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bulletin

International Association for Landscape Ecology

EDITORIAL

A brand new Bulletin for a brand new International Association for Landscape Ecology.

This Bulletin is intended to inform the reader, whether geographer, biologist, regional planner, landscape architect, geologist or whatever, so that he or she can find a way more easily through the complex world of information on landscape and landscape ecology.

The IALE aims to be a communication channel between landscape ecologists all over the world. Three lines of communication are easily available:

- diaries of conferences, meetings, workshops, etc.
- information about current research
- reviews of publications

The Bulletin is meant to use these communication channels as well as possible. We have chosen the following format:

1. A section on general international information on IALE matters: news from the international secretariat, letters to the editor, reports from special working groups, etc.
2. Scientific features. To be compiled by a different regional IALE secretariat each time. It should contain information about current research items of special interest to all IALE members. Its actual composition should be the responsibility of each regio, but particular attention should be paid to:
 - methodological problems in landscape ecology;
 - contributions to the paradigm of landscape ecology;
 - research projects to be started in the near future.
3. A section on recently published scientific literature relevant to landscape ecologists. We envisage three different entries:
 - simple reference lists

- extended and short reviews
- information about field data (e.g. information on data banks).

4. An international diary.

5. A section on Regional Information. This section of the Bulletin will be prepared by each regional secretariat separately. Nevertheless, we would like to suggest some guidelines for it:

- Regional diary: Meetings, symposia, workshops etc. that are mainly interesting at regional or national levels.
- Regional problems: Landscape ecology may be faced with different problems in different regions. Therefore these specific problems should mainly be dealt with in the regional section.
- Literature: Publications and other written information that are only relevant at regional or national levels can be reviewed or mentioned here.

Sections 1,2,3 and 4 of the Bulletin will be compiled at the international secretariat. Each regional secretariat will compile its own section 5. The international secretariat will send originals of sections 1,2,3 and 4 to all regional secretariats; these will be attached to the appropriate section 5 and then duplicated. Each regional secretariat will be responsible for mailing the Bulletin to its members. Members living in countries that do not yet belong to a region will receive the Bulletin from the international secretariat.

We would welcome readers' comments on the contents and presentation of the Bulletin. Without your feedback we will not know whether the Bulletin is indeed succeeding in making relevant information on landscape ecology accessible to those interested and involved in this field.

The editors.

IALE INFORMATON

IALE PRESIDENT PREFACE

With this first bulletin, the International Association for Landscape Ecology, presents itself to the world. Conceived in Veldhoven, the Netherlands (1981), born in Bratislava, Czechoslovakia (1982), its first cry now (1983) goes over the world via this little pamphlet.

Who are we, what do we want?

We call ourselves "landscape ecologists", we are at the same time:

agronomists, foresters, conservationists, biologists, animal and plant and human ecologists, geographers of any kind, soil scientists, geomorphologists, sociologists, landscape architects, physical planners, hydrologists, conservationists, also landscape scientists, even pure landscape ecologist (whatever that may be).

In our society all these disciplines are logically and now legally united and everybody is welcome to contribute as long as he or she either has a landscape ecology state of mind or wants to obtain and promote one, or wants to be a pure landscape ecologist according to his or her own definition.

We have at least one thing in common: our concern with the intricate complex ecosystem of which we are a part, locally and at world scale. We are convinced about our responsibility for our environment and believe that an increase in knowledge about the interrelations in that environment will enable us to prevent disturbance and promote optimal living conditions for man, in harmony with the other creatures and creations.

There is room for those who are concerned to promote knowledge for higher sustained production of food, and for those that are primarily concerned about well-being in its cultural (including aesthetic) aspects and also for the ethici that see no right and reason for man to dominate all other parts of the ecosystem purely for his own benefit.

For all these groups equally, knowledge of relations in the land, that is "the study of landscape ecology", is the base for designing means of management, for the goals we strive after. It may be that other associations also have this goal. So much the better, but everywhere the accent may be focused on a part of the total.

Certain geographical association may claim to cover everything but other scientists, e.g. biologists, may not feel at home there. In biology organizations abiotic with important landscape ecology contributions are not welcome. And often more pure scientists do not feel at ease with the practical appliers of science. Experience in the Neth. Society for landscape ecology (WLO; currently 500 members) shows that in spite of existing associations for geography, soil science, ecology, vegetation science, etc., a landscape ecology association has a task and may flourish.

In Veldhoven and Bratislava a large audience expressed the opinion that this would hold in many other countries, and the world as a whole.

So there we are, please join actively.

We cannot, however, be a mixed amorphous mass. We are too many different types of people to try to do all the same. We need certain structures. In the first place of course a vertical structure in the sense of an administration. You will find details about the strongly decentralized set-up elsewhere in this Bulletin.

For the horizontal structure based on the multitude of attitudes gathered under the same umbrella of landscape ecology, we chose to have a series of Commissions. These Commissions (or Working Groups) are not organized discipline-wise according to land attributes; for that many associations exist already.

The proposed Commissions deal with landscape ecology as a whole, but differ in the tasks, or stage of the study. We need to study fundamental theory, without which no scientific approach is possible. We need methodology. There are special fields of application, such as production, conservation and urban problems. The following list represents a proposal for Commissions within the IALE.

Being a good child it shows, young as it is, the signs of kinship with its parents (in Veldhoven).

Proposal for IALE commissions or working Groups

1. Fundamentals.
Concepts, methodology, topological and chorological relations, etc.
2. Geo-information systems and teledetection.
Techniques of survey, teledetection,

recording, data banks, automatic cartography.

3. Production land ecology.
Optimizing sustained production by balance between development and conservation (agriculture, forestry, range management).
4. Urban ecology (incl. urban fringe).
Optimizing human welfare in built-up areas and surroundings.
5. Landscape architecture, Visual landscape.
Human welfare. Visual aspects (aesthetics).
6. Nature protection.
Care for natural values which are less relevant for short-term economic gain.
7. Land evaluation and planning.
Translation (methodology) of research data into possible action (application).
8. Landscape ecology aspects of international development.
Technical assistance to developing countries is often one-sided, too much aimed at short term economic gain. Here international promotion of the landscape ecology state of mind is a must.

The last aspect should also be present in the first seven, but still it may be worthwhile to mention it separately. This and the coming decades are decades of revolutionary change in that part of the world!

Our next meeting will be October 1984 in Denmark. There we may discuss these proposals. If you have any ideas about them, let us know.

I.S. Zonneveld,
President IALE,
Enschede, The Netherlands.

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THE INTERNATIONAL ASSOCIATION FOR LANDSCAPE ECOLOGY; A BRIEF HISTORY

The first ideas for setting up an international organization for communication

and co-operation in the field of landscape ecology were conceived during the International Symposia on Problems of Landscape Ecology Research, which have been organized in Czechoslovakia triennially for over fifteen years by Dr. M. Ruzicka and his team from the Slovak Academy of Sciences. More concrete proposals were put forward by a group of Dutch landscape ecologists, headed by Prof. E. van der Maarel, at the International Congress 'Perspectives in Landscape Ecology', held in Veldhoven, The Netherlands, in April 1981. These proposals were accepted by the participants at the Congress, representing twenty four countries, and a Committee consisting of members of The Netherlands Society for Landscape Ecology (W.L.O.) was formed to pave the way for the establishment of the 'International Association for Landscape Ecology'(IALE). The founding of such an association was proposed to take place at the VIth International Symposium in Piestany in 1982 in acknowledgement of Czechoslovak endeavours for international co-operation in the field of landscape ecology.

Thanks to the Committee's work, draft statutes were presented at this symposium. One of the main problems in drafting these statutes was to find an administrative structure for the Association that would avoid the necessity of transferring large sums of money to e.g. the international secretariat. The solution was found - as can be seen in the Statutes in this Bulletin - in a structure with relatively independent and self-supporting Regions. During the Piestany Symposium the draft statutes were discussed and finalized by a multinational working group.

The product of several years of discussion and preparation, the final version of the statutes was - after incorporation of a few last-minute amendments - accepted at the Founding Meeting of the International Association for Landscape Ecology, held at Piestany in October 1982. Representatives of the following countries attended this meetings: Austria, Canada, Cuba, Denmark, Federal Republic of Germany, The Netherlands, Portugal, Thailand, the United States of America. Representatives of the following countries were present as observers: Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Soviet Union.

After the Statutes has been accepted, the chairman of the Founding Meeting, Drs. S.W.F. van der Ploeg, declared the IALE to be founded.

The first activity of the new association was then to nominate the members of the Executive Committee. This was done according to do a suggestion of the Founding Committee. For the first period the following members were nominated to the Executive Committee:

President:

Prof. Dr. I.S. Zonneveld (NL; Professor of vegetation survey and landecology; International Institute of Aerial Survey and Earth Science (ITC), Enschede, and Agricultural University, Wageningen; his nomination was supported during the meeting by F.B. Golley (USA) and H.G.A. Reimerink (NL).

Vice President:

Prof. Dr. R.T.T. Forman (USA; Professor of Botany, Rutgers State University, New Jersey; his nomination was supported by F.B. Golley (USA) and M.J. Phipps (CDN).

Vice President:

Prof. Dr. K.F. Schreiber (FRG; Professor of Landscape Ecology, Institute of Geography, University of Münster; his nomination was supported by S.M. ten Houde de Lange (NL) and F.B. Golley (USA).

Secretary General:

Drs. S.M. ten Houde de Lange (NL; Head Department of Landscape Ecology, Research Institute for Nature Management, Leersum; his nomination was supported by P. Agger (DK) and F.B. Golley (USA).

Deputy Secretary General:

Drs. W.B. Harms (NL; Department of landscape planning, Research Institute for Forestry and Landscape Planning "De Dorschkamp", Wageningen; his nomination was supported by P. Agger (DK) and M.J. Phipps (CDN).

Treasurer:

Drs. F.J.A. Saris (NL; Secretary, Netherlands Society for Landscape Ecology; (W.L.O.); Netherlands Central Organization for Applied Scientific Research, Delft; his nomination was supported by J. Brandt (DK) and K. Meisel (FRG).

Two posts of Vice President are vacant because in several countries the Academy of Science must be consulted before members from these countries can join the IALE officially. The meeting expressed the wish to nominate Dr. M. Ruzicka (Bratislava, Czechoslovakia) as a Vice President of the Association.

The following recommendations concerning the International Association for Landscape Ecology were accepted during the founding meeting:

1. It is recommended that the number of vice presidents be limited to four persons and that these persons represent different regions.
2. It is recommended that the location of the headquarters of the international secretariat be discussed at the next meeting of the General Assembly.
3. It is recommended that the members taking part in the formation of a Region bear in mind the importance of having a broad representation of the different disciplines involved in landscape ecology.

After the founding of IALE the meeting was addressed by several speakers. Prof. K.F. Schreiber, one of the new Vice Presidents, took the floor because Prof. Zonneveld was not present at the Founding Meeting. He discussed the term 'landscape ecology' and concluded that, although this term had been introduced by C. Troll back in the 1930s, developments in the near future will determine which definition or interpretation will be adopted within IALE. Schreiber recalled the initiatives and efforts of those whom he named as the 'spiritual fathers' of IALE: Prof. E. van der Maarel (NL) and Dr. M. Ruzicka (CCSR), and thanked the members of the Founding Committee for their work since the Congress in Veldhoven.

Next, Dr. Ruzicka, as chairman of the Symposium, expressed his pleasure that Czechoslovakia had been able to contribute to the promotion of international co-operation and wished the new association a good start. Finally, Prof. F.B. Golley, in his capacity as Secretary General of the International Association for Ecology (INTECOL), congratulated the new Association on its establishment and expressed a wish for good co-operation between IALE and ITECOL in the future. Since the founding of IALE work to establish regional groups or societies for landscape ecology has been done in several countries. As part of its task to launch the IALE the Executive Committee is establishing contacts in many countries and trying to publicize the existence of IALE, is publishing this IALE Bulletin and, together with several Danish colleagues, is organizing the first IALE meeting in October 1984 in Roskilde, Denmark.

S.M. ten Houde de Lange,
Secretary General, IALE.

FEATURES

LANDSCAPE ECOLOGY TODAY IN THE USA

A workshop on Landscape Ecology was held April 25-27, 1983 at Allerton Park, Illinois, USA. The Workshop was funded by the National Science Foundation and organized and hosted by: Paul G. Risser, Chief, Illinois Natural History Survey; James R. Karr, Professor of Ecology, University of Illinois; and Richard T.T. Forman, Professor of Botany, Rutgers University. Twenty-five scholars participated, the majority being ecologists, but with geography, landscape design, wildlife management, forestry, water resources, and agricultural pest management represented. Two directors from the National Science Foundation attended, as well as Gray Merriam from Canada and Michel Godron from France. The objectives of the Workshop were to determine the status of landscape ecology in the United States today, and identify research areas in landscape ecology which appear promising for the immediate future.

Briefly, the Workshop pondered the perennially-difficult definition and concept of landscape ecology. The participants provided an array of concepts at the beginning which gradually narrowed during the 2½-day period. Many seemed to agree that landscape ecology focuses on: (a) the landscape, in the anthropocentric sense, (b) spatial heterogeneity, (c) fluxes, or redistribution, among the internal ecological units or landscape elements, and (d) human actions as prominent processes in most landscapes. The question of scale was particularly troublesome, and temporal patterns were recognized as critical and widespread. Participants agreed that landscape ecology helps provide theoretical underpinning for a variety of applied disciplines, such as regional planning, landscape architecture, and natural resource management. Landscape ecology in the USA at present is basically viewed as the intersection of many disciplines.

The Workshop then considered a few representative questions which may be effectively addressed by landscape ecology. How are fluxes of organisms and of material and energy related to landscape heterogeneity? What formative processes, both historical and present, are responsible for the existing pattern in a landscape? How does landscape heterogeneity affect the spread of disturbances? How can

conventional natural resource management be enhanced by a landscape ecology approach? The answers were of course incomplete, but the quality of insights which emerged convincingly illustrated the power of the landscape ecology approach. Much of the remaining time was spent considering possible methodologies applicable to landscape ecology. An impressive sequence of methods for measuring landscape heterogeneity and data acquisition approaches followed. Perhaps most remarkable was the richness in potentially-useful modelling approaches described. Illustrations of procedures useful in the solution of pest management problems were given.

The Workshop finished with a list of conclusions and recommendations. This brief abstract by one participant doesn't do justice to the interest generated in the Workshop, the quality of the discussion, and the recognized potential of landscape ecology. Similarly, a full report of the Workshop would emphasize the excessively-tight time schedule and consequent incompleteness in dealing with topics, thus being basically unpublished. Instead, the organizers plan to publish a summary of the Workshop in the months ahead.

Richard T.T. Forman, Rutgers University,
New Brunswick, New Jersey, USA
July 5, 1983.



LANDSCAPE ECOLOGY IN THE NETHERLANDS: THE W.L.O.

The Netherlands Society for Landscape Ecology, in Dutch W.L.O. was founded in 1972 on the initiative of some soil scientists and biologists. The aims of the society were to gain knowledge about the structure and function of the landscape, to develop methods for inventory and evaluation and to use and promote landscape ecology in urban and regional planning, nature conservation, and the management of the human environment. The society is open to anyone who in some way or another deals with research into or education on or application of landscape ecology.

The Society appeared to be needed. It

grew rapidly to nearly 400 members in 1976 and to approximately 600 members in 1983. Most of the members work and live in The Netherlands. Nearly fifty members work in Belgium; Greece, German Federal Republic, Czechoslovakia, Sweden and Indonesia are represented by one or two members per country.

A survey of members of the W.L.O. revealed that approximately third are biologists, one-quarter are physical geographers and soil scientists, one-quarter are agriculturists, landscape architects and foresters, and the remaining 20% are economists, urban and regional planners and social scientists. Approximately 24% of the members are employed at an university, 14% at research institutes, 36% in the agencies of the local, regional and national authorities, 26% are students or work in private enterprises (consultants, urban planners).

With the number of members the sphere of activities of the W.L.O. has also enlarged. The W.L.O. has become a centre of fruitful confrontation between research workers and their customers. The quarterly journal developed from a medium for communication to a scientific journal. There has been issues on special themes, mostly brought out as a report of a symposium on that theme. In 1982, for instance, an issue came out on the theme "mapping, monitoring and predicting". This issue was edited in co-operation with the Ecological Society and concerns mapping and monitoring of biotic and abiotic variables, possible methods for analysis and some aspects of their use in policy making. It was a report of a symposium on that theme, organized by both societies. Another special issue was brought out in 1983. It was the report of a symposium held in Gent (Belgium) on the theme "nature and national parks in Flanders". The Society wants to formalize this development. In 1984 the journal will be brought out professionally. The name of the journal will be changed and its scope will be specified.

Within the W.L.O. several working groups exist: a working group on theory, on operationalization and application and since 1982 on ecological corridors. The year 1982 was important for the W.L.O. At the general assembly of April 19 the first decennial was celebrated. In his speech on "growing and blossoming in landscape ecology" prof. dr. I.S. Zonneveld referred to the interdisciplinary character and what he called the "practical holistic approach" of landscape

ecology. He also emphasized the relation between land use aimed at production (agriculture) and at ecosystem regulation (nature conservation), because both converge in landscape ecology.

In that year the first plan for course of action was prepared. It deals with the period 1982-1987 and will be a guideline for the activities of the W.L.O. in these years. An important aspect of this plan is that it enables the co-ordination and weighing of activities and priorities. The members now have better possibilities of influencing the policy of the board, by assessing and deciding on priorities at the general assembly. Thirty-seven points for action were included in this plan, including:

- continuing to organize symposia;
- the already mentioned change in the journal;
- the start of a project on "long term vision of landscape ecology research";
- agreement to contribute to the founding and organization of the I.A.L.E..

At the request of the W.L.O. the institute for environmental Studies of the Free University of Amsterdam started the project "Long term vision of landscape ecology research". A report on this project came out in 1983 and contains an inventory of supply and demand of research into landscape ecology and of bottlenecks and priorities derived from it.

As a selection from those priorities, research on the following can be mentioned:

- possibilities for maintaining ecological structure and quality outside reserves;
- effects of agriculture on quality and quantity of groundwater;
- consequences of intensive recreational use of the landscape;
- possibilities for small-scale innovation in agriculture (use of methane fermentation of manure, firewood from wooded banks and hedgerows);

The Society will try to gain attention and support for these priorities. The list of the priorities will be adjusted at regular intervals. A second W.L.O. research project started in 1982. It is being carried out by the Foundation for applied landscape ecology research (STL, Nijmegen). The project is called "Inventory and evaluation of methods for environmental inventory and their potential applications". An important issue in this project is how environmental inventory can be used for mapping predicted effects and for monitoring in physical planning. It will be reported on in 1984.

In 1982 two important publications were issued:

- Perspectives in Landscape Ecology, proceedings of the international congress, organized by the W.L.O. in 1981, edited by S.P. Tjallingii and A.A. de Veer. This book contains the texts of the lectures and the workshops held at the congress;
- Landschapstaal, edited by P. Schroevers. This book is the product of several years of discussion on scope and terminology held in the working group on theory of the W.L.O. After the VIth

international symposium in Piestany a start was made to obtain an English translation.

In the following years the W.L.O. will continue with the co-ordination and stimulation of research as stated in the plan of course of action and in the long-term vision. Symposia will be held on various subjects. Finally the W.L.O. will actively help the young I.A.L.E. to grow up rapidly.

Robert H.G. Jongman
Agricultural University Wageningen, dept. of urban and regional planning.

LITERATURE

PERSPECTIVES IN LANDSCAPE ECOLOGY

Contributions to research, planning and management of our environment

Proceeding of the International Congress organized by the Netherlands Society of Landscape Ecology, Veldhoven, The Netherlands, April 6-11, 1981.

S.P. Tjallingii and A.a. de Veer (Eds)

Both landscape ecology and landscape planning are trying to approach a whole, a synthesis. They work on basis of many specialized scientific and practical disciplines, each producing a sea of information. The individual scientist struggles to keep pace with new developments. This task is almost a hopeless one where the specialized seas merge into the ocean of landscape information. Is it possible to organize a congress that does not carry more water to this ocean but endeavours to clarify the structures of its depths and surfaces, its islands and shores?

The congress organization committee has tried to meet these problems by setting up a structure of LECTURES with views about unifying principles and practical syntheses, WORKSHOPS to discuss controversial points and POSTERS to offer a variety of new results and ideas.

The Proceedings follow this scheme. Each chapter comprises LECTURES, POSTERS and DISCUSSION. Lectures and posters are published as they were submitted by their authors. The workshops have been synthesized. An attempt is made to summarize discussion topics at the end of each chapter.

1982, 352 pages, 22 lectures, 48 posters, 19 workshops, cloth
ISBN 90-220-0787-1, Price Dfl. 60.00.

Pudoc, P.O. Box 4, 6700 AA Wageningen, The Netherlands.

LANDSCAPE ECOLOGY Theory and Applications

Z. Naveh, Technion-Israel Institute of Technology, and A.S. Lieberman, Cornell University.

This book provides a comprehensive conceptual and theoretical framework for landscape ecology as the holistic, scientific basis for land and landscape appraisal, planning, management, conservation, and reclamation. This unified theory of landscape ecology as a transdisciplinary human ecosystem science is attempted by integrating new insights in the theory of general systems, living systems, ecological systems, and in biocybernetics.

In a clear, concise, but non-technical way, this book presents a wide range of ideas and up-dated information. These transdisciplinary paradigms of landscape ecology will supplement the "environmental" disciplines of human ecology, applied ecology, and geography. Clearly this book is invaluable to landuse students and scholars, researchers, educators, and decision makers.

1983/approach. 352 pp./61 illus./cloth/
90849-8
(Springer Series on Environmental Management)

The International Association for Landscape Ecology (IALE) exists to promote interdisciplinary scientific research and communication between scientists and planners

IALE EXECUTIVE COMMITTEE

President: I.S. Zonneveld (Netherlands)
 Vice President: R.T.T. Forman (USA)
 Vice President: K.F. Schreiber (Fed. Rep. Germany)
 Sec.-Gen.: S.M. ten Houte de Lange (Netherlands)
 Deputy Sec.-Gen.: W.B. Harms (Netherlands)
 Treasurer: F.J.A. Saris (Netherlands)

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The IALE-BULLETIN is published two times per year. News items, articles, comments and suggestions are welcomed.

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DIARY

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|--------------------|--|--------------------|---|
| Jan. 16-21
1984 | Environmental Impact Assessment and Land use Planning, Hong Kong. Enq.: Mrs. Sandra Ralston. Dept. of Geography, University of Aberdeen, Old Aberdeen AB9 2UF, Scotland, UK. tel. (0224) 40241 Ext. 6124/6515. Telex: 73458. | Jun 13
1984 | 2nd International Westlands Conference, Joint Meeting INTECOLSCOPE-MAB/UNESCO. Trebon, Czechoslovakia. Enq.: Dr. Jan Kvet, Inst. of botany, Dep. of Hydrobotany, Trebon, Dukelska, Czechoslovakia. |
| Apr. 5-6
1984 | XVIIIth Symposium "Managing our Environment - Today and Tomorrow", Geneva. Enq.: International Professional Association for Environmental Affairs, Square des Latins 49, Bte 11 B-1050 Brussels, Belgium. Tel. (02)6406041. | Aug. 27-31
1984 | 25th International Geographical Congress. Paris, France. Enq.: Comite d'Organisation du 25e Congres International de Geographie, 19, rue Isidore Pierre - 14000 Cean, France. |
| May 28
1984 | International Symposium-Management of the World's Savannas. Brisbane, Australia. Enq.: Symposium Secretary, Division of Tropical Crops and Pastures, CSIRO, Cunningham Laboratory, St. Lucia, Brisbane, 4067. | Oct. 15-19
1984 | First IALE-seminar "Methodology in landscape ecological research and planning", Roskilde, Denmark. Enq.: Ms. Inge Birkelund, Roskilde University Centre p.o. box 260, DK-4000 Roskilde, Denmark. tel. (02)757711. |