



# Bulletin

International association for landscape ecology

## IALE CONGRESS 1995: THE FUTURE OF OUR LANDSCAPES Henri Décamps

The next IALE Congress will be held in Toulouse France on the last week of August 1995.

The Congress will focus on Landscape Ecology as a problem-solving oriented science. This of course does not imply that anything not directly related to problem solving should be kept away from the Congress, but that we should force participants not to stick to just describe "that there is some change going on in a landscape so and so, which is just so bad".

Sessions and workshops should have clear aims, which not only imply a definition of a problem, and the theoretical analysis of it, but also the development of solutions.

### PRELIMINARY PROGRAM

#### Day 1:

During this first day plenary lectures will be given: one general and three on the themes of the parallel sessions of the second day.

#### Day 2:

Three parallel sessions will include presentations and posters. Each of these three sessions will have a chairman whose responsibility will be to organize the session and write a report to be read on the last day in a plenary session. Themes for these three parallel sessions are:

**1. Future landscapes:** How will the future landscapes look like? Can we predict the future land use and in relation to that the spatial structure of future landscapes from changes in the economic conditions? How to use our knowledge on abiotic conditions as well as on ecologic and socioeconomic processes at the landscape and regional level for better predictions? How to improve techniques of scenario building?

**2. Goals for future landscapes:** How do we expect these future landscapes to function in ecological term? What are the threats? Which problems are to be expected in this functioning? Can we detect and indicate solutions to these problems? This will lead to ecological planning goals. What are the priorities here? What are the criteria and which

are the norms? (maximal biodiversity? maximal diversity in particular species groups? functioning of natural processes? Particular valuable species? Indicator species?). How do we measure these criteria? Do we want different goals in different landscapes, or different regions?

**3. Planning landscapes.** Do we know enough of landscape to work out spatial plans which will allow to reach or conserve these goals on the long term. Under what conditions are various goals reachable? Planning concepts? Separation in space of land use types or integration? Spatial networks of reserves or small elements versus a few big areas. Corridors, stepping stones and buffer zones as solutions? Alternative farming systems. Planning rules. Scenarios of future landscape. Quantitative models for scenario evaluation.

#### Day 3.

Workshops will be devoted to special issues related to the themes considered in the first and second day. It is suggested to have the following workshops:

**1. Human perception of change and the role of human culture in creating landscapes.** Do we have to consider this in defining our goals for future landscapes? What do we know? Regional variation? Different landscapes? What are the criteria?

**2. Multiscale approach.** How to use a multiscale approach: a) in predicting

future trends, b) setting the goals, c) in analysing landscape functioning? Statistical approaches for monitoring and analysis. Working at the regional scale: are existing techniques adequate, or do we need new approaches?

**3. Agricultural landscapes.** Links between ecology and economics. Land abandonment. Organic farming systems against high energy input farming. Is organic farming a solution for the problems of agricultural landscapes in different parts of the world? How much land is needed? How to change between systems?

**4. Restoring landscapes.** The use of our knowledge of the interactions between the biota and the landscape. What are the potential goals? Spatial conditions? Abiotic conditions? Ecological time bombs? The peculiar nature of urban landscapes?

**5. Education.** How to promote teaching of Landscape Ecology? Possibility of International courses? What is the situation in different countries? Landscape Ecology for managers, for a large public? Landscape Ecology at Universities?

#### Day 4.

The whole day will be devoted to a general Assembly including at the beginning reports and recommendations from the Chairmen of the parallel sessions, and ending with a key plenary lecture.

Excursions will be organized before the Congress. A pre-Congress day will be available for meetings of particular interest. Please contact Henri Décamps for proposals. More news and details about the IALE Congress 1995 will be given regularly in the next bulletins. Proposals for the Congress and comments to the programme will be most wellcome, and should be forwarded to IALE president Henri Décamps, Centre D'Ecologie des Ressources Renouvelables - CNRS, 29, rue Jeanne Marwig, F-31055 Toulouse Cédex, France, Phone: +33 61 55 40 87, Fax: +33 61 25 40 87

## LANDSCAPE RESEARCH IN LATVIA: THE BACKGROUND AND CONTEMPORARY PROBLEMS

The landscape science as a complex issue of physical geography joining closely to the ecology and human geography is wide known in Latvia since early 1950s. At that time the first field studies have been carried out by K. Ramans. V. Klane and other geographers principles and methods of landscape research became a subject of teaching at the Latvian University's Department of Geography (Ramans 1956, Ramans & Nikodemus 1982). This development have been prepared, to a great extent, by previous attempts to reveal a division of Latvia's territory into integral geographic regions (G. Ramans, V. Sleinis) as well as by advances in the forest typology (K. Melderis, V. Eiche, P. Sarma), soil mapping (J. Vitins, K. Brivkalns) and some other ecological areas.

Taking into consideration a wider context it is worth noting that some encouraging approaches towards scientific grasping the whole of a landscape originated in Russia, especially the "land ecology" of G. L. Ramensky and landscape geochemistry of B. B. Polinov, furthered the development of the landscape science in Latvia; German experiences on landscape ideas well known in pre-war Latvia were of importance, too.

First the landscape investigations focused on description, classification and mapping of "micro regions" (in modern terms macro- and mesochores) interpreted as local compositions of elementary landscape units (sites or ecotopes). The research work leaned first of all upon three sources: (1) site surveys; (2) ecological identification of site types regarding moisture and trophic gradations, species composition (both actual and potential) and land-use patterns; (3) revealing dependencies and effects of a site on its surroundings, studying spatial sequences (catenas) of site types on different relief and rock forms, classification of the catenas. Later such researches were combined with observations on the micro climate, soil and geomorphologic processes and with

some other special investigations on model areas (A. Kalnina, R. Ava, A. Vanaga).

The landscape surveys have been conducted in all regions and several versions of generalized landscape map for the country are provided by K. Ramans and A. Melluma. Detailed maps are designated for many separate territories.

At the first post-war decades land evaluation, land-use and agriculture were the main scopes interested in the landscape research from practical point of view. During the years followed Latvian landscape scientists started to elaborate systematically also other problems: nature protection, recreation and tourism (A. Melluma, A. Seile), chemical pollution and its influence on soils, vegetation as well as on other nature components (O. Nikodemus, I. Mürnieks), populated places (V. Steins) and cultural landscapes (P. Skinkis). Specialists on urban and regional planning (G. Poltorak, R. Bruzgulis), landscape architecture (J. Svarcbachs), forest ecology (M. Laivins) and marine coast dynamics (G. Eberhards), in their turn, have tried successfully to implement landscape ideas. These studies on interaction between nature of the earth's surface and man have contributed remarkably for interpretation of the landscape integrity in terms of ecology, economy, technology, management and landscape planning. The same fields belong to the most actual ones also nowadays.

However, two perspectives are to be accentuated especially. One of them points out humanistic values of landscapes; it may be called a creative or cultural perspective of the interaction between man and nature. This is based on consideration of "inscapes" or "les paysage interieur" (Dansereau 1975) i.e. how do peoples perceive, experience, and imagine the landscape within which they live as well as on exploration of inhabitants' awareness of the "external" landscape, their attitudes to it, traditions, intentions, and so on.

Exceptionally high "inscape" and nature attitude values had been accumulated in the Latvian folklore (Vike-Freiberga 1983). They manifest partly in remnants of traditional cultural landscapes up to now (Burkse 1992) and encourage farmers in mastering a biodynamic or other nature friendly kinds of agriculture. It is worthy to actualize these values by the so called environmental education, elaborating and carrying out the nature policy, landscape planning as well as by land-use and production management. But, on the other hand, a concrete knowledge about what are creative "inscape resources" (both active and potential ones) within Latvian cultural landscapes and among different groups of population is very poor so far. It is clear only that today the opposite factor - alienation from humanistic values of landscapes as well as from the main attribute of a landscape, its integrity, - affects development of the country very strongly. therefore, the problem "Landscape perception, humanistic values and economic efficiency of cultural landscapes" is to be regarded as one of the major research priorities in Latvia.

The second perspective being to point out concerns the common scientific level of the landscape researches. So far the Latvian landscape maps and other records reflects mainly static, abiotic and local features of natural environment and its man-made modifications. Seasonal rhythms, interannual fluctuations, succession courses and stability conditions of landscape units, differences among principal site types in heat, water and chemical element balances, in biomass production and its conversions as well as in many other fundamental landscape ecological characteristics are yet wanted. Zonal and macro regional interpretations of the local diversity of biotic communities and ecotopes is an actual task, too. This refers especially to studying interrelations among ecological and geographical features of three biomes - the Euro-Asian boreal conifer forests, the Middle-European mixed oak forests and

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DEADLINE FOR THE NEXT BULLETIN: 15th December.



the North-Western - European heath lands - and degree of their expression within different site types and landscapes of Latvia. Riga was a distinguished center of landscape research in the former USSR and extensive connections with scientists of different regions existed; this was favorable for originating new ideas and theoretical generalizations (e.g. Ramans 1972, Melluma 1988, Melluma & Leinerte 1992). An interesting cooperation arose in Siberia; here the experimental work carried out in common with Siberian colleagues under guidance of Prof. V. Sochava on several model areas within the taiga and steppe landscape resulted in the elaboration of an integral approach to revealing both how do landscape units change, function, and interact with man and how do these processes manifest in the landscape structure (Krauklis 1979). Certain bonds existed also with colleagues in Central European countries but these were fairly weak. Now the contacts to the Western scientists become an important source of accelerating the progress. However this opportunity is realized yet insufficiently.

*Adolfs Krauklis*

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- Vike-Freiberga, V.: *On the Amber Mountain*. Montreal: Helios, 1983. 195 p. (in Latvian)

#### QUESTIONARY - CALL FOR PAPERS

#### LANDSCAPE ECOLOGY IN EDUCATIONAL PROGRAMS AND TRAINING COURSES

Landscape Ecology is world-wide recognized as an emergent discipline. Scientists, professionals, practitioners and politicians utilize the principle of landscape ecology and the scaling approach in an increasing variety of fields and applications.

Some important text books, reviews and a plethora of literature are available today. Academic and training courses are organized in many countries at national and international level. It would be extremely useful for our organization to know in details the type, the program and the length of these courses in landscape ecology, the age class of the students and the position in the study curriculum.

In order to describe the state of art of this discipline and to organize in the best and most efficient way the symposium on education at the next World IALE meeting in Toulouse (1995) (see the draft program on this issue), we are asking you the full collaboration in terms of information on the state of art of landscape ecology teaching courses in your country and/or in your working circle.

Due to different education organization in different countries we will appreciate full details about the teaching of Landscape Ecology and ask you to fill in the form enclosed with this bulletin. During the symposium at the world congress a detailed report will be presented based on your reply.

This is also the occasion to call for papers for the symposium, if you are interested please send the title of the argument. We would greatly appreciate your collaboration.

Please send your replies to IALE Secretariat - Lunigiana Museum of Natural History - 54011 Aulla (Italy).

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**MEDITERRANEAN LANDSCAPE ECOLOGY**

Short Course on Mediterranean Landscape Ecology  
March 15 - April 2, 1993 Mediterranean Agronomic Institute of  
Chania, Crete, Greece

A short course on Mediterranean landscape Ecology has been held in the Mediterranean Agronomic Institute of Chania (MAICH). The lectures were presented by prominent landscape ecologists working in the Mediterranean:

Isaac Zonneveld (the Netherlands), Almo Farina (Italy), Green Bryn (United Kingdom), Willem Vos and Anton H.F. Stortelder (The Netherlands), Vasilios Papanastasis (Greece), Oliver Rackham (United Kingdom) under the coordination of G.L. Lyrintzis. The prompt and enthusiastic reply of many young graduate students from different countries and non homogeneous educational experience created an exciting climate during the course. In fact the course was attended by 26 students (one more than the maximum course enrollment) from different Mediterranean countries (Algeria, Bulgaria, Croatia, Cyprus, Greece, Italy, Lebanon, Portugal, Turkey) and from Sudan and Belgium. 15 foresters, 3 agronomists, 3 biophysic engineers, 2 biologists, 1 environmental scientist and 1 geologist were representing a true composite student auditory.

The argument of the lectures was focusing on principles and applications of Landscape Ecology, especially in the Mediterranean area with a particular emphasis on the interactions between people and landscape and their long time co-evolution in the Mediterranean. Theoretical lectures and field excursions allowed the students to take confidence with the true Mediterranean landscape of Crete and with the complex problems concerning the land abandonment, the change of land use and the new impact of tourism.

The great interest showed by students in the course is a very promising signal for the future editions of the course that should be transformed from a short course to a long course.

The call of the next course in 1994 will appear on the Bulletin as published from MAICH.

**TIME IN GEOGRAPHIC INFORMATION SYSTEMS**

In this small book Gail Langran gives a thorough introduction to the concepts of and possible designs for temporal GIS. In modern GIS literature there is a growing awareness of what Ian Masser calls the fundamental system hooks, i.e. the essential elements of GIS and Langran is a good example of this tradition.

In the first three chapters Langran gives a conceptual discussion of temporal GIS including a review of existing research and a good conceptual framework for the understanding of temporal GIS.

Chapter 4 and 5 introduces a logical design of temporal GIS in a straight forward and general fashion. All of these 5 chapters are based on a sound geographical/cartographic tradition and are highly recommendable as reading for anyone toiling with spatial-temporal data even on a technical level.

Chapter 6, 7 and 8 are of a more technical nature discussing data storage and access method, and are probably beyond the grasp of most non technical personal.

Chapter 9 is a short conclusion and outlook. For anyone desiring to look further into the subject the book includes a thorough reference list.

The book is published by Tyler and Francis Ltd. in a series called Technical Issues in Geographic Information Systems and is referenced as: Langran, Gail. Time in Geographic Information Systems. Tyler and Francis Ltd. UK 1992. ISBN 0-7484-003-6.

**PROCEEDINGS**

The proceedings from the IALE-meeting: Landscape approach to regional planning, with the subtheme: The future of Mediterranean landscapes in Montecatini, Italy 27 April-1 May 1992 has been published in Landscape and Urban Planning 24 (1-4) July 1993 from Elsevier.

**DIARY**

Buenos Aires, Argentina 18-26 January 1994  
The World Conservation Union General Assembly  
Contact: Richardo Bayón, IUCN, 28 rue de Mauverney, 1196  
Gland, Switzerland. Tel: (4122) 9990115 Fax: 9990010

Kathmandu, Nepal 7-9 March 1994  
Environment and Biodiversity.  
Contact: Dr. P.K. Jha, Department of Botany, Tribhuvan University, Kirtipur, Kathmandu, Nepal.

Tucson, USA 23-26 March 1994  
Ninth Annual U.S. IALE Landscape Ecology Symposium: Spatial and Temporal Models for Analysing Pattern and Process in Landscapes. Contact: Dr. Margaret M. Moore, Program Chair, School of Forestry, Box 15018, Northern Arizona University, Flagstaff, AZ86011 fax: 602-523-1080; phone 602-523-7457

Coventry, United Kingdom 18-20 April 1994  
Field Margins - integrating Agriculture and Conservation  
Contact: Conference Associates and Services Ltd FMS, Congress House, 55 New Cavendish Street, London, UK W1M7RE

Jerusalem, Israel 21-26 June 1995  
6th International Conference on Preservation of Our World in the Wake of Change.  
Contact: Yosef Steinberger, Dept. of Life Sciences, Bar-Ilan University, Ramat-Gan 52900 Israel. Tel: (972-3) 5318571 Fax: (972-3) 771088

Manchester, England 20-26 August 1994  
Ecological Progress to meet the Challenge of Environmental Change - VI INTECOL Congress of Ecology. Contact: The Secretary, The Manchester Conference Center, UMIST P.O.Box 88, Manchester, M60 1QD, UK

Prague, Czech Republic 22-26 August 1994  
IGU Conference 1994: Environment and Quality of Life in Central Europe. Contact: IGU RC, Albertov 6, 128 43 Praha 2, Czech Republic Tel: +42 2 203608 Fax: +42 2 296025

San Jose, Costa Rica 24-28 October 1994  
Down to Earth: Practical applications of ecological economics  
Contact: Sylvia Tognetti, Maryland International Institute for Ecological Economics, P.O.Box 38, Solomons, MD20688, USA