



# Bulletin

International association for landscape ecology

## STATEMENT OF THE INTERNATIONAL ASSOCIATION FOR LANDSCAPE ECOLOGY TO THE EARTH SUMMIT

Ecological planning at the scale of whole landscapes is one of the most important tools for the realization of sustainable living. Fundamentally, sustainability means some guarantee of life in a sustainable ecological system. A sustainable ecological system is one which is committed to and has attained in practice a state of no net decline in quality for all its characteristics. For any environmental space, this state can be attained only by understanding, planning and managing whole landscapes as defined by a combination of their physical, biotic and cultural mosaics. These landscapes form the living homes for all on earth. Only these landscapes and the larger regions that they form can give us sustainability.

The documents of Agenda 21 express this in several ways. "Integrated approach to planning and management of land resources - A/CONF.151/PC/100" and "Conservation of biodiversity - A/CONF.151/PC/100. add. 20" stress the importance of landscape planning directly. The strategy of ecological planning is the central idea of other documents such as "Promoting sustainable agriculture and rural development - A/CONF.151/PC/100. add. 19", "protection of the quality and supply of fresh water resources - A/CONF.151/PC/100. add. 22", and "Managing fragile ecosystems: Sustainable mountain development - A/CONF.151/PC/100. add. 18", "Promoting a sustainable pattern of human settlements - A/CONF.151/PC/100. add. 7".

To facilitate achieving such goals, it is critical that UNCED stress the following:

1. All countries should integrate ecological planning at the landscape scale into their planning legislation and should seek assistance from landscape ecologists as needed.
2. Conservation of biodiversity should be a stated goal of any planning because biodiversity, at all levels from species to biotopes or landscape elements, is a fundamental characteristic that must be sustained in all types of landscape. If they are to be sustainable, this applies to all land and water areas, whether heavily farmed or fished, or supporting our life-system in any other way. Measures for sustaining biodiversity at all scales must be created and incorporated into all sustainability planning. A concrete measure that can be recommended to all member-states is to establish a baseline inventory of regional diversity of landscape elements and of landscape types, including a "red list" of threatened landscapes in their land.

The International Association for landscape ecology (IALE), founded in 1982, provides a professional organization with a pool of skilled professionals and a communications and scientific exchange network devoted to landscape ecology. We can facilitate landscape-scale basic research, exchange of existing knowledge, and formulation of existing knowledge into problem-solving practical applications.

IALE offers its capability in landscape ecology to the after-Rio-process. IALE can aid in development of concepts and methods and their implementation in projects aimed at achieving sustainability of regions. IALE is particularly capable of aiding in education and training programs for researchers, planners and managers and in symposia and conferences on critical topics in a region.

## EDITORIAL

*It will be fundamental for the future of IALE as an interdisciplinary community of scientists and planners to contribute to the realization of the sustainable development of the world's landscapes, understood concretely as spatial and volumetric ecosystems in their regional contexts.*

*IALE prepared the present statement to the Earth Summit in Rio to draw attention to the importance of landscape ecological research and planning in our transformation to a sustainable development paradigm. In the after-Rio-process it will be important for IALE to carry out a comprehensive discussion of the Rio documents to define in detail how and where we can offer our capability in the most efficient manner. Education and training programs in landscape ecological planning and monitoring will be an important part of such endeavours.*

### Acknowledgement

*The landscape ecological approach to the problems of sustainable development is by no means obvious to the general public or well understood by politicians.*

*The Executive Committee of IALE wants to express its gratitude to Ladislav Miklos from Slovakia; he has contributed greatly to include the landscape ecological approach in Agenda 21. As a Deputy Minister of Environment in Slovakia, he has not only been very active in the development of legislation for landscape ecological planning in his own country (see Bulletin 9, No. 4), but has also been deeply involved in an international effort of preparation for the Earth Summit in Rio. Ladislav was instrumental in preparing IALE's statement drawn up at the Montecatini meetings in Tuscany, making the long drive from Bratislava to Montecatini on his own to inspire this effort.*

*Jesper Brandt*

## TRENDS OF LANDSCAPE RESEARCH IN VIETNAM FROM THE TREASURER

Landscape science has developed in Vietnam since the 1970's. The first works, as well as study methodology and approach were based on the Soviet school, which considers landscape as separate units. The first research, published in 1970, was carried out by the Biological-Geoscientific Department of the Government Committee on Science and Technology. This publication was entitled "Physico-geographical zoning of North Vietnam". In 1976 Professor Vu Tu Lap published the book "Landscape Units of North Vietnam". Other landscape studies have been done, but without a systematic approach.

After 1975, landscape maps were prepared by national programs of integrated study of nature and natural resources for the various regions. During this time the landscape approach embraced the principle of immutability of relief and parent material as starting conditions for landscape genesis. Documentation of these conditions took place side by side with documentation of existing landscape condition and of ecological indicators. At this time landscape maps were considered the ultimate integrated tool for assessing existing and potential natural resource conditions, for evaluation of agriculture/forestry potential and for physical planning. Study scale and conventional taxonomy progressively changed toward finer scale, smaller territories and more finely divided taxonomy. An "ecologization" of landscape maps occurred, based on landscape division into small, discrete bioclimatic zones. Such results were used to make recommendations regarding the raising and breeding of appropriate species of domestic plants and animals.

Today, landscape ecology has good conditions for growth in Vietnam. Ecological data can be obtained from a special branch of government. Integrated studies can combine land use problems with ecological theory. Applications of the limit rule, food web theory, as well

as concepts of symbiosis and competition have great potential in these integrated studies as applied to biological problems in soil science.

Because of variations in the seasonal monsoon climate, where we find deeply contrasting seasons in some places, landscape division were determined differently for the North and South of Vietnam. Ability to maintain a dynamic equilibrium in the wet monsoon tropical landscapes and the drier landscapes is a great challenge. Releasing the considerably free energy available in these landscapes can lead to ecological disaster.

Today, Vietnamese landscape studies are concentrated in the national program at the Institute of Geography and Natural Resources, NCSR. The two major themes at this institute are:

1. The creation of a landscape map of Vietnam at a scale of 1:500000
2. The study of the wet monsoon tropical landscape units

Generally, applied studies have taken the place of traditional, more theoretical studies of landscape. In fact, many scientist have been successful at integrating goals of applied studies with more common ecological goals.

At present the Physical Geography Division of the Institute of Geography and Natural Resources is carrying out the landscape mapping mentioned above as well as the evaluation of landscape units for agriculture/forestry and territorial planning. Landscape ecology is considered a new orientation which will have great potential for applications. By integrating landscape ecological principles into the planning of reservoirs and dams as well as industrial plants, more generally beneficial results have been obtained. We are now also concentrating on the studies of soil erosion using remote sensing and other means.

Tran Van Y

At our last quadrennial meeting in Ottawa, Ontario, Canada in July 1991 IALE made a great step toward becoming a better functioning organization. It was decided that all members (except those from countries with currency problems) would thereafter pay \$10US per year for membership in IALE international. As a result, I am proud to report that for the first time in its history, IALE has a positive treasury balance. This is an important event, because it means that IALE can increase its operational ability. In the past our organization has relied on volunteer service and, most importantly, the subsidy of its activities by a few individuals and their institutions. We are now in the process of determining whether the dues we are collecting can suffice to cover the normal expenses of our organization, including the publication of this Bulletin as well as international communication and other office operations of IALE business. At this point in time, I do not believe that this is yet possible. The main reason for this situation is that IALE has still received very few dues payments. Some of this may be a result of the time it takes to implement this dues collection and transfer process at the Regional level. However, it may also be that members are still not aware that these dues must now be paid to IALE. In order to continue to operate effectively, I feel that dues must be paid by all members (in countries without currency exchange problems). In particular, I feel it is especially important for us to support the remarkable efforts of Jesper Brandt, our Deputy Secretary General, in publishing this Bulletin. I am particularly asking the Regional Contacts of IALE to forward these dues to Almo Farina for those in Europe, the Middle East and Africa and to myself for those in the Americas, Asia and Australia. Please match this great commitment in spirit to IALE with the new financial commitment. Thank you!

James F. Thorne

The IALE BULLETIN is distributed 4 times a year to the members of IALE. IALE Bulletin Editor : Jesper Brandt, Inst. Geography & Computer Science, Roskilde University Center, P.O.Box 260, DK-4000 Roskilde, Denmark, Tel: +46 75 77 11 ext. 2463, Fax: +46 75 74 01 E-mail: brandt@ruc.dk. Layout Erling Andersen. IALE - International Association for Landscape ecology - was founded in 1982 to promote communication between scientists and planners and interdisciplinary scientific research. IALE executive committee: President Henri Decamps (France), Past-president Gray Merriam (Canada), Vice-presidents: Joan Iverson Nassauer (USA), E.R. Fuentes (Chile), Paul F.M. Opdam (Netherlands), Vaclav Mejstrik (Czechoslovakia), General Secretary Almo Farina (Italy), Lunigiana Museum of Natural History, 54001 Aulla, Italy Tel: +187 42 03 74, Fax: +187 420727. Deputy General Secretary & Bulletin editor Jesper Brandt (Denmark), Treasurer: James F. Thorne (USA), Univ. of Pennsylvania, PA 19104-6311, Fax: (215) 898-9215

DEADLINES FOR THE BULLETIN: Vol. 10 no. 3: 15th September 1992, Vol. 10 no. 4: 1st December 1992.

## THE FUTURE OF MEDITERRANEAN LANDSCAPES

During the week of 28 April to 1 May, 1992, the IALE-seminar "Landscape Approach to Regional Planning: The Future of Mediterranean Landscape" took place in Montecatini, Italy. Some 100 people from 17 countries participated in the seminar, which were organized by the IALE General Secretary Almo Farina and his team at the Lunigiana Museum of Natural History. We owe much to Almo Farina, for the organization and for the fact that IALE - not at least through the preparation of this seminar - has succeeded to spread the interest in organizing interdisciplinary scientist and planners within landscape ecology further to the south, thereby softening IALEs earlier bias towards the higher latitudes especially in Europe.

Mediterranean landscapes represent an unique combination of both natural and cultural factors. The resulting landscapes are small scale landscapes, with a specific floristic, faunistic and structural diversity and scenic attractiveness. Mediterranean people have been able to reclaim land with poor and shallow soils and to utilise its biological productivity, preserving or even increasing the organic and cultural variety. Here, the integration of production with conservation has traditionally been a characteristic of human management. This state of balance has nevertheless been broken, by the effects on an extremely vulnerable environment of modern "neo-technological" pressures. These pressures are a result of the accelerating growth of populations, mass tourism, urban-industrial development, and rupture

of the agro-ecological balance, by intensification or extensification of land exploitation, often leading to abandonment. Mediterranean landscapes are thus threatened of fragmentation and degradation of their biological, ecological and cultural resources, often with irreversible consequences. A special 2 days workshop on Red Books for threatened Mediterranean landscapes was arranged in cooperation with IUCN-CEPS chaired by Zev Naveh. Red Books for Threatened Landscapes constitute an innovative tool for holistic landscape conservation, indicated to Mediterranean or other threatened landscapes. These Red Books intend to present guidelines based on integrated ecological, socio-economic and cultural information, in order to serve as a practical support for the political and the professional decision making and for all those who deal directly with the landscapes concerned. Red Books for Threatened Landscapes deal with the concrete landscape level of distinct space-time defined geographical, ecological and cultural entities of endangered landscape units, ranging from the smallest landscape cell or ecotope to the regional landscape. They present relevant information not only on endangered natural assets but also on other crucial issues and perils concerning cultural, historical and scenic landscape assets. Furthermore, they provide practical solutions for preventing further deterioration and misuses and recommend alternative land use practices and integrated management strategies. The concept of Red Books for Threatened Landscapes is rela-

tively new and yet only applied to a limited number of Mediterranean landscapes. Being an active and positive initiative to change already prevailing undesirable trends, we hope it will concern many other cases in a next future.

The symposium on the 30th of April was devoted mainly to a report on the first full-fledged Red Book case study, carried out in Western Crete by a team, led by V. Papanastasis, Thessaloniki and A.T. Grove, Cambridge, assisted by W. Vos and A. Stortelder, Wageningen, and Z. Naveh, Haifa. The main goal of the workshop on the next day was to discuss the working program for the preparation of a Red Book blueprint, to be submitted to the next General Assembly of IUCN, at the end of 1993. It was decided that this proposal should be expanded with a rationale for the compilation of worldwide Red Lists of threatened landscapes, together with the methodology for Red Book case studies. This will contain the W. Crete study and additional examples of threatened landscapes in industrial and developing countries. Two subcommittees were formed: One to prepare a draft proposal for the methodology of the Red Books case studies, coordinated by A. Farina, and another to prepare the proposal for the Red List rationale, of which Y. Sagie took charge. Z. Naveh will be coordinator of both groups and will promote the preparation of examples for case studies. Each subcommittee should have its proposals ready until February 1993 and the next workshop will be held in March - April.

Teresa Pinto Correia

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## SHORT NEWS

**US-IALE MEETING 1993**

The 8th Annual US Landscape Ecology Symposium will be held 24-27 March at the Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA. The theme of the symposium is "Pattern and Process in Landscape Ecology". For more information on the symposium, please contact local host Dr. Monica G. Turner, Environmental Sciences Division, P.O. Box 2008, Oak Ridge, TN 37831-6038 USA (e-mail: mtq@mtqgrass.esd.ornl.gov or MTQ@ORNLSTC.bitnet; FAX 1-615-576-8646; PHONE 1-615-574-8282).

**SECOND US-IALE FOREIGN TRAVELLING SCHOLAR AWARD OFFERED**

Last April at the 7th Annual US Landscape Ecology Symposium in Corvallis, Oregon, The Foreign Travelling Scholar Award was given to Timothy Lynam from Zimbabwe. Tim gave a fascinating presentation on the landscape ecology of traditional agricultural practice and its influence on wildlife conservation in one region of Zimbabwe. This year the Foreign Travelling Scholar Award will again be offered with a cash prize of a minimum of \$ 200 US. Applicants must have a submitted and accepted abstract for the 8th Annual Meetings to be held 24-27 March in Oak Ridge, Tennessee (see related announcement). If interested please send a copy of your abstract to Dr. James F. Thorne, Department of Landscape Architecture and Regional Planning, University of Pennsylvania, 210 South 34th Street, Philadelphia, PA 19104-6311 USA.

**MEMBERSHIP LIST**

The secretariat has produced a membership list, that will be enclosed in this Bulletin to all members of IALE.

**IN MEMORY OF TADEUSZ BARTKOWSKI**

Prof. Tadeusz Bartkowski was born in 1920 near Poznan, Poland. In 1945 he began to study Geography in Poznan - in 1952 he graduated. In the beginning he worked in the field of Geomorphology of glacial lowlands and gained international recognition for his work on the concept of areal deglaciation as normal glaciation of the lowlands. In the 60's he created the foundation for a complex interpretation of physical geography in Poland as well as the practical applications. His later syntheses (Handbooks) is still in use by students and colleagues today. His work "Environmental engineering and protection" (in Polish) in 5 volumes (1972-91) has a special stand. The strong position of Polish geography in this field is based on these works.

His international position was strongly connected with IALE. He was one of the founders and chairman of the working group "Urban Ecology". Prof. Bartkowski also founded and was the first president of the Polish IALE. In the innumerable scientific conferences, in which he participated, he was extremely active. His original - often consciously provocative - conceptions, as well as countless numbers of suggestions to terminology, brought him respect and acknowledgement and made him an institution within IALE. Prof. Bartkowski died in the middle of the preparation for another IALE-meeting.

His restless spirit always sought something new. With more than 400 scientific publications, he was one of the most productive scientists. Besides his scientific work, Prof. Bartkowski remains in our memories as a man of culture, who to the end combined this to a harmony with a youthful spontaneity. His youthful soul always aimed at the future - the past having very little interest to him.

**DIARY**

Marseille, France 7-11 September 1992

6th European Ecological Congress. Organiser by European Ecological Federation and Soci t  France d'Ecologie. Contact: Dr. D. Bellan Santini, Centre d'Oceanologie, Station Marine d'Edouard, rue Batterie des Lions, 13007 Marseille, France. Fax: 33 91 04 16 35

Eger, Hungary 8-11 September 1992

Remote sensing for monitoring the changing geography of Europe. 12th symposium of EARSEL. Contact: EARSEL secretariat, Mrs. M. Godefroy, B.P. 209, F92108 Boulogne-Billancourt, France.

Svratka, Czechoslovakia 3-10 September 1992

2th international conference: Cultural aspects of landscape. Organized by Iale working group "Culture and landscape". Contact: Dr. Hanna Swouden-Svobodov , PObox 75020, 1007 AA Amsterdam, The Netherlands. Tel. (0) 20-66251421.

Palanga, Lithuania October 1992

International meeting: Landscape ecology and landscape planning. Contact: B. Vosylyte, Institute of Ecology, Akademijos St. 2, Vilnius, Lithuania. Tel: (+0122) 359263. Fax: (+0122) 359257

New Delhi, India November 1992

Mapping of environment and cartography. Organized by Indian National Cartographic Association. Contact: Majid Husain, Dep. of Geography, Jamia Millia Islamia, New Delhi 110025.

Graz, Austria 4 - 8 April 1993

ERIM: 25th International Symposium on Remote Sensing and Global Environmental Change. Contact: ERIM/International Symposium. P.O. box 134001, Ann Arbor, MI 48113-4001, USA. Tel. (313) 994 120. Fax 994 5123

Rennes, France 7 - 9 June 1993

IALE-meeting: Agricultural landscapes in Europe. Contact: Sandrine Petit, Laboratoire d' volution des Syst mes Naturels et modifi s, Campus de Beaulieu, Avenue du G n ral Leclerc 5042 Rennes cedex, France, Tel: (33) 99 28 61 45. Fax: (33) 99 38 15 71

Tokyo, Japan 28 August - 3 September 1993

15th International Botanical Congress. Contact: M. Furuya, Frontier Research Programs, The Riken Inst., Wako City, 351-01, Japan