

2. Beginnings of Landscape Ecology in Slovakia



2.2. International symposia as an input of Slovak landscape ecologists to international cooperation and IALE activities

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The first ideas for setting up an international organisation for communication and co-operation in the field of landscape ecology were conceived during the International Symposia on Problems of Landscape Ecological Research. These symposia have been organised in former Czechoslovakia (and later since 1993 in the Slovak Republic) triennially by professor Milan Ružička and his team from the Slovak Academy of Sciences since 1967.

The idea to set up an international association for landscape ecology developed among Dutch landscape ecologists during the end of the 70ties based on a Slovakian proposal presented in the conclusions of **the 1st International Symposium on Problems of Landscape Ecological Research** Bratislava (September 4 – 9, 1967, Východná – Bratislava, former Czechoslovakia). Dutch landscape ecology had at that time already strong tradition for international cooperation, mainly in western Europe and North America, but decisive for the initiative was participation of Dutch landscape ecologists in some landscape ecological conferences in symposia in Eastern Europe especially in German Democratic Republic, Czechoslovakia, Poland and the Soviet Union (especially Siberia).

Milan Ružička and his team found international cooperation through contacts with institutes in Germany and France. These contacts led to the idea of initiating international symposia on the problems of landscape ecological research. It was clear, that there was an enormous potential for the development of both science and planning in a closer international cooperation between landscape ecologists and landscape planners and managers in East and West, and Dutch and Slovakian colleagues decided to overcome the obstacles and to prepare proposal for a new organisation.

More concrete proposals were put forward by a group of the Dutch landscape ecologists at the International Congress “Perspectives in Landscape Ecology” held in Veldhoven, the Netherlands, in April 1981. **The funding of such an association was proposed to take place at the 6th International Symposium in Piešťany (October 25-30, 1982, former Czechoslovakia)** in acknowledgement of Czechoslovak endeavours for international cooperation in the field of landscape ecology. We can say, that **International Association for Landscape Ecology (IALE) conceived in Veldhoven (the Netherlands, 1981) and born in Piešťany (former Czechoslovakia, 1982)**. Milan Ružička became a vice-president of IALE and he performed this position since 1982 to 1991.

In the years 1984 – 1990 the international symposia organised in the Czechoslovakia were regularly as a part of the IALE activity organised by the Secretariat of the East European Region. They played an important role in the field of exchange of experience and knowledge between East European and other regions of IALE, but also in the development of the scientific basis of landscape ecology.

Tradition for international symposia is continuing and up to now have been realised 14 international symposia on this problem (see table 1). The paper presented detailed overview of the objectives of these international symposia and their input to the international cooperation and IALE activities.

Table 1 Overview about International Symposia on the Problems of Landscape Ecological Research organised by the Slovak Academy of Sciences since 1967 to 2006

International symposia	Term, venue and main organising institutions	Number of participants and participating countries
1st Int. Symposium Theoretical problems of biological landscape research	September 4–9, 1967, Bratislava and Východná, High Tatras Mts. Institute of Landscape Biology SAS	42 participants coming from 6 countries: Czechoslovakia, France, FRG, GDR, Hungary, Poland
2nd Int. Symposium Application of landscape ecology in the practice	September 21–24, 1970, Smolenice Institute of Landscape Biology SAS	86 participants coming from 11 countries: Belgium, Bulgaria, Czechoslovakia, France, FRG, GDR, Hungary, the Netherlands, Poland, Soviet Union, Sweden
3rd Int. Symposium Content and object of the complex landscape research	November 28 – December 1, 1973, Smolenice Institute of Landscape Biology SAS	86 participants coming from 14 countries: Austria, Belgium, Bulgaria, Czechoslovakia, France, FRG, GDR, Hungary, the Netherlands, Poland, Rumania, Soviet Union, Sweden, Yugoslavia
4th Int. Symposium Ecological data for optimum landscape utilisation	November 22–26, 1976, Smolenice Institute of Experimental Biology and Ecology SAS	62 participants coming from 9 countries: Belgium, Bulgaria, Czechoslovakia, France, FRG, GDR, Hungary, the Netherlands, Soviet Union
5th Int. Symposium Ecological stability, resistance, diversity, potentiality, productivity and equilibrium of landscape	November 19–23, 1979, Stará Lesná, High Tatras Mts. Institute of Experimental Biology and Ecology SAS	114 participants coming from 17 countries: Austria, Bulgaria, Canada, Czechoslovakia, Cuba, Denmark, FRG, GDR, Hungary, the Netherlands, Poland, Portugal, Romania, Soviet Union, Thailand, USA, Yugoslavia
6th Int. Symposium Ecosystem approach to the (agricultural) landscape Foundation of IALE on October 29th 1982	October 25–30, 1982, Piešťany Institute of Experimental Biology and Ecology SAS	122 participants coming from 16 countries: Austria, Bulgaria, Canada, Czechoslovakia, Denmark, France, FRG, GDR, Hungary, the Netherlands, Nigeria, Poland, Portugal, Soviet Union, Thailand, USA
7th Int. Symposium Topical problems of landscape ecological research and planning	October 21–26 1985, Pezinok Institute of Experimental Biology and Ecology of the SAS and the Secretarial of the East European Region of IALE	135 participants coming from 13 countries: Bulgaria, Czechoslovakia, Finland; FRG; GDR, Hungary; the Netherlands; Poland; Portugal; Thailand; Soviet Union; Sweden, Yugoslavia
8th Int. Symposium Spatial and functional relationships in landscape ecology	October 3–7, 1988, Zemplínska Šírava Institute of Experimental Biology and Ecology of the SAS and the Secretarial of the East European Region of IALE	148 participants coming from 18 countries: Australia, Austria, Belgium, Bulgaria, Canada, China, Czechoslovakia, Denmark, Finland, FRG, GDR, Great Britain, Hungary, the Netherlands, Poland, Sweden, Soviet Union, USA

International symposia	Term, venue and main organising institutions	Number of participants and participating countries
9th Int. Symposium Theory and practice in landscape ecology	October, 14–19, 1991, Dudince Institute of Landscape Ecology SAS; the Secretariat of the East European Region of IALE; Commission for the Environment of the Slovak Republic	70 participants coming from 9 countries: Austria, Finland, Germany, East Germany, Hungary, the Netherlands, Poland, Venezuela, Czechoslovakia
10th Int. Symposium Present state and new trends in landscape ecology	November 21–24, 1994, Smolenice Institute of Landscape Ecology SAS	92 participants coming from 13 countries: Austria, Belarus, Czech Republic, Denmark, Finland, FRG, Great Britain, Hungary, the Netherlands, Poland, Russia, Slovak Republic, Venezuela
11th Int. Symposium System approaches to landscape research	November 12–16, 1997, Nitra Institute of Landscape Ecology SAS in cooperation with: Comenius University in Bratislava; Austrian Institute for Eastern and South-Eastern Europe, Department in Bratislava; Constantine the Philosopher University in Nitra.	70 participants coming from 11 countries: Austria, Belarus, Belgium, China, Czech Republic, Germany, Japan, Poland, Russia, Slovak Republic, Ukraine
12th Int. Symposium Protected areas and landscape ecological research	November 7–11, 2000, Stará Lesná – High Tatras Mts. Institute of Landscape Ecology SAS in cooperation with: Comenius University in Bratislava; Austrian Institute for Eastern and South-Eastern Europe, Department in Bratislava; Slovak Committee for the UNESCO Program Man and the Biosphere (MaB).	75 participants coming from 8 countries: Austria, Czech Republic, Great Britain, Greece, Hungary, Poland, Russia, Slovak Republic
13th Int. Symposium Landscape ecology – an international integrating tool in environmental issues	September 30 – October 3, 2003, Mojmírovce Institute of Landscape Ecology SAS in cooperation with: Ministry of the Environment of the Slovak Republic; Comenius University in Bratislava, Constantine the Philosopher University in Nitra; Austrian Institute for Eastern and South-Eastern Europe, Department in Bratislava; and others	110 participants coming from 10 countries: Austria, Belarus, Czech Republic, FRG, Hungary, Japan, Lithuania, Poland, Russia, Slovak Republic
14th Int. Symposium Implementation of landscape ecology in the new and changing conditions	October 4–7, 2006, Stará Lesná, High Tatras Mts. Institute of Landscape Ecology SAS, Slovak Association for Landscape Ecology (IALE-SK), and Constantine the Philosopher University in Nitra	128 participants coming from 11 countries: Austria, Czech Republic, FRG, Great Britain, Hungary, Latvia, Lithuania, the Netherlands, Poland, Slovak Republic, Turkey

3. Agriculture and exploitation of cultivated soil

Symposium participants fully accepted the final recommendations of the 1st symposium and considered them as valid based for the development of landscape ecology. In addition, it was emphasized that the problems discussed at the symposium comply with the goals and efforts of many international organisations (UNESCO, FAO, IUCN, IFLA, EHO, IBP, INTECOL etc.). The participants having contacts with these organisations promised to strive for a close collaboration. Symposium participants agreed upon the recommendations relating to:

- Problems of applying landscape ecology in the practice and
- Scientific-organisational problems of consolidating and supporting international collaboration.

The 3rd International Symposium was held in November 1973 (Smolenice) with main topic: the “Content and object of the complex landscape research in the protection and formation of human environment”. Symposium was organised by the Institute of Landscape Biology SAS. Objectives of the symposium were orientated to:

1. Theoretical and methodical problems in the complex landscape research.
2. Concepts and terminology
3. System approach and mathematical methods
4. The role of specialised scientific branches
5. Some selected problems of the research and application of results the specialised scientific branches in protection and formation of human environment.

The Symposium was concluded with following recommendations:

- To intensify the initiated cooperation
- To attempt the unification the terminology
- To concentrate the care on the environmental problems
- To necessity to establish the international landscape ecological journal.

The 4th International Symposium “Ecological data for optimum landscape utilisation (November 1976, Smolenice) was aimed to the preparation and elaboration of the ecological document for optimal utilisation of landscape. Symposium was organised by the Institute of Experimental Biology and Ecology SAS. Objectives of the symposium were orientated to:

1. Data and inputs for complex landscape ecological research
2. Methods data providing and its synthesis
3. The content and methods of landscape ecological proposals in comparison of application results

Symposium participants agreed upon the recommendations relating:

- To pay attention especially on the changes and flows in landscape
- To continue with the confrontation among the landscape ecological proposals and possibilities of their applying into practice.

The topic of the 5th International Symposium was “Ecological stability, resistance, diversity, potentiality, productivity and equilibrium of landscape” and it was held in November 1979 (Stará Lesná, High Tatras Mts.). Symposium was organised by the Institute of Experimental Biology and Ecology SAS. Symposium was organised by the Institute of Experimental Biology and Ecology SAS. Objectives of the symposium were orientated to:

1. Theoretical questions of ecological stability, resistance, diversity and equilibrium in landscape
2. Methodologies of study of ecological stability, resistance, diversity and equilibrium in landscape
3. Biological productivity and cycle of elements in landscape

4. Ecological potentiality of landscape
5. Ecological optimisation of landscape utilisation

The Symposium participants recommended:

- To stress the system approach in landscape ecological research
- To indicate the necessity to increase the education of young scientists in landscape ecology
- The involvement in complex landscape ecological research of specialised institutions was affirmative appreciated
- In the final recommendation the Czechoslovak endeavour to enhance the international cooperation was formulated in the requirement to find an adequate organisation form for supporting the landscape ecological research.

The First International Congress “Perspectives in Landscape Ecology”, held in Veldhoven (April, 1981) recommended that in the frame of the 6th International Symposium (to be held in Czechoslovakia in 1982), IALE should be established.

A team of Dutch landscape ecologists undertook the formulation of requirement and submitted more concrete designs at the first international congress. The first working principles for the foundation of the International Association for Landscape Ecology (IALE) were accepted in the presence of 300 participants from 24 countries (including Slovak participants – M. Ružička together with L. Miklos presented a paper “Methodology of ecological landscape evaluation for optimal development of territory”).

The Preparatory Committee consisting of members of the Dutch Society of Landscape Ecologists was initiated. At the congress the participants recommended the foundation of IALE to be carried out at the 6th International Symposium on problems of ecological research of landscape (held in former Czechoslovakia in 1982). The proposal was based on the fact that the international symposia organised by the Slovak Academy of Sciences have been a base for this cooperation and the participants of the congress wished to regard the tradition in this way.

The 6th International Symposium in October 1982 (October 25 – 30, Piešťany) was focussed on the **“Ecosystem approach to the (agricultural) landscape”**. Symposium was organised by the Institute of Experimental Biology and Ecology SAS (Figs. 2 – 3).



Fig. 2 The 6th International Symposium: professors G. Haase, V. Preobraženskij, M. Ružička, Ľ. Mičian (Author: T. Hrnčiarová)



Fig. 3 The 6th International Symposium: Ružička's band with S. M. ten Houte de Lange (Author: T. Hrnčiarová)

One of the most important tasks resulting from the recommendations of the 5th International symposium, held in November 1979 (Stará Lesná, High Tatras Mts., Slovakia) and

consultations of the International Congress on Landscape Ecology in April 1981 (Veldhoven, the Netherlands) was to develop and support ecosystem approach to the landscape and at the same time to devote special attention to the agricultural land. Objectives of the symposium were orientated to:

1. Ecosystem approaches to the landscape
2. Ecosystem aspects of agricultural landscape formation and use (theoretical and methodological questions; agricultural landscape planning and development;
3. Stability and diversity from the landscape ecology aspect
4. Selected concept and terms in the sphere of landscape ecology.

The symposium based opened discussion within objectives (topical panels). The establishment of IALE as one of important point was also placed on the agenda of the Symposium.

During the Piešťany symposium a draft of statutes was discussed and finalised by a multinational working group. The Joint Working Group for the preparation of IALE prepared the final version of the statutes of the new organisation on October 26, 1982. On October 29 1982 in the morning discussion participants from: Austria, Canada, Denmark, Federal Republic of Germany, France, the Netherlands, Nigeria, Portugal, Thailand and USA adopted the statutes IALE. The participants from Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland and Soviet Union participated as observers since their official cooperation had to be discussed firstly with representatives of their respective academies of sciences.

The fact that the establishment of IALE took place in former Czechoslovakia was honour to the Czechoslovak science and research, which laid the foundations to the development of international cooperation in this area. The former socialistic countries conducted the ecological landscape research within the framework of the Common Mutual Economic Aids (CMEA) scientific and technical cooperation on the problem of protection of Ecosystems (Biogeocenoses) and Landscape thus contribute to the solution of question concerned the formation and protection of the environment. Co-operation between IALE and INTECOL was also discussed.

During symposium a nomination of the members of the Executive Committee and election of a preliminary Executive Committee were realised. The symposium participants expressed the wish to nominate M. Ružička, one of the “spiritual fathers” of IALE, as a vice-president of IALE. Due to organisation circumstances, M. Ružička was able to accept his nomination as vice president of IALE at the beginning of 1984.

At the same time, the organisers of symposium – the Institute of Experimental Biology and Ecology SAS – were entitled to prepare a proposal of the Statutes of the Region and the connections with the General Secretariat of IALE.

The Eastern European Region of IALE was established at the First IALE seminar held in Roskilde

On October 15th 1984 the First IALE seminar was held in Roskilde. M. Ružička together with L. Miklós presented a plenary paper: Methodology of synthesis in landscape ecological planning (LANDEP). At the First IALE seminar the Executive Committee of IALE approved to establish the East European region of IALE (EER IALE) with the regional secretariat in former Czechoslovakia. Executive Committee consisted of:

Chairman: M. Ružička (former Czechoslovakia)

Vice-chairman: T. Bartkowski (Poland)

Vice-president: G. Haase (former German Democratic Republic)

Vice-chairman: T. D. Alexandrova (former Soviet Union)

Secretary: M. Kozová (former Czechoslovakia)

Deputy Secretary: T. Hrnčiarová (former Czechoslovakia)

Treasurer: P. Nováček (former Czechoslovakia)

Tens of outstanding landscape ecologists and geocologists are registered as members of this region. The aims of the regional secretariat were:

- To coordinate the IALE activities within the member countries
- To ensure the contact with the international IALE Secretariat
- To publish the IALE Bulletin extended by a separated column with regional information.

The 7th International Symposium was aimed to the “**Topical problems of landscape ecological research and planning**” (held in October 1985 in Pezinok). Symposium was organised by the Institute of Experimental Biology and Ecology SAS and the Secretariat of the Eastern European Region of IALE. Objectives of the symposium were orientated to:

1. Synthesis and comparison of methods usable in landscape-ecological planning
2. Comprehensive evaluation of landscape
3. Special evaluation of landscape
4. Ecological monitoring of landscape.

The second meeting of the IALE General Assembly was held during symposium and a new working group within IALE focused on the landscape ecological planning was initiated (chairman: L. Miklós, secretary: M. Kozová).

During the symposium favourable conditions for the preparation of further cooperation within Eastern European Region IALE (EER IALE) had created. A survey of the participation of the countries of the Region was made – Bulgaria, German Democratic republic, Hungary, Poland, Soviet Union and Czechoslovakia were interested in membership of the Region. The Secretariat of the Region was in contact with representatives of the EER IALE member countries. During 1985-1988 they discussed the prerequisites of the region as well as the IALE rules and the state of the creation of national sections – associations. In 1985 the Polish Section of IALE was established. Preliminary Council of the EER IALE and Executive Committee were approved for the period since 1988 to 1991.

The 8th International Symposium “Spatial and functional relationships in landscape ecology” was held in October 1988 (Zemplínska Šírava) (Figs. 4 – 6). Symposium was organised by the Institute of Experimental Biology and Ecology of the SAS and the Secretariat of the Eastern European Region of IALE. The main objectives of the symposium were as follows:

1. Spatial relationships in landscape ecology (present problems on landscape-ecological research; spatial flows of energy, matter, and organism in the landscape; spatial structure of landscapes)
2. Functions of biotic components in landscape (formation of territorial system of ecological stability; evaluation of spatial, qualitative, and dynamic characteristics of biotic landscape components; conservation of nature, natural resources and ecological monitoring).

Within the framework of the symposium a professional field trip through the Eastern Slovakian Lowland was organised and the main research results of the Bioproject and the target-oriented project „Ecological Optimisation of the Eastern Slovakian Lowland utilisation“ were presented.

A short meeting between the old and the new Committee was held on October 2nd 1988 in Zemplínska Šírava. A session of the new Executive Committee of IALE was held on October 3rd 1988, as well as the General Assembly of IALE. The “Temporary Council” of IALE has been established as the chief managing unit, which should control the work of the Executive Committee. A session of the representatives of the Eastern European Region of IALE was

held; within the framework of this session a temporary council of the region has been established.



Fig. 4 The 8th International Symposium: F. B. Golley, I. Daubner, M. Ružička, R. Mati, I. S. Zonneveld (Author: T. Hrnčiarová)



Fig. 5 The 8th International Symposium: G. Merriam, I. S. Zonneveld, S. M. ten Houte de Lange (Author: T. Hrnčiarová)



Fig. 6 The 8th International Symposium: G. Haase, P. Janssens, O. Bastian, M. G. Turner, X. Duning, F. B. Golley, A. Richling (Author: T. Hrnčiarová)

At the session a proposal for establishment of a new working group of IALE „Landscape-Ecological Planning“ was also initiated. The establishment of the working group should meet the following targets:

- To stimulate the effort of the landscape ecologists, planners and managers in this field, to support better personal contacts
- To create the basis for applying the methods of landscape ecological planning developed by one country on the territory of another one, to eventually develop common methods, ecological studies, or projects
- To organise regular meeting of the working group within the framework of international symposia (e.g. within the framework of the International symposia on problems of Landscape Ecological research held in Czechoslovakia every three years), and eventually within the framework of other international seminars or regional meetings.

The 9th International Symposium “Theory and practice in landscape ecology” was held in October 1991 (Dudince). The symposium was organised by newly re-established the Institute of Landscape Ecology SAS in cooperation with the Secretarial of the Eastern European Region of IALE (which concluded as a reason a new political and social chances its

activities) and the Commission for Environment of the Slovak Republic. Symposium objectives were as follows:

1. Basic philosophical and theoretical principles of landscape ecology
2. Application methods of research results in landscape ecology
3. Wetland aquatic landscape and water management
4. Anthropogenic changes and ecology of urbanised landscape
5. Soil factors and soil erosion.

Participants agreed these principal recommendations:

- To concentrate to the long term experimental research in the field stations situated in different types of landscape
- To modernise the methods of laboratory and field research.

The 10th International Symposium (November 1994, Smolenice) had as a main topic "Present State and New Trends in Landscape Ecology". The symposium was organised by the Institute of Landscape Ecology SAS. Objectives of symposium were oriented to

1. Theory and Methodology of Landscape Ecology
2. Application in Landscape Ecology
3. Education in Landscape Ecology and Environment
4. Environmental Philosophy and Policy
5. 30 years of Landscape Ecology in Slovakia

New trends and challenges of the World Summit (Rio de Janeiro, 1992) were reflected in the symposium programme. In this relation we would like to emphasised that in 1992 the Executive Committee IALE expressed its gratitude to L. Miklos (Slovakia) for his contribution to include the landscape ecological approaches in Agenda 21. He was deeply involved in an international effort of preparation for the Earth Summit in Rio. L. Miklos was instrumental in preparing IALE statement drawn up at the Montecatini meeting in Tuscany, making the long drive from Bratislava to Montecatini on his own to inspire this effort.

The 11th International Symposium held in November 1997 (Nitra) was focussed on the "System approach to the landscape research". Within the symposium IALE conference "Landscape system analysis in environmental management" was organised.

The symposium was organised by the Institute of Landscape Ecology SAS together with Faculty of Natural Sciences Comenius University in Bratislava, Austrian Institute for Eastern and South-Eastern Europe, Department in Bratislava and Faculty of Natural Sciences Constantine the Philosopher University in Nitra. Symposium had these main themes:

1. Geosystem and ecosystem research in landscape ecology
2. Macro- and microstructure of landscape
3. Landscape patterns and processes in the changing environment
4. The present-days approaches and trends in teaching of landscape ecology.

Scientific part (paper sessions and poster sessions) of the IALE Conference of the Working Group "Landscape System Analysis and Environmental Management" (chairman: professor A. Richling, Poland) was presented as the 5th theme of the symposium. The topics of the IALE conference was devoted the following problems:

1. Methodology and techniques of landscape systems analysis and their application in environmental management
2. Landscape development and evolution from a historical perspective and its relevance to understanding current conditions
3. The significance of ideas of landscape stability, integrity and health, particularly in regions of rapid socio-economic change
4. Landscape analysis as a critical basis for identifying zones of environmental stress / hazards

5. The importance of the perception and aesthetic value of landscape and the significance of this people's approaches to, and their understanding of landscape.

In the framework of the conference the business meeting of the working group IALE "Landscape System Analysis and Environmental Management" was held. Resulting from the discussion at the meeting, and also from the proposals presented later on, as well as the respective agreements, changes were introduced into the structure of the working group. Side by side with the previously existing work teams oriented at carrying out of the activities related to the main subjects of interest of the group several other teams appeared.

The 12th International Symposium with main topic: "**Protected areas and landscape ecological research**" was held in November 2000 (Stará Lesná – High Tatras Mts.) The symposium was organised by the Institute of Landscape Ecology SAS together with the Faculty of Natural Sciences Comenius University in Bratislava, Austrian Institute for Eastern and South-Eastern Europe, Department in Bratislava, Slovak Committee for the UNESCO Program Man and the Biosphere (MaB). Objectives symposium were oriented to:

1. Theoretical problems in landscape ecology
2. Biosphere reserves – subject of ecological and environmental education
3. Development of landscape structure and its changes
4. Biodiversity problems in landscape ecology
5. Natural resources exploitation and its sustainable development
6. Socio-economical problems in protected areas
7. Ecological and environmental problems in protected areas.

The meeting of the working group of IALE "Landscape Analysis in Environmental Management" was held during symposium. Slovak landscape ecologists discussed with Polish and Czech colleagues about appropriate form of this regional organization and the first preparatory meeting of the Slovak IALE chapter was held.

The Slovak landscape ecologists decided, in occasion of the 20th anniversary of IALE establishment, to organise conference in the same place where IALE was established in 1982 and put together the evaluation of new trends in landscape ecology in Slovak Republic and Czech Republic.

The conference "The New Trends in Landscape Ecology" was held on the 20th anniversary of the "birth of IALE on October 24-26, 2002 in Piešťany. It was actually the occasion to declare the Slovak regional branch office. Special supplement of Ecology (Bratislava) was published, representing contribution of Slovak and Czech Landscape Ecologists to the 6th World Congress of IALE (Darwin, Australia, July 2003).

The conference was organised by the Slovak Ecological Association of the SAS in co-operation with the Faculty of Natural Sciences Comenius University in Bratislava, the Faculty of Natural Sciences, Constantine the Philosopher University in Nitra, the Institute of Landscape Ecology SAS, the Faculty of Ecology and Environmental Sciences, technical University in Zvolen and the Austrian Institute of East and Southeast European Studies Vienna, Branch Bratislava.

The 13th International Symposium with the main topic: "**Landscape Ecology – an International Integrating Tool in Environmental Issues**" was held in (September 2003 in Mojmirovce) (Figs. 7 – 9). Symposium had these objectives:

1. New Experience and trends in Landscape Ecology and Environmentalistics
2. Application of new knowledge in landscape ecology and environmentalistics in practice
3. Integration programmes of EU members and accession countries
4. Environmental education and training.

A final preparatory meeting of the Slovak chapter of IALE foundation was held during symposium. Special Supplement of Ecology (Bratislava), published in 2003, representing contribution of Slovak and Czech landscape ecologists to the 6th World Congress of IALE (Darwin, Australia, July 2003) was distributed in the end of 2003.



Fig. 7 The 13th International Symposium: J. Oszlányi, F. Žigrai, M. Ružička, L. Miklós (Author: T. Hrnčiarová)



Fig. 8 The 13th International Symposium: N. Nakagoshi, M. Ružička, T. Hrnčiarová, O. Bastian, W. Kvarda, W. Zsilincsar (Author: F. Petrovič)



Fig. 9 The 13th International Symposium: participants of excursion – O. Bastian, W. Zsilincsar (Author: T. Hrnčiarová)

On January 15, 2004, the Slovak chapter of IALE (Slovak Association for Landscape Ecology IALE-SK) has been founded or has been (re) founded. The IALE-SK has more than 100 members, and has been organised a number of working sections and activities (more information see in chapter 2.3 on IALE-SK).

The 14th International Symposium with the main topic: **“Implementation of Landscape Ecology in the New and Changing Conditions”** was held in October 2006 (Stará Lesná, High Tatra Mts.) (Figs. 10 – 11). The Symposium was organised by the Institute of Landscape Ecology, Slovak Academy of Sciences in cooperation with newly established the Slovak Association for Landscape Ecology (IALE-SK), and with the Department of Ecology and Environmentalistics, Faculty of Natural Sciences, Constantine the Philosopher University in Nitra. The symposium created a forum for landscape ecologists and representatives of related scientific disciplines for exchange of their knowledge and experiences to these relating objectives:

1. Past and current landscapes – changes and links
2. Simulation of future in landscape ecology (scenarios, modelling)
3. Landscape in changing socio-economic conditions

4. Processes in landscape ecology
5. Shifting paradigms and concepts in landscape ecology
6. Landscape management and sustainable development
7. Other aspects of landscape ecology.



Fig. 10 The 14th International Symposium: M. Ružička, M. Kozová, B. Bunce, B. Peťko, J. Oszlányi



Fig. 11 The 14th International Symposium: participants of symposium

Interdisciplinarity aspects focused on management problems and implementation in the environmental policy were the main themes of many of the papers. The results of several international, mainly EU funded projects, were presented, and were based on up-to-date methods and on newest technical approaches. In the first evening of the symposium, the European IALE meeting was organised. Bob Bunce, president of IALE, gave information about the preparations for a European IALE chapter. A European IALE (or IALE Europe) could work as an officially accepted partner at the European level in relation to bodies such as the European Council and the European Community. The participants discussed the positive and effective role of the proposed organisation, which could act as an “umbrella” for landscape ecology activities of the national, supranational, and cross-national European regional chapters.

Jürgen Breuste from the German IALE chapter presented the initial ideas about the European Congress of IALE 2009, which will be organised by the German, Switzerland, and

Slovakian IALE chapters. Proposed time and venue of the congress: July 2009, Salzburg at the Natural Science Faculty. A course on landscape ecology for young scientists will be held in Bratislava (Slovakia) prior to congress. The European Congress of IALE 2009 will be thematically oriented to the European Landscapes in Transformation – Challenges for Landscape Management.

The five first symposia of 1967, 1970, 1973, 1976 and 1979 established an internationally recognised tradition of scientific meetings in Slovakia concerning topical problems of landscape ecological research. They had also initiated the organisation of other related seminars and conferences on landscape ecology.

Preparatory works started during the International Congress “Perspectives in Landscape Ecology” held in April 1981 in Veldhoven (the Netherlands). But the birthplace of IALE is October 1982 in former Czechoslovakia, at small spa town Piešťany with the participation of 122 coming from 16 countries. IALE was founded within the 6th International symposium on problems of landscape ecological research as honour to the Czechoslovak science and research, which laid the foundations to the development of international cooperation in this area.

In 1985, three years after foundation of IALE (1982), the Slovak landscape ecologists initiated and found the Eastern European IALE region. Tens of the reputable landscape ecologists from the Eastern European region signed up for this organisation: from Poland (i. e. Prof. T. Bartkowski, prof. J. Kondracki, prof. A. Richling), from the former Soviet Union (i. g. prof. V. S. Preobraženskij), from Hungary (i. g. P. Czorba), former German Democratic Republic (i. g. prof. G. Haase), from Bulgaria (i. g. prof. Marinov). There were approximately 15 scientific and research institutions as group members from former Czechoslovakia and around 50 individual members signed up for this organisation (i. g. from Czech Republic A. Buček, J. Jeník, P. Kovář, S. Hejný, A. Hynek and others).

Especially until 1989 these symposia played an important role at the enhancement of international contacts supporting the study of landscape ecology in many European and others countries. The international symposia began to act as a bridge between the East and the West. Objectives of symposia have been to bring together specialists in the field of landscape ecology and other relating environmental sciences and provide international forum to discuss the latest scientific knowledge and practical experience. Scientists have coming from countries with different social systems and various continents. International symposia have been regularly connected with IALE activities:

- 7th Symposium: Topical Problems of Landscape Ecological Research and Planning (1985, Pezinok) – the 2nd meeting of the IALE General Assembly was held.
- 8th Symposium: Spatial and Functional Relationships in Landscape Ecology (1988, Zemplínska Šírava) – a short meeting between the old and the new EC and the General Assembly of IALE were held as well as the “Temporary Council” was established.
- 10th Symposium: Present State and New Trends in Landscape Ecology (1994, Smolenice) – reflected results of the World Summit in Rio (1992). EC IALE expressed its gratitude to L. Miklós (Slovakia) for his contribution including landscape ecological issues into Agenda 21.
- 11th Symposium: System Approaches in the Landscape Research (1997, Nitra) – Conference of IALE Working Group “Landscape System Analysis and Environ. Management” (chairman: A. Richling, Poland) was held.
- 12th Symposium: Protected Areas and Landscape Ecological Research (2000, Stará Lesná) – the meeting of IALE working group “Landscape Analysis in Environ. Management” and a preparatory meeting of the Slovak IALE region were held.
- Jubilee Slovak conference in occasion of the 20th anniversary of IALE establishment was held at the same place where IALE was established (October 2002, Piešťany).

- 13th Symposium: Landscape Ecology – an International Tool in Environ. Issues (2003, Mojmírovce) – a working meeting of the Slovak IALE region was held. Special Suppl. of Ecology (Bratislava), 2/2003, representing contribution of Slovak and Czech landscape ecologists to the 6th World Congress IALE (Darwin, Australia, 2003) was distributed.
- 14th Symposium: Implementation of Landscape Ecology (2006, Stará Lesná) – the European IALE working meeting was organised chaired by Bob Bunce, president of IALE.

14 symposia represent 40 years international cooperation. More than 1 300 participants from 33 countries participated on fourteen international symposia organised in Slovakia. Outstanding personalities from abroad participated on our symposia:

P. Agger (Denmark), M. Antrop (Belgium), G. W. Arnold (Australia), T. Bartkowski (Poland), O. Bastian (FRG), W. Bleuten (the Netherlands), J. Brandt (Denmark), L. Breuste (FRG), K. Buchwald (FRG), B. Bunce (UK), P. Czorba (Hungary), P. Daget (France), X. Duning (China), R. T. T. Forman (USA), G. Haase (FRG), M. Godron (France), F. B. Golley (USA), J. L. Guillermin (France), H. Gulinck (Belgium), R. H. G. Jongman (the Netherlands), J. Kondracki (Poland), O. Kontturi (Finland), W. Kwarda (Austria), S. M. ten Houte de Lange (the Netherlands), Ü. Mander (Estonia), H. Marinov (Bulgaria), G. Merriam (Canada), M. R. Moss (Canada), N. Nakagoshi (Japan), Z. Naveh (Israel), V. S. Preobraženskij (Soviet Union), A. Richling (Poland), F. Saris (the Netherlands), M. Seger (Austria), J. Schmithüsen (FRG), K. F. Schreiber (FRG), F. Snacken (Belgium), V. A. Snytko (Soviet Union), J. Solon (Poland), J. F. Thorne (USA), M. G. Turner (USA), T. Wrabka (Austria), D. van der Zee (the Netherlands), I. S. Zonneveld (the Netherlands), W. Zsilincsar (Austria), F. Žigrai (Austria) and others.

We are very glad that tradition of the Slovak landscape ecological symposia is continuing. Next, the 15th International Symposium (jubilee) will be held in 2009, i.e. in the same year as the European Congress of IALE 2009 and will be held as the follow-up of this Congress. Most probable themes will be the complex studies involving landscape analysis, landscape diagnosis, and the consequences for the human society. Special interest will be on the driving forces of changes, and how landscapes are expected to change in the near future. The most probable date will be October – November 2009. The title of the 15th International Symposium will be directly connected with the topic of the European Congress of IALE 2009, but in general it will be on the history, development, and transformation of the European landscapes. We would like to invite all of you and also your colleagues to Slovakia to our jubilee 15th International Symposium on Landscape Ecology Research.

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