

## CONTENTS

	Page
EDITORIAL	2
PAST AND PRESENT SOIL EROSION by J. Boardman & M. Bell	3
EROSION Y DEGRADACION DEL SUELO COMO CONSECUENCIA DE LOS INCENDIOS FORESTALES by J.L. Rubio & M. Sala	5
EROSION PHENOMENA IN SICILY DUE TO RECENT RAINSTORMS by C. Dazzi	9
DEVELOPMENT OF THE NORTH EUROPEAN WOODLANDS AND RECOLTIVATION PROBLEMS by Y.B. Archegova	13
AIM - ANNOUNCEMENTS, INFORMATION, MEETINGS MEETINGS	15
PUBLICATIONS	19
ELECTIONS TO COUNCIL 1992-96	20

## EDITORIAL

You will see from the information on the inside cover that this Newsletter is the first prepared by a new editorial board. I and my co-editors hope that we will be able to build on the hard work of Professor Dr. Hans-Rudolf Bork who succeeded, almost single-handedly, in establishing the ESSC Newsletter as an interesting and informative document, issued on a regular basis. All members of the Society are extremely indebted to him for getting the Newsletter started in a sound way.

I would like to take this opportunity to impress on members of the Society that the Newsletter is your means of communicating information. Its content is largely dependent upon what contributions we receive. Fellow members of the Society are interested in learning about examples of soil conservation and soil protection in practice, in instances of erosion, and in your ideas on policy and development. Also, the editorial board would like to receive reports on conferences, workshops and seminars; notices of future meetings; information on publications outside the standard range of international scientific journals; research contracts; and on movements of members from one institution to another. I know it is extra effort to prepare something for the Newsletter but unless we receive this kind of information, we will have nothing to publish and the Newsletter will not exist.

Contributions in English should be sent to me direct at Silsoe College; those in other languages should be sent first to Professor Dr. H. Vogt at Strasbourg (French), Professor Dr. G. Richter at Trier (German) and Dr. J.L. Rubio at Valencia (Spanish).

We look forward to receiving your contributions.

**R.P.C. Morgan**  
Silsoe College  
February 1992

## PAST AND PRESENT SOIL EROSION

**Report on a Discussion Meeting, held at  
Institute of Archaeology, University of London  
15 May 1991**

The one-day discussion meeting sponsored by the Quaternary Research Association for Environmental Archaeology, and organised by Martin Bell (Lampeter) and John Boardman (Oxford), aimed to bring together archaeologists, geomorphologists and soil scientists for an exchange of information on a topic of mutual concern. About 100 people attended the meeting, 15 papers were presented and several poster papers displayed.

Contributors to the first session on 'Field studies in Britain' attempted to varying degrees to use knowledge of erosional processes to explain erosion in the past. Bob Evans (Cambridge) concentrated on upland erosion; John Boardman, Martin Bell and Mike Allen (Trust for Wessex Archaeology) on chalk and limestone landscapes in southern England; John Catt (Rothamsted) on the sandy soils of the Lower Greensand; and Tony Brown (Leicester) on colluviation at the floodplain edge in the East Midlands.

In a session on 'Analytical techniques', Tim Quine and Des Walling (Exeter) discussed the potential of the Caesium-137 technique, Richard Macphail (London) and Paul Farres (Portsmouth Polytechnic) discussed micromorphological examination of soil and colluvial materials, and Richard Preece (Cambridge) presented recent results of dating colluvial sequences from the entrance site to the Channel Tunnel at Holywell, Folkestone.

The final session was devoted to erosion in the Mediterranean region. Eberhard Zangger (Cambridge) summarised the history of erosion in Greece, arguing that the first phase of Holocene erosion was the most significant in terms of quantity of soil moved. John Bintliff (Durham) reviewed the history of Mediterranean erosion research emphasizing recent methodological and conceptual developments and John Wainwright (Bristol) demonstrated the use of computer models for simulating artifact and soil movement at archaeological sites. The results of soil erosion mapping in Greece were presented by Donald Davidson (Stirling) and the development of agricultural terraces in Cyprus was discussed by Malcolm Wagstaff (Southampton).

There were poster papers from Louise Heathwaite (Sheffield) and Tim Burt (Oxford) on past and present erosion at Slapton, Devon; Steve Ellis (Hull) on erosion on the Yorkshire Wolds; Rebecca Roseff (Birmingham) on post-Mediaeval erosion on Welsh uplands; Brigitte van Vliet-Lance (CNRS, Caen) on loess erosion in north-west France; Duncan McGregor (Royal Holloway) on erosion in Jamaica and Steve Carter (Edinburgh) on archaeological research in Scotland.

Discussion ranged over several issues of general interest such as the role of large rainfall events; the use of average values in expressing quantities of erosion and the definition and origin of colluvium. A critical issue which emerged from discussion of several papers was differing perceptions of the comparison between past and present erosion rates. Some felt that present rates were substantially greater than those in the past whilst others emphasized past phases of apparently greater erosion. The conference papers, together with six additional contributions, will be published by Oxbow Books (Oxford) in 1992.

**John Boardman**  
**Oxford University**

**Martin Bell**  
**University College, Lampeter**

**Conferencia sobre  
EROSION Y DEGRADACION DEL SUELO COMO CONSECUENCIA DE LOS  
INCENDIOS FORESTALES**

**Barcelona-Valencia, 3-7 de Septiembre de 1991**

**Conclusiones Generales**

1. En la actualidad, el número y extensión de los incendios forestales representa en muchas áreas del Mediterráneo, el mayor problema ambiental debido a que puede conducir a una degradación irreversible del suelo.
2. Los incendios forestales, sobre todo los repetidos e incontrolados, dan lugar a una progresiva pérdida de calidad ambiental.
3. Existe una urgente necesidad de investigaciones multidisciplinarias acerca de la naturaleza de los procesos de degradación del suelo causados por los incendios forestales.
4. El número e intensidad de los incendios forestales pueden ser reducidos mediante una eficaz acción coordinada entre gestores forestales, grupos técnicos y científicos, y la administración.
5. Las medidas estructurales encaminadas a reducir la amenaza de los incendios forestales deben incluir la diversificación del uso del suelo, la gestión y control de los espacios de recreo y de los vertidos ilegales, y la introducción y potenciación de los instrumentos legales apropiados.
6. Las medidas recomendadas para reducir el impacto de los incendios forestales incluyen: la reducción del tiempo necesario para su detección, la intervención inmediata y la aplicación de nuevas tecnologías para la extinción de los fuegos.

Texto aprobado en el curso del debate general en el que actuaron como moderadores:

Jan de Ploey	Universidad de Lovaina, Presidente de la Sociedad Europea para la Conservación del Suelo (ESSC).
Maria Sala	Universidad de Barcelona, Vicepresidenta de la Sociedad Europea para la Conservación del Suelo (ESSC).
José Luis Rubio	CSIC de Valencia, miembro del consejo de Sociedad Europea para la Conservación del Suelo (ESSC).

**Aparte de la discusión y aprobación del texto precedente, en el debate general fueron tratados los siguientes temas:**

El Sr. Díaz-Fierros (Universidad de Santiago de Compostela) cree que hay que estudiar a fondo la erosión y degradación del suelo como consecuencia de los incendios, así como la planificación de las áreas seleccionadas para su revegetación.

Para el Sr. Forteza (CSIC de Valencia) uno de los problemas a tener en cuenta es una revegetación es el modelo a seguir y las técnicas a utilizar en la nueva repoblación.

El Sr. Rubio (CSIC de Valencia) puso énfasis en la conveniencia de la diversificación en los usos del suelo como medida estructural de prevención de los incendios, diversificación que se ha ido perdiendo a consecuencia del progresivo abandono de las áreas agrícolas y forestales.

El Sr. Inbar (Universidad de Jaifa) se pregunta si es posible la total erradicación de los incendios forestales, o si por el contrario hemos de prepararnos para una permanencia de los mismos en nuestro medio ambiente, es decir, como un hecho con el que hemos de aprender a vivir.

El Sr. Velez (ICONA de Madrid) dice que el bosque mediterráneo no constituye un medio totalmente natural, ya que el impacto de la acción humana en su explotación es muy importante. También manifiesta que los fuegos están relacionados en gran parte con la actividad humana y cree, como el Sr. Inbar, que hemos de prepararnos para hacer frente a los mismos.

La Sra. Sala (Universidad de Barcelona) cree que, dado que los incendios son en gran parte un problema provocado por el desconocimiento que el hombre urbano tiene del medio natural, es necesario potenciar una educación medio-ambiental en los medios urbanos.

El Sr. Verstraten (Universidad de Amsterdam) manifiesta que, en lo que a investigación se refiere, hay todavía muchos resultados sobre el efecto de los incendios en los suelos, que resultan á veces contradictorios, seguramente a causa de la diversidad en los métodos de estudio.

El Sr. de Boodt (Universidad de Gante) remarca la variedad en los tipos de erosión en relación con las diferencias geográficas entre regiones, y la necesidad de buscar métodos de estudio que armonicen los resultados obtenidos en la investigación.

La Sra. Carballas (CSIC de Santiago de Compostela) pone de manifiesto que el problema de los incendios no es solo mediterráneo, puesto que en el caso de España afecta gravemente a una región atlántica como es Galicia, y que la erosión no es el único problema que afecta a los suelos después de un incendio, ya que los cambios físico-químicos pueden a veces ser importantes, aunque no tan evidentes.

Finalmente, el Sr. de Ploey (Universidad de Lovaina), haciendo un resumen de las aportaciones científicas presentadas durante la Conferencia, destaca los siguientes puntos en relación a lo que parece más conveniente para la conservación del suelo, tema en el que está involucrada la Sociedad Europea que preside:

En relación a la vegetación:

- (a) es mejor no sacar los restos de árboles después de quemados pues las actividades de limpieza son a veces más perjudiciales para el suelo que el mismo incendio.
- (b) la magnitud y frecuencia de los incendios determina que la evolución de suelos y vegetación sea reversible o irreversible.

En relación a los cambios físicos y químicos del suelo:

- (a) es de capital importancia la temperatura que produce el incendio en el suelo, en las alteraciones físicas y químicas.
- (b) el desarrollo de un horizonte de suelo impermeable (hidrofóbico) tiene aspectos contradictorios y ciertamente no solo relacionados con los incendios.

En relación a la erosión:

- (a) los estudios cuantitativos presentados muestran que la pérdida de suelo es elevada inmediatamente después del incendio, pero se reduce mucho al cabo de un año; la gravedad de la situación estará en relación con el tipo y cantidad de suelo disponible.
- (b) el lavado de los elementos finos del suelo provoca un incremento de la pedregosidad superficial en gran número de suelos mediterráneos, ya de por sí esqueléticos.
- (c) no se ha estudiado todavía de manera suficiente el papel, posiblemente, protector de la pedregosidad ante la erosión.

- (d) tampoco se conoce bien el papel negativo de esta pedregosidad, es decir, la impermeabilización del terreno y el consiguiente incremento en la escorrentía superficial del agua de lluvia, lo cual ha de repercutir en el incremento del agua fluvial, y por tanto en el incremento de las crecidas e inundaciones.
- (e) es importante la pérdida de los nutrientes que estaban almacenados en la cobertura vegetal.

En conjunto, se destaca la necesidad de ampliar y profundizar en los estudios sobre cada uno de los temas, a fin de llegar a obtener datos que ayuden a la toma de decisiones.

A parte de los aspectos de erosión y de degradación del suelo, hay que destacar que los incendios forestales son causa de:

- (a) la eliminación o disminución de la meso y microfauna
- (b) una importante degradación estética del paisaje
- (c) notables pérdidas económicas
- (d) un posible incremento de la magnitud de las crecidas fluviales
- (e) contaminación atmosférica por emisión de cenizas.

**J.L. Rubio**  
**CSIC de Valencia**

**M. Sala**  
**Universidad de Barcelona**



## EROSION PHENOMENA IN SICILY DUE TO RECENT RAINSTORMS

Sicily, with a surface of approximately 25,700 km<sup>2</sup>, is the largest island in the Mediterranean Sea and the most extensive Italian region. Owing to its geographical position and to its geological, climatic, anthropic and vegetational developments during the last millennia, Sicily has many characteristic features. Morphologically, Sicilian territory is characterized by mountainous, hilly and plain areas with a predominance of hilly and mountainous slopes which occupy about 86% of the total area. Although there are some advantages arising from this topography, due to the fact that water (potentially the most important factor to increase crop yield in a hot-dry environment such as in Sicily) can easily be collected in reservoirs, the disadvantages are the hazards of waterlogging in plain areas and erosion and landslides in the sloping areas.

The climate is characterized by high summer temperatures with long dry periods, contrasting with the mild winter temperatures and high rainfall. On the island the average annual rainfall is 600-700 mm. The south-east area has an average of 400 mm rising to 1100-1200 mm on the highest peaks. Rainfall distribution is irregular over the year. An average of 10% falls between April and September, 90% falls during the autumn-winter period and is concentrated in a few days of very heavy and dangerous rain. Such a climatic regime is typical of the Mediterranean, where a season with heavy rainfall alternates with a period of drought and gives rise to intense and unusual phenomena of erosion.

Sicilian soils are greatly influenced by the different lithological formations from which they have inherited many of their features. They are very different from one another and range from the least to the most developed. In particular, the hilly inland area is characterized by the following catenary sequence. In the highest part of the hills and on steep slopes, is formed a shallow, clayey soil which has a low rate of infiltration and a low quantity of nutrients (Entisols). On the gentle slopes of the hillsides there are other clayey soils, sometimes with vertisolic features, moderately deep or deep, with a low permeability, and generally poor in nutrients (Inceptisols). These are used for olive-groves, vineyards or for durum wheat. On the foot-hills where the slopes are very gentle or nearly flat there are other clayey soils, very deep, often with vertisolic features and with a low rate of infiltration, good in structure, and with a very variable content of nutrients (Entisols and/or Vertisols). These are used for arable land and for orchards such as citrus-groves, vineyards, market-gardening, and, in the coastal areas, also for greenhouses.

In Sicily, the soil's natural features have been affected by timeless intensive tillage. As in other regions of the Mediterranean basin, land reclamation and soil and water conservation have long been a strong tradition. Different systems of land management which were suitable for the environment, were devised for soil and water conservation. Since the Second World War and especially during the past 20 years, the land management system, particularly in the hilly and mountainous area has changed rapidly in response to socio-economic conditions. Man's presence on the land has diminished, the farm structures have changed, and the management system of the soil and crops has been modified. Due to these factors the soils of the hilly inland area of Sicily, which are naturally characterized by high erodibility, have become even more subject to erosion and degradation. In such conditions, rain of average intensity is always erosive while heavy rain is extremely dangerous and sometimes catastrophic in its effects.

During the night of 12 and 13 October 1991, 16 hours of intensive rain caused a tremendous disaster in the provinces of Caltanissetta, Enna and Agrigento, the more disadvantaged areas of Sicily. Many lives were lost and serious damage was caused, estimated at 600 million ECU to agriculture alone. Even if no estimate of soil loss has been made, we will pay a high price for the heavy erosion. All the hilly areas ploughed ready for sowing in the provinces of Caltanissetta and Enna and in some areas of the province of Agrigento were subjected to extensive rill and gully erosion, while in those areas where the soils were not yet ploughed, severe sheet erosion has led to the complete loss of the A horizon of the soil.

The eroded soil mass was concentrated, together with the water from the rainstorms, along the main streams, so filling them up in a short time and causing flooding by streams of sediments which submerged the valley areas. This is what happened in a catastrophic way in the area surrounding Barrafranca (province of Enna) and in almost all the valley areas, where many hectares of vineyards were submerged by mud. Several bridges over the main streams, tributaries of the Salso river, were demolished by the wild power of the water that, flowing downhill, also removed rows of grapes and citrus.

There was an even greater catastrophe on the plain of Licata (in the province of Agrigento), where the River Salso rose, broke its banks and flooded a large area with over a metre of water. The fertile alluvial soils of the Licata plain were covered by a 30-50 cm deep blanket of mud.

Large areas of vegetable crops (artichokes, peppers, etc) were destroyed. All the greenhouses reached by the flooding were also seriously damaged or destroyed. It is calculated that, among inland and coastal areas, about 50.000 hectares were covered by sediments.

Was it possible to avoid all this? It is very difficult to answer. Certainly all those areas which had been treated by programmes of afforestation or by systems of soil conservation, withstood the rain's fury. Obviously it is necessary to ponder on such events and plan suitable systems of soil conservation, for when we lose the soil, we also lose one of the basic bricks of human life.

**Carmelo Dazzi**  
**Istituto di Agronomia Generale**  
**Facolta' di Agraria**  
**viale delle Scienze**  
**90128 Palermo**  
**Italy**

Now available:

**G. RICHTER (ed.):**      **Combating Soil Erosion  
in Vineyards  
of the Mosel Region**

Universität Trier, Forschungsstelle Bodenerosion Nr. 10,  
in english language, 150 pages, Trier 1991

Content:

- RICHTER, G.:            The Mosel Region - Nature, Landuse and Soil Erosion  
Problems on both Sides of the Border between Germany and  
Luxembourg
- SCHRÖDER, D.:        Soils and Cultivation of Land in the Region of Trier
- HENZLER, B.:         The Climatic Situation of the German-Luxembourgian Region
- KURZ, S.:             Singularities in Trier
- FAAS, K.-H.:         The Vine Cultivation Area of Mosel, Saar and Ruwer
- WALTER, B.:          Consolidation of Vineyards and Soil Problems
- RESCH, N., WALTER, B.: Nutrient Output from Vineyards in Relation to different  
Cultivation Systems
- HUSSE, B.:            Soil Conservation in Vineyards
- RICHTER, G.:         The Soil Erosion Measurement Station and its Program
- WAGNER, B.:         Microclimatic Conditions in Vineyards on steep Slopes
- RICHTER, G.:         Microclimatic Parameters and Wine Must Quality - Some  
Preliminary Results
- BAMBERGER, M.:      Continuous Sodding and its ecological Effects on the  
Landscape in steep Slope Vineyards in the Ruwer Valley Area
- BRAUNSCHWEIG, W.:   Application of statistical Methods for Classification of Soil  
Loss Events

Price:  
DM 25.-- or \$ 17.-- + mailing  
reduced price for ESSC-members  
DM 20.-- or \$ 14.-- + mailing

Ask for copies:  
Prof. Dr. G. Richter  
University of Trier, PB 3825  
D-5500 Trier/Germany

**DEVELOPMENT OF THE NORTH EUROPEAN WOODLANDS  
AND RECULTIVATION PROBLEMS**

**Resolutions from an International Conference, held at Syktyvkar, 8-14 July 1991**

Economic development of the north is in obvious contradiction with the resources and life-providing possibilities of the region. The present framework of a departmental approach to development ignores the fact that utilization of nature can only be socially effective if it is also ecologically sound. The ecosystems of northern Europe are most sensitive and not so easy to recultivate. This is the reason why the north, with its great raw material potential, must be the zone where the problems of a balanced co-existence between nature and society should be solved.

At the Conference, more than 60 reports were presented of great theoretical and practical importance. The participants of the Conference accepted the following recommendations:

1. To hold conferences on the problems of reconstruction and recultivation of northern ecosystems once every three years under the title "Problems of Northern Ecosystems Reconstruction". In the intervals working seminars will be held in different geographical locations on some specific themes with the participation of representatives from different regions but with the total number not more than 40 persons.
2. To set up an International Commission on the problems of northern ecosystems reconstruction. To approve the suggestions of the Organizing Committee of the Conference on its preliminary personal membership. To ask the Organizing Committee to collect additional suggestions on personal candidates from the institutions and enterprises concerned and to decide the expedience of their membership in the Commission. To provide conditions for the working organs of the Commission in the Institute of Biology, Komi Science Centre of the USSR Academy of Sciences and Syktyvkar State University.
3. To ask the Commission to accept the status of a judicial body and open a credit in the State Bank to make all possible attempts to set up an ecological fund for the peoples of the north. To make contacts with international state and public organizations with the same aims. To find the place for the next conference.
4. On the basis of the reports and communications presented to ask the Organizing Committee of the Conference to prepare "The request of the Conference to all organizations, enterprises and authorities regulating economic activity on the northern territories". To pass the "request" over to the international journal

"Environment, Resources and Management", various ecological and biological publications in the USSR and editorial offices of local and republican newspapers of the northern regions.

5. To ask the Commission to compile a list of basic enterprises, organizations and scientific groups working on the problem of northern ecosystems reconstruction and to have the plans of their perspective investigations. From 1993, to issue a yearly review of the information obtained on the "Problems of Northern Ecosystems Reconstruction".
6. The Conference recommends to develop complex investigations concerning ecological-economic aspects of constructing great industrial enterprises. The Conference asks executive republican, regional and local bodies to allocate for this purpose definite sums from their budgets and to organize monitoring of environment on their territories.
7. The Conference requests the State Committee of RSFR on the Problems of Science and the Presidium of the USSR Academy of Sciences to give priority to financing research work on methods of estimating the environmental impacts on natural sites as a result of different industrial and other kinds of human activity and providing compensation for the damage caused. High level support should be also given to investigations aimed at the development of technologies with smaller-waste and non-waste systems.
8. The Conference asks all legislative bodies lawfully to forbid the construction of great industrial and civil objects without preliminary independent ecological examination.

The participants of the Conference express gratitude to the Institute of Biology, Komi Science Centre, Ural Division of the USSR Academy of Sciences and Syktyvkar State University for support and all the obligations connected with the work of the participants of the International Conference held in Syktyvkar.

Accepted at the Closing Session.

11 July, 1991

**Dr. I.B. Archegova**  
**Institute of Biology**  
**Syktyvkar**

---

## A I M - ANNOUNCEMENTS, INFORMATION, MEETINGS

---

### MEETINGS

**Meeting:** 6-10 April 1992. Silsoe College, Silsoe, UK  
The European Society for Soil Conservation  
First International Congress

Hopefully by now you will be aware of the First International Congress of the ESSC. The meeting will include technical sessions for both paper and poster presentations, covering a wide range of topics related to assessment of soil degradation, prediction and modelling of soil degradation processes and soil protection measures.

### Mid and Post Congress Tours

There are opportunities to visit field sites both during and after the Congress. The Mid Congress tour (on Wednesday 8<sup>th</sup> April) will include a visit to the erosion plots used for the validation of the European Soil Erosion Model (EUROSEM), which is being developed by European scientists, with funding from the EC. The Mid Congress tour will also visit an Experimental Husbandry Farm in Cambridgeshire, where strategies to combat wind erosion are being researched and developed.

The Post Congress Tour of the English Midlands begins on Saturday 11<sup>th</sup> April and ends on Tuesday 14<sup>th</sup> April. This tour includes visits to trials of conservation measures on sugar beet and potatoes, and experiments aiming to control nitrate and pesticide leaching. The on-site and off-site consequences of erosion in upland areas will also be covered on the tour, with visits to areas of peat erosion and discussion of the effects of erosion on reservoir siltation and water quality. A £50 deposit is also required to secure a place on the Post Congress Tour.

### **Abstracts and Papers**

Paper and poster presentations for the Congress are welcomed. Abstracts should be sent to the Congress Secretary immediately. All full papers submitted at the Congress will be refereed, and those accepted will be published in the Congress Proceedings, as a special volume to be published by Catena. The Proceedings will be free to all authors of refereed papers.

### **Registration**

Registration fees can be paid at the Congress, with special rates for ESSC members (£100) and registered students (£50). These fees will include the book of abstracts.

### **Correction**

Did you notice the error in the Second Circular? The correct title for Session 3 is 'Soil Protection Measures'.

**Meeting:** 25-29 May 1992. St. Cloud, Paris, France  
International Symposium on 'Erosion on farming lands  
in temperate plains environments'

Organised by the Biogeography-Ecology Centre, ENS de Fontenay, St. Cloud in collaboration with INRA and assisted by CNRS.

Information from: Stanislas Wicherek, ENS de Fontenay St. Cloud, Biogeography and Ecology Centre, Avenue de la Grille d'Honneur, Le Parc 92211 Saint-Cloud, France.

Phone: 47 71 91 11 Telex: ENSCLOU 206937F

Fax : 46 02 39 11

**Meeting:** 21-23 September 1992. Weihenstephan, Freising near Munich, Germany  
Symposium on 'Erosion in the Alps'.

Organised by the Soil Erosion Working Group of the German Soil Science Society. Field trips to current research projects on first and last day. Poster session with intensive discussions introduced by invited speakers on second day.

Deadlines: Submission of poster titles - 15 May 1992

Registration - 15 July 1992

Send registration fee (20 DM) to K. Auerswald, Lehrstuhl für Bodenkunde, Hohenbachernstrasse, W-8050 Freising, Germany



**Meeting:** 22-26 September 1993. Salamanca-Sevilla  
XII Congreso Latinoamericano de la Ciencia del Suelo.

"Estudio del suelo: medidas contra su degradación y desertificación.

**Información:** Dr. J.F. Gallardo-Lancho. I.E.T.-CSIC, Apdo. 257, Salamanca 37071,  
España.

**Meeting:** 27-30 September 1993. Salamanca  
XI International Symposium on Environmental Biogeochemistry.

**Information:** Dr. J.F. Gallardo-Lancho. I.E.T.-CSIC, Apdo. 257, Salamanca 37071,  
Spain.

# SOIL TECHNOLOGY

A Cooperating Journal of **CATENA**

This quarterly journal is concerned with applied research and field applications on

- soil physics,
- soil mechanics,
- soil erosion and conservation,
- soil pollution,
- soil restoration,
- drainage and irrigation,
- land evaluation.

The majority of the articles will be published in English but original contributions in French, German or Spanish, with extended summaries in English will occasionally be considered according to the basic principles of the publisher CATENA whose name not only represents the link between different disciplines of soil science but also symbolizes the connection between scientists and technologists of different nations, different thoughts and different languages.

#### Editorial Advisory Board:

J. Biggar, Davis, California, USA  
H.-R. Bork, Braunschweig, F.R.G.  
J. Bouma, Wageningen, The Netherlands  
W. Burke, Dublin, Ireland  
P. Burrough, Utrecht, The Netherlands  
J. De Ploey, Leuven, Belgium  
B. Dieckrüger, Braunschweig, F.R.G.  
S. A. El-Swaify, Hawaii, USA  
K. H. Hartge, Hannover, F.R.G.  
M. M. Kutilek, Praha, CSSR  
W. C. Moldenhauer, Volga, S. Dakota, USA  
G. Monnier, Montfavet, France  
R. P. C. Morgan, Silsoe, UK

D. Nielsen, Davis, California, USA  
I. Pla Sentis, Maracay, Venezuela  
J. Poesen, Leuven, Belgium  
M. Renger, Berlin, F.R.G.  
E. Roose, Montpellier, France  
J. Rubio, Valencia, Spain  
I. Shainberg, Bet Dagan, Israel  
E. Skidmore, Manhattan, Kansas, USA  
A. Stein, Wageningen, The Netherlands  
M. A. Stocking, Norwich, UK  
G. Vachaud, Grenoble, France  
M. Vauclin, Grenoble, France  
C. van Ouwerkerk, Haren, The Netherlands

#### Editorial Office SOIL TECHNOLOGY: Coordinator:

Dr. D. Gabriels  
Department of Soil Physics, Faculty of Agricultural Sciences, State University Gent  
Coupure Links 653, B-9000 Gent, Belgium  
Tel. 32-91-236961

## PUBLICATIONS

The last issue of the "Bulletin du Laboratoire Rhodanien de Géomorphologie" published by geomorphologists of the Universities of Lyon and Saint-Etienne (No. 25-26, 1990, issued December 1991) lists three papers about soil erosion:

MANDIER, P., GAYVALLET, P.

Ruissellement en nappe et ruissellement concentré sur sols nus dans la moyenne vallée du Rhône. (Sheet and rill runoff on bare soils in the Middle Rhône Valley) (p.4-24).

GAYVALLET, P., MANDIER, P.

L'érosion hydrique des sols loessiques: du constat in situ à l'expérimentation en laboratoire sous pluies simulées. (Water erosion of loess soils: from on-site assessment to laboratory experiments with rain simulation) (p.25-44).

[These papers refer to two successive rain events of Mediterranean characteristics, with a return period of 10-15 years, which occurred at the end of September and the beginning of October 1987. In the second paper the authors try to reproduce them as exactly as possible in laboratory. Through a detailed description of processes, they establish the main effects on the evolution of soil loss with time with particular consideration given to the development of the rill system and the initial soil moisture conditions.]

FAVRY, O.

L'érosion anthropique actuelle sur les hautes chaumes des Monts du Forez: mesures de suivi. (Present man-induced erosion on the Summit Pasture Lands of the Monts du Forez, Massif Central, France. Repeated Measurements) (p.45-46).

[This paper deals with soil degradation effects of leisure activities on summit grasslands. Most valuable are the results of repeated measurements of gullies evolution.]

To get these publications, write to:

Laboratoire Rhodanien de Géomorphologie  
Université Lumière  
Boulevard de l'Université  
F-67676 BRON CEDEX  
France

## ELECTIONS TO COUNCIL 1992-96

The procedures for electing the 1992-96 Council were described in ESSC Newsletter 2/1991. The following candidates were nominated by the deadline in accordance with those procedures:

### **Austria:**

Prof. Dr. Othmar Nestroy  
TU Graz, Inst. f. Techn. Geologie u. Ang. Min.  
Rechbauerstr. 12  
A-8010 Graz.

### **Belgium:**

Prof. Dr. Jan de Ploey  
Instituut voor Aardwetenschappen, Katholieke Universiteit Leuven  
Redingenstraat 16 bis  
B-3000 Leuven.

### **Denmark:**

Senior Scientist Per Schjønning  
Department of Soil Physics, Soil Tillage and Irrigation  
Research Centre Foulum  
Post Boks 25  
DK-8830 Tjele.

### **France:**

Yves le Bissonais  
I.N.R.A., SESCOF  
Route d'Ardos  
F-45160 Olivet.

Prof. Dr. Henri Vogt  
Unité de Géographie  
3 Rue de l'Argonne  
F-67083 Strasbourg

### **Germany:**

Prof. Dr. Hans-Rudolf Bork  
TU Berlin, Institut für Ökologie  
Salzufer 11-12  
D/W-1000 Berlin.

Prof. Dr. Gerold Richter  
Universität Trier, Physische Geographie, FB VI  
Postfach 3825  
D/W-5500 Trier.

Margot Rohdenburg  
Editorial Office Catena  
Brockenblick 8  
D/W-3302 Cremlingen-Destedt.

**Greece:**

Prof. Dr. Nikos Misopolinos  
Aristotelian University, Department of Agriculture  
TT 540 06  
GR-54006 Thessaloniki.

Prof. Dr. Nikolaos Silleos  
Aristotelian University, Department of Agriculture  
TT 540 06  
GR-54006 Thessaloniki.

**Hungary:**

Dr. Adam Kertesz  
Hungarian Academy of Sciences, Geographical Institute  
Andrassy-ucta 62  
H-1388 Budapest.

**The Netherlands:**

Dr. A. Imeson  
Universiteit van Amsterdam  
Fysisch Geografisch en Bodenkundig Laboratorium  
Dapperstraat 115  
NL-1093 BS Amsterdam.

**Norway:**

Arnor Njφs  
Jordforsk, Centre for Soil and Environmental Res.  
P.B. 9  
N-1432 Aas-NLH.

**Portugal:**

Prof. Dr. Azevedo Coutinho  
Instituto Superior Tecnico  
Av. Rovisco Paes  
P-1096 Lisboa Codex.

Prof. Dr. Alfredo Gonçaves Ferreira  
Rua de S. Marcos 29  
P-7000 Evora.

**Spain:**

Diaz-Fierros Francisco  
Departamento Edafologia, Facultad de Ciencias  
E-Santiago de Compostela (Coruña).

Dr. Jose Luis Rubio  
Unidad de Desertification IATA (C.S.I.C.)  
Jaime Roig 11  
E-46010 Valencia.

Prof. Dr. Maria Sala  
Departament de Geografia Fisica  
Facultat de Geografia e Historia  
Universitat Barcelona  
E-08028 Barcelona.

**Sweden:**

Dr. Inge Håkansson  
Swedish University of Agricultural Sciences  
Dept. of Soil Sciences  
S-75007, Uppsala.

Prof. Anders Rapp  
Dep. of Physical Geography  
Solvegatan 13  
S-22363 Lund.

**Switzerland:**

Prof. Dr. Hans Sticher  
Inst. f. Bodenchemie, Terrestrische Ökologie, E.T.H.  
Grabenstr. 3  
CH-8952 Schlieren.

**United Kingdom:**

John Boardman  
School of Geography, University of Oxford  
Mansfield Road  
Oxford OX1 3TB

Prof. R.P.C. Morgan  
Silsoe College  
Silsoe  
Bedford MK45 4DT.

Dr. R.A. Shakesby  
Univ. College of Swansea, Dep. of Geography  
Singleton Park, Swansea  
West Glamorgan, SA2 8PP.

**Union of Independent States (former USSR):**  
(must be first affiliated officially by the Council)

Prof. Dr. G.P. Glazunov  
Moscow State University  
Faculty of Soil Science, Dept. of Soil Erosion  
119899 Moscow

Prof. Dr. M.S. Kusnetsov  
Moscow State University  
Faculty of Soil Science, Dept. of Soil Erosion  
119899 Moscow

Elections for the Council will be organized at the General Meeting to be held during the First International Congress at Silsoe in the following way:

1. The Council members for each country will be elected by the ESSC members of that country who are present at the meeting;
2. If only one candidate has been nominated as a country's representative on Council, that candidate will be the elected member;
3. If no members from a country are present at the Meeting, the General Meeting will elect a representative for that country from the list of nominated candidates;
4. In addition to the country representatives on Council, the former Council will nominate up to six members to serve on the new Council;
5. After the country elections have been held, the complete list of members for the new Council will be presented to the General Meeting for ratification. The general Meeting will decide to accept or reject the new Council in its entirety by a simple majority of votes;
6. The Council has the right to co-opt additional representatives where members of a country without representation on Council join the ESSC in the period between General Congresses.

According to the rules for the elections of the Council 1992-96, those countries with 20 or more members of the ESSC may be represented by two Council members. Countries at present with 20 or more members are: Belgium, France, Germany, Greece, Italy, Netherlands, Portugal, Spain and the United Kingdom.

**Dr. G. Richter**  
Secretary and treasurer  
University of Trier  
P.O. Box 3825  
D/W-5500 Trier/Germany

---

Please copy and return this slip together with your cheque!

**Yes,**

**I am willing to sponsor the cost of**

**one person-day = 30 £**

**half a person-day = 15 £**

for the participation of an Eastern European colleague at the ESSC-Congress at Silsoe 1992.

.....

signature

Address: .....  
.....  
.....  
.....