NEWSLETTER
4/2008

ESSC EUROPEAN SOCIETY for SOIL CONSERVATION

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Cover photo: Gully erosion in Paraiba do Sul drainage basin. This photo was taken on the highway between the two largest cities in Brazil: Rio de Janeiro and São Paulo. In the 19th Century, huge coffee plantations were established on steep slopes, without soil conservation measures, which led to severe gully erosion.
(Photo courtesy of Maria do Carmo Oliveira Jorge).

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Contents

This issue of the ESSC Newsletter presents the seventh 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. For the first time, we have perspectives from the southern hemisphere, from Antonio Guerra (Rio de Janeiro, Brazil). Eventually, we envisage this collection of essays developing into an authoritative book.

Challenges for the use of soil with quality and efficiency

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Let's overcome challenges?

Issues related to the environment are no longer restricted to scientists. Fashion or not, we can see governments, companies, media and citizens discussing how to save human beings from global warming and how to improve the quality of life on Earth. Although many people are concerned with the consequences of global warming, another problem

Part of the Atlantic Forest (Ubatuba Municipality, São Paulo State, Brazil). It is almost impossible to imagine this verdant path, between São Paulo City and Rio de Janeiro City, lies between the two main metropolitan conurbations of Brazil.

draws the attention of many experts to another world crisis: the lack of agricultural land and the associated consequences, including the lack of biodiversity, damage to ecosystems, decreased productivity and the lack of food.

Considering these consequences, we can see that the main factor for soil degradation is mismanagement. Therefore, what is the solution to resolve this self-destructive trend? Is it possible for us human beings to adopt a system of life, which is based on a productive and more rational economic model; that is **sustainability?** According to Hellin (2006) *"the greater part of most Better Land Husbandry projects involves discovering what farmers' realities are, determining where lie the problems in their operational systems that allow land degradation, and then seeking strategies that help those farmers rise above the obstacles by improving their welfare and by helping them conserve and enhance their land."*

We live on a planet with over 6 billion people, under a system that favours exaggerated consumption. A consumerism, where the culture of capital is based on hunger for billions of inhabitants and of the current lack of food for humanity. In the face of this situation, how should humans consume? Because we are dealing with so many complex issues, we should think about our present role on Earth.

Legacy

What is the ecological crisis? Is it recent to us? We notice more clearly the events that occur in short periods of time, such as floods, earthquakes, mass movements, than catastrophes that take longer periods to occur. Even those catastrophic events, which seem to take a long time under human eyes, are considered rapid, when we consider the geologic time scale. And we can say that those slow catastrophic events, such as global warming and desertification, can cause the worst consequences to society. Even though, it seems that

Green frog on an abandoned stem in tropical forest of Ubatuba Municipality.

many people and governments all over the world are not so concerned. According to Gerrard (1992) *"soils and landscapes behave as open systems in that they lose and receive material and energy at their boundaries. Soils are continuously adjusting by variable degrees, scales and rates to variable energy and mass fluxes, thermodynamic gradients, and other changing exogenous environmental conditions."*

Natural resources and the environment

Environmental problems, such as land mismanagement and lack of natural resources, are not recent. Preoccupation with the environment and its resources was a major concern of ancient civilizations. The historical collapses are opposed to old and recent histories of success are presented in the book 'Collapse' by Jared Diamond (2005). Perhaps the main contrast is between Easter Island and Japan; both complex societies which have flourished amongst the Pacific Islands. The Easter Island inhabitants became famous by the enormous stone statues they built: the Moai. Nevertheless, during the Moai construction apex, the whole Island was deforested and its soil became infertile. The paucity of vegetation still remains one of the characteristics of the Island, which has brought both massive starvation and consequent death. The same problem of deforestation threatened Japan at that time (between the 17–18th centuries), but the answer from the Shoguns was different: the government initiated a massive process to reforest Japan, which remains one of the greenest countries in the world.

We know that many raw materials will become exhausted in the future, putting human survival at risk. There are ecosystems and species in decline all over the world, mainly as a result of soil mismanagement, which has accelerated due to the effect of human activities, such as agriculture, cattle, housing and various services. Therefore, we should carefully reflect on ways to change society in its totality. The ecological crisis is not an isolated problem of

Bromélia (Ubatuba Municipality, São Paulo State). Most Bromélias are present in the Atlantic Forest of Brazil, one of the most endangered ecosystems in the world.

overloading the environment. It is more a problem of natural resources and raw materials. We are reaching a momentum of lack of raw materials on which our society is based.

Soils and food

Although the soil is a finite resource, the human population continues to grow and today we are over 6 billion people; all people needing food. Therefore, there is constant pressure on potentially arable soils, in order to increase agricultural production, consequently increasing soil degradation all over the world. *"One of the challenges in the tropics and subtropics is, therefore, to intensify the output from the land without destroying the land resource – soil, water and land"* (Hellin, 2006).

According to FAO (2008), approximately 1.5 billion people, that is one-quarter of the world population, depends directly on land which is suffering degradation. The food scarcity is partially caused by continuous reduction in the amount and quality of global agricultural soils and this has engendered crises in Asia, Africa and Latin America. It has been estimated that by 2030, 8.3 billion inhabitants will be living on this planet and so farmers will have to produce 30% more cereals for food than they produce today (National Geographic, 2008).

Rill and gully erosion in Paraiba do Sul drainage basin, São Paulo State.

Soils and misery: the food under our feet

Inadequate soil use has destroyed many natural resources and has transformed fertile soils into ecological and economic deserts. Therefore, we are faced with very serious environmental and social problems. What is the social response to this situation? These include land abandonment by poor populations and decreased quality of life. Furthermore, there is also the growth of urban poverty, due to migration, urban disorganization, increased

pollution and many forms of urban environmental problems. *"The challenge is to recognize that land degradation, including soil erosion, is driven largely by socio-economic factors. There is an urgent need to change how decisions are made regarding land use at all levels, from individual land user to national and international policy-makers, taking into account the development of improved land-use practises"* (Craswell et al., 1998).

An example of poverty and, consequently, lack of food is what we see in Haiti today. In the largest slum of Port au Prince, many people feed themselves with a kind of clay mixture with butter, salt and water. This is a "meal", consumed every day in Haiti. Is this fair?

The future

The year 2006 was declared by the United Nations Organization (UNO) as the 'Year of Deserts and Desertification.' The aim of this Declaration was to sensitize the international community to the advancement of deserts and the threat that desertification represents to humanity. Because this is a current problem in many countries, desertification is now considered a global issue. America, Asia, Europe, Africa and Australia have areas where man, due to inadequate and/or intensive soil use, has destroyed natural resources and have transformed fertile soils into deserts.

The African continent is by far the most affected by desertification, which threatens 41% of global territory. In Brazil, this problem can be seen around 1400 municipalities, mainly in the North-east Region, where 32 million people live, and the semi-arid areas are expanding.

But I would like to stress that on each part of Earth, desertification has different types of occurrence and has its own dynamics, influenced by local site conditions. Although desertification has different dynamics, the possible causes are similar. Deforestation endangers biodiversity and leaves soils uncovered and exposed to soil erosion, and occurs mainly as a function of economic activities.

Economic activities are necessary and dictate the culture of capital, but what distinguishes the need for human beings of exaggerated consumerism? Will our civilization fail, in the same way as the Rapa Nui (Easter Island) inhabitants? Can we say that this could happen to us in the near future? These are the complex issues we face at the interface between ecology and economy.

The ways to deal with the future scarcity of raw materials scarcity has to be prepared today, in the present. Sustainable development is a way out, but how to adopt it, with so many difficulties? Sustainable development proposes conciliation between economic development and conservation (Brundtland, 1987). Although this has not achieved full application, it is a very interesting and well discussed thesis. However, it remains highly theoretical and very few people and governments have put the recommendations of the Brundtland Report into practise.

Sustainability

Although in the long-term there is a great risk of soil exhaustion, all over the world researchers and farmers are discovering that even on the most degraded soils there are possibilities for rehabilitation. Investigations in the Amazon Basin show that between

Trees in Burle Marx Park (Rio de Janeiro City). The famous Brazilian environmentalist Burle Marx has left a great legacy for those of us who campaign for nature conservation.

2,500 and 500 years ago native South American Indians already efficiently utilized simple soil conservation techniques. They created thick layers of soil enriched with carbon, aiming to improve the poor shallow soils. Today, this technique could be used as a cheap way to rehabilitate poor and exhausted soils (National Geographic, 2008). Simple and low cost solutions may have good effects if necessary measures are taken. However, before we use any technique, it is necessary to count on the support of politicians. To rehabilitate degraded lands could be the beginning to combat hunger and many kinds of environmental problems. *"Political stability, environmental quality, hunger and poverty, all of them have the same root. The solution for many problems is on the most basic natural resource that we have, that is the soil"* (National Geographic, 2008).

Some questions to consider

Sustainability is not an economic theory or a political treaty, is a life philosophy, in which we should basically look after our current environment, so that the future generations can use it. It is to live, to develop and make business without forgetting the environment and the improvement in the quality of life of all people. To fight against the causes which lead to increased global warming, desertification and other catastrophes, is not only an environmental issue, it is also a fight against a very unfair world. The unequal world exists everywhere. *"The history of a nation depends on how it looks after its soil"* (Franklin Roosevelt).

India tree from Burle Marx Park.

Acknowledgments

I thank Ms. Maria do Carmo Oliveira Jorge (Consultant in Physical Geography and Geoprocessing) for taking all the photographs for this Editorial.

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Introduction

The Soil Science research community is increasingly being asked to communicate the relevance of its work to society, as well as its excellence to fellow scientists. The Scottish Government funds a substantial programme of soils research (see http://www.programme3.net/soil.php) and provide funds specifically for knowledge exchange beyond scientific audiences. These audiences include:

1. The scientific community.
2. Scottish and UK governments.
3. Other public institutions.
4. Non-Government Organizations (NGOs).
5. Commercial Companies.
6. Land Managers.
7. Politicians (local and National).
8. The Public.

The primary objective of this programme of knowledge exchange is to raise awareness of the value of soil to society in several different contexts, for example, in food production, in delivering clean water, in environmental protection, in supporting above- and below-ground biodiversity and even in its role in local culture. This short article describes several approaches we have adopted for contrasting audience types and some of the lessons that we have learned in the process.

Policy and politicians

There is a growing focus on policy related research and to demonstrate that scientific findings find their way into better evidence based environmental policy. The Macaulay Institute (Aberdeen) in partnership with Stirling University produced a report on the Scotland's Soil Resources: current state and threats (see ESSC Newsletter 2007/1) for the Scottish Government as a first step in their development of a Scottish Soil policy. I believe that the success of this publication and the interest that it generated was based to a large extent on our deliberate policy of accentuating the positive aspects of soil and the environmental, economic and social benefits that they bring to Scotland. Soil scientists can tend to focus on the complexity of soils and that we need to do more and more research. However **if we do not highlight the positive benefits that accrue from healthy soils, then we will always struggle to convince others (including our funders) that they are worthy of protection.**

This positive engagement with policy has led to further joint working, including the part-time secondment of two scientists to the Scottish Government to assist them in the development of the Scottish Soils Framework. An earlier consultation document attracted around 40 responses, well in excess of expectations, comparable with similar consultations and indicative of some success in making soils more generally 'accessible' and relevant.

We have also worked closely with the Scottish Parliament Information Centre (SPICe) to produce briefing notes that inform Members of the Scottish Parliament and their researchers. The Scottish Government Cabinet Secretary and other parliamentarians have visited our Institute on several occasions: **there is no substitute for personal contact to convince people of the worth of your work.**

Finally, there is a relatively new administration in Scotland and it has identified five strategic objectives to make Scotland a wealthier and fairer, greener, smarter, safer and stronger and healthier place. It proved a very useful exercise to determine how well soils align themselves against these objectives. I would invite all readers of this article to do so; it is very instructive and you might be surprised at the outcome.

The Education sector

Soils constitute part of the geography curriculum in Scottish schools and to a lesser extent, in biology. The teaching profession has found it difficult to source materials and we have worked closely with them to provide materials, including web site resources (Figure 1). We also attend teachers' annual meetings, for example of the 'Association of Scottish Geography Teachers' and this has proved a useful venue for 'teaching the teachers.' Equally enjoyable, but less efficient and effective, are visits to individual schools, although both teachers and pupils like it because it is a new face in the classroom! We are still on a learning curve, but lessons learned to date include:

- Materials produced must map onto teaching outcomes.
- Work with the teachers to ensure that this happens.
- Materials must be in the correct language.
- Demonstrate what soils do as well as what they are.

The General Public

Soil does not figure uppermost in most peoples' minds and we have to think a little imaginatively to spark interest. One approach that we took was to make comparisons between human and soil health and between functions of human organs, for example our lungs and kidneys and soil functions, such as respiration and filtering. The analogy between soil erosion and a human wound is another example; both can usually be repaired but depending on the severity of the original incident. We gave different soils a character name and personal health statement dependent on their properties and their function. An example is given in Figure 2. This approach has proved popular with the general public and coupled with practical hands-on exhibits, have helped raise the profile of soils with the public at several events (Figure 3).

Other ways of communicating with non-scientists is through the broadcast media which, although perhaps initially daunting, can reach a potentially large and diverse audience. It is also very instructive to learn how journalists think, the type of 'story' that they are looking for and how we can use that experience to our subsequent advantage. Increasingly, broadcasts are retained and accessible via the WWW, so the initial effort is time well invested. See for example: http://www.bbc.co.uk/scotland/outdoors/articles/landward_300508/.

Lastly, the power of the written word should not be overlooked and articles written specifically for specialist publications can generate interest beyond our standard audiences. Here too, the different perspective of the journalist can generate eye-catching headlines (Figure 4)! **But increasingly that is the way that the soil science community should be thinking, if we are to enhance our profile as a profession. In our experience, do not be afraid of public engagement, it is very satisfying, most people have some degree of genuine interest and above all, it is good fun!**

Figure 1. Example of downloadable soil teaching material.

Figure 2. Health profile of a Scottish arable soil.

Consider this: the amount of land that the proposed Aberdeen Western Periphery route will occupy is greater than the area of Inverurie. Although enormous benefits accrue from development, we must be aware that the resulting changes to our soils are permanent.

ROUNDABOUT: The massive house-building and industrial developments round Aberdeen and in the surrounding countryside, all leave their mark.

Our love affair with the land

BY WILLIE TOWERS

The land of north-east Scotland and its contribution to the culture and social history of the area have caught the imagination of many writers. Lewis Grassic Gibbon in *Sunset Song* and David Kerr Cameron in *The Cowsloister Days* both capture the seemly relentless toil of agriculture in the area before World War 2 and the type of character that this environment produced.

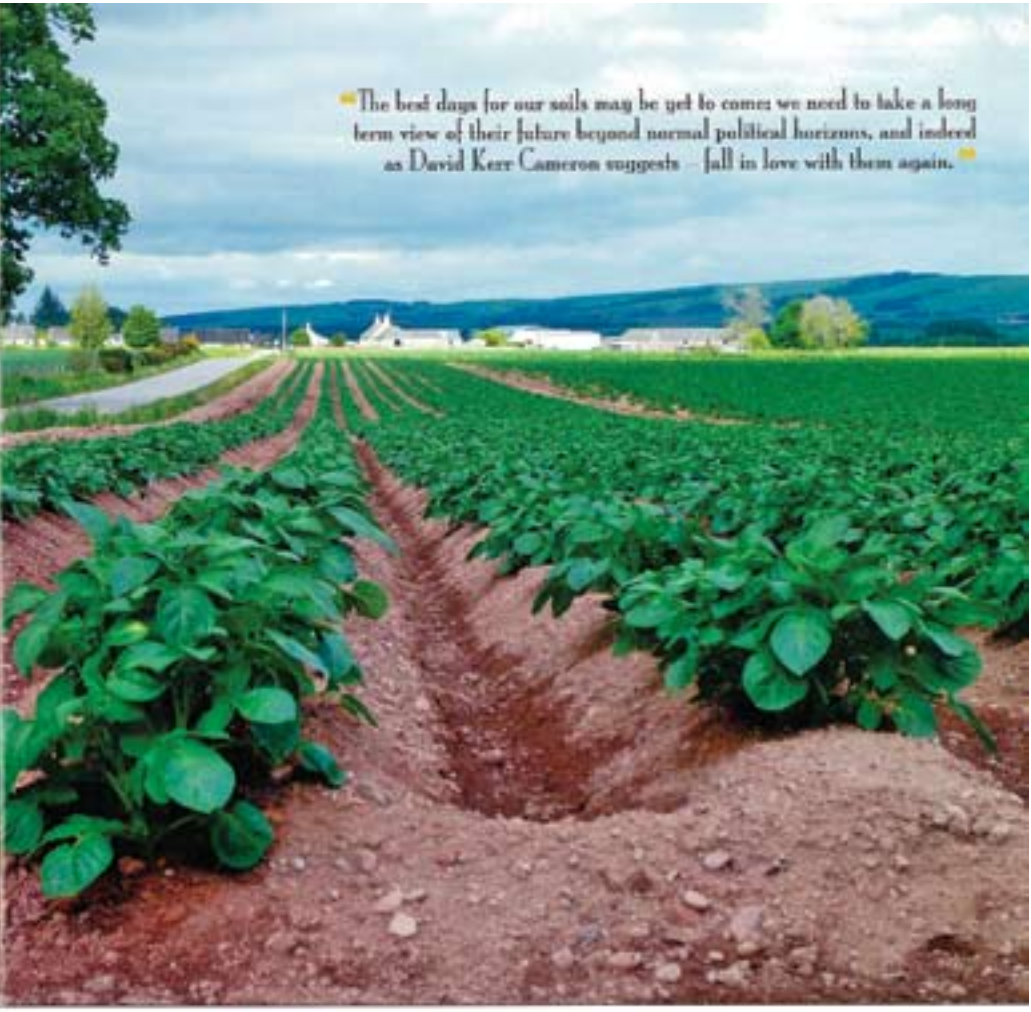
More recently Jack Webster and David Ogston, both sons of North-East farmers and brought up in the 1940s and 1950s, have written evocatively of the places that they have left behind to pursue careers outside farming.

It is interesting to note how often these writers refer to the soil – in his preface to a Sixty Quair, Cameron suggests that *Sunset Song* is a splendid hymn to the soil; it is also a love story deep and true' – and to that wonderful invention, the plough. In all these works, there is an implicit recognition that there would be no farming without soil, and that we need to manage it with care.

At the Macaulay Institute in Aberdeen we work on one of the area's most valuable resources – its soil.

The institute was founded in 1930 by farming enthusiast, TB Macaulay – a native of Lewis who emigrated to Canada and became president of the Sun Life Assurance Company of Canada. At his bequest, the institute's scientists (or 'Dirt Doctors' as they later became known) focused on improving the agricultural production of Scotland's soil and in 1943 the Soil Survey mapping programme started in the Insch Basin. This mapping programme gradually extended to all of Scotland and in 1983, the series ▶

Figure 4. An imaginative editor's headline for an article on soils.



of seven national soil maps was completed.

At the same time, many thousands of soil profiles were sampled, so the Macaulay Institute now is the repository for over 40,000 archived soil samples – in essence a soil museum. This unique resource allows institute scientists to test new techniques on these samples and determine whether there have been any changes compared to present day soils. Because soils stay in the same place (unlike water), they can be used to determine what impacts pollution, changes in farming practice, or changes in climate may have had over the period since they were first sampled.

These data and maps have allowed scientists to develop applications for specific uses. These include the Land Capability for Agriculture classification, a method that assesses the potential for any piece of land for agriculture. It is based on a series of guidelines that are very similar to the types of questions that any farmer would consider when thinking about the land on his farm:

What types of crop does the climate allow me to grow? How steep is my land? Is my soil, sandy, clayey or what?

Does my soil drain naturally? Have I any ▶

Figure 3 Macaulay Institute staff at 'Gardening Scotland.'

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Minutes of the ESSC Council Meeting held in Budapest on 19 May 2008

Present: P. Bielek, W. Cornelis, M.A. Countinho, C. Dazzi, M. Dumitru, L. Øygarden, J. Podhrázská, Á. Kertész, J. L. Rubio, M. A. Fullen, I. Pla Sentis, A. Marzecová, M. Zlatić.

Apologies: N. Fohrer, D. Gabriels, K. Helming, T. Karyotis, J. Poesen, A. Rodriguez, T. Scholten, L. Stroosnijder, P. Strauss.

Agenda:
1. Welcome and introductory remarks (J. L. Rubio, A. Kertész).
2. Report by the Treasurers (W. Cornelis, D. Gabriels).
3. Report by the Secretary (P. Bielek).
4. Report by the Editor-in-Chief (M. A. Fullen).
5. Report from the 5th ESSC Congress (C. Dazzi).
6. Information on the 6th ESSC Congress (T. Karyotis).

7. EU Soil Thematic Strategy (P. Bielek, J. L. Rubio).
8. New soil conservation paradigms: ESSC Workshop at EUROSOIL 2008 (J. L. Rubio, D. Gabriels, M. A. Fullen).
9. Continuing discussion on ESSC mission, vision and priority actions.
10. Review of recent and future activities.
11. Any other items.

Point 1

José Luis Rubio (President of the ESSC) opened the Council Meeting by greeting the participants and thanking Ádám Kertész for the organization of the meeting. On behalf of the meeting organizers, Á. Kertész also expressed thanks to the participants.

J. L. Rubio presented the Council Meeting Agenda and its respective points.

As part of an introduction, two new ESSC members were appointed to the ESSC Council with unanimous agreement:
Ivan Tursic (Croatia).
Jane Rickson (United Kingdom).

J. L. Rubio expressed his belief that these two new members will make important contributions to the ESSC Council.

M. Zlatić reminded the Committee that at the Palermo Meeting (June 2007), the ESSC Council agreed that good co-operation with other organizations is important and it was agreed that the ESSC should strengthen links with the 'World Association for Soil and Water Conservation' (WASWC) by increased membership of ESSC members in WASWC.

Point 2

Wim Cornelis presented the Treasurer's Report in which evolution of the number of paying members and potential payers were evaluated. Furthermore, he represented the financial situation and current income and expenses of the ESSC. Currently, the ESSC has 372 members (paying members and potential payers).

During 2007, the Society gained over 20 new members, mostly from Romania. Based on this evolution and in accordance with the rule "1 council member per 5 paying members," there is the possibility for Romania to have more Council members.

With regards to information from the Treasurer's report, there was a discussion about paying and non-paying members. As this issue represents long-lasting problems for the Society, members agreed that the Society should actively seek solutions. However, specific ideas from individual members differed.

J. L. Rubio expressed the opinion that non-paying members should be understood as potential members, the ESSC should treat them with patience and approach them with several circulars. Pavol Bielek expressed the opinion that strictly only paying members should receive the printed Newsletter.

Ilfonso Pla Sentis introduced the idea of guest membership that could be issued for one-year.

W. Cornelis added that invoices with an invitation to pay will accompany Newsletter 2008/2 and will be sent to all non-paying members, so the Society can expect some changes regarding this issue.

As a solution, J. L. Rubio suggested to keep this problem in mind, but wait until the next meeting in Vienna, to see the reactions from the membership base.

Point 3

Agáta Marzecová presented the Secretary's Report, which described the activities of the Secretariat during 2007, activities concerning the distribution of Newsletters and several proposed activities in 2008.

2008 is the 20th anniversary of the establishment of the Society. With regard to this event, Council members, after broad discussion, agreed on the following activities:

- To implement changes in the ESSC website (Secretariat).
- Prepare an updated list of VIP addresses for free copies of the ESSC Newsletter, including the Presidents of all European national soil science societies.
- Prepare a promotional leaflet in the context of the 20th anniversary (Secretariat).
- Prepare an extended Newsletter with contact details of all paying members of the ESSC (Secretariat).
- Prepare an ESSC anniversary publication which would summarize the activities and accomplishments of the ESSC (team of several Council Members, led by J. L. Rubio).

The last point (to prepare an anniversary publication) received much discussion, where Council members expressed diverse ideas about the character of the planned document. Finally, it was agreed that this publication is important (albeit the preparation is time-consuming) and it should reflect the main milestones and history of the ESSC, as well as outline the current situation and future plans for the Society. It should be developed by a team of Council Members co-ordinated by the President. It should serve both for members and for the propagation of the Society.

Point 4

Editor-in-Chief, Mike Fullen, presented his report and information about the main publishing activities of the ESSC in 2008 and plans for 2009.

Since 2004, when the new Editorial team was elected, 14 Newsletters have been published. M. A. Fullen thanked everyone who helped in the process of creating the Newsletters.

J. L. Rubio stated that the Newsletter is of a very high standard and is a functional communication tool. Furthermore, the feedback from readers is good.

As the Guest Editorials in the Newsletter have proved to be popular, M.A. Fullen suggested to compile the Guest Editorials into an interesting book. To assure quality of the publication, publications should go through a refereeing process. In the ensuing discussion, M.A. Fullen explained that the aim would be a collection of the best 'state-of-the art' essays on soil protection, because such resources are presently missing. Carmelo Dazzi suggested that the publication must have scientific value and should be based on sound scientific research.

Lily Øygarden proposed that such a book should have a tailored layout and that is it should be well thought through and accompanied by figures, plates and illustrations. M.A. Fullen also asked the Council to think over possibilities of printing the publication in Bratislava or by a commercial company.

J. L. Rubio closed the discussion about publication stating that the general idea is good and it accords with ESSC efforts to promote soil conservation, also it would assist information dissemination. However, we should bear in mind remarks by C. Dazzi and others.

M.A. Fullen further presented the Council with the members' citation list and the list of Ph.D. theses completed by ESSC members since the year 2000.

J. L. Rubio invited all Council Members to update their list of citations, list of publications or provide other useful data, to be shared on the ESSC website. He also invited more contributions to the Newsletter.

Point 5

C. Dazzi presented his report of the Palermo Congress of June 2007. He summarized the programme of the Congress and related activities and excursions. Overall evaluation of the event was very good. Organizers received 190 papers from which, with the help of 152 reviewers, the final selection was made, totalling about 600 pages. Because of the shortage of space, high quality papers had to be rejected. C. Dazzi explained the problems and the process of paper selection. Books should be ready for distribution in September 2008 and ESSC members will be offered a reduced price. Details about this offer will be published on the web site.

C. Dazzi also commented that they received 28 grant applications from young researchers to participate, for the five available sponsored grants. J. L. Rubio thanked C. Dazzi and his colleagues for great work on this very successful Congress.

Point 6

Theodore Karyotis sent his apologies for absence, but sent a report about the forthcoming ESSC Congress in Athens in May 2011, which was presented. Organizers of the Congress are in the process of establishing contacts in the research sphere, governmental and the private sector, to find sponsors and consider field trips. It is anticipated that the Congress will receive governmental support.

More detailed information will be presented in Vienna in August at EUROSOIL 2008. P. Bielek and I. Pla Sentis remarked that it would be appropriate that by EUROSOIL, the first announcement for the Congress and its general title should be prepared. Also registration fees should be announced.

Point 7

J. L. Rubio and P. Bielek informed the Council about the EU Soil Thematic Strategy. P. Bielek explained in detail why the adoption of the EU Soil Directive was unsuccessful and what are the future possibilities regarding this issue. He described the whole, two-year long process of preparation of the Directive, respective chapters and articles and explained the most important terms (e.g. soil contamination, soil sealing). He explained that the current draft document is not accepted, but it is not refused. Therefore, it can be 'put on the table'

again. P. Bielek expressed his opinion that decision-makers did not have fundamental knowledge about soil systems and the decision was influenced by strong lobbying from industry and farmers.

M. A. Countinho suggested that decision-makers need to know that measures will have progressively positive impacts and the eventual costs to the EU for non-implementation will be high.

J. L. Rubio summarized by stating that establishing soil protection and adopting the Soil Directive is a long and challenging process, but the ESSC as an interested scientific society should actively support such efforts. This can be made by sending official letters which would show scientific support at political levels. Also the letter could be supported by other scientific soil protection organizations (e.g. universities and research institutes). J.L Rubio emphasized the role of the ESSC in informing and educating the public about soil issues. On behalf of the ESSC, J. L. Rubio will prepare an official report of the European Council to support the initiative.

Point 8

J. L. Rubio introduced the structure and goals of the forthcoming ESSC Workshop at the EUROSOIL Conference, scheduled for Vienna on 27 August 2008. It should provide complex views on new situations in soil protection and an important part of the Workshop will be brain-storming and open discussion.

P. Bielek outlined a small workshop organized by him and Winfried Blum on 'Soil Policy' and invited all members to take part. J. L. Rubio and P. Bielek agreed that these two workshops should avoid overlapping. J. L. Rubio and M.A. Fullen proposed to publish results of the Workshop on the ESSC website and in the Newsletter.

Points 9 and 10

J. L. Rubio suggested the Council should be more proactive in recruiting new ESSC members and encourage increased activity by passive, non-paying members.

J. L. Rubio thanked the Council Members from Romania (M. Dumitru and A. Canarache) for the notable increase of membership from Romania and expressed appreciation and recognition of their welcome activities.

Furthermore, J. L. Rubio was happy to announce that J. Podhrázská (Research Institute for Soil and Water Conservation (VUMOP), Czech Republic) will organize the ESSC Conference on 'Protection of The Ecological and Productivity Functions of Soil in a PAN-European Context,' to be held in June 2009 in Průhonice (near Prague), Czech Republic. J. Podhrázská presented further information about the Conference, which will be held in a convenient Congress Centre. The Conference will be organized in conjunction with the 55th anniversary celebrations of the VUMOP Institute. As a result of the Conference, a book of extracts and the selection of best papers for publishing in scientific journals are planned. An invitation document can be found on the ESSC website and an extended announcement will be available from June 2008. Miodrag Zlatić advised that the Conference will also be publicized in the WASWC Bulletin. Council members discussed possibilities for reduced registration fees in such conferences and meetings for paying ESSC members. J.L Rubio presented other forthcoming activities:

ESSC Council meeting and ESSC workshop on EUROSOIL in August 2008, in Vienna.

Third International Meeting on Environmental Biotechnology and Engineering, September 2008, Palma de Mallorca, Spain.

13th International Conference 'Biosystems Engineering and Processes in Agriculture,' September 2008, Kaunas, Lithuania.

WASWC meeting, May 2009, Tara Mountains, Croatia.

J. L. Rubio closed the meeting with many thanks to all participants of the Council Meeting.

Agáta Marzecová
Budapest, May 19, 2008

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!"

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, 41 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. Three new Ph.D. theses are reported in this issue.

Wheat (*Triticum aestivum L.*) response to main soil degradation factors in semiarid area of Golestan Province, northern Iran (2008). Ph.D. thesis, 154 pp. (ISBN 978-90-5989-252-1).

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Abstract
Soil degradation is one manifestation of land degradation, whereby we concentrate on both soil quality and productivity. Four main types of soil degradation can be distinguished: water erosion and wind erosion; chemical deterioration (i.e. soil fertility decline, salinization and pollution); and physical deterioration (i.e. soil compaction and waterlogging). In this study, we focus more on salinity, waterlogging and compaction, as the main factors influencing soil degradation in the study area (northern Golestan Province).

In the first study the aim was to quantify the effects of different salinity levels, i.e. 3 dS m^{-1} (as control), 8, 12 and 16 dS m^{-1} on grain yield, yield components and leaf ion concentrations, i.e. Na^+, K^+ and Cl^-, and Na^+:K^+ ratio of four Iranian wheat genotypes, i.e. Kouhdasht, Atrak, Tajan and Rasoul. Kouhdasht and Atrak were identified as the most salt-tolerant genotypes and could be utilized through selection and breeding programmes to further improve the salt tolerance of Iranian wheat genotypes.

The objective of the second study was to obtain information on the response of two selected wheat genotypes, which from the previous experiment were shown to be, respectively, tolerant and sensitive to salinity, i.e. Kouhdasht and Tajan, to waterlogging stress at different growth stages. Results revealed that highest reduction in grain yield, thousand-grain weight (TGW) and harvest index (HI) were observed through waterlogging that occurred twice during wheat growth stages. Non-significant changes in grain yield, TGW and HI were observed with waterlogging at booting as compared to the control. Kouhdasht showed better performance than Tajan under saline and saline × waterlogged conditions. Therefore, Kouhdasht seems to be a genotype relatively suitable for the study area which also suffers from high salt accumulation in soils, and shallow and brackish groundwater.

The aim of the third study was to quantify soil compaction effects on grain yield,

some yield components and leaf ion concentrations of two Iranian wheat genotypes (i.e. Kouhdasht and Tajan) under individual and combined effects of salinity and waterlogging treatments. Results show that soil compaction alone significantly reduced grain yield and yield component values of both wheat genotypes as compared to the control. Compaction also significantly intensified the effect of all other treatments, except waterlogging, on grain yield, yield components and leaf ion uptake of both wheat genotypes as compared to non-compacted soil conditions.

Acknowledgements

The author would like to thank the Ministry of Science, Research, and Technology of Iran who granted him a four years scholarship to pursue his doctoral research at Ghent University, Belgium.

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Synthesis of zeolites from geological materials and industrial wastes for potential application in environmental problems (2008). Ph.D. thesis, 233 pp.

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Abstract

Zeolites are among the least-known products for environmental pollution control, separation science and technology. Due to their unique porous properties, they are used in various applications in petrochemical cracking, ion-exchange and separation and removal of gases and solvents. The preparation of synthetic zeolites from chemical reagents is expensive. Therefore, in order to reduce costs, zeolite researchers are seeking cheaper aluminosilicate-bearing raw materials to produce synthetic zeolites.

This research concerns the synthesis of zeolites and zeotypes derived from low-cost materials like kaolinite (KAO), natural clinker (NC) and fly ash (FA). The motivation for using these sources as the starting materials in zeolite synthesis is driven by factors, such as they are cheap and available in bulk quantities, are currently under-utilized, have high workability and require less water (or solution) for activation. The raw materials were activated by two different routes: (1) classic alkaline hydrothermal synthesis and (2) alkaline fusion prior to

hydrothermal synthesis. In the first method, the synthesis of zeolitic materials was carried out generally in alkaline media, although KAO or its calcination product, metakaolinite (MTK), was also activated in the presence or absence of structure directing agents (SDAs) and additional silica (precipitated SiO_2), with the last one determining the SiO_2/Al_2O_3 ratio of the reaction mixture and the time given for zeolitization. Synthesis in fluoride- and calcium-bearing media was also used to activate kaolinite. The process of synthesis was optimized by applying a wide range of experimental conditions with a wide range of reaction temperatures, times, mineralizer concentrations and solid/solution ratios. In the second approach, an alkaline fusion step was conducted prior to hydrothermal treatment, because it plays an important role in enhancing the hydrothermal conditions for zeolite synthesis. On the other hand, this approach was adopted because it can dissolve more aluminosilicates.

The main synthesis products obtained after activation of KAO in NaOH solutions included zeolite LTA (LTA), sodalite (SOD), cancrinite (CAN), faujasite (FAU), zeolite Na-P1 (GIS), JBW-type zeolite (JBW), analcime (ANA), whereas the activation of KAO in KOH solutions produced chabazite (CHA), zeolite Barrer-KF, phillipsite (PHI) and K-feldspar. The hydrothermal conversion of kaolinite in fluoride media did not produce successful results, although traces of FAU, GIS, CHA, SOD and CAN crystallized. The activation of KAO in the system $CaO\text{-}SiO_2\text{-}Al_2O_3\text{-}H_2O$ promoted the formation of different calcium silicate hydrate (C-S-H) phases, including hydrogarnet (HYD) and tobermorite (TOB). Following the fusion approach, the main zeolitic phases obtained using NaOH as mineralizer were LTA and CAN.

The main as-synthesized zeolites obtained from NC by the conventional hydrothermal treatment method include PHI, SOD and CAN. Using the fusion approach, FAU and LTA were obtained with NaOH as an activator, whereas non-zeolitic material crystallized when KOH was used.

The main as-synthesized zeolitic materials obtained by hydrothermal reaction of FA include PHI, zeolite Barrer-KF, CHA and SOD with traces of TOB, ANA, zeolite LTF (LTF) and herschelite (HER), appearing occasionally. By the fusion approach, FAU was obtained with NaOH as activator, whereas no zeolitic material crystallized using KOH.

Experimental results indicate that the method, mineralizer, concentration and time have strong effects on the type and degree of crystallinity of the synthesis products. On the other hand, the type and chemical composition of the as-synthesized products are strongly dependent on the chemical composition of the starting material. The chemistry of zeolite synthesis was subject to perturbations caused by the presence of impurities in the raw materials, which may remain insoluble during crystallization and cause undesired species to nucleate, developing mixtures of different types of zeolites. However, other physicochemical factors may play a very important role in the thermodynamics and kinetics of zeolite formation. The raw materials have very high contents of SiO_2 and Al_2O_3, with SiO_2/Al_2O_3 ratios appropriate for the synthesis of low-Si zeolitic materials with high crystallinity and cation exchange capacity (CEC). However, although zeolites' CEC represents a very important characteristic quality in the removal of undesired species from polluted effluents, it is not the deciding factor in determining zeolite performance during ion exchange processes, since numerous other factors also need to be considered.

Finally, the potential application of the raw materials and their as-synthesized products as low-cost sorbents in the remediation of metal ions and ammonium from wastewater effluents was investigated. PHI showed a lower efficiency than FAU. Selectivity of FAU for metal removal was, in decreasing order, Fe>As>Pb>Zn>Cu>Ni>Cr. Based on these results, the use of these materials has the potential to provide improved methods for the treatment of contaminated effluents.

Publications

Ríos, C.A. and Williams, C.D. (2008). Synthesis of zeolitic materials from natural clinker: A new alternative for recycling coal combustion by-products. Fuel 87, 2482-2492.

Ríos, C.A., Williams, C.D. and Roberts, C.L. (2008). Removal of heavy metals from acid mine drainage (AMD) using fly ash, natural clinker and synthetic zeolites. Journal of Hazardous Materials 156, 23-35.

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Trace elements in soils and vegetables in a periurban market garden in Yunnan Province (P.R. China): evaluation and experimentation (2008). Ph.D. thesis, 236 pp.

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Abstract

This research was conducted in order to evaluate natural trace element (TE) contents and anthropogenic contamination in soils and vegetables in Chenggong County (Yunnan Province, China). In this way, trace element contents in soils have been analysed to assess TE contamination in soils and vegetables, and transfer of TE from soil to vegetables. Agricultural practises have been proposed to amend the quality of vegetables.

We identified three geomorphopedological units: lacustrine unit, transition unit and mountain unit.

In the mountain unit, soil texture is clay more often from the weathering of limestone and marlstone. Soil colour is red or reddish brown with acid reaction.

- In the transition unit, soil texture is loamy clay. Soil colour is red-brown with acid reaction.
- In the lacustrine unit, soil texture is mainly sandy, developed from lacustrine-alluvial deposits. Soil colour is brown and soil is slightly acid.

Total TE contents in the topsoil are higher than usual and even Kunming Prefecture soil. TE contents indicate a high contaminated level when considered globally. Pb, Cd and Zn, however, present individually low contaminated levels, and Cu presents a medium contaminated level. TE contents decrease from northeast to southwest, which is consistent with the elevation gradient. Significant differences of TE contents are observed according to distance from Chenggong town in the lacustrine unit and with distance from the mountain in the transition unit. TE accumulation is usually observed along roads. TE contents in subsoil are related to soil colour, texture, parent materials and mottles. Accumulation of Pb and Zn in topsoil and of Cu and Cd in subsoil are observed.

The highest contents are observed for Pb in cauliflower, Cd in lettuce and Chinese cabbage, and Cu and Zn in pea. The order of TE accumulation in plants varies according

to the plant species and organ. According to relations between TE contents in Chinese cabbage and extraction sequential fractions of TE in soils, different soil fractions are suggested as soil assessment indicators.

Lime and pig manure have been applied to modify the soil pH and to decrease the mobility of TE in situ. With increasing in lime rate and pH, contents of acetic-acid extractable TE fractions in soil decrease. Enrichment coefficients related to TE availability (AEC) of Pb and Cu are stable and are not changed by lime or pig manure. AEC of Cd and Zn which are high in low pH, decrease with increased pH and application rates of lime and pig manure.

When application rates of lime and pig manure increase, TE contents in Chinese cabbage decrease and biomass of Chinese cabbage increases. Application rates of lime and pig manure are recommended, but their quality should also be taken into account.

Keywords: Trace elements; Assessment; Transfer; Soils; Vegetables; Chinese cabbage; Lime; Pig manure.

Eléments en trace dans les sols et les légumes d'une zone maraîchère périurbaine de la Province du Yunnan (RP de Chine): évaluation et expérimentation (2008). Ph.D. thesis, 236 pp.

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Résumé

Cette recherche a pour objet l'étude de la teneur naturelle en éléments traces métalliques (ET) et de la contamination anthropique des sols et des productions légumières dans le Comté de Chenggong (Province du Yunnan, RP de Chine).

Pour cela, la variabilité des teneurs en fonction des conditions géomorphopédologiques a été analysée, ainsi que les transferts des ET du sol vers les végétaux. Cette approche a permis ensuite d'aborder l'évaluation de la qualité des sols et des légumes, puis de proposer des pratiques agricoles alternatives dans le but d'améliorer la qualité des légumes produits.

La zone d'étude a été divisée en 3 unités géomorphopédologiques:

- unité de montagne où les sols brun rouge à rouge résultent notamment de l'altération de calcaires et de marnes. Une texture argileuse et une réaction acide dominent.
- unité de piedmont (dite de transition) où les sols de couleur jaune clair à jaune rougeâtre résultent principalement de l'altération de grès et de shales. Une texture limono-argileuse en surface et argileuse en profondeur, ainsi qu'une réaction acide dominent.
- unité lacustre, à proximité du Dianchi Lake, dont les sols de couleur brun foncé sont essentiellement développés à partir de sédiments lacustres. Une texture sableuse domine en surface, ainsi qu'une réaction faiblement acide à neutre.
- Les teneurs en ET rencontrées en surface des sols de la zone d'étude sont plus élevées que les teneurs moyennes observées dans les sols du monde ou même de la préfecture de Kunming. Evaluées séparément pour chaque ET, les teneurs rencontrées correspondent à des niveaux de contamination jugés faibles pour Pb, Cd et Zn, moyen

pour Cu. Considérées simultanément, ces teneurs permettent de déterminer un indice de contamination global correspondant à un niveau de contamination élevé. Les teneurs en ET décroissent globalement du nord-est vers le sud-ouest, suivant le gradient d'altitude. Ces teneurs varient également de façon significative en fonction de l'éloignement de la montagne dans l'unité de transition et de l'éloignement de l'agglomération de Chenggong dans l'unité lacustre . Une accumulation en ET est souvent observée le long des routes. Dans le sous-sol, les teneurs en ET sont liées à la couleur, à la texture, au matériau parental, et aux marques d'altération. Les teneurs sont plus élevées en surface pour Pb et Zn, et en profondeur pour Cu et Cd.

Les teneurs les plus élevées pour Pb sont observées dans le chou-fleur, pour Cd dans la laitue et le chou chinois, pour Cu et Zn dans le pois.L'ordre d'accumulation des ET dans la plante dépend de l'espèce et de l'organe considérés. En fonction des corrélations observées entre les teneurs du chou chinois et les résultats obtenus avec différentes modalités d'extraction des ET du sol, des indicateurs d'évaluation de la qualité du sol ont été proposés.

Un amendement carbonaté et du fumier de porc ont été épandus afin de réduire in situ la mobilité des ET. L'augmentation de l'apport d'amendement carbonaté permet d'augmenter le pH du sol et de diminuer la fraction extraite avec l'acide acétique dilué (AA) pour chaque élément. Les AEC, rapports teneur dans la plante : teneur dans le sol extractible à l'AA, sont stables pour Pb et Cu et ne sont modifiés par aucun des 2 apports. Cependant, les AEC de Zn et de Cu, élevés quand le pH du sol est acide, diminuent si le pH devient plus alcalin, ainsi qu'avec les apports d'amendement carbonaté et de fumier de porc.

Quand les apports d'amendement carbonaté et de fumier de porc augmentent, les teneurs en ET du chou chinois diminuent et sa biomasse augmente. Un épandage d'amendement carbonaté est donc recommandé. Cependant la plus grande attention doit être portée à la qualité des fumiers de porcs dont les teneurs en Zn et Cu ne sont pas négligeables.

Mots clés: Eléments traces, Evaluation, Transferts, Sols, Légumes, Chou chinois, Amendement carbonaté, Fumier de porc.

Publications

Zu, Y. Q., Li., Y. and Chen, H.Y. (2003). Research on factors influencing concentrations of Pb, Cd, Cu and Zn in vegetables. Journal of Agro-environmental Science 22(3), 289-292. (In Chinese).

Zu, Y. Q., Li, Y., Bock, L., Schvartz, C., Colinet, G. and Hu, W.Y. (2008). Interactions between heavy metals and nitrogen and their ecological effects. Journal of Agro-environmental Science 27(1), 1-8. (In Chinese).

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Romanian National Debate on the 'Danube River, its Floodplain and Delta; Agriculture and Environment; Present and Prospective' 8–9 May 2008, Bucharest, Romania

The debate was held on 8–9 May, 2008 in Bucharest and was organized by the **Section of Soil Science, Land Reclamation and Environmental Protection** of the **Academy of Agricultural and Forestry Sciences** 'Gheorghe Ionescu-Şişeşti' (ASAS). The debate aimed at identifying the present problems and the best solutions for sustainable management regarding the **Danube River, its floodplain and delta; agriculture and environment; present and prospective.**

All the above mentioned area of Romania, along of about 1075 km, covers about 10,500 km^2, of which 5,465 km^2 belong to the Danube floodplain. Until 1990, almost 4,320 km^2 (about 75%) of the Danube floodplain was protected with dikes designed to withstand a 100-year flood, with the particular purpose to protect human settlements and large areas of irrigated agriculture from flooding.

Unfortunately, the works carried out in this area, especially within the Danube floodplain, are facing some evident shortages with quantifiable negative consequences. The debate had many aspects to consider. These include the evolution and the present specific features of this territory. We must also consider the imperative requirement that the sustainable development of such an area *"should meet the needs of the present generation without compromising the ability of the future generations to assuring their own needs"* (WCED, 1987). As an EU State, Romania has commitments regarding the implementation of the EU Water Framework Directive. Thus, the participants in this debate prepared a resolution including, short-, medium- and long-term measures to be applied, as well as their priorities. This resolution is currently receiving the attention of the central state authorities at the highest level.

The solution of realistic sustainable development in such a large and specific territory is complex and emotionally-charged. The solutions are of particular importance for both Romania and the European Union. Thus, scientists and specialists in the research and development institutions of ASAS are fully prepared to participate, alongside policy-makers, both in preparing needed programmes and plans and in their implementation. Indeed, interaction between science and policy is as complex as it is vital. Of course, we welcome international co-operation in the development and application of a sustainable management policy.

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The 15th Congress of ISCO (International Soil Conservation Organization), 18-23 May 2008, Budapest, Hungary

The theme of the 15th Congress of ISCO (International Soil Conservation Organization) was 'Soil and water conservation, climate change and environmental sensitivity.' At the 14th ISCO Congress in Marrakech it was decided that the 15th Congress would be held in Budapest and Ádám Kertész was asked to be the Chairman of the Organizing Committee. The reason for Hungary is the long and fruitful history of soil conservation and the important scientific results in this field.

The Congress was organized in the Budapest Congress and World Trade Centre. Four days of papers and posters were presented in 10 thematic sessions. Some 162 participants took part in the Congress from all over the world.

The thematic sessions presented the newest results on climate change and environmental sensitivity, land use change, soil erosion, water management and agronomy, salinization and other land degradation processes, desertification, soil rehabilitation and management, socio-economic aspects of land degradation, legislative and institutional aspects of soil and water conservation and a special session was organized on soil conservation in China.

During the Mid-Congress Excursion congress participants visited the soil erosion experimental station of the Geographical Research Institute, Hungarian Academy of

Opening session of the ISCO Conference, Budapest, 19 May 2008. The presenter is Professor Ádám Kertész and the panel consists of Mr. Ferenc Sirman (State Secretary of the Ministry of Agriculture), Professor Tamás Németh (General Secretary of the Hungarian Academy of Sciences, HAS), Professor József Ádám (President of the Section of Earth Sciences of the HAS) and Dr Mark Nearing (Tucson, USA).

Sciences at Szentgyörgyvár, near Lake Balaton, where the results of the SOWAP (SOil and WAter Protection) Project were presented. The main objective of the SOWAP Project was the comparison of conventional and conservation agriculture from the perspective of runoff and soil loss. Ecological aspects of conventional and conservation agriculture were also included in the objectives of the Project. The second stop was at the Research Institute for Viticulture and Oenology, Centre for Agricultural Sciences, Pannon University, in Badacsony were soil conservation experiments of the Institute were introduced, followed by wine tasting. The third stop was on the Tihany Peninsula to enjoy the panoramic vista of Lake Balaton.

The main scientific topic of the Pre-Congress Excursion were salinization processes and problems of the Great Hungarian Plain. The Post-Congress Excursion took the participants to the Eger and Tokaj wine-growing region, where volcanic soils and viticultural areas were studied by participants.

We feel that all participants have fond memories of a well-organized congress with high scientific level and interesting excursions.

Budapest, 14 July 2008

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Field visit to the soil erosion experimental station of the Geographical Research Institute, Hungarian Academy of Sciences at Szentgyörgyvár, 21 May 2008.

The Second International Conference on 'Eco-engineering: the Use of Vegetation to Improve Slope Stability,' 14–18 July 2008, Beijing, China

From 14–18 July 2008, the Second International Conference on 'Eco-engineering: the Use of Vegetation to Improve Slope Stability' was held in Beijing. The Organising Committee consisted of nine members, with *Alexia Stokes as Conference Chair:

- T. FOURCAUD, CIRAD, Montpellier, France / LIAMA-CASIA, Beijing, China.
- L. JOUNEAU, INRA Jouy France / 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.
- SPANOS, NAGREF, Thessaloniki, Greece.
- *A. STOKES, INRA, Montpellier, France / LIAMA-CASIA, Beijing, China.
- X. ZHANG, LIAMA-CASIA Beijing, China.

Almost 100 participants from at least 25 countries attended the meeting. A total of 12 sessions were organized, covering topics such as soil mass movement, erosion processes, soil conservation and vegetation, ecology, biodiversity and restoration after disturbance, ground bio- and eco-engineering techniques as well as modelling of slope stability. Keynote speakers included R.C. Sidle (Kyoto University, Japan), J. Poesen (KU Leuven, Belgium), L. Walker (University of Nevada, USA), R.B. Sotir (Sotir & Associates, Inc, USA), J.C. Bathurst (Newcastle University, UK) and S. Sombatpanit (WASWC, Bangkok, Thailand).

Some interesting conclusions of the meeting included:

- It is of uttermost importance to clearly understand the processes involved in the problem you try to tackle. Every problem asks for a specific approach and not all techniques are useful in any situation. Above all, this is important for practical implementation, but it is also an important consideration for the design of research setups.
- The same is true for the use of models: they are a valuable tool to help eco-engineers, but it is important to accept their shortcomings, and to clearly understand what you put into it as well as what you get out of it.
- A clear balance has to be found between natural recovery and human restoration. One should not be too eager to intervene in any case. We are not controlling nature, we are negotiating with it.
- The problems addressed in the field of bio- and eco-engineering require a multidisciplinary approach in order to be successful and ecologically, economically and socially sustainable.

Proceedings will be published in special editions of 'Ecological Engineering' (Elsevier) and 'Plant & Soil' (Springer). Furthermore, a network will be established for a more efficient exchange of data on species properties and suitability for bio- and eco-engineering. The next Eco-engineering Conference will be in Vancouver, Canada, in 2012.

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Soil and Water Assessment Tool – A Textbook from WASWC[1]

Authors: Jeff Arnold, Raghavan Srinivasan, Susan L. Neitsch, Chris George, Philip W. Gassman, Manuel Reyes, Attachai Jintrawet and Samran Sombatpanit.

Advisor: John Laflen (Former Director of the National Soil Erosion Research Laboratory, Indiana, USA).

Available January 2009; A5, 400 pp.; **Contact** Samran Sombatpanit: sombatpanit@yahoo.com

"SWAT is the acronym for 'Soil and Water Assessment Tool', a river basin, or watershed, scale model developed by Dr Jeff Arnold for the United States Department of Agriculture-Agricultural Research Service (USDA-ARS). SWAT was developed to predict the impact of land management practises on water, sediment and agricultural chemicals yields in large complex watersheds with varying soils, land use and management conditions over long periods of time (Neitsch et al., 2005)."

"SWAT is a continuation of nearly 30 years of modelling efforts conducted by USDA-ARS. SWAT has gained international acceptance as a robust interdisciplinary watershed modelling tool as evidenced by international SWAT conferences, hundreds of SWAT related papers presented at numerous other scientific meetings, and dozens of articles published in peer-reviewed journals. The model has also been adopted as part of the U.S. Environmental Protection Agency (USEPA) Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) software package and is being used by many U.S. Federal and State agencies, including the USDA within the Conservation Effects Assessment Project (CEAP). At present, over 400 peer-reviewed published articles have been identified that report SWAT applications, reviews of SWAT components, or other research that includes SWAT. SWAT has also been used extensively in Europe, including projects supported by various European Commission (EC) agencies. Several models including SWAT were used to quantify the impacts of climate change for five different watersheds in Europe and a suite of nine models including SWAT were tested in 17 different European watersheds (Gassman et al., 2007)." Several countries developed modified versions of SWAT, such as SWAT-Korea and SWAT-Germany.

Despite of the rise in usage of SWAT, it is mainly used by modellers in developed countries. The expensive cost of computer hardware and licenses for ARC-GIS software discouraged most developing countries from studying it and made it virtually inaccessible to graduate and undergraduate students of these countries. Fortunately, Chris George from the United Nations University saw the prospects of SWAT. He and his colleagues developed a free open source interface to SWAT, consisting of the GIS system MapWindow and the

[1] This is made possible through support provided by: the United States Department of Agriculture-Agricultural Research Service (USDA-ARS), Texas A&M University, United Nations University, Chiang Mai University, Virginia Polytechnic Institute and State University (Virginia Tech), North Carolina Agricultural and Technical State University (NCA&T), World Association of Soil and Water Conservation, the United States Agency for International Development (USAID) and the generous support of the American People for the Sustainable Agriculture and Natural Resources Management Collaborative Research Support Program (SANREM CRSP) under terms of Cooperative Agreement Award No. EPP-A-00-04-00013-00 to the Office of International Research and Development (OIRED) at Virginia Tech, and terms of sub-award agreement 19070A-425632 between Virginia Tech and NCA&T. For more information see: www.brc.tamus.edu/swat/index.html

MapWindow-SWAT interface MWSWAT, which was released on the web in July 2007. However, internet connectivity is not as dependable and available and SWAT training is needed in many developing nations.

To accelerate the use of SWAT in the developing world a SWAT textbook is being proposed to be published and distributed by the World Association of Soil and Water Conservation (WASWC). It will be a compilation of several SWAT materials that discuss SWAT fundamentals and MWSWAT and will be accompanied by a DVD that contains MapWindow and MWSWAT software, as well as other SWAT literature to supplement the SWAT textbook, plus other works of interest in the field of soil and water conservation within the framework of WASWC. This textbook will be first distributed at the 1st International SWAT-South-East Asia (SWAT-SEA) workshop/conference in Chiang Mai, Thailand, during 5–8 January 2009 and at subsequent meetings, and possibly to the participants of SWAT-China (October 2008).

For SWAT-China meeting (Beijing, 15–18 October 2008) see 2008 SWAT Conference English Web site **Contact:** Dr Fanghua HAO or Dr Yun ZHOU, School of Environment, Beijing Normal University, Beijing 100875, P.R. China. Tel.: 00 86 10 58807937, fanghua@bnu.edu.cn, zhouyun@craes.org.cn or Dr Raghavan Srinivasan, Texas A&M University, USA. r-srinivasan@tamu.edu.

For SWAT-SEA meeting (Chiang Mai, Thailand, 5-8 January 2009) see: http://www2.mcc.cmu.ac.th/swat/index.php.

Contact Dr Attachai Jintrawet at attachai@chiangmai.ac.th, attachaij@gmail.com or Dr Manuel Reyes at mannyreyes@nc.rr.com.

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 409. 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, 41 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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D'haene, K., Vermang, J., Cornelis, W. M., Schiettecatte, W., Leroy, B., De Neve, S., Gabriels, D. and Hofman, G. (2008). The effect of reduced tillage on physical properties of silt loam soils. Soil & Tillage Research 99, 279-290.

Erpul, G., Cornelis, W. M., Gabriels, D., Samray, H. N. and Guzelordu, T. (2008). Sand detachment under the rains with varying angle of incidence. Catena 72, 413-422.

Jankauskas, B., Jankauskiene, G. and Fullen, M. A. (2008). Soil erosion and changes in the physical properties of Lithuanian Eutric Albeluvisols under different land use systems. Acta Agriculturae Scandinavica (Section B-Soil and Plant Science) 58(1), 66-76.

Jin, K., Cornelis, W. M., Schiettecatte, W., Lu, J., Yao, Y., Wu, H., Gabriels, D., De Neve, S., Cai, D. and Hartmann, R. (2007). Effects of different management practices on the soil-water balance and crop yield for improved dryland farming in the Chinese Loess Plateau. Soil & Tillage Research 96, 131-144.

Jin, K., Cornelis, W. M, Schiettecatte, W., Lu, J. J., Buysse, T., Baert, G., Wu, H. J., Yao, Y., Cai, D. X., Jin, J. Y., De Neve, S., Hartmann, R. and Gabriels, D. (2008). Redistribution and loss of soil organic carbon by overland flow under various soil management practices on the Chinese Loess Plateau. Soil Use and Management 22, 181-191.

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Ríos, C. A. and Williams, C. D. (2008). Synthesis of zeolitic materials from natural clinker: A new alternative for recycling coal combustion by-products. Fuel 87, 2482-2492.

Ríos, C. A., Williams, C. D. and Roberts, C. L. (2008). Removal of heavy metals from acid mine drainage (AMD) using fly ash, natural clinker and synthetic zeolites. Journal of Hazardous Materials 156, 23-35.

Schiettecatte, W., Gabriels, D., Cornelis, W. M and Hofman, G. (2008). Impact of deposition on the enrichment of organic carbon in eroded sediment. Catena 72, 340-347.

Schiettecatte, W., Gabriels, D., Cornelis, W. M. and Hofman, G. (2008). Enrichment of organic carbon in sediment transport by interrill and rill erosion processes. Soil Science Society of America Journal 72, 50-55.

Schiettecatte, W., D´hondt, L., Cornelis, W. M. ., Acosta, M. L., Leal, Z., Lauwers, N., Almoza, Y, Alonso, G. R., Díaz, J., Ruíz, M. and Gabriels, D. (2008). Influence of landuse on soil erosion risk in the Cuyaguateje watershed (Cuba). Catena 74, 1-12.

Verbist, K., Schiettecatte, W., Cornelis, W. M., Oltenfreiter, G., Van Meirvenne, M. and Gabriels, D. (2007). The influence of a compacted plow sole on saturation excess and runoff. Soil & Tillage Research 96, 292-302.

Youssef, F., Erpul, G., Bogman, P., Cornelis, W. M. and Gabriels, D. (2008). Determination of efficiency of Vaseline Slide and Wilson and Cooke sediment traps by wind tunnel experiments. Environmental Geology 55, 741-750.

Professor John Thornes, R.I.P. (1940–2008)

Innovative research leader in geomorphology and processes of desertification

Several weeks ago it was my very sad duty to circulate the news of the unexpected death of our friend and colleague John Thornes. The response was immediate, with tributes arriving by phone and e-mail from the UK and all over Europe. A very telling measure of the way in which his life and work has had a profound influence on so many others.

John was born on 27 December 1940 and grew up near Wakefield in Yorkshire (UK). Despite spending all his adult life in southern England, he never lost his distinctive accent (nor habit of addressing all women as "love"). John graduated from London University with a first class degree and married Rosemary, a fellow geography student. He then went to McGill University (Canada) to complete an M.Sc. He often described this as one of the formative experiences of his life. McGill opened a new world of modelling geomorphological processes to him. He always tried to recreate this experience of excitement and discovery for his own (particularly overseas) students, of which there were many. His Ph.D. from King's College, London on 'Erosion and Sedimentation in the Alto Duero, Spain' sparked a love affair with the Mediterranean, which remained all his life.

John lectured at the London School of Economics from 1966 to 1981. It was during this period that his research interests expanded to include tropical geomorphology and he took part in the first hovercraft navigation of the Amazon, an adventure which he always recounted with delight. In 1981 he was appointed to a Chair in Physical Geography at Bedford College, London, becoming Head of Geography and later Dean of Science and Deputy Principal. One of John's undergraduate students from this time recalled his "boundless energy, guidance and friendship" and said that, as happened to so many of his students, John inspired him to enter a research career. Many of these students now head their own research teams. This was also a time when John sang a lot, mostly "Lara's theme" from Dr Zhivago, his great voice booming down the long corridor.

In 1985 John moved to be Head of the Geography Department at Bristol University. Here he oversaw its growth to a four-professor department, with expanded

expertise in all areas and additional new research facilities. His tenure at Bristol also coincided with the blossoming of European Commission funding for Europe-wide collaborative research and especially in John's own field of Mediterranean desertification. From the period 1989 to 1999 he led some 11 inter-related research projects with a research network of up to 44 different European institutions and over 250 individual scientists. Many of these have sent messages reflecting on his extraordinary, charismatic skills as a leader, bringing together different groups and disciplines under a common vision and purpose. But they equally valued his friendship, the long dinners over which conversation would range freely, the shared stories and bellowing laughter.

Throughout these projects John strove not only to investigate the physical processes of land degradation but to integrate them with the socio-economic causes and consequences and then to disseminate the research findings to wider society. His vision persists in the many desertification-related projects that are still underway today.

In 1992 John returned to King's College, London, as Head of Department and member the College Council. Once again he was pivotal in the growth and development of the Geography Department, pouring in his energy and enthusiasm, and founding the Environmental Monitoring and Modelling Research Group.

In 1996 he suffered a severe stroke which left him walking with a stick and with little use of his left arm. Despite this he returned to work and to a series of overseas visits, including Brazil and China, and a Rhodes Fellowship in South Africa. Here he developed a new research interest, the role of grazing patterns in desertification, which he presented at this year's EGU in Vienna. In 1996 John received the RGS Founder's Medal, in 1998 he won the Linton Medal of the British Geomorphological Research Group, and in 2005 his long association with and influence on Spanish research was recognized with an Honorary Doctorate from the University of Murcia.

John collapsed suddenly and died on 17 July 2008 while on a field visit near his home in Shropshire. We send our love and sympathy to Rosemary, to his children Clare and Chris, and to his grandchildren in Hong Kong and England.

Ciao John!

Jane Brandt
(Long-time Research Assistant to John Thornes)

E-mail: medulus@medalus.demon.co.uk

"The final test of a leader is that he leaves behind him in other men the conviction and the will to carry on" (**Walter Lippmann,** 1899-1974).

Agáta Marzecová leaves VUPOP (Bratislava) to undertake Ph.D. research

Agáta Marzecová is leaving Bratislava to undertake Ph.D. research in soil science in Estonia. Agáta did an excellent job in preparing both the ESSC Newsletter and web site and we thank her for her splendid efforts. We also send our best wishes for her future career and hope Agáta will remain an active member of the ESSC.

Web Based Bulletin Board

The ESSC wishes to rapidly disseminate information to its members. Please forward information to the ESSC web site to be placed on our ESSC Bulletin Board. These could include searches for potential collaborators for research proposals, calls for research proposals, job opportunities, research studentship opportunities, impending conferences and other items of important information for rapid dissemination. Of course, we will also continue the regular circulation of information via our Newsletter. The ESSC web site is:

http://www.essc.sk

ESSC membership list and contact details

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 handled by Ida Kriegerová-Kurincová. In terms of membership lists, contact details and the ESSC web site, please send updated information to Ida at: e-mail: i.kriegerova@vupop.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 contains 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).

FORTHCOMING DATES FOR YOUR DIARY

FIRST ANNOUNCEMENTS

International Symposium on Soil, Sediment and Dust Magnetism (SoilSEDUMA) 29 June–1 July 2009

Venue: Upper Silesia (southern Poland): exact location will be given late 2008.
Registration fee: €180.

Target group: scientists who study problems of:
Magnetic properties of soils and sediments, occurring as a result of both anthropogenic or technogenic (urban and industrial pollution) and natural processes (caused by pedogenic, geogenic or sedimentary features); magnetic properties of urban and industrial dusts and magnetic pollutions in living organisms.

Organizers: Institute of Environmental Engineering, Polish Academy of Sciences; Zabrze, Poland; Opole University, Poland.

Aims of the Symposium:

- Presentation of scientific results of studies conducted in different laboratories in the fields of soil, sediment and dust magnetism, and magnetic pollutants in living organisms.
- Exchange of experiences of scientists from different disciplines (geophysics, geochemistry, soil science, environmental geology and geography, biology, archeology, medicine) and analysis of new trends in this field of study.
- Possibility of practical application of magnetic methods and techniques for assessment of ecological state and changes of natural environment, pollution monitoring and health related problems.
- Building of scientific platform (working group) for promotion of magnetic methods as a complementary method supporting classical chemical and geochemical analysis in studies of soil, sediment and dust environments

Contact:

Doc. dr hab. Tadeusz Magiera
Institute of Environmental Engineering
Polish Academy of Sciences
Zabrze
Poland

Tel: 00 48 32 271 64 81
Fax: 0048 32 271 69 50
E-mail: magiera@ipis.zabrze.pl

Preliminary Symposium Programme

29 June 2009
Session I: Pedogenic and geogenic soil magnetism.
Possibility of practical application. Open discussion
Session II: Anthropogenic soil magnetism.
Possibility of practical application. Open discussion

30 June 2008
Session III: Magnetism of lake and river sediments.
Possibility of practical applications. Open discussion
Session IV: Magnetic particles in industrial and urban dusts.
Possibility of practical application. Open discussion

1 July 2008
Session V: Magnetic pollution in living organisms.
Possibility of practical application. Open discussion

Deadlines:
ASAP Expressions of interest.
15 January 2009: Initial registration and abstract submission.
30 April 2009: One page abstract submission.
31 May 2009: Final registration and payment of registration fee.

Registration Form:

If you are interested in this event, please complete and send ASAP by e-mail to:
Tadeusz Magiera
Fax: 00 48 32 271 69 50
E-mail: magiera@ipis.zabrze.pl
Keyword (for mail): SoilSEDUMA Symposium

Please note that, wherever possible, information about this Conference will be sent by e-mail.

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

Initial..... Surname.....

Organization.....

Address.....

Telephone.....

Fax.....

E-mail.....

Participation: Please mark the session of your interest

- ☐ Session I: Pedogenic and geogenic soil magnetism
- ☐ Session II: Anthropogenic soil magnetism
- ☐ Session III: Magnetism of lake and river sediments
- ☐ Session IV: Magnetic particles in industrial and urban dusts
- ☐ Session V: Magnetic pollution in living organisms

Title and form of your contribution (oral/poster):

.....

.....

Your specialization:

- ☐ Geophysics
- ☐ Geochemistry
- ☐ Environmental geology
- ☐ Environmental geography
- ☐ Soil science
- ☐ Biology
- ☐ Medicine
- ☐ Archeology
- ☐ Other (please specify)

Dear Colleagues

We are pleased to invite you to the special session on:
'Fire Effects on Geomorphology and Environmental Processes' at the **7th International Conference on Geomorphology, 7–12 July 2009, Melbourne.** (See session description below). The IAG meeting is ideally placed to bring together the global research community on wildfire impacts.

Wildfire can lead to considerable geomorphological and environmental change, both directly by weathering bedrock surfaces and changing soil structure and properties, and indirectly through the effects of changes to the soil and vegetation on hydrological and geomorphological processes. Thus, for example, investigations of accelerated hillslope erosion and post-fire debris flow have been at the forefront of fire impact research in recent years. A recent surge in these and related areas of fire research highlights the challenges faced by researchers and land managers in predicting and addressing the on-site and off-site effects of fires. This surge has accompanied a trend of increased fire activity with particularly destructive fires in many parts of the world, which is likely to continue with climate change for the foreseeable future. Notwithstanding this need to focus on contemporary fire impacts, fires have influenced landscape development in various ways over many millions of years as a recurring agent in most environments that produce sufficient biomass to sustain a burn.

We welcome presentations on all aspects of wildfire-related research addressing geomorphological and broader environmental processes at any spatial or temporal scale.

This session focuses on:
i) The understanding, predicting and mitigating of fire effects in contemporary environments.
ii) The role of fire as an agent in shaping landscapes and their ecosystems over medium- or geological timescales.

Please note that the **deadline for abstracts is 3 December 2008:**
http://www.geomorphology2009.com

With best wishes,

Stefan Doerr and Artemi Cerda

E-mail: S.Doerr@Swansea.ac.uk

The 5th International Symposium on Gully Erosion, Lublin (Poland), 20-25 April 2010

Dear Colleagues

The Institute of Earth Sciences of Maria Curie-Sklodowska University (Lublin, Poland) and the Association of Polish Geomorphologists are pleased to invite you to participate in the '5th International Symposium on Gully Erosion.'

The meeting will be held in Lublin (South-East Poland) from 20–25 April 2010.

Please visit the symposium website with the preliminary information and the preliminary registration form:

http://gis.umcs.lublin.pl/gullyerosion2010/

We kindly ask you to distribute information about the Symposium to your colleagues.

On behalf of the Organising Committee

Wojciech Zglobicki

E-mail: **zglobek@hektor.umcs.lublin.pl**

SECOND ANNOUNCEMENTS

The International Conference of the ESSC

'Protection of The Ecological and Productivity Functions of Soil in a PAN European Context'



Held on the occasion of the 55th Anniversary of the foundation of the Research Institute for Soil and Water Conservation

Congress and Education Centre 'Floret'
Průhonice, Czech Republic
23-25 June 2009





Auspices

Ministry of Agriculture of the Czech Republic.
Ministry of Environment of the Czech Republic.

Organizers

Research Institute for Soil and Water Conservation.
European Society for Soil Conservation
Czech Society of Soil Science.

Co-organizers

Czech University of Life Sciences Prague.
Mendel University of Agriculture and Forestry in Brno.

Organizing Committee

Jiří Hladík (Czech Republic).
Michaela Budňáková (Czech Republic).
Jarmila Čechmánková (Czech Republic).
Jana Doležalová (Czech Republic).
Ivo Hauptman (Czech Republic).
Karel Jacko (Czech Republic).
Marcela Rohošková (Czech Republic).
Jana Uhlířová (Czech Republic).
Radim Vácha (Czech Republic).

Scientific Committee

Jana Podhrázská (Czech Republic).
Pavol Bielek (Slovak Republic).
Carmelo Dazzi (Italy).
František Doležal (Czech Republic).
Ivan Holoubek (Czech Republic).
Sigbert Huber (Austria).
Ádám Kertész (Hungary).
Josef Kozák (Czech Republic).
Jiří Kulhavý (Czech Republic).
Pavel Novák (Czech Republic).
Alois Prax (Czech Republic).
José Luis Rubio (Spain).
Jaroslava Sobocká (Slovak Republic).
Milan Sáňka (Czech Republic).
Jaroslav Staňa (Czech Republic).
Ivan Suchara (Czech Republic).
Bořivoj Šarapatka (Czech Republic).
Miodrag Zlatič (Serbia).

Topics

1. Soil sealing (e.g. brownfields, urban development and transport construction).
2. Soil degradation (e.g. contamination, erosion, floods and drought).
3. Soil reclamation (e.g. drainage, irrigation, and improving the retention ability of agricultural and forest soils).
4. Methods of soil monitoring.

Preliminary programme

22 June 2009	Arrival of participants
Registration	
Welcome party	
23 June 2009	Registration.
	Opening ceremony.
	Oral and poster presentations.
	Castle park: guided walk.
24 June 2009	Oral and poster presentations.
	Conclusions.
Social dinner	
25 June 2009	Field excursion.
26 June 2009	Optional cultural-historical excursion to Prague.

Conference fees

On or before 28 February 2009 **after 28 February 2009**
€260 **€290**

The conference fee includes the following items:

- Conference programme, book of abstracts and Conference proceedings (on CD).
- Admission to the Conference rooms.
- Welcome party. • Coffee breaks. • Two lunches.
- Conference excursion (including bus, lunch and excursion guide).

The conference fee does not include:

- Social dinner on 24 June: €45.
- Optional cultural-historical excursion to Prague on 26 June: €60 (including lunch).

Excluded items may be paid together with the conference fee.

Cancellations and refunds

Registration fees to be refunded as follows:	On or before 30 April 2009	50% refund,
	After 30 April 2009	no refund.

Deadlines

30 September 2008	2nd announcement with the registration form and call for abstracts.
30 November 2008	Registration, abstract submission.
10 February 2009	Notice of abstract acceptance.
28 February 2009	Payment of reduced conference fee.
30 Apri 2009	Payment of non-reduced conference fee, hotel reservation, full papers submission, last announcement and final programme.

Field excursion

The Excursion will be to West Bohemia and focus on soil conservation, soil degradation and anthropogenic influences on soil and land reclamation. Details will be provided later.

Accommodation

Accommodation is provided by Anthony Production, s.r.o. Rooms can be booked exclusively through the Agency on the following e-mail address: anthony@anthony.cz.

Offered hotels Hotel Floret: www.floret.cz,
Parkhotel Průhonice: www.park-hotel-prague-pruhonice.cz
Hotel Magnolia: www.magnoliahotel.cz.

Travel

For information about transport or transfer e-mail: anthony@anthony.cz .

Informations and contacts

Research Institute for Soil and Water Conservation
Dep. for Land Use Planning
Lidická 25/27, 602 00 Brno
Czech Republic
www.vumop.cz
Ing. Jana Uhlířová
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podhrazska@vumopbrno.cz

Anthony Production, s.r.o
Počernická 96, 108 00 Praha 10
Czech Republic
Mgr. Jana Doležalová
anthony@anthony.cz

INTERNATIONAL CONFERENCE ON LAND AND WATER DEGRADATION: PROCESSES AND MANAGEMENT
6–9 September 2009

There is an urgent need to improve our practical and theoretical understanding of land and water degradation processes; in particular the physical, chemical and biological deterioration of soils and water bodies in various regions of the world. This Conference will bridge the gap between land and water and will bring together scientists from various disciplines with different methodological backgrounds.

Topics

- Nutrient dynamics in the land-sediment-water system.
- Function of buffer strips and floodplains for catchment health.
- Physical, chemical and biological processes of soil degradation.
- Methodological approaches to estimate and regionalize non-point source pollution.
- Spatial heterogeneity, variation and prediction of land degradation.
- Methods to review outcomes of mitigation strategies and catchment management.
- Regional studies of land and water degradation, especially in industrialized and urbanized areas, cold climates and Mediterranean regions.

Field trip

The *mid-conference field trip* will focus on land and water management problems in the vicinity of Magdeburg.

The *post-conference field trip* (10-13 September) will introduce general environmental characteristics of the region and will focus on:

- Farm management under changing environmental and socio-economic conditions with visits to a loess region, a low mountain area and the lowlands of north Germany.
- Water and catchment management, with emphasis on mining lakes, mining activities and visits to a low mountain region and a research mine.

Keynote lectures

John Quinton, Lancaster University, United Kingdom.
Rattan Lal, Ohio State University, USA.

Web site: www.ufz.de/comland2009

16th Workshop

University of Turin
University of Milan

Connecting Different Scales of Nitrogen use in Agriculture

The 16th Nitrogen Workshop will be held in Turin (Italy), from 28 June–1 July 2009.
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
For further information, please contact us at the e-mail address: info@nitrogenworkshop2009.org

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

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

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.
vi) 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
or
Dr Colin Booth: 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:

'When man interferes with the Tao,
The sky becomes filthy,
The earth becomes depleted,
The equilibrium crumbles,
creatures become extinct.'

Lao Tzu, Tao Te Ching, Verse 39.
The 'Tao Te Ching' was written by Lao Tzu in circa 515 BC. Philosophers have debated the meaning of the 'Tao' for 25 Centuries. The nearest meaning in English is probably 'Nature.'

"I am happy in my mud."
(response of Chuang Tzu (Taoist philosopher of the 4th Century BC), as he declined the invitation by the Emperor of China to become the Prime Minister).

"Wise men talk because they have something to say, fools talk because they have to say something." *(Plato).*

"Only two things are infinite, the universe and human stupidity, and I'm not sure about the former." *(Albert Einstein).*

"Always forgive your enemies; nothing annoys them so much." *(Oscar Wilde, 1854–1900).*

"The most vital time to relax is when you don't have time for it." *(David Baird).*

"Choose silence of all virtues, for by it you hear other men's imperfections, and conceal your own." *(The Greco-Italian philosopher Zeno of Elea, circa 490–425 BC).*

"It is amazing what you can accomplish if you do not care who gets the credit."
(Harry S. Truman, 1884–1972).

"Neither fire nor wind, birth nor death can erase our good deeds." *(Buddha).*

"The fragrance always stays in the hand that gives the rose."
(David Baird).

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 Öffenlichkeit 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 problemes 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 conseil agricole, de l'industrie, et des institutions gouvernementales.

OBJECTIVOS DE LA SOCIEDAD

La ESSC es una asociación interdisciplinar, no-politica, dedicada a la investigación y a la realización de acciones orientadas a la conservación del suelo en Europa. La ESSC persigue sus objectivos en los sectores cientificos, educacionales y aplicados, en al ámbito europeo:

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

informanto 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

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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