NEWSLETTER 1/2008

ESSC EUROPEAN SOCIETY for SOIL CONSERVATION

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Collapse of abandoned agricultural (almond tree and vineyard) terraces near Valencia, Spain.
Photo by José Luis Rubio (Valencia).

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Contents

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

A FUTURE FOR SOIL EROSION RESEARCH

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The context in which some knowledge of soil erosion and its control is required is continually expanding. Starting in the 1930s and continuing into the 1960s, the emphasis was on conserving soil as a resource for agricultural production. The 1970s saw increasing concern with the off-site effects of runoff and sediment loss from agricultural land. Today, there is far wider recognition of erosion as a potential problem on all types of land, from mine spoils, pipeline corridors and construction sites to recreational and urban areas. Soil erosion is increasingly seen in the context of environmental damage associated with sediment in areas downslope, downstream and downwind of its source, with legal and, possibly, financial consequences for the land owners upstream or upwind for failing to control sediment loss. The feedback between erosion, the hydrological properties of soil and the risk of muddy floods is of major environmental concern in many countries, as are the links between the properties of eroded sediment and the pollution of water bodies. Today it is no longer enough to measure and understand erosion and its control as a discrete science at a plot scale. The need is to be able to predict the quantity and pathways of sediment as it moves over the landscape and its eventual fate, such as its deposition on land or its transfer to rivers, lakes and reservoirs. Although the detachment of soil particles from the soil mass and their transport by running water and wind are physical processes, the reasons why soil erosion takes place are related to the way the land is used which, in turn, is conditioned by social and economic factors. In order to operate effectively, the soil erosion specialist now needs an understanding of the physical, socio-economic, political and legal environments and the way these interact to form the overall context in which erosion occurs.

Provided that this multidisciplinary context is appreciated, there is still plenty of research to occupy the enthusiastic physical scientist, whether coming from an agricultural, agricultural engineering, geomorphological or soil science background. The view widely held in certain circles that we know enough about the physical processes of erosion and that erosion control is now a socio-economic issue is wrong. Any erosion control measure needs to be designed, whether it is a structure such as a terrace or waterway, a farming system involving cropping sequences in rotation, or a programme of re-vegetation along a pipeline right-of-way. In all these cases, it is important to know the design life of what is proposed and the threshold conditions at which it will fail. However, if it is to be adopted and succeed, the design work needs to be informed from the outset by the socio-economic constraints affecting the land user.

Whilst soil conservation has traditionally concentrated on interventions made at a field or hillslope scale, there is now greater recognition that cost-effective designs for erosion control require an understanding of how sediment is produced, transported and deposited within the wider landscape, so that control measures can be targeted in critical locations. This requirement explains the concentration of much recent work on the modelling of sediment transport and the need to be able to apply models at a range of scales from the individual field to small and large catchments. The appropriate way of carrying out such scaling will be a research topic of priority for the next few years or so. Whether it is possible to apply models such as WEPP and EUROSEM to large areas simply by operating them at a field scale and, for large catchments, merely increasing the number of elements over which the model is applied to several thousand, is still to be tested. The robustness of these models when operated in this way is likely to depend on how they link temporal and spatial scaling, since a pulse of sediment can only move a certain distance in the landscape during a single time period. It may take several hours or even days to move from source to sink. The alternative approach is to develop different models for different scales of operation, but these require a greater understanding of how the factors which influence erosion change in their relative importance as scale alters and, also, how they might be best described at different scales.

More work needs to be done to make erosion models generic rather than applicable to the limited range of conditions dependent upon the data from which they have been derived. Whilst the understanding of the detachment and transport of soil particles and, more recently sediment deposition, has enabled more physically-based modelling of these processes, the factors which influence erosion are still frequently described by coefficients or ratios such as the erodibility or K-factor of the soil or the C-factor for crops used in the Universal Soil Loss Equation. Some recent models attempt to describe crop or vegetation cover using simple measurable parameters of plant architecture, such as the number and size of the individual plant elements or stems, but much more testing of model output is required before we know how successful such descriptions will be. Research into the explicit but generic modelling of soil is less advanced. The effect of properties such as soil strength or cohesion and saturated hydraulic conductivity is understood, but few models use such terms as direct inputs. It is still necessary to relate them to some detachability or erodibility value. As a result, there is often much variability or potential error in the input values because of controls related to clay mineralogy. Developing ways of using basic information on soil properties directly in erosion models is a prerequisite for developing a new generation of generic models.

If erosion models are to be adopted as planning tools, the users must be convinced of their ability and robustness, which means that they must have been tested against measured data. At present, this is almost impossible to do. Many of the present models predict rates of soil particle detachment, soil transport and sediment deposition at different positions in the landscape at different times during a storm, but present methods of erosion measurement at best provide information on sediment transport over time at a few positions in the landscape. Data on rates of soil particle detachment and rates of deposition are usually unavailable, as is information on the particle size distribution of the detached, transported and deposited material and the way that changes over time. Since erosion models can produce predictions of erosion rates which may be either detachment- or transport-limited and the balance between these controls can vary over time, it is not possible to check that model output is produced for the right reasons without detailed field measurements to provide appropriate

data. Research is needed on how best to establish field measurement systems at a range of scales that can provide the data needed to validate erosion models in an efficient and relatively cheap way.

Erosion measurement is not the only source of data required for model validation. Information on soils, slope and land cover can also be obtained from public databases. Unfortunately, these do not always provide the level of detail required. For example, many soil surveys give the typical texture and grain-size distribution of the soil, but not the aggregate-size distribution, cohesion or aggregate stability. Thus, the information can only be used in a general way. Similarly, information on rainfall amounts for different durations and return periods can be obtained, but virtually nothing on typical storm patterns (i.e. the frequency at which the peak intensity falls early, in the middle or late in a storm). With all data, whether purposely measured in the field or obtained from a database, there is a need to know about its accuracy. At present it is often difficult to evaluate whether errors in model predictions relate to problems inherent with the model or to errors associated with the input data or to errors in the measured rates of erosion. It is unreasonable to expect a model to perform more accurately than the input data provided to it.

As the context of erosion changes from agricultural production to environmental protection, it is likely to become harder to obtain funding for projects restricted to erosion. Soil erosion will be one component of broader environmental projects. Whilst this will have the advantage of working in a multidisciplinary team extending across the physical and socio-economic sciences, it will undoubtedly mean that erosion studies have to become more efficient in order to provide the results required from only a proportion of the budget. At the same time, the demands on erosion research are likely to increase as planners, politicians and others become increasingly aware of the dynamic nature of the subject, a dynamism which will be ever more important as planners demand information on how the environment will alter in relation to changing climate and changing land use. The conflict of how to ensure that policy decisions are based on sound science rather than poorly designed experiments or inadequate systems of data collection already exists and is likely to become more pronounced. There will be plenty of scope for designing scientifically robust but cheap and effective methods of data collection to replace existing methods based on expensive erosion plots.

Surprisingly, it is almost impossible to provide an answer to the simple question of whether erosion as a national problem has got worse or better over the last decade or so. Judgements have to be made on the basis of local studies of the frequency and distribution of erosion events, often supported by anecdotal evidence. Extrapolation to a national scale generally depends relating erosion rates to changes in land use and using models. In very few countries is there a base-line survey of the status of the land with respect to erosion at a specific date. The problem is that even using a combination of aerial photography, field sampling and student labour, such a survey is expensive to perform, probably within the region of €1.2-1.4 million for the United Kingdom as an example. Yet without such an erosion census, repeated at regular intervals, it is impossible to make proper statements on changes in the severity of the problem over time or to assess whether intervention measures at regional or national scales have been successful.

Despite the advances made over the last half century in understanding the processes of interrill and rill erosion, there are still areas in which fundamental research needs to be undertaken. Only over the last decade has sediment deposition from runoff been studied

explicitly at a hillslope scale, in contrast to research on deposition in marine and lacustrine environments. Although much has been achieved on the threshold conditions for gullies to develop, there is still no reliable physically-based model of gully erosion. Since gullying is an integral part of many hillslope erosion systems, so it should be an integral part of hillslope and catchment erosion models. The development of dedicated gully models, operating in isolation of hillslope hydrology and sediment movement, is a very limiting approach since it ignores any feedback of gully formation on the generation of runoff and resulting sediment production elsewhere in the landscape. Process-based models like WEPP, EUROSEM and GUESS need to be expanded to incorporate the conditions under which gullies can develop and expand. This will require extending the models to simulate the flow of water below as well as above ground, its concentration into surface channels or sub-surface pipes, the initiation of gullies and the expansion of the gully network through headward erosion by running water and bank collapse, and the associated changes in the location of erosion and deposition over time. Since there are few erosion models at present which can model such effects with respect to rills, the production of a comprehensive water erosion model, incorporating gullies, will be a major challenge for the future.

Although the processes of wind erosion have been reasonably well understood physically for decades, there is still no easily usable wind erosion model. Nor, despite recent advances on the design of sediment catchers for wind-blown material and in the design of statistically-sound measurement systems for evaluating the transport of sediment by wind, are there sufficient data to validate wind-erosion models.

Of course, the more that modellers address the issues raised above, so the number of models available for use will increase and the problems of selecting an appropriate model for a specific application will become more difficult. Already problems exist because modellers are generally not very good at identifying the kinds of applications and the spatial and temporal scales to which their models apply. Model users are faced with a multiplicity of models, but little guidance on how to select what might be appropriate for a specific application with the result that models are often used for conditions and applications for which they were not designed. Many models have received only limited testing and users often have little idea how accurate the predictions might be or, indeed, how accurate they need to be in order to develop policy decisions. Nor do users know how accurate the input data needs to be in order to run a particular model. There is a need for better dialogue between model developers and users so that developers know what users need and user know what constraints may exist in terms of model operation, for example, in the availability of input data or the need for access to other specific software like a particular Geographical Information System in order for the model to run. Users need to know what questions to ask the modellers about their products so as to help their decisions on which model to choose.

Once models are developed there is frequently a question of how they are made available to the model user. Some organizations make a charge for their model and use this money to recoup their development costs and, in some cases, to provide training and a user support service. Most models, however, are developed by researchers in universities. They are in the public domain but there is no money available to provide product support to the user. Research funds can usually be obtained to cover the science involved in model development, but few openings exist for money to allow a model to be developed as a commercial product. In this respect, most erosion models differ from other types of computer software. The university environment, with its emphasis on research assessment, personal reputation

and criteria for staff promotion, encourages modellers to protect their work and hold on to their data and computer coding. The question arises as to whether this is beneficial to the overall development of erosion models or whether modelling would be better served if coding was open-source and any individuals able to contribute to its development, subject to some quality controls. This alternative scenario could lead to the possibility of modelling software becoming available on the internet which could be run on-line without the need to download it. Instead of individual modellers promoting their own software and providing advice on how to operate it, there would be scope for setting up on-line services which could provide independent and unbiased advice on model selection and the best way of setting-up the chosen model for a particular application.

As indicated above, if environmental damage from erosion is to be controlled and soil preserved for future generations, there is still plenty of opportunity for the physical scientist. Our systems of erosion monitoring and measurement need to be improved and made cost-effective. Even so, it will not be possible to measure everywhere in the landscape and models will be needed to provide an overview from which policy decisions on environmental protection can be made. Fundamental scientific research is required in order to improve our understanding of the way soils and plants interact with erosion processes, so that these can be expressed in erosion models using engineering or physical processes instead of empirical coefficients. Whether these challenges can be met will depend on our ability to convince government and private industry that soil conservation is a priority area for funding and, further, that such funding needs to cover the full economic cost of the research. It is no longer sufficient for scientific funding organizations to offer a grant on the expectation that the university or research organization can subsidize much of the costs from other sources. A body such as the ESSC can play a vital role in this regard.

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Understanding soils within the context of Earth Surface Systems

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Editor's Note: This paper was presented by Professor Mermut as the 'Lectio Magistralis' at the 5th ESSC Congress in Palermo on 25 June 2007. The paper has been modified by Professor Mermut for the readers of the ESSC Newsletter.

Abstract

Soils are indeed the root of the life. They are used for road building, construction, ceramics and many industries such as aluminium production, which have long been known to mankind. Therefore, soils are most important to mankind. In the 'International Geosphere-Biosphere Programme' (IBP), the soil sytem, especially its carbon dynamics, is the central link between the physical climate and biogeochemical sytem. In the past decade, increasing awareness of CO_2 accumulation in the atmosphere and the threat of global warming has instigated society to find means to decrease or at least stabilize atmospheric CO_2 concentrations. Multiple benefits of terrestrial sequestration of carbon are also well documented. Erosion removes soils and sediments from the landscape on the one hand, while soils continue to form the stable part on the other. To quantify changes in soil systems, a new concept, which is now called pedometrics, has been introduced. Environmental pollution and its effects on human health and other living beings have quickly become very serious public concerns. Spectacular work is helping to feed an ever-growing population. About 50,000 soil scientists are active, studying soil composition and dynamics in greater detail.

Introduction

Historically, geology as a modern science evolved much earlier than soil science. In many countries soil science evolved from geology and it took quite some time to become an independent discipline. It did not evolve only from geology, but also from other sciences as well, such as the agricultural chemistry activities of Justus von Liebig (1803-1873), who focused on plant nutrition and crop production. Fieldwork by geologists stimulated the development of two major ideas that were essential for understanding soil systems. These were the dependent relationships with the underlying rocks and theories of soil genesis. They were extremely important in the recognition of soil bodies in the landscape (Fanning and Fanning, 1989). Many systems of soil classification based on geology were developed during the 19th Century.

Soils form a continuum across the Earth's surface and are the interface between atmospheric, biological and geological processes. Soils are indeed the root of life. Soil harbours a diverse population of living organisms, both animals and plants. Soils are used for road building, construction, ceramics and many industries such as aluminium production,

which have long been known to mankind. Soils are transformers, regulators, buffers and filters of water, nutrients and other dissolved and dispersed compounds. Therefore, soils are most important to mankind. Most great civilizations have depended on good soils and it is certain that mismanagement have contributed to their downfall.

Many religions recognized the importance of soils and developed spiritual attachments to life-giving earth (Yaalon, 2000). Early scientists have unfortunately ignored the spiritual dimension. Alexander von Humboldt (1769-1859), founder of plant geography never compared soils with plant geography. Leonardo da Vinci (1452-1519) said that *"Why do we know more about distant celestial objects than we do about the ground beneath our feet?"*. As early as 1862 Friedrich Albert Fallon wrote *"there is nothing in the whole of nature which is more important or deserves as much attention as the soil. Truly it is the soil which nourishes and provides for the whole of nature, the whole of creation depends on the soil, which is the ultimate foundation of our existence"* (Sparks, 1988). New ideas about the nature and origin of soils emerged only in the second half of the 19th Century, with the works of V.V. Dokuchaev (1846-1903) and Hilgard (1833-1916) (Yaalon, 1997). Soils are the central link to bio-geo-chemical transformations. We have much to learn about non-arable soils and must try to integrate our knowledge into a holistic view of Earth dynamics and biogeochemical transformations.

In recent few decades, Soil Science has refined tools for its own purposes. Currently increasing demands are being placed on the soil resource to feed, clothe, house and provide energy for a growing world population. We do not realize how important soils are for our life, environmental protection including human health, earth dynamics, water cycling and biogeochemical transformations. Soils are economically and socially important. They even have beauty. Soil teems with life. Nobel Laureate Selman Waksman (1888-1973) isolated streptomycin from soil biota. Pedodiversity and biodiversity research may provide similar results in the future. Furthermore, soils are used in road building, construction, ceramics and many industries such as aluminium production.

Soils in the Landscape

Soils are more than a veneer of surfical alteration on landscapes or sediments (Wysocki et al., 2000). Soils cover the underlying geological material and carry enormous variability. Soil Science is still in an evolutionary stage and rather young within the Earth Sciences family. It is an integral part of Earth Sciences and related to other sciences. Arnold (1994) stated that soil properties are related to specific landscape positions. Thus, soils within a survey area must be visualized, described, documented and tested in order to adequately develop predictive hypotheses.

To completely understand the soils on Earth and predict soil patterns and behaviour, one must comprehend relationships to landscape and geological materials under the soil. Changes in soil morphology and characteristics across a landscape depend on the transfer of mass and energy within the context of Earth surface processes.

To quantify changes in the soil system, a new concept, which is called pedometrics, is rapidly developing. Webster (1994) described it as essentially the application of probability and statistics to soils. Pedometrics, though still a research tool, has the potential to complement conventional soil surveys and is a crucial technique in precision agriculture. It is one of the

developing areas in Soil-Landscape Analysis. The goals are to: (1) improve the understanding of soils as natural bodies within landscapes, and (2) develop techniques for landscape-scale modelling and risk assessment that can be applied to both rural and urban areas. Such programmes also involve the maintenance of expertise in geographic applications (e.g. GIS and geostatistics) and multidisciplinary research with environmental scientists, chemists, geologists, engineers and ecologists.

A customized GIS application for semi-automated classification of landform elements are derived from a Digital Elevation Model (DEM) and used as thresholds for the classification of landform elements, such as crests, flats, depressions and slopes. With developing new methods, slopes can be further subdivided into upper, mid and lower slopes at significant breakpoints along slope profiles. The classification results can be used in applications related to precision agriculture, land degradation studies and spatial modelling applications. A specific relationship exists between man and geomorphological landscapes in different environments and eco-regions.

According to Wikipedia (The free e-Encyclopedia) a digital elevation model (DEM) is a digital representation of ground surface topography or terrain. It is also widely known as a digital terrain model (DTM). A DEM can be represented as a raster (a grid of squares) or as a triangular irregular network. DEMs are commonly built using remote sensing techniques. However, they may also be built from land surveying. DEMs are often used in geographic information systems, and are the most common basis for digitally-produced relief maps. It is well established that topographic position and soil texture affect moisture availability, which

Figure 1. Two sets of soils derived from volcanic ash in the Rift Valley of Ethiopia.

is the most important characteristic influencing species composition and abundance in the landscape.

Geological processes that create and destroy soils and landscapes vary in time and space. Erosion removes soils and sediments from the landscape on the one hand, and on the other soils continue to form on the stable part. Buried soils and soils that endure on stable land surfaces become part of the the geological record and are valuable for interpreting Earth history. Ancient and buried soils help us reconstruct past climate and landscape development (Figure 1).

Soil Erosion

Soil erosion by water, wind and tillage affects both agriculture and the natural environment. Erosion is a natural process. When it is much more than natural, primarily as a result of human activities including animals, it is called 'accelerated soil erosion'. It occurs universally and creates serious problems. It is well recognized that no soil phenomenon is more destructive than soil erosion. Soil erosion is studied by geomorphologists, agricultural engineers, soil scientists, hydrologists and others; and is of interest to policy-makers, farmers, environmentalists and many other individuals and groups.

The loss of protective vegetation through deforestation, over-grazing, ploughing and fire makes the soil vulnerable to being swept away by wind and water. In addition, excessive-cultivation and compaction cause the soil to lose its structure and cohesion and it becomes more ready to be eroded. Erosion will remove the topsoil first. To understand soil erosion we must be aware of the political and economic factors affecting land users.

Some suggest that, compared to Asia and South America, southern Africa's rates of soil erosion seem to be not very high. However, the amount of soil lost through erosion is not a good measure of the land's ability to produce crops. Losing 10 tonnes/ha from poor thin soil is much more of a problem for farmers than losing 50 tonnes/ha from deep fertile soils (Lal, 1985). Soils derived from volcanic ash in the East African Rift Valley are very susceptible to wind and water erosion; even though they may be very deep. Figure 2A shows an example of catastrophic erosion in the Ethiopian Rift Valley and Figure 2B wind erosion in Sudan.

Figure 2A: Catastrophic water erosion in the Ethiopian Rift Valley. Figure 2B: Wind erosion in Sudan.

Soils of the Rift Valley region of Ethiopia are among the world's most fragile soils and are experiencing the highest rates of soil erosion and fertility loss. Extensive and traditional farming practices with no or meagre agricultural inputs have sustained generally smaller populations in the past. To supply the needs of the ever-increasing population of today is a considerable challenge and is playing the leading role in the prevailing soil degradation problems in the area. Figure 3 clearly shows how fragile the soils are and once disturbed, they become eroded and put beyond use. Once it is eroded it cannot be used for agriculture and conversion of such lands even to forestry requires considerable resources and time.

Figure 3. Soils derived from volcanic ash are particularly vulnerable to water erosion.

Soils and Society

Spectacular work is helping to feed an ever-growing population. About 50,000 soil scientists are actively studying soil composition and dynamics in increasing detail. Yet less than 5% of the global agricultural research budget is allocated for soil research. There is a lack of communication channels between soil management scientists and economists, decision-makers, and most importantly farmers. It should be remembered that technologies may be damaging, such as irrigation causing salinization and pollution. However, soil institutions with global mandates are succeeding in increasing yields and soil conservation. Such institutions include 'The International Soil Reference and Information Centre' (ISRIC), 'The International Board for Soil Research and Management' (IBSRAM), 'The World Association of Soil and Water Conservation' (WASWC) and 'The International Soil Conservation Organization' (ISCO).

Recently the global soil science community has become conscious of the limitations of soil resources and the irreversible damaging effects on the environment brought about by human activities. These must increase the importance of basic and applied research in Soil Science.

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The Award of the ESSC Scholarships to attend the 5th ESSC Congress in Palermo, Italy, in June 2007

Editor's note:
At the ESSC Council meeting in Lleida (Spain) in September 2006, the ESSC Council agreed to sponsor five young scientists to attend the ESSC Congress in Palermo. These were to be young scientists (under 35 years of age) who wished to attend and contribute to the ESSC Congress. Precise and transparent evaluation criteria were drawn up and advertised, both in the ESSC Newsletter and on the ESSC web site. In fact, there were 24 applications for the five places. The winners of the ESSC Scholarship to attend the Palermo Congress were Ranjan Bhattacharyya, Slobodan Mickovski, Endla Reintam, Péter Sipos and Metka Udovič. The successful applicants have been invited to tell us something about themselves, to share their perspectives on the Congress and tell us about their plans for the future. Below, the one remaining profile is presented. We hope these young scientists will remain members of the ESSC and actively support and contribute to the development of our Society. Given the success of this new venture by the ESSC, it is hoped further sponsorship can be arranged for future ESSC meetings.

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The 5th International Congress of the ESSC held in Palermo in Summer 2007 was an excellent opportunity to meet researchers and experts working on problems related to soil conservation, as well as to discuss diverse issues with like-minded individuals who have the preservation of the soil as an important natural resource as their priority. I thoroughly enjoyed the presentations and the discussion environment at the Congress, most of which reminded me that I know much less about soil conservation now than when I started my research!

Bobby investigating the soil stabilizing effects of vetiver grass in Spain.

Having graduated in civil engineering from Saints Cyril and Methodius University in Skopje, Macedonia, I worked for a geotechnical consultancy where I was introduced to the practical problems facing ground engineers, including slope stability, soil loss and sediment transport. I developed interest in the ecological and engineering aspects of soil protection and conservation, which led me to undertaking Master's studies in Environmental Sciences and Policy at the Central European University in Budapest. In this very diverse research community, I deepened my knowledge of soil and groundwater contamination and remediation of contaminated ground. These studies helped me in broadening my research horizons in terms of putting the soil as a medium in the broader perspective of an ecosystem scale.

I started investigating slope stability protection with research on the anchorage mechanics of different types of vegetation during my Ph.D. studies at the University of Manchester (UK). Over this period, I explored the potential of different types of root systems to provide both stability for the plant and to protect the soil from erosion and mass instability. My work at INRA's 'Laboratoire de Rhéologie du Bois de Bordeaux' on the EU funded ECOSLOPES Project came as a continuation of the research I had conducted in Manchester. The multi- and inter-disciplinary ECOSLOPES Project offered me the opportunity to work together with researchers from several European countries and to gain invaluable experience in carrying out research on both the engineering and the ecological aspects of soil and vegetation on slopes.

Before joining Jacobs UK Ltd as a geotechnical engineer, I was offered a chance to practically apply the knowledge and the experience from my research. I worked on the interface between the engineering and the biological sciences on a UK Engineering and

Physical Sciences Research Council (EPSRC) funded project at the University of Dundee and the Scottish Crop Research Institute (near Edinburgh). The focus of the research programme was on the fundamental aspects of how plant roots stabilize soil and it involved, *inter alia,* modelling of the long-term effect of tree roots on the stability of vegetated slopes in a geotechnical centrifuge. Another aspect of this project was investigating the effect of vegetation roots on the increase of the shear strength of the soil, and some results of this research were presented at the ESSC Congress in Palermo.

As a researcher who carries out soil-landscape analysis aimed at understanding of the soil as a natural part of the landscape system and the eco-system including the climate, I am concerned with developing techniques for landscape-scale modelling and risk assessment which can be applied to both urban and rural areas. Knowing that large quantities of pollutants are generated by humans and are overloading the ecosystem components with toxic materials, I see soil bioremediation – one of the relatively recent methodologies and techniques aimed at cleaning organic and metal pollutants from the soil – as an area where I will try to contribute with practical applications and knowledge gained from ongoing communication with the contacts I made at the Congress.

I was happy to learn at the Congress that there is a trend towards a more holistic perspective recognizing the fundamental role of soil conservation in connection to global and local environmental implications as a shift from the relatively recent pragmatic vision of the soil with close connection to food production for survival.

Being awarded the 'Certificate of Merit Award of the ESSC' meant that I could travel to Palermo, meet soil conservation researchers from virtually all over the World, discuss topics we have in common, as well as present my research in front of a wider audience. I received the award with a hope that I will be able to justify the recognition and the trust of the ESSC community with continuing my research in soil conservation and interest in different topics closely connected with it. I was thrilled to be in the company of the other winners of the award whose research output and potential I really appreciate. The Certificate will be there as a motivation for me to persist in raising the awareness of the problems with our most valuable resource we are all facing today, but also for all other young researchers in the future who strive to achieve excellence through research. I am very grateful to the ESSC Award Committee for the Award and for the opportunity to present my research and views to the soil conservation community.

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, 36 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. Two new Ph.D. theses are reported in this issue.

Sarah DE BAETS
K. U. Leuven, Belgium

The effects of plant roots on rill and gully erosion: application to a Mediterranean ecosystem (2007). Ph.D. thesis, 274 pp.

(ISBN: 978-90-8649-148-3)

Abstract
Soil erosion by water is considered to be the dominant erosion process in Mediterranean environments, leading to land degradation and desertification. Of all water erosion processes, gully erosion is responsible for significant on-site soil losses and off-site consequences, such as sediment deposition in river channels and flooding. Reducing gully erosion is needed to overcome these problems and to prevent further degradation. The use of natural vegetation has been suggested as the way forward to manage the degradation problems within the Mediterranean region. Previous studies have shown that vegetation reduces water erosion to a large extent. However, research on the effects of plants on soil erosion mainly focused on the effects of the above-ground biomass, while much less attention has been paid on the role of below-ground biomass.

This study aimed at quantifying the effects of plant roots on the resistance of topsoils to incisive water erosion processes. Moreover, a methodology was developed to select suitable plants for rill and gully erosion control taking into account both above ground as well as below ground plant characteristics.

Laboratory experiments revealed that root-permeated topsoils are much more resistant during concentrated flow erosion compared to rootless topsoils. With increasing root density, relative soil detachment rate decreases exponentially. At a topsoil root density of 2 $kg.m^{-3}$ relative erosion rates are reduced to almost zero (i.e. 0.001 for fibrous roots, 0.03 for fine tap roots growing in a silt loam soil) as compared to bare, rootless topsoils with similar soil conditions and tested under the same circumstances. Beyond a certain root density, i.e. 2-5 $kg.m^{-3}$, the increase in soil erosion resistance reaches a limit.

While previous studies never investigated the impact of root type on the erosion-reducing potential of plants roots, this study reveals that roots reduce erosion rates differently depending on their root architecture. Fibrous root systems are most effective in reducing concentrated flow erosion rates. For tap root systems, the erosion-reducing potential becomes less when root diameter increases. Soil loss from topsoils permeated with tap roots is only reduced by 50% compared to bare topsoils when topsoil root density amount to 2 $kg.m^{-3}$ and mean root diameter varies between 0.010-0.015 m. Apart from root density and root diameter, other plant, soil and flow variables, such as plant orientation, soil texture and flow shear stress, affect the erosion-reducing potential of plant roots during concentrated flow erosion. The effects of roots on the resistance of the topsoil to concentrated flow erosion can be incorporated in the EUROSEM model by adjusting the soil cohesion value and the corresponding soil detachment efficiency coefficient.

The erosion-reducing potential of 25 typical Mediterranean matorral species was predicted in this study using root density and root diameter information. The results indicate that plant roots can have a very large effect on soil erosion resistance and that this effect is largely dependent on plant species. It can be concluded that most grasses are very effective for preventing topsoils from being eroded by concentrated flow. Their high stem density, resulting in a reduction of runoff velocity and a decrease in erosivity combined with their dense network of fine roots in the topsoil offers good protection to concentrated flow erosion. But also some shrubs, such as *Anthyllis cytisoides,* the herb *Plantago albicans* and the rush *Juncus acutus* are suitable to prevent soil erosion by concentrated flow, because of their high stem and root density.

To improve slope stability on steep slopes or gully walls, deep-rooted species providing a high reinforcement at larger soil depth and hence preventing shallow mass movements, such as *Salsola genistoides* or *Anthyllis cytisoides* are preferred. To stabilize riverbanks and ephemeral channel bottoms, *Retama sphaerocarpa* and *Juncus acutus* are put forward.

A combination of species, i.e. a grass having a high potential to resist concentrated flow erosion and a high ability to trap sediments and a shrub with a high resistance to removal and a high potential to improve slope stability, or the allocation of species to specific target areas (e.g. grasses in concentrated flow zones and on terrace walls, deep-rooted species to stabilize gully walls) is proposed to mitigate erosion by concentrated flow and further soil degradation. The grasses *Stipa tenacissima* and *Lygeum spartum* and the shrub *Salsola genistoides* were selected as the most suitable plant species for rill and gully erosion control.

This study resulted in a methodology, which is based on simple measurements and calculations of both above-ground and below-ground plant characteristics, that allows one to also assess the suitability of plant species for rill and gully erosion control in other regions.

Publications

De Baets, S., Poesen, J., Gyssels, G. and Knapen, A. (2006). *Effects of grass roots on the erodibility of topsoils during concentrated flow.* Geomorphology 76, 54-67.

De Baets, S., Poesen J., Galindo-Morales, P. and Knapen, A. (2007). *Impact of root architecture on the erosion-reducing potential of roots during concentrated flow.* Earth Surface Processes and Landforms 32, 1323-1345.

De Baets, S., Poesen, J., Knapen, A., Gonzáles Barberá, G. and Navarro, J. A. (2007). *Root characteristics of representative Mediterranean plant species and their erosion-reducing potential during concentrated runoff.* Plant and Soil 294, 169-183.
De Baets, S., Torri, D., Poesen, J. and Meersmans, J., (in press). *Modelling increased soil cohesion due to roots with EUROSEM.* Earth Surface Processes and Landforms.
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Knapen, A., Poesen, J. and De Baets, S. (2007). *Seasonal variations in soil resistance during concentrated flow for a loess-derived soil under two contrasting tillage practices.* Soil & Tillage Research 94, 425-440.
Knapen, A., Poesen, J., Galindo-Morales, P., De Baets, S. and Pals, A. (2007). *Effects of microbiotic crusts under cropland in temperate environments on soil erodibility during concentrated flow.* Earth Surface Processes and Landforms 32, 1884-1901.
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Land use change, runoff and erosion in a degraded catchment in the Andes: determining pathways of degradation and recovery (2007). Ph.D. thesis, 142 pp.

(ISBN: 978-90-8649-150-6)

Abstract

Mountain ecosystems fulfil essential hydrological functions. Over 50% of the global population relies on water from mountain areas, for drinking, industry, agriculture, hydropower etc. Demographic growth and socio-economic development is accelerating land use/-cover change in these fragile environments, and increasingly affects their main ecological and hydrological functions. The main objective of this study was to contribute to a better understanding of the pathways of degradation and recovery of degraded catchments in the tropical Andes. The Jadan (296 km^2) and Burgay (448 km^2) River basins were selected as a case-study, given their dynamic land use history. Field data from 37 small sub-basins (10^{-2}–10^2 km^2) indicate that annual erosion rates vary between 26-15,100 Mg $km^{-2}.yr^{-1}$. Erosion rates are a strong function of the vegetation cover of the basin. Therefore, the effect of vegetation on surface runoff and sediment generation and transport was examined in further detail at different spatial scales.

Rainfall runoff simulations at experimental plots (1 m^2) indicate that surface runoff generation is largely controlled by the ground vegetation cover and land management. The hydrological response at abandoned lands is rapid and sharp, in contrast with arable and rangelands where overland flow is limited. Water and sediment generated on the hillslopes are then transported towards the river system through a dense network of rills and gullies. Field measurements in 13 gullies with different vegetation cover show that the presence of vegetation in the gully bed promotes sediment deposition and gully stabilization. The amount of sediment deposited in the gully bed is significant when compared to the annual sediment production rate observed at the basin level. Concentrated flow experiments conducted in nine gullies allowed us to characterize the effect of gully bed vegetation on the transfer efficiency of runoff water. A kinematic wave model was then used to predict runoff water transmission in gully channels. Our model was able to simulate runoff flow and surface runoff infiltration for gully beds with contrasting vegetation cover.

The findings of this research have brought new insights into the effect of vegetation cover on surface runoff, sediment generation and transfer mechanisms. The combined effect of vegetation on several sub-processes explains its dominant influence on basin-wide erosion rates. Our results indicate that relatively small changes in landscape connectivity have the potential to create strong feedback loops.

Publications:

Molina, A., Govers, G., Vanacker, V., Poesen, J., Zeelmaekers, E. and Cisneros., F. (2007). *Runoff generation in an Andean ecosystem: interaction of vegetation cover and land use.* Catena 71, 357-370.

Molina, A., Govers, G., Poesen, J., Van Hemelryck, H., De Bièvre, B. and Vanacker, V. (In press). *Environmental factors controlling spatial variation in sediment yield in a central Andean mountain area.* Geomorphology. doi:10.1016/j.geomorph.2006.12.025.

Molina, A., Govers, G., Vanacker, V. and Cisneros, F. (Submitted). *Effectiveness of vegetation for gully sedimentation and sediment storage in degraded mountainous environments.* Earth Surface Processes and Landforms.

Vanacker, V., von Blanckenburg, F., Govers, G., Molina, A., Poesen, J., Deckers, J. and Kubik, P. (2007). *Restoring natural vegetation reverts mountain erosion to natural levels.* Geology 35, 303-306.

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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!"

CONFERENCE REPORTS

None received.

Hanspeter Liniger and William Critchley, Eds. (2007). Where the Land is Greener – Case Studies and Analysis of Soil and Water Conservation Initiatives Worldwide

World Overview of Conservation Approaches and Technologies (WOCAT), pp. 364.(ISBN 978-92-9081-339-2)
Cost Price: $45.00 via earthprint.com at:
http://www.earthprint.com/go.htm?to=wocat001

'Where the Land is Greener' is a compendium of selected successful examples of soil and water conservation activities. 'Greener land' in the title of this Book is used to indicate sustainable land and improved livelihoods. This Book has demonstrated that sustainable agricultural technologies are the means for improving the livelihood of rural people. The Book is divided into two parts.

Part I – Analysis and policy implications: This Section presents a synthesis on where and why the land is greener. Analysis of technology is performed to answer questions on what works, where and why. Similarly, discourses on soil and water conservation (SWC) approaches analyse how SWC technology can be spread and where efforts are required to achieve benefits from the technologies. In the concluding section, important policy issues are outlined for the benefit of policy makers.

Part II – Case studies: This section covers about 80% of the Book space and presents 42 case studies from over 20 different countries around the world. The case studies were selected from nine different SWC themes, viz. conservation agriculture, manuring/composting, vegetative strips/cover, agro-forestry, water harvesting, gully rehabilitation, terraces, grazing land management and other technologies. The case studies have been selected from all around the world covering a wide variety of conservation practices, geographical regions, land uses and production systems. This includes success stories of 20 different countries around the globe. Forty-two soil and water conservation technologies generated from Asia (17), Africa (14), Europe (2), Latin America (6) and Australia (3) are reported. Similarly, the Book includes 28 conservation approaches tested and developed in Asia (9), Africa (10), Europe (2), Latin America (5) and Australia (2). This makes the Book relevant for people involved in land care issues worldwide. Each case study has been presented concisely by summarizing the information in four pages. The information about each of the technologies has been organized in the same format as the approaches. This provides an opportunity to compare the technologies and approaches in any given particular area. The information about the advantages and disadvantages (strengths/weaknesses) of conservation practices presented in each of the case studies offers opportunities for potential users to judge whether any particular practice is suitable to their bio-physical and socio-economic environment.

This Book portrays the stories of some of the most successful sustainable land management initiatives and describes a broad range of ways in which farming families achieved these successes. The information presented is supported with striking images,

sketches, figures, maps and statistical facts. The colourful layout of the Book makes it easy to find particular information. The presentation of information is particularly vivid and reader-friendly. This will help to encourage readers to apply sustainable land management practices.

This is a very impressive and informative Book and is well worth reading. This compendium can be a wonderful decision-support tool. The Book is one of the extensive compilations of successful sustainable soil management technologies and approaches. This informs us of progress to date and opportunities to identify future needs for research and development interventions in the area of sustainable soil management. The information in the Book can also be considered as baseline marker for measuring the changes achieved by future research and development interventions. This is a useful reference for all involved in sustainable soil management, land care and soil and water conservation issues.

The Book is very timely, considering the environmental challenges the world is currently facing. The Editors have done a great job in organizing and presenting the information so convincingly and meticulously and it was a very commendable allocation of resources by WOCAT. Both deserve recognition for their accomplishments.

The impact of the Book, however, depends on how widely it will be distributed and information disseminated. It is therefore important to ensure this information reaches those who implement the practices and adopt the approaches. Translation of this Book or part of the book into different languages would ensure wider dissemination and hence impact.

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BOOK ANNOUNCEMENTS

None received.

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 313. 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, 36 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

De Baets, S., Poesen, J., Gyssels, G. and Knapen, A. (2006). Effects of grass roots on the erodibility of topsoils during concentrated flow. Geomorphology 76, 54-67.

De Baets, S., Poesen J., Galindo-Morales, P. and Knapen, A. (2007). Impact of root architecture on the erosion-reducing potential of roots during concentrated flow. Earth Surface Processes and Landforms 32, 1323-1345.

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Fullen, M.A., Jankauskas, B., Jankauskiene, G., Booth, C.A. and Slepetiene, A. 2007. Inter-relationships between soil texture and soil organic matter in eroded Eutric Albeluvisols in Lithuania. Lithuanian Journal of Science (Agricultural Sciences) 2007 (3), 9-18.

Gyssels, G., Poesen, J., Liu, G., Van Dessel, W., Knapen, A. and De Baets, S. (2006). Effects of cereal roots on detachment rates of single- and double drilled topsoils during concentrated flow. European Journal of Soil Science 57(3), 381-391.

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Knapen, A., Poesen, J., Galindo-Morales, P., De Baets, S. and Pals, A. (2007). Effects of microbiotic crusts under cropland in temperate environments on soil erodibility during concentrated flow. Earth Surface Processes and Landforms 32, 1884-1901.

Molina, A., Govers, G., Vanacker, V., Poesen, J., Zeelmaekers, E. and Cisneros., F. (2007). Runoff generation in an Andean ecosystem: interaction of vegetation cover and land use. Catena 71, 357-370.

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ANNOUNCEMENTS

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

Appointment of new Ph.D. research students

None reported.

Institutional movements and promotions of ESSC members

None reported.

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.

After several years of helping with ESSC publication matters in Bratislava (Slovakia),

Zuzana Tekelova has decided to develop her career in business administration. On behalf of the ESSC, we thank Zuzana for her dedication and hard work and wish her every success for the future.

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

E-mail: marzecova@vupu.sk

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

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

FIRST ANNOUNCEMENTS

EGU Vienna 2008
European Geosciences Union General Assembly (EGU-2008)
Soil System Science Division (SSS), Soil Conservation Committee,
Vienna, Austria, 13-18 April 2008

Session on

SOIL EROSION AND DEGRADATION ON MEDITERRANEAN TYPE-ECOSYSTEMS

Mediterranean ecosystems are characterized by strong seasonal contrasts in the distribution of precipitation, by the coincidence of the driest and hottest season in summer, by mountainous terrain and by a long history of intense human occupation around the Mediterranean Sea. All those cultural and natural conditions result in a highly dynamic and complex soil erosion and degradation system. Within the last two decades substantial improvements in scientific knowledge has been achieved by scientists around the world. The session to be held within the European Geoscience Union 2008 will be a great chance to share and show all those findings. The special session on **SOIL EROSION AND DEGRADATION IN MEDITERRANEAN TYPE-ECOSYSTEMS (EroMed)** will discuss such topics as soil degradation, past and present erosion processes, the effect of agriculture, grazing, mining and other human activities. These include land abandonment on Mediterranean soils, fluvial and slope erosion and deposition processes, forest fire effects and soil and landscape restoration and conservation strategies. Investigations developed by means of experimental and laboratory studies, field measurements and quantification, modelling and mapping assessment are welcome. The meeting will allow researchers to share knowledge on soil erosion and degradation processes in the five Mediterranean areas (Mediterranean basin, California, Chile, South Africa and Australia) and to define and discuss future research challenges and strategies. This is also a key meeting to plan programmes and develop future research projects. Scientists are invited to submit abstracts on the above mentioned topics. A peer review international journal will publish a special issue on soil erosion and degradation in the Mediterranean Type Ecosystems.

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Session on

ORIGINAL IDEAS FOR TEACHING IN EARTH SCIENCES

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Teaching courses in various disciplines of Earth Science requires continuous innovation, as new concepts and new generations of students change the dynamics of knowledge transfer between teachers and students. Excellent teachers are always looking for new ideas and strategies that facilitate creative thinking in students, and improve the transfer of ideas in the classroom. New ideas and strategies are usually developed, tested and applied by teachers working in a wide variety of colleges and universities, but little of this knowledge or results of these experiences is disseminated to other teachers.

The session on **ORIGINAL IDEAS FOR TEACHING EARTH SCIENCES** is devoted to presenting teaching techniques and ideas that teachers from different regions and academic backgrounds have found effective in teaching Earth Science courses. Many teachers have worked for decades with innovative and highly successful strategies, but little is known outside of their lecture rooms. During EGU2008 we will have the chance to share their experiences. We welcome abstracts on original ideas for teaching all aspects of Earth Science courses, with special emphasis on field and excursion strategies, computer and laboratory teaching and modelling. If enough interest is shown, we will consider publishing selected paper as a special issue of an international peer-reviewed journal.

Session on

SOIL ORGANIC MATTER DECOMPOSITION AND THE IMPACT OF LAND MANAGEMENT PRACTICES

Convener
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Soil organic matter and the processes that govern decomposition are critical to maintaining site productivity, nutrient and water supplies, soil aggregation and plant disease incidence or prevention. Organic matter decomposition is controlled by site water balances, nutrients, pH and temperature. It is also greatly affected by land management practices, which vary greatly according to management objectives, climatic regimes and soil properties. The effect of management on organic matter decomposition and resulting soil carbon sequestration is an important factor in global climate change scenarios. We invite contributions on organic matter decomposition-land use related topics. If enough interest is shown, we would like to have selected papers published as a special issue in a soil, ecology or land management journal.

CALL FOR PARTICIPATION

6TH INTERNATIONAL SYMPOSIUM

AGROENVIRON – 2008

NATURAL RESOURCES CONSERVATION USE AND SUSTAINABILITY

28 APRIL-1 MAY 2008

ANKARA UNIVERSITY, ANTALYA, TURKEY

The first Agroenviron Symposium was organized in 1998 by the University of Agriculture in Faisalabad, Pakistan. Trakya University in Turkey hosted the Second Symposium in 2000 and the National Authority for Remote Sensing and Space Sciences (NARSS) in Cairo, Egypt, served as the host for the Third Symposium in 2002. The Fourth Agroenviron Symposium was organized by the University of Udine in Italy in 2004. Ghent University, Belgium, was the home of the last Symposium in 2006.

The aim of the Symposium is to involve scientists, engineers, planners, research centres and institutions in issues related to the agricultural environment. There is a need to assess and control the pressures and impacts of agricultural and horticultural activities on the environment in terms of soil, plant and atmosphere. Agroenviron Symposia covered a range of topics addressing key environmental, agricultural and horticultural issues through applying new technologies that aim at sustaining agricultural systems, monitoring the environment and conserving natural resources.

The Symposium will bring together researchers from various disciplines, including soil science, geology, agricultural engineering, geoinformatics, spectroscopy, agronomy, spatial statistics and environmental engineering.

Please visit our web site:
http://www.agroenviron2008.org/

Dr Sajid MAHMOOD (Azeemi)
Agroenviron Symposium Co-ordinator
On Behalf of the Organizers of the Agroenviron 2008 Symposium.

Dear All

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

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

Pre-register using the Conference website www.14icc.org and we will inform you when it is updated.

For information visit the Conference website at:
http://www.14icc.org/call.html

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

With best regards

On behalf of the Organizing Committee

Saverio Fiore
Chair of the XIV International Clay Conference.

The Conference Organizers, on behalf of the International Association of Geomorphologists (IAG), have the pleasure of inviting geomorphologists and other scientists in related fields to participate in a Regional Conference on Geomorphology entitled 'Landslides, Floods and Global Environmental Change in Mountain Regions', which will be held in Braşov, Romania, from 15-25 September 2008.

Aims and Objectives

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

ORGANIZERS of the Scientific Programme:

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

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Website: www.geoinst.ro

DATES AND PRELIMINARY PROGRAMME

Sunday, 14 September 2008:

Arrival of IAG Executive Committee members.

Monday, 15 September:

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

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

Pre-Conference One-Day-Excursion

Tuesday, 16 September:

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

Conference Programme

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

Wednesday, 17 September:

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

Thursday, 18 September:

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

Friday, 19 September:

0800-1200: Poster sessions, round-table discussions. Closing Ceremony.
Afternoon excursion: Braşov, Bran Castle, Poiana Brasov.
Estimated price for transport: €5/person
Special dinner (overnight in Braşov).

Post-Conference Excursions:

Saturday-Monday, 20-22 September:

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

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

International Summer School

Tuesday-Thursday, 23-25 September:

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

Friday, 26 September:

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

Optional Post Conference excursions

Tuesday-Friday, 23-26 September:

Excursion 3. Tulcea, Sulina, Letea, Caraorman, Razelm Lake, Portița, Cheile Dobrogei. Objectives of the excursion: Evolution of Danube Delta in relation to sea-level rise; deltaic and lagoon relief; deltaic accumulation and erosional coasts; deltaic geomorphological processes and human induced changes; transboundary issues of the Danube Delta. Overnights on floating hotel. Friday, 26 September: overnight in Bucharest. Estimated price (transport, accommodation, meals): €480/person.

Participants to the Braşov Regional IAG Conference on Geomorphology should fill out the attached Registration Form and send it back together with copies of the payment documents.

Registration fees in Euros:		
Categories	Until 31 March 2008	Until 31 July 2008
Professional	200	260
Students (i) /retired person	100	150
Accompanying person (ii)	50	75
Summer School for young geomorphologists	175	

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

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

http://www.geomorph.org
www.geoinst.ro

Professor Dan Bălteanu
Organizing Committee.

Fifth International Conference on Land Degradation
Valenzano, Bari, Italy
18-22 September 2008

Conference theme

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

Introduction

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

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

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

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

Registration Fee

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

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

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

The 2nd Announcement will provide details on methods of payment.

Contacts

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Italy

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Fax: 00 39 055 241 485

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GREEN5 International Conference
Vilnius, Lithuania: 1-4 July 2008

'Construction for a sustainable environment'

CALL FOR PAPERS

Construction and the environment.
Whole Life Cycle Analysis and Environmental Assessment.
Design for sustainability.
Municipal, commercial and industrial waste streams.
Waste management and disposal.
Use of waste materials in construction.
Landfills, tips and tailings facilities.
Derelict and contaminated land.
Erosion control and ground stabilization.
Influence of climate change.
Coping with extreme weather events.
Policy and regulation.
Quality Control and Assurance.
Case histories.

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

Tel: 00 44 1902 322263
Fax: 00 44 1902 322743
E-mail: R.Sarsby@wlv.ac.uk
Website: www.GREEN5.co.uk

GREEN5 International Conference

Vilnius, Lithuania: 1-4 July 2008

'Construction for a sustainable environment'

Preliminary registration of interest:

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

Name:.....

Institution:.....

.....

Address for correspondence:.....

.....

.....

Tel:.....

Fax:.....

e-mail:.....

Topics of interest:.....

.....

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

Invitation

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

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

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

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

Conference topics

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

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

Abstract submission

All interested persons are invited to give oral or poster presentations. In order for presentations to be included in the programme, it is required that at least one of the authors is registered at the Congress by the pre-registration deadline of 30 November 2007.

Venue

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

Conference languages: English, French

Conference fees

Registration fee

- Normal Registration from 01 December 2007 **€490**

Conference dinner **€60**

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

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

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

International Conference on Flood Recovery Innovation and Response FRIAR 2008 2-3 July 2008 at the Institution of Civil Engineers, London, UK

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

SPONSORED BY: WIT Transactions on Ecology and the Environment.

INTRODUCTION

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

- Identification and dissemination of good practice in flood repair / reinstatement and flood claims management.
- Supporting in-depth collaborative research into appropriate flooding and property issues.
- Critically examine developments in flood resilient repair uses.
- Developing critical perspectives on the impact of flooding on property owners.
- Creating an information depository for collation of relevant flood repair publications and literature.

AIMS AND CONFERENCE KEY THEMES

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

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

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

THEME 2: PRE-EVENT PLANNING AND BUSINESS CONTINUITY

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

THEME 3: MANAGEMENT OF MAJOR EVENTS

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

THEME 4: POST DAMAGE RESTORATION AND RECOVERY

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

THEME 5: VICTIMS OF FLOODING

Whether their businesses or their homes are inundated, it is the people directly affected by floods who are victims of the water that invaded their property. There are increasing concerns over a variety of health risks, both physiological and psychological, which can arise from flood events. These can encompass the discovery of asbestos during the course of restoration; moulds and fungi developing in properties which have not been fully dried; and, in recent events, a disturbing incidence of depression, anxiety and other emotional impacts arising during and after the flood recovery period. The latter effects are currently poorly understood and in need of in-depth investigation. Many of these health risks also extend to practitioners (repairers, inspectors) with employers having a duty of care to their employees.

THEME 6: INTERNATIONAL AND NATIONAL GOVERNMENT POLICY

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

WHO SHOULD ATTEND

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

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

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

LOCAL ORGANIZING COMMITTEE
T. Boobier, UK Flooding Expert, UK.
J. Davison, Director BDMA, UK.
M. Dhonau, Consultant, UK.
M.A. Fullen, University of Wolverhampton, UK.
P. May, Environment Agency Wales, UK.
C. Netherton, The National Flood School, UK.
R.W. Sarsby, University of Wolverhampton, UK.
A. Saul, University of Sheffield, UK.
R. Woodhead, Rameses Associates, UK.

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

INDEXING AND ARCHIVING OF PAPERS

Papers presented at Wessex Institute Conferences are referenced by Crossref and regularly appear in notable reviews, publications and databases, including Elsevier's referencing and abstract services (Scopus and Compendex); Cambridge Scientific Abstracts; Thomson (Index to Scientific & Technical Proceedings, and Index to Scientific Book Contents); Scitech Book

News; Interdok (Directory of Published Proceedings); American Library Association (Choice). Papers continue to be added to new databases regularly. In addition the Conference papers will be:

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

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

VENUE

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

CONFERENCE SECRETARIAT

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

Tel: 00 44 238 029 3223
Fax: 00 44 238 029 2853
E-mail: rswinburn@wessex.ac.uk

CALL FOR PAPERS

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

CONFERENCE KEY THEMES

- Risk Management in Relation to Flood Events and Climate Change.

- Pre-event Planning and Business Continuity.
- Management of Major Events.
- Post Damage Restoration and Recovery.
- Victims of Flooding.
- International and National Government Policy.

CONFERENCE TOPICS

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

Please indicate your intention below:

I intend to submit a paper and present it.
I intend to participate in the conference, but will not be submitting a paper.
I intend to submit a Poster Presentation.

ABSTRACT/PAPER SUBMISSION

Abstract (300 words): Submit to the Conference Secretariat as indicated on the Enquiry Form.
Camera Ready Paper Submission: Date to be advised after submission of abstracts.

OPEN-ACCESS

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

ABSTRACT SUBMISSION

E-mail submission to: krobberts@wessex.ac.uk
Please submit your abstract with FRIAR 2008 in the subject line. Include your name, full address and conference topics.
Web Submission: www.wessex.ac.uk/conferences/2008/friar08
Fax Submission: 00 44 238 029 2853
Fax one copy of your abstract with this completed Enquiry Form.

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

Please mail a copy of your abstract with this completed Enquiry Form.
Telephone: 00 44 238 029 3223.

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

International Conference on Flood Recovery Innovation and Response FRIAR 2008
2-3 July 2008 at the Institution of Civil Engineers, London, UK.

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

Initials ..... Surname .....

Organization .....

Address .....

Postcode/Zip .....

Country .....

Telephone .....

Fax .....

E-Mail .....

I suggest this announcement should also be sent to:

Title: ..... Initials ..... Surname ..... e-mail .....

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

EPSRC
Engineering and Physical Sciences Research Council

2nd International Conference on Ground Bio- and Eco-engineering
The Use of Vegetation to Improve Slope Stability
Beijing, China, 14-18 July 2008

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

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

Organizing Committee:
T. FOURCAUD, CIRAD, Montpellier, France / LIAMA-CASIA, Beijing, China.
L. JOUNEAU, INRA Jouy / LIAMA-CASIA, Beijing, China.
H. LU, WASWC, Beijing, China.
Y. LU, Chinese Academy of Forestry, Beijing, China.
T. LUO, Institute of Tibetan Plateau Research CAS, Beijing, China.
J. NORRIS, Nottingham Trent University, Nottingham, UK.
I. SPANOS, NAGREF, Thessaloniki, Greece.
*A. STOKES, INRA, Montpellier, France / LIAMA-CASIA, Beijing, China.
X. ZHANG, LIAMA-CASIA Beijing, China.

***Conference Chair and for further information, please contact:**
Alexia Stokes
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P.R. China
E-mail: stokes@liama.ia.ac.cn
Tel: 00 86 10 82614528
Fax: 00 86 10 62647458.

EUROSOIL 2008
25-29 August 2008, Vienna, Austria

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

EUROSOIL 2008 will comprise about 30 Symposia, four Workshops and numerous 1 to 3 day excursions in:

Central, Eastern, Southern and Western Europe.

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

http://www.ecsss.net

or e-mail: winfried.blum@boku.ac.at

INVITATION
to the International Scientific Conference
on 'SOIL IN A SUSTAINABLE ENVIRONMENT'
on the occasion of the 50th Jubilee
of the Lithuanian Soil Science Society.

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

Conference Topics:

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

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

PROGRAMME:

Tuesday 23 September 2008:

Arrival of participants.

Wednesday 24 September 2008:

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

Thursday 25 September 2008-Friday 26 September 2008.

Two-day field excursion and completion of official conference.

Conference Secretariat:

Department of Soil Science and Plant Nutrition
Lithuanian University of Agriculture
Studentų g. 11, Akademija
Kaunas, LT-53361
Lithuania.
Tel.: 00 370 752 239; 752 279; 752 212
Fax.: 00 370 752 239
E-mail: rimantas.vaisvalavicius@lzuu.lt
algirdas.motuzas@lzuu.lt,
da@lzuu.lt

PAPERS

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

CONFERENCE FEE: €100

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

ACCOMMODATION

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

COST OF FIELD EXCURSION

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

DEADLINES:

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

28 March 2008: second announcement for persons who have notified participation in the Congress.
30 May 2008: Deadline for the payment of the Conference fee.
Bank account for fee payment: AB bankas **Hansabankas,** IBAN-LT27 7300 0100 0223 6099, to account **'LSSS 50 Years Conference.'**

Reminder for the next issue:

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

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

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

i) Reviews of recent conferences.
ii) Recent grant awards.
iii) The citation details and abstracts of completed Ph.D. and M.Sc. theses.
iv) Newly enrolled Ph.D. research students, title of their research topic and names of research supervisors.
v) Recent staff institutional movements/promotions.
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

Hordes of gullies now remind us
We should build our land to stay,
And, departing, leave behind us
Fields that have not washed away;
When our boys assume the mortgage
On the land that's had our toil,
They'll not have to ask the question
"Here's the farm, but
Where's the soil?"

(Brade-Birks, S.G. (1944)
Good Soil. English University Press, London, p. 185)

'As whirlwinds in the south pass through, so it cometh from the desert, from a terrible land'
(Isaiah, Chapter 21, verse 1)

"We do not inherit the earth from our ancestors: we borrow it from our children"
Kenyan proverb

"What is more thrilling than the prospect of truths you do not yet know?"
(Deepak Chopra, 1997)

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