giving me the opportunity to serve as one of the judges for the President's Student Poster Awards. The Council continues its goals of forging links with other like-minded organizations. The next CSSS Annual Meeting will be held in Montreal, Quebec, August 10-13, 2003 in conjunction with the 4th International Conference on Mycorrhiza and the Canadian Society of Agronomy. Further information will be available on our website (www.csss.ca) <<http://www.csss.ca>> and from the CSSS Business Office by contacting Steve Sheppard, P.O. Box 637, Pinawa, MB, Canada R0E 1L0 (E-mail: sheppards@ecomatters.com).

Information on the next CGU meeting will be posted on the website (www.cgu-ugc.ca) <<http://www.cgu-ugc.ca>>

Banff (named for Banffshire, Scotland) is nestled in the heart of Canada's premier wilderness reserve (Banff National Park, Canada's first National Park.....3rd oldest in the world, established in 1885). BNP is one of four adjoining mountain parks comprising more than 5,200 square miles of spectacular Canadian Rocky Mountain landscape. At 4,540 feet above sea level, Banff is "Canada's Highest Town". Banff Springs Hotel, Banff Gondola at Sulphur Mountain, Banff Upper Hot Springs, Bow River, Bow Falls, Bow River Hoodoos, bighorn sheep, bears, buffaloes, bald eagles, black magpies, Buffalo Nations Luxton Museum, BMWs, bounty of Alpine grandeur, Banff Park Museum, boating, birding, biking, bustling Banff Avenue, beautiful awe-inspiring sunset Banff has got it all! This short working vacation was sufficient to recharge the batteries for the rest of the year. As we headed home on Wednesday, it was hard to say good bye to beautiful Banff. An unforgettable conference!

Yash P. Kalra, Past President, CSSS



Yash P. Kalra (right) congratulating Ahmet R. Mermut who was installed CSSS President for 2002-2003.



(Left to right) Phillip R. Warman, M.A. (Charlie) Arshad, and Joel A. Crumbaugh enjoying the beauty of winter in spring. Mother nature forgot to check the calendar. Picture taken on May 22, 2002 (...and no, it is not a misprint).

XIth Congress of the Colombian Soil Science Society (Sociedad Colombiana de la Ciencia del Suelo)

The XIth Congress of the Colombian Soil Science Society took place in Santiago de Cali (Valle, Colombia), from September 18 to 20, 2002. The Congress was opened with keynote speeches by M. García and D. Malagon, dealing with problems concerning water and soils in Colombia, respectively.

Other keynote speakers were M. Blasco (Spain), N. Senesi (Italy), H. Burbano, E. Amezcuita and A. García Ocampo, who spoke about various aspects of soils, in general referring to soils in a tropical environment. After that, 7 Symposia were held on "El componente bioorgánico y el manejo productivo del Suelo" ("The bio-organic component and productive management of soils") - N. Senesi, Italy, J.F. Gallardo, Spain, M. Blasco, Spain and A. Feijoo; "Secuestro de C en el trópico" ("Carbon sequestration in the Tropics") - J.F. Gallardo, Spain, I. Salazar, Chile, and E. Amezcuita; "Manejo físico del Suelo para prevenir y solucionar su degradación" ("Physical management of soils for preventing and solving degradation problems") - E. Amezcuita, P.P. Herrera and M. Bendeck; "Contaminación y degradación química de suelos en Colombia" ("Chemical soil contamination and degradation in Colombia") - L. Mejía, I. Toro, O. Montenegro and A. Gonzalez; "La agricultura de precisión en el trópico" ("Precision agriculture in the Tropics") - J. Espinosa, Ecuador, F. Bertsch, Costa Rica and E. Madero; "Enseñanza de la Ciencia del Suelo" ("Education in soil science") - H. Burbano, I. Salazar, Chile, C.A. Escobar and R. Guerrero; and "El control analítico en los laboratorios de suelos, aguas y tejidos foliares" ("Analytical control in soil, water and plant material laboratories") - F. Munevar, A. García, R. Barreto and M. Bendeck. There was also a Round Table, co-ordinated by Dr. F. Silva Mojica, about soil science education in Colombia, in which Colombian and foreign professors participated, discussing the situation of soil science at Ibero-American and European universities.

The Congress was divided into four Symposia:

- I. Soil Fertility (45 contributions);
 - II. Soil Chemistry and Mineralogy (35 contributions);
 - III. Soil Physics and Conservation (55 contributions);
 - IV. Soil Biology (35 contributions),
- which were presented as oral (120) or poster (50) presentations.

There was also a memorable social event in the form of a banquet at which the guests were entertained by an orchestra playing Tropical and Caribbean music. There was also a homage to Dr. L.A. León, who had been awarded the Honorary Membership of the International Union of Soil Sciences (IUSS).

Participation was high (approx. 500 scientists, engineers, professionals and students); among the participants were many students of agronomy of Colombian universities. Therefore, we congratulate the organizers, Dr. García Ocampo (President of SCCS) and his co-workers from the Universidad Nacional de Colombia, Campus Palmira, Valle, on the success of this Congress, which is an evidence for the vitality of the Colombian Soil Science Society. The next congress of the SCCS will be held in Cartagena de Indias in October 2004, together with the Latin American Congress of Soil Science (Congreso Latinoamericano de la Ciencia del Suelo).

J.F. Gallardo Lancho

VIIIth Congress of the Soil Science Society of Ecuador (Sociedad Ecuatoriana de la Ciencia del Suelo)

The VIIIth Congress of the Soil Science Society of Ecuador took place in Portoviejo, Manabí, Ecuador, from September 26-27, 2002. The Congress was opened with keynote speeches of the scientists H. Burbano (Colombia), M. Calvache, F. Cisneros, J.F. Gallardo (Spain), H. Velazquez and J. Woolley (UK). Several Symposia were held about the following topics: "The organic material of soils" ("Materia orgánica del suelo") – J.F. Gallardo, España; "Precision agriculture" ("Agricultura de precisión") – J. Espinosa and F. Bertsch, Costa Rica; "Soil analysis" ("Análisis de suelos") – J. Grove, USA, A. García, Colombia, F. Bertsch, Costa Rica, F. Silva, Colombia, and C. Chavez; and "Soil salinity" ("Salinidad de suelos") – J. Shalvet, Israel, A. García Ocampo, Colombia and F. Mite.

A number of sessions were dedicated to oral presentations (soil biology, soil fertility, soil conservation and management). Regarding the poster session, the works presented by the Agronomy Faculty of Cali (Colombia) *deserves to be mentioned especially*.

The social event was a memorable "Noche Manabita", in which popular Ecuadorian artists took part, to the great delight of the congress participants present at this event. The number of participants (more than 700 scientists, engineers, professionals and students) surpassed all expectations; it has to be mentioned that a great number of students of Faculties of Agronomy took part in this event. As pre- and post-Congress activities, Dr. J.F. Gallardo held 20 hours of courses on "The organic material in soils" both in Quito and in Guayaquil. We want to congratulate the organizers of the Congress, Prof. B. Bravo, Prof. F. Mite and Prof. J. Espinosa and their co-workers on the great success, which is a sign of the vitality of the Soil Science Society of Ecuador. The next Congress of the SECS is foreseen for the year 2004, in Loja.

J.F. Gallardo Lancho

Ethiopian Society of Soil Science (ESSS)

The annual workshop of ESSS was held in Addis Ababa in 2002. The theme of the workshop was "Challenges of Land Degradation to Agriculture in Ehtiopia". Before the start of the workshop a minute of silence was held for the late Dr. Tamiré Hawando who had been an outstanding soil scientist and member of ESSS.

After the workshop a Business Meeting was held and the following persons were elected as new Executive Board Members:

| | |
|-------------------------|---------------------|
| President: | Dr. Taye Bekele |
| Vice President: | Dr. Belay Demisse |
| Executive Secretary: | Ato Surafel Abay |
| Treasurer: | W/zt Askal Alamirew |
| Editor: | Dr. Tilahun Amedie |
| Associate Editor: | Dr. Eylachew Zewdie |
| Auditor: | Ato Yesuf Assen |
| Public Relation Officer | Ato Asefa Gizaw |

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Fax: 251 1 515-288
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Dr. Taye Bekele

SOIL SCIENCE SOCIETY OF GREECE

The 9th Congress of Soil Science Society of Greece was held from 22-24 September 2002 at the Goulandri Museum of Physical History "Gaia", in Athens.

About 150 scientists, researchers and students from all over the country attended the Congress and a total of 60 research papers were presented as oral contributions or posters during the plenary and the following sessions:

1. Soil physics
2. Soil chemistry
3. Soil fertility, plant nutrition, soil biology
4. Soil resources management: soil and water quality
5. Soil resources management: arable and forest ecosystems
6. Soil taxonomy and soil mapping

Dr A. Simonis, President of the Hellenic Soil Science Society, presented the opening key note paper "Modern Agriculture: the role of science and technology". The Congress hosted two renowned scientists: Dr J. Doran, President of the Soil Science Society of USA, from the University of Nebraska who presented a paper on the sustainable use of soil resources as a key to sustaining Earth and its People and Dr J.S. Schepers, from the USDA-ARS Agronomy and Horticulture Department of the University of Nebraska, who presented a paper on crop-based nitrogen management.

During the Congress, the new board of Directors of the Hellenic Soil Science Society was elected by the General Assembly for 2002-2004.

President: Dr A. Simonis

Vice-President: Dr Ch. Tsadilas

Secretary-General: Mrs H. Setatou

Treasurer: Pr Dr N. Barbayannis

Members: Pr Dr D. Moustakas

Pr Dr D. Alifragis

Pr Dr K. Panagiotopoulos

The new address of the society is:

Ms Helen Setatou

HSSS G. Secretary

Analipseos 4

552 36 Panorama

Greece

E-mail: elset@the.forthnet.gr

Portuguese Society of Soil Science (PSSS)

Sociedade Portuguesa da Ciência do Solo

The Portuguese Society of Soil Science has a new executive committee, elected on May 14, 2002. Its members are:

President: Manuel Madeira

Secretary: Carlos Alexandre

Treasurer: Fernando Monteiro

Address:

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Soil Scientists' Meeting in Slovakia

On June 17-19th, 2002 experts of soil science from Central Europe came together in Ražková Dolina, in the High Tatras.

This meeting was the first one after Slovakia became independent. The international character of the Conference was stressed by the presence of pedologists from Austria, the Czech Republic, Bulgaria and Croatia. More than forty papers and 18 posters were presented. The atmosphere was highly creative, as soil scientists working with agricultural soils had a very good opportunity to discuss their problems with colleagues from forestry. This creative spirit continued in the discussions at three forest soil profiles in the High Tatras, at Tatranská Polianka.



Slovakian pedologists hope that their first meeting with colleagues from abroad was a first step towards a future tradition of pedological confrontation right in the middle of Europe – exactly at the geometrical centre of Europe.

Pavol Jambor
President of the Societas Pedologica Slovaca

INTERNATIONAL RELATIONS

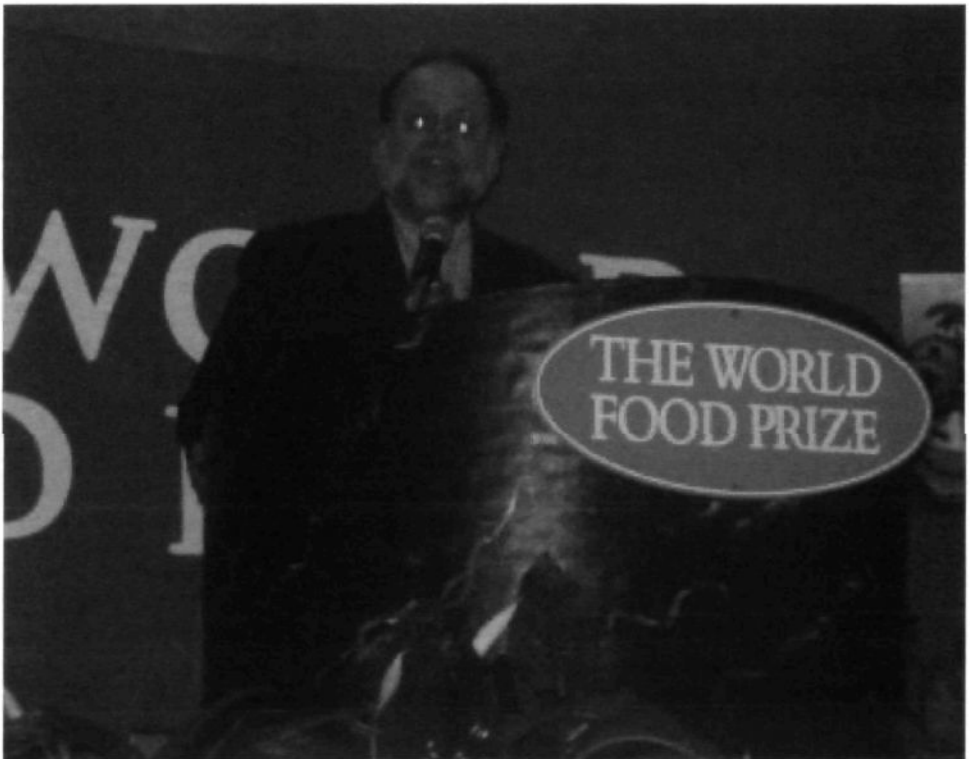
WORLD FOOD PRIZE

On 24 October 2002, Dr. Pedro A. Sanchez was honored as the 2002 World Food Prize Laureate at the C.Y. Stephens Auditorium at Iowa State University. Dr. Sanchez will put the prize money into a foundation to help with his continued efforts to find and remove the “invisible simper” that is causing hunger and starvation in the tropics. Starting in January 2003 he will move to Colombia University in New York and continuing his work on tropical soils. Dr. Sanchez was awarded the World Food Prize for his many years of research and leadership in pioneering ways to restore soil fertility to the poorest and most degraded soils in Latin America and Africa. By doing this he has made a major contribution to improving the over all ecosystem and showing that soils are where the action is for food production.

We as soil scientists are very lucky to be able to call Pedro a soil scientist he has never left his boyhood “sandbox”. He learned about soils as a young boy on the farm in Cuba and to this day he is still working in the soil.

He learned starting with travels with his father an agronomist that managing soils is the way to uplift the poor and move them from food shortage to food abundance which moves them from subsistence framing to a much better life.

We in the IUSS are deeply honored to be able to call Pedro one of us. And his research and leadership should inspire us all.



Dear Colleagues, please, visit

www.alterra.dlo.nl/websites/soilnet

The SoilNet initiative is an effort of originally forty (and now almost eighty!) prominent research organisations and universities across Europe and elsewhere, and aims to receive the status of network of excellence by the European Commission within the forthcoming 6th Framework Programme. In case this network will be selected by the Commission, significant amounts of research funds might be allocated and released for addressing the research priorities as described in the submitted expression of interest.

The exact text of the expression of interest and related annexes can be found at the protected pages of the network website. Username and password to reach the protected part of the website will be sent to you after subscription to the network initiative.

We aim to expand the network initiative with research organisations and universities INSIDE and OUTSIDE Europe in order to grow into the direction of an European based, global initiative on the theme of Soil Use and Protection for Sustainable Development.

I hope that this possibility will attract many new, competent research groups interested in the topics to be addressed by the SoilNet consortium. As such, this organically growing Network of Excellence will stand an even better chance in securing EU funding for their activities.

We hope that this initiative is of interest for your soil science society, and we look forward to welcome interested universities, research organisations and others as new members of this network. Please, distribute this news among your society members. Your cooperation would greatly be appreciated.

In case you have any questions related to this initiative, please, don't hesitate to contact me.

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R.I.P. another clay research group

To clay people around the world

Yesterday, the managers of CSIRO Land and Water closed down the largest and oldest lab doing research on clays and clay mineralogy in Australia. This lab was the successor of the Mineralogy Section of CSIRO Division of Soils (which merged with CSIRO Division of Water Resources to form CSIRO Land and Water a few years ago). The lab has been one of the major centres of clay research in the world for more than 50 years. It is the lab in which Keith Norrish did his pioneering work on the chemistry and mineralogy of micas and on clay swelling and much else besides in mineralogy and X-ray studies. It is also the lab where Ted Radoslovich developed the idea of rotations of silica tetrahe-

dra to explain how kaolinites can have a flat morphology when there is an inherent mismatch between octahedral and tetrahedral sheets. In this lab, Reg Taylor developed world-class expertise on iron oxides and Reg McKenzie likewise on manganese oxides, and it is here that Phil Slade has done so much careful and pioneering work on the structures of clay-organic complexes.

This lab has a collection of clay mineral samples that may be unmatched anywhere. Nonetheless, it is to be closed down as a research facility. I write this to alert the rest of the clay world to this unfortunate fact. However, I also write because I think this is another sad example of the demise of centres of excellence in clay mineralogy world-wide. I think an occasion like this is one where we should all take time to reflect on the state of our discipline and the reasons for its apparent decline. In the particular situation in CSIRO Land and Water, the reasons given for the closing of this area of research are quite clear. Simply speaking, clay research did not bring in enough money from clients. Other areas of land and (especially) water research are much more lucrative in that regard in this country. Of course, this explanation begs the question of why this particular criterion should be the paramount consideration for the worth of a discipline. It is a fact that it is so. And, of course, it is also the case in research institutes in much of the rest of the world (though perhaps not in France—vive la France!). I think it typifies the general situation almost world-wide where science is now valued only for the monetary gain it can bring—and the sooner the better. Science is seen historically as having been successful in producing worthwhile products. The hen of scientific research has certainly laid some large shiny golden eggs. Now all (society, managers, even scientists themselves, while justifying support) have become so focussed on those eggs that they have forgotten quite a few aspects of how they got there. For example, it has been forgotten that the hen sometimes lays some duds or does not lay at all for periods of time. It has also been forgotten that the eggs that have been produced have often been quite different from those that were expected. The research hen has produced many serendipitous eggs that have proven to be more valuable than the regular products, when and if they were seen for their true worth. What is worse, everyone has become so focussed on the apparently inevitable golden eggs that they have forgotten to feed the poor hen and especially to give it encouragement.

To bring this back to reality, applied science and technology have come to be favoured at the expense of basic understanding and new science. And this is why clay research is missing out for support. Apart from the rare situations where geophagy occurs, you can't sell clays for their nutritional value, nor do they have beauty or rarity to give them value. They are not a 'problem', like heavy metals or pesticides, although they may help to deal with these problems. Even then, however, they probably have no magical characteristics to give them great value for these applications. In many ways, clays are undervalued because they are everywhere. Yet the fact that they are everywhere—in all soils, in enough deposits to make pottery universal and enable paper to be filled and coated everywhere and to provide all of the world's pets with litter, means that they are of priceless value. Their occurrence in soils alone means that life on earth is possible. Otherwise, plants would not acquire nutrients and water to provide food for animals, etc. Still, they are generally taken for granted and, as a result, we cannot get (enough) grants to study them. It seems that many believe that we can get by without extending and deepening our understanding of these most useful materials. For example, it is commonly believed that we can confine our (environmental) studies to more superficial and specific topics. If a soil science department or an environmental research institute needs to cut staff, it is those at the basic understanding end who suffer. They will not be able to provide the instant solutions, so they will not be able to find clients to support their work. The outcomes from the basic work are of value in the long-term—maybe decades, but not in the one or two years demanded by industrial and regulatory interests. In the Australian situation, it has been the move towards organisation of research along outcome, client-oriented, lines that has killed off clay research. Financial targets have been set and scientists have had to align themselves with groups that approach particular problems. Our group has been aligned most recently with remediation research. This turned out to be a poor gamble. There has not been enough promise in the application of clays in remediation research to enable us to gain approximately 60% of our salaries, and the target is rising. We may have been able to earn more through assisting others in a variety of topics e.g. carbon sequestration or water treatment, as well, but we would still be limited by the short time-lines

that argue against research aimed at understanding. Still, all of that is water under the bridge for us. The main point I have arrived at in these musings is to warn my clay mineralogical colleagues elsewhere to be very wary of the organisation of scientific research along problem-based lines. Institutes that are organised in this way are no place for real clay mineralogical research. What do people think?

Jock Churchman, CSIRO Land and Water
Private Mail Bag 2, Glen Osmond, South Australia 5064

Annual Meeting of the AOAC INTERNATIONAL PNW, Tacoma, USA, June 20-21, 2002

The AOAC (Association of Official Agricultural Chemists/Association of Official Analytical Chemists/Association Of Analytical Communities) Pacific Northwest Section's Annual Meeting was held at the University of Puget Sound in Tacoma, Washington on June 20-21, 2002. We maintained the two-day format of previous meetings with a variety of workshops held on Thursday afternoon and Friday morning. Our objective was to provide an atmosphere conducive to the free exchange of ideas and to develop and foster fellowship among the meeting participants.

The focus of the conference was bioterrorism. There were three plenary presentations. Major Anthony Littrell of the US Army Medical Research Institute for Infectious Diseases discussed "Biological weapons of mass destruction: present, and future threat". He provided an overview of the current threat of bioterrorism and how that threat may evolve as we move into the 21st century. He discussed how current and developing technologies may accelerate our ability to respond to an episode of bioterrorism and even a biological attack. Topics included the promise and risk of recombinant technology, black biology and how it could be used, the promise of genomics, molecular forensics, and future vaccines and treatments. Scott Coates of the AOAC INTERNATIONAL Research Institute, discussed "A new AOAC online database and method validation system". This electronic repository will contain analytical methods in an easily searchable database for use by the analytical community. Julie H. Wicklund of the Washington State Department of Health spoke on "The public health response to bioterrorism". She provided an overview of defense mechanisms against threats of bioterrorism with special emphasis on civilian biological defense preparedness.

Several papers were presented in the seven workshops following the plenary session (the names of the workshop organizers are given in parentheses): Food analysis (Diane Altwein and Dave Graham), inorganic chemistry (Kathy Parker), laboratory safety (Sue Coffey), metals chemistry (Katie Adams), microbiology (Carlos Abeyta, Mike Grant, Cheryl Ecklund, and Josephine Pompey), pesticide residue (Bob Rieck and Virginia Palomo), and soil and environmental chemistry (Yash P. Kalra). There were five training sessions (the names of the presenters are given in parentheses): Measurement of uncertainty in analytical laboratories (Ed Paski), basic capillary column techniques (Neil Mosesman), pulsed field gel electrophoresis-disease surveillance (Ravi Pallipamu, Anthony DeRubeis, and Kaye Pride), basic HPLC practices (Becky Wittig), and introduction to ISO 14000 - environmental management requirements for laboratories, a.k.a. laboratories working in harmony with nature (Jerry Hirsch). The Scientific Expo was a highlight involving productive interchange between 18 vendors and 160 delegates. In an attempt to present a balanced perception of the usefulness of microbes present in the world, the banquet speaker Tuan-Tuan Liu of the Redhook Ale Brewery spoke on the "Art of brewing beer." She discussed various aspects of the quality control process and how they apply to brewing an excellent beer.

The 2002 Planning Committee consisted of Carlos Abeyta, Katie Adams, Diane Altwein, Joe Blaze-vich, Sr., Enrico Buenaventura, Jeff Bush, Sue Coffey, Cheryl Ekland, Dave Graham, Mike Grant, Jerry Hirsch, Peggy Knight, Gwen Llewellyn, Greg Ma, Virginia Palomo, Kathy Parker, Ed Paski, Josephine Pompey, Steve Pope, Bob Rieck, Jim Silkey, Despina Strong, and Kathleen Wickman. My thanks to the members of the Planning Committee for their cooperation in organizing a successful meeting. I am grateful to the society members for giving me the opportunity to serve as President of



(left to right) Yash P. Kalra welcoming the three plenary speakers: Julie H. Wicklund, Major Anthony Littrell, and Scott Coates at the Opening Session on June 20.

the AOAC PNW and Chair of the Planning Committee. I thank the Conference Services of the University of Puget Sound, particularly Patti Turner, Juanita Cheatham, Heather Clifford, and Ryan Kahler for making a significant contribution to the success of our meeting. The 2002-2003 executive consists of President Sue Coffey, Past President Yash P. Kalra, President-Elect Carlos Abeyta, Secretary Josephine Pompey and Treasurer Stephen Pope. Further information on the association is available from: AOAC INTERNATIONAL, 481 North Frederick Avenue, Suite 500, Gaithersburg, Maryland 20877-2417, USA, telephone (301) 924-7077 or (800) 379-2622 (toll-free from North America); fax (301) 924-7089; Internet: aoac@aoac.org.

Yash P. Kalra, President (2001-2002)
Edmonton, Alberta, Canada

APPOINTMENTS, HONOURS, PERSONAL NEWS

Dr. Pedro A. Sanchez was honored as the 2002 World Food Prize Laureate (see article in this Bulletin).

On August 5, 2002, the President of the Russian Federation awarded the State Prize of the year 2001 in the field of science and technology to the following professors of the Moscow Lomonossov State University: **Academician G.V. Dobrovolsky** (Research Director) **F.R. Zaidelman**, **D.G. Zvyagintsev**, **L.O. Karpachevsky**, **V.G. Mineev**, **E.D. Nikitin**, **D.S. Orlov**, and **I.S. Urusevskaya**, for their series of scientific works on "Functional and Ecological Foundations of the Study and Protection of Soils, the Increase of Soil Fertility and the Rational Use of Soil Resources",.

Prof. Mark M. Alley of the Virginia Polytechnic Institute and State University, USA, received the 2002 IFA (International Fertilizer Industry Association) International Award in Lisbon, in May 2002.

IN MEMORIAM

Prof. S.V. Zonn



On June 22, 2002, S.V. Zonn, Honorary Member of IUSS and Russia's oldest soil scientist, died at the age of 96. His merits were acknowledged in Russia and abroad. He maintained correspondence with people living and working on all the continents of the earth. As a teacher of numerous soil scientists from different countries and as academic advisor of a whole army of doctors and candidates of science, he is widely recognized in our country and abroad as a diversified investigator, energetic scientist, and steadfast organizer. His name is associated with the successes of Russian forest science and a broad knowledge regarding the developments in tropical soil sciences. The thorough knowledge of soils of all continents (except Antarctica) allowed Zonn to put forward many original hypotheses about geography, classification and genesis of soil formation. Almost a coeval of the century, Sergey Vladimirovich went all the way with it from the very beginning to the end, survived all storms of this hard and sometimes scary period. He passed all the trials but stayed himself. Most likely it was the fresh air of the Caucasus where he studied, and the eminence of his teachers, Prof. A.M. Pankov and Academician L.I. Prasolov, that allowed Sergey Vladimirovich to overcome all setbacks.

He graduated at the Highlands Agricultural Institute in Vladikavkaz in 1929. Despite all difficulties, he managed to remain a responsive and friendly person, always ready to help anybody who needed in it. In 1929, Zonn started his research activities under the leadership of one of the forerunners of biogeocenology, the talented R.I. Abolin. At this time, Zonn took interest in problems of soil reclamation in the Northern Caucasus.

From 1931 to 1939, Sergey Vladimirovich studied the soils of the Caucasus, Crimea and Buryatia heading expeditions of the Leningrad division of the All-Union Institute of Fertilizers, Agrochemistry and Agropedology. There L.I. Prasolov became his teacher.

Due to Prasolov's petition, Zonn was accepted as a candidate of agricultural sciences in 1937 without presenting a dissertation. Since 1939 he had worked in the All-Union Institute of Crop Science, at that time lead by N.I. Vavilov. During this period, Zonn studied soils at Aral, Karakum, Turkmeni and Balkash research stations. In 1939, still working at AUICS, Zonn started to teach a class on *Foundations of Quaternary Geology with Soil Science* at the Leningrad Mining Engineering Institute. At the beginning of the Second World War he was in Leningrad. Thus, he experienced the whole horror of the blockade. Seriously ill, he was evacuated in 1942 along the icy *Road of Life* (over the ice of the Lake Ladoga) to Kazan. 180 cm tall, he weighed that time just 40 kg. Gradually he regained his health, and in 1943 Zonn resumed his studies of soils of his native Caucasus. The research carried out before

World War II and partially during the war resulted in two monographs: *Soils of Dagestan* (1940) and *Experience of Natural—Historical Regionalization of Dagestan* (1946). These works contain one of the best descriptions of Dagestan's soils and their most accurate soil maps. In 1943, the Academician V.N. Sukachev established the Forest Institute at the Science Academy. At that time this was the only barrier to the anti-scientific doctrine of Lysenko. Sukachev did not only argue against it in publications but also hired opponents of anti-scientific concepts of biology dismissed from other institutes. Invited by Sukachev in 1945, Zonn managed to organize one of the most interesting laboratories in the Institute of Forest – the Laboratory of Forest Soil Science. It provided young people with the opportunity to study, to become a doctor or a candidate of sciences. Its numerous scientific investigations essentially created the modern image of forest soil science. D.F. Sokolov, V.N. Mina, V.S. Frolova, E.A. Kuzmina made up the initial mainframe of the laboratory. Zonn's students (T.F. Urushadze, O.G. Tarasashvili, M.V. Vaichis, R.I. Shleininis, I.I. Sudnitsyn, N.A. Vznuzdaev, A.P. Sapozhnikov, and many others) represent the heritage of the school. His contribution to the development of the school itself as well to a science of forest soils was also prominent. Zonn's book *Influence of Forest on Soil* (1954) became an important stage for rising forest soil science. After V.N. Sukachev left the Laboratory of Forest Science (formerly the Forest Institute), Zonn moved to the Institute of Geography of the Academy of Sciences, while simultaneously heading the department of soil science at the University of People's Friendship. Since 1972 Zonn directed studies on the use of aerospace methods in geography at the Institute of Geography. His book *Steppes of the Russian Plain* represents one of results of the joint work of collaborators of the institute. In the course of his long life, Zonn's work was many times crowned by prestigious awards. Nevertheless, as it was said by N.A. Nekrasov "wild outcries of bitterness" sometimes are more honorable for a real scientist. Thus, in 1948 the soil scientist Zonn was dismissed from the Moscow Forest Technology Institute (MSTI) as Weissmaninst-Morganist. Being neither a breeder nor a geneticist he never participated in genetic discussions. However, in Leningrad he was closely linked to N.I. Vavilov, and while working in the MSTI he collaborated with V.N. Sukachev. Therefore it was his scientific origin that caused the hatred of ignorant followers of "new biology". At that time these persecutions cost many people's lives. Moreover, being the head of the expedition on field-protective forest planting, he widely applied Sukachev's ideas despite all Lysenko's attempts to influence the expedition with regard to his own methods of forest strip planting in steppe. Works organized by Zonn in Tellerman, Derkul, Dzhanibek developed into powerful research stations functioning until present. As a real soil scientist and researcher, Zonn, was always ready for field work. His expeditions covered not only all the country but great parts of the world. Ukraine, the Baltic countries, Middle Russia, the Precaspian, the Tien Shan, Kamchatka, and the Far East, China, Tibet, Bulgaria, Cuba, Columbia, Syria, Egypt, and New Zealand is by far not the full list of places where he studied soils. It is very important that he concluded these researches by comprehensive scientific articles and monographs. His familiarity with tropical soils allowed him to write a remarkable textbook on tropical soil science. If one opens any issue of the journal *Pochvovedenie*, one can easily find a reference to Zonn's works.

There is not one monograph which could escape citing his articles. His impact on the scientific work of his colleagues is due to the relevance of the problems touched on in his articles, the thoroughness of his investigations, and his deep knowledge of a problem. His deliberate attitude to classical heritage should be mentioned especially. Not only did he often use materials of his teachers as well as works of his aspirants in articles, but he also devoted articles and books to them. His biographic sketches about V.N. Sukachev, V.V. Dokuchaev, I.P. Gerasimov are worth to be noted. We should be grateful to Professor Zonn for his revival of a bright image of Glinka. Zonn's book made us recall the teacher of all our soil scientists. Constantly directing the youth to learn the scientific heritage of our teachers, Zonn published his two-volume book *The History of Soil Science in the 20th Century*. This book resurrected many names, showed the historical development of soil science in Russia and recalled our glorious history.

Zonn devoted much of his time to the Russian Soil Science Society. As the Vice-President of the Society he did a lot to sustain the authority of Russian soil scientists within the country and abroad. His international prominence allowed him to solve many problems arisen during various international discussions on soil science. For many years Zonn was the Vice-Editor of the journal *Pochvovedenie*. There

is hardly another soil scientist in Russia who was so deep in the heart of social and scientific life for such a long time, who discovered new horizons in science, helped new scientists and scientists of different regions. His merits were often rewarded by scientific and state awards. He was awarded the State Prize of the Soviet Union of 1952 for the monograph *Mountain Forest Soils of the Northwestern Caucasus* (1950), he received the Dokuchaev and the Vilyams prizes, and the Dokuchaev Gold Medal. In 1953 he was chosen to join the Order of the Labor Red Banner and later he received a number of medals: 30 Years Victory of World War II, 40 Years Victory of World War II, 50 Years Victory of World War II, medals of the 800-year Anniversary of Moscow and Chinese-Soviet Friendship. He was bestowed the titles: Honorable Researcher of the Institute of Forest Economy of the People's Republic of China, Honorable citizen of Dagestan, Merit of Science of Kalmykia.

Among the numerous Russian soil scientists now working in independent states who studied under the guidance of Prof. Zonn we may mention L.Y. Reintam, T.F. Urushadze, M.V. Vaichis, R.I. Shleinis, T.A. Romanova, B. Dzhafarov and A.P. Travleev. In 2001, together with his son Igor, S.V. Zonn published a book about the environmental impact of military activities, particularly in Chechnya. The book bravely raises the most acute problems.

Zonn lived a long and full life, under the motto of work. He worked until his very last minute.

The memory of S.V. Zonn will be preserved in the books that he wrote, in the students he supervised, in the issues of the journal *Pochvovedenie* that he prepared. We lost an outstanding researcher, who noticeably predetermined the progress of our science. We express sympathy to the family of S.V. Zonn and to Russian soil science.

L. Karpachevskii

Francis Doan Hole

Francis Doan Hole, professor emeritus of geography and soil science at the University of Wisconsin-Madison, died on 15th January 2002, at the age of 88.

Prof. Hole graduated in 1933, and earned a Ph.D. degree in geology and soil science from the University of Wisconsin-Madison in 1944. He joined this university in 1946, where he participated in soil surveys of 10 Wisconsin counties, followed up with cartographic work leading to the publication of the county soil maps. Over the years his responsibilities grew to include teaching and research at the Department of Soil Science. A classically trained violinist who played with the Madison Symphony orchestra and many informal ensembles, Dr. Hole was perhaps best known for utilizing the violin during his lectures, and for the presentation of numerous songs which he composed extolling the importance of soil and the critical foundation for plant, animal and human life.

Notably among his many publications were his *Soils of Wisconsin* and especially *Soil Genesis and Classification*, co-authored with Drs. McCracken and Buol. He also created *Soil Survey Horizons*, and designed the *Soils of Wisconsin Map*. Dr Hole proudest accomplishment was the enactment of legislation in 1983 designating Antigo silt loam as the Wisconsin state soil, a culmination of his long campaign for a state soil symbol.

After his retirement in 1983, he continued his active involvement by giving lectures and courses on the importance of soil, employing his soil songs at schools and numerous other venues.



Dr. Samarn Panichapong or Khun Samarn as he is popularly known in Thailand, graduated from Kasetsart University with a degree in Agriculture in 1957 and joined the Land Development Department (LDD) as a Soil Scientist and became a part of the team to initiate soil survey in Thailand. In 1961, he completed his M.S. degree at the Texas Technological University and completed another M.S. degree at the Rijksuniversiteit te Gent, Belgium in 1965. Soon after, he became the Director of the Soil Survey Division of LDD. While managing the soil survey program, he worked on his thesis and obtained his Ph. D degree from University of Tokyo in 1982.

During the early years of the soil survey program, one of the challenges was to attract young scientists and train them for soil surveys. He managed to obtain funds for his staff to have advanced training in the U.S., Europe and in Australia. In addition, he recognized the need to maintain contacts with soil scientists around the world and to foster this, he organized several regional and international meetings in Thailand and encouraged his staff to participate in similar meetings around the world. Soil Science in the ASEAN countries is indebted to him for his initiative in organizing the many ASEAN soil conferences. He was the *de facto* soil scientist of the region and won the admiration and respect of decision makers in agriculture of the region. His dream was to organize the World Congress of Soil Science in Thailand. Although his dream was realized, poor health prevented him from playing an important role.

His leadership in the Thai soil survey program has made it the most reliable and effective program in Asia. Making of soil maps and publication of reports is only the beginning of the task, was his instruction. To ensure that the soil survey products were used, he coordinated the development of many publications and audio-visual materials so that all users, from farmers to ministers were aware of the nation's soil resources. It would not be an exaggeration to say that Khun Samarn had a small but significant role in the advances in Thai agriculture.

His vision for enhancing the productivity of the small farmers made him join the International Board for Soil Research and Management (IBSRAM) in 1988. Prior to that he was one of the persons responsible for the establishment of IBSRAM and he was directly involved in developing the offices of IBSRAM in Thailand. In 1992, he parted company with IBSRAM when it changed its focus and emphasis and he decided to be semi-retired. A debilitating disease curbed his activities though he tried to remain an active member of the Soils and Fertilizer Society of Thailand. The personality, his convictions and his contributions to soil science both in Thailand and in the region makes Khun Samarn a leader of soil science in South East Asia.

Hari Eswaran, Washington DC, USA

Régis R. Simard
15/07/1956 - 5/07/2002

Despite his young age, Prof. Régis Simard was a highly respected soil chemist and recently appointed Professor and Head of the Soil Science Department of University of Manitoba. He was born on July 15th, 1956 at Chicoutimi, QC, and was educated in Laval University, QC from where he graduated in 1979 in Bio Agronomie and earned an M.Sc. in Soil Genesis in 1983. He also attended the University of Guelph where he earned a Ph.D. in Soil Chemistry in 1987. Dr. Simard started his professional career as a Pedologist with Agriculture and Agri-Food Canada (AAFC). After completing his Ph.D., Régis resumed his career with AAFC, but changed his focus to research on soil chemistry, nutrient management and environmental quality.

Dr Simard's broad knowledge, strong personal values, dedication for to his work and imaginative vision led him to initiate work on the understanding and management managing of agroenvironmental systems before these terms were in common use. His curiosity and interest in helping others brought him to collaborate with an impressive number of other scientists in soil science as well as from other disciplines such as plant and weed science, hydrology, geomatics and spatial analysis, among others. Dr. Simard's dedication to scientific education and discovery also translated into a prominent role as an advisor and mentor to young scientists. This dedication led to the training of 15 (how many?) graduate students under Régis's generous leadership in the last five years period (number of years?) of his work with AAFC; this dedication also led Régis to shift his career to the University of Manitoba in the fall of 2001.

Dr Simard was an active member of several scientific societies and participated in numerous committees where he contributed significantly. He was successively President of the Québec and Canadian Societies of Soil Science. Régis's concern for publishing and communicating science led him to become the Editor of the Canadian Journal of Soil Science. Régis showed his potential as a soil scientist and his great interest for the CSSS by winning the Bentley Award in 1986. Other distinctions he received include the Auguste Scott prize from the Québec Association for Soil Scientists, the AgExcellence from Agriculture and Agri-Food Canada, an OECD/OCDE Fellowship and a Scientific Prize for Leadership in Sustainable Development from the Canadian Government.

Dr Simard's absence is a significant loss for his family, collaborators and friends and all those who were touched by his love for life, his concern for people and extraordinary energy and enthusiasm. However, his legacy will accompany and inspire us for years to come and he will always be remembered as one of the great soil scientists of Canada.

Tamirie Hawando

1944-2002



The Ethiopian community of soil scientists and agricultural experts suffered an irreplaceable and grievous loss when Dr. Tamirie Hawando, an outstanding soil scientist, educator and development expert suddenly died on January 2, 2002 at the age of 58. Dr. Tamirie Hawando was born in southern Ethiopia. Educated at the former Alemaya Agricultural College of the Haile Selassie I University from where he graduated with Great Distinction in 1969 winning the Chancellor's Gold Medal. Recruited as a Graduate Assistant, Tamirie briefly served in the college before he was sent to Florida State University for a M.Sc. degree in soil science. Continuing with his career development, Dr. Tamirie got his PhD in Soil Science from the Kansas State University in the USA in 1977. His scientific interests were in the field of soil genesis and classification, soil management and land use, and plant nutrition. Dr. Tamirie authored and co-authored more than 100 publications in the fields of soil science, natural resource conservation, environmental protection and integrated rural development. He was a member of the Ethiopian Society of Soil Science, the African Society of Soil Science, the American Society of Soil Science, the American Crop Science Society and the Sigma Zeta, Gamma Sigma, Delta and Alfa Zeta honorary agricultural fraternities.

After completing his PhD, he worked at both Alemaya and Addis Ababa Universities where he rose to different posts, including lecturer, assistant professor and associate professor. He served as Department Head, Associate Dean for Postgraduate Studies, and Research and Development Vice President of the Alemaya University. An evolution in his career developed in the mid-nineties when he became more and more involved in international rural development and natural resource conservation activities. It was after this rich experience that he opened his own firm, Taamer Consult, which was the first of its kind in the country in terms of multi-disciplinary consultancy activities involving sustainable natural resources, environmental protection, integrated rural development, agricultural research and training. He was in high demand in the country and abroad with assignments in many countries including Ethiopia, Kenya, Uganda, Eritrea, Japan, Niger, Somalia, Rwanda, Indonesia and Sudan and also served as a consultant to many international organizations such as the FAO, UNDP, UNEP, USAID and other bilaterally funded projects.

Dr. Tamirie is missed not only by his beloved family, relations and friends, but by the country at large. He passed away at the prime of his life and creative work following a brief but tragic illness while on duty in his office.

Tekalign Mamo and Taye Bekele
Ethiopian Society of Soil Science

MEETINGS, CONFERENCES, SYMPOSIA

Important Notice

IUSS, as a Scientific Union Member of the International Council for Science (ICSU), subscribes to the principle of free movement of bona fide scientists; patronage or sponsoring will therefore automatically be withdrawn if the country of venue denies or purposely delays visa awarding to any IUSS member who wishes to participate in the meeting concerned.

2003

Golden Jubilee 50th Anniversary Congress of the Soil Science Society of South Africa, Stellenbosch, Cape Town, South Africa, January 20-24, 2003.

Information: Deborah McTeer, Conference Management Centre, University of Cape Town Faculty of Health Sciences, Anzio Rd., Observatory 7925, Cape Town, South Africa. Tel.: +27-21-406-6348; Fax: +27-21-448-6263; E-mail: deborah@curie.uct.ac.za.

Humic Substances Seminar VII, Boston, USA, March 19-21, 2003.

Information: Dr. Elham A. Ghabour, Chemistry Department, 406 Hurtig Hall, Northeastern University, Boston, MA 02115-5000; Tel.: +1-617-373-7988; Fax: +1-617-373-8795; E-mail: e.ghabbour@neu.edu; <http://www.hagroup.neu.edu>.

2nd International Workshop on Groundwater Risk Assessment at Contaminated Sites and Integrated Soil and Water Protection, Tuebingen, Germany, March 20-21, 2003.

Information: Dr. Dietrich Halm, Eberhard-Karls-University of Tuebingen, Center for Applied Geoscience, Sigwartstr. 10, 72076 Tuebingen, Germany; Fax: (+49)(0)7071-5059; E-mail: dietch.halm@uni-tuebingen.de.

IFA/FAO Agriculture Conference: "Global Food Security and the Role of Sustainable Fertilization", Rome, Italy, March 26-28, 2003.

Information: IFA, 28, rue Marbeuf, 75008 Paris, France; Tel.: +33-1-53-93-05-00; Fax: +33-1-53-93-05-45/47, E-mail: ifa@fertilizer.org; www.fertilizer.org.

International Conference on the Hydrology of the Mediterranean and Semi-arid Regions, Montpellier, France, April 7-10, 2003.

Information: Muriel Tapiau, Conference 2003, Laboratoire HydroSciences Montpellier, UMR 5569, BP 5045, F-34032 Montpellier Cedex, France; Tel.: +33-4-6714-9020; Fax: +33-4-6714-9010; montpellier2003@msem.univ-montp2.fr.

International Conference: "Framing Land Use Dynamics", Utrecht, The Netherlands, April 16-18, 2003.

Information: <http://networks.geog.uu.nl/conference>

2nd International Conference on River Basin Management, Las Palmas, Gran Canaria, Spain, April 28-30, 2003.

Information: Conference Secretariat, River Basin03, Wessex Institute of Technology, Ashurst Lodge, Ashurst Southampton, SO40 7AA, UK; Tel.: +44(0)-238-029-3223; Fax: +44(0)238-029-2853; E-mail: shobbs@wessex.ac.uk; Website: <http://www.wessex.ac.uk/conferences/2003/riverbasin03/>

2nd International Conference on Water Resources Management, Las Palmas, Gran Canaria, Spain, April 30 – May 2, 2003.

Information: Conference Secretariat, Water Resources03, Wessex Institute of Technology, Ashurst Lodge, Ashurst Southampton, SO40 7AA, UK; Tel.: +44(0)-238-029-3223; Fax: +44(0)238-029-2853; E-mail: shobbs@wessex.ac.uk; Website: <http://www.wessex.ac.uk/conferences/2003/waterresources03/>

2nd International Conference on Soils and Archaeology, Pisa, Italy, May 12-15, 2003.

Information: Giovanni Boschian, Dpt. di Scienze Archeologiche, Università di Pisa, 53, via Santa Maria, 56126 Pisa, Italy; Fax: +39-050-911-665; E-mail: soilarch@arch.unipi.it; Website: <http://soilarch.humnet.unipi.it>.

Field Symposium on Human Impact and Geological Heritage, Tallinn, Estonia, May 12-17, 2003.

Information: Anto Raukas, Institute of Geology, Estonia Ave. 7, 10143 Tallinn, Estonia; E-mail: raukas@gi.ee; Fax: +372-6-312-074.

9th Nordic IHSS Symposium on "Abundance and Functions of Natural Organic Matter Species in Soil and Water", Sundsvall, Sweden, May 19-21, 2003.

Information: Dept. of Natural and Environmental Sciences, Mid Sweden University, IHSS Nordic Chapter, SE-851 70 Sundsvall, Sweden; E-mail: NordicIHSS@kep.mh.se; Web-site: http://www.ntm.mh.se/nordic_ihss.

Sudbury 2003 Mining and the Environment, Sudbury, Ontario, Canada, May 25-28, 2003.

Information: Sudbury 2003, Laurentian University, Room F217, 935 Ramsey Lake Road, Sudbury, Ontario, Canada, P3E 2C6, Tel.: +1-705-675-1151; Fax: +1-705-673-6530; E-mail: Sudbury2003@nickel.laurentian.ca.

Loess and Palaeoenvironment (Joint meeting of the INQUA Loess Commission and the Carbon Commission), Moscow, Russia, May 26 - June 1, 2003.

Information: Alexandra Simakova, Geological Institute, Russian Academy of Sciences, Pyzhevsky per. 7, 119017 Moscow, Russia. Fax: +7-095-9530760. E-mail: loess2003@geo.tv-sign.ru. Website: <http://quaternary.ginras.ru/loess2003/>

4th International Conference on Ecosystems and Sustainable Development (ECOSUD 2003), Siena, Italy, June 4-6, 2003.

Information: Gabrielle Gossutta, Conference Secretariat, ECOSUD 2003, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, UK; Tel.: +44-238-029-3223; Fax: +44-238-029-2853; E-mail: gcossutta@wessex.ac.uk.

EUROCLAY 2003, Modena, Italy, June 22-26, 2003.

Information: Maria Franca Brigatti, Dipartimento di Scienza della Terra, Università di Modena e Reggio, Largo S. Eufemia 19, 41100 Modena, Italy. E-mail: ec2003@unimo.it; Fax: +39-059-2055887; www.unimo.it/euroclay2003.

7th International Conference on the Biogeochemistry of Trace Elements (ICOBTE), Uppsala, Sweden, June 15-19, 2003.

Information: Conference Secretariat, SLU Conference, Swedish University of Agricultural Sciences, P.O. Box 7059, SE-750 07 Uppsala, Sweden; Fax: +46-18-67-35-30; E-mail: 7thICOBTE@slu.se.

7th International Conference on Modelling, Monitoring and Prediction of Water Pollution: "Water Pollutin 2003", Cadiz, Spain, June 18-20, 2003.

Information: Rachel Green, Water Pollution 2003, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, Tel.: +44(0)238-029-3223; Fax: +44(0)238-029-2853; E-mail: rgreen@wessex.ac.uk.

XXIII General Assembly of the International Union of Geodesy and Geophysics with IAHS symposia and workshops, Sapporo, Japan, June 30 - July 11, 2003.

Information: IUGG2003 LOC Office, Deep Sea Research Department, Japan Marine Science and Technology Center (JAMSTEC), 2-15 Natsushima-cho; Yokosuka, Kanagawa 237-0061; Japan. E-mail: iugg_service@jamstec.go.jp; Website: <http://www.jamstec.go.jp/jamstec-e/iugg/htm/frist.htm>.

16th ISTRO Conference: Soil Management for Sustainability, Brisbane, Australia, July 13-18, 2003.

Information: ISTRO 2003, Sally Brown Conference Connections, PO Box 108, Kenmore, QLD 4069, Australia; Tel.: +61-7-3201-2808; Fax: +61-7-3201-2809; E-mail: sally.brown@uq.net.au; <http://www.istro.org>.

2nd International Conference "Enzymes and the Environment: Activity, Ecology & Applications", Prague, Czech Republic, July 14-17, 2003.

Information: Dr. Richard P. Dick, Dept. of Grop and Soil Science, Oregon State University, 3017 ALS, Corvallis, OR 97331-7306, USA, Tel.: +1-541-737-5718; Fax: +1-541-737-5725; E-mail: richard.dick@orst.edu.

International Meeting: Preservation and Ecological Restoration in Tropical Mining Environments, Noumea, New Caledonia, July 15-20, 2003.

Information: "Meeting: Preservation and ecological restoration in tropical mining environments, IRD Noumea Centre, BP A5, 98 848 Noumea cedex, New Caledonia; E-mail: sec.conf2003@noumea.ird.nc.

10th North American Forest Soils Conference: Forest Soils Research: Theory, Reality and Role in Technology Transfer, Sault Ste. Marie, Ontario, Canada, July 20-24, 2003.

Information: 10th North American Forest Soils Conference, c/o Dr. Mary Beth Adams, USDA Forest Service, P.O. Box 404, Parsons, WC 26287, USA; E-mail: mbadams@fs.fed.us; Website: <http://www.fs.fed.us/forestsoilsconference>.

XVI INQUA Congress "Shaping the Earth: A Quaternary Perspective", Reno, USA, July 23-31, 2003.

Information: www.dri.edu/DEES/INQUA2003/inqua_home.htm.

VII International Rangeland Congress "Rangelands in the New Millennium", Durban, South Africa, July 26-August 1, 2003.

Information: VII International Rangeland Congress, c/o Sue Bumpstead Conferences, Private Bag X37, Greyville, 4023, Durban, South Africa; Tel.: +27-31-303-2480; Fax: +27-31-312-9441; E-mail: delegates@sbconferences.co.za.

www.ru.ac.za/rgi/irc2003/IRC2003.htm

International Conference on Managing Soils for Food Security, Human Health and the Environment: "Emerging Strategies for Poverty Alleviation", Accra, Ghana, July 27-August 2, 2003.

Information: Soil Science Society of Ghana, c/o Department of Soil Science, Faculty of Agriculture, University of Ghana, Legon, Accra, Ghana; E-mail: soilagm@hotmail.com, Fax: +233-21-500467.

17th National Conference of Soil Science: Soil Use, Environmental Protection and Rural Development in Western Romania, Timisoara, Romania, August 24-30, 2003.

Information: Dr. Valentina Cotet, ICPA, 61 Marasti Boulevard, 71331 Bucharest, Romania. Fax: +40-1-2225979. E-mail: vali-c76@yahoo.com.

6th International Symposium on Environmental Geochemistry, Edinburgh, Scotland, September 7-11, 2003.

Information: 6th International Symposium on Environmental Geochemistry, c/o In Conference Ltd, Edinburgh EH1 3LY, UK; E-mail: info@in-conference.org.uk.

Congress of the Polish Society of Soil Science & International Conference: Soil in the Environment, Kraków, Poland, September 9-12, 2003.

Information: Prof. dr hab. Stefan Skiba, Dr Andrzej Kacprzak, Zakład Gleboznawstwa i Geografii Gleb IG UJ, ul. Grodzka 64, 31-044 Kraków, Poland; tel: +48-12-431-18-21, fax: +48-12-422-55-78; e-mail: kongres@grodzki.phils.uj.edu.pl; website: <http://www.geo.uj.edu.pl/soil>.

8th Symposium on Biogeochemistry of Wetlands, Gent, Belgium, September 14-17, 2003.

Information: Saskia Vanderloven, Tel.: +32-9-264-60-01; Fax: +32-9-264-62-30; Saskia.Vanderlooven@rug.ac.be; Website: <http://fltbwww.rug.ac.be/isofys>

International Symposium on Sustainability of Dehesas, Montados and Other Agrosilvopastoral Systems, Cáceres, Spain, September 21-24, 2003.

Information: Dr. Susanne Schnabel, Dpto. de Geografía, Universidad de Extremadura, Avda. de la Universidad, 10071 Cáceres, Spain; Tel.: +34-927-257-000; Fax: +34-927-257-401; E-mail: snadal@unex.es.

2nd International Symposium, Phosphorus Dynamics in the Soil-Plant Continuum, Perth, Western Australia, September 21-26, 2003.

Information: Prof. Z. Rengel, Dept. of Soil Science and Plant Nutrition, The University of Western Australia, 33 Stirling Highway, Crawley WA 6016, Australia. Email: zrengel@agric.uwa.edu.au. Internet: <http://www.agric.uwa.edu.au/soils/welcome.html>.

12th World Forestry Congress, Québec City, Québec, Canada, September 21-28, 2003; Information:

Secretariat, Congrès forestier mondial 2003 World Forestry Congress, 800, Place d'Youville, 18th Floor, Québec, Canada G1R 3P4; Tel.: +1-418-694-2424; +1-418-694-9922; E-mail: secgen@wfc2003.org; Webpage: <http://www.wfc2003.org/>

International Symposium "25 Years Assessment of Soil Erosion", Ghent, Belgium, September 22-26, 2003.

Information: Department of Soil Management and Soil Care, Ghent University, Coupure Links 653, B-9000 Ghent, Belgium; Phone: +32 9 264 60 36; Fax: +32 9 264 62 47; E-mail: erosion@soilman.rug.ac.be.

2nd International Conference on Soil Quality Evolution Mechanism and Sustainable Use of Soil Resources, Yingtan, Jiangxi Province, China, September 23-27, 2003.

Information: Xingxiang Wang, Fax: +86-25-3353590; E-mail: xxwang@issas.ac.cn.

XI World Water Congress: "Water Resources Management in the 21st Century", Madrid, Spain, October 5-9, 2003.

Information: Manuel Martín Antón, E-mail: wwater2003@cedex.es; http://www.cedex.es/iwracongress2003/en/hoja2_en.htm.

III Congreso Iberoamericano de Química y Física Ambiental (III CIQFA), Tlaxcala, México, 6-10 Octubre 2003.

Información: III CIQFA, Miramar 54, Cumbria C.P. 54740, Cuautitlán Izcalli, México; Tel.: +52-(5)868-32-93; Fax: +52-(5)868-32-92; E-mail: lbrs@servidor.unam.mx o sicarubeu@hotmail.com; <http://xochimilco.uam.mx/riqua>.

2003 Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Montreal, Canada, October 16-18, 2003.

Information: Peter Brown, McGill School of Environment, 3534 University Street, Montreal, Quebec H3A 2A7, Canada; Tel.: +1-514-398-4306; +1-514-398-1643; E-mail: info.mse@mcgill.ca; <http://www.mcgill.ca/mse/>.

6th Conference of the Parties to the Convention to Combat Desertification: CCD COP-6, Bonn, Germany, October 19-30, 2003.

Information: Tel.: +49-228-815-2800; Fax: +49-228-815-2898/2899; E-mail: secretariat@unccd.int; <http://www.unccd.int>.

2004

International Meeting: "Sustainable Agriculture on Tropical Steeplands", Merida, Venezuela, June 14-18, 2004.

Information: Fernando Delgado, Fax: +58-274-2441461; E-mail: delgado@cidiat.ing.ula.ve.

1st World Congress of Agroforestry, Orlando, USA, June 27-July 2, 2004.

Information: P.K. Nair, Fax: +1-352-392-9734; E-mail: pknair@ufl.edu; <http://conference.ifas.ufl.edu/WCA/>

13th International Soil Conservation Organization Conference "Conserving soil and water for society: the social, environmental and economic challenge" Brisbane, Australia; 5-9 July 2004:

Information: Mike Grundy (President, ASSSI Queensland branch): mike.grundy@nrm.qld.gov.au

2nd International Conference and Field Workshop on Soil Classification 2004, Petrozavodsk, Russia, August 3-9, 2004.

Information: Mrs. Valeria Sidorova, Fax: +7-8142-789810; E-mail: sidorova@krc.karelia.ru.

EUROSOIL 2004, Freiburg, Germany, September 6-12, 2004.

Information: Dr. Thorsten Gaertig, Albert-Ludwigs Universitaet Freiburg, Institute for Soil Science and Forest Nutrition, Eurosoil 2004, 79085 Freiburg i. Br., Germany, Tel.: +49-(0)761/203-9144; Fax: +49(0)761/203-9144; E-mail: Thorsten.Gaertig@bodenkunde.uni-freiburg.de; <http://www.forst.uni-freiburg.de/eurosoil>

International Conference "Eco-Engineering – The Use of Vegetation to Improve Slope Stability", Thessaloniki, Greece, September 13-17, 2004.

Information: Sanna Dupuy, Laboratoire de Rhéologie du Bois de Bordeaux, Domaine de L'Hermitage, 69 route d' Arcachon, 33612 Cestas cedex, France; Tel.: +33-5-57-12-28-36; Fax: +33-5-56-68-07-13; E-mail: ecoconf@lrbb3.perroton.inra.fr; <http://www.ecoslopes.com>; <http://lrbb3.pierroton.inra.fr>.

International Meeting on Soil Micromorphology, Adana, Turkey, September 20-24, 2004.

Information: Prof.Dr. Selim Kapur, Dpt. of Soil Science and Archaeometry, University of Cukurova, Balcali, 01330 Adana, Turkey; Fax: +90-322-338-66-43; kapur@cu.edu.tr.

13th World Congress Clean Air & Environment, Salzburg, Austria, October 24-29, 2004.

Information: <http://www.iuappa.fsnet.co.uk> or iuappa@nsca.org.uk

2005

19th International Congress on Irrigation and Drainage (ICID), Beijing, China, September 10-18, 2005.

Information: Chinese National Committee on Irrigation and Drainage, No. 20 West Chegongzhuang Road, Beijing 100044, China; Tel.: +86-10-6841-5522/6841-6506; E-mail: cncid@iwhr.com

IUFRO World Congress 2005, Brisbane, Australia, August 8-13, 2005.

Information: Russell J. Haines, Queensland Forestry Research Institute (QFRI), Australia, Tel.: +61-7-389-69-714; Fax: +61-7-389-69-628; E-mail: hainesr@gfri1.se2.dpi.gld.gov.au.

International Congress on Irrigation and Drainage (ICID), Beijing, China, September 10-18, 2005.

Information: www.icid.org/index_e.html.

2006

18th World Congress of Soil Science, Philadelphia, USA, July 9-15, 2006.

Information: http://www7.nationalacademies.org/usnc-ss/WCSS_First_Announcement.html.

INTERNATIONAL TRAINING COURSES

The International Agricultural Centre (IAC) offers training courses in the fields of:

- Sustainable Agricultural Production Systems
- Natural Resources Management
- Processes for Rural Change
- Food Industry and Agribusiness Development
- Food Security, Food Safety and Nutrition

Information: International Agricultural Centre, PO Box 88, 6700 AB Wageningen, The Netherlands; Tel.: +31-317-495-495; Fax: +31-317-495-395; E-mail: iac@iac.agro.nl; Website: www.iac.wageningen-ur.nl/services/training/index.htm.

The Vrije Universiteit Brussel, Belgium, offers a 2-year **Master Programme in Human Ecology** (1 year short course also possible, leading to a Postgraduate Diploma in Human Ecology)

Information: Serge Gillot, Admissions Administrator, VUB, Human Ecology Department (GF), Laarbeeklaan 103, B-1090 Brussels, Belgium; Tel.: +32-2-477-4281; Fax: +32-2-477-4964; E-mail: sgillot@meko.vub.ac.be; Website: <http://meko.vub.ac.be/~gronsse/>

FGRA – Formation en Gestion de la Recherche Agricole Pour les Chefs de Programmes des Systemes Nationaux de Recherche Agricole, organisé par le Conseil Nationale de Recherche Agricole (CNRA), Abidjan, Côte d'Ivoire, 5-17 novembre 2001.

Information: Zenete Peixoto França, Chef du service de la formation ISNAR, B.P. 93375, 2509 AJ, La Haye, Pays-Bas; Tél: +31-70349-6100; Fax: +31-7038-19677; E-mail: isnar@cgiar.org.

The International Centre for Development Oriented Research in Agriculture (ICRA), offers "Professional Training in Interdisciplinary Team Research in Agriculture" (13 weeks knowledge acquisition in Wageningen, NL, and 13 weeks professional experience in Africa/Asia/Latin America.

Information: ICRA – P.O. Box 88, 6700 AB Wageningen, The Netherlands. Tel.: +31-317-422938; Fax: +31-317-427046; E-mail: icra@iac.agro.nl; <http://icra.agropolis.fr>.

Wageningen University (WU) in collaboration with the International Agricultural Centre (IAC) and the International Soil Reference and Information Centre (ISRIC).

all in Wageningen, the Netherlands offers yearly an International Postgraduate Course on Soil and Plant Analysis and Data Handling.

Information: Dr. E.J.M. Temminghoff, Wageningen University, Department Environmental Sciences (e-mail: erwin.temminghoff@wur.nl) or look at the website: http://www.dow.wau.nl/soil_quality/nieuw/edu/spa.htm

The International Fertilizer Development Center offers various training programs/study tours in the USA, Africa, Asia, South America and Europe.

The topics include: "Developing Competitive Agricultural Input Markets to Benefit Smallholders", "International Training Program on Safety in Fertilizer Production and Handling", "Workshop on Globalization, Privatization, and Agricultural Input Markets: Challenges and Opportunities", "Use of Geographical Information Systems in Natural Resource Management", "International Workshop on NPK Fertilizer Production Alternatives", "Integrated Soil Fertility Management in the Tropics", "Developing Competitive Fertilizer Marketing for Small and Medium Agricultural Enterprises", "International Workshop on the Impact of Environmental Issues on Fertilizer Use and Production".

Information: Director, Human Resource Development, International Fertilizer Development Center, P.O. Box 2040, Muscle Shoals, Alabama 35662, USA.

Tel: +1-256-381-6600; Fax: +1-256-381-7408; E-mail: hrd@ifdc.org; Website: <http://www.ifdc.org>.

The International Institute for Aerospace Survey and Earth Sciences (ITC) offers, among others, the following courses (MSc and Professional Master degrees, modular system of courses):

- Sustainable Agriculture
- Rural Land Ecology
- Land Degradation and Conservation
- Soil Information for Sustainable Land Management
- Environmental Systems Analysis and Management

Information: ITC Student Registration Office, P.O.Box 6, 7500 AA Enschede, The Netherlands. Tel.: +31-53-487-42-05; Fax: +31-53-487-42-38; E-mail: education@itc.nl. Webpage: <http://www.itc.nl/education>

The University of Gent and the Free University of Brussels, Belgium offer:

International Interuniversity Post-Graduate Programmes in Physical Land Resources. Diploma and Master Courses.

Information: Programme Secretariat, Physical Land Resources, Krijgslaan 281 (S8), B-9000 Gent, Belgium; Tel: +32-9-264-46-18; Fax: +32-9-264-49-91; E-mail: PLRprog.adm@rug.ac.be, Website: <http://allserv.rug.ac.be/~amtanghe/PLRprog.html>.

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The Katholieke Universiteit Leuven and the Vrije Universiteit Brussel offer, among others a:

2-year Master of Science Programme in Water Resources Engineering for undergraduates, faculty staff, project engineers, staff of ministries etc.

The programme provides advanced training in information technology, mathematical modelling, and decision support systems with application to water resources problems. Course options are hydrology, irrigation, waste water treatment and aquatic ecology.

Information: Institute for Land and Water Management, K.U. Leuven, Vital Decosterstraat 102, 3000 Leuven, Belgium. Tel: +32-16-32-97-45; Fax: +32-16-32-97-60;

E-mail: iupware@agr.kuleuven.ac.be.

or: Laboratory of Hydrology, V.U. B., Pleinlaan 2, 1050 Brussel, Belgium. Tel: +32-2-629-30-21; Fax: +32-2-629-30-22; E-mail: fdesmedt@vub.ac.be.

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ITC Postgraduate Diploma and MSc Degree Courses, Enschede, The Netherlands,

ITC offers a wide range of courses for example

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- Geoinformation Management for Rural Development and Resource Mangement
- Rural Land Ecology – Agriculture, Conservation and Environment
- Soil Information Systems
- Planning and Coordination in Natural Resources Mangement
- Environmental Health Using GIS and Remote Sensing.

Information: ITC, Student Registration Office, P.O.Box 6, 7500 AA Enschede, The Netherlands, Tel: +31-(0)53-487-42-05; Fax: +31-(0)53-487-42-38; E-mail: education@itc.nl; Website: <http://www.itc.nl/education>.

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Silsoe College, Bedford, England, offers a wide range of post-graduate courses and studies, e.g.:

Agribusiness Management and Technology (MSc.), Agroforestry (MSc.), Land Resource Management and Planning (MSc. and Postgraduate Diploma programmes), Engineering for Rural Development (MSc.), Agricultural Engineering (Agrochemicals Application Technology - MSc., etc.), Management for Agricultural Development (MSc.), Agricultural and Food Marketing (MSc. and PD), Agricultural Water Management (MSc.), Crop Production Technology (MSc.), Information Technology (MSc.), etc.

Information: The Student Recruitment Executive, Silsoe College, Silsoe, Bedford MK45 4DT, U.K.; Tel: (0525) 860428; Fax: (0525) 861527; Telex: 826383 silcam g

External Programme, MSc, PG Diploma and other programmes related to Environment, Biodiversity, Sustainable Agriculture, Rural Change, Applied Economics and Agribusiness and Food Management. Information: External Programme, Imperial College at Wye, **University of London,** Ashford, Kent TN25 5AH, UK (Tel: +44 (0)20 759 42680; Fax: +44 (0)1233) 812138; email: epadmin@ic.ac.uk)

The University of East Anglia, Norwich, UK, offers a specialist training for development. Tailor-made courses are organized in different fields, e.g.:

- **Natural resource policy and management**
- **Agroforestry and cropping systems**
- **Farming systems research**
- **Land use planning**
- **Rangeland, livestock and pastoralism**
- **Fisheries assessment and management**
- **Demographic and population studies**
- **HIV/AIDS impact assessment**
- **Industrial development and policy and others**

It also offers a 10-week **Short Course on Sustainable Information Systems.**

Information: The Overseas Development Group, University of East Anglia, Norwich NR4 7TJ United Kingdom; Tel: +44-1603-456-410; Fax: +44-1603-505-262; Telex: +51-317210 BUREAU G ODG/UEA; E-mail: odg.train.@uea.ac.uk.

The Wageningen Agricultural University offers an International Postgraduate Programme in different fields, e.g.:

Msc Courses in Agricultural Economics and Management; Agricultural Engineering; Animal Science; Biotechnology; Crop Science, Ecological Agriculture, Environmental Sciences, Soil and Water, Urban Environmental Management etc., as well as a **PhD Programme**.

Information: Ms. Jeanine W.M. Hermans, Dean, Office for International Students, Wageningen Agricultural University, P.O. Box 453, 6700 AL Wageningen, The Netherlands; Tel.: +31-317-483618 or -483433; Fax: +31-317-484464; E-mail: Office@DOIS.SZ.WAU.NL; HTTP://WWW.WAU.NL/; Internet for education and student information: HTTP://WWW.WAU.NL/WAUEDUC.HTML

The Soil Science Department, Faculty of Agriculture, of the Minia University, Minia, Egypt, organizes the following International Courses:

- **International Course on Soil and Plant Analysis** (in cooperation with the Royal Tropical Institute, Amsterdam, The Netherlands);
- **International Training Course for Extension Workers on Soil and Water Problems;**
- **International Training Course on Water Analysis for Agricultural Purposes;**

Information: Prof. Dr. M. A. Kishk, Minia University, Faculty of Agriculture, Service Laboratory for Soil, Plant & Water Analysis, Minia, Egypt. Tel and Fax: +20-86-345-394; Fax: +20-86-322-182.

International Institute for Land Reclamation and Improvement (ILRI)

offers international short courses (1-12 weeks) e.g. on:

- Water Management in Irrigation Systems;
- Land Drainage;
- Land and Water Management
- Computer Applications in Irrigation;
- Microcomputer Applications in Land Drainage; etc.

Information: ILRI, Training Coordinator, Lawickse Allee 11, P.O.Box 45, 6700 AA Wageningen, The Netherlands. Fax: +31-317-495590; E-mail: ilri@ilri.nl

Lincoln University, New Zealand

MSc Course on Resource Management, New Zealand, 2 years.

Information: Lincoln University, International Centre, P.O.Box 94, Canterbury, New Zealand. Fax: +64-3-3253879; E-mail: wwwic@lincoln.ac.nz.

Cranfield University, United Kingdom

- Msc Course on Land Resource Management, United Kingdom, 1 year.
- Msc Course on Soil Physics and Soil Management, United Kingdom, 3 months.
- Msc Course on Soil Conservation, United Kingdom, 10 weeks
- MSc Course on Land Resource Management, United Kingdom, 1 year.
- Water Management, United Kingdom, 3 months.

Information: Cranfield University, School of Agriculture, Food and Environment, Admissions Office, Silsoe, Bedford MK45 4DT, UK. Fax: +44-1525-863316; E-mail: admissions@cranfield.ac.uk.

CNEARC, France

Techniques d'Irrigation, France, 5 semaines.

Centre National d'Etudes Agronomiques des Régions Chaude (CNEARC), B.P. 5098, F-340033 Montpellier Cedex 01, France.

Fax: +33-467-410232.

CATIE

- Desarrollo rural basado en el manejo de ecosistemas naturales tropicales, Costa Rica,
- Gestión Ambiental, Costa Rica, 2 semanas.

Information: CATIE, Coordinator, Programa de Educación, Apartado 126, Area de Capacitación, Turrialba, Costa Rica. Fax: +506-5561533; E-mail: capacita@computa.catie.ac.cr.

Université des Sciences Agronomiques

Diplôme en Gestion et Développement des Milieux Intertropicaux, Belgique, 1 année.

Information: Université des Sciences Agronomiques, Passage des Déportés 2, B-5030 Gembloux, Belgique.

Fax: +32-81614544; E-mail: boudoin@fsagx.ac.be.

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Master Courses in Applied Environmental Geoscience at the University of Tuebingen, Germany

Information: Dr. C.I. McDermott M.Sc. (AEG Course Administrator) Chair of Applied Geology, Sigwart Str. 10, 72074 Tuebingen, Germany; E-mail: chris.mcdermott@uni-tuebingen.de; Tel: (+49) (0)7071-2978921; Fax: (+49) (0)7071-5059.

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IV Curso Internacional de Postgrado en "Manejo de Suelos Tropicales"

Universitat de Lleida-Centre Tecnològic Forestal de Catalunya, Solsona (Lleida). España. 7 Mayo-1 Junio del 2001

Participantes: Ing. Agrónomos, Ing. Forestales, Biólogos, Geógrafos, Licenciados en Ciencias Ambientales, especialmente de América Latina y España, que estén trabajando o piensen trabajar en la investigación, desarrollo y aplicación de sistemas y prácticas de manejo y conservación de suelos en zonas tropicales y subtropicales.

Profesores: Invitados internacionales con amplia experiencia en diferentes zonas tropicales del mundo.

Información: Secretaría del Curso. Email: Cursosctfc@lisu.lleida.net

Dirección del curso: Prof. Dr. Ildefonso Pla Sentís. Dept. de Medi Ambient i Ciències del Sol. UdL. Av. Alcalde Rovira Roure, 177. E-25198 Lleida. España; Email: Ipla@macs.udl.es; Fax: +(34)(973)-702613

Programa de Doctorado en "Medio Ambiente y Ciencia del Suelo"

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Información: Prof. Dr. Ildefonso Pla Sentís. Coordinador del Programa de Doctorado. Dept. de Medi Ambient i Ciències del Sòl. Universitat de Lleida. Av. Alcalde Rovira Roure, 177. E-25198 Lleida. España; Email: Ipla@macs.UdL.es; Fax: +(34)(973)-702613

IUSS COOPERATING JOURNALS

1. ARID LAND RESEARCH AND MANAGEMENT. Four issues per year in one volume of ca. 400 pages. - Publisher: Taylor & Francis New York - Editor-in-chief: Prof. Dr. J. Skujins, Utah State University, USA.
Personal subscription rate for IUSS members (1998): US\$ 105.00.

2. AUSTRALIAN JOURNAL OF SOIL RESEARCH. Eight issues per year and about 1500 pages. An international journal for publication of soil research relating to primary production, land and water management, environmental pollution, and site remediation. The journal has a particular, but not exclusive, focus on research that promotes understanding of soils in Australia, New Zealand, and the South West Pacific, as well as those in tropical and mediterranean environments. Editor: J. Fegent. Publisher: CSIRO PUBLISHING, Melbourne, Australia. Webpage: www.publish.csiro.au/journals/ajrs.
Personal subscription rate (both print and online) for IUSS members, including postage/handling (2003): US\$ 105.00.

3. BIOLOGY & FERTILITY OF SOILS. Eight issues per year, in two volumes of about 750 pages.
Publisher: Springer Verlag, Berlin-Heidelberg-New-York-Tokyo. - Editor-in-Chief: Prof. Dr. J.C.G. Ottow, Giessen, Germany.
Full subscription rate for the two volumes, excluding surface mailing: 488.80 EUR.
Personal subscription price for IUSS members for the two volumes, excluding postage and handling 305.55 EUR.

4. CATENA, an interdisciplinary journal of Soil Science-Hydrology- Geomorphology, focusing on Geoecology and Landscape Evolution. - Publisher: Elsevier Science Publishers, Amsterdam, the Netherlands - Joint editors: J.A. Catt, Harpenden, UK, M.F. Thomas, Stirling, UK, J. Poesen, Leuven, Belgium, S.W. Trimble, Los Angeles, USA, O. Slaymaker, Vancouver, Canada, and D. Yaalon, Jerusalem, Israel - Webpage: <http://www.elsevier.com/locate/catena>
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5. GEODERMA, an International Journal of Soil Science. - Publisher: Elsevier Science Publishers, Amsterdam, the Netherlands. - Editors-in-Chief: H. Insam, Innsbruck, Austria, A.B. McBratney, Sydney, Australia, K. McSweeney, Madison, USA and Prof. D.L. Sparks, Newark, USA -
Webpage: <http://www.elsevier.com/locate/geoderma>
Personal subscription price for IUSS members: 210 EURO

6. JOURNAL OF PLANT NUTRITION & SOIL SCIENCE/ZEITSCHRIFT FÜR PFLANZENERNÄHRUNG UND BODENKUNDE, international journal covering all aspects of plant nutrition and soil science. - Size: 6 issues per year. - Publisher: Wiley-VCH, Weinheim, Germany. - Editors-in-chief: Prof. Dr. W. Fischer, Hannover, Germany, Prof. Dr. H. Beringer, Hofgeismar, Germany.
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7. JOURNAL OF SOILS AND SEDIMENTS, Protection, Risk Assessment and Remediation; (JSS) is an international periodical, the first journal entirely devoted to soils and sediments, dealing not only with contaminated but also with intact and disturbed soils and sediments. **JSS** presents the mutualities and differences of both compartments. **JSS** provides information concerning scientific and practical knowledge from experts in the soil and sediment areas. **JSS** is an interdisciplinary journal intended to be of benefit to the scientist as well as to the practitioner. **JSS** is a peer-reviewed journal with at least two reviewers evaluating each contribution. **Types of articles:** Original scientific papers, review articles, case studies, commentaries, discussion papers, reports from research and technology and from policy and legislation, book reviews and announcements, conference reports and announcements, editorials. **Editors-in-Chief:** Deckere, Eric de, Belgium; Knacker, Thomas, Germany; Koerdel, Werner, Germany; Peijnenburg, Willie, The Netherlands; **Co-editors:** Blum, Winfried, Austria, Guerin, Turlough, Australia, Matschullat, Joerg, Germany. **Appearance (currently):** 4 issues per year with 64 pages each (6 issues are planned beginning with 2003). **Publisher:** ecomed publishers, Scientific Journals, Landsberg, Germany; website: www.scientificjournals.com/jss
Personal subscription rate for IUSS members (50% discount): EUR 67.50 (printed version, plus postage); EUR 74.25 (printed and online version, plus postage); EUR 54.00 (online version); EUR 87.75 (IP-Access including the printed version, plus postage)

8. PEDOBIOLOGIA, international journal, focusing on soil biology, especially on soil zoology and microbiology. - Publisher: Urban & Fischer, Jena. - Editors-in-chief: Prof. S. Scheu, Darmstadt, Prof. J. Lussenhop, Chicago, Dr. J. Schauermaun, Göttingen.
Personal subscription rate for IUSS members (2001): 50.11 EUR, plus postage

9. SOIL AND TILLAGE RESEARCH, incorporating SOIL TECHNOLOGY, journal concerned with applied research and field applications on soil physics, soil mechanics, soil erosion and conservation, soil pollution, soil restoration, drainage, irrigation and land evaluation. - Size: 2 volumes (6 issues) per year, about 600 pages. - Publisher: Elsevier Science Publishers, Amsterdam, The Netherlands - Editor-in-Chief: Dr. M.R. Carter (Canada); Prof. Dr. M. Kutilek (Czech Republic); Dr. A.J. Franzuebbers (USA). - Webpage: <http://www.elsevier.com/locate/still>
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A Big Thank You!

The first issue of the Bulletin of the International Society of Soil Science appeared in 1952 with 20 pages. The ISSS President from 1950 to 1954, R. Tavernier from Belgium wrote in the introduction: "The Bulletin.....aims to pass on official information about all important events concerning the life and activity of the Society to its members and Regional Groupings as well as to Research Institutes. We hope that this Bulletin will satisfy our members wishes, who have expressly shown their desire to be informed about these activities and about the development of Soil Science in the diverse countries of the world." It contained a listing of eleven new books and soil maps, as well as announcements of eight forthcoming meetings in related disciplines. Most space was taken up by planned activities of the Commissions and the just established International Nomenclature Committee.

In the course of time, the section on New Publications was growing, in line with the development of our science. Bulletin 25 (1964/2) had 48 pages in total, with only eight announcements of new books, issue 50 (1976/2) had 62 pages and 20 new books, issue 75(1989/1) had 82 pages and 78 new books, while Bulletin 100 (2001/2) had 152 pages with 88 new books.

The New Publications section of the Bulletin would not have been possible with the cooperation of many large and small publishers, all around the world. Upon request, they kindly made available the review copies to the Book Review Editor. With the help of Mrs. M.B. Clabaut and Mrs. R. de Ridder it has been possible to prepare over 1000 announcements of new books, maps, CD-ROMs, posters, etc., still in line with the words of the President in 1952 as mentioned above. Over 100 book reviews were made by other scientists, and I should like to thank them too.

With the hand-over of my responsibilities as Deputy Secretary General of the IUSS to Dr. Alfred Hartemink and as Co-editor and Book Review Editor of the Bulletin at the 17th World Congress of Soil Science in Bangkok, my tasks have ended.

I should like to thank most sincerely all persons who have sent us publications for review and announcements! With some of them I have been already in contact for many years.

It is one thing to prepare announcements, but another thing to have it made ready for the printers. I am grateful to Dr. Rudi Dudal, Dr. Wim Sombroek, Dr. Winfried Blum, and especially Ms. Herma Exner for the excellent cooperation during all these years.

It was a pleasure to cooperate with all of you!

Of course, not all relevant books have been announced. Some publishers were not responding to our request, and without funding possibilities from the ISSS/IUSS we were not able to buy the books. Other books did not come to our notice. I am sure that especially in Latin America books have appeared that should have been included. This applies also to books published in Eastern Europe, Russia, Japan and China, that have not been included because of the language barrier.

Together with the increase in the number of books, the use of full colour, better printing techniques and more use of acid-free paper, the prices of books have greatly increased. This makes it more and more difficult for individuals to build up a book collection, but the more so for libraries in the developing world. I am worried that this trend will continue, resulting in fewer scientific papers in refereed journals from scientists working in developing countries. Perhaps that the rapid spreading of the internet and free access to scientific information might reverse this trend.

Again, a big thank you to all who made it possible to work for our Union!

Hans van Baren.

NEW PUBLICATIONS

Dictionnaire de Science du Sol, 4ème édition. J. Lozet et C. Mathieu. Editions TEC & DOC, Lavoisier, Londres, Paris, 2002, 584 p. ISBN 2-7430-0538-6. Hardcover.

A dictionary is a record of generally accepted meanings, which words have acquired at the time of publication. It can also be a book of alphabetically listed words in a language with their equivalent in another language. This fourth edition of the 'Dictionnaire de Science du Sol' meets both purposes in the field of soil science and related disciplines including soil classification, soil formation, landuse, soil fertility, soil conservation, mineralogy and geomorphology. It lists words in alphabetical order with definitions in French, the equivalent word in English and the etymology of terms derived from roots in classical languages. An English-French index constitutes a real Dictionary in both languages. With reference to 'accepted meanings which words have acquired at the time of publication' it is obvious that updating is regularly required, especially in the domain of soil science, which evolved at a fast rate since the 1950s. In 1954 Lozet published his 'Dictionnaire de Pédologie' of 800 words. In 1958 Plaisance and Caillaux published a very comprehensive 'Dictionnaire des Sols'. This valuable book is still a rich source of information, including vernacular names and expressions, but it is of limited pertinence for the present-day soil scientist. Hence, in 1986 Lozet and Mathieu prepared the first edition of their 'Dictionnaire de Science du Sol' covering 2400 words. The success of this publication led to a 2nd edition in 1990, a 3rd edition in 1997 and the present 4th edition in 2002. The latter spans 4000 words, reflecting the evolution of soil science, the diversification of specializations, the development of different soil classification systems and the generation of new terminologies. Furthermore this dictionary has an added encyclopedic character. The explanation of words reaches often beyond a mere definition: concepts are elaborated on, cross references are made to related topics, bibliography for further reading is given, illustrations with figures and photographs are inserted. A biography of eighty late soil scientists of international renown is provided in a special chapter. Annexes are devoted to tabular overviews of French, German, Russian, USA, FAO and WRB (World Reference Base) soil classification systems. It is to be noted that the 2nd edition of the dictionary has been translated in English and in Russian. This dictionary should enhance international relations and hopefully contribute to overcome the language barrier, which still constrains the universal impact of soil science. The publishers have produced a highly finished book. Its attractive layout and clarity make it easy to read and to use.

Price: EUR 85.00.

Orders to: Lavoisier, 11 rue Lavoisier, F-75008 Paris, France. Or : Lavoisier, rue de Provigny, 14, F-94236 Cachan Cedex, France. Fax : +33-1-47-40-67-02
Homepage : www.lavoisier.fr.

R. Dudal, Belgium.

Man and Soil at the Third Millennium. J.L. Rubio, R.P.C. Morgan, S. Asins and V. Andreu, editors. Geofórmes Ediciones, Centro de Investigaciones sobre Desertificación, Logroño, 2002. 2234 p., in two volumes. ISBN volume I 84-87779-46-8; volume II 84-87779-47-6. Set of two volumes 84-87779-45-X. Hardcover.

This set consists of the proceedings of the Third International Congress of the European Society for Soil Conservation (ESSC), which was held in Valencia, from 28 March to 1 April, 2000.

With strategy documents on soil emerging at both European and national levels, soil is being recognized again as an important resource, alongside air and water, underpinning future sustainable development. Since implementation of strategies needs to be based on sound science, these volumes are timely in providing a clear statement of scientific understanding and knowledge of soils at the start of the new millennium. The volumes are organized around ten themes: (1) soil and society (17 papers); (2) soil and water cycle (17 papers); (3) interlinkages between biodiversity, climate change and water resources (17 papers); (4) traditional soil and water conservation systems (7 papers); (5) soil indicators (7 papers); (6) soil functions and soil quality (31 papers); (7) desertification and soil degradation processes (38 papers); (8) soil contamination (17 papers); (9) new technologies and soil assessment (20 papers); and (10) soil conservation (11 papers). Also included are the opening speeches and the texts of twelve keynote addresses. In his preface to the volumes, the Crown Prince of Spain encourages soil scientists to explore their subject with depth and efficiency to understand better the functioning of one of the essential components of the earth's ecosystem.

Although this was a European meeting, in which the IUSS collaborated, contributions came also from the USA, Africa, Asia and Latin America. The result is a timely, comprehensive statement of the issues, methodologies and research findings on soils as they affect society. This is certainly a welcome addition, at an affordable price, to the growing literature on this important subject!

Price: EUR 60.00, plus EUR 5.00 mailing costs.

Orders to: Dr. Katharina Helming, ZALF, Eberswalde Starssse 84, D-15374 Müncheberg, Germany. Fax: +49-33432-82280. E-mail: essc.helming@zalf.de.

Fundamentals of Soil Science. G.S. Sekhon, Editor. Indian Society of Soil Science, New Delhi, 2002. viii + 548 p. ISBN 81-901470-0-5. Hardcover.

This authoritative text begins with an introductory chapter by Dr. J.S. Kanwar, Past President of the International Society of Soil Science, and includes chapters on weathering and soil formation, soil classification, soil survey and mapping, physical properties of soils, soil water, soil air and soil temperature, tillage, water management of rainfed soils, water management of irrigated lands, soil erosion and conservation, basic chemical principles in soil science, chemical composition of

soils, soil colloids, ion exchange in soils, soil acidity, soil salinity and alkalinity, essential nutrients and their uptake by plants, nitrogen, phosphorus, potassium, secondary nutrients, micronutrients, analysis of soil, plant, and fertilizer, soil fertility evaluation, organisms in soil and their activities, soil organic matter, fertilizers, soil fertility management, soil pollution and its control, and soil management for sustainable farming. SI units and conversion factors for SI and non-SI units are presented in the appendices that also include 48 color photographs of soilscapes and soil profiles, soil and water conservation measures, and nutrient deficiency symptoms. The 31 chapters have been written by 49 eminent Indian soil scientists.

It is a cohesive and well-presented book. The authors' stated audience is students and teachers. It is best suited as a textbook. The book projects Indian data and examples; as such it is unique in its field. Although it focuses on Indian soils, it deals with basic principles of soil science and management. It is, therefore, equally well suited to a broad audience in natural resource fields. The clear, easy-to-follow book will serve as an invaluable resource to individuals interested in soil science. This book is certainly a "must have" publication for all agricultural libraries.

Price: USD 75.00 (including airmail charges and handling).

Orders to: Indian Society of Soil Science, Division of Soil Science and Agricultural Chemistry, Indian Agricultural Research Institute, New Delhi - 110 012, India. Fax: +91-11-5755529. E-mail: iss@vsnl.com. Homepage: www.indiansocietyofsoilscience.org.

Yash Kalra, Canada.

Natural Resources Engineering. E.W. Tollner. Iowa State Press, Ames, 2002, xvi + 576 p. ISBN 0-8138-1847-8. Hardcover.

This practical text and reference book examines the physics and engineering aspects related to water, soil and air-quality preservation. The book covers a diverse range of topics on the forefront of natural resources engineering. The hydrologic cycle and natural circulation of the wind shape the topic organization: general hydrologic topics, uplands water quality, stream channel design, management structures, stream and lake processes, storages and various uses, and air related processes. The volume stresses fundamentals, building on traditional agricultural engineering soil and water teachings. Furthermore, it provides useful internet addresses and links to sites offering practical tips.

The text serves as a platform for upper undergraduate and graduate students in natural resources, environmental science, agricultural biosystems, biological, civil and chemical engineering, and as a reference and resource for practicing professionals in agriculture and natural resource engineering, forestry, ecology, water quality and hydrology management.

Price: USD 99.99.

Orders to: Iowa State Press, 2121 State Avenue, Ames, IA 50014-8300, USA. Fax: +1-515-292-3348. Homepage: www.iowastatepress.com.

Tillage for Sustainable Cropping. P.R. Gajri, V.K. Arora and S.S. Prihar. Food Products Press, New York, London, 2002, ix + 195 p. ISBN 1-56022-903-9, softcover; 1-56022-902-0, hardcover.

This book is a state-of-the-art examination of various tillage systems and tillage-induced edaphic changes and their implications for soil productivity and the environment. It provides a rational framework for tillage systems that takes soil and climatic characteristics and the availability of other edaphic inputs into consideration. This well-referenced volume also examines soil sustainability in terms of pollution, greenhouse gases, water contamination, growing production demands, and soil degradation, and looks at the way crops respond to tillage techniques in terms of weed growth, root growth, crop yields and more.

Price: USD 39.95, softcover; USD 89.95, hardcover.

Orders to: Food Products Press, 10 Alice Street, Binghamton, NY 13904-1580, USA. Fax: +1-607-771-0012. E-mail: orders@haworthpressinc.com. Homepage: www.haworthpressinc.com.

Terrestrial Ecoregions of the Indo-Pacific. A Conservation Assessment. E. Wikramanayake, E. Dinerstein, C.J. Loucks et al. Island Press, Washington, Covelo, 2002, xxix + 643 p. ISBN 1-55963-923-7. Softcover.

This analysis of the terrestrial ecoregions of the Indo-Pacific is the third installment of a series using ecoregions to identify biological and conservation priority areas. This study has built on and improved the lessons learned from the previous two volumes (on Latin America and the Caribbean in 1995; on North America in 1999), and is a guide to the upcoming assessment of Africa's biological and conservation status. Together, these assessments form the backbone of the World Wildlife Fund global strategies for conserving the Global 200 ecoregions. The present volume offers a comprehensive examination of the state of the Indo-Pacific biodiversity and habitats, moving beyond endangered or charismatic species to quantify for the first time the number of mammal and bird species, including endemics, in each ecoregion. Short essays by regional experts address special topics relating to finer-scale conservation issues or ecological processes that are typically overlooked in a regional-scale analysis.

This study involved the collection, synthesis and analysis of a vast amount of information. In chapter 2 the background and basis for the delineation of the 140 ecoregions are given. In chapter 3 the objectives and the approach used in the analysis are defined. In the next two chapters the biological distinctiveness and conservation status are described, which are integrated in chapter 6 to set the conservation agenda and provide recommendations for where efforts should first be concentrated. Chapter 7 discusses the conservation needs at the ecoregional or landscape scale, which the authors argue as being the best hope for saving nature in Asia. Descriptions are also given of all the ecoregions, with reference to the biodiversity and conservation status of each.

Scanty information on soils in most of the 140 ecoregions is given. Short term (1 to 5 years) and long term

(5 to 20 years) conservation actions are mentioned for all ecoregions. Together, these well-organized assessments form an invaluable resource for anyone interested in understanding and protecting global biodiversity. *Price:* GBP 66.50; USD 85.00.

Orders to: EDS, 3 Henriette Street, Covent Garden, London WC2E 8LU, UK. Fax: +44-20-7379-0609. E-mail: orders@edspub.co.uk. In the USA: Island Press, Distribution Center, P.O. Box 7, Covelo, CA 95428, USA. Fax: +1-707-983-6414. E-mail: service@islandpress.org. Homepage: www.islandpress.org.

Cation Binding by Humic Substances. E. Tipping. Cambridge University Press, 2002, 444 p. ISBN 0-521-62146-1. Hardcover.

Humic substances are highly-abundant organic compounds formed in soils and sediments by the decay of dead plants, microbes and animals. This book focuses on the important binding properties of these compounds which regulate the chemical reactivity and bioavailability of hydrogen and metal ions in the natural environment. Topics covered include the physico-chemical properties of humic matter and interactions of protons and metal cations with weak acids and macromolecules. Experimental laboratory methods are also discussed, together with mathematical modeling. Finally the author looks at how the results of this research can be used to interpret environmental phenomena in soils, waters and sediments. This comprehensive account of cation binding by humic matter is a valuable resource for advanced undergraduate and graduate students, environmental scientists, ecologists and geochemists. *Price:* GBP 70.00; USD 95.00.

Orders to: see below.

Agriculture. The Potential Consequences of Climate Variability and Change for the United States. A Report of the National Agriculture Assessment Group for the U.S. Global Research Program. J.M. Reilly, editor. Cambridge University Press, 2002, xii + 136 p. ISBN 0-521-01628-2. Softcover.

Agriculture is one of the sectors of the economy that depends most on weather and climate. Scientists now believe that climate will change at unprecedented rates over the 21st century. This has caused concern that food and fiber production in the US could be threatened. But, warmer temperatures and changes in precipitation are not necessarily detrimental for all crops or all areas. The impacts of climate and weather also extend well beyond the farm. Changes can affect consumer prices, erosion, pollution of lakes, rivers and coastal areas, and the need for pesticides and irrigation water. These changes can further affect recreation, health, wildlife as well as food supply.

This volume reports the results of a rigorous and quantitative assessment of the impacts of climate change on US agriculture over the 21st century. It advances work on climate impacts by using climate scenarios from state-of-the-art climate models. It also considers impacts of changes in climate variability and impacts on the environment and natural resources caused by changes in agriculture due to climate change. It describes the forces likely to shape US agriculture over

the next century, the policy and economic environment, and their interaction with climate change. The basic findings are that climate change is positive for agriculture production, although southern parts of the US could be harmed.

Price: GBP 21.95; USD 30.00.

Orders to: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge, CB2 2RU, UK. Fax: +44-1223-315052.

E-mail: information@cup.cam.ac.uk. Homepage: www.cup.ac.uk. In North and Central America: Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211, USA. Fax: +1-212-6913-239. E-mail: information@cup.org. Homepage: www.cup.org. Online ordering: www.uk.cambridge.org.

Les éléments traces métalliques dans les sols. Approches fonctionnelles et spatiales. D. Baise et M. Tercé, coord. Institut National de la Recherche Agronomique, Paris, 2002, 565 p. ISBN 2-7380-0993-X. Réf. 01468.

Une prise de conscience générale émerge enfin sur l'importance des sols et de maintien de leurs "qualités" biologiques, physiques et chimiques. Parmi celles-ci, la dynamique des éléments traces (ET) est parmi les grandes préoccupations environnementales de nos sociétés. Par des approches complémentaires, les auteurs, principalement des chercheurs français, mais aussi suisses et belges, offrent au lecteur une vision complète de l'état de la recherche sur les éléments traces dans les sols agricoles ou forestiers plus au moins contaminés.

Premier du genre en français, cet ouvrage rend accessible les résultats de travaux récents, applications au plan local de méthodes d'intérêt général: il détaille les possibilités ouvertes par les techniques modernes, leurs limites, les précautions indispensables, etc.; il montre comment les raisonnements de la pédologie et les caractéristiques des sols peuvent être utiles dans l'interprétation des teneurs en éléments traces. Une grande quantité de "littérature grise" est ainsi mise à la disposition d'un large public au lieu de demeurer inaccessible. Ce livre s'articule autour de quatre parties principales: écosystèmes peu anthropisés – sols agricoles modérément contaminés par des pratiques courantes – sols fortement contaminés par des activités industrielles et méthodes de réhabilitation – études de la mobilité des ET dans les sols et de leur biodisponibilité. Ce livre s'adresse à tous les ingénieurs qui ont à gérer des problèmes d'éléments traces dans les sols et les récoltes: agronomes, géologues, géochimistes, hygiénistes, environnementalistes, et écologues.

Prix: EUR 94,00 + EUR 4,57 frais de port pour l'UE. *Commandes à:* INRA Editions, RD 10, F-78026 Versailles Cedex, France. Fax: +33-1-30-833449. E-mail: INRA-Editions@versailles.inra.fr. Catalogue et commande en ligne: www.inra.fr/editions.

How to Unravel and Solve Soil Fertility Problems. ACIAR Monograph No. 83. C. Asher, N. Grundon and N. Menzies. Australian Centre for International Agricultural Research, Canberra, 2002, 139 p. ISBN 1-86329-321-4 (print, softcover), 1-86320-322-2 (electronic).

The maintenance and improvement of the fertility of our soils has never been more important than it is today. Meeting the needs of the rapidly growing world population for food, fiber, timber, and fuel is going to require a very large increase in agricultural and forestry production in the decades ahead. Improving the productivity of existing farmlands by ecologically sustainable methods is essential, not only to meet the needs of the world population, but also to alleviate pressures to clear and cultivate remaining areas of natural vegetation, with their rich and irreplaceable flora and fauna.

On fragile and nutrient-depleted lands, appropriate inputs of nutrients may play an important role in protecting the soil surface from erosion by increasing plant cover, and along with the return of crop residues, allowing a rebuilding of soil organic matter reserves. Nutrient management needs to be guided by a sound knowledge of which chemical elements are limiting without our intervention. Simple pot experiments, which are discussed in some detail in this publication, are one of the more reliable tools by which this knowledge can be gained. The monograph allows farmers in developing countries to benefit from scientific knowledge on plant nutrition and soil fertility. It bridges the gap between basic research and the results of applied research on soil and crop management. It is intended for use by agricultural scientists and extension staff in developing countries.

Requests for a complimentary copy for developing countries to: Publications Manager, ACIAR, GPO Box 1571, Canberra ACT 2601, Australia. Fax: +61-2-6217-0501. Homepage: www.aciar.gov.au/publications/complimentary.htm.

Orders to: CSIRO Publishing, P.O. Box 1139, Collingwood, Victoria 3066, Australia. Fax: +61-3-9662-7555. E-mail: publishing.sales@csiro.au. Homepage: www.publish.csiro.au.

Vital Signs 2002. The Trends that are Shaping our Future. The Worldwatch Institute, in cooperation with the United Nations Environment Programme, W.W. Norton & Company, New York and London, 2002, 215 p. ISBN0-393-32315-3. Softcover.

The 11th volume in the series Vital Signs from the Worldwatch Institute shows in graphic detail the key trends that are too often overlooked by the news media and world leaders. It is a unique snapshot of the social, economic, and environmental trends that determine the quality of our lives and the future of our children's lives. From the seemingly mundane, like drinking soda, to the massive concrete, like the contribution of sprawling cities to global warming, this book helps you chart the future.

Among the findings in this year's edition: Global pesticides sales have increased 15-fold since 1950, but farmers are still losing as great a share of their crops to pests as they were 50 years ago. The average global surface temperatures in 2001 were the second warmest on record, putting additional pressure on nations to adopt the Kyoto Protocol and cut back on the use of fossil fuels and the release of carbon dioxide. The area of forests certified as well managed by the Forest Stewardship Council more than doubled between 1998 and

2001. Since 1961, the total area under irrigation was 139 million ha, or 45.1 ha per thousand persons; in 1999 it was 274 million ha, or a nearly equal area of 45.7 ha per thousand persons.

A CD-ROM, soon to come, will contain all the figures presented in this issue, plus user-friendly software.

Price: USD 14.95.

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Ecology of Desert Systems. W.G. Whitford. Academic Press, 2002, 360 p. ISBN 0-12-747261-4. Hardcover. Conventional wisdom considers deserts stark, harsh regions that support few living things. Most people also believe that water alone makes the desert bloom. This book challenges these conventional views. It explores a broad range of topics of interest to ecosystem, population, community, and physiological ecologists. Climate, weather patterns, geomorphology, and wind and water processes are examined as variables that affect the distribution of biota through fundamental ecosystem processes. Descriptions of morphological, behavioral, and physiological adaptations of desert biota illuminate, through the lens of patch dynamics, principles for understanding observed patterns of primary production, nutrient cycling, and the effects of consumers. Desertification, and the techniques for monitoring and quantifying it, is examined within the framework of desert ecosystem patterns and processes.

Price: GBP 49.00; USD 74.95.

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Interactions of Microorganisms with Radionuclides. Radioactivity in the Environment, volume 2. M.J. Keith-Roach and F.R. Livens, editors. M.S. Baxter, series editor. Elsevier, 2002, 408 p. ISBN 0-08-043708-7. Hardcover.

Many environmental processes are influenced, if not controlled, by microbial action and it is becoming increasingly important to develop understanding of microbial roles in geochemistry. This book brings together state-of-the-art research into microbial processes and the extent to which they affect or can be used to control radioactive elements. The basic principles and fundamental mechanisms by which microbes and radionuclides interact are outlined, the methodology described, potential microbial influences on waste repositories examined, direct and indirect effects on transport both on local and global scales considered and potential technological applications identified.

Price: EUR 170.00; USD 170.00.

Orders to: see below.

Understanding and Solving Environmental Problems in the 21st Century. Toward a new, integrated hard problem science. R. Costanza and S.E. Joergensen, editors. Elsevier, 2002, 350 p. ISBN 0-08-044111-4. Hardcover.

The aim of this book is to encourage integration of the natural and social sciences with the policy and design making community, and thereby develop a deeper understanding of complex environmental problems. Its themes are: (1) integrated modeling and assessment; (2) complex, adaptive, hierarchical systems; (3) ecosystem services; (4) science and decision making; (5) ecosystem health and human health; and (6) quality of life and the distribution of wealth and resources.

The book will act as a state-of-the-art assessment of integrated environmental science and its relation to real world problem solving. It is not only aimed at the academic community, but also as a sourcebook for managers, policy makers, and the informed public. It dealt both with the state of the science and the level of consensus among scientists on key environmental issues. The concepts underlying this book were developed at the 2nd EcoSummit workshop held in Halifax in June 2000, with the active participation from all delegates, and attempts to present their collective view.

Price: EUR 95.00; USD 95.00.

Orders to: see below.

Soil Mineral-Organic Matter-Microorganism Interactions and Ecosystem Health. Dynamics, Mobility and Transformation of Pollutants and Nutrients. Developments in Soil Science 28A. A. Violante, P.M. Huang, J.-M. Bollag and L. Gianfreda, editors. Elsevier, Amsterdam, Boston, 2002, xvii + 459 p. ISBN 0-444-51038-9 (this volume); with volume 28B as set: 0-444-51040-0. Hardcover.

Soil Mineral-Organic Matter-Microorganism Interactions and Ecosystem Health. Ecological Significance of the Interactions Among Clay Minerals, Organic Matter and Soil Biota. Developments in Soil Science 28B. A. Violante, P.M. Huang, J.-M. Bollag and L. Gianfreda, editors. Elsevier, Amsterdam, Boston, 2002, xix + 434 p. ISBN 0-444-51039-7 (this volume); with volume 28A as set: 0-444-51040-0. Hardcover.

The Working Group MO (Interactions of Soil Minerals with Organic Components and Microorganisms) of the IUSS was founded in 1990 at the 14th International Congress of Soil Science in Kyoto. It organized two symposia and was involved in four other meetings. As a result, seven volumes or special books were published in the last six years.

The present book consists of two volumes, and includes 59 of a total of 175 papers delivered at the 3rd Symposium on Soil Mineral-Organic Matter-Microorganism Interactions and Ecosystem Health, which was held in May 2000 in Naples, Italy. The symposium was attended by 220 scientists from 32 countries, representing several sub disciplines of soil science as well as ecology, environmental science, toxicology and health science. The aim of this symposium was to provide a forum for the interaction of soil chemists, soil mineralogists, soil microbiologists, soil biochemists and environmental scientists with the intention of promoting

discussions and exchanging information on many topics of mutual interest in this important area of science. It was also meant to stimulate research leading to an integration of knowledge on "soil minerals-natural organics-microorganisms" and their impact on agricultural production and environmental protection.

All papers accepted for publication in this book have been subjected to critical peer review. Volume 28A deals with the dynamics, mobility and transformation of pollutants and nutrients. Volume 28B covers the ecological significance of the interactions among clay minerals, organic matter and soil biota. This book elaborates critical research and an integrated view on basic aspects of mineral weathering reactions; formation and surface reactivity of soil minerals with respect to nutrients and environmental pollutants; dynamics and transformation of metals, metalloids, and natural and anthropogenic organics; effects of soil colloids on microorganisms and immobilization and activity of enzymes, and metabolic processes, growth and ecology of microbes. It offers up-to-date information on the impact of such processes on soil development, agricultural production, environmental protection, and ecosystem integrity.

Price: EUR 160.00 for volume 28A; EUR 150.00 for volume 28B.

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Land Use and Land Use Planning in Bangladesh. H. Brammer. The University Press, Dhaka, 2002, xxiv + 554 p. ISBN 984-05-1565-9. Hardcover.

Having worked under the able leadership of the author while surveying the soils in Bangladesh, I was glad to read this impressive volume. It is a follow-up of earlier books in this series, based upon the extensive knowledge of Dr. Brammer of many aspects of the physical and human resources of this small country with its many inhabitants, by far surpassing the density of population of my own country, The Netherlands. At the time, while making soil maps, the author was busy developing a series of practical guides, in Bengali, for extensionists on agricultural development, related to the occurrences of the soils, depth of water table, flooding characteristics, etc. I believe that this worthwhile activity was an exceptional case of the direct application of soil survey data to agricultural development.

In the present book, the fifth volume of the collected works, the author provides a historical perspective on Bangladesh's dynamic land use and evolving approaches to rural development planning in the 1970s and 1980s. Aimed particularly at agriculture, geography and soil science researchers, teachers and students, and agricultural planning and extension officials, this book makes available material that previously had a limited circulation, provides models and benchmarks

for repeating some of the studies described, and supplies practical training material.

comprises land use studies made in support of agricultural development planning. Part I provides background information about Bangladesh' physical environment and land use. Part II comprises nine chapters describing wide-ranging land use studies made in support of agricultural development planning. Part III outlines the policies and principles involved in national and local-level land use planning, while Part IV gives information and guidelines for use in planning more intensive land use. Part V describes in detail the various methods tried to use soil survey information at village level. Throughout, emphasis is given to participatory planning methods.

The book is very well illustrated with maps, tables and figures. It has a practical index. Unfortunately, the book does not have photographs. For other books in the series, see the homepage mentioned below.

Price: USD 46.00; GBP 35.00; Tk. 1500, including handling and postage.

Orders to: The University Press, G.P.O. Box 2611, Dhaka 1000, Bangladesh. Fax: +88-02-9565443. E-mail: upl@btb.net.bd. Homepage: www.uplbooks.com.

Hans van Baren, The Netherlands.

Spatial Data Quality. W. Shi, P.F. Fischer and M.F. Goodchild, editors. Taylor & Francis, London and New York, 2002, xx + 313 p. ISBN 0-415-25835-9. Hardcover.

Quality is an issue for any kind of information. This book is about the quality of spatial (synonymous with geographical and geospatial) data and in the sense of this book spatial data consist of information about the surface and near-surface of the Earth. Such information is used today for many purposes, including the management of natural resources, navigation, agriculture, the monitoring of disease outbreaks, and a host of other everyday activities. In all of these cases it is obvious that data must be of high quality, and over the last two decades a large research literature has emerged on this subject.

The first section of the present book looks at efforts to advance the theoretical framework for spatial data quality, in the form of models of quality, links to existing areas such as geostatistics that can provide ready-made techniques and approaches, and designs for spatial databases that incorporate knowledge of data quality and directly address problems of its analysis and impacts. The second section looks in detail at a selection of methods for handling spatial; data quality, with discussions that range from new techniques for visualization, to the perspectives of policy makers. The final section has two themes: case studies of data quality as metadata, and assessments of the consequences of data quality on specific applications. Each section is introduced, and the book ends with an epilog. The book attempts to create a sense of the art in spatial data quality, and the directions currently being pursued by the research community.

The chapters grew out of a Symposium on Spatial Data Quality, held in Hong Kong in 1999, and each has been

extensively modified and edited to suit the purposes of the book.

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Plant Nutrition. Food Security and Sustainability of agro-ecosystems through basic and applied Research. Developments in Plant and Soil Sciences volume 92. Proceedings XIV International Plant Nutrition Colloquium, Hannover, 2001. W.J. Horst, M.K. Schenk, A. Bürkert, et al, editors. Kluwer Academic Publishers, Dordrecht, Boston, 2002, xxxviii + 1043 p. ISBN 0-7923-7105-4. Hardcover.

The International Plant Nutrition Colloquium in Hannover was the 14th in a series that started in 1954. This volume is a compilation of extended abstracts of all papers presented. These include two plenary lectures which address the role of plant nutrition in the sustainability of agro-ecosystems and production of enough high quality food to feed the growing world population. Papers are given in the following symposia: Genetics and molecular biology and plant nutrition (44 papers); Nutrient functions (40 papers); Nutrient uptake and translocation (28 papers); The role of apoplast in plant mineral nutrition (21 papers); Mineral nutrition: plant quality and plant health (42 papers); salinity and plant-soil-water relations (35 papers); mineral element toxicity and resistance (42 papers); Nutrient acquisition: mechanisms and modeling (43 papers); soil organisms/plant interactions (37 papers); Fertilizer use with regard to optimum yield and environment (99 papers); Nutrient dynamics in natural and agricultural ecosystems – processes and modeling (36 papers); and: Plant nutrition and sustainable development (32 papers). The more than 500 contributions in these proceedings provide an excellent current state-of-the-art in plant nutrition research and its contribution to food security and agro-ecosystem sustainability while maintaining and enhancing environmental quality.

Price: EUR 370.00; USD 320.00; GBP 225.00.

Orders to: see below.

Diversity and Integration in Mycorrhizas. Proceedings of the 3rd International Conference on Mycorrhizas. Development in Plant and Soil Sciences 94. S.C. Smith and F.A. Smith, editors. Kluwer Academic Publishers, Dordrecht, Boston, 2002, x + 335 p. ISBN 1-4020-0269-6. Hardcover. Reprint from Plant and Soil, volume 244, nos. 1-2 (2002).

The present book contains chapters that were derived from invited Keynote and Symposium presentations at the 3rd International Conference on Mycorrhizas (ICOM3), held in Adelaide, from 8 to 13 July 2001. However, it is more than 'a book of the conference': it also contains chapters by authors who did not speak at the conference, but who were invited in order to provide additional depth and balance. Abstracts of all papers

can be found at the ICOM3 website: www.waite.ade-laide.edu.au/soil_water/3icom.html.

Mycorrhizas are being increasingly recognized as ubiquitous plant/fungal symbiosis, with the potential to influence the function and ecology of around 90% of all land plants; perhaps the most common and also ancient terrestrial symbiosis in existence. This book has a broad coverage of biology of symbiosis between mycorrhizal fungi and plants, especially ecto- and arbuscular mycorrhizas, and the forward-looking review papers include overviews of research challenges for the future. After the scene is set in an interesting introductory chapter, the papers are presented in four groups: (1) Molecular diversity and phylogeny (7 papers); (2) Development: from genes to structure (7 papers); (3) Functional relationships (9 papers); and (4) Ecological interactions (7 papers). The last group contains papers on the implications of the symbioses for ecosystems processes, including agriculture.

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Soil Fertility and Food Production. K.R. Krishna, editor. Science Publishers, Enfield and Plymouth, 2002, xv + 465 p. ISBN 1-57808-215-3. Hardcover.

Soil fertility and crop management are the two most important ingredients of the modern agricultural activity on the globe. Soils, their fertility along with the general agro-climate have almost always dictated the spread of agricultural enterprise, including the cropping patterns and grain harvest levels possible. The success of agricultural activity in the 20th century, particularly in the American and European continents, and the green revolution in parts of Asia, have relied on improved soil fertility management procedures and appropriate cropping patterns. The greener revolution in the offing in some agrobelt will involve further intensification of cropping patterns. It also indicates priority to develop suitable soil fertility management practices.

This book offers a combination of recent findings and basic principles related to both soil and crop sciences, presenting concise and comprehensive discussions on a wide range of topics. The first of the 18 chapters deals with the historical aspects of soil fertility research. Soil fertility aspects of all major and micro nutrients are discussed in detail. Attention is also given to such aspects as: soil geography, soil organic matter, modeling and computer simulation, fertilizers and bio-inoculants, the use of isotopes, nutrient dynamics, the use of remote sensing techniques in soil fertility research.

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Wetlands in Central Europe. Soil Organisms, Soil Ecological Processes and Trace Gas Emissions. G. Broll, W. Merbach and E.-M. Pfeiffer, editors. Springer Verlag, Berlin, Heidelberg, 2002, xvi + 244 p. ISBN 3-540-43474-7. Hardcover.

Soil ecology deals with the interactions among soil organisms and between such organisms and the environment. The science has gained increasing attention during the past years and has contributed to the understanding of ecological processes in many ecosystems. Wetlands, which are unique and very sensitive ecosystems, function as a habitat for many organisms, including soil organisms. Although information on soil ecological processes in wetlands is still lacking, such knowledge is very much needed for landscape planning purposes and for climatic change predictions. This book on the wetlands of Central Europe focuses on wetlands as habitats for soil organisms (3 papers), on soil ecological processes in fens and floodplains (3 papers), on carbon and nitrogen dynamics in soils with different water regimes (3 papers), and on trace gas emissions (4 papers).

The papers are based on presentations made at a workshop on soil ecological processes in wetlands, held at the Centre for Agricultural Landscape and Land Use Research (ZALF), in Müncheberg, Germany, in 1988. Price: EUR 69.95; GBP 49.00; USD 79.95.

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Handbook of Plant Growth. pH as the Master Variable. Z. Rengel, editor. Marcel Dekker, New York and Basel, 2002. ISBN 0-8247-0761-3. Hardcover.

This book explores the molecular, biochemical, functional, structural, and developmental mechanisms of pH in plant growth; examining the role of pH in plant symplasm, plant apoplasm, the rhizosphere, the ecosystem, and in plant interaction with biotic and abiotic environments. The book discusses the dynamics of H⁺ fluxes across membranes; the interdependence of pH dynamics and soil abiotic systems; the effect of pH fluxes on soil-plant-microbe interactions; the physiological properties of vacuolar proton pumps; the maintenance and regulation of stable cytoplasmic pH; and the current methods for the imaging of intracellular pH. Price: USD 175.00.

Orders to: see below.

Enzymes in the Environment. Activity, Ecology, and Applications. R. Burns and R. Dick, editors. Marcel Dekker, New York and Basel, 2002, 640 p. ISBN 0-8247-0614-5. Hardcover.

Covering the latest research on the role of enzymes in biogeochemical processes, such as nutrient cycling, atmosphere gas exchange, and degradation of environmental pollutants, this book explores the function, molecular biology, and biochemistry of microorganisms and their intra- and extracellular enzymes in soils and

aquatic systems. With contributions from over 50 experts in the field, the book provides discussions on: the use of enzymes to assess nutrient turnover, soil health and stresses due to pollution and climatic changes; current methods to determine and manipulate the diversity of microbial populations; the effect of biofilms and their microbes and enzymes on the environment; microbe-plant symbiosis including the rhizosphere and phyllosphere; community interactions of microbes and enzymes in organic matter breakdown; microbial activities in lake and ocean systems; enzyme assays and microbial responses as indicators of aquatic and terrestrial ecosystem stress; and biological control and bioremediation. It is supplemented with nearly 3000 references to assist in further study.

Price: USD195.00.

Orders to: see below.

Using the Agricultural, Environmental, and Food Literature. Books in Library and Information Science volume 61. B.S. Hutchinson and A. Paris Greider, editors. Marcel Dekker, New York and Basel, 2002, x + 533 p. ISBN 0-8247-0800-8. Hardcover.

This reference book provides the groundwork, tools, and terminology to conduct specialized searches for information and resources pertaining to traditional and emerging fields of agriculture, such as food and nutrition, rural development, farming, conservation management, veterinary sciences, soils, genetic engineering, biological control, and the environment, as well as discussing a wide range of print and electronic media to locate hard-to-find documents, navigate poorly indexed subjects, and investigate specific research topics and subcategories. The book outlines strategies for targeted literature searches, and contains numerous titles and descriptions of useful books, guides and journals. It contains lists of significant agricultural websites, details the use of thesauri and category codes for the utilization of electronic data and furnishes URLs for free electronic journals.

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Sustainable Land Management – Environmental Protection. A Soil Physical Approach. *Advances in Geocology* 35. M. Pagliai and R. Jones, editors. Catena Verlag, Reiskirchen, 2002, viii + 588 p. ISBN 3-923381-48-4. Hardcover.

This book contains papers presented at The International Conference on Sustainable Soil Management for Environmental Protection – Soil Physical Aspects, held in Florence, 2-7 July 2001, under the auspices of the IUSS, the Italian Soil Science Society, European Society of Agricultural Engineers and the International Commission of Agricultural Engineering. The meeting was organized to present information and to make proposals useful for policymakers in the development of

future strategies for a sustainable agriculture able to prevent soil physical degradation. Many aspects of environmental degradation can be ascribed to soil physical processes, including erosion, compaction, crusting, structure decline, loss of organic matter, salinization, etc. Strategies to be developed must take into account interactions between the many forms of soil degradation that up to now have not been adequately considered. Many of the environmental disasters that frequent not only the Mediterranean, but also other parts of the world, are the direct consequence of inappropriate land use and management. There is clearly a need to change agricultural soil management practices, and success will depend on adopting an interdisciplinary approach. This monograph in the series *Advances in Geocology* contains a selection of papers presented at the conference, which covers the following topics: Introductory papers (5 papers); (2) Soil structure (11 papers); (3) Soil Hydrology (12 papers); (4) Soil compaction (13 papers); (5) Soil erosion (6 papers); and (6) Models, Databases and Maps (10 papers).

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Methods of Soil Analysis: Part 4 – Physical Methods. Soil Science Society of America Book Series Number 5. J.H. Dane and G.C. Topp, editors. Soil Science Society of America, Madison, 2002, 1692 p. ISBN 0-89118-841-X. Hardcover.

Due to the rapid and numerous changes in measurement methods associated with soil physical and mineralogical properties, it was decided not to print a third edition of the highly popular *Methods of Soil Analysis: Part 1 – Physical and Mineralogical Methods*. The volume is split into two parts, and the part containing soil physical measurements has now been published.

The approach in Part 4 differs substantially from that in Part 1 in that the new book uses a more hierarchical approach. As such, it is divided into eight chapters, with each chapter covering a major aspect of soil physical properties. Following the table of contents, the reader can then refine the search until a specific topic or measurement of interest is indicated. Compared with Part 1, new methods have been added and some of the older methods have been updated or deleted.

Price: USD 100.00 in USA, members of SSSA: USD 80.00. Elsewhere: USD 110.00, including postage.

Orders to: see below.

Soil Mineralogy with Environmental Applications. Soil Science Society of America Book Series Number 7. J.B. Dixon and D.G. Schulze, editors. Soil Science Society of America, Madison, 2002, xxix + 866 p. ISBN 0-89118-839-8. Hardcover.

With the present knowledge about soils and a technologically advanced set of tools for addressing the needs of humanity and the earth, comes the responsibility to

translate our science into practice and to effectively communicate the vital role of soils in sustaining human welfare and in assuring environmental stability and agricultural productivity. The chapters in this book attempt to synthesize and summarize important concepts rather than to provide comprehensive reviews of the literature. Preference has been given to citing recent reviews and original studies that provide additional links to the older literature. The educational focus is enhanced by the inclusion of numerous questions and exercises that facilitate a practical synthesis of the information given.

The first five chapters present principles and illustrations of mineral properties and crystallography, surface chemistry, mineral-solution equilibria, soil organic matter, and methods of soil mineral analysis. The following seventeen chapters present soil mineralogy in a uniform chapter outline devoted to various mineral groups based on their chemical composition and structural properties. The final six chapters are devoted to applications of soil mineralogy to our understanding of soil taxonomy, soil movement, radionuclides in soils, pesticides in soils, enzymes in soils, and an introduction to charcoal in soils.

The book has many visuals from soils, sediments, and models of synthetic and natural minerals, part of them in colour.

Price: USD 90.00 in USA, USD 99.00 elsewhere, including postage.

Orders to: SSSA Headquarters Office, Attn: Book Order Department, 677 South Segoe Road, Madison, Wisconsin 53711, USA. Fax: +1-608-273-2021. E-mail: books@soils.org. Homepage: www.soils.org.

Global Environmental Outlook 3. Past, present and future perspectives. UNEP and Earthscan Publications, 2002, xxxiii + 446 p. ISBN Earthscan softcover 1-85383-845-4. Hardcover 1-85383-844-6. With CD-ROM.

The GEO reports are produced using a regional and participatory approach. Input is solicited from a wide range of sources throughout the world, including the collaborating center network, UN organizations and independent experts. During the preparation of the report, UNEP organizes consultations inviting policy makers and other stakeholders to review and comment on draft materials. This iterative process is designed to ensure that the contents are scientifically accurate and policy relevant to users in different parts of the world and with different environmental information needs.

The present GEO-3 places major emphasis on providing an integrated assessment of environmental trends over the 30 years since the 1972 Stockholm Conference. The analysis of environmental trends takes into consideration the widest possible range of social, economic, political and cultural drivers and root causes – demographics, production and consumption, poverty, urbanization, industrialization, governance, conflict, globalization of trade, finance, information and others. It also investigates the relationship between policy and environment, showing how policy can impact the environment and how the environment can drive policy. Description and analysis are primarily targeted at glob-

al and regional levels but included sub-regional differentiation where appropriate. The analysis focuses on priority issues, with assessment of vulnerability, hot spots and emerging issues. The report analyses the increasing human vulnerability to environmental change to determine extent and impacts on people. The report breaks with the tradition of most environmental resources rather than around human concerns.

Using a 2002–2003 time frame, GEO-3 also contains a forward-looking and integrated analysis, which is based on four scenarios and linked to major issues of current concern. The global-level analysis is extended to regions and sub-regions, identifying potential areas of vulnerability and hot spots of the future. The final chapter presents positive policy and action items, linked to overall conclusions of the assessment and targeted at different categories and levels of decision makers and actors. The CD-ROM contains the full text of the report, accompanied by a compendium of the data used in preparing it.

Price: Softcover: GBP 25.00; hardcover GBP 60.00.

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Global Environment Outlook 3. Data Compendium. United Nations Environment Programme, Nairobi, 2002, viii + 269 p. Publication UNEP/DEWA/RS.02-5. Book in softcover ISBN 92-807-2223-9. CD-ROM ISBN 92-807-2222-0.

The publication mentioned above (GEO-3) was published in 2002. The present Data Compendium presents major statistical data sets underlying the integrated analysis of the environment at global and regional levels in GEO-3. As such, it supports the scientific and empirical nature of the GEO process and provides background information to other assessment programs and data users. The compendium holds data tables for environmental issues, such as climate change, water stress and deforestation, as well as a wide variety of socio-economic variables. Examples of data sets are CO₂ emissions, water consumption, forest cover change, population growth, land use change and GDP development. Documentation on data sources, definitions and other parameters is also provided in the form of meta-data for each data set. Most of the tables are available for the GEO regions and sub-regions, and for the world as a whole.

The data for the compendium have been extracted from the wider GEO Data Portal, available at <http://geodata.grid.unep.ch>, through the GEO-3 website at <http://www.unep.org/geo>, or through the UNEP.Net site at <http://www.unep.net>.

The CD-ROM gives access to the full compendium tables, that is for all the years available and including all national statistics.

The GEO-3 Data Compendium is also available on the internet at <http://geocompendium.grid.unep.ch>. For additional and up-to-date statistical and geospatial data, see the GEO Data Portal mentioned above.

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Mediterranean Desertification. A Mosaic of Processes and Responses. N.A. Geeson, C.J. Brandt and J.B. Thornes, editors. John Wiley & Sons, Chichester, 2002, xv + 440 p. ISBN 0-470-84448-5. Hardcover.

Desertification has been recognized as one of the biggest problems facing the European Mediterranean countries. By desertification the authors mean land degradation resulting from various factors, including climatic variation and human impact, and it is the long history of human intervention that has particularly shaped the landscape here. Water resources have been exploited unsustainably, resulting in chemical pollution, salinization and exhaustion of aquifers. As economic activity has flourished in coastal areas so abandonment and degradation of land in the interior, previously sustained by traditional farming practices, have continued. Portugal, Spain, Italy and Greece are all now signatories to the UN Convention to Combat Desertification and implementation of the convention within national and regional action plans will require further organization of research and monitoring.

The European Commission has funded a number of projects aimed at improving the understanding of the whole range of desertification issues. The book is based on the results of one of those projects, MEDALUS II, where 44 universities and other institutions combined their expertise to clarify the processes of desertification operating in the region, and the responses to those processes. The material presented in this book includes the results of interdisciplinary investigations undertaken over the last 10 years. Scientists of many disciplines, ranging from remote sensing to microbiology, researched climate, land use and the physical processes within soil and vegetation systems in order to design tools to describe and monitor desertification. Part 2 of this book, occupying about half of the text, describes how these processes and tools have been applied specifically. The regional studies illustrate how the application of remedial action cannot usually be uniform, but must respect the mosaic of physical environments and social and historical variations that interact within the geographical space of two of the target areas in southern Spain and southern Italy. The book is well illustrated with figures, tables and maps, part of them in colour.
Price: GBP 110.00.

Orders to: see below.

Soil Erosion: Processes, Prediction, Measurement, and Control. T.J. Toy, G.R. Foster and K.G. Renard. John Wiley & Sons, New York, 2002, xiii + 338 p. ISBN 0-471-38369-4. Hardcover.

This textbook is about soil-erosion processes. It is structured into five parts. The first part discusses the importance of soil erosion as a problem of global dimensions with local solutions and places erosion within the context of the environmental system operating at the local scale. The second part contains a

description of the types of erosion and processes within those types, the relationship among erosion processes and environmental characteristics. In the third part the understanding of erosion processes to explain how erosion-prediction technologies (erosion models) are developed and how erosion research is conducted in the field and laboratory. Then, an understanding of erosion processes, erosion-prediction technologies, and erosion research provide a foundation for an understanding of erosion-control concepts and practices. A chapter on conservation planning, planning tools, and examples of conservation programs for selected land uses is followed by the last chapter the essential lessons from the preceding chapters are summarized, and present the authors' perspective concerning the future of erosion problems and erosion control. Appendices contain background information about soils and hydrology and a listing of useful websites.

Price: GBP 70.50.

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Potassium and Chloride in Crops and Soils: The Role of Potassium Chloride Fertilizer in Crop Production. IPI Research Topics No. 22. U. Kafkafi, G. Xu, P. Imas, H. Magen and J. Tarchitzky. A.E. Johnston, editor. International Potash Institute, Basel, 2001, 220 p. Softcover.

This Bulletin is a comprehensive compilation of information covering the scientific and applied aspects of the use of potassium chloride (muriate of potash, MOP) in agriculture. The bulletin is primarily concerned with potassium chloride, because it accounts for some 92% of world potassium consumption in agriculture. The vast majority of crops are fertilized with potassium chloride, including field, horticultural and plantation crops. Nevertheless, there are combinations of soil and climate where the use of the chloride salt can exacerbate the damaging effects of salinity. There are crops, like tobacco, where chloride is known to impair quality. There is an increasing amount of evidence that the use of potassium sulphate improves the quality of some crops. On the other hand, there are crops like coconut and oil palm, where chloride additions are an important part of nutrient management, as also for a wide range of crops in areas where atmospheric deposition does not supply sufficient chloride.

This bulletin discusses the considerations in deciding which potassium fertilizer to use.

Orders to: International Potash Institute, P.O. Box 1609, CH-4001 Basel, Switzerland. Fax: +41-61-261-29-25. E-mail: ipi@iprolink.ch. Homepage: www.ipipotash.org.

Foundations of Tropical Forest Biology. Classic Papers with Commentaries. R.L. Chazdon and T.C. Whitmore, editors. The University of Chicago Press, Chicago and London, 2002, xvii + 862 p. ISBN 0-226-10225-4. Softcover.

The books *The Tropical Rain-forest*, an ecological study (1952) by Dr. Richards, *Tropical Rain Forests of the Far East* (1975) and *An Introduction to Tropical Rain Forests*, written by Dr Whitmore were important textbooks for my education as a soil scientist interested in the tropics at large. I am very glad that the last author and Dr. Chazdon made this compilation of pioneering research texts. The idea for this book first took shape at a council meeting of the Association for Tropical Biology in August 1998. This idea was initially inspired by the book *Foundations of Ecology* (Real and Brown 1991), an anthology of seminal works with commentaries written by authorities in the field.

The book consists of facsimiles of papers chosen by experts in tropical biology as the "classics" in the field. The papers are organized in sections on related topics and each section is introduced by a discussion on the role the papers have played in triggering subsequent research. Topics covered include ecological and evolutionary perspectives on the origins of tropical biodiversity; plant-animal interactions; patterns of species diversity and distribution of arthropods, vertebrates, and plants; forest dynamics and ecosystem ecology; conservation biology; and tropical forest management. Excellent material, in a convenient form, for scholars as well as students concerned with tropical conservation. A nice example for a comparable book on soil science literature!

Price: Softcover: USD 35.00, GBP 45.50. Hardcover: USD 85.00, GBP 66.50.

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Hans van Baren, The Netherlands.

Soil Fertility in Organically Managed Soils. Supplement to *Soil Use and Management*, Volume 18, September 2002, pp. 238 – 308. Published for the British Society of Soil Science by CABI Publishing, Wallingford.

This publication focuses on a comparison of soil fertility in soils farmed organically and conventionally, and examines whether the current concept of soil fertility adequately encompasses both these systems. Organic farming is an alternative agriculture, which has been proposed as a solution to problems associated with inputs of chemical fertilizer and pesticide. It takes an ecological approach to nutrient supply and crop protection rather than a chemical one.

The scene setting paper describes the nature and practice of organic farming with the aid of a review, and then explores how organic growers use a range of management practices to maintain and improve soil fertility in attempting to achieve wider goals. Four subsequent papers deal with the key components of soil fertility by combining comprehensive review with infor-

mation from new and recent research. A comparative study of nitrate leaching from farms managed conventionally or organically is the subject of a further contribution. The final paper examines important aspects of nutrient pools and nutrient transformations and then draws together the findings of the previous papers in reaching a definitive answer to the question of the adequacy of the current concept of soil fertility.

Price: GBP 15.00.

Orders to: CABI Publishing, attention Ms. Sarah Peck, Wallingford, Oxon OX10 8DE, UK. E-mail: s.peck@cabi.org. Homepage: www.cabi-publishing.org.

Methods in Agricultural Chemical Analysis: A Practical Handbook. N.T. Faithfull.

CABI Publishing, Wallingford, 2002, 304 p. ISBN 0-85199-608-6. Hardcover.

This reference manual contains information on the most suitable procedures for the analysis of agricultural materials. It describes the analysis of soils and composts, plant materials, feeds, plant components (e.g. cellulose, lignin, trace elements), fertilizers, and biological substances. The book is designed as a laboratory sourcebook, complete with useful Internet addresses, and contains over 60 different practical methods. Each method is described by a step-by-step approach, and contains details of apparatus required, chemical reaction equations, formulae and calculations, and meticulous descriptions experimental results. Most methods use standard equipment and instruments commonly found in the practical lab. The aim is that scientists with little experience in analytical techniques should be able to safely carry out these procedures and obtain acceptable results. It is essential for any university or research institute that carries out agricultural or environmental research.

It has the following chapters: Chapter 1: Experimental Planning; Chapter 2: Sample Preparation; Chapter 3: Weighing and Dispensing; Chapter 4: Acid-digestion, Ashing and Extraction Procedures; Chapter 5: Analysis of Soil and Compost; Chapter 6: The Analysis of Fertilizers; Chapter 7: The Analysis of Animal Feed and Plant Materials; Chapter 8: The Analysis of Silage; Chapter 9: Near Infrared Spectroscopy; Chapter 10: Methods in Equine Nutrition; Chapter 11: Methods of Organic Farmers and Growers; and Chapter 12: Quality Assurance and Control.

Price: GBP 60.00; USD 100.00.

Orders to: see below.

Nitrogen Fixation: Global Perspectives. T. Finan, M.R. O'Brien, D.B. Layzell and J.K. Vessey, editors. CABI Publishing, Wallingford, 2002, 576 p. ISBN 0-85199-591-8. Hardcover.

Whilst the actual reduction of nitrogen gas (dinitrogen) to ammonia would appear to be a well defined process, many research questions concerning nitrogen fixation remain and continue to be addressed by diverse groups of scientists. This book presents the proceedings of the 13th International Congress on Nitrogen Fixation, held in Hamilton in July 2001. With very broad participation and a wide range of topics, it

covers the most recent findings. In fifteen sections the main topics discussed include: bacterial genomics, plant genomics, development biology, signals in the soil, nodule metabolism and applied aspects of nitrogen fixation. The sections are: Chemistry and biochemistry of nitrogenase; Bacterial genomics; Plant genomics; Signal transduction; Developmental biology; Signals in the soil; Proteins in regulation and development; Stresses and factors limiting nitrogen fixation; Regulation of N₂ fixation and metabolism; Nodule metabolism; Endophytic/associative plant-microbe interactions; Common themes in symbiosis and pathogenesis; Nitrification, denitrification, and the nitrogen cycle; Novel applications in nitrogen fixation.
Price: GBP 85.00; USD 149.00.
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Trees, Crops and Soil Fertility: Concepts and Research Methods. G. Schroth and F.L. Sinclair, editors. CABI Publishing, Wallingford, 2003, 448 p. ISBN 0-85199-593-4. Hardcover.

This book integrates information from soil science, agronomy and forestry in temperate and tropical regions. It provides both background theory and practical methods. Successful agroforestry requires an understanding of the complex relationship between trees, crops and soils. This book provides a review of both economic and biophysical aspects of soil use and research in agroforestry, with an emphasis on nutrient-poor forest and savanna soils. Key topics covered include the economics of soil fertility management, cycling of water, nutrients and organic matter, soil structure, and soil biological processes. The book combines synthetic overviews of research results and a review of methods used in research.
From the foreword: "The book is written within a particular context - soil fertility development under agroforestry. At first this may seem very specific and thus limited in appeal and application. But over the last decade or so agroforestry research has been one of the most influential in developing new insights into soil biology and fertility and thus provides a very suitable framework for review of progress. Furthermore the influence of trees on soil is profound and of significance beyond agroforestry systems, so the book is likely to be of interest in the wider spheres of agriculture, forestry and ecological sciences." *Mike Swift, TSBF, Nairobi, Kenya.*

Price: GBP 65.00; USD 120.00.

Orders to: see below.

Crop-Soil Simulation Models. Applications in Developing Countries. R.B. Matthews and W. Stephens, editors. CABI Publishing, Wallingford, 2002. xiv + 277 p. ISBN 0-85199-563-2. Hardcover. The use of crop-soil modeling has so far been mainly confined to the research community. Practical applications have occurred in the areas of decision tools for irrigation studies and pest management. However, there is potential to increase its applied use. This book reviews progress in crop-soil simulation modeling and assesses its application to agriculture in developing

countries. It covers the main themes of tropical agriculture, simulation modeling, agriculture development, research impact, crop and soil science, decision support systems and educational tools. The book has the following parts: (1) Models as tools in research (6 papers); (2) Models as decision-support tools (4 papers); (3) Models as tools in education and training (1 paper); (4) Have crop models been useful? (2 papers); and (5) The way forward. (1 paper).

Price: GBP 55.00; USD 100.00.

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Soils and Palaeoenvironment Reconstruction Applications in Geo- and Archaeopedology. 10 November 1999. *Pedologie-Themata* 2000, no. 8. G. Louwagie and R. Langohr, editors. Belgian Soil Science Society, Leuven, 152 p. Softcover.

This publication contains the texts of 14 papers presented at the meeting on the above subject, organized by the Belgian Soil Science Society, plus the abstracts of oral communications and abstracts of poster presentations. Contributions are mainly from Belgium, and most are in English.

Requests to: Prof. J. Deckers, Secretary-General of the BSSS, Vital Decosterstraat 102, B-3000 Leuven, Belgium. E-mail: seppe.deckers@agr.kuleuven.ac.be.

75 Jahre Deutsche Bodenkundliche Gesellschaft, 1926 – 2001. *DBG Mitteilungen*, Band 97, 2001. H.-P. Blume, Schriftleitung P. Hugenroth. Deutsche Bodenkundliche Gesellschaft, Oldenburg, 2001, 382 S. ISSN 0343-1071.

This is an excellent publication, in German, on the history of the German Soil Science Society (DBG), written by Prof. Hans-Peter Blume, who also played an important role in the IUSS. The DBG was established in Berlin in 1926, when 41 soil scientists became member. It was two years after the founding of the International Society of Soil Science, where it was decided that national societies could only be established in countries where more than 15 soil scientists were active. As was customary in other European countries, these persons were regarded as members of the national section of the ISSS. *In the early years of the DBG only professors, directors of institutes and top scientists were participating in the meetings, many of whom were with the participation of well-known soil scientists from other countries. The ISSS apparently played a large role, also because of its journal Mitteilungen der Internationalen Bodenkundlichen Gesellschaft/ Proceedings of the International Society of Soil Science, and its supplement Bodenkundliche Forschungen/Soil Research, both edited and published in Berlin until 1944.*

The publication gives comprehensive information about the development of soil science and its applications in Germany before WW II, in West and East Germany until 1989, and Germany until 2001. It illustrates

the great influence of German soil scientists on global activities and developments in our science. Much attention is given to the activities of the Commissions and Working groups of the DBG. An interesting chapter presents bibliographies of important, mostly German soil scientists, including honorary members of the IUSS, corresponding members of the DBG and persons who have received the Fritz-Scheffer-Preis. The book is well-illustrated with many photographs, and forms a welcome contribution to the history of our science.

Price: EUR 10.00, including mailing charges. (only few copies are left!)

Orders to: Prof. Dr. H.-P. Blume, Schlieffenstrasse 28, D-24105 Kiel, Germany. E-mail: hblume@soils.uni-kiel.de.

Bodenkunde und Bodenkundler in der Schweiz, 1855 – 1962. Mit einem kurzen Abriss über die Vorgeschichte. BGS Dokument 11. H. Sticher. Bodenkundliche Gesellschaft der Schweiz. Juris Verlag, Dietikon, 122 S. ISBN 3-260-05452-9.

It is a pleasure to note that also Switzerland now has a valuable publication about the historical developments of pure and applied soil science, and bibliographical notes about the main scientists, who played a role in this.

Early references to scientific investigations of soils of Switzerland go back to the first half of the 18th century, but no higher education in soil science was possible until the establishment of the Federal Polytechnic in Zürich in 1855. In order to complete university courses in agronomy and forestry (including pedology) Swiss students had to go abroad, e.g. to Germany. The first Swiss book on pedology appeared in 1884. From the beginning, soils were examined by two laboratories, one dealing with soil fertility, the other one with a wider diversity, including investigations of rock samples, weathering processes, texture, physical processes, soil tillage, etc. An important break in the history of Swiss soil science occurred in 1913, when G. Wiegner was appointed to the chair of agricultural chemistry in Zürich. He replaced the previously separate pedology courses for agronomists and foresters into one which was strongly based on physico-chemical and colloid chemical principles. He was also aware of the great importance of ecological pedology and his ideas influenced the thinking of soil scientists in Switzerland to the present time. H. Pallmann, succeeding Wiegner, developed the classification of soils and started collaboration with plant socialists, developing a comprehensive classification system, on which soil taxonomy in Switzerland is still based. The era of Wiegner, Pallmann, and his successor H. Deuel, was without any doubt the first summit of soil science in Switzerland. Deuel died in 1962. The present overview of Swiss soil science is concluded in the same year.

The publication has also a chapter on the Swiss Soil Science Society, which was founded in 1975, and presently has more than 400 members. The author, Prof. Hans Sticher, was elected Honorary Member of the Swiss Soil Science Society in August 2000.

Orders to: Dr. Moritz Müller, Schweizerische Hochschule Für Landwirtschaft, Länggasse 85, CH-

3052 Zollikofen, Switzerland. Fax: +41-31-910-22-99. E-mail: moritz.mueller@shl.bfh.ch.

Abrupt Climate Change. Inevitable Surprises. Committee on Abrupt Climate Change. Ocean Studies Board, Polar Research Board, Board on Atmospheric Sciences and Climate, Division on Earth and Life Studies, National Research Council. National Academy Press, Washington, D.C., 2002 xii + 230 p. ISBN 0-309-07434-7. Hardcover.

Large, abrupt climate changes have repeatedly affected much or all of the earth, locally reaching as much as 10 degrees C change in 10 years. Available evidence suggests that such changes are not only possible but likely in the future, potentially with large impacts on ecosystems and societies.

This report is an attempt to describe what is known about abrupt climate changes and their impacts, based on paleoclimate proxies, historical observations and modeling. The report focuses on the surprising new findings that abrupt climate change can occur when gradual causes push the earth system across a threshold. The report considers patterns, magnitudes, mechanisms, and impacts of abrupt climate changes, possible implications for the future, and critical knowledge gaps. The potentially large impacts and prediction difficulties focus special attention on increasing the adaptability and resilience of societies and ecosystems. Future dislocations can be minimized by taking steps to face the potential for abrupt climate change. The committee responsible for putting together this report believes that increased knowledge is the best way to improve the effectiveness of response, and thus that research on abrupt climate change can help reduce vulnerabilities and increase adaptive capabilities.

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Gully Erosion and Global Change. Special issue of CATENA, volume 50, 2-4, pp. 89-562. Elsevier, 2003. ISSN 0341-8162.

This special issue of papers has mainly arisen from a symposium hosted by the Laboratory for Experimental Geomorphology, K.U. Leuven, Belgium. The symposium was designed to (1) review current understanding of, (2) report progress in, and (3) identify priorities for future research in various areas of global change impacts on gully erosion. Particular attention was given to the following topics: historical studies of gully erosion, contribution of gully erosion to soil degradation and sediment production at various temporal and spatial scales and under different environmental conditions. Monitoring techniques and experimental investigations of various gully types, subprocesses of gully erosion, critical thresholds for gully development and gully infilling, factors controlling gully erosion rates, interactions between gully erosion and hydrological as

well as other land degradation processes, modeling rates of gully erosion and their impacts on landscape evolution, on-site and off-site impacts of gully erosion, gully prevention and gully control measures and their effectiveness and efficiency.

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Organic Soils and Peat Materials for Sustainable Agriculture. L.E. Parent and P. Innicki, editors. CRC Press, Boca Raton, London, 2003, 205 p. ISBN 0-8493-1458-5. Cat. no. 1458. Hardcover.

While organic soils have the potential to contribute greatly to agricultural production, the irreversible processes that occur from draining organic soils need to be managed with caution. This book provides detailed information from a worldwide perspective on the degradation process of fragile peat resources used for agriculture. It documents the best management practices and defines and quantifies soil quality indicators and pedo-transfer functions for organic soils and peat materials.

Co-published with the International Peat Society, this book is the first to integrate the physical, chemical and biological aspects of organic soils and peat materials for sustainable agriculture and horticulture. It presents how peat works chemically, physically and ecologically. It quantifies the moorsh-forming, or peat degradation, process in tables and figures, provides conversion equations among pH determination methods, and supplies a novel diagnosis of N and P release. With detailed information and a global perspective, this book aims to promote a shift from the current paradigm of input-based unsustainable use to a new knowledge-based approach. Price: USD 99.95; GBP 66.99.

Orders to: see below.

Agricultural Practices and Policies for Carbon Sequestration in Soil. J.M. Kimble, R. Lal and R.F. Follett, editors. Lewis Publishers, a CRC Press Company, Boca Raton, London, 2002, xx + 512 p. ISBN 1-56670-581-9. Cat. no. L1581. Hardcover.

The potential to mitigate greenhouse gas emissions and global climate change is one factor driving agricultural policy development of programs that might pay farmers to implement practices to sequester carbon. With chapters by economists, policy makers, farmers, land managers, energy company representatives, and soil scientists, this book explores a broad range of topics, such as the effects of soil tillage and mulch rate, soil monitoring and assessment, soil fertility management, policy options, and the economic issues associated with carbon sequestration.

This volume caps a "series" of books from researchers on carbon sequestration in soils by integrating the science with the economic and policy issues surrounding

it. It provides agricultural scientists, farmers, and policy makers with innovative and environmentally friendly practices for improved management and crop production. It helps to identify strategies that can lead to widespread adoption of management practices that will enhance productivity, the soil carbon pool, and the overall environment.

Price: USD 159.95; GBP 107.00.

Orders to: see below.

Soil Classification. A Global Desk Reference. H. Eswaran, R.J. Ahrens, T.J. Rice and B.A. Stewart, editors. CRC Press, Boca Raton, London, 2002, 312 p. ISBN 0-8493-1339-2. Cat. no. 1339. Hardcover.

Developments in soil classification have accompanied parallel progress in our understanding of the soil system. However the theories behind classifications and the purposes for which they were created have changed over time. The editors hope that this comprehensive synthesis will help the to rally soil scientists around the world to develop an acceptable classification system for soils. It is only when the global soil science community agrees to such a system that we can truly say that we have science.

The book illustrates the current state of a number of national and international soil classification systems. The authors evaluate developments in soil classification during the last century. They review concepts, practices, and goals that led to the creation of individual soil classification systems and recommend modifications to classification systems to meet new demands. The documentation in this book serves as a foundation for the revision of existing soil taxonomies and the creation of new ones.

Price: USD 99.95; GBP 66.99.

Orders to: see below.

Food Security and Environmental Quality in the Developing World. R. Lal, D. Hansen, N. Uphoff and S. Slack, editors. Lewis Publishers, a CRC Press Company, Boca Raton, London, 2003, xiv + 464 p. ISBN 1-56670-594-0. Cat. no. L1594. Hardcover.

Leading authorities from soil scientists to economists address the following critical questions: Can developing countries meet the food requirements of their growing populations with jeopardizing a natural resource base that is already under great stress?, and How can food security be reconciled with environmental quality in an industrializing society? With a focus on India, this book reviews the state of natural resources, fertilizers and energy needs, and the potential importance of biotechnology as they affect all developing countries. It then addresses issues pertaining to water quality, agricultural chemicals, and pesticides residues on food. Part three examines harvesting, post-harvest food losses, storage and processing of animal products, and sustainability and inequality issues. The next sections deal with poverty alleviation, microfinance, gender equity, policy issues, and the role of the public sector. The book takes on the crucial challenge of enhancing agricultural production while reversing the alarming trends in soil and environmental degradation.

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Soil Terminology and Correlation. 2002. Ed.: S.A. Shoba, Compiler: P.V. Krasilnikov. 2nd edition. Petrozavodsk. 294 p. (Softcover).

A new book containing a correlation of soil terms of national soil classifications with the Reference Base for Soil Resources. It is a revised and renewed English translation of a book published in Russian in 1999. It contains more than 3,000 soil terms including 1,000 vernacular soil names. It also includes articles on the theory of natural classifications and ethnopedology (original article on ethnopedology by J. Tabor and P. Krasilnikov).

Price: 30 US\$

Orders to: sidorova@krc.karelia.ru

Procedures for Soil Analysis. Sixth edition. ISRIC Technical Paper 9. Compiled and edited by L.P. van Reeuwijk. ISRIC and FAO. International Soil Reference and Information Centre, Wageningen, 2002. ISBN 90-6672-044-4. ISSN 0923-3792; no. 9. Softcover. This laboratory manual presents the procedures for soil analysis as they are in use at ISRIC at the time of writing. The present sixth edition replaces the fifth, which was published in 1995. It is expanded with two procedures used in soil characterization: the optical density of the oxalate extract (ODOE) for the characterization of Podzols, and the determination of the Melanic Index, used in Andisols.

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Developing Indicators. Lessons learned from Central America. L. Segnestam, M. Winograd and A. Farrow. CIAT, the World Bank and UNEP, 2000, vii + 48 p. Plus CD-ROM, entitled: *Indicadores de sustentabilidad rural: una visión para América Central*.

Indicators are important for the sustainable use and management of environmental resources. They give valuable information about the present status of the resources being measured, the rate and direction of change, highlighting priority issues and guiding policy formulation. The project of the three collaborating institutions has focused on the development and use of indicators for measuring and tracking rural change in Central America. Given the economic importance of natural resources, and the close link between the health of natural resources and the economic well being of these countries, this is an important topic for the region. In addition, the lessons learned from this exercise have broader implications for other parts of the world and other indicator efforts.

This report is designed to provide practical guidance to indicator developers. It recognizes that there is a need to integrate environmental, economic, and social concerns into development decision-making, at the regional, national, and local levels. Such integration was designed to both improve policies and their implementation, and facilitate regular monitoring and reporting on the state of the environment and development process. The package with this publication also includes a poster outlining the steps of indicator development, specific reports on indicator development for the forestry sector, land use, and climatic risk, as well as a CD-ROM with all the data and tools used in the project.

For more information, please contact: Manual Winograd at m.winograd@cgiar.org, fax: +57-2-4450073. Internet: www.ciat.cgiar.org/indicators/index.htm.

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Global Agro-ecological Assessment for Agriculture in the 21st Century. G. Fischer, M. Shah, H. van Velthuisen and F.O. Nachtergaele. IIASA, Laxenburg, 2001. 39 p. Softcover.

This report presents a summary of the methodology and results of a comprehensive global assessment of the world's agricultural ecology. The national-level information with global coverage enables knowledge-based decisions for sustainable agricultural development. The Agro-Ecological Zones (AEZ) approach is a GIS-based modeling framework that combines land evaluation methods with socioeconomic and multi-criteria analysis to evaluate spatial and dynamic aspects of agriculture. The results of the global AEZ assessment are estimated by grid cell and aggregated to national, regional and global levels. They include identification of areas with specific climate, soil and terrain constraints to crop production; estimates of the extent and productivity of rain fed and irrigated cultivable land and potential for expansion; quantification of cultivation potential of land currently in forest ecosystems; and impacts of climatic change on food production, geographical shifts of cultivable land, and implications for food security.

A complete description of the methodology can be found in the next publication, as well as at the FAO/IIASA CD-ROM, also announced below.

Orders to: see below.

Global Agro-Ecological Zones Assessment: Methodology and Results. IIASA Interim Report IR-00-064. G. Fischer, H. van Velthuisen and F.O. Nachtergaele. IIASA and FAO, 2000, xxiii + 314 p. Softcover.

Over the past 20 years, the term agro-ecological zones methodology (AEZ) has become widely used. AEZ provides a standardized framework for the characterization of climate, soil and terrain conditions relevant to agricultural production. In this context, the concepts of Length of Growing Period (LGP) and of latitudinal thermal climates have been applied in mapping activities focusing on zoning at various scales, from sub-national to global level. Also, AEZ matching procedures are used to identify crop-specific limitations of

prevailing climate, soil and terrain resources, under assumed levels of inputs and management conditions. These two sets of activities result in very large databases. The information contained in the datasets from the basis for a number of AEZ applications, such as quantification of land productivity, extents of land with rain fed or irrigated cultivation potential, estimation of the land's population supporting capacity, and multi-criteria optimization of land resources and development.

The AEZ methodologies and procedures have been extended and newly implemented to make use of digital geographical databases, and to cope with the specific characteristics of growing periods in the seasonal temperate and boreal climates. This report describes the methodological adaptations necessary for the global assessment and illustrates with numerous results a wide range of global AEZ applications.

Orders to: see below.

Global Agro-ecological Zones, version 1.0. FAO Land and Water Digital Media Series 11. IIASA and FAO, 2000. CD-ROM.

The information of the above two publications can be found on this CD-ROM. The data and applications presented includes examples of: quantification of land productivity, estimation of extents of land with rain fed or irrigated cultivation potential, occurrences of environmental constraints to agricultural production, indication of potential "hot spots" of agricultural conversion, and possible geographical shifts of agricultural land potentials as result of changing climate. Attention is also given to the limitations of the currently available global datasets and recommendations are made for upgrading and extending the base information, and for future applications. The CD-ROM contains a section with bibliographical references, an index and a search engine. It also provides a large number of maps and tables in graphic, GIS and spreadsheet formats.

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www.iiasa.ac.at/research/luc/gaez/index.htm.

For information about the project, please contact Dr. G. Fischer at IIASA (Fax: +43-2236-71313).

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Berechnung von Prüfwerten zur Bewertung von Altlasten (PBA) – Ableitung und Berechnung von Prüfwerten der Bundes-Bodenschutz- und Altlastenverordnung für den Wirkungspfad Boden-Mensch aufgrund der Bekanntmachung der Ableitungsmethoden und –maßstäbe im Bundesanzeiger Nr. 161a vom 28. August 1999.

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Geocology of Antarctic Ice-Free Coastal Landscapes. L. Beyer, M. Bölter, University of Kiel (Eds.). 2002. xxiv, 424 pp., 54 figs., 59 tabs. (Ecological Studies Analysis and Synthesis, Vol. 154). Hardcover. ISBN 3-540-42268-4.

Research in Antarctica in the past two decades has fundamentally changed our perceptions of the southern continent. This volume describes typical terrestrial environments of the maritime and continental Antarctic. Life and chemical processes are restricted to small ranges of ambient temperature, availability of water and nutrients. This is reflected not only in life processes, but also in those of weathering and pedogenesis. The volume focuses on interactions between plants, animals

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Legal Basis and Practical Experience. Sebastian Oberthür, Matthias Buck, Sebastian Müller, Dr. Stephanie Pfahl, Richard G. Tarasofsky, Dr. Jacob Werksmann, Alice Palmer. Ecologic Centre for International & European Environmental Research, Berlin. Reihe: Berichte des Umweltbundesamtes, Band 11/02. 2003. XIII. 287 Seiten. 15,8 cm x 23,5 cm, kartoniert. ISBN 3 503 07060 5.

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and 3. the ten co-operating international scientific journals. Every four years, a 'World Congress of Soil Science' is organised, the next one will be held in Philadelphia, PA, USA, in 2006."

Another association concerns the Battelle Sediments Conferences (www.battelle.org/sedimentscon) of which JSS belongs to the Co-operating Organisations. One of the consequences from the co-operation with JSS is the beneficial connection of the two sediments conferences to be held in Venice/Italy, September/October 2003, 1. the Intermediate SedNet Conference, and 2. the Battelle 'Conference on Remediation of Contaminated Sediments'. The SedNet Conference takes place on 29–30 September ending up 5:00 p.m., and the Battelle Conference adjoins on 30 September 6:00 p.m. through October 3.

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