

# NEWSLETTER

2/2008



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Cover photo: Intense monsoon rains causing runoff and erosion from adjacent maize fields. Runoff is concentrated and cascades down a farm footpath, transforming it into a torrent for only about 20 minutes. Yiliang, Yunnan Province, China, 5 September 1990.

Photo by Mike Fullen (Wolverhampton).

# E.S.S.C. NEWSLETTER 2/2008

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# INTERNATIONAL FORUM ON SOILS, SOCIETY AND GLOBAL CHANGE PROGRAMME FOR ACTION

## STATEMENT AGREED AT THE “INTERNATIONAL FORUM ON SOILS, SOCIETY AND GLOBAL CHANGE”, HELD IN SELFOSS, ICELAND, 31 AUGUST–4 SEPTEMBER 2007

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Successful implementation on the ground of efforts to prevent, mitigate and adapt to environmental and social changes begins with the stewardship of the soil by and for the users of the land.

Stewardship of the soil results in:

- Conservation of the soil resource, and of the ecosystem services that depend upon it.
- Improved food security and fibre productivity for human well-being and development.
- Increased water storage capacity and flood prevention, and water supply.
- Increased capture and retention of carbon and other greenhouse gases to mitigate global climate change.

Experiences of soil stewardship and restoration efforts in communities around the world are diverse and location-specific. Bringing together these experiences from the 'International Forum on Soils, Society and Global Change' held in Selfoss, Iceland, to celebrate 100 years of soil conservation and vegetation restoration in the country, we build our common global soil stewardship. We have resolved on the following actions. Recognizing that there are many institutions already engaged in the field that are not mentioned below, we invite other interested partners to engage in the process.

### **1. Promoting Soil stewardship and Land Care:**

A set of guiding principles on soil stewardship and land care is being drafted by an informal working group emerging from the Forum. These will be used as the basis for raising awareness, education and training activities, preferably through joint initiatives across the three UN Conventions. The Working Group will also collate practical sources of knowledge and lessons from experience into a knowledge base to assist land care practitioners around the world. The knowledge base will include successful examples of land literacy projects aimed at assisting young people to 'read the land' and information on the emerging issue of carbon sequestration benefits from Landcare initiatives. An 'International Year of Land Care' may be proposed. A subcommittee of the Forum Working Group has been formed to explore these possibilities with interested governments. An interpretative statement to the Earth Charter to promote the soil ethic will be prepared by relevant interested parties.

### **2. Operationalizing synergies amongst the Conventions through implementation of soil stewardship initiatives on the ground:**

A joint mechanism amongst the Conventions is to be initiated by the UNCCD (United Nations Convention to Combat Desertification) to operationalize synergies in implementation of the MEAs (Multilateral Environment Agreements). These will begin with a request to the

'Intergovernmental Panel on Climate Change' (IPCC) to develop a 'Special Report on Land Degradation and Climate Change' (as done previously for the CBD (Convention on Biological Diversity) with respect to biodiversity). This document, together with other existing documents addressing synergies in the subject matters of the three Conventions, will be assessed by an *ad hoc* group of experts under the JLG. Based on this assessment, the Group will compile guidelines for joint implementation of the three Conventions, targeting focal points and donors of these Conventions. A second avenue of achieving synergies in implementation will be a certification mechanism independently developed by each Convention, for assessing the added benefit of actions under one Convention, to the subject matters of the other Conventions. The CBD will be requested to review its work on agricultural biodiversity, to create an advisory body and to identify a lead agency for its implementation.

### **3. Enabling knowledge management to inform better decision-making:**

To enable better land-use decision-making, primary data must be augmented, maintained and improved. This requires ongoing financial and technical support to mandated national, regional and international institutions. In this process, it is important that methodologies for assessment of land degradation from the perspective of climate change, desertification and other major global processes are harmonized across organizations and updated as needed. A fast-tracking mechanism has to be developed for incorporation of new data into assessments. To ensure access, datasets collected at any level need to be centrally catalogued. Knowledge management should become a fundamental component in all projects funded by GEF (Global Environment Facility) and other major donors. Scientists and scientific institutions have the responsibility to make information and knowledge available for land users and decision makers at all levels. We encourage the WBCSD (World Business Council for Sustainable Development) and the GM (Global Mechanism) to devise an action plan for the greater involvement of businesses in supporting sustainable land management and related capacity building. WOCAT and KM:Land should bring together networks to establish a knowledge base that makes lessons learned accessible and facilitates capacity building.

### **4. Improving legislation and policy frameworks through capacity building:**

The 'IUCN (International Union for Conservation of Nature) Commission on Environmental Law Specialist Group on Sustainable Use of Soils and Desertification' will develop guidelines for national governments to strengthen the capacity of their legal frameworks to implement the CCD (Convention to Combat Desertification) and to develop new or improved soils legislation, including that with respect to soil contamination. The Forum recognized that this group has also been engaged for some time in discussion on the formulation of a new, binding, international instrument concerning the protection and sustainable use of soils. This work will be progressed by the Commission, in consultation with the soil science community, with the aim of strengthening the current legal, policy, ethical and institutional frameworks at both national and international levels. Enhanced human capacity and knowledge management for the implementation of laws and policies will be promoted through the above actions proposed by the Forum.

### **5. Galvanizing support from business and decision-makers for soil stewardship including recognition of carbon sequestration benefits:**

At least a quarter of the excess CO<sub>2</sub> in the atmosphere has come from land use change in the last century. The challenge is to put it back in the soils, where it is needed – so a better understanding of processes, practices, measurement and monitoring of carbon-

sequestration in terrestrial ecosystems is needed. The global potential of -2 billion tonnes of C-sequestration by restoration of degraded ecosystems is estimated to be US\$30 billion/year at present market values.

Priority investment by donors and the private sector should strengthen capacity, policy and assessment for carbon sequestration. The Working Group calls on the CDM (Clean Development Mechanism), and national and international organizations to transform market mechanisms, reduce risks, reduce transaction costs, and maximize the multiple economic and social benefits from carbon-sequestration in soils and the allied gains in ecosystem health and resilience and containing climate change. The benefits of land restoration will depend on strengthening human resource and technical capacity of local institutions. With these actions, it is possible to expand the carbon markets – state-mandated, CDM and voluntary – and maximize benefits to local land users.

A high-level round table of scientists, business leaders and policy makers is called for to put this issue in the mainstream of development policy.

### ***DON'T FORGET THE SOIL!***

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# Introduction of Guest Editorials

This issue of the ESSC Newsletter presents the fifth of our 'Guest Editorials.' This is an opportunity for leading authorities in the soil science community to offer their perspectives on issues relating to soil conservation. The fifth in our series is from Samran Sombatpanit (Bangkok, Thailand). Eventually, we envisage this collection of essays developing into an authoritative book.

## **THE 'WORLD ASSOCIATION FOR SOIL AND WATER CONSERVATION' (WASWC):**

### **HOW IT WORKS AND ITS DIRECTION**

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I appreciate that Mike Fullen invited me to write a Guest Editorial for the ESSC Newsletter. This gives me a good chance to recall what has been happening during the first 25 years of the 'World Association of Soil and Water Conservation' (WASWC) as well as to inform ESSC members what we are precisely doing at this time, what benefits are given to worldwide members and what our future direction will be.

#### **Historical background**

As far as I can recall, Dr William (Bill) Moldenhauer expressed his idea about forming a group called, something like, an 'association,' to act as a forum for soil and water conservationists worldwide for the first time at a conference in Honolulu, Hawaii, USA, in January 1983, organized by Professor Samir A. El-Swaify. The idea did not progress much then, but a positive outcome from that Conference was an organization called the 'International Soil Conservation Organization' (ISCO), with a mandate to organize a conference every 2-3 years in various locations around the world. Half-a-year later, Bill put the same proposal to the annual conference of the 'Soil Conservation Society of America' (SCSA; later called the 'Soil and Water Conservation Society,' SWCS) somewhere on the East Coast of the USA. This time, the idea was accepted and SWCS placed the Association, called the 'World Association of Soil and Water Conservation' (WASWC) as its international wing. The Association was envisaged as an entity that the members of SWCS who were interested in international affairs of soil and water conservation (SWC) may join, with a nominal fee of US\$10/year. The membership was also opened to other non-SWCS members both inside and outside the USA.

The work of the WASWC went well during its first several years, as its leadership changed 'to and fro' across the Atlantic. After Bill initiated the Association, Norman Hudson (UK) followed, with Rattan Lal (USA) taking the rein later, and Hans Hurni (Switzerland) became the next President. Several technical meetings that took place in Africa, North America, Asia and Europe brought out several notable publications (reported at the end of this article) and they have become the early treatises on soil and water conservation produced by collaboration between US and international soil scientists and conservationists.



The second decade started with the WOCAT programme of Hans Hurni, when WASWC members had very good opportunities for several years to be involved in this ambitious attempt by Berne University (Switzerland) to catalogue, analyse, synthesize and map SWC practices from all over the world. This initiative finally succeeded and resulted in its first major output in the form of a global overview book called 'Where the Land is Greener', in late 2006.

Inspired by the three SWCS-WASWC publications concerning the conservation and management of sloping lands published in 1988, 1990 and 1992, which were the results from conferences in Puerto Rico, Taiwan and Indonesia, respectively, Thailand offered to organize one international workshop on 'Soil Conservation Extension' in 1995. The resulting book, with the same title as the workshop, was followed by other publications up to 2007. The series was well supported by a publishing company. The publications of WASWC have served the public very well, their contents are unique in that contributions from both developed and developing countries were mingled and thus the generalized views truly reflect the 'world view' and could apply to various locations and situations with minimum bias.

### **WASWC in a new era**

As WASWC was approaching the end of its 2nd decade, some organizational shake-up was inevitable. The fact was, although the work of technical persons (e.g. President, Deputy President, Regional Vice-Presidents) was voluntary, being performed without remuneration, the Secretariat work at the SWCS headquarters in Iowa, USA, was not. As the number of members dwindled from the golden years (~700+ during 1987-1990) to less than 400 in 2001, the finances of WASWC became so bad that it could not go on and we had to shift our strategy by changing the newsletter from a newsprint to digital format, to be circulated by e-mail. This strategic change was suggested by Hans Hurni during the time that David Sanders was President, and proved highly beneficial. During my Presidency (2002-2004, after David Sanders, with Michael Zoebisch as Deputy President), the production base of the Newsletter, our flagship publication, changed from the USA to Thailand. However, we still sent out duplicated newsletters to members who had no internet connection for several few years. The WASWC Council at that time reduced the fee for developing country members to US\$5/year.

To prevent further financial loss, the Secretariat of WASWC eventually moved from the USA to China in April 2003, through the offer of the Ministry of Water Resources to host it at no cost. As such, our management has been working with the Ministry people to familiarize them and to progressively move Secretariat operations to China. In the meantime, our management has been operating in other Asian countries, e.g. Japan and Thailand. From 2008 onwards some major Secretariat activities will also be undertaken in India, The Philippines and Taiwan.

As mentioned earlier, the change of medium of communication from printout to digital was crucial and it helped us to open up many more communication possibilities; thus changing a 'challenge' into an 'opportunity'. From the WASWC Newsletter as our sole initial publication, more publications have followed:

**Publications:** Newsletter, HOT NEWS, Journal, Proceedings, Special publications and WASWC books.

**Services:** Discussion forum, contacts among professionals in various countries, conference support, issuance of Norman Hudson Award and Photo Websites:

<http://community.webshots.com/user/waswc>

<http://community.webshots.com/user/waswc1>

All these things are also accessible from the websites:

<http://waswc.soil.gd.cn>

[www.waswc.org](http://www.waswc.org)

### **Membership categories and strategies**

Along with this expansion of activities, we opened up more membership categories. From Individual (annual) membership alone prior to 2001, we started to offer Life membership and Organizational membership, both at affordable rates. Persons or organizations in developing countries pay only one-half of their developed country counterparts: a form of social justice on our part. Lately, in the Individual membership category, we even give an incentive that a payment for four years at the same time will enable the membership to be valid for five years, which is proving popular.

With more membership categories, some donations, some money given by societies that had terminated and advertisement fees, the financial status of the WASWC greatly improved and enabled some of our officers to carry out certain activities, so that the WASWC can offer more products and services to our global members. For example, with a chance to participate in person at various meetings, we can report developments to members as primary news, rather than secondary news as before.

To enhance membership registration, we had initiated a kind of Guest membership some years ago. In the process, any conference organizer, especially concerning natural resources, is eligible to send a list of participants to us. Then we invite all of them to be WASWC Guest members for one year, at no charge, and they receive the same benefits as paying members. This way through the internet, many people, whatever they do and wherever they live, will have a chance to know us and our many activities and some of them may sign up as paying members later. This method has proved beneficial in publicity, especially when there is something of importance to announce. This strategy has enabled WASWC to build up its membership list for all categories to several thousand in 2008.

One interesting category is the Organization membership. When registered as such, with a nominal fee, everyone in that organization has access to all products and services of WASWC and can participate in all interactive activities. This is good in such a way that the activities and outcomes of WASWC can be useful to many people and, at the same time, their organization does not have to pay much. Thus, the Association can have some revenue to pay for its expenditure and helped limit the administrative work of WASWC to a manageable level. We therefore wish to see more organizations sign up with us. Some large-size organizations that have been with us include the 'International Erosion Control Association' (IECA: with 3,100 members), the 'Soil Conservation Society of India' (SCSI: 2,200 members), the 'Indian Association of Soil and Water Conservationists' (IASWC: 1,600 members) and the 'Argentinean No-Till Farmers Association' (AAPRESID: 1,000 members), to mention just a few.

### **Types of publications**

For about 20 years WASWC operated with one steady activity, i.e. the production of a 4-8 page newsletter posted to members. With the shift to the use of IT, we have developed more publications, which can be put in the following categories:

1. WASWC HOT NEWS, monthly, for reporting news about conferences, funding, awards-prizes, training courses, fellowships, and new information sources.
2. WASWC Newsletter, quarterly, to report the activities of the Association, the special

features of various interesting programmes and the outcomes from many conferences of note. This publication is now published in 10 languages (English, Spanish, French, Chinese, Portuguese, Bahasa for Indonesia and Malaysia, Russian, Vietnamese, Arabic and Thai).

3. Journal of the WASWC, to report peer-reviewed research and research papers.
4. Proceedings of the WASWC, to publish non-peer-reviewed papers in the form of reports or observations.
5. Special publications, occasionally available, to publish long papers or collection of papers of interest that may give unbiased information to our members.
6. WASWC books.

To the question about the quality of our products we must say, that we have the primary purpose in giving opportunities to members in developing countries to publish their works, many of which may not reach the very high standards recognized in the developed world. We, however, do the editing as well as possible, to comply with the recognized style present in certain publication guidelines. So far, the papers in the Journal of WASWC (peer-reviewed) and Proceedings of WASWC (non-peer-reviewed) were among those receiving good editing, with the intention of the Journal being indexed with several authorities, to be more attractive to future potential authors.

### **Subject matters for WASWC publications**

Since the beginning, WASWC has tried to find subjects that can facilitate SWC works in various parts of the world. The theme of SWC in the classic 'Sloping land' book series made WASWC officers busy for several years (1987-1992). After that, we narrowed down to specific themes such as Extension, Incentives, Bioengineering, and M&E (Monitoring and Evaluation) as the latest one.

Moreover, WASWC has ventured into producing small-sized publications, called Special Publication (SP). SP No. 1 (SP I) with the title 'The USLE Story' came up in 2003 that shows the history of how the Universal Soil Loss Equation was developed, and SP II 'Carbon Trading' concerned the carbon credit as a part of campaign to limit climate change and was published in 2004. A remarkable publication, SP III, with the title 'No-Till Farming Systems', was published because of the excellent co-operation received from many agencies (co-publishers) all over the world. After spending three years preparing the ground work with five papers ready, we opened up the opportunity to any organizations to send papers related to no-tillage to be published with a condition that they would buy several copies at cost to distribute in their circles. The price offered, slightly different from region to region, was planned to cover only the printing and postage costs. Such condition had created an 'enabling environment' that we obtained many papers to publish and ended up with 34 chapters, covering no-till experiences from 20 countries in six continents. Altogether, 68 agencies joined, with an initial purchase totalling 7,000 copies. This has given us a clue of what and how WASWC should do to spread knowledge quickly.

However, this quick way of spreading technology may not be repeated like SP III easily. The reasons include:

1. Exceptional technology. Among various farm technologies, no-tillage has emerged to be of great interest almost immediately, due to multi-faceted usefulness (less use of fossil fuel, less farm expense, less CO<sub>2</sub> emission, less soil erosion, less need for the new land to be taken to grow crops, plus the enhancement of soil biodiversity).

2. Affordable price. The price of the book offered for various regions has been realized to be very low, which attracted buyers and enabled the rapid spread of technology. Had the book been offered at an appreciably higher price, e.g. 30-40% higher, would there still be a large order? We think not.
3. Present structure of WASWC. The structure of WASWC at this moment does not allow us to undertake such a huge programme like publishing the No-Till book continually. The handling of this book had appreciably interrupted the other activities of WASWC, especially the issuing of the WASWC Newsletter.

Although there are several subjects in the pipeline for producing SPs, the issue needs to be discussed to develop practical solutions of how we should proceed with this publication series.

### **Administration in WASWC**

For almost 20 years since our establishment, the Association's main functions rested with the President, Deputy President, Executive Vice-President, nine Regional Vice-Presidents (RVPs) and the Secretariat. From 2002, more RVPs were appointed to take care of regions of the world more effectively. The year 2003 saw a new position (National Representative; NR) established, and in 2004, another position, Special Representative; SR) was introduced.

Since all these positions had been totally voluntary, resulting performance differed greatly among RVPs and also among NRs, and the tasks performed by the two groups became quite similar. All VPs, except one, were known to do their work only in their own countries, if and when they did. It was discussed in the Council in late 2007 and agreed that the two positions should be made into one, the Vice-President (VP), and persons who hold such position may perform within one country or more than that. All the VPs and NRs whose term ended in December 2007 may resume their duty, if they like, in the present Council of 2008-2010 as VPs.

The Council, on the other hand, has evolved over the years. When I became the Deputy President in mid-1997 (with David Sanders as President) the Council (of five) comprised the President, Deputy President, Executive Secretary, Treasurer and Immediate Past President. The number had increased to nine in October 2005, to include representatives from all continents and again increased in the beginning of 2008 to 23 to respond to the increased workload as well as to have representatives from other societies, plus several subject matter specialists.

### **The rationale of the WASWC**

As I recall, there had been several societies or associations in the world before the WASWC was initiated in 1983, e.g. in the USA, India, Taiwan, Thailand, and perhaps Iceland, but there was none that operated internationally. ESSC came into being in 1989. Since physical and social circumstances, especially the wealth levels, of various countries are so varied, a body like the WASWC may play a role in promoting good understanding among people in many regions of the world, leading to effective and broad exchanges of knowledge and experience in natural resource management. Thus, the role of the WASWC as a forum could be realized. Also, during recent decades, the trend was that countries of various wealth levels came to work together more than before, with an understanding that we are living on only one world.

Another reason for the WASWC to function in a useful way is to make facilities, e.g. technologies and logistics, available to members of various countries to enable the rapid

diffusion of new information. For example, during the last few months, WASWC had sent several hundred copies of the 'No-Till Farming Systems' book to donate to some countries that had potential in using this technology, but their financial conditions did not allow the bulk purchase of the book. Fortunately, there were some benefactors who stepped in to make this useful action possible. During past several years some kind members have given several gift memberships to other less fortunate colleagues.

The need for having the WASWC seems more crucial now than ever. With the increased threat from global warming, which all countries have to work together to tackle, WASWC can play a role in accelerating the action of soil and water conservation, an important component that will help retain much carbon in the ground as well as to preserve soil fertility for food production.

One aspect of the WASWC needs attention, i.e. the Association has been operating under volunteers to a great extent and our work does not involve much money. One-year Guest membership can be given for free to anyone who asks and when registered the fee in any category is always very low when compared with other societies/associations and other necessities in life. Such an environment is inductive to bringing many people who are concerned with natural resource management to join.

### **A way forward**

The Council term of 2008-2010 will be a crucial period about the administration and development of the WASWC. Since core persons who have been running the Association are in their retirement age (eighties, seventies and late sixties, for example) they naturally look for their replacements in the first place, and, even more importantly, try to see various functions of the WASWC firmly established at institutions that have the will and capability to take part in this novel movement to conserve the world's natural resources. The Chinese Ministry of Water Resources in Beijing has provided the Secretariat as an umbrella and, for practical reasons; the various tasks are or will be undertaken by several institutions in China and other Asian countries (i.e. Japan, The Philippines, Thailand and India).

The following is our vision of what WASWC should be or how it could serve society. Even though some of them appear as a kind of 'wish list' they can nevertheless be used as our guiding principles and we will try our best to have these wishes realized.

1. Various functions in the WASWC Secretariat are firmly established at various institutions, under effective direction of WASWC Officers (e.g. Councillors, Vice-Presidents and Special Representatives).
2. Products and services of WASWC are of good quantity and quality and will be useful in enhancing good working practises and tools for those responsible for natural resource management worldwide.
3. Officers representing the WASWC in various countries/regions do their work effectively in terms of administration, technical, financial and implementation aspects.

### **WASWC Publications** (Published in association with other institutions or publishers)

#### **1988**

- Conservation Farming on Steep Lands. Edited by W.C. Moldenhauer and N.W. Hudson, (ISBN 0935734198).

**1989**

- Land Husbandry – a Framework for Soil and Water Conservation by T.F. Shaxson, N.W. Hudson, D.W. Sanders, E. Roose and W.C. Moldenhauer (ISBN 0935734201).

**1990**

- Soil Erosion on Agricultural Land. Edited by J. Boardman, I.D.L. Foster and J.A. Dearing, (ISBN 0471906027) (from a meeting co-sponsored by WASWC).

**1991**

- Development of Conservation Farming on Hillslopes. Edited by W.C. Moldenhauer, N.W. Hudson, T.C. Sheng and San-Wei Lee (ISBN 0935734244).
- Soil Management for Sustainability. Edited by R. Lal and F.J. Pierce (ISBN 0935734236).

**1992**

- Conservation Policies for Sustainable Hillslope Farming. Edited by S. Arsyad, I. Amien, Ted Sheng and W.C. Moldenhauer (ISBN 0935734287).
- Soil Conservation for Survival. Edited by K. Tato and H. Hurni (ISBN 0935734279).
- Erosion, Conservation and Small-Scale Farming. Edited by H. Hurni and K. Tato (ISBN 3906290700).
- Environmental Regeneration in Headwaters. Edited by J. Krecek and M.J. Haigh.

**1993**

- Working with Farmers for Better Land Husbandry. Edited by N. Hudson and R.J. Cheatle, (ISBN 1853391220).

**1995**

- Adopting Conservation on the Farm: An International Perspective on the Socioeconomics of SWC. Edited by T.L. Napier, S.M. Camboni and S.A. El-Swaify (ISBN 0935734317).

**1996**

- Hydrological Problems and Environmental Management in Highlands and Headwaters. Edited by J. Krecek, G.S. Rajwar and M.J. Haigh (ISBN 8120410483).

**1997**

- Soil Conservation Extension: From Concepts to Adoption. Edited by S. Sombatpanit, M. Zoebisch, D. Sanders and M.G. Cook (ISBN 8120411897).

**1999**

- Multiple Objective Decision Making for Land, Water and Environmental Management. Edited by S.A. El-Swaify and D.S. Yakowitz (ISBN 1-57444-091-8).
- Incentives in Soil Conservation: From Theory to Practice. Edited by D.W. Sanders, P. Huszar, S. Sombatpanit and T. Enters (ISBN 1-57808-061-4).

**2000**

- Reclaimed Land: Erosion Control, Soils and Ecology. Edited by M.J. Haigh (ISBN 90 5410 793 6).

## 2001

- Response to Land Degradation. Edited by E.M. Bridges, I.D. Hannam, L.R. Oldeman, F. Penning de Vries, S.J. Scherr and S. Sombatpanit (ISBN 812041942).

## 2004

- Ground and Water Bioengineering for Erosion Control and Slope Stabilization. Edited by D.H. Barker, A.J. Watson, S. Sombatpanit, B. Northcutt and A.R. Maglinao (ISBN 1-57808-209-9).

## 2007

- Monitoring and Evaluation of Soil Conservation and Watershed Development Projects. Edited by J. de Graaff, J. Cameron, S. Sombatpanit, C. Pieri and J. Woodhill. (ISBN 978-1-57808-349-7).

### **Special Publications, published by WASWC**

**2003:** No. 1. Pioneering Soil Erosion Prediction – The USLE Story. By John Laffen and Bill Moldenhauer (ISBN 974 91310 3 7), 54 pp. (available on the website).

**2004:** No. 2. Carbon Trading, Agriculture and Poverty. By Mike Robbins (ISBN 974 92226 7 9), 48 pp. (available on the website).

**2008:** No. 3. No-Till Farming Systems. Edited by Tom Goddard, Michael A. Zoebisch, Yantai Gan, Wyn Ellis, Alex Watson and Samran Sombatpanit (ISBN 978-974-8391-60-1), 544 pp.

## **OPEN LETTER:**

### **THE LONG AND WINDING ROAD**

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*Dear ESSC Members*

On 20 December 2007 at their meeting in Brussels, the Ministerial Environmental Council of the EU created bad news for European Soil Protection! At ministerial level, the Council discussed the proposal for a Soil Framework Directive. This was presented by the Portuguese Presidency, which had made enormous efforts to reach a political agreement and approval, with strong support from some EU States (Italy, Spain, Hungary, the Czech Republic, Poland, Ireland and Greece). However, unfortunately some countries (France, Austria, The Netherlands, Germany and the UK) opposed the text which had already been approved by the European Parliament. Throughout the day, the Presidency proposed different texts, each time with a lower level of scope and commitment, in order to obtain consensus for approval. Despite all efforts, the blocking minority voted against any compromise text. Therefore, there was insufficient support to adopt a political agreement.

This is a very disappointing decision. It is a missed opportunity to protect soil and the environment, to combat climate change and to boost the competitiveness of Europe.

The much acclaimed European environmental leadership is absent from this decision. Furthermore, the consensus is that the proposed Directive is unlikely to progress in the immediate future. However, it is clear that sooner or later the EU will confront a general framework for soil protection and that we, as the ESSC, will continue our efforts towards this goal. Also the Commission is very willing to continue working very closely with the European Council in the forthcoming presidencies to make progress on the adoption of this very important piece of legislation and to overcome this impasse.

I am reminded of a comment by Winston Churchill: "Never give in. Never, never, never, never in nothing great or small, large or petty – never give in except to convictions of honour and good sense" (Sir W. Churchill, speech to Harrow School, 29 October 1941).

We are not in such a dramatic situation, but the spirit of determination is still applicable. I am convinced that soil and soil protection issues will receive adequate attention. The world is becoming smaller and more crowded. The demographic growth and the need for food, for the expected 9,000 million people, are important challenges. Increasing water demand and the regulation of the hydrological cycle are linked to soil. Climate change and the role of soil as a sink and source of greenhouse gases need new considerations. Biodiversity and landscape conservation require attention to the crucial role of soil. Desertification and forced human displacement are also linked to soil degradation. All these major challenges will oblige us to take care of our soil resources. In this context, Europe could have the opportunity to show approaches of how to deal with the sustainable use of the soil. It will be a matter of time.

I would like to ask all of you, as ESSC members, to keep actively supporting the European Soil Protection initiative, now in a temporary parenthesis, particularly at national level. We are looking forward to continuing our efforts towards achieving better and much needed soil protection in Europe.

Kind regards

**José Luis Rubio**  
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Carbon emissions are of great concern worldwide, because they trap heat in the Earth's atmosphere and are a major cause of global climate change. We need to know where and how much carbon is being released or captured in order to develop sensible and cost-effective measures to curb climate change. Unfortunately, there are still many unknowns in the global carbon cycle, especially on land.

Our research, described in the 26 October 2007 Issue of **Science** (Van Oost et al., 2007), considered how soil erosion on agricultural land could affect global carbon emissions. Soil erosion previously had been thought to have a large impact on the carbon cycle, but current research was inconclusive and contradictory because scientists were still debating whether it resulted in a great release or a great uptake of carbon (equalling ~10% of fossil fuel emissions).

In our study, we estimated the net amount of carbon being captured into the soil and the net amount of carbon being released into the atmosphere during the last 50 years as a result of erosion. We used a by-product of nuclear weapons testing, Caesium-137, that is present throughout the world, to track the movement of soil around agricultural landscapes. This allowed us to predict how much carbon would be expected to be found in areas of soil erosion and deposition. By comparing these predictions with measured amounts of carbon in 1400 soils, we could identify which soils had released carbon versus which ones had captured carbon.

Our results showed that in landscapes subject to soil erosion, erosion acts like a conveyor belt, excavating subsoil, passing it through surface soils and burying it in hill-slope hollows. During its journey, the soil absorbs carbon from plant material, and this becomes buried within the soil in depositional areas. At sites of erosion, carbon is exported so there is less remaining carbon available for release. At the same time, plants that continue to grow at sites of erosion contribute carbon to the soil, leading to the replenishment of the carbon stocks. We estimated that approximately 26% of the eroded carbon is replenished.

The proportion of eroded carbon that is replaced is similar to the magnitude of the 'active' carbon pool, which turns over within years to decades, and we suggest that only this pool undergoes most rapid replacement. At sites of deposition, the addition of sediment and soil to the surface leads to the gradual burial of carbon below the surface. As carbon is further buried down in the soil profile, it is moved from the area of most microbial activity (and hence large carbon release) to an area where there is less microbial activity (and hence reduced carbon release). Therefore, our results suggested that the buried carbon was actually

stable and almost no carbon was lost to the atmosphere. Erosion and deposition, therefore, lead to more carbon being removed from the atmosphere than is emitted; creating what can be described as a 'sink' of atmospheric carbon.

Using models, we extrapolated these findings to a global scale and found that this sink of atmospheric carbon represents the equivalent of ~1.5% of annual fossil fuel emissions. This finding challenges previous assessments that erosion represents an additional release of carbon to the atmosphere equivalent to ~10% of annual fossil fuel emissions. On the other hand, the amount of carbon taken out of the atmosphere and mixed into the soil is also much less beneficial than some previous studies had estimated. Why is our estimate so much lower? There are two reasons here. One is that past estimates have tended to assume that all the eroded carbon found in deposition areas has been replaced by new carbon on the slopes, whereas for our data we find this figure around about only 26% of the carbon being replaced. The other reason is that we have estimated rather lower rates of soil erosion on agricultural land, reflecting improvements in the modelling of erosion rates at the global scale.

This new insight into the effect of erosion on the carbon cycle is essential for sound management of agricultural soils. If previous assessments that erosion causes a high level of carbon emissions to the atmosphere had been correct, then erosion control could have been used to offset fossil fuel emissions. These results show that erosion control should be pursued for its environmental and agronomic benefits, but will not play a role in the currently needed potentials to offset fossil fuel emissions. Finally, our results indicate that large amounts of carbon (16-21 Pg) have been buried in shallow deposits within agricultural watersheds during the last 50 years. The stability of this large pool under present and future climatic disturbances remains highly uncertain.

**Reference:**

Van Oost, K., Quine, T.A., Govers, G., De Gryze, S., Six, J., Harden, J.W., Ritchie, J.C., McCarty, G.W., Heckrath, G., Kosmas, C., Giraldez, J.V., Marques da Silva, J.R. and Merckx, R. (2007). The impact of agricultural soil erosion on the global carbon cycle. *Science*, 26 October 2007, 626-629.

**Editor's note:**

Congratulations to Kristof and his team for their publication in such a high-impact international journal.

## **A RESEARCH PROFILE OF THE 'DESERTIFICATION RESEARCH GROUP' (NRD) OF THE UNIVERSITY OF SASSARI (ITALY)**

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**Chiara Zanolla, Giuseppe Enne and Claudio Zucca**

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Soil conservation is one of the main priorities of our times. It is also the core element of any strategy to combat desertification and poverty, in a world where population growth and uncertainty in food supply linked to environmental crises are increasingly becoming a menace to development and peaceful stability. Simultaneously, the preservation of carbon stocks and the rich soil biodiversity continue to draw the attention of the international community actively engaged in fostering effective sustainable development policies.

In this framework, it is necessary that scientists and researchers involved in soil protection act synergistically with experts on climate, water and biological resources. Coherently with this approach, the European position on soil issues will certainly provide a relevant boost to European and national policies. The latter in particular are sometimes biased by schematic approaches, as is the case in Italy; soil conservation is mainly related to such factors as slope stability and flood risk. Thus, soil conservation specialists tend to be mainly geologists and geomorphologists. We strongly believe that the ESSC has the important and demanding role to play of raising the awareness of the European scientific community about these issues.

The Desertification Research Group (NRD) of the University of Sassari (Italy) attaches great importance to soil conservation, which constitutes one of its main activities both in the research domain and in technical co-operation with developing countries. On this occasion, we would like to bring to your attention two recent initiatives carried out by NRD that have provided interesting scientific results:

- Research activities carried out in Sardinia within the framework of the DesertNet Project (INTERREG IIIB MEDOCC).
- Studies carried out in Morocco and Tunisia within the framework of a co-operation project under the EU MEDA-SMAP Programme.

### **Desertnet Project: Irgoli site (east-central Sardinia, Italy)**

The Project assessed the impacts of land use on soil properties in an agropastoral area in east-central Sardinia. This is a rural region, where agropastoralism is one of the main economic activities. In recent decades, agricultural policies have favoured the increase of forage production in the region, also encouraged by subsidies. Such policies were not accompanied by the necessary guidelines for their implementation and often caused land degradation, due to both tillage and water erosion. During the experimental work, sampling sites were selected in relation to land use, land suitability and land use history. Different kinds of soil degradation indicators were considered: physical (soil granulometry, soil density and resistance to surface penetration; gully density, distribution and development; soil roughness and rill development), chemical (routine analytical set), biological (microarthropod fauna) and micromorphological (microporosity and microstructure). The results show that land use markedly influenced soil properties and caused severe soil degradation in most surveyed

sites and that an integrated use of different indicators can improve understanding, and monitoring of soil conservation phenomena.



Rill and gully erosion on grazing land in Irgoli (Sardinia, Italy). Photo taken by Claudio Zucca (NRD), April 2004.

### **SMAP Project in Morocco and Tunisia**

This Project is entitled 'Demonstration Project on Strategies to Combat Desertification in Arid Lands with Direct Involvement of Local Agro-pastoral Communities in North Africa.' It is conducted in vulnerable regions in Morocco and Tunisia, with the co-ordination of the NRD of the University of Sassari and the partnership of the local Ministries of Agriculture.



Atriplex n. plantation in Ouled Dlim (Marrakech, Morocco). Photo taken by Claudio Zucca (NRD), January 2007.

The Project involves restoration of vegetation cover with drought resistant perennial forage species (main genus: *Opuntia*, *Atriplex* and *Acacia*) on highly degraded rangelands, to mitigate desertification processes and to improve rangeland productivity. The areas are located in regions characterized by rural poverty, local food dependency and land abandonment. Here urgent measures are needed to promote optimization of resource management with regard to sustainable development. Research activities were conducted in the field to pave the way for future optimization of the spatial patterns of plantations and to monitor their impacts on soils.

### **The Desertification Research Group of the University of Sassari**

Finally, we would like to briefly introduce the Desertification Research Group (*Nucleo Ricerca Desertificazione* – NRD) of the University of Sassari. This was born in 1990 as a multidisciplinary research group focusing on Mediterranean desertification. To comply with the complexity of land degradation and desertification issues, the NRD Group involves several researchers from our University working in different disciplines, including earth sciences (geology, geomorphology, pedology), hydraulics, hydrology, agronomy, forestry, economics, animal science, bioecology and microbiology. Since its establishment, NRD researchers have been involved in the study of physical, biological and socio-economic aspects of desertification and land degradation in the Mediterranean as a consequence of the impact of agricultural policies and agropastoral activities.

Over recent years, NRD has participated in many R&D projects, at the International (MEDALUS II and III, DESERTLINKS, MEDRAP, REACTION, AIDCCD, DESURVEY, LUCINDA), interregional (DESERTNET and DESERTNET II – INTERREG IIIB MEDOCC) and national (RIADE) levels. These have worked in close relation with multidisciplinary consortia, thus maturing considerable expertise in the land degradation and desertification domains. These activities have particularly focused on monitoring and modelling, using *ad hoc* sets of indicators. Technical co-operation projects with North African Countries (Morocco, Tunisia and Egypt) also play a relevant role in NRD activity, mainly developed in the framework of the SMAP-MEDA Programme. Research and co-operation have developed alongside training of young researchers from Europe and beyond and networking activities for the exchange of data and experiences at the international level.

NRD is open to new collaborations in the domain of soil conservation. For any queries please contact:

#### **Professor Giuseppe Enne**

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#### **Editor's note:**

We welcome contributions outlining the work of European research centres, institutes and laboratories. Please tell us about the work of your institution.

### Summary of the article:

Sonneveld, B.G.J.S.\* and Dent, D.L.\*\* (2007). How good is GLASOD? *Journal of Environmental Management*,

doi:10.1016/j.jenvman.2007.09.008

\*Centre for World Food Studies, VU University Amsterdam, [b.g.j.sonneveld@sow.vu.nl](mailto:b.g.j.sonneveld@sow.vu.nl)

\*\*SRIC - World Soil Information, [David.Dent@wur.nl](mailto:David.Dent@wur.nl)

The Global Assessment of Soil Degradation (GLASOD), commissioned 20 years ago by the UN Environment Programme (Oldeman et al., 1991), collated expert judgments of many soil scientists to produce a world map of human-induced soil degradation. It has been an important source for national and international environmental policy decisions, but has been criticized on the grounds that its qualitative judgments were never tested for their consistency, the map units were too rough for national policy purposes, while the assumed relationship between land degradation and policy-pertinent criteria like crop production was unverified. The GLASOD authors were the first to point out its limitations; criticism should be directed at its inappropriate use - which underlines the need for a more rigorous and detailed assessment. Renewed alarm about land degradation from international organizations like FAO and UNEP clearly warrants a new global inventory; a review of the literature shows that irrespective of the approach, some degree of expert judgment will be called for, so it is worth drawing lessons from the GLASOD exercise.

In this study, we scrutinize the GLASOD assessments for the African continent for reasons of data availability and policy-relevance; the social and economic impact of land degradation seems to be most severe in Africa. First, we test the GLASOD assessments for their consistency by comparing expert judgments on the status of soil degradation for similar combinations of land and land use. Secondly, we evaluate the reproducibility of expert judgments by estimating an ordered logit model that relates degradation classes to easily-available information on explanatory variables, so as to enable land degradation assessments at unvisited sites. Thirdly, we analyse the impact of the land degradation on food production in a cross-sectional analysis relating GLASOD assessments to crop production data at sub-national level. To account for climatic variability, we express productivity as a ratio of actual to potential yield, while soil fertility appears explicitly. Furthermore, we analyse the association of the degradation-productivity relationship with prevalence of malnutrition and fertilizer usage.

So, how good is GLASOD? We find that the experts were not very consistent in assigning soil degradation classes to similar sites, possibly because they had different concepts of the degrees of degradation - these differences are likely to be more pronounced when experts come from different countries and have dissimilar experience of land degradation. Because of this lack of consistency, it is difficult to reproduce expert judgments with a parametric model approach. The findings confirm the results in other studies, where deviating trends of expert assessments make it necessary to use country dummies in the qualitative response models to correct for interpretive differences among the international forum of experts.

The findings on the relationship between yields and land degradation were counter-intuitive: yields increase for higher levels of land degradation. Apparently, more intensive cultivation without appropriate soil protection measures causes higher degradation levels but

does not necessarily reduce productivity. Moreover, yields on more productive, but severely degraded soils, are largely maintained by applications of fertilizer. Better soils also seem to resist the impact of the lower levels of degradation without the need for fertilizers, yet yields deteriorate rapidly for the more degraded areas with poorer soils. The high prevalence of malnutrition in areas with declining yields on the poor and highly degraded soils is alarming indeed.

We conclude that the GLASOD expert assessments are not very reliable. However, our verdict should not be too harsh. With slender resources, and in a very short time, a global assessment was completed that clearly depicted, for the first time, the extent and degree of land degradation. Its limitations were made clear by the authors and, in spite of these limitations, GLASOD underpinned environmental policy discussions - it has been the only information available. Improved methods of assessment of land degradation are now needed to provide decision makers with the appropriate information for the development of sound environmental policies and it is likely that any new global assessment will have to resort, in some degree, to expert judgments - so the lessons learned from this GLASOD analysis will be valuable.

**Reference:**

Oldeman L.R., Hakkeling, R.T.A. and Sombroek, W.G. (1991). World map of the status of human induced soil degradation. ISRIC/UNEP, Wageningen.

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## EXPLORING THE WEB: LINKS TO THE ESSC

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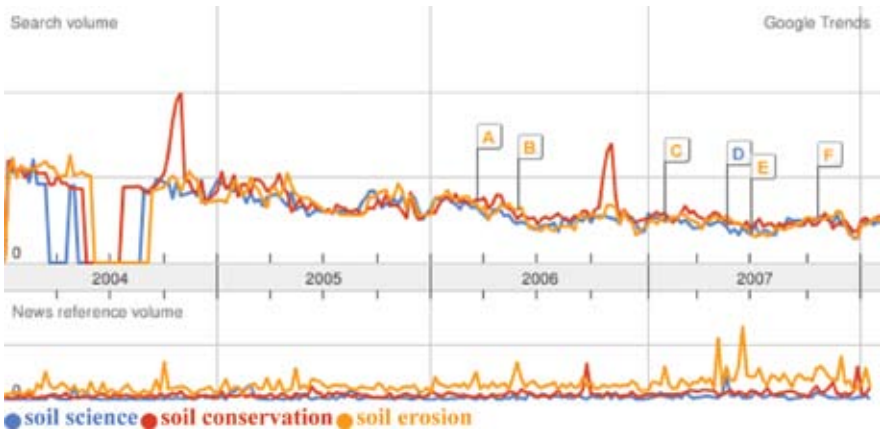
There is a diverse range of equipment, facilities and human resources for most ESSC members at their institutions, but the world-wide web is the one universal resource accessible to all of them. General information about the ESSC, including missions, members, meetings, newsletters, publications and task forces is presented on the web at:

<http://www.essc.sk/>

At the time of writing this overview (February 2008), there had been 5,200 unique visitors to the website. Declaring over 500 ESSC members in 42 countries indicates a 10/1 visitor/member ratio. This is quite complicated to assess in terms of relative web activities. The ESSC does not have enough search volume to show graphs and is not yet presented in Google Trends:

<http://www.google.com/trends>

This tool from Google Labs shows the most popularly searched terms from the beginning of 2004 to the present. 'Google Trends' charts indicate how often a particular search term is entered relative to the total search volume across various regions of the world, and in various languages. The ESSC pursues its aims by supporting research on soil degradation, soil erosion and soil conservation and providing a network for the exchange of knowledge. Two of these topics are presented in 'Trends.' To this, we can add a third one, submitting 'Soil Science' during the 2004–2007 period chart indicated a similar searching popularity. Since the beginning of 2004 interest in subjects has continuously decreased, except for some peaks (i.e. 'Soil conservation' web searching in the 2<sup>nd</sup> quarter of 2004 and 4<sup>th</sup> quarter of 2006).



'Google trends' searches are dominated by Eastern English-speaking countries; The Philippines, Pakistan and India, depending on the selected topic. The main interest in European countries is led by visitors from the UK. The relative interest in these three topics (Soil Erosion, Soil Science and Soil Conservation) is highly variable within each of these countries. The exception is India, which is maintaining a balanced state of searches between the three topics. This is demonstrated in 'Google Trends' ranks, presented below:

Soil erosion		Soil science		Soil conservation	
Regions		Regions		Regions	
1. Philippines		1. Pakistan		1. India	
2. South Africa		2. Iran		2. Philippines	
3. India		3. India		3. United States	
4. Iran		4. South Africa		4. Australia	
5. Australia		5. New Zealand		5. Canada	
6. Malaysia		6. Australia		6. United Kingdom	
7. United States		7. Canada			
8. Canada		8. United States			
9. United Kingdom		9. United Kingdom			
10. China		10. China			

Source: Soil conservation on Wikipedia:

Source: Soil conservation on Wikipedia:  
[http://en.wikipedia.org/wiki/Soil\\_conservation](http://en.wikipedia.org/wiki/Soil_conservation)

Search on the world's most popular search engine 'Google' indicates that 'Wikipedia' is leading the first search results in Soil science, Soil conservation and Soil erosion terms. Itself



Wikipedia is a free encyclopaedia, which is collaboratively written by many of its readers. It is a special type of website, called a 'wiki,' that makes collaboration easy. Many people are constantly improving Wikipedia, making thousands of changes an hour, all of which are recorded on article histories and recent changes. Inappropriate changes are usually removed quickly, and repeat offenders can be blocked from editing. Browsing within the discussed terms in Wikipedia could partly explain the decreasing level of interest.

Currently, 'Soil conservation' articles are presented in only three languages (English, German and Portuguese). 'Soil degradation' articles are presented in only two languages (English and French):

[http://en.wikipedia.org/wiki/Soils\\_retrogression\\_and\\_degradation](http://en.wikipedia.org/wiki/Soils_retrogression_and_degradation)

In comparison 'Soil erosion' has articles in 40 languages and is the most widely presented in Wiki:

<http://en.wikipedia.org/wiki/Erosion>

### **The Role of the ESSC**

We all need to promote societal awareness of the importance of the soil resource. Currently, the main focus of ESSC activities is academic study, but we should also stimulate interest in our activities within wider groups within society. This can be achieved by dissemination of information on our activities. The importance of free web access to general information on soil protection topics is beyond doubt and the contribution of the ESSC can be improved. Professional editing and adding general information on soil conservation and related topics is important. By having members in 42 countries, the ESSC can contribute to improving the flow of information, helping people all over the World to increase their awareness of soil conservation issues. Members can help by exploring, linking and disseminating information on the multiple functions of soil systems. This information flow should include maintaining biodiversity and productivity, partitioning water and solute flow, filtering and buffering water and contaminants and nutrient cycling to supplement basic knowledge on providing support for plants and the functions of human built structures (e.g. buildings and associated infrastructure).

# SUCCESSFUL CONCLUSION OF THE ZALA-DAGET PROJECT: 'FIGHTING DESERTIFICATION IN THE TIGRAY HIGHLANDS: LESSONS TO BE LEARNT FROM SUCCESSES AND FAILURES OF SOIL EROSION CONTROL TECHNIQUES'

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<sup>c</sup>Department of Land Resource Management and Environmental Protection, Mekelle University, Mekelle, Ethiopia.

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<sup>e</sup>Royal Museum for Central Africa, Tervuren, Belgium.

<sup>f</sup>Division of Soil and Water Management, K.U. Leuven, Celestijnenlaan 200E, B-3001 Heverlee, Belgium.

<sup>g</sup>Corresponding author. E-mail address: jan.nyssen@ugent.be (J. Nyssen).

## 1. Introduction

Semi-arid areas of the world (1) are often marginalized in terms of investments in natural resource management and agricultural production (2). "It is like pouring water on a stone" is a popular saying in the better endowed parts of the country when talking about Ethiopia's peripheral drylands. The overall productivity of such areas is often perceived to be so dramatically damaged by human impact that recovery is deemed impossible (3, 4). However, several impact studies have demonstrated that investments in drylands do pay off in economic terms (2, 5, 6).

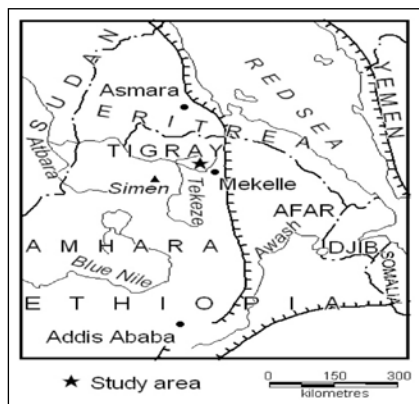


Fig. 1: Location of the Project area.

These case studies are often limited in space, time and scope; they may include better endowed regions (6, 7) and/or high-investment and nearby-monitored NGO-type of interventions. One might therefore question to what extent these reports on recovery are representative of wider areas. Admittedly, such impact studies typically do not include detailed botanical, hydrological and geomorphological components either (8). Here, we present some outputs of a project that has made a multi-scale assessment of the results of 20 years of environmental rehabilitation of a whole region in one of the world's most degraded areas: the Tigray Highlands in north Ethiopia (Fig. 1).

Despite the catastrophic impact of dry years on the degraded environment (9, 10), no tendency of decreasing rainfall can be observed in the Ethiopian highlands (11, 12), nor for the rainfall station of Mekelle, located in the centre of the study area. Causes of current land degradation by sheet, rill and gully erosion are to be found in the unsustainable use of natural resources and in changing land use and land cover, which result from human impact on the environment (13).

There is geomorphological and palynological evidence that deforestation and the associated soil erosion in the Ethiopian highlands is at least 3000 years old (13-16). However, modern population growth is assumed to have accelerated soil erosion due to a progressive change in land cover with the main purpose of increasing food production within a subsistence farming system (17, 18). As land resources are pushed to their limits, ruptures in the fragile equilibrium contribute to catastrophes such as the 1984 famine. As a response to such situations, huge efforts have been made in Tigray (north Ethiopia) at a regional scale (105 km<sup>2</sup>) to control soil erosion, for instance through the construction of stone bunds and the rehabilitation of steep slopes (19-21).

Research co-operation between Mekelle University, the academic heart of the Tigray region, and Belgian partners on soil erosion and soil and water conservation started in 1994 through a M.Sc. study of the University of Liège. Subsequently, fundamental research was carried out by FWO (Fund for Scientific Research, Flanders, Belgium) from 1998-2001 and concerned especially soil erosion processes, rates and assessment of human versus natural causes of land degradation. The Zala-Daget Project (VLIR, Flemish Inter-University Council, 2001-2007) was a joint project between Mekelle University, the Relief Society of Tigray, the K.U.Leuven and the Royal Museum for Central Africa in Tervuren (Belgium). The Tigrinya words 'zala' and 'daget' stand for physical and biological soil and water conservation technology. This research project focuses on the evaluation of various soil and water conservation techniques used in Tigray, the impact of soil erosion at catchment scales and the two-way transfer of knowledge on soil conservation between land users and researchers.

The Project (budget for 6 years: €300,000) has published dozens of theses, congress presentations and scientific papers, out of which about 30 are in high-level international scientific journals. At the end of project lifetime, two initiatives have been taken: the development of an extension manual, both in English (22) and in the local Tigrinya language (23). In addition, a region-wide photo-monitoring study was carried out, through which the impacts of the sustained soil and water conservation (SWC) efforts could be monitored.

## **2. The Zala-Daget extension manuals**

The extension manuals concentrate the gathered knowledge in a single volume directed towards experts in soil and water conservation and natural resource management. The Tigrinya manual (Fig. 2) has been simplified to the extent that it became accessible to a fraction of the smallholder farmers. Given that the manuals are about research progress, they have their own limitations. They are not full fledged 'Soil and Water Conservation Manuals,' but rather complement existing basic manuals, such as Hurni's Guidelines (24) or various technical manuals (25, 26). Our manuals are about new findings: scientific progress obtained in FWO and Zala-Daget projects made accessible to end users. Colleagues of the VLIR Forest Rehabilitation Project contributed to the section on management of exclosures. During fieldwork, there was always intense interaction with farmers and agricultural experts. A draft version of this manual was also discussed with farmers and experts during the Zala-Daget project stakeholders' forum on 23 September 2004 and many useful comments have been integrated.

Every section of each manual contains a problem statement and 'state of the art' review on the approaches used in north Ethiopia so far. Next, the larger part of each section concerns the research findings. These findings have mostly been published already in international



**ሰዕሊ. 38** ከፋሪ መፍሰስ ማይ ዘገዘገ፣ ቀደም (ዐጋማይ ሰዕሊ)፣ ድክሪ ምዕማሳ መፍሰስ (የማናይ ሰዕሊ)።  
 ስቶም ሰባተ ናብ ፋደ ዐታ ስቶም ዘመሠራ ሲሱም ዘለሙ። ዕዕሊ 2000 ሄ.ፎ ስተ ከባቢ ዝመዘዘም ፊደካባሂ ሰባባ  
 ሓመድን ማይን ቀጠሪታትን ተሸሰ ፈሰሲታትን ተካይዶም ስቶም። ስቲ ዐታ ካብ ሱይ ከብቲ ገጋዘዐሂን ምስፈራይ  
 ንዳይ ሰንበይቲን ዝተሸሰከሰ ስቶ። ብባባ ካብ ባሕርባይ መፍሰስ ዝመዕስ ዝነበረ ተባባሪ ሠራድ ብሳሳሚ ዝቆነሰ  
 ስቲ ተሕተባይ ጉዘሚ ከሓውን ስንደገኛ ንሕርብ መፈተ ክሸውንን (ከሠራሰን) ይኸስሰ ስቶ።

Fig. 2: Extract of the extension manual in Tigrinya: “Before and after watershed management.” This semitic language is spoken by approximately 7 million people in north Ethiopia and Eritrea, and uses the Ge’ez alphabet, which it shares with Amharic and some other Ethiopic languages. The full document can be downloaded from: [http://www.geoweb.ugent.be/download/TLP\\_6\\_Extension\\_manual\\_Tigrinya.pdf](http://www.geoweb.ugent.be/download/TLP_6_Extension_manual_Tigrinya.pdf).

journals, which imply that they have been cross-checked and evaluated by international scientists, as a guarantee of their quality. The demonstration of the scientific findings was not within the scope of the manuals. Interested readers were provided with references to the articles on which that section is based.

**3. Landscape changes induced by conservation activities in north Ethiopia**

The repeat photography study (27) assesses changes in environmental conditions in the Ethiopian highlands based on a combination of over 10 years of field research (on-farm and at the catchment scale) and observations deduced from the comparison of 51 historical photographs taken in 1975 (28, 29) with the current status. The combination of a variety of methods allowed for a holistic analysis of observed environmental changes in Tigray between 1975–2006. This incorporates details on the effectiveness of conservation measures in this marginal semi-arid area, which is considered representative of mountain dryland environments (Fig. 3).

The extension manual in the English language, which is targeted at development agencies, may be downloaded from: [http://www.geoweb.ugent.be/download/TLP\\_7\\_Extension\\_manual\\_English.pdf](http://www.geoweb.ugent.be/download/TLP_7_Extension_manual_English.pdf).

The recent active intervention by authorities and farmers to conserve natural resources in Tigray has led to demonstrated significant improvements in terms of soil conservation, infiltration, crop yield, biomass production, groundwater recharge and the prevention of flood hazards. These results from detailed *in situ* studies are corroborated by analyses of landscape changes, which show that the status of natural resources has improved (and locally strongly



Fig. 3: Excerpt of the repeat photography study, showing the most common type of change in the landscape. When the 1975 image (left; photo R. N. Munro) was taken, the ancient agricultural terraces that utilize sandstone benches in Makhano (near Senkata) were largely devoid of woody vegetation. In 2006 (right) the terraces have been rehabilitated, and vegetation has established on the risers (photo J. Nyssen). Many farmsteads have shelter belts, but the key feature is the lack of change in the church woodland (centre right of the picture). This set of repeat photographs acted as a control that demonstrates that changes on the surrounding plains and slopes are not related to increased rainfall after a drought, but to land husbandry. This contributed to the rejection of the hypothesis that the improvement is solely caused by better rainfall. If higher rainfall were the cause, the woodland would have improved too, because people do not cut down trees in such areas. The full study and photographs are available at: [http://www.geoweb.ugent.be/download/TLP\\_3\\_Photomonitoring.pdf](http://www.geoweb.ugent.be/download/TLP_3_Photomonitoring.pdf)

improved) since 1975. The rehabilitation is due both to improved vegetation cover and to the implementation of physical conservation structures. Exceptional degradation is still ongoing around Des'a forest and some other remnant forests. Like elsewhere in Tigray, conservation of vegetation cover should be strongly implemented here. A system for sustainable forest exploitation must be established.

Our study invalidates hypotheses on the irreversibility of land degradation in Tigray and a fortiori in less marginal semi-arid areas, and on the futility of SWC programmes. The study furthermore demonstrates that:

- (a) Land management has become an inherent part of the farming system in Tigray.
- (b) It is possible to reverse environmental degradation in semi-arid areas through an active, farmer-centred SWC policy (30).
- (c) Keeping small-scale farmers on their land by providing adequate levels of subsidies (31) is an effective way to sustain the agricultural system of semi-arid areas in the long-term and to provide ecosystem services to society.
- (d) The 'More People Less Erosion' hypothesis (32) is also valid in other, semi-arid areas. In a highly degraded environment, with high pressure on the land, no alternatives are left open but to improve land husbandry.

#### 4. Conclusions

The positive changes in ecosystem service supply that result from such changing land cover and management (33) are an issue of global concern. Yet, the challenges to be met are numerous and require: (a) *in situ* SWC of farmland (34), (b) shifting to stall feeding of livestock and ecologically-sound grazing management of the rangelands, (c) involving local communities in decision making about resource management (31, 35) and (d) active development of a policy for sustainable urban energy consumption.

## Acknowledgements

This research was carried out in the framework of the Zala-Daget Project ('Fighting desertification in the Tigray Highlands: lessons to be learnt from successes and failures of soil erosion control techniques'), a collaborative project between Mekelle University, Relief Society of Tigray (Ethiopia), the K.U.Leuven and Africamuseum (Belgium), funded by the Belgian authorities through VLIRUOS. JN and KD were at KULeuven while conducting the research and JN was based at Mekelle University. Many individuals and institutions contributed to this research. The authors particularly acknowledge the Tigrayan farmers, whose hard work in an adverse environment allows environmental recovery. Their endeavours proved an inspiring source for scientists committed to improving land conditions.

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**Editor's note:**

The citation details of Ph.D. theses by ESSC members since and including 2004 have been added as an additional page to the ESSC web site. To date, 38 Ph.D. theses are quoted. On the ESSC web site, please look under 'Publications.' Please forward the citation details of any additional Ph.D. thesis completed since the year 2000 by an ESSC member to any of the Editorial team. We will then add the thesis citation details to the web site. No new Ph.D. theses are reported in this issue.

## The Newsletter and supporting Ph.D. research

**Editor's note:**

At the ESSC Council meeting in Lleida (Spain) in September 2006, the interactions between the ESSC and younger soil scientists were discussed (see Newsletter 2006/3, p. 5-8). It was decided that the ESSC should be more proactive in its support of younger scientists. As part of that initiative, we welcome articles from both Ph.D. researchers and supervisors. We would like to hear from recent Ph.D. graduates; what advice and experience do you have which you would like to share with your colleagues in earlier stages of their research? We would also like to hear from current Ph.D. researchers; what are the factors which both encourage and limit progress? What are the particular challenges facing part-time Ph.D. researchers? We also invite contributions from experienced Ph.D. supervisors. What experience would you like to share with less experienced colleagues? If you are a less experienced Ph.D. supervisor, what supervisory issues do you find challenging? In short, please tell us "what I know now, which I wish I knew then!"



**OSCE CHAIRMANSHIP/NATO WORKSHOP ON 'WATER SCARCITY, LAND  
DEGRADATION AND DESERTIFICATION IN THE MEDITERRANEAN REGION,'  
MUSEO DE LAS CIENCIAS PRÍNCIPE FELIPE, VALENCIA, SPAIN,  
10-11 DECEMBER 2007**

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The great increase in the world population over the past century has been naturally accompanied by increasing needs for goods and foodstuff production to sustain the population. This phenomenon has had exponential impacts on natural resources. In turn, this has often caused the degradation or exhaustion of these resources in fragile environments, such as those that characterize the Mediterranean region. The main features of the region are land degradation and water scarcity, which are impaired by the particular climate of this area, with scarce rains and recurrent droughts. In addition, the climate future perspectives of the 'Intergovernmental Panel on Climate Change' (IPCC) in its last Assessment Report for this area were very pessimistic.

The induced environmental degradation and the effects on water resources favour the advance of desertification and may produce the displacement of population. Firstly, the population will move to more favourable places, usually urban centres in a first wave and then, beyond borders. These migrations have multiple effects on social stability and security at regional, national and international levels. These facts could have dramatic effects on developing countries, mainly in arid, semi-arid and dry-subhumid areas of the Mediterranean.

Under this scope and with focused concern on these important problems, on 10-11 December 2007 the OSCE Chairmanship/NATO Workshop on '**Water Scarcity, Land Degradation and Desertification in the Mediterranean region – Environment and Security Aspects**' was held in Valencia. It was organized by the Office of the Co-ordinator of OSCE Economic and Environmental Activities and the NATO 'Science for Peace and Security Programme' (SPS), with the collaboration of the Spanish Ministry of Foreign Affairs and the Desertification Research Centre-CIDE (CSIC-Generalitat Valenciana-University of Valencia).

Dr Raul Dausa (OSCE) and Dr Fausto Pedrazzini (SPS-NATO) were some of the main promoters and organizers of the Workshop. Dr José Luis Rubio (ESSC President) and other CIDE staff (Dr Vicente Andreu) were the hosts and local organizers of the event. The Regional Government of the Valencia Community, through its Department of Environment, gave

support to this meeting, providing the use of the Museum of Sciences 'Príncipe Felipe' as the venue and hosting a working dinner.

The importance of the subject matter of the Workshop is reflected in the broad and diverse representation. There were delegates from the Southern Mediterranean countries, mainly the OSCE Mediterranean Partners for Co-operation (Algeria, Egypt, Israel, Jordan, Morocco and Tunisia) and the NATO Mediterranean dialogue (all the OSCE Mediterranean partners, plus Mauritania), together with all NATO countries. The representation of delegates from the Mediterranean countries was very substantial, reaching 70 participants from 24 countries. They were mainly senior representatives of Water Management, Land Degradation and Desertification Departments of Ministries of the Environment, and representatives from the Ministries of Foreign Affairs selected by the different governments involved. The nature of the representation gave a political-scientific interface to the event.

The discussions mainly focused on two key issues: Environmental Security, regarding the effects of environmental changes, natural or human induced, on security and social stability; and Desertification and Land Degradation in the framework of the UNCCD definitions. The Workshop through its Plenary Sessions and the work developed in the four Working Groups tried to facilitate dialogue and interchange of ideas between the participants on the different key questions and topics.

By the one hand, the synergy between all groups of participants and the intense brainstorming regarding different issues resulted in a fruitful debate producing valuable ideas and possible initiatives for the near future. However, on the other hand, the discussions highlighted the differences in thinking, needs and priorities between both shores of the Mediterranean, North and South. Almost all international and European organizations, together with the European countries, had developed programmes and initiatives tackling problems such as sustainability of land and water resources, development and environmental degradation of the developing Mediterranean countries. However, in many cases these initiatives were diluted with time or even halted.

The South Mediterranean countries had also developed measures, programmes and plans on these issues, sometimes very effective (as in the case of Egypt and Algeria), but many times in a specific local arena. A common feeling of all these countries was the urgent need for a serious and creative dialogue between North and South towards developing common strategies to avoid or minimize security risks. However, it cannot be reached without the necessary financial support from the European Union and international agencies. Another key aspect was that very few actions have been taken regarding the security threats that these problems can produce. There was a general concern that all efforts made in the future will need to ensure the sustainability of resources, and the well being of the population.

The core conclusion was that the advance in a North-South Mediterranean co-operation with a maintained dialogue between countries in a broad view can be the best, and perhaps, the only way to assure the sustainability and security of the whole region. The Workshop in this sense was very succesful and could be an important step towards the better understanding and stability within the Mediterranean area.

# III NATIONAL SYMPOSIUM ON 'DESERTIFICATION AND SOIL DEGRADATION CONTROL,' FUERTEVENTURA, CANARY ISLANDS, SPAIN, 16-20 SEPTEMBER 2007

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The Department of Soil Science and Geology of the University of La Laguna (Tenerife, Canary Islands, Spain) held this Symposium at Fuerteventura, in close collaboration with the 'Cabildo Insular of Fuerteventura,' on behalf of the Spanish Society of Soil Science and the ESSC. Support funds were provided by the Spanish Ministry of Education and Science (State Secretary of Universities and Research, as well as the National Institute of Food and Agricultural Technology, INIA), Cabildo Insular of Fuerteventura (Environmental Area), Pájara Council and the Vice-Rectorate of Research, Development and Innovation (I+D+i) of the University of La Laguna. Additional support and facilities were provided by the ESSC and local companies, such as Oasis Park La Lajita (Fuerteventura), Vega del Yuco Wineries (Lanzarote), and Sunrise Beach Hotels. Financial management was granted by the Caixa d'Estalvis i Pensions de Barcelona (La Caixa).

Taking into account the increasing relevance of environmental issues, such as desertification, global warming and loss of biodiversity on the planet, the Canary Islands were regarded as an ideal location for this Symposium, because of their peculiarities as volcanic islands and desert environments.

### **Why Fuerteventura?**

Soil degradation (including wind and water erosion, soil salinization and sodification, sealing, and loss of organic matter) and desertification processes can perhaps be best observed in Fuerteventura, rather than in any other island among the Canaries. Similarly, and in spite of its apparently barren territory, Fuerteventura shows natural desert and semi-desert areas diverse in soils, geology and biological communities, and rich in palaeontological deposits. All of these systems are organized in singular and fragile ecosystems that must be preserved and protected against the intense urban, population and grazing pressures they are subjected to. In addition, the Island has recently been targeted by strong immigration from African territories most depressed by desertification, poverty and socio-political instability, with direct consequences for their environmental degradation. Because of all this, and in view of the remarkable degree of awareness of the inhabitants and local authorities towards environmental issues, as well as the local conservation activities, we decided to celebrate this Symposium at Fuerteventura, the Quiet Island, one of the most beautiful among the Canaries.

The Organizing Committee was led by Dr ANTONIO RODRÍGUEZ RODRÍGUEZ (Full Professor of Soil Science in the University of La Laguna), Member of ESSC Council and Chairman of Soil and Water Conservation Section of the Spanish Society for Soil Science and

Dr CARMEN D. ARBELO (Associate Professor of Soil Science in the University of La Laguna) and ESSC member. A total of 158 scientists from different universities, centres of the Spanish High Council of Scientific Research (CSIC), INIA, and other private and public institutions gathered between 16-19 September 2007 in the magnificent Costa Calma Palace Hotel.

The welcome meeting took place during the afternoon of Sunday 16 September 2007, and the Symposium started the next day, with an excellent opening ceremony, under the presidency of Mr. Mario Cabrera (President of Cabildo Insular of Fuerteventura), together with Professor Antonio Rodríguez, Professor José Luis Rubio (President of the ESSC), Professor Felipe Macías (Full Professor of Soil Science at the University of Santiago de Compostela and President of the Spanish Society of Soil Science), Ms. Natalia Evora (Councillor of the Environmental Area of the Cabildo Insular of Fuerteventura), Mr. Rafael Perdomo (Mayor of Pajara), Mr. Lorenzo Moreno (Vice-Rector of Research, University of La Laguna) and Mr. Domingo Berriel (Councillor for Environment and Territorial Ordination of the Canarian Regional Government).

The Symposium was organized in six main lectures, and 148 additional communications, either as posters or short lectures, were distributed in the following five thematic areas:

- **Thematic Area 1 (Soil Degradation and Desertification).** Two main lectures, by Professor Ildefonso Pla (Full Professor of Soil Science at the University of Lleida), who spoke on *'Soil Degradation and Desertification: New perspectives'* and Professor José Luis Rubio, (Senior Researcher in the Centre for Research on Desertification (CIDE) in Valencia, and President of the ESSC) about *'Desertification, a curable illness.'* Moreover, 15 short oral lectures and 14 posters were presented in this thematic area.
- **Thematic Area 2 (Soil Erosion).** Main lecturer: Professor Juan Sánchez (Full Professor of Soil Science and Agricultural Chemistry of the University of Valencia). Subject: *'Soil erosion: aspects on its evaluation and mid-term perspectives.'* Additional communications were presented in this thematic area as short communications (8) and posters (15).
- **Thematic Area 3 (Organic matter and Biodiversity).** Professor Salvador González (Full Professor of Soil Science and Agricultural Chemistry of the University of Burgos), presented his lecture on *'Organic matter and Biodiversity.'* In this thematic area, eight oral communications and 18 posters were also presented.
- **Thematic Area 4 (Other processes of Soil Degradation).** Main lecture by Professor María Teresa Felipó (Full Professor of Soil Science and Agricultural Chemistry of the University of Barcelona) entitled *'From soil contamination to contaminated soils: some history and some considerations.'* This area was completed with eight short communications and 34 posters.
- **Thematic Area 5 (Soil Conservation and Restoration).** Here the main lecture was given by Professor Arturo García (Full Professor of Soil Science and Agricultural Chemistry of the University of Extremadura) and was entitled *'Conservation and Restoration.'* This area also included eight short lectures and 20 posters.

On Wednesday, 19 September in the afternoon, a debate on the subject *'Desertification and Global Warming: the role of the broadcasting media'* was organized and conducted by Ms. Montserrat Domínguez, journalist from the SER radio chain. Besides the attendants of the Symposium, the main participants in the discussion were Mr. X. Sort (Soil Scientist of Torres Wineries, Barcelona), Professor Juan Sanchez, Professor Marisa Tejedor (Full Professor of Soil Science and Agricultural Chemistry of the University of La Laguna, and formerly Councillor

of Industry, Trade and New Technologies of the Canarian Regional Government), Mr. Antonio Gallardo (Manager of the Environmental Area of the Cabildo Insular of Fuerteventura) and Professor Felipe Macías. The intense discussion about the role of the media in the dissemination of science lasted until late evening.

Finally, the Symposium was closed with the choice of the new location for the next event, to be held at Valencia, and organized by the University of Valencia. Also, following unanimous approval by the attendants, the Declaration of Fuerteventura was presented.

## **DECLARATION OF FUERTEVENTURA**

Soil scientists and related disciplines, representing the Spanish universities, centres of the High Council of Scientific Research, and other public and private research organizations, gathered at Fuerteventura (Canary Islands, Spain), to celebrate the '3rd National Symposium on the Control of Soil Degradation and Desertification' declare:

- That soil degradation, soil quality impoverishment, desertification and loss of soil ecological regulation functions are becoming increasingly intense processes, due to both climatic and socio-economic factors.
- That both Spain and the Canary Islands are especially vulnerable areas regarding these processes, and that
- Soils are basic climatic regulators acting on the circulation of greenhouse gases, on the balance of radiation flux, and on the regulation of the water cycle. Current trends towards global warming may enhance desertification that, in turn, might accelerate such climatic trends.

Also consider necessary:

- Deepening of scientific knowledge on the potential of soils to immobilize the excess of atmospheric carbon dioxide, as well as empowering actions to preserve and restore soils, are basic tools necessary to fight against environmental degradation and promote sustainable development.
- To improve the social perception of soils and their productive and ecological functions, as well as the importance and consequences of soil degradation. In this regard, we urge the Spanish Ministries of Science and Education and Environment to favour the didactic contents about these issues, so as to be effectively transmitted to young students at all educational levels.

Make evident:

- Their concern about the difficulties to elaborate the European Directive on Soils, within the framework of the 'European Thematic Strategy on Soil Protection,' and actively support the development of a decisive Directive, capable of addressing soil degradation in Europe, including adequate attention to the European countries most affected by desertification and the consequences of global warming.

And they join to:

- A proposal to create an Observatory for the Study of Desertification Processes in Fuerteventura Island, as the ideal location for this purpose, as well as to the Declaration

of Fuerteventura as a Biosphere Reserve and the declaration of the windward coast as an Arid Zone National Park.

### **Costa Calma (Fuerteventura), 19 September 2007**

On Thursday, 20 September, and as scheduled, 82 attendants joined the post-Symposium field trip to Lanzarote. It was a great opportunity to observe their unique agricultural systems: crops under volcanic ash (La Geria), on cracks (Masdache), under artificial sandy substrata (Vega de Quintero) and the degraded soils around the Guanapay volcanic cone.

To summarize, the main achievements of the Symposium were:

- To share the most recent advances on soil degradation control, that focus on the central role played by soils in the conservation of the environment as well as new soil management techniques that may help prevent erosion, salinization, sealing, pollution and other degradation processes.
- To advance knowledge of those factors and processes responsible for desertification that affect all Spain, and of the measures currently investigated by the different research groups, as well as those taken by the public authorities, to control this phenomenon.
- To empower research efforts related to the 'Thematic Strategy for Soil Protection' and to the proposal for a Framework Directive on Soil, recently debated by the European Commission, on which several works from Spain have been made since 2002.
- To prompt and favour the interaction, knowledge exchange and the creation of thematic networks among the different Spanish research groups that may lead to future collaborative projects of recognized excellence, so as to compete favourably in these scientific fields within the European Union.
- To show and discuss the different trends, systems and methodologies currently in use on soil degradation control and desertification.
- To broadcast the results of the numerous investigations of Spanish groups in these fields, by the publication of, at least, a proceedings book.

We therefore must thank Dr Antonio Rodríguez Rodríguez, Dr Carmen Arbelo and the entire Organizing Committee for this excellent Symposium, held at a wonderful location, and in a friendly environment, suitable for the scientific debate.



**Manifiesto on Desertification,  
Poverty and Migrations**

Campus de  
**Excelencia**  
Fuerteventura

Authors of the initial draft of the Manifiesto: José L. Rubio  
Anton Imeson  
Carmen Arbelo  
Concepción Jiménez  
Antonio Rodríguez  
Marisa Tejedor



'Campus de Excelencia' is an academic event promoted by Fundación Vitalia and the University of Las Palmas de Gran Canaria. Every year it gathers together a group of selected highly qualified post-graduates from all over the world and a distinguished panel. In July 2007 the panel included 13 Nobel Prize winners, three heads of state or government, seven ministers or former government ministers, four presidents of international organizations and a further 140 internationally renowned guests from the worlds of science and culture. Their aim was to analyse, discuss and contribute possible ideas and solutions, from the perspectives of two generations, to help resolve the problems existing in the world. We approached these with humility, but with the conviction that the figures considering these problems and contributing their ideas are more than qualified for their opinions to be taken into consideration, and for them collaborating in tackling what are sometimes dramatic situations, requiring courage and originality to be faced and resolved.

It is from this perspective that the participants in 'Campus 07' considered the phenomenon of desertification as one of the shames of our time, with its unquestionable link to mass immigration and the uncontrolled addition to poverty associated with this, has given rise to the need to issue the following document.





## MANIFESTO ON DESERTIFICATION, POVERTY AND MIGRATIONS CAMPUS OF EXCELLENCE 2007 CORRALEJO, FUERTEVENTURA, CANARY ISLANDS (ISLAS CANARIAS), SPAIN, 13 JULY 2007

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The Plenary of the 'Campus of Excellence 2007,' its academic and institutional speakers and participants in general approve the following **'Manifesto on Desertification, Poverty and Migrations'**, as a result of the speeches and discussions at the Sectoral Meeting on the socio-economic and human implications of the human aspects of desertification processes, safety and environmental safety.

Processes of desertification affect 30% of the dry land surface of the planet; there are currently around 200 million emigrants, a large proportion of whom are environmentally displaced; situations of poverty, which oscillate from extreme conditions for survival to precarious living conditions, affect around 2,000 million people. These figures themselves show the magnitude and global impact of these problems, which mainly affect the continent of Africa. Added to this underlying situation, there is a worrying trend towards further deterioration as a consequence of the evolution of global warming, population growth and the precarious situation of basic resources, such a water and land. The implications of these deteriorating trends is to foresee alarming scenarios, that could



impact food shortages, poverty, an increase in migratory flows and the escalation of conflicts.

These problems develop mainly in specific parts of the planet, particularly in arid, semi-arid and dry-subhumid areas, but the causes and consequences are a global responsibility and require shared, ethical solutions. In spite of the existence of both national and international initiatives, it is a fact that existing initiatives are either inefficient or their approaches do not deal with the true roots and causes of these problems.

To act more efficiently it is necessary to gain better knowledge of the complex interactions among desertification, poverty and migration; to establish adequate conceptual frameworks that also include the positive aspects of migration and to facilitate access to education and information in the affected countries. There is an important field of activity and the possibility of innovative responses in the social, political, technological and scientific sectors, which may substantially improve living conditions and the economic situation in the countries and the affected local communities. The most highly developed countries must reroute their international trade laws and the perverse effects of globalization processes that impact economic viability, social welfare and political stability and the environmental health of the affected countries.

The participants of 'Campus de Excelencia 2007' manifest their concern about the unacceptable situation in terms of non-sustainability, socio-economic inequality and a lack of human solidarity represented by these problems. Finally, the Campus demands, mainly from developed countries and international organizations, a change of attitude and the adoption of determined and efficient actions to reverse the trend of these threats that directly affect the conditions of survival and the conditions of dignified life of a great proportion of the world community and, indirectly, humanity as a whole.

# ANNOUNCEMENT

## **PROFESSOR PETER BULLOCK, R.I.P.**

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Dear Colleagues,

On behalf of the ESSC, of which Professor Peter Bullock was a distinguished member, I express our sincere and great sadness for the loss of an excellent colleague.

Peter Bullock was an outstanding scientist and a person with a special, creative and very stimulating personality. We will all miss him.

We transmit to his family and friends our deepest sympathy and condolence.

Yours faithfully

**José Luis Rubio**

President of the European Society  
for Soil Conservation

## **PROFESSOR PETER BULLOCK (1937-2008)**

### **A LEADING SOIL SCIENTIST WHO TIRELESSLY**

### **PROMOTED THE IMPORTANCE OF SOIL**

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Professor Peter Bullock was a highly distinguished, influential and inspirational soil scientist with a prestigious professional career spanning some 50 years. His professional experience included: soil mapping and land evaluation, soil mineralogy, soil genesis, land degradation and global environmental change. He worked in the UK and the USA, as well as visiting some 20 other countries on a professional basis.

Peter Bullock rose to become a leading figure in UK Soil Science and one who was universally liked and admired by all who knew him. He took over Directorship of the 'Soil Survey of England and Wales' at Rothamsted Experimental Station in 1986, at a time when the organization was threatened with closure, and won its reprieve. This led to its successful transfer to the then Cranfield Institute of Technology two years later. His courageous and charismatic leadership was a major factor in ensuring the continued existence of a research institute focused on the soil resources of England and Wales. The 'National Soil Resources Institute' at Cranfield University today is the direct descendant of the Soil Survey of England and Wales.

Born in 1937, Peter Bullock developed his early interest in the natural environment

studying Geography at Birmingham University. He joined the fledgling Soil Survey of England and Wales (SSEW) in 1958 to work as a soil surveyor, during which time he was based in Yorkshire. In 1963, he returned to university to study for a Masters in Agricultural Chemistry at Leeds University. A year later he was awarded a prestigious Fulbright Scholarship which took him to Cornell University to read for his Doctorate in Agronomy, focused on clay translocation in soils. He worked briefly for the United States Department of Agriculture Soil Conservation Service as a field soil surveyor in New York State, before returning to the UK in 1967 to take up the position of Head of the Mineralogy Section in the SSEW based at Rothamsted Experimental Station in Harpenden. Rothamsted allowed him the opportunity to indulge both his scientific and sporting interests and he was a key and enthusiastic member of the Cricket team for many years.

In his new post, Peter developed facilities for study of the microscopic structure and morphology of UK soils in support of soil mapping and classification and became a leading world expert in the field of soil micromorphology. He went on to produce, among other things, the first major atlas of soil thin-sections as well as a systematic terminology for their description. He led work on the development of soil thin-section technologies and initiated much of the early work on computerised image analysis of soil micromorphology. Acknowledgement of his widespread expertise in this area saw him become first Secretary-General of the International Commission on Soil Micromorphology and then its President in 1978.

In 1981, Peter joined the Council of the British Society of Soil Science, cementing his strong association with this Society, which was to continue throughout his career. He later served as its President for the years 1995-96. Peter had taken on the wider remit of Head of Research in SSEW when, in 1984, the decision was taken to withdraw funding from the main national programme of strategic soil mapping. Faced with the imminent closure of the SSEW, Peter was put in charge of a campaign to save the organization. His single-minded determination and charismatic leadership led to a tapered reduction in funding and a lifeline transfer to the Silsoe Campus of Cranfield Institute of Technology, then home to Silsoe College. He became Director of the SSEW in 1986 and then of the 'Soil Survey and Land Research Centre,' following the move to Cranfield in 1987, also then being made Professor of Land Resource Management.

Peter Bullock's reputation as a leading and influential soil scientist grew through this period. He chaired the important 'Natural Environmental Research Council' (NERC) Review Committee. In 1988, he became the Chairman of the 'Heads of Soils Surveys Committee of the European Union,' a role in which he worked to align the activities of soil survey organizations across Europe. This led into his chairmanship of the 'Advisory Committee of the European Soil Bureau' in 1996. In 1991, he became a member of the 'UK Climate Change Impacts Review Group,' recognizing the role that soil systems have in the wider debate on climate change that was then only just coming to public attention.

Peter's growing influence on governmental and international scientific bodies continued in 1994 when he became a Special Adviser to the 'Royal Commission on Environmental Pollution' (RCEP) for their seminal inquiry into the sustainable use of soil. This was followed by his invitation to join the prestigious 'Intergovernmental Panel on Climate Change' (IPCC) as Co-ordinator of Impacts on Soils and Land Use. He served as a member of the Governing Body of the 'Biotechnology and Biological Sciences Research Council's' (BBSRC) Institute

of Grassland and Environmental Research and he subsequently joined the BBSRC Senior Appointments Review Committee.

Upon his retirement in 1997 after 11 years as Director of the Soil Survey and Land Research Centre, Peter was made Emeritus Professor of Land Resource Management in Cranfield University. He continued his association with the International Union of Soil Sciences (IUSS), becoming a member of their Core Committee of the Working Group on Land Degradation and Desertification. In 2005 he was a joint author of a seminal European Commission Publication on the Soil Resources of Europe.

Despite retirement, Peter retained an active interest in the work of the National Soil Resources Institute at Cranfield. He focused his energy on several projects. He was instrumental in the launch of the 'World Soil Survey Archive and Collection' (WOSSAC): a unique, global repository of soil survey materials collated from over 250 territories worldwide.

Peter's final major contribution was through his work in the development of the widely acknowledged 'Soil-Net' educational Internet portal, a resource aimed at school teachers and their students. His texts have been consulted online by users in hundreds of schools worldwide.

Privately, Peter Bullock was a keen cricketer and lifetime supporter of Luton Town Football Club.

Peter Bullock, born 6 July 1937, died on 2 April 2008, is survived by his wife and daughter.

Written by **Dr Stephen Hallett**,  
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# BOOK ANNOUNCEMENTS

We have received the following books:

Tsotne E. Mirtskhoulava (2007). SOIL EROSION: Forecasting, Risk, Conservation. Georgian Institute of Water Management and Engineering Ecology, Tbilisi, Georgia. English language version: 304 pages, ISBN: 0-582-24492-7. Russian language version (2000): 421 pages, ISBN: 99928-835-1-0.

The book is currently being reviewed by Dr Saulius Marcinkonis (Lithuanian Institute of Agriculture (Voke Branch), Vilnius, Lithuania) and his review will be published in ESSC Newsletter 2008/3.

## **ENVIRONMENTAL ASSESSMENT OF SOIL FOR MONITORING DESERTIFICATION IN EUROPE**

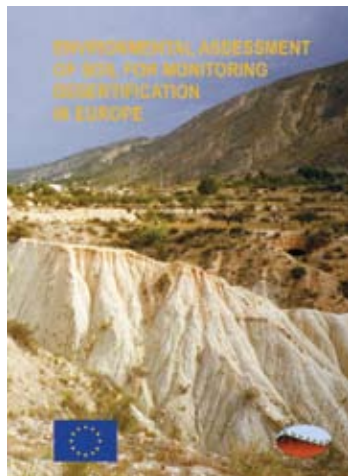
**MARK KIBBLEWHITE, JOSÉ LUIS RUBIO, COSTAS KOSMAS, ROBERT JONES, DOMINIQUE  
ARROUAYS, SIGBERT HUBER AND FRANK VERHEIJEN**

**PUBLISHED BY CRANFIELD UNIVERSITY PRESS (UK).**

**(ISBN 1-871315-97-2)**

This Report presents some early results from the ENVASSO Project **ENV**ironmental **AS**essment of **SO**il for **MO**nitoring (ENVASSO) funded under the European Commission's 6<sup>th</sup> Framework Programme of Research

The aim of ENVASSO is to design and test a single, integrated, operational and EU-wide set of measurable criteria and indicators for monitoring soil in Europe. There are relatively few soil monitoring systems in Europe that cover large areas (Bullock *et al.*, 2005), and many of these are strictly only inventory systems at present because they have yet to be re-sampled. Progress towards harmonization of these systems at the European level has been hindered by several factors, particularly data incompatibility resulting from different sampling and testing procedures (Van-Camp *et al.*, 2004). By funding the ENVASSO Project, the European Commission has recognized the need for better soil information than currently exists for implementing a soil protection policy (European Commission, 2002, 2006). ENVASSO indicators are applicable across Europe as a whole and elsewhere, but this report focuses on a sub-set, termed 'Soil-



Linked Desertification Indicators' (SLDIs), that have been selected for monitoring the state of soil, and the pressures on it, in the arid, semi-arid and dry sub-humid zones of Europe. The ENVASSO Project comprises a Consortium of 37 partner organizations from 25 countries. The Project Co-ordinator is Professor Mark Kibblewhite of Cranfield University, UK.

*Prepared for the Eighth Conference of the Parties of the United Nations Convention to Combat Desertification. Madrid, September 2007*

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Available to download from:  
[www.envasso.eu](http://www.envasso.eu)



## RECENT PUBLICATIONS BY ESSC MEMBERS

Included are the citation details of papers and books produced by ESSC members. These provide a growing resource for exchange of valuable information to both research and teaching. The cumulative citation list is being added to and updated on the ESSC web site. Students of ESSC members (both undergraduate and postgraduate) are increasingly accessing this facility in their literature searches. Currently, the number of quoted publications cited on the web page is 317. Please e-mail the citation details of papers in international refereed journals since and including the year 2000 to any member of the Editorial team.

As mentioned in the report on recent Ph.D. theses, the citation details of Ph.D. theses by ESSC members since and including 2000 have been added as an additional page to the ESSC web site. To date, 38 Ph.D. theses are quoted. On the ESSC web site, please look under 'Publications.' Please forward the citation details of any additional Ph.D. thesis completed since 2000 by an ESSC member to any of the Editorial team. We will then add the thesis citation details to the web site.

### **PAPERS**

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Enne, G. and Yeroyanni, M. (2007) (Eds). Role of the Information Circulation Systems in Scientific and Practical approaches to Combat Desertification. Proceedings of the International Seminar (Windhoek and Ondangwa, Namibia, 2-6 April 2006), Sassari, p. 277.

Enne G., Lubino M. and Bellavite D. (2007). A participatory demonstration project to fight desertification in Morocco and Tunisia. *Memorie di Scienze Fisiche e Naturali Vol. XXXI*, p. 1-14. Accademia Nazionale delle Scienze detta dei XL, Rome.

Van Oost, K., Quine, T.A., Govers, G., De Gryze, S., Six, J., Harden, J.W., Ritchie, J.C., McCarty, G.W., Heckrath, G., Kosmas, C., Giraldez, J.V., Marques da Silva, J.R. and Merckx, R. (2007). The impact of agricultural soil erosion on the global carbon cycle. *Science*, 26 October 2007, 626-629.

Zucca, C., Zdruli, P. and Montanarella, L. (2007). Integrated monitoring and trans-national co-ordination to support sustainable land management strategies: Ideas for new joint Euro-Mediterranean initiatives, p. 135-150 In: P. Zdruli and G. Trisorio Liuzzi (Eds), *Proceeding of the Euro-Mediterranean Conference on 'Managing Natural Resources through Implementation of Sustainable Policies'* (Beirut, Lebanon 25-30 June 2006), MEDCOASTLAND Publication 5. IAM Bari.



# Institutional movements and promotions of ESSC members

## **AN EROSION SCIENTIST IS AWARDED A DEGREE AS ENGLISH AS 'AFTERNOON TEA'**

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### **Dr David Favis-Mortlock**

The Queen's University of Belfast  
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*Dr John Boardman D.Sc.,  
University of Oxford, UK*

The English, as a nation, are well-known (even if only in parody) as the inventors of such institutions as 'afternoon tea.' This aims to fill the gap of time between the midday and evening meals. This can sometimes be a lengthy gap.

Less well-known is another, very English, institution. This is the D.Sc., the 'Doctor of Science.' Like afternoon tea, it aims to fill a gap. This time-gap is the one between Ph.D. and Professor, between Doctorate and Chair (which can also be a lengthy gap). As far as this author knows, the D.Sc. degree is only awarded by UK universities.

There are more similarities:

- Not everyone who can take afternoon tea wishes to do so. Some prefer to wait for the evening meal. Similarly, not everyone who might qualify for a D.Sc. desires to obtain one.
- There is no fixed time for afternoon tea: it is taken sometime after the midday meal, and sometime before the evening meal. And there is no fixed time, career-wise, to apply for a D.Sc.
- There are no fixed guidelines for the 'content' (i.e. what is consumed) at afternoon tea; similarly the criteria for awarding the D.Sc. vary notably from university to university.
- Afternoon tea is pleasant, but not especially nutritious. And – you guessed it! – possession of a D.Sc. does not guarantee a pay rise!

Dr John Boardman (Environmental Change Institute, University of Oxford, UK) recently obtained a D.Sc. from the University of Keele (UK). I interviewed him about this.

"There are very few discretionary awards for which academics can apply. I'd amassed a good-sized body of work (c. 130 papers on soil erosion and geomorphology) since obtaining my Ph.D. from the University of London in 1981. It seemed like a good idea<sup>1</sup> to

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<sup>1</sup> Particularly since Chairs at the venerable University of Oxford, where John has been based since 1991, are not hastily awarded. There is a joke which relates to the sometimes slow pace of decision-making at Oxford: "How many Oxford Dons does it take to change a light bulb?" "Change???"

submit this body of work to Keele University, where i completed my undergraduate degree<sup>2</sup> in Geography in 1966, as my application for a D.Sc.”

Accordingly, in 2003, John packaged up four boxes of publications, weighing over 20 kg in total, and sent them with his application documents to Keele. These were then passed to referees for assessment. The D.Sc. was awarded in 2004. Since D.Sc. degrees are rare, John’s D.Sc. is probably the first ever awarded for a body of research based around soil erosion.<sup>3</sup> So how did John get started on this D.Sc.-winning body of erosion research?

“I was a Lecturer at Brighton Polytechnic (now the University of Brighton) in 1979. Whilst on my way to the Lake District, I saw a badly-eroded strawberry field at Albourne, on the Lower Greensand (Boardman, 1983). Soil erosion by water was not thought to be a problem in England at this time. With the exception of Bob Evans (Evans, 1971; Evans and Nortcliff, 1978), most workers thought that water erosion was not likely. This was because of the low intensity of English rainfall, and English farming practices of the time (Hudson, 1967). So this eroded field was a surprise to me. Subsequently, I sat next to Bob during a coach trip to Wales (actually a BGRG field trip). He had already worked on soil erosion for 10 years. The conversation further stimulated my interest in British erosion. Also, around this time I was asked to teach a course in Applied Geomorphology at Brighton Polytechnic. This provided an opportunity to find and read all available publications (not too many at that time!) on British erosion.”

Then, in 1982, there was some serious erosion in John’s own backyard: the South Downs. This was written up and published (Boardman and Robinson, 1985). He then began to monitor a 36 km<sup>2</sup> area of the Downs for erosion, since at that time autumn-planted cereals were replacing grassland and spring cereals over much of the South Downs, a highly erodible crop/management combination which greatly increasing the potential for erosion. This monitoring continued throughout the 1980s, and developed into a unique database of over 300 erosion events. It includes the very serious erosion of 1987 (Boardman, 1988).

In 1991, John left Brighton for Oxford (“... because my wife, Brenda, got a job there and we both became involved from the beginning in the establishment of the Environmental Change Institute (ECI) which 15 years later has over 60 research scientists, 33 M.Sc. students and about 30 doctoral students”). This change of scene ended his regular monitoring of the South Downs. It also led to a change of perspective, away from ‘pure’ geomorphology towards more policy-oriented research. One driver of this change was the M.Sc. in Environmental Change and Management at Oxford, which John set up. Additionally, at this time John became involved in several legal cases involving soil erosion and muddy runoff on the Downs (Boardman et al., 2003). All of these were the result of unwise land management. “In one way, these legal cases achieved little, but they raised awareness of the issues among those affected and those responsible. Erosion and muddy flooding cannot now be so easily dismissed and being the result of ‘exceptional rainfall’. Out-of-court settlements meant that that the cases were abandoned before they had finished. However it does appear that they had an indirect effect on soil conservation on the Downs, since they certainly encouraged some changes of land use (Evans and Boardman, 2003).”

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<sup>2</sup> Actually, his second undergraduate degree. His first was in English.

<sup>3</sup> John’s early research was on periglacial geomorphology, mainly in the Lake District (north-west England).

While not able to visit the South Downs as regularly as before, John still kept up an interest in monitoring erosion there during the 1990s (Boardman, 1998). During this period, erosion became less of a problem due to shifts in land use: these reduced the field-to-field connections of runoff and sediment transport which had caused such problems in the winter-cereal-dominated 1980s. The 1990s were also rather drier than the 1980s. Nonetheless, 2000 saw something of a 'spike' in erosion, which John wrote up (Boardman, 2001). "Serious erosion is still possible on the South Downs. Only small shifts in land use are needed for this to happen. This is 'landscape sensitivity' in action. Also, recent trends towards increased rainfall intensity cannot be ignored."

More recently, John's research has gradually shifted in focus. His main interest has become soil erosion in a very different geographical context: the Karoo region of South Africa. "Peter Holmes (now at Bloemfontain) finished his Ph.D. on the Karoo in 1998: this pointed out that land degradation in the area had been little studied. I became interested, and went out to South Africa to see for myself. I found severe erosion there, which had in some instances even resulted in the formation of badlands. This erosion had probably been the result of overgrazing since European settlement." John became sufficiently interested to return to the Karoo every year, with other soil erosion luminaries (such as Tony Parsons, Ian Foster and Mike Meadows) as well as postgraduate students.

Alongside this South Africa research, John also carried out the activity for which he is most proud. From 1998-2003 he Chaired EU COST Action 623 'Soil Erosion and Global Change': <http://www.soilerosion.net/cost623/>

The COST Action resulted in a Book (Boardman and Poesen, 2006) and a follow-up COST Action, COST 634 'On- and Off-Site Environmental Impacts of Runoff and Erosion', in which John is actively involved: <http://soilerosion.net/cost634/>

"From my early work on South Downs erosion, I've gradually become more interested in issues involving 'how science works' and 'what science is for'. The first has resulted in exploration of model-building in science and the misuse of scientific methodologies (Boardman, 1998). I think that much that is published, particularly the output of models, is quite untested, little more than apparently sophisticated guesses, science 'dressed in a little brief authority'. It's rather sad that the term 'sceptical environmentalist' has been appropriated – that's what we should all be but in the best sense of 'sceptical'. All of this has convinced me of the need for the free flow of information in science, between scientists working co-operatively, and between countries."

"The second issue is a little more difficult to pin down. It really comes from the notion of 'applied geomorphology', with science attempting to solve social and economic problems, in Europe and worldwide. But to do this ('scientists contributing to the needs of society'), I'm convinced there needs to be a more explicit connection between science and policy/society. At present, the contribution of geomorphology to environmental legislation in Europe is tortuous and uncertain, and progress correspondingly slow. There are downturns as well as upturns. But nonetheless, European environmental legislation is better now than it was 20 years ago. Some, at least, of this is due to the contribution of science. A good example of this is the 'European Water Framework Directive', though we still have the challenge of getting it to work effectively over future decades."

John Boardman continues to work, in particular on his South African research interests. He now has an Honorary Chair at the University of Cape Town, and is attached there for the next five years.

In October, John retires from his position as Director of the M.Sc. Environmental Change and Management and Deputy Director of the ECI in Oxford. But John intends to continue with research in Europe and Africa and some teaching in the ECI.

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## **Editor's note:**

On behalf of the ESSC, we offer our congratulations to John on his excellent achievement!

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## ESSC MEMBERSHIP LIST AND CONTACT DETAILS

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The full ESSC membership list is held on the ESSC web site. Under 'members' you can get a full listing. Also under 'members' you can click on any member country and find a listing of members in the selected country.

We are trying to keep the membership list on the web site up-to-date. Please check your details and let us know if there are any necessary correction(s). If your details change, also please let us know. Some members have requested that we do not add their e-mail addresses to the web site, to avoid uninvited 'spam' e-mails. Of course, we respect this request. Therefore, while we retain a list of the e-mail addresses of ESSC Members, this list will not be available on the web site.

Editorial matters in Bratislava are now being handled by Agáta Marzecová. We welcome our new colleague and look forward to working with her. In terms of membership lists, contact details and the ESSC web site, please send updated information to Agáta at:

E-mail: [marzecova@vupu.sk](mailto:marzecova@vupu.sk)

Please also use and refer to the '**Directory of European Organizations and Persons Working on Soil Protection**' as a reference source for European colleagues, both members and non-members of the ESSC. This publication does contain the e-mail addresses of most ESSC members and will be subject to periodic updates. The reference citation is:

Rubio, J. L., Imeson, A. C., Bielek, P., Fullen, M. A., Pascual, J. A., Andreu, V., Recatala, L. and Ano, C. (2006). **Directory of European Organizations and Persons Working on Soil Protection**. Soil Science and Conservation Research Institute, Bratislava, 190 pp. (plus CD-Rom).

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## INTRODUCTION TO AGÁTA MARZECOVÁ

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My name is Agáta Marzecová and I have recently started to work for the 'Soil Science and Conservation Research Institute' (SSCRI) in Bratislava, Slovakia. Although my work focus mainly involves administration of the research projects of our Institute, it also partially includes assistance to ESSC Secretary, Professor Pavol Bielek – therefore Mike Fullen asked me to write few words to introduce myself.

Within ESSC work activities, I mostly help with correspondence, websites and registrations. I am also the one who is sending out the ESSC Newsletter. So, in case you have any remarks, questions or ideas for the ESSC website or Newsletter, please do not hesitate to contact me and I will do my best to respond to the request promptly. I really enjoy this part of my work because it involves communication with interesting people from institutions around all of Europe and it keeps me updated with news in the field of the soil protection – thus it is both enjoyable and useful.



My interest in the soil protection issues is rooted in my studies of Environmental Science, where among other subjects, I attended interesting courses in Pedology and later I received a degree in Environmental Geochemistry: so these soil issues are close to my study orientation.

Before working in the SSCRI, I lived for nearly one year in Iceland. As, after my university studies, I was interested to gain some new practical skills in the field of environment, I decided to participate in a European Voluntary Service Programme. My project took me to Reykjavik, where I helped a local youth hostel improve their environmental policy and start non-formal education activities oriented towards responsible tourism and nature protection. Over last few years, Iceland has been experiencing an unprecedented rise of mass tourism which affects the environment. Therefore, I found this project and all my stay really interesting. My professional interests include nature, the environment and responsible tourism. My leisure interests include art, cinema, reading and photography.

E-mail: [marzecova@vupu.sk](mailto:marzecova@vupu.sk)

# FORTHCOMING DATES FOR YOUR DIARY

## FIRST ANNOUNCEMENTS

### **CALL FOR PAPERS AND PARTICIPATION IN THE 'INTERNATIONAL SYMPOSIUM ON AGRICULTURAL RESEARCH,' 28-31 AUGUST 2008, IN AGRINIO, GREECE**

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The Department of Business Administration of Food and Agricultural Products of the University of Ioannina (Agrinio Campus), in collaboration with the Athens Institute for Education and Research (AT.IN.E.R.), is organizing an International Symposium on Agricultural Research, to be held 28-31 August 2008. The Conference website is:

<http://www.atiner.gr/docs/Agriculture.htm>

The registration fee is €250, covering access to all sessions, dinners, lunches, coffee breaks and conference materials. Special arrangements will be made with local hotels for a limited number of rooms at a special conference rate. In addition, several special events will be organized, including a Greek night of entertainment (free with registration) and a special one-day cruise. The aim of the Conference is to bring together scholars and students of all related disciplines. Areas of interest include (but are not confined to): Botany, Ecology and Nature Conservation, Waste Management, Rural Development, Biomass, Animal Behaviour, Geochemistry, Computers in Agriculture, Food and Nutrition, Plant and Tree Studies, Marine Studies, Agricultural Engineering, Crop Studies, Agronomy, Soil Science, Mycology, Fish Science, Forest Science, Genetics, Agribusiness, Hydrology, Land Use and Policy, Pesticides, Plant Pathology and Veterinary Sciences.

The Athens Institute for Education and Research (ATINER) was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet in Athens and exchange ideas on their research and discuss the future development of their discipline. Since 1995, over 70 international conferences were organized and over 60 books have been published. The Institute is organized into four research divisions and 18 research units. Each research unit organizes at least an annual conference and undertakes various small and large research projects.

For further information, please contact:

Dr Christos Fotopoulos  
Chair and Professor  
Department of Business Administration  
of Food and Agricultural Products  
University of Ioannina (Agrinio Campus)  
Greece  
E-mail: [atiner@atiner.gr](mailto:atiner@atiner.gr)

Or Dr Gregory T. Papanikos  
Director of ATINER  
E-mail: [gtp@atiner.gr](mailto:gtp@atiner.gr)

**THE THIRD INTERNATIONAL MEETING ON ENVIRONMENTAL  
BIOTECHNOLOGY AND ENGINEERING (3IMEBE),  
PALMA DE MALLORCA,  
SPAIN 21-25 SEPTEMBER 2008**

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To obtain more information about the Conference, e-mail: [imebe2008@gmail.com](mailto:imebe2008@gmail.com)

You can submit your abstract through our web site: <http://www.3imebe.org>

The Congress intends to translate fundamental knowledge on the microbial ecology of impaired ecosystems into technological solutions for the restoration of terrestrial and aquatic environments. The unification of fundamental and applied research is of utmost importance, because they are interdependent and connected to the action-reaction of the environment. The main objective of the Congress will be to integrate the research on different technologies (engineering, biotechnology) in such a way that their future action will be based on fundamental research (ecology). The Conference topics embrace land degradation processes (soil pollution, erosion and salinization) and strategies for the protection and remediation of soil environments.

The 3IMEBE Programme will analyse appropriate remediation technologies, such as phytoremediation, bioremediation, bioaugmentation, biowaste addition, electro-kinetics and other techniques with an important role in soil conservation and restoration. Sustainable agriculture and control and modelling of environmental processes are very important subjects related to soil ecological processes and biocontrol. Finally, the 3IMEBE is a good opportunity to advance understanding of the legislative aspects of soil conservation and new perspectives on agriculture and forest management for better control of greenhouse gases.





**CONNECTING DIFFERENT SCALES  
OF NITROGEN USE IN AGRICULTURE**  
**THE 16<sup>TH</sup> NITROGEN WORKSHOP WILL BE HELD IN TURIN (ITALY),  
FROM 28 JUNE-1 JULY 2009**

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The Workshop is jointly organized by the Department of Crop Science of the University of Milan and by the Department of Agronomy, Forest and Land Management of the University of Turin.

Themes to be discussed include:

- Soil biology and the N cycle.
- Physiology of N in plants and soil micro-organisms.
- Gaseous losses.
- Short and long term modelling of N and C.
- N management at the cropping system scale.
- N management at farm and regional scales.
- Assessment of N efficiency and diagnostic tools.
- N management and crop quality.
- Sustainable N use in horticulture, viticulture and tree crops.
- Manure processing for sustainable N management.
- Integrated management of N and other nutrients.
- Education, dissemination and demonstration.

**General programme:**

**Sunday 28 June (afternoon):** Registration and Welcome Aperitivo.

**Monday 29 June:** Workshop sessions.

**Tuesday 30 June:** Workshop session, field trip and Workshop Dinner.

**Wednesday 1 July (morning):** Working groups and closing session.

**Workshop website:** [www.nitrogenworkshop2009.org](http://www.nitrogenworkshop2009.org)

For further information, please contact us at the e-mail address:  
[info@nitrogenworkshop2009.org](mailto:info@nitrogenworkshop2009.org)

To subscribe the workshop mailing list, please send an empty e-mail to:  
[sympa@liste.unimi.it](mailto:sympa@liste.unimi.it) with Subject: SUBSCRIBE nitrogenworkshop2009

The second announcement, with deadlines and more details, will be distributed before August 2008.

## SECOND ANNOUNCEMENTS

Dear All

The 'Associazione Italiana per lo Studio delle Argille' (AISA), on behalf of the 'Association Internationale pour l'Etude des Argiles' (AIPEA), is pleased to invite you to the 14th International Clay Conference that will be held from 14-20 June 2008 in Castellanata Marina, Italy.

The theme of the Conference ***Micro et Nano: Scientiae Mare Magnum*** provides a unique opportunity for mineralogists, soil scientists, physicists, geochemists, engineers, chemists and for many other specialists to share ideas and knowledge on the boundless world of micro- and nanoparticles: **The Mare Magnum of Science!**

Pre-register using the Conference website [www.14icc.org](http://www.14icc.org) and we will inform you when it is updated.

For information visit the Conference website at:

<http://www.14icc.org/call.html>

Please share this information with any colleagues that may be interested.

With best regards

On behalf of the Organizing Committee

**Saverio Fiore**

Chair of the XIV International Clay Conference



The Conference Organizers, on behalf of the International Association of Geomorphologists (IAG), have the pleasure of inviting geomorphologists and other scientists in related fields to participate in a Regional Conference on Geomorphology entitled

**'LANDSLIDES, FLOODS AND GLOBAL ENVIRONMENTAL CHANGE  
IN MOUNTAIN REGIONS,' WHICH WILL BE HELD IN BRAȘOV, ROMANIA,  
FROM 15-25 SEPTEMBER 2008**

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**Aims and Objectives**

The Conference will promote exchange of ideas and methods for the investigation of landslides, floods and associated geomorphic processes in connection with Global Environmental Change. Mountain regions are very sensitive geosystems to global change. At the same time, they offer a variety of goods and services to mankind.

**ORGANIZERS of the Scientific Programme:**

International Association of Geomorphologists; Romanian Association of Geomorphology; Carpatho-Balkan Geomorphological Commission; Institute of Geography, Romanian Academy; University of Bucharest, Faculty of Geography; Transylvania University of Brasov, Faculty of Silviculture and Forest Engineering; Babes-Bolyai University of Cluj-Napoca, Faculty of Geography; Alexandru Ioan Cuza University of Iasi, Faculty of Geography-Geology; University of Oradea, Faculty of History-Geography; West University of Timisoara, Faculty of Chemistry-Biology-Geography.

**CORRESPONDENCE ADDRESS:**

Conference Secretariat  
Marta Jurchescu  
Institute of Geography  
Romanian Academy  
12 Dimitrie Racoviță Street  
Bucharest 023993  
ROMANIA

Telephone: 00 40 21 313 59 90/ 314 37 48  
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E-mail: [geoinst@nc.ro](mailto:geoinst@nc.ro)  
Website: [www.geoinst.ro](http://www.geoinst.ro)

**DATES AND PRELIMINARY PROGRAMME**

**Sunday, 14 September 2008:**

Arrival of IAG Executive Committee members.

**Monday, 15 September:**

Meeting of the IAG Executive Committee, Brașov (overnight in Brașov).

Arrival of participants in Brașov (those participating at the Pre-Conference excursion).

## **Pre-Conference One-Day-Excursion**

### **Tuesday, 16 September:**

Braşov-Depression, Bucegi Mountains and Prahova Valley-Carpathian Mountains. Themes: Climate Change, extreme events and tourist activities. (Overnight in Braşov). Estimated price (transport, accommodation, meals): €65/person.

Arrival of participants.

### **Conference Programme**

The Conference sessions will be held in the building of the Transylvania University in the City of Braşov.

### **Wednesday, 17 September:**

Opening Ceremony. Plenary lectures, oral sessions, working group activities (overnight in Braşov).

### **Thursday, 18 September:**

Plenary lectures, oral sessions, working group activities, poster sessions (overnight in Braşov).

### **Friday, 19 September:**

0800-1200: Poster sessions, round-table discussions. Closing Ceremony.

Afternoon excursion: Braşov, Bran Castle, Poiana Brasov.

Estimated price for transport: €5/person.

Special dinner (overnight in Braşov).

## **Post-Conference Excursions:**

### **Saturday-Monday, 20-22 September:**

**Excursion 1:** Braşov, Sighişoara Sibiu, Râmnicu Vâlcea, Curtea de Argeş, Bucharest: Landslides in the Transylvanian Depression, the Făgăraş Mountains (Transylvanian Alps) and the Getic Subcarpathians. 20-22 September overnights in Sibiu, Curtea de Argeş and Bucharest, respectively. Estimated price (transport, accommodation, meals): €420/person.

**Excursion 2:** Braşov, Întorsura Buzăului, Nehoiu, Buzău, Bucureşti: The Vrancea Seismogenic Region: earthquake-induced landslides, slope instability related to large reservoirs, mass movements related to extreme rainfalls, active faults and mud volcanoes. 20-22 September overnights in Cislău, Buzău and Bucharest, respectively. Estimated price (transport, accommodation, meals): €396 /person.

## **International Summer School**

### **Tuesday-Thursday, 23-25 September:**

Courses and field trips for young geomorphologists in Pătârlagele (Buzău County); the 8th Edition of the Summer School (two overnights in Pătârlagele).

### **Friday, 26 September:**

End of activities (overnight in Bucharest). Estimated price (transport, accommodation, meals): €175/person.

## Optional Post Conference excursions

### Tuesday-Friday, 23-26 September:

**Excursion 3.** Tulcea, Sulina, Letea, Caraorman, Razelm Lake, Portița, Cheile Dobrogei. Objectives of the excursion: Evolution of Danube Delta in relation to sea-level rise; deltaic and lagoon relief; deltaic accumulation and erosional coasts; deltaic geomorphological processes and human induced changes; transboundary issues of the Danube Delta.

Overnights on floating hotel. Friday, 26 September: overnight in Bucharest.

Estimated price (transport, accommodation, meals): €480/person.

Participants to the Brașov Regional IAG Conference on Geomorphology should fill out the Registration Form (available on the web site) and send it back together with copies of the payment documents.

### Registration fees (€)

Categories	Until 31 July 2008
Professional	260
Students (i) /retired person	150
Accompanying person (ii)	75
Summer School for young geomorphologists	

Accommodation during Conference days is not included in the registration fee. Hotels in Brașov range from 2 to 5\* with prices from €30-80/day for a single room and €50-110/day for a double room.

The Second Announcement will be circulated in January 2008. Details related to the IAG Regional Conference on Geomorphology will also be found on the website of the IAG and the Institute of Geography of the Romanian Academy in Bucharest:

<http://www.geomorph.org>

[www.geoinst.ro](http://www.geoinst.ro)

**Professor Dan Bălteanu**  
Organizing Committee

**FIFTH INTERNATIONAL CONFERENCE ON LAND DEGRADATION**  
**VALENZANO, BARI, ITALY**  
**18-22 SEPTEMBER 2008**

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**Conference theme**

**Moving ahead from assessments to actions:  
Could we win the struggle with land degradation?**

**Introduction**

At the 4<sup>th</sup> International Conference on Land Degradation held in Cartagena (Murcia), Spain, in September 2004, it was decided to hold the next Conference in Bari, Italy, in September 2008. The Cartagena participants overwhelmingly approved the invitation made on behalf of the 'Italian Society of Soil Science' (SISS) and the 'International Centre for Advanced Mediterranean Agronomic Studies' (CIHEAM), Mediterranean Agronomic Institute of Bari (MAI-B), to organize the 5<sup>th</sup> International Conference on Land Degradation (5th ICLD) in Italy.

The history of these international events started in 1996 in Adana, Turkey, when the first Conference was held. It was followed by a second one held in Khon Kaen, Thailand, in 1999 and another one in Brazil in 2001 organized by 'Empresa Brasileira de Pesquisa Agropecuária' (Embrapa) in co-operation with the 'Secretariat of Sustainable Development of the Ministry of the Environment' and the 'Institute of Agronomy' in Campinas, São Paulo. At the first Conference in Adana, a Task Force on Land Degradation and Desertification was formed that was officially transformed into a Working Group of the International Union of Soil Sciences (IUSS) at the 16<sup>th</sup> World Congress of Soil Science held in Montpellier, France, in 1998. The Working Group has remained active since then.

**Programme**

Wednesday 17 September 2008	Arrival of participants, registration and welcome reception.
Thursday 18 September	Opening ceremony, Invited papers presentations, Oral and poster session.
Friday 19 September	Oral and poster presentations.
Saturday 20 September	Oral and poster presentations.
Sunday 21 September	Oral and poster presentations. Conclusions of the Workshop. Farewell dinner.
Monday 22 September	Field excursion (details will be provided latter).
Tuesday 23 September	Departure.

For further information, please visit our web site: <http://www.iamb.it/5ICLD/>

**Registration Fee**

The registration fee will cover the welcome reception, participation in the scientific sessions, book of abstracts, coffee, tea and snacks, and field excursion (including lunch) at the end of the Conference. The farewell dinner will be offered by MAI-B.

Members of ESSC, IUSS and SISS	€350
Students (requires evidence in support)	€150
Non-members	€400

Payments received later than 30 April 2008 will be increased by €50

The 2<sup>nd</sup> Announcement will provide details on methods of payment.

**Contacts**

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# THIRD AND FOURTH ANNOUNCEMENTS

## **15<sup>TH</sup> INTERNATIONAL CONGRESS OF THE INTERNATIONAL SOIL CONSERVATION ORGANIZATION (ISCO): 'SOIL AND WATER CONSERVATION, CLIMATE CHANGE AND ENVIRONMENTAL SENSITIVITY' 18-23 MAY 2008, BUDAPEST, HUNGARY**

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### **Invitation**

The Organizing Committee is pleased to invite you to attend the 15<sup>th</sup> Conference of the 'International Soil Conservation Organization' (ISCO) to be held in Budapest, Hungary, from 18-23 May 2008. The theme of the 15<sup>th</sup> Conference of ISCO is '**Soil and Water Conservation, Climate Change and Environmental Sensitivity**'.

This topic will attract a wide range of experts, including scientists, university lecturers, policy makers and stakeholders from public and private institutions and non-governmental organizations throughout the world.

Hungary has a long and rich history of soil conservation, mainly because of salinization problems on the Great Hungarian Plain. The Country belongs to Eastern-Central Europe, where the change of regime after 1989 had serious implications for soil and water conservation. Central Hungary is very sensitive to environmental change, especially to extreme events like drought and flooding. Therefore, it provides excellent case studies for the theme of the Conference. Climate change is manifested in the growing frequency and greater amplitude of extreme events. Hungary provides good examples for a range of soil conservation problems and practices, including soil erosion by water and wind, salinization, compaction and water management problems of heavy soils. Research institutes, university departments and the soil conservation service network have been dealing with soil and water conservation problems for many decades, offering and ensuring solutions for these problems. Four days of oral and poster presentations and a mid-conference excursion will make the Conference an event always to be remembered for participants making contributions as presenters or participants in the discussions.

We are looking forward to welcoming you in Budapest in May 2008 at the 15th ISCO Conference!

### **Conference topics**

- Climate change and environmental sensitivity.
- Land use change.
- Water management.
- Soil erosion.
- Salinization.
- Desertification.
- Other land degradation processes.
- Soil rehabilitation and management.



- Socio-economic aspects of land degradation.
- Legislative and institutional aspects of soil and water conservation.

### Venue

Budapest Congress and World Trade Centre (H-1123 Budapest, Jagelló út 1-3):  
<http://www.bcc.hu>

**Conference languages:** English and French.

### Conference fees

#### Registration fee

- Normal Registration from 1 December 2007 €490

#### Conference dinner

€60

Conference dinner for your accompanying person can be ordered and paid on site. Participation fees of the pre- and post conference tours will be given soon.

The publication of the preliminary programme is scheduled for 15 March 2008.

For further detailed information, please see the ISCO 2008 web page:  
<http://www.isco2008.com>



**INTERNATIONAL CONFERENCE ON FLOOD RECOVERY INNOVATION  
 AND RESPONSE FRIAR 2008  
 2-3 JULY 2008 AT THE INSTITUTION OF CIVIL ENGINEERS, LONDON, UK**

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**ORGANIZED BY:** The University of Wolverhampton (UK) and Wessex Institute of Technology (WIT), UK.

**SPONSORED BY:** WIT Transactions on Ecology and the Environment.

### INTRODUCTION

The UK Engineering and Physical Sciences Research Council (EPSRC) funded 'Flood Repair Network' is an independent forum involving major stakeholders in the repair, reinstatement and resilience of flood-damaged property. The network's objectives include:

- Identification and dissemination of good practice in flood repair / reinstatement and flood claims management.
- Supporting in-depth collaborative research into appropriate flooding and property issues.
- Critically examine developments in flood resilient repair uses.

- Developing critical perspectives on the impact of flooding on property owners.
- Creating an information depository for collation of relevant flood repair publications and literature.

## **AIMS AND CONFERENCE KEY THEMES**

Scientific and technical sessions will provide an opportunity for the international community to share experiences and best practice.

### **THEME 1: RISK MANAGEMENT IN RELATION TO FLOOD EVENTS AND CLIMATE CHANGE**

Within the overall hazard of flooding are encapsulated a variety of specific risk situations. To the obvious risk of fatalities from drowning must be added the economic damage to businesses and the emotional implications for individuals. The increasing likelihood of occurrence of flood events is now subject to the impacts of climate change, which gives rise to a host of wider implications, such as sewer flooding, infrastructure damage and concerns as to the effectiveness of existing flood defences. The use of floodplains for building purposes also exposes an ever-increasing number of people to flood danger. Cost reduction strategies to address these issues currently include flood resilient design and construction; retrofitting of flood resilience measures and improvements to flood mapping techniques.

### **THEME 2: PRE-EVENT PLANNING AND BUSINESS CONTINUITY**

Strategies are required to address the issues that will face a flood-risk community in both the short and long-term. This involves international, national, regional and local governments and agencies, as well as those living and working within the at-risk communities themselves. The relevant issues here therefore extend from disaster management at strategic level, to business continuity planning for commercial and public organizations of all sizes and, of course, flood plans for individual households in flood risk areas. Underpinning all the foregoing is the need to raise awareness amongst the at-risk community worldwide without causing unnecessary alarm.

### **THEME 3: MANAGEMENT OF MAJOR EVENTS**

Both during and after a flood event many organizations and agencies may need to interface with each other as well as engaging with the victims. Input will be from flood-warning agencies, local authorities, emergency services, insurers, loss adjusters and specialist restoration companies through to local community leaders. From the victims' point of view the ideal approach lies in a coherent and seamless framework of support providing help in the most effective and efficient manner.

### **THEME 4: POST DAMAGE RESTORATION AND RECOVERY**

When the flood waters have receded, the owners and occupiers of affected buildings face the prospect of drying out, cleaning, restoring and, where necessary, rebuilding their properties. The issues here revolve around the most effective methods of tackling the immediate aftermath; the development of new drying technologies and, crucially, the standards of repair affected.

### **THEME 5: VICTIMS OF FLOODING**

Whether their businesses or their homes are inundated, it is the people directly affected by floods who are victims of the water that invaded their property. There are increasing

concerns over a variety of health risks, both physiological and psychological, which can arise from flood events. These can encompass the discovery of asbestos during the course of restoration; moulds and fungi developing in properties which have not been fully dried; and, in recent events, a disturbing incidence of depression, anxiety and other emotional impacts arising during and after the flood recovery period. The latter effects are currently poorly understood and in need of in-depth investigation. Many of these health risks also extend to practitioners (repairers, inspectors) with employers having a duty of care to their employees.

#### **THEME 6: INTERNATIONAL AND NATIONAL GOVERNMENT POLICY**

Flooding is, of course, a global problem and different governments have developed their own strategies for approaching the issue. The fundamental need for appropriate cost/benefit analysis inevitably affect all nations, but the factors defining 'cost' and 'benefit' can vary. Sustainability issues may be higher on the agenda for some countries, while purely economic factors may be the key drivers for others. Policy decisions relating to planning guidelines, the use of innovative techniques, such as temporary flood defence barriers or the construction of homes on floating pontoons, can have implications for risk as well as response to flood events.

#### **WHO SHOULD ATTEND**

This two-day Conference will provide a unique opportunity for Practitioners and Researchers and all others interested in the topic of flooding to meet in order to exchange experience and ideas.

#### **CONFERENCE CHAIRMEN**

D. Proverbs, University of Wolverhampton, UK.  
C.A. Brebbia, Wessex Institute of Technology, UK.  
E. Penning-Rowsell, Flood Hazard Research Centre, University of Middlesex, UK.

#### **INTERNATIONAL SCIENTIFIC ADVISORY COMMITTEE**

K. Alhussan, King Abdulaziz City, Sci. & Tech., Saudi Arabia.  
C.A. Booth, University of Wolverhampton, UK.  
D. De Wrachien, University of Milan, Italy.  
H. Hashimoto, Kyushu University, Japan.  
M. Holicky, CTU Prague, Czech Republic.  
G. Holzinger, Torrent and Avalanche Control, Austria.  
G. Jager, Forest Technology Service, Austria.  
F.C.B. Mascarenhas, UFRJ-COPPE, Brazil.  
M. Moser, Forest Technology Service, Austria.  
A. Sole, University of Basilicata, Italy.  
M. Takezawa, Nihon University, Japan.  
A. Thieken, GeoForschungsZentrum Potsdam, Germany.  
K. Toda, Kyoto University, Japan.  
F. Vinet, University Paul Valery, France.  
C. Zevenbergen, DuraVermeer Group NV, The Netherlands.

#### **LOCAL ORGANIZING COMMITTEE**

T. Boobier, UK Flooding Expert, UK.  
J. Davison, Director BDMA, UK.

M. Dhonau, Consultant, UK.  
M.A. Fullen, University of Wolverhampton, UK.  
P. May, Environment Agency Wales, UK.  
C. Netherton, The National Flood School, UK.  
R.W. Sarsby, University of Wolverhampton, UK.  
A. Saul, University of Sheffield, UK.  
R. Woodhead, Rameses Associates, UK.

### **BENEFITS OF ATTENDING**

- Keep up-to-date on the latest advances in the field.
- Present your research within a unique forum.
- Collaborate with experts from around the world.
- Your conference paper will be reviewed by members of the International Scientific Committee and other colleagues and processed for prompt publication in book form.
- In addition, all papers in the conference book will be permanently archived in the Transactions of the Wessex Institute on our e-Library site, where they will be available to the international scientific community.

### **INDEXING AND ARCHIVING OF PAPERS**

Papers presented at Wessex Institute Conferences are referenced by Crossref and regularly appear in notable reviews, publications and databases, including Elsevier's referencing and abstract services (Scopus and Compendex); Cambridge Scientific Abstracts; Thomson (Index to Scientific & Technical Proceedings, and Index to Scientific Book Contents); Scitech Book News; Interdok (Directory of Published Proceedings) and the American Library Association (Choice). Papers continue to be regularly added to new databases. In addition, the Conference papers will be:

- Published by WIT Press in a volume of WIT Transactions on Ecology and the Environment (ISSN: 1743-3541).
- Available to Conference delegates at the time of registration at the Conference as a hardcover volume.
- Publicized directly to researchers and institutional libraries.
- Distributed widely through the international book trade.
- Archived online in the Transactions of the Wessex Institute Collection, which provides the international scientific community with immediate and permanent access to individual papers.

WIT Press is committed to making all its material OPEN ACCESS. This option is available to all authors. View the Transactions of the Wessex Institute Collection at:

<http://www.library.witpress.com>

### **VENUE**

The Institution of Civil Engineers (ICE) is a charity that exists to promote and progress civil engineering. Its award-winning event venue at One Great George Street provides conference facilities at a location in the very heart of London's cultural and political life, a short distance from the Houses of Parliament and Westminster Abbey. The facilities are spacious, stylish and have the latest presentation technology discreetly deployed throughout. Further details regarding local attractions, accommodation booking and travel directions will be available closer to the time of the Conference.

## **CONFERENCE SECRETARIAT**

Rachel Swinburn: FRIAR 2008 Conference Secretariat  
Wessex Institute of Technology  
Ashurst Lodge  
Ashurst  
Southampton SO40 7AA  
UK  
Tel: 00 44 238 029 3223  
Fax: 00 44 238 029 2853  
E-mail: [rswinburn@wessex.ac.uk](mailto:rswinburn@wessex.ac.uk)

## **CALL FOR PAPERS**

Papers are invited on the topics outlined and others falling within the scope of the meeting. Abstracts of no more than 300 words should be submitted as soon as possible. We strongly encourage the submission of abstracts electronically. Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper. Final acceptance will be based on the full-length paper, which if accepted for publication, must be presented at the Conference. To be fair to all participants, each registered delegate will only be able to submit one paper. The language of the conference will be English.

## **CONFERENCE KEY THEMES**

- Risk Management in Relation to Flood Events and Climate Change.
- Pre-event Planning and Business Continuity.
- Management of Major Events.
- Post Damage Restoration and Recovery.
- Victims of Flooding.
- International and National Government Policy.

## **CONFERENCE TOPICS**

- Flood Defence Methods.
- Financial and Insurance Issues.
- Coping Strategies.
- Adaptive Capacity.
- Rural versus Urban community approaches.

Please indicate your intention below:

I intend to submit a paper and present it.

I intend to participate in the conference, but will not be submitting a paper.

I intend to submit a Poster Presentation.

## **ABSTRACT/PAPER SUBMISSION**

Abstract (300 words): Submit to the Conference Secretariat as indicated on the Enquiry Form.

Camera Ready Paper Submission: Date to be advised after submission of abstracts.

## **OPEN-ACCESS**

WIT Press is committed to Open-Access. We strongly believe that removing barriers to research published online will greatly aid progress in many scientific and technical disciplines.

## ABSTRACT SUBMISSION

E-mail submission to: [krobberts@wessex.ac.uk](mailto:krobberts@wessex.ac.uk)

Please submit your abstract with FRIAR 2008 in the subject line. Include your name, full address and Conference topics.

Web Submission: [www.wessex.ac.uk/conferences/2008/friar08](http://www.wessex.ac.uk/conferences/2008/friar08)

Fax Submission: 00 44 238 029 2853

Fax one copy of your abstract with this completed Enquiry Form.

Mail Submission: Rachel Swinburn, Conference Secretariat, FRIAR 2008, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK.

Please mail a copy of your abstract with this completed Enquiry Form.

Telephone: 00 44 238 029 3223.

Wherever possible information about this Conference will be sent to you by e-mail.

## International Conference on Flood Recovery Innovation and Response FRIAR 2008

2-3 July 2008 at the Institution of Civil Engineers, London, UK.

Title (Prof/Dr/Mr/Mrs/Ms)

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Initials

Surname

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Organization

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Address

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Postcode/Zip

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Country

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Telephone

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Fax

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E-Mail

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I suggest this announcement should also be sent to:

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Title:

Initials

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e-mail:

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By completing this form, we understand that you are agreeable to receiving further information on this event and other activities which we believe will interest you. We will not disclose this information to third parties.



**'Construction for a Sustainable Environment'**

**CALL FOR PAPERS**

Construction and the environment.  
Whole Life Cycle Analysis and Environmental Assessment.  
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Coping with extreme weather events.  
Policy and regulation.  
Quality Control and Assurance.  
Case histories.

**Contact:** Professor R.W. Sarsby (Civil Engineering Section, SEBE)  
University of Wolverhampton, Wulfruna Street, Wolverhampton WV1 1SB, UK

Tel: 00 44 1902 322263  
Fax: 00 44 1902 322743  
E-mail: [R.Sarsby@wlv.ac.uk](mailto:R.Sarsby@wlv.ac.uk)  
Website: [www.GREEN5.co.uk](http://www.GREEN5.co.uk)

**GREEN5 INTERNATIONAL CONFERENCE**  
**VILNIUS, LITHUANIA: 1-4 JULY 2008**

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**‘Construction for a Sustainable Environment’**

Preliminary registration of interest:

Please complete this form and return to Professor R.W. Sarsby

Name: Institution: \_\_\_\_\_

\_\_\_\_\_

Address for correspondence: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

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e-mail: \_\_\_\_\_

Topics of interest: \_\_\_\_\_

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## **2<sup>ND</sup> INTERNATIONAL CONFERENCE ON GROUND BIO- AND ECO-ENGINEERING**

### **THE USE OF VEGETATION TO IMPROVE SLOPE STABILITY**

#### **BEIJING, CHINA, 14-18 JULY 2008**

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This Conference is the second in the series 'The Use of Vegetation to Improve Slope Stability'. The first Congress was held at Thessaloniki, Greece, from 13-17 September 2004. In an era where more natural hazards are occurring; soil erosion, landslides and other catastrophic events cause loss of lives and infrastructure and major environmental damage. The aim of these meetings, therefore, is to bring together scientific researchers, practitioners, geotechnical and civil engineers, biologists, ecologists and foresters to discuss current problems in slope stability research and how to address those problems using ground bio- and eco-engineering techniques.

Ground bioengineering methods integrate civil engineering techniques with natural materials to obtain fast, effective and economic methods of protecting, restoring and maintaining the environment. Eco-engineering has been defined as a long-term ecological strategy to manage a site with regard to natural or man-made hazards. Conference sessions will focus on an area where such engineering techniques are used increasingly frequently (i.e. natural and man-made slopes). Papers will be presented on slope instability, erosion, soil hydrology, mountain ecology, land use and restoration and how to mitigate these problems using vegetation. The mechanics of root-soil interaction are of utmost importance, along with the modelling of root reinforcement and the development of decision-support systems, areas where significant advances have been made in recent years. Proceedings will be published in a special edition of an international journal. We hope that you will be able to join us at this meeting, to be held in exciting Beijing, the 2008 Olympic City!

#### **Organizing Committee:**

T. FOURCAUD, CIRAD, Montpellier, France / LIAMA-CASIA, Beijing, China.

L. JOUNEAU, INRA Jouy / LIAMA-CASIA, Beijing, China.

H. LU, WASWC, Beijing, China.

Y. LU, Chinese Academy of Forestry, Beijing, China.

T. LUO, Institute of Tibetan Plateau Research, CAS, Beijing, China.

J. NORRIS, Nottingham Trent University, Nottingham, UK.

I. SPANOS, NAGREF, Thessaloniki, Greece.

\*A. STOKES, INRA, Montpellier, France / LIAMA-CASIA, Beijing, China.

X. ZHANG, LIAMA-CASIA Beijing, China.

\*Conference Chair and for further information, please contact:

Alexia Stokes

LIAMA-CASIA

PO Box 2728

Zhonguancun Dong Lu 95, Hadian,

Beijing 100080

P.R. China.

E-mail: [stokes@liama.ia.ac.cn](mailto:stokes@liama.ia.ac.cn)

Tel: 00 86 10 82614528

Fax: 00 86 10 62647458.

**EUROSOIL 2008**  
**25-29 AUGUST 2008, VIENNA, AUSTRIA**

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This is a co-operative venture between the 'European Confederation of Soil Science Societies' (ECSSS) and the Soil Science Societies of Austria, Croatia, the Czech Republic, Hungary, Slovakia, Slovenia and Switzerland.

EUROSOIL 2008 will comprise about 30 Symposia, 13 Workshops and numerous one to three day excursions in:  
Central, Eastern, Southern and Western Europe.

More information can be obtained from the website of the European Confederation of Soil Science Societies (ECSSS):

<http://www.ecsss.net>

or e-mail: [winfried.blum@boku.ac.at](mailto:winfried.blum@boku.ac.at)

## **ESSC WORKSHOP ON 'FRONTIERS IN SOIL PROTECTION RESEARCH: NEW PERSPECTIVES AND CHALLENGES' (WORKSHOP 10)**

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**Convenor:** José Luis Rubio (Valencia, Spain).

**Co-convenors:** Donald Gabriels (Ghent, Belgium) and Mike Fullen (Wolverhampton, UK).

The ESSC will present a workshop at the EUROSIL Congress. This will focus on the theme '**Frontiers in Soil Protection Research: New Perspectives and Challenges.**'  
**The Workshop will be held on Wednesday 27 August 2008 from 0900-1700.**

Historically, Soil Conservation Science has maintained a clear orientation towards agrarian production, with a long and significant record of scientific and applied contributions. These contributions continue to be of crucial relevance to humanity. However, in recent decades, there have been important epistemological changes towards more holistic objectives, including environmental aspects. It is anticipated that important and new scientific paradigms will develop, owing to the wide recognition of the fundamental role of soil in the support and functioning of terrestrial systems. Particularly, there are emerging and important aspects related to soil protection that require scientific analysis and conceptual reflections. These objectives include maintaining biodiversity, regulation of the hydrological cycle and water reserves, implications for the landscape, bioengineering for soil conservation, the tendency towards more ecological agriculture, the implications of global approaches and the role of soil as a source and sink of greenhouse gases and others interactions with climatic change, such as desertification. Together with gaps in knowledge and methodological constraints, there are also new research tools, technologies, equipment and methodologies that require new approaches and visions.

The aim of the Workshop is to offer a deep analysis, discussion and orientations on how to meet the social and environmental demand on protecting the soil for the sound functioning of the biosphere.

For further information, please consult the EUROSIL 2008 web site:

<http://www.ecsss.net>

or e-mail:

José L. Rubio: [jose.l.rubio@uv.es](mailto:jose.l.rubio@uv.es)

Donald Gabriels: [donald.gabriels@ugent.be](mailto:donald.gabriels@ugent.be)

Mike Fullen: [m.fullen@wlv.ac.uk](mailto:m.fullen@wlv.ac.uk)



**INVITATION TO THE INTERNATIONAL SCIENTIFIC CONFERENCE  
ON 'SOIL IN A SUSTAINABLE ENVIRONMENT'  
ON THE OCCASION OF THE 50<sup>TH</sup> JUBILEE  
OF THE LITHUANIAN SOIL SCIENCE SOCIETY**

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We have the honour to invite you to the International Scientific Conference 'Soil in a Sustainable Environment' on the occasion of the 50<sup>th</sup> Jubilee of the Lithuanian Soil Science Society (LSSS). It will be held from **23-27 September 2008** in the Lithuanian University of Agriculture, Kaunas, Lithuania.

**Conference Topics:**

The international conference dedicated to the commemoration of the 50<sup>th</sup> Jubilee of the LSSS allows us to be flexible, to enable participants to present their research results in thematic group discussions referring to divisions recognized by the International Union of Soil Sciences (IUSS):

- **Genesis, morphology, classification and cartography of soil.**
- **Soil processes and properties.**
- **Use and management of soils.**
- **Role of soil in the environment.**

**PROGRAMME:**

**Tuesday 23 September 2008:**

Arrival of participants.

**Wednesday 24 September 2008:**

Ceremonial opening of Conference and plenary session followed by discussions and posters session (in the afternoon). Welcome party.

**Thursday 25 September-Friday 26 September 2008.**

Two-day field excursion and completion of official conference.

Conference Secretariat:

Department of Soil Science and Plant Nutrition

Lithuanian University of Agriculture

Studentų g. 11, Akademija

Kaunas, LT-53361, Lithuania

Tel.: 00 370 752 239; 752 279; 752 212

Fax.: 00 370 752 239

E-mail: [rimantas.vaisvalavicius@lzuu.lt](mailto:rimantas.vaisvalavicius@lzuu.lt)

[algirdas.motuzas@lzuu.lt](mailto:algirdas.motuzas@lzuu.lt), [da@lzuu.lt](mailto:da@lzuu.lt)

## **PAPERS**

Abstracts of papers/posters will be published in conference materials after acceptance by the Conference Scientific Committee and the payment of the registration fee. The publication of full length papers is planned in **Agricultural Sciences** (The Journal of the Lithuanian Academy of Sciences) and **Vagos** (The Journal of the Lithuanian University of Agriculture).

## **CONFERENCE FEE: €100**

Conference fee includes conference materials (print of abstracts), participation in conference, official and optional events. The Conference fee does not include cost of journeys (incoming/outgoing), accommodation or the field excursion.

## **ACCOMMODATION**

On the campus of the Lithuanian University of Agriculture, accommodation will be available in the hotel 'Akademija' and inexpensive rooms in student hostels. Hotel bookings in Kaunas City are also possible.

## **COST OF FIELD EXCURSION**

Two-days: €70 (transport, board, accommodation and excursion guidebook).

## **DEADLINES:**

**15 February 2008:** Application for participation and submission title of paper/poster with abstract.

**28 March 2008:** Second announcement for persons who have notified participation in the Congress.

**30 May 2008:** Deadline for the payment of the Conference fee.

Bank account for fee payment: AB bankas **Hansabankas**, IBAN-LT27 7300 0100 0223 6099, to account '**LSSS 50 Years Conference**'.

## **Reminder for the next issue:**

**Articles, reports, letters, views or comments on any aspect of soil erosion and conservation in Europe are always welcome.**

We invite proposals for special thematic issues of the Newsletter. We also welcome any comments on the ESSC Newsletter and suggestions on how it can be improved and developed.

Do not forget to send in your details of the following information:

- (i) Reviews of recent conferences.
- (ii) Recent grant awards.
- (iii) The citation details and abstracts of completed Ph.D. and M.Sc. theses.
- (iv) Newly enrolled Ph.D. research students, title of their research topic and names of research supervisors.
- (v) Recent staff institutional movements/promotions.
- (iv) A reference list of your 'new' international refereed scientific journal papers, which have been published recently (since and including the year 2000).

Send these details to either:

Professor Mike Fullen: [m.fullen@wlv.ac.uk](mailto:m.fullen@wlv.ac.uk) or

Dr Colin Booth: [c.booth@wlv.ac.uk](mailto:c.booth@wlv.ac.uk) and they will include this information in the next issue.

## **PLEASE NOTE:**

We publish four Newsletter issues per year. The deadlines are:  
10 January; 1 April, 1 July and 1 October.

## Some Closing Thoughts



*“Where armies settle,  
nature offers nothing but briars and thorns.  
After a great battle has been fought,  
the land is cursed, the crops fail,  
The earth lies stripped of its Motherhood.”*

*(Lao Tzu (born 604 BC), Tao Te Ching, Verse 30)*



*“The hills are shadows, and they flow from  
form to form, and nothing stands. They  
melt like mist, the solid lands. Like  
clouds they shape themselves and go.”*

*(Alfred, Lord Tennyson (1809-1892), In Memoriam A.H.H., 1850)*



*“When eating bamboo shoots, remember the man who planted them”*

*(ancient Chinese Proverb)*



*An empty stomach is not a good political advisor”*

*(Albert Einstein, 1879-1955)*



*“Never attribute to malice that which is adequately explained by stupidity”*

*(Marion Kaplinsky)*



*“It is better to be silent and thought a fool, than to speak and remove all doubt”*

*(Abraham Lincoln)*



*“A successful person is one who can lay a firm foundation with the bricks others throw at them”*

*(David Brinkley)*



*No evil lasts forever nor indeed for very long”*

*(Epicurus, 341-271 BC)*

## **AIMS OF THE SOCIETY**

*The ESSC is an interdisciplinary, non-political association, which is dedicated to investigating and realizing soil conservation in Europe. The ESSC pursues its aims in the scientific, educational and applied sectors by:*

*Supporting investigations on soil degradation, soil erosion and soil conservation in Europe,*

*Informing the public about major questions of soil conservation in Europe,*

*Collaborating with institutions and persons involved in practical conservation work in Europe.*

*The ESSC aims at co-ordinating the efforts of all parties involved in the above cited subjects: research institutions; teachers and students of geosciences, agriculture and ecology; farmers; agricultural planning and advisory boards; industries and government institutions.*

## **ZWECK DER VEREINIGUNG**

*Die ESSC ist einer interdisziplinäre, nicht politische Vereinigung. Ihr Ziel ist die Erforschung und Durchführung des Schutzes der Böden in Europa. Die ESSC verfolgt dieses Ziel auf wissenschaftlichem, erzieherischen und angewandtem Gebiet:*

*durch Unterstützung der Forschung auf den Gebieten der Boden-Degradierung, der Bodenerosion und des Bodenschutzes in Europa,*

*durch Information der Öffentlichkeit über wichtige Fragen des Bodenschutzes in Europa,*

*durch Zusammenarbeit mit Institutionen und Personen, die an der Praxis des Bodenschutzes in Europa beteiligt sind.*

*Die ESSC will alle Personen und Institutionen zusammenführen, die sich für die genannten Ziele einsetzen: Forschungsinstitutionen, Lehrer und Studenten der Geowissenschaften, der Landwirtschaftswissenschaften und der Ökologie, Bauern, landwirtschaftliche Planungs- und Beratungsstellen, Industrieunternehmen und Einrichtungen der öffentlichen Hand.*

## **BUTS DE L'ASSOCIATION**

*L'ESSC est une association interdisciplinaire et non politique. Le but de l'association est la recherche et les réalisations concernant la conservation du sol en Europe. L'ESSC poursuit cette finalité dans les domaines de la recherche scientifique, de l'éducation et de l'application:*

*en encourageant la recherche sur la dégradation, l'érosion et la conservation du sol en Europe,*

*en informant le public des problèmes majeurs de la conservation du sol en Europe,*

*par la collaboration avec des institutions et des personnes impliquées dans la pratique de la conservation du sol en Europe.*

*L'ESSC souhaite favoriser la collaboration de toutes les personnes et institutions poursuivant les buts définis ci-dessus, en particulier: institutions de recherche, professeurs et étudiants en géosciences, des agriculteurs, des institutions de planification et des conseils agricoles, de l'industrie, et des institutions gouvernementales.*

## **OBJECTIVOS DE LA SOCIEDAD**

*La ESSC es una asociación interdisciplinar, no-política, dedicada a la investigación y a la realización de acciones orientadas a la conservación del suelo en Europa. La ESSC persigue sus objetivos en los sectores científicos, educacionales y aplicados, en el ámbito europeo:*

*promocionando la investigación sobre degradación, erosión y conservación de suelos,*

*informando al público sobre los principales aspectos de conservación de suelos,*

*colaborando con instituciones y personas implicadas en la práctica de la conservación de suelos.*

*La ESSC aspira a coordinar los esfuerzos, en los temas arriba mencionados, de todas las partes implicadas: centros de investigación, profesores y estudiantes de geo-ciencias, agricultura, selvicultura y ecología, agricultores, servicios de extensión agraria, industrias e instituciones gubernamentales.*

**Visit the ESSC Website: <http://www.essc.sk>**

## MEMBERSHIP FEES

*I wish to (please mark appropriate box):*

- Join the ESSC
- Renew my membership of the ESSC
- Know whether I have outstanding membership contributions to pay

*Membership rates:*

Standard Rates:

- One year € 25.00
- Three years € 70.00

Members in Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine:

- One year € 10.00
- Three years € 25.00

Students:

50 % reduction on above rates for three years

Your supervisor must provide written confirmation of student status

*I wish to pay my membership contribution by (please mark appropriate box):*

- Eurocard / Mastercard
- American Express Card
- Visa Card
- Bank Transfer

Branch address: Fortis Bank, Zonnestraat 2, B-9000 Gent, Belgium;

International transaction codes:

IBAN - BE29 0014 5139 8064 and BIC - GEBABEBB;

Account name: European Society for Soil Conservation;

Account number 001-4513980-64

CARD NO. .... EXPIRY .....

Amount: € ..... Date: ..... Signature: .....

NAME: .....

ADDRESS: .....

E-MAIL: .....

MEMBERSHIP NUMBER (if known): M0 .....

Please send this form to: ESSC Treasurer, Dr Wim Cornelis, Department of Soil Management and Soil Care, Coupure links 653, B-9000 Gent, BELGIUM.

wim.cornelis@UGent.be