

COMLAND NEWSLETTER NO. 4

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Message from the Chair

After four years of leadership by Maria Sala, there is no doubt that COMLAND members have been able to achieve an outstanding record of activities.

Land Degradation and Desertification are not positive fields of science. Rivers, glaciers and other nice geographical features are no doubt exciting, but like medical doctors, we have chosen earth diseases as our field of investigation, and therefore we can define our task as a commission of GEODISEASES. And the aim should be not only to describe and define the degradation problems and to study their extent, but also to analyze the causes and try to find solutions. We invite all interested people to participate and join COMLAND.

Our biggest challenge is to involve the coming generations in our research and scientific task. We are glad that half of the Commission members are young and promising scientists. Our membership includes membership from all continents, with a very wide variety of disciplinary formations and traditions.

The highlight activity of the last year was the successful meeting in Mexico (May 2001) and publication of the *Land Degradation* book, edited by Arthur Conacher. The next main commission meeting is scheduled for August 2002 at the Regional IGU Conference in Durban, South Africa, with a COMLAND field-based session centred on Rhodes University. We will also have other meetings, as announced in this Newsletter.

New COMLAND member

Dr. Paul F. Hudson, from the University of Texas, Austin, USA, has been appointed a full member of COMLAND. It is our wish that this appointment will strengthen the link between COMLAND and USA geographers and other scientists, and that we will have the participation of many of them in our future activities, as in the Mexico meeting. The current full members are listed at the end of the Newsletter, with brief statements of their interests and recent publications.

COMLAND Website

We are indebted to Dr. Gregor Ollesch in Magdeburg who has worked very hard to develop the COMLAND website - initially for the meeting in Probbach this August, but then developed for the Commission as a whole. The website is still in the process of being constructed but it already contains information about the Commission's aims, future and some previous meetings, and full members. It can be accessed at www.comland-commission.com

Finally, I wish you all courage and success in your land degradation scientific undertakings.

Moshe Inbar

Message from Maria Sala (previous Chair)

Dear colleagues,

Moshe Inbar, the new Chair of the Commission, has asked me to write a letter to you. The most important thing I wish to say is that it has been a great privilege to coordinate the work of the Mediterranean Study Group and the present Commission on Land Degradation. First of all because I have always counted on the faithful and effective cooperation of the full members, most especially from Moshe Inbar, with whom the idea of an IGU group was first developed, and of Arthur Conacher, who has been the most efficient Secretary during the last four years. Secondly, because I have deeply enjoyed the international contacts and the new friendships that developed from these interactions. And thirdly, because it has given me the opportunity to learn a great deal about Land Degradation problems, first in Mediterranean environments and more recently in world-wide environments. In summary, the work has been interesting and rewarding, a real enrichment for me.

May I conclude by wishing every success for the future work of the Commission. I hope as many members as possible will support the forthcoming activities, with which I will do my best to cooperate. I look forward to seeing you in many future meetings

Maria Sala

Special request from the Secretary

This is the first Newsletter of the second period of COMLAND. It is being distributed electronically to corresponding members for whom we have e-mail addresses, and hard copy will be posted to our other members.

I have some 250 names and addresses on the COMLAND mailing list. But of those, only about 150 people have provided their e-mail addresses.

IMPORTANT: If you have not received any e-mail messages from me concerning COMLAND activities for the past six months, then this almost certainly means you are one of the 100 people for whom I do not have an email address.

If this applies to you, please provide me with your email address by emailing Arthur Conacher at ajconach@geog.uwa.edu.au

We are trying to increase the amount of information sent to members by email and at the same time reduce the amount of print mailing - to reduce costs and increase prompt information flow.

Additionally, if members have relevant COMLAND-related information which they would like to share with other members, please email it to me and I will forward it to the full circulation list - by email.

Arthur Conacher

Activities since Newsletter No. 3

29th International Geographical Congress, August 2000, Seoul, Korea

Many COMLAND members participated in the main IGU Congress, held every four years. The main topic was *Living with Diversity*, and Korea was indeed a good example of geographical diversity, as we could see in the interesting field trips.

COMLAND had a special session with nine papers, and a joint session with IAG/AIG (International Association of Geomorphologists) on Sediment Budgets in Geomorphic Systems, with six papers.

At the General Assembly a new term was approved for COMLAND for the next period 2000-2004, and Moshe Inbar was elected Chair, replacing Maria Sala.

An official COMLAND meeting with the participation of five full members was held. Arthur Conacher accepted the unanimous wish of the Commission members to continue as Secretary.

Writing these lines 10 months after the meeting, it seems a distant story, and since then many new COMLAND activities have taken place as reflected in this Newsletter.

Moshe Inbar

Meeting in India: XXIIInd Conference of IIG and IGU COMLAND Meeting, January 9-11, 2001: Report by Professor V.C. Jha, Organising Secretary and full member of COMLAND

The Institute of Indian Geographers (IIG) organises an annual conference at premier institutions in the country where geographers and scientists from sister disciplines congregate to present papers and exchange views on recent trends in their fields/sub-fields.

It was the privilege of the Department of Geography, Visva-Bharati University, Santiniketan, to host the Twenty-Second Conference of the Institute of Indian Geographers (IIG) on January 9-11, 2001, jointly with the International Geographical Union (IGU) Commission Meeting on Land Degradation and Desertification (COMLAND). The main focus of the Conference was on Spatial Information Technology and Land Degradation and Desertification to restore the ecological balance of the present environment, particularly in developing countries. The emphasis was on interactions with regard to new approaches and topical problems in Geographical Studies. In fact, every year millions of hectares of land suffer physical, chemical and biological degradation, which reduces their current and potential capability to provide goods and services through agricultural, engineering, sanitary and recreational uses.

Land Degradation is largely human induced and thus includes a strong socio-cultural component. Land Conservation and Rehabilitation are technically feasible, but often at high costs. To study land degradation and desertification and land conservation and rehabilitation many different types of data need to be collected and combined in order to make a sound environmental assessment. The use of Remote Sensing and GIS (Spatial Information Technology) is indispensable in this process. This XXIIInd IIG Conference and IGU COMLAND meeting helped the participants with regard to the collection, management and application of Remote Sensing and GIS to solve real world problems of Land Degradation and Desertification.

The Conference was well attended with over 225 participants both from abroad and various States of the Country. Foreign delegates represented USA, Germany, England, Zambia, Kenya and Bangladesh.

Noteworthy among the participants were Professor S.M. Bhardwaj, Kent State University, USA, Professor Avijit Gupta, University of Leeds, UK, Dr. N. Batnasan, Mongolia, Professor R.Y. Singh, University of Zambia, Zambia, Professor H. Prasad, Kenyatta University, Kenya, Professor Mesbah-us-Saleheen, Professor Mirza Maffiuddin, Bangladesh, Professor R.D. Dikshit, Rohtak, Professor K. Dikshit, Pune, Dr. P. Nag, Calcutta, Professor S.B. Singh, Varanasi, Professor C.R. Pathak, Professor S.R. Basu, Calcutta, Professor S.R. Patil, Bangalore, Professor M.M. Das, Guwahati and others. A total of 208 papers were received in the academic program covering the focal theme and sub-themes of the Conference. Out of 208 papers 164 papers were presented by the authors in the 21 technical sessions which were run in three parallel sessions on all the three days of the Conference. Eight Keynote Addresses were also presented by eminent scholars in their respective disciplines like geography, geology, geophysics, hydrology, ecology, physics, remote sensing and related interdisciplinary fields.

The Conference-cum-IGU COMLAND Meeting was inaugurated by Professor Dilip Kumar Sinha, Vice-Chancellor, Visva-Bharati University, Santiniketan. The Introductory and Welcome address was given by Professor V.C. Jha, Organising Secretary. The IIG Presidential address was presented by Professor R.D. Dikshit, Retired Professor M.D. University, Rohtak. Dr. Jaymala Didee and Professor A. Biswas also addressed the gathering. Messages sent by Professor Maria Sala, University of Barcelona, Spain,

Founder Chairperson IGU COMLAND and Professor Moshe Inbar, University of Haifa, Israel, Present Chairperson IGU COMLAND, were also read at this occasion.

Participants came from eighteen States and one from the Union Territory of India. In addition to 25 Indian Universities, the participating Institutions were the National Remote Sensing Agency, Hyderabad, Indian Institute of Remote Sensing Dehradun, Space Application Center, Ahmedabad, Indian Space Research Organisation, Bangalore, State Remote Sensing Application Center, Calcutta, National Atlas and Thematic Mapping Organisation, Calcutta, Survey of India (Eastern Circle) Calcutta, State Land Use Board, Department of Development and Planning, Calcutta, Anthropological Survey of India, Calcutta, Regional Remote Sensing Service Center, Kharagpur, and Indian Institute of Tropical Meteorology, Pune. On the whole the Conference was a great success in terms of academic excellence and organisation. The deliberations were highly interesting and instructive.

The Conference was made possible with the financial assistance and sponsorships from a number of reputed research institutes and government departments of the Country. These were Department of Science and Technology & NES, Calcutta, Council of Scientific and Industrial Research, New Delhi, Indian Council of Agricultural Research, New Delhi, Department of Land resources, Ministry of Rural Development, New Delhi, Anthropological Survey of India, Ministry of Tourism and Culture, Calcutta, Indian Space Research Organisation, Bangalore, Development and Planning Department - State Land Use Board, Calcutta, National Remote Sensing Agency, Hyderabad, National Institute of Hydrology, Roorkee and Center for Spatial Data Management and Solutions, Noida and finally Visva-Bharati University, Santiniketan. The National Atlas and Thematic Mapping Organisation, Calcutta, PCI Calcutta and State Remote Sensing Center, Calcutta were also associated with this Conference as exhibitors displaying their various products. The exhibition was formally opened by Professor K.R. Dikshit, Founder Chairman IIG on the 9th January 2001 just after the Inauguration.

The delegates were also given glimpses of the rich artistic and cultural tradition of Santiniketan through Cultural Programs which were organised on the first and second day of the Conference. The XXIInd IIG and IGU COMLAND concluded with the valedictory and field work covering aspects related to Land Degradation and Desertification and Cultural Geography in the Birbhum District, West-Bengal, India.

Professor V.C. Jha

Department of Geography, Visva-Bharati University

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e-mail: vcjha@vbharat.ernet.in

Mexico Symposium May 2001

Organized in an excellent way by Dr. Jose Luis Palacio - Director of the Institute of Geography of the UNAM - and collaborators: Laura Luna Gonzalez, Dr. Lorenzo Vazquez Selem, Dr. Gerardo Bocco and Dr. Irasema Alcantara, the COMLAND Mexico meeting was an unqualified success. As with previous meetings, the Symposium was truly international with more than 60 participants from distant parts of the world, from Finland to Argentina. Forty one papers were submitted in oral or poster presentations.

The opening session was on May 7, 2001, in the new Lecture Hall of the Institute of Geography of the Universidad Nacional Autonoma de Mexico. The Institute is one of the largest geographical Institutes in the world, with about 80 staff working in a large three-storey building. The opening session was addressed by Prof. Anne Buttimer, President of the IGU. Prof. Hermann Verstappen, past President of the IGU, also participated in the Symposium activities.

The next day we were guided to the famous ruins of the Teotihuacan pyramids, led by the expert archaeologists Dr. Linda Manzanilla and Dr. Emily McClung de Tapia. The next five days were spent in the vicinity of Lake Pazcuaro, state of Michoacan, including one day of paper sessions. The excursion to the Paricutin volcano was probably the highlight of the tour, which ended at a typical Mexican meal offered by the former inhabitants of the San Juan village, covered in 1943 by the Paricutin lavas.

Back to Mexico City, on the final day we visited Popocatepetl volcano, led by Lorenzo Vazquez, witnessing the continuous eruptions of steam and ash. Detailed reports of the fieldtrips are presented below.

For many of the participants it was their first encounter with Mexico, its spectacular volcanic landforms and the warm and kindly human environment.

Moshe Inbar

Summary of Field Trip - Mexico City to Patzcuaro

1. On our way out of Mexico City, we observed urbanization expanding over the mountains around the Valley of Mexico. Those terrains are extremely permeable and therefore important recharge areas for the shrinking aquifers of Mexico City. The chaotic urbanization of this area reduces the infiltration rate and increases sewage pollution, both contributing to the degradation of the aquifers. The authorities are trying to protect the area from land invasions but without much success.
2. *Valley of Taluca:* The piedmonts, alluvial fans and slopes around the valley largely consist of massive pyroclastic deposits. The low density loose material promotes larger transport capacity and erosion of the streams. As a result, stream incision creates deep barrancas or ravines.
 - a. *Destructive flashflood* in small village, Santa Maria Xajalpa. The village is located on an alluvial fan at the mouth of a small watershed ($\sim 1 \text{ km}^2$) of one of the volcanic cones surrounding the valley of Taluca. We observed the consequences and tried to understand the reasons for the extreme discharge in such a small watershed. From flow marks at two crosssections, we could estimate a localized rainfall amount of more than 100 mm in two hours (this was after several days of rain, so the soil could have been saturated). We found the channel experiencing severe and rapid gullyng by downcutting. The gullyng process starts in rill erosion observed on the exposed fields in the catchment. Post-colonial deforestation of the watershed is probably a major factor contributing to the accelerated degradation.
 - b. *Barranca of arroyo El Zagan:* The distinctiveness of different pyroclastic flows and pumice deposits from the active volcanoes in the region enable researchers to identify different peri-

ods of land stability. Favourable conditions for soil development occurred between 28 000 and 24 500 yr B.P., shortly before the last Global Glacial Maximum. In the Late Glacial the paleosols are more loess-like deposits with poorly developed soil features, representing a period of aridity and dust accumulation. The present soils which have developed on the Upper Toluca pumice (11 600 BP) have not achieved the degree of development of the paleosol formed between 28 000 and 24 500 yr B.P. Due to the high permeability of the pumice deposits, moderate gully erosion occurs only on the steep slopes. However, there are clear signs of sheet erosion and truncation of soil profiles on many parcels of land.

3. *Cuitzeo Basin: Land cover and land use changes:* The most pronounced effect is the increase in the area of urban settlements. Morelia (population 800 000) has increased its area by 600% in the last 35 years. Water demand and sewage pollution have increased proportionally and resulted in severe degradation of the Cuitzeo Lake. The slopes of the basin exhibit only moderate degradation (soil erosion), and partial restoration of shrubland areas following the migration and abandonment of rainfed agricultural fields.

Gully erosion, found on red soils (Acrisols) slopes, originally covered by deciduous forest (*Quercus* sp.) was replaced by agricultural fields. Accelerated gully erosion was observed only on abandoned parcels. Interflow between Ap and Bt horizons causes gully head migration and channel widening because of soil slumping. Gully development is enhanced by water concentration on the road. Conservation practice with eucalyptus plantations were not particularly successful.

Youval Arbel
Hebrew University, Jerusalem

Land Degradation of the Lake Putzcuaro Basin in Central Mexico

During the symposium on Land Degradation and Desertification, the Lake Putzcuaro basin was visited during our stay in the lovely village Putzcuaro. The basin has a rich history and is situated in a part of Mexico that is geologically and volcanologically active with a high variability in climate. Most volcanoes in the area are monogenetic and date from the pre-Quaternary, with an age of 1-2 million years. Due to current volcanic activity, many Holocene volcanoes persist in the region. Complex relations between environment and human activities during the last 4000 years suggest that agricultural activities have been a factor inducing land degradation. Visits to a cinder cone El Stribo, an experimental agricultural plot, the archeological site Tzintzuntzan and the village Santa Fe de la Laguna raised discussions and more insight into the potential factors of desertification in the area.

At the monogenetic volcano El Stribo, the socio-cultural and natural events of the Putzcuaro basin were discussed. In pre-Hispanic times, around 3000 BP, an initial event of accelerated anthropogenic soil erosion has been identified by pollen analyses. This timing coincides with the opening of agricultural plots. During that time, sedentary agriculture was common in the basin. During a second event, around 2000 BP, more severe erosion occurred compared with former accelerated erosion rates. This event was associated with the rise of the Tarascan Empire. Iron-rich sediments from these times indicate that soils became more and more exploited. A third acceleration of soil erosion (1200 AD) is thought to be related to the flourishing of the Tarascan Empire during the Post-Classic Period.

The National Centre of Sustainable Agriculture investigates the rate of erosion on agricultural lands with the aid of simulation plots. Water runoff is collected from runoff plots, in large barrels, after each rainstorm. The amount of sediment as well as the concentrations of nitrogen, pH and organic content are measured. Currently, soils in the area have a low fertility and therefore a low productivity. About 1.5 t/ha of maize is harvested from an areal coverage of 44% of cropland. This is a very low value. The research program started in 1995 and will run for 10 years. It aims to improve current soil conservation methods. Results to date indicate that the erosion rate under normal tillage is 16 t/ha while the erosion rate under non-tillage is 1 t/ha. At present, 1000 ha of land are under conservation.

At the archaeological site of Tzintzuntzan remains of the Tarascan Empire are visible. Agricultural activities during this time are believed to have had a major impact on soil erosion rates. The Tarascans called themselves the 'stone people'. At Tzintzuntzan, a mixture of Tarascans and people from other groups must have been living. They built circular buildings, which are not very common for central America at that time. Five circular buildings here, on which big fires burned continuously, are related to the five cardinals. It was believed by the Tarascans that the squirrel and gopher connect respectively the air with the land and the land with the underground. Volcanoes were men and women, they were human beings. The cosmology of these people stated that the sun, volcanoes and other physical entities were in fact human.

Johan Hendriks
University of Turku, Finland

Future Meetings

- 24-28 August 2001, Tokyo. Special COMLAND Symposium on *The Role of Geomorphology in Combating Land Degradation* in the program of the 5th International Association of Geomorphologists' Congress. Ten papers are being presented and it is hoped to publish a selection in a theme issue of *Australian Geographical Studies*.
- 28 August to 2 September, 2001. Dryland Change 2001, sponsored by IGCP413 *Understanding future dryland from past dynamics* and the IGU Commission on Land Degradation and Desertification (COMLAND)

Venue: University of the Northwest, Mafikeng, South Africa. Full details are at:
<http://www.shuf.ac.uk/~igcp413>

60+ registrants from 14 different countries within and beyond Africa have offered 50+ papers on a diverse range of complementary dryland change topics ranging from ecosystem sensitivity, dust hazards and land degradation through to longer term (including future) environmental and climatic change.

- 29 July-8 August 2002, Grahamstown and Durban, South Africa. IGU Regional Congress. Since COMLAND is a Commission of the International Geographical Union (IGU), we plan:

1. A five days pre-Congress (i.e. before 4th August) field trip with some papers, as a 'pure' COMLAND meeting, based on Grahamstown. Organiser Prof Kate Rowntree, Rhodes University. Contact K.Rowntree@ru.ac.za

Theme: Land degradation in the eastern Cape frontier region.

Leaders: Kate Rowntree and Roddy Fox , Rhodes University, Grahamstown

Grahamstown is located on many frontiers, a climatological frontier between the summer and winter rainfall regions of South Africa, an ecological frontier (or convergence zone) between the namakaroo, the fynbos, subtropical thicket, savanna thornveld, grassland and afro-montane forest, and a socio-political frontier between the former white South Africa, the former 'coloured' labour preference area and the former black homeland of Ciskei. This field excursion will take you on a circular traverse through this diverse landscape, examining the various ways in which land degradation manifests itself. Vegetation change and soil erosion will be the main foci of the trip, but there will also be opportunities to look at problems associated with irrigation.

The field excursion will start from Grahamstown on the 29th July, with an introductory paper session on the first day. There will also be opportunity to present a limited number of papers during the excursion itself. The excursion will end in Port Elizabeth on the 4th August, in order to catch flights to the IGU conference in Durban. The last day will be spent in the Suurberg Mountains near Port Elizabeth, with the opportunity to walk in the fynbos, visit the Addo Elephant park or even the Sundays Valley citrus irrigation scheme. Delegates can leave the excursion on the Saturday.

The nearest airport to Grahamstown is Port Elizabeth. Transport can be provided to Grahamstown on the Sunday at a small cost.

Anticipated cost (1999 prices) in the order of R2500 for accommodation and transport.

2. As part of the main Regional Congress in Durban two joint symposia have been planned:
 - a) *Catchment Management to Protect and Improve Water Quality and Flow* with the IGU's Study Group on Water Sustainability and the Commission on Geomorphic Processes, and
 - b) *Managing the Environment for Rural Sustainability* with the IGU's Commission on Rural Sustainability.

Distribution of the Congress Circular is imminent and COMLAND members are urged to make every effort to participate in COMLAND's pre-Congress field trip and to present a paper in one (or both) of the symposia.

Congress Website: <http://www.turners.co.za/igu>

- Late August 2003: COMLAND meeting in Iceland

This is a preliminary announcement of a COMLAND meeting to be held in Iceland in late August 2003, organised by COMLAND full member Dr. Gudrun Gisladdottir. Further details will be provided.

Gudrun's contact address is ggisla@raunvis.hi.is

- 2004, Glasgow, Scotland

Main IGU Congress. Professor Donald Davidson has kindly agreed to be COMLAND's local organiser at the Congress. We hope to have a full program of papers as well as a field trip.

Donald's contact address is d.a.davidson@stir.ac.uk

Task Forces

COMLAND members are encouraged to contribute to the work of one or more of the following active Task Forces. Additionally, if you have a suggestion for an additional Task Force or would like to form your own, please contact either COMLAND Chair Prof Moshe Inbar (inbar@geo.haifa.ac.il) or Secretary Dr. Arthur Conacher (ajconach@geog.uwa.edu.au).

Task force for land degradation in cold climates and winter conditions

During the discussion at the COMLAND Conference in Perth at the end of September, 1999, mention was made of the problem of land degradation in cold climates and winter conditions. Although the relevant regions are not officially defined, processes of degradation are obvious. COMLAND decided to establish a task force related to problems of land degradation in cold climates and winter conditions.

Current members are as follows (other interested scientists are welcome):

- Gregor Ollesch (coordinator), ollesch@gm.ufz.de
Department of Soil Science, Environmental Research Centre (UFZ), Germany
- Linnel Edwards
Charlottetown Research Centre, Agriculture and Agri-Food Canada, Canada
- Gudrun Gisladdottir
Department of Geography and Geology, University of Iceland, Iceland
- Yuri Soukhanovski

Laboratory of Soil Erosion Processes Modeling, All Russian Research Institute of Agronomy and Soil Erosion Control, Russia

A general objective of the task force will be participation in and support for discussion about the above mentioned items in the form of meetings and publications. Its first action was to cooperate in organizing an ESSC seminar on snowmelt erosion in March 2001. In addition, a special paper session is planned for the COMLAND meeting in Iceland. For more information please contact Dr. Gregor Ollesch ollesch@gm.ufz.de

Task Force on Wind Erosion

Formation of this Task Force was also discussed at the Perth meeting of COMLAND in September 1999. The convener is Dr. Greg Okin at the Division of Geological and Planetary Sciences, California Institute of Technology. He welcomes contact with other COMLAND members with an interest in this important area. Contact okin@gps.caltech.edu

Task Force on Erosion around the Mediterranean Basin

In a strange way the formation of this Task Force returns COMLAND to its origins as the Med Study Group back in 1994. At the COMLAND meeting in Mexico in May 2001, Prof. Anne Buttimer, President of IGU, asked COMLAND to form this Task Force due to the increasing interest in and importance of land degradation around the Mediterranean Basin. Unlike the Med Study Group the Task Force will be concerned only with countries which border the Mediterranean Sea, not with all regions of Mediterranean-type climate around the world.

Previous COMLAND Chair Prof. Maria Sala agreed to Prof Buttimer's request to form this Task Force and she welcomes contact with members interested in contributing to the important work of this group. Contact Maria at sala@trivium.gh.ub.es

10th Anniversary of the Rio Declaration

Strictly speaking this is not a Task Force. But at the COMLAND meeting in Mexico, Prof. Anne Buttimer also asked COMLAND to make a contribution to the tenth anniversary in 2002 of the 1992 world environment declaration known as the Rio Declaration, which emerged from the international conference held in Rio de Janeiro.

IGU was approached by ICSU (the International Council of Scientific Unions, of which IGU is a member) to contribute to this anniversary, and IGU in turn approached its Commissions and Study Groups. We understand that COMLAND was one of only four Commissions to respond. ICSU will hold a meeting in Johannesburg, South Africa, to commemorate the anniversary.

Specifically, COMLAND has been asked to investigate the extent of compliance by countries around the world with the principles and objectives of Agenda 21, the action document of the Declaration. This is advance warning that some COMLAND members - and all full members - will be approached by COMLAND Secretary Dr. Arthur Conacher for information from their regions on this topic. Please reply promptly when you receive his request.

In the meantime, if you have any information readily available which would assist him, or knowledge of any relevant publications on countries' compliance (or failure to comply) with Agenda 21, please contact him at: ajconach@geog.uwa.edu.au He will be delighted to hear from you!

Publications

Members for whom the Secretary has e-mail addresses will have already received the following information - and also some of the previous announcements concerning past and future meetings.

The papers from the Perth conference of COMLAND have now been published. Details are provided below. The book is far too expensive for individuals to purchase, but some of you may have access to libraries which are still purchasing some books.

- CONACHER, A. J. (ed.), 2001: Land degradation: papers selected from contributions to the sixth meeting of the International Geographical Union's Commission on Land Degradation and Desertification, Perth, Western Australia, 20-28 September 1999, Kluwer Academic Publishers, Dordrecht. ISBN 0-7923-6770-7. Price: € 135.00 / US\$ 145.00/ GB£ 92.00

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Other COMLAND Publications

Proceedings of the International Symposium on Land Degradation and Desertification May 7-14, 2001, Mexico City. IGU Commission on Land Degradation and Desertification and Institute of Geography - Institute of Ecology - Institute of Anthropology, Nacional Autonomous University of Mexico.

Field trip guide: International symposium on land degradation and desertification Mexico City and Patzcuaro. Lake Patzcuaro basin. Lorenzo Vazquez S., Manuel Mendoza C., Erna Lopez G., Gerardo Bocco. May 2001, 31 pp. Universidad Nacional Autonoma de Mexico, Mexico.

Popocatepetl volcano field trip guide COMLAND Symposium, Mexico, May 2001, 21 pp.

Teotihuacan: urbanization and human impact on the prehispanic landscape in the northern basin of Mexico, Field trip guide, COMLAND Symposium, Emily McClung de Tapia, May 2001, 23 pp.

Field trip guide: Paricutin Volcano and surroundings, COMLAND Symposium, Mexico. Gabriel Legorreta Paulin, May 2001, 21 pp.

Full Members of COMLAND

Moshe Inbar graduated from the Hebrew University in Jerusalem, Faculty of Natural Sciences in 1977, and has worked in the field of Dynamic Geomorphology with about 70 papers in leading journals and scientific books. At present, he is Professor at the Department of Geography and Head of the Laboratory of Geomorphology at the University of Haifa in Israel.

He has conducted research and published works in Israel, Spain, Australia, South Africa, United States, Mexico, Peru, Argentina, Chile and Antarctica. His main scientific contributions are in the area of erosion processes in Mediterranean climate areas, focusing on the impact of anthropic factors. His interest also includes the area of volcanic geomorphology, where he formulated concepts of rates of landform recovery after volcanic activity.

In 1999 he was awarded a prestigious Gladden Visiting Senior Fellowship by the University of Western Australia. He was a founder member of the IGU Study Group on *Erosion and Desertification in Regions of Mediterranean-type Climate (MED)*, formed in 1992, and is now (since 2000) the Chair of COMLAND.

Moshe enjoys field trips to exotic areas in the world - like Tibet, Patagonia, Ayers Rock, Antarctica, rafting in the Canadian Arctic rivers - and climbing volcanoes.

Recent Publications:

SCHWARTZ, J., INBAR, M., GOLIK, A. (1999): Geomorphic processes along the coastal cliff Michmoret-Giv'at Olga. - *Horizons in Geography*, 50: 5-18. (Hebrew)

INBAR, M., HOVERS, E. (1999): The morphological development of the Lower Amud River in the Upper Pleistocene - *Horizons in Geography*, 50: 27-38 (Hebrew).

INBAR, M. (1999): The Northeastern coast of the Lake of Galilee, Its geographical uniqueness. - *Ariel* 135-136, 32-36. (Hebrew).

KUMAN, K., INBAR, M., CLARKE, R. J. (1999): Palaeoenvironments and cultural sequence of the Florisbad Middle Stone age hominid site, South Africa. - *Journal of Archaeological Science*, 26, 1409-1425.

COSTELLO, J., INBAR, M. (1999): Una aproximación al conocimiento de los andenes de cultivo de la localidad de Las Juntas, Catamarca. - *Vientos del Norte*, Univ. de Catamarca, Argentina.

INBAR, M. (1999): The hydraulic geometry and geomorphic sensitivity assessment of some rivers of Western Australia. Preliminary Report. - *Department of Geography, University of Western Australia*, 37 pp.

INBAR, M., LLERENA, C. A. (2000): Erosion processes in high mountain agricultural terraces in Peru. - *Mountain Research and Development*, 20, 1: 72-79.

INBAR, M. (2000): Episodes of flash-flood and boulder transport in the Upper Jordan river. - *The Hydrology-Geomorphology Interface, IAHS Pub. 261*: 185-200.

INBAR, M., RISSO, C. (2001): Yardangs in volcanic terrains in the southern Andes, Argentina. - *Earth Surface Processes and Landforms* (26, 1-10)

Maria Sala is Titular Professor at the Department of Geography, University of Barcelona, and has a BA in Geography (Physical Landscapes) and a PhD in Geography (Fluvial Geomorphology) from the University of Barcelona.

Research interests: Maria Sala leads the GRAM, Mediterranean Environment Research Group, which is recognized and funded by the University of Barcelona and the Catalan Autonomous Government. Her current research interests lie in the fields of fluvial geomorphology, soil and slope erosion, catchment hydrology and water quality. Work in these fields has mainly been undertaken in the Catalan Coastal Ranges although through cooperative work she has done research in the UK, German Alps, Tunisia, Portugal, Argentina and Mexico. Fundamental research is applied to environmental problems, mainly increased runoff and flooding as a result of expanding urban land use and forest fires. Recent and current research has attracted substantial funding from a number of sources including CICYT (Spanish Ministry of Education), CIRIT (Catalan Council for Research) and the EU.

Maria was the Chair of the IGU Study Group on *Erosion and Desertification in Regions of Mediterranean-type Climate (MED)* formed in 1992, and then of the (current) *IGU Commission on Land Degradation and Desertification (COMLAND)* from 1996 to 2000. Her current investigations include: Hydrology and sediment dynamics in Mediterranean mountain catchments, Effects of prescribed burning in soil parameters and in the increased runoff and erosion, Morphological changes and sediment transport in the bed of a Mediterranean river, Fluvial transport of suspended material: sources, routing, storage and yield.

Recent publications

GARCIA, C., LARONNE, J. B. & SALA, M. (1999): Variable source areas of bedload in gravel-bedstreams. - *Journal of Sedimentary Research*, 69 (1) 27-31.

BATALLA, R., DE JONG, C., ERGENZINGER, P. & SALA, M. (1999): Field observations on hyperconcentrated flows in mountain torrents. - *Earth Surface Processes and Landforms*, 24, 247-253.

GARCIA, C., LARONNE, J. B. & SALA, M. (2000): Continuous monitoring of bedload flux in a mountain gravel-bed river. - *Geomorphology*, 34, 23-31.

SALA, M. & RUBIO, C. (2001): Estudi i mesura de l'escolament i l'erosio en parcel. les experimentals al massis de les Gavarres. - *Butlletí de la Institució Catalana d'Història Natural*, 68, 89-102.

SALA, M. (2001): Land use impacts on water quality in a Mediterranean drainage basin. - In: JHA (ed.) *Land Degradation and Desertification*. Calcutta.

SALA, M., FARGUELL, J. & LLORENS, P. (2001): Runoff, storm runoff and water quality in two instrumented small catchments in the Catalan Coastal Ranges. - *ERB 2000 Proceedings*.

FARGUELL, J. & SALA, M. (2001): Magnitud y frecuencia de procesos hidrogeomorfológicos en pequeñas cuencas mediterráneas. - *Cuaternario y geomorfología* (in press).

SALA, M. & FARGUELL, J. (2001): Producción de agua y sedimento en dos cuencas experimentales bajo diferentes usos del suelo. - *Cuaternario y geomorfología* (in press).

SALA, M. (2001): Increased flooding induced by touristic urban landuses. - In: J. L. PALACIO & M. INBAR (eds.) *Land Degradation and Desertification*, Mexico (in press).

Gudrun Gísladóttir took her BSc in Geography from the University of Iceland, Dept. of Geosciences in 1980. In 1998 she graduated with Ph.D. from Stockholm University, Department of Physical Geography. She is currently a lecturer (Assistant Professor) in Geography, Department of Geology and Geography, University of Iceland.

In her research Gudrun has focused on ecological problems connected to land use. She has worked on the effects of long-term sheep grazing on vegetation change and soil erosion - especially the effects of disturbance on the structure and function of the ecosystem and the susceptibility of various plant communities to erosion. Because various powerful groups in Iceland have been able to influence agricultural policy Gudrun has also looked at the role of agricultural policy on the development of land use and land degradation.

Tourism has increased enormously in Iceland in recent years, and nature is the major attraction. Also the interest in outdoor recreation is reflected by an increasing number of hiking tourists. In connection with this type of land use Gudrun is studying the effects of tourism on the ecology (vegetation and soil) of Iceland in popular tourist areas, often in sensitive areas.

Gudrun has also worked with an historical perspective, studying the influence of nature on settlement possibilities during former times, how people used the land and the response of the environment to the land use. She is commencing a project to estimate the reliability of vegetation descriptions in the Icelandic Sagas, with reference to existing books and documents from that time. For comparison, results from pollen research in the area, archaeology, climatology, and studies on place names will be used to complete the information about vegetation during the Saga period. The written documents during the Saga period will be assessed with regard to their values realistic references of natural conditions during that period, with special emphasis on vegetation.

Recent publications:

GISLADOTTIR, G. (2001): Ecological Disturbance and Soil Erosion on Grazing Land in Southwest Iceland. - In: CONACHER, A. (ed.) 2001: *Land degradation*, Kluwer Academic Publishers, Dordrecht, The Netherlands, 111-129.

GISLADOTTIR, G. (2000): The role of physical landscape in forming the settlement pattern of subsistence farming. - In: SVEINBJARNARDOTTIR, G. (ed.): Research Reports 2000. *An interdisciplinary research project*. Workshop held 20-21 August 1999 at Reykholt. National Museum of Iceland - Division of Monuments and Sites. pp. 42-48.

GISLADOTTIR, G. (1999): Vegetation and land degradation in grazing land. - In: COELHO, C. (ed): *Proceedings of the International Seminar on Land Degradation and Desertification*. - International Geographical Union, Commission on Land Degradation and Desertification, Commission on Sustainable Development and Management of Karst Terrain, Grafigamelas, Aveiro.

Vibhash Chandra Jha (born 1958) is Professor and Chairman, Department of Geography, Visva-Bharati University, Santiniketan, West Bengal, India. He has had a distinguished academic career. Professor Jha received a Bhabha Atomic Research Centre (Department of Atomic Energy) Research Fellowship in Geology for his doctorate degree in Geomorphology. Prior to joining Visva-Bharati University in 1986, he worked as a Scientist/Engineer 'SD' (Geographer) for the National Remote Sensing Agency, Hyderabad, posted at IIRS Dehradun. He specialises in Himalayan geomorphology. Currently he is researching in tropical geomorphology from the land degradation and desertification point of view. Dr. Jha was awarded second place in the national photo-geomorphological contest at McMaster University, Hamilton, Canada in 1993. He is the Joint Secretary of the Indian Institute of Geomorphologists (IGI).

He has numerous research papers to his credit, is author of a research monograph on Himalayan Geomorphology and edited a book on Geomorphology and Remote Sensing. He is well trained in GIS and Remote Sensing and is Coordinator of the Remote Sensing Unit. Professor Jha has travelled widely to Hungary, Italy, Vatican City, Austria, Germany, Kenya, Canada and the USA for various seminars/conferences and workshops. He organised the 8th IGI and National Seminar on Geomorphology and Remote Sensing and the 22nd Conference of IIG and the IGU COMLAND Meeting in India in January 2001.

Michael Stocking (BA MPhil PhD) is Professor of Natural Resource Development, School of Development Studies, University of East Anglia. He has been involved in tropical agricultural development, land resources and soil conservation since 1969. With field experience in sub-Saharan Africa, South America and South and South-east Asia, he is currently professionally engaged on biological diversity on agricultural lands, erosion and conservation economics, erosion modelling on the Loess Plateau (China), and erosion productivity investigations.

He is special adviser to DFID (hillside production systems), UNU/UNEP (biodiversity) and TSBF, Nairobi (soil fertility). As Associate Scientific Coordinator of the GEF funded Project on People, Land Management and Environmental Change, he is working with over 200 developing country scientists engaged in developing demonstration sites of agrodiversity.

Recent publications

LU, Y., STOCKING, M., LIU, B. & LI, G. (2000): Productivity impact of soil erosion on the Loess Plateau, A modelling approach. - In: LAFLÉN, J. M., JUNLIANG TIAN and CHI-HUA HUANG (eds.) *Soil Erosion and Dry-land Farming*. CRC Press, Boca Raton, FL, pp. 265-278.

STOCKING, M. & LU, Y. (2000): Integrating biophysical and socioeconomic aspects of soil conservation on the Loess Plateau, China: Part 1 Design and calibration of a model. - *Land Degradation and Development* 11(2): 125-139.

LU, Y. & STOCKING, M. (2000): Integrating biophysical and socioeconomic aspects of soil conservation on the Loess Plateau, China: Part 2 Productivity impact and economic costs of erosion. - *Land Degradation and Development* 11(2): 141-152 .

LU, Y. & STOCKING, M. (2000): Integrating biophysical and socioeconomic aspects of soil conservation on the Loess Plateau, China: Part 3 The benefits of conservation. - *Land Degradation and Development* 11(2): 153-165.

STOCKING, M. & MURNAGHAN, N. (2000): Land Degradation - Guidelines for Field Assessment. UNU/UNEP/PLEC Working Paper. Overseas Development Group, University of East Anglia, Norwich, 120 pp. [Available on CD-ROM and Internet www.unu.edu/env/plec/l-degrade/index-toc.html]

BLACKIE, M., BLAIKIE, P. & STOCKING, M. (2000): Agriculture and Natural Resources Research for Development: Specialist Review of DANIDA Funded Research. Overseas Development Group, Norwich, 56 pp.

STOCKING, M. (2001): Hillside farming, Living at the margin. - In: DFID *Research Highlights 1999-2000*, Natural Resources Systems Programme, Department for International Development, London, pp. 24-26.

STOCKING, M. (2001): Agrodiversity: a positive means of addressing land degradation and sustainable rural livelihoods. - In: CONACHER, A. (ed.): *Land Degradation*. Kluwer Publishers, Dordrecht, 1-16.

STOCKING, M. (2001): Biological diversity, land degradation and sustainable rural livelihoods. - *Acta Botanica Yunnanica* (in press).

Otmar Seuffert is retired Full Professor of Geography of the Technical University of Darmstadt and currently Guest Professor at the University of Salzburg (Austria).

He is Founder and Chief Editor of "Geoeko" and its supplements ("Geoeko plus", "Geoekotest") and Editor of "Petermanns Geographische Mitteilungen". For 30 years he has been busy undertaking theoretical and experimental geoecological research to unveil the secrets of the rainfall-runoff-erosion catena in all its aspects (causes, processes, consequences), in all its dimensions in time (from minutes to millions of years) and in space (from the square metre to the global scale) and in all its natural and man-made implications.

Recent publications

SEUFFERT, O. (2000): ÖKO 2000 - Realitäten, Illusionen, Visionen. - *Geoöko* 21, 1-2: blaue Seiten: 1-16.

SEUFFERT, O. (2000): Editorial zum Heft Klimawandel. - *Petermanns Geographische Mitteilungen* 144, 4: 5.

SEUFFERT, O. (2000) Klimawandel - Erkenntnisse, Defizite und Erfordernisse bei Erfassung und Prognose. - *Petermanns Geographische Mitteilungen* 144, 4: 66-71.

SEUFFERT, O. (2000): Kommt die "Sintflut"? Klimatologische Aspekte der Februarflut in Südafrika/Mosambik. - *Petermanns Geographische Mitteilungen* 144, 4: 72-73.

SEUFFERT, O. (2000): Von der Kultivierung zur Degradierung der Landschaft im Mittelmeerraum. - *Petermanns Geographische Mitteilungen* 144, 5: 36-47.

RUSSOW, F., GARLAND, G., SEUFFERT, O. & OLLESCH, G. (2000): Die räumliche und zeitliche Differenzierung von Sedimentquellen und Sedimentationsraten: Untersuchungen am Beispiel des Mdloti-Einzugsgebiets, KwaZulu-Natal/Südafrika. - *Geoöko* 21: 85-102.

MENSCHING, H. G. & SEUFFERT, O. (2001): (Landschafts)degradation - Desertifikation: Erscheinungsformen, Entwicklung und Bekämpfung eines globalen Umweltsyndroms. Rück- und Ausblick. - *Petermanns Geographische Mitteilungen* 145, 4: 6-15.

SEUFFERT, O. (2001): (Landschafts)degradation - Desertifikation. Statische Materialien zum Problemkreis und ihre Vergleichbarkeit. - *Petermanns Geographische Mitteilungen* 145, 4: 52-55.

SEUFFERT, O. (2001): Prozesse der Landschafts(zer)störung - Ursachen, Prozesse, Produkte, Definitionen, Perspektiven. - *Geoöko* 22: 91-102.

Julio Costello is Associate Professor of Geography, Universidad Nacional de Catamarca, Av. Belgrano 300, 4700 Catamarca, Argentina.

He graduated in 1982 from the National University of Catamarca with the highest distinction, receiving the University Prize. Since then Geomorphology has been his main research and teaching field and he leads the Geomorphology and Hydrology studies at the University. He is also a member of the Research Council of the Faculty of Humanities. His main fields of interest are the physical-human interaction in the environment, focusing on erosion processes in high gradient streams. Julio has published about 30 papers in Spanish scientific journals.

In his free time he enjoys trout fishing with his sons and reading about military history and strategy.

Arthur Conacher is Associate Professor of Geography at the University of Western Australia in Perth. He holds an MA (Hons) degree from the University of Auckland and a DSc degree from the University of Western Australia.

He is convener of the Environmental Science program at the University of Western Australia, co-editor of *Australian Geographical Studies* (the professional journal of the Institute of Australian Geographers), a member of the Editorial Board of *Australian Geographer*, a member of the Standing Committee on Policy and Practice of the Environment Institute of Australia, a founder member of the International Geographical Union's Study Group on Erosion in Regions of Mediterranean type Climate formed in 1992, and Secretary of the Study Group's upgraded Commission on Land Degradation and Desertification formed in 1996.

His early, joint research focussed on soil/slope relationships (the nine unit landsurface model), leading to work on secondary salinisation in Western Australia's wheatbelt. This was later extended to encompass other forms of land degradation, environmental problems (initially associated with forest clear felling) and environmental planning and management. Current research with his students concerns integrated catchment management and related topics.

Recent publications

CONACHER, A. J. and CONACHER, J. L. (2000): Environmental management and planning in Australia, Oxford University Press, Melbourne. xxviii + 461 pp.

CONACHER, A. J. (ed.) (2001): Land degradation: papers selected from contributions to the sixth meeting of the International Geographical Union's Commission on Land Degradation and Desertification, Perth, Western Australia, 20-28 September 1999. Kluwer Academic Publishers, Dordrecht. 390 pp.

CONACHER, J. L. and CONACHER, A. J. (2001): Policy responses to land degradation in Australia. - In: CONACHER, A. J. (ed), Land degradation, Kluwer Academic Publishers, Dordrecht, 363-382.

Paul Hudson received his Ph.D. in 1998 from Louisiana State University, and is an Assistant Professor in the Department of Geography at the University of Texas at Austin. His major research interests are in fluvial geomorphology, and he is particularly interested in the adjustment and metamorphosis of meandering rivers to climatic and anthropogenically induced environmental change. At present his primary research activities involve examination of channel changes and floodplain sedimentology within the lower Panuco basin of eastern Mexico, and the Mississippi River within the southern U.S.

Recent publications

HUDSON, P. F. (2001, in press): Historic Channel Behavior of the Lower Mississippi River. - In: M. K. STEINBERG and P. F. HUDSON (eds.) *Cultural and Physical Geography of Latin America and the Southern U.S.*: Geoscience & Man, Baton Rouge, LA, V. 36.

STEINBERG, M. K and HUDSON, P. F. (eds.) (2001, in press): Cultural and Physical Geography of Latin America and the Southern U.S.: Geoscience & Man, Baton Rouge, LA, V. 36.

HUDSON, P. F. and KESEL, R. H. (2000): Relationships between lateral migration rates and channel geometry in the Lower Mississippi River. - *Geology*, V. 28, No. 6, pp. 531-534.

HUDSON, P. F. (2000): Discharge, sediment, and channel characteristics of the Rio Panuco, Mexico. - *Yearbook, Conference of Latin Americanist Geographers*, V. 26, pp. 61-70.

Michael Meadows hails from Liverpool in the United Kingdom and was educated at St Mary's College in Crosby and the Universities of Sussex (BSc Hons, 1976) and Cambridge (PhD, 1982).

His first academic appointment was as lecturer in Physical Geography at what is now known as the Liverpool John Moores University, but he moved to South Africa in 1983, first taking up a lectureship at

Rhodes University in Grahamstown. Subsequently he moved on to the University of Cape Town, where he is currently Associate Professor and Head of Department. Mike's research interests stem from his background in Quaternary Science, although he has broadened this to encompass the human-induced aspects of environmental change. Undergraduate teaching responsibilities are mainly in the area of general Physical Geography, while at postgraduate level, the Quaternary perspective is more prominent. Mike has more than 70 scientific publications and is currently busy with Professor Otmar Seuffert on a major book on Land Degradation to be published by Kluwer. Mike is editor of the South African Geographical Journal and president elect of the Society of South African Geographers. He is also Secretary to the Commonwealth Geographical Bureau. Mike is married to Alison and they have two children - Polly (b 1995) and George (b 1998). He is an avid (and sad!) supporter of Everton Football Club and a keen cricket and rugby fan. He is also a regular participant in road and cross-country running races.