

# **INSTITUTE OF LANDSCAPE ECOLOGY**

Slovak Academy of Sciences

Štefánikova 3, P. O. Box 254, 814 99 Bratislava



## **Questionnaire**

**Summary of the main activities of a scientific Organisation of the  
Slovak Academy of Sciences**

**Period: January 1, 2003 – December 31, 2006**

**Bratislava**

**February 2007**

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# Questionnaire

## Summary of the main activities of a scientific Organisation of the Slovak Academy of Sciences

*Period: January 1, 2003 - December 31, 2006*

### ***I. Formal information on the assessed Organisation:***

#### **1. Legal name and address**

Institute of Landscape Ecology of Slovak Academy of Sciences  
Štefánikova 3  
814 99 Bratislava  
P.O.Box 254  
Slovak Republic

#### **2. Executive body of the Organisation and its composition**

Directoriat	name	age	years in the position
director	Ing. Július Oszlányi, CSc.	62	1996 -
deputy director	Mgr. Henrik Kalivoda, PhD.	36	2002 -
scientific secretary	Ing. Dagmar Štefunková, PhD.	46	2002 -

#### **3. Head of the Scientific Board**

RNDr. Zita Izakovičová, PhD.

#### **4. Basic information about the research personnel**

- i. Number of employees with a university degree (PhD students excluded) engaged in research and development and their full time equivalent work

capacity (FTE) in 2003, 2004, 2005, 2006 and average number during the assessment period

ii.

Research staff	2003	2004	2005	2006	average
No.	33	34	39	35	35,25
FTE	30,68	30,12	36,68	32,88	32,64

iii. Organisation units/departments and their FTE employees with the university degree engaged in research and development

Research staff	2003		2004		2005		2006		average	
	No.	FTE	No.	FTE	No.	FTE	No.	FTE	No.	FTE
organisation in whole	33	30,68	34	30,12	39	36,88	35	32,88	35,25	32,64
Department of ecosystem analysis	12	12	12	12	13	13	12	12	12,25	12,25
Department of landscape-ecological syntheses	9	8,33	9	8,28	12	11,28	11	10,28	10,25	9,5425
Department of diversity of ecosystems and landscape - Branch Nitra	12	10,35	13	9,84	14	12,6	12	10,6	12,75	10,848

## 5. Basic information on the funding

i. Total salary budget<sup>1</sup> of the Organisation allocated from the institutional resources of the Slovak Academy of Sciences (SAS) in 2003, 2004, 2005, 2006, and average amount for the assessment period

Salary budget	2003	2004	2005	2006	average
total salary budget (millions of SKK)	9,380	9,307	9,710	10,170	9,642

## 6. URL of the Organisation's web site

[www.uke.sav.sk](http://www.uke.sav.sk)

<sup>1</sup> Sum of the brutto salaries without the fund contributions.

## ***II. General information on the research and development activity of the Organisation:***

### **1. Mission Statement of the Organisation as presented in its Foundation Charter**

1. R&D activity of ILE SAS is focused on the development and elaboration of theories and methods of recognition of ecological characteristics and processes at the level of system. The Institute evolves the theory and the methods of landscape ecology, studies the problems of ecological processes and landscape dynamics, elaborates the models of ecologically optimal utilisation of landscape. Studies contentual and spatial differentiation of biotopes and their relationship with the landscape biodiversity. The Institute works on problems of ecological modelling and conservation of landscape and rational exploitation and utilisation of natural resources at the level of ecosystem, local and spatial systems.

2. ILE SAS evolves the ecological planning methods and special methods of application and interpretation of ecological knowledge for practical use.

3. ILE SAS provides advisory services and others expertises, witch are connected with the basic activities of the Institute.

4. ILE SAS provides the scientific education of PhD. students within the generally established legal directives.

5. ILE SAS publishes the scientific results of scientific-research activities trough periodical and non-periodical press. Publishing of periodical and non-periodical press is done according to the Presidium of SAS decisions.

### **2. Summary of R&D activity pursued by the Organisation during the assessed period, from both national and international aspects and its incorporation in the European Research Area (max. 10 pages)**

Institute of landscape ecology of the Slovak Academy of Sciences has established in previous decades and especially in the period 2003-2006 as one of the leading scientific organisations in the field of landscape ecology not only in Slovakia, but also in the

European Research Area. The precondition for this was the excellent position of the Institute and institute's scientists who elaborated and developed methods broadly accepted by the European community of scientists.

The local environmental and ecological problems of Slovakia, especially connected with human impact and not-wise use of natural resources caused a number of scientific challenges which became the main focus of scientific work of the ILE SAS scientists.

In the period 2003-2006, the scientific projects has been focused on problems:

- In the agriculturally utilised lowland landscape of Slovakia. Here, specific environmental and ecological problems as large-scale agriculture and its ecological instability, management of water catchment with mainly arable fields, water pollution and influence of fertilisation of agriculturally utilised fields on the waterbodies in the catchment were the main types of projects
- Changes in agricultural land utilisation in the mountainous regions. Here, the specific problems caused by reprivatisation of land, land abandonment, land natural afforestation and consequently the changes in species, ecosystems and landscape biodiversity were studied
- In the forested area influenced by the hydropower plant near Gabčíkovo. Here, the consequences of the decrease or changes of groundwater level on different types of forest ecosystems were studied
- The protected landscape areas ( Malé Karpaty, Záhorie, elsewhere), national protected areas (Parížske močiare, Jurský Šúr, elsewhere), national parks and UNESCO biosphere Reserves ( Vysoké , Belianske, Západné Tatry, Nízke Tatry, Poloniny, Poľana) served as study areas for the assessment of biodiversity status, changes and models for the future developments of landcover, biodiversity and sustainable development
- In the urban ecosystems. Here, Bratislava, the capital of Slovakia, underwent deep-in study from the landscape-ecological point of view. Different aspects of city's possible development were studied and scientifically evaluated
- In the different parts of the country, in the different types of ecosystems, biotopes, the influence of global changes (including climate change) on ecosystem function were studied.

- The chosen protected areas of European importance (NATURA 2000 sites) were studied within their surroundings, i.e. the influence of the surroundings on the ecological stability of NATURA 2000 sites was studied and evaluated following the land-use changes in the previous decades, based on air photos and field studies
- In the abandoned mountain meadows in the Eastern Carpathians, which are important from species biodiversity point of view (Eastern Carpathians flora, rare and endemic species), the studies on changes in species composition, abundance and scenarios on sound management practices were followed within the projects with international participation
- Integrated management of landscape was studied in the scale of Slovakia. Here, all aspects ( abiotic, biotic, social) has been studied, evaluated and the proposal for science-based integrated management of landscape was prepared
- 120 representative geoecosystems covering Slovakia were studied and evaluated apart from basic characteristics. The scientific information consists of scientific description of dominant communities, soils, dominant plant species, protected areas. Geoecological regions, covering whole Slovakia contain the scientific information on land cover, environmental problems, NATURA 2000 components, development of potential, protected areas, socio-economic structure and current landscape structure.

The list of the scientific activities are included into this questionnaire. Altogether 19 VEGA projects, 6 APVV project, 13 projects of 5<sup>th</sup> and 6<sup>th</sup> Framework Programme (+ 8 Alter-Net subprojects) and other 24 international scientific projects have been worked on during the assessment period.

The scientists of the Institute of landscape ecology of SAS have achieved an outstanding position in the area of ecological and environmental sciences within the Central-European ( New EU member countries and candidate countries) and also in the context of Europe as a whole. The Institute is well-known also in the scientific environment of the world. Apart from important scientific events and actions (however originated in the earlier period of the Institute's existence, as for example methodology LANDEP, foundation of IALE – International Association of Landscape Ecology, the Prince of Asturias Award) the following achievements in the period 2003-2006 are to be mentioned:

## ILE SAS

- became member of the European Topic Centre for the Nature Protection and Biodiversity, Paris, 2001-2004
- is member of the European Topic Centre for the Nature Protection and Biodiversity, Paris, 2005-2008
- works for European Centre for Nature Protection, Tilburg, NL
- works for the European Environment Agency, Copenhagen, DK
- works for the UNESCO Headquarters, Department for Ecological Sciences, Paris
- works for ILTER (International Long-Term Ecosystem Research)
- there is the Office for Central and Eastern European ILTER at ILE SAS

ILE SAS scientists have represented or are representing the Slovak Republic in the Programme Committee of the European Commission:

- - Environment and sustainable development (2000-2003)
- - Global change and Ecosystems (2003-2006)
- - Environment (2006 - )

ILE SAS is representing the Slovak Republic in the NATO Environment Security Panel being responsible for the evaluations of proposals of scientific projects.

ILE SAS represents the Slovak Republic in:

- -DIVERSITAS, Paris – word network
- -EPBRS (European Platform for Biodiversity Research Strategy) in the EU Council Presidency country
- -European Platform for Biodiversity

Scientists of ILE SAS in their personal capacity served or serve as:

- Chair of the Commission III- Natural, human and social sciences at the 33rd General Conference of UNESCO 3 weeks (3-20 October, 2005)
- member of the scientific committees of
- European Environment Agency, Copenhagen, DK
- European Centre for Nature Protection, Tilburg, NL
- Conference under German EU Council Presidency on “Sustainable Neighbourhood from Lisbon to Leipzig through Research”
- Member of the Editorial Board of 3 renowned international scientific journals

The excellent international position of ILE SAS can be documented by the following: At present (2006), ILE SAS cooperates with 148 (onehundredfortyeight) partners within EU



+ Romania and Bulgaria and with approximately 11 partners elsewhere (USA, Russia, Ukraine, Norway, Island, Switzerland).

The most important partners in EU are the most important scientific institutes as:

- ALTERRA, Wageningen, NL
- Centre for Ecology and Hydrology, Lancaster, UK
- Leibnitz – Centre for Agricultural Landscape Research, Münchenberg, D
- Instituut voor Natuurbehoed, Brussels, B

8 (eight) scientists from ILE SAS (former and present) became and are the first professors of Ecology in Slovakia, additionally in the assessed period 2 scientists have been promoted to the position of professors and 2 scientists are professors-to-be in short time.

In the assessed period, one ILE SAS scientist served as Minister of Environment of the Slovak Republic, one former ILE SAS scientist have become State Secretary of the Ministry of Environment of the Czech Republic, another one have become Director at the DG Environment of the EC in Brussels.

Scientists of ILE SAS are coauthors of the encyclopedical book “European Environment State and outlook 2005” by EC and Europaen Environment Agency. Especially of the part B „Biodiversity, threatened and protected species, Designated areas and Species Diversity“. They are also providers of scientific information and data as well as coauthors of the EU policy relevant experteses as „Progress towards halting the loss of biodiversity by 2010“, „Streamlining European 2010 Biodiversity indicators“ and „Assessment for the Belgrade Pan – European Conference“ (by European Environment Agency).

Scientists of ILE SAS served as EU experts in plant species diversity, botany, arachnology and landscape diversity during the negotiation process between EU and that time accession countries in matters of environment and nature protection, they led the Advisory Group (guidance and review of the materials) which resulted in the publication of the book mentioned above.

At the occasion of Green Week in the European Parliament, ILE SAS has been addressed by the Comissioner for Environment Mr. Stavros Dimas as the most successfull institution from new EU – member countries in the integration into the European Research Area to publish its status. The information on ILE SAS scientific activities was published in the journal of Parliament Magazine, issue 225, 29 May 2006.

International activities of the scientists of ILE SAS have a long lasting and firm position within the institute's activities. Scientific projects of 5th and 6th (13 together) enabled permanent contact, cooperation and mutual exchange of knowledge, methods, data and results. ILE SAS young scientists are since their very start of their scientific career positively confronted with the work, methods and results of the excellent scientists from the prominent and renowned scientific institutions in the European Union.

ILE SAS was the initiator, preparator, writer and is now member of the Network of Excellence (6thFP Alternet) where, having an outstanding position within the new EU member countries is leading several subprojects or participating in them.

On behalf of the European Commission, DG Environment, ILE SAS scientists monitor and check the scientific and technical quality of the ongoing or already finished projects (nature protection) in the Czech Republic, Slovakia, Hungary, Romania and Slovenia.

Charged by the European Commission, DG Agri, ILE SAS scientists have participated in several projects, focused on the environment changes, biodiversity, nature protection as a result of the Common Agricultural Policy and its implementation in the new EU member states.

UNESCO Headquarters have addressed the Institute in the assessed period several times to solve the scientific problems in the UNESCO biosphere reserves. Apart from scientific events, the UNESCO expert study on Landscape – ecological optimal territorial and functional utilisation of the Biosphere Reserve Tatry was one of the results. This was an excellent scientific reaction on the wind-storm damaged National Park.

The transfer of scientific knowledge and of results of scientific projects into the educational process and environmental policy is also one of the strengths of ILE SAS. Numerous projects, financed from different sources, have addressed the pupils of basic schools (Learning Together), teachers, stakeholders, local governments and policy – makers in the rural parts of Slovakia, starting with agricultural lowland areas and ending in the most remote villages in the national parks or protected landscape areas.

ILE SAS scientists feel both satisfied and proud for such a broad and intensive impact at both local, regional, national and EU levels. It is worth to mention, that the United Nations University in Tokyo is planning to build-up the Research and Training Centre for Landscape and Ecosystems Management in Slovakia. This idea is directly connected with the tradition, quality and high reputation of the landscape ecology in Slovakia, to which the ILE SAS scientists have contributed substantially. And not only in earlier times,

but also and mainly in the assessed period of 2003 – 2006, when the landscape ecology became the science accepted and appreciated as provider of scientific results, data, scientific arguments and science based expertise advise in all developed countries.

### **3. Concept of R&D activity of the Organisation for the next four years (max. 5 pages)**

#### **i. Present state of knowledge and status of ongoing research related to the subject of the Concept, from both international and national perspective**

The research of the landscape is very complicated because the landscape is a very complex system which consists of numerous abiotical, biotocal and socio-economical aspects.

Landscape ecology as science has been established in recent decades only. ILE SAS is proud to declare, that high-level standard of landscape ecology in Slovakia has been reached mainly thanks to the scientific activities of its researchers and scientists. Renowned methods, such as LANDEP, broad scientific activities and excellent scientific results have influences the decisions in environmental policy. Also in recent years, the results of scientific projects are broadly utilised in solving almost any problems, connected with nature protection, wise-use of natural resources and landscape planning.

The sustainable development concept generally accepted in the developed world has influenced the landscape ecology also in Slovakia: 3 dimensions – environmental, social and economical became the basis for the environmental programme of development at the threshold of 3rd Millenium. This was declared and accepted at the UN Conference on Environment and Development at the Earth Summit in Rio de Janeiro in 1992, and later endorsed by the Summit in Johannesburg (2004).

The acute problems must be solved to secure the further existence and development of mankind. At present, environmental problems, like exhausted natural resources, worsenning of environment quality, threatening and loss of biodiversity, decrease of landscape ecological stability, increase of negative psychosocial features, etc. are overgrowing the purely ecological frames and became already threatening the existence of mankind. To study and to solve the problems of sustainable development is the task

coming out from the pragmatical reasons. This aspect is the determinant one for the landscape-ecological research at present and in future. The study of the landscape is and will be focused on the possibilities of sustainable utilisation and development of the landscape, sustainable utilisation and use of ecosystems to achieve the ecologically acceptable utilisation of landscape, wise-use of nature, of natural resources, protection of stability and biodiversity of the landscape and protection of the environment.

The main tool for the implementation of sustainable development is the **integrated management of landscape**.

Due to the socio-economical changes in recent decades, the European and thus also the Slovakian landscape underwent intensive changes. Especially changes in structure of the agriculture, land reprivatisation and abandonment, decrease of agri-production, increasing pressure towards the agricultural land and other natural resources are negative aspects which are to be described and scientifically evaluated at the scientific level. Another groups of problems, closely connected with the previous changes, are the changes in the circle of demography and socio-economy, of natural disasters and catastrophies as consequence of climate and global changes followed by risks and hazards such as droughts and floods.

All these changes are interconnected: the changes in land-cover or in land utilisation influence biodiversity and stability, pollution and loading by pollutants influence the land cover, biodiversity, etc. And consequently, socio-economical problems are often result of it.

The integrated approach to the problems is the only possible. This approach is generally accepted and serves as the basis for any of the scientific projects.

The present research within the ILE SAS in the period concentrated in 3 inner circles:

- Analysis and ecology of ecosystems. Here, short-term and long-term approaches enabled the researchers in-deep studies, which resulted in outcomes having basic science character. In this field, mainly the structure, production and productivity of the ecosystems and its compartments are the main subjects of studies, accompanied by assessment of ecological relationships towards biodiversity features as abundance, species diversity and its changes under the influence of stress factors, including climate change.

- Landscape-ecological synthesis. Here, based on broad scientific information from particular parts of the landscape, the synthetic methods are used following the principles of analysis, evaluation and proposal for the best and ecologically acceptable solution of the situation. Stress factors, risk conditions and socio-economical conditions are also part of these studies
- Biodiversity, biotopes and ecosystems. Here the specific problems of changes in ecosystems, biotopes and landscape enabled the scientists to follow the mutual influence and impact between the studied units and factors as land abandoned, land-cover changes and socio-economic influences.

Specific problems connected with sustainable development and ecological stability are problems of all European countries. The European Commission in the calls of 5th and 6th FP addressed these problems and ILE SAS is proud to participate in greatest part of EU funded projects of this kind. For example, the negative influence of land abandonment on biodiversity (BIOSCENE), relationship between biodiversity and landscape changes (BIOPRESS), between pressure of socio-economical activities on biodiversity, landscape stability, etc. (SOBIO, ALTER-Net), creation of NATURA 2000 sites (BIOHab) and evaluation of wetlands in the agricultural landscape (EVALUWET) became the crucial part of our work in the assessed period. Along with other EU funded projects (GLORIA, CARBOMONT, SENSOR, BIOSTRAT, RURAL-ETINET, BIOFORUM, BIOPLATFORM) and projects of VEGA and APVV, ILE SAS contributed to new methods, and brought up excellent scientific results in both domestic and international scale substantially.

The scientific results achieved in the assessed period 2003-2006 are of high quality, high level and at good international standard. These valuable scientific results and arguments, in general, clearly state:

- the changes in ecosystems, biotopes, landscape (many of them intensive and abrupt) as a result of climate and global change, negative impact of Man, stress factors, etc.
- there are possibilities for optimal management and planning of landscape under the the respecting the abiotical, biotocal and socio-economical conditions in the respective areas
- the inevitable approach to any of the studies is long-term. Only in long-term studies the results can bring plausible explanation on trends and tendencies in ecosystems

and in landscape, which are initiated, driven and supported by any of the ecological and environmental aspects

- there are possibilities for the wise-use of natural resources including species, ecosystems and landscape biodiversity when the natural laws as well as other circumstances are being respected.

The scientific results, as well as the methods used by ILE SAS researchers are of European standard. Substantial part of the studies has been done within the Network of Excellence of EU.

**ii. Organisation's role or significance in the overall research effort within the field of the Concept on both the national and international scales**

ILE SAS is not only the founder and initiator of landscape ecology as science in Slovakia (or Czechoslovakia, since 1965) but it plays also leading role among similar institutes at least in the Central European area. At the domestic scene, ILE SAS is the leader in new and modern methodologies and methods of landscape ecology. This can be proved by its initiative towards close co-operation with the Slovakian universities (with the departments or chairs of landscape ecology), mutual work on common scientific projects and also by the functioning of Common Department with the University of the Constantine the Philosopher in Nitra. Here, the utilisation of the recent scientific results in the educational process at the University secures the direct impact on quality of youngest generation of landscape ecologists. There is almost none of the environmental or ecological problems in SK which has not been touched by ILE SAS scientists.

The most important results and to our best knowledge excellent scientific arguments have been involved in the elaborated National Strategy for the Sustainable Development of Slovakia. This document elaborated by ILE SAS scientists ( great part) represents the concept material which will be utilised in the development of our country respecting the principles and criteria of sustainable development. Also the models of regional Agenda 21 for Stredné Pohronie/Trnava regions and of local extent have resulted from our scientific work, too.

ILE SAS has been well prepared to enter to the European Research Area and to become apart of it.

Since very beginning, ILE SAS scientists have utilised the opportunities to make contacts with relevant scientists abroad and to be their partners at all levels.

Before the assessment period, ILE SAS was the co-ordinator and leader of an EU funded project. This made the Institute well known, appreciated and everywhere welcomed institution. Having an overview about the landscape-ecological, biodiversity and socio-economical conditions in this part of Europe, ILE SAS achieved an excellent position, utilising not only its reputation but mainly the high quality scientists, high-level of work and intensive co-operation with abroad scientists in numerous fields. Not only Slovakia, its West Carpathians and Northern part of the Pannonian biogeographical region became the Institute's target areas. Some of the scientific projects have been placed in the Eastern Carpathians, the Czech part of Carpathians, the Ukrainian and Romanian Carpathians. Within the projects of the 5th and 6th FP, ILE SAS had altogether 148 partners in the EU countries and numerous elsewhere. In several cases, ILE SAS or its scientists represents the Slovak Republic in different scientific bodies, consortia and boards, what proofs also the high reputation of the Institute and of the Slovakian landscape ecology.

### **iii. Objectives of the Concept**

The Institute of Landscape Ecology of Slovak Academy of Sciences has and will have the objectives, which are the scientific–research activity in the field of landscape ecology, focused on elaboration of theory and methodology of the landscape ecological research at the level of systems up to level of landscape. The landscape ecological research in further period must be the inevitably interdisciplinary based. The umbrella of the scientific activities will be the integrated management of landscape in the sustainable development frame. Research on socio-economical development in sound interaction with nature protection, wise use of natural resources and environment preservation will be the main objectives. Here, the intensive international cooperation is inevitable (at least at EU level). The research must be coordinated with impact towards the policy-making sphere but also with the impact towards ecological awareness of population. Only the changed hierarchy of values can bring changes in common attitude to ecological and environmental problems. In the policy-making sphere and in the environmental practice is ILE SAS' task to provide scientific information and scientific arguments focused on securing the landscape ecologically optimal utilization, the implementation of ecological principles into the technologies and the

wise-use of natural resources, the biodiversity protection, the landscape ecological stability and sound quality of environment.

The Institute has this specific tasks and their management:

- analyses, syntheses and interpretations of abiotic, biotic and socio-economic landscape elements for landscape-ecological planning
- ecological landscape problems, influence of anthropogenous factors on landscape, ecological optimalization and landscape utilization and methodology of ecological carrying capacity
- ecological problems of agricultural landscape, territorial system of ecological stability, preservation of biodiversity and geoecodiversity
- territorial system of stress factors, structure of the present landscape structure created by Man
- biodiversity and production ecology of forest ecosystems and grasslands mainly in stress conditions caused by pollution, climatic changes and tourism
- management of protected areas endangered by negative interferences

Global changes, including climate change, sustainable development and ecologization of the human activities are the main challenges, which influence at present and will also influence in future the Concept of the Institute. There are 4 pillars to achieve these objectives:

[1] Basic scientific concept. ILE SAS must and will secure the dominant scientific characteristics of its activities. This will be achieved by further development of basic landscape - ecological research which makes our Institute unique and non – replaceable by other institutes. Here, the vertical and spatial relations of synthetical units of landscape ecological systems will be the main topics. ILE SAS will keep its interdisciplinary scientific character to be able to cover if not all, then at least greatest part of the fields, which are parts or compartments of the landscape ecology as science. Long – term studies of ecosystem and landscape along with studies focused on abiotic, biotic and socio – economical factors, biodiversity of ecosystems and landscape will be the main focus. Here, new methods and methodologies of landscape ecological research will be based on the aspects of integrated approach to the analysis and evaluation of processes in the landscape. In this pillar, apart from domestic project, substantial part of activities will be within the EU funded projects.

[2] Applied research concept. Studies on actual ecological and environmental problems, their scientific consideration, evaluation and practical proposal for



problem solution will be the bases for the activities in the second pillar. ILE SAS being experienced in this field both in international and national perspective will touch acute and interesting tasks to be solved in the circle of sustainable development, landscape modeling, biodiversity protection including management plans, nature protection. The areas addressed by the results will be agriculture, forest, rural and urbanized landscape. Great deal of this pillar will be covered by the projects supported by the EU (DG Environment and DG Agriculture), by the European Environment Agency and by the European Topic Centre for Biodiversity.

[3] Pedagogical and educational concept. As a result of both previous pillars ILE SAS strongly feel as a honor and duty to continue with high level education of docstudents in the premises of ILE SAS both in Bratislava and Nitra, but also towards education at the Common Department between ILE SAS and the University of the Constantine the Philosopher in Nitra. Activities in this circle will contain also the improvement of ecological awareness of rural and urban population, starting with pupils of basic schools and ending with local governments and stakeholders.

[4] Popularisation concept will be focus on presentation of scientific knowledge to general population with aim to form the environmental and ecological awareness and to improve the level of acceptance and application of results of scientific projects.

**ILE SAS wishes to stress, that it considers the first pillar, the basic scientific concept as the most important one, as the highest priority for the Institute's further prosperity and perspective.**

#### **iv. Proposed strategies and methods to be applied, and time schedule**

Permanent task will be the work on projects representing the first pillar – basic scientific research. These projects are mainly supported by insufficient finances, however, ILE SAS management will do everything to secure efficient and effective work in this field using also other resources. These ongoing projects and also projects-to-be **must cover** all the theoretical aspects of landscape ecology, starting with (hopefully long – term) analytical projects in different ecosystems and different biogeographical regions and finishing with synthetical projects concerning landscape ecological units. Similar aim must be achieved also at the level of international projects. Everything will be done to utilize each single possibility to write excellent quality proposals to secure, that ILE

SAS remains among the top institutes in charge of basic ecological research projects of EU.

Apart from this, ILE SAS has the plan to achieve also these technical and technological goals which improve the quality of our work and which will have benefits for landscape ecology itself:

- elaboration of monitoring system of landscape changes for Slovakia
- completion of the Remote Sensing and GIS laboratory at the Institute
- personal, technical and financial condition securement for long-term ecological research (LTER) in Slovakia
- building up the complex information and archive system of the Institute

**Permanent engagement and continuously effective work, in the field of applied research expertise activities, pedagogical and educational activities will be another characteristic feature of the 4 years period in front of us.**

- In the period 2007 – 2008 everything will be done to decrease the average age of one of the Institute's departments. It will be achieved by engagement of 2 scientists who will finish their PhD studies at ILE SAS and thus being aware of the basic scientific field of work at the Institute.
- To keep the accreditation of ILE SAS in PhD studies, 2 scientists (at present assistant professors) will be inaugurated for professors. Improvement will be done in administrative activities connected with the management of EU funded projects.
- In 2009, when Network of Excellence (of EU) will finish its structure and work, ILE SAS will do everything, to utilize the gained knowledge and experiences in the period of on – going of Network of Excellence, to submit the proposal or undergo any other steps to keep and maintain its excellent international position and reputation.
- In 2010, keeping all strategical aims at high level, ILE SAS will be, as always at the best way to remain leading, renowned and high-level institution with qualified, adaptable, internationally appreciated staff with excellent scientific results.
- The technical and technological goals will be achieved by the end 2010 or earlier.
- In the period 2007 – 2010, ILE SAS will continuously publish its scientific results at expected and acceptable level to enable broad utilization of scientific results in the practice. ILE SAS will continue in the editorial activities (Ekológia, Životné prostredie, monographs), in organizing 15th and 16th Symposium on landscape ecology and in the broad cooperation with Slovakian institutes. The infrastructure of information and communication technologies will be permanently improved. The

quality status of the research station in Východná will be kept at the acceptable level, the same with technical equipment and premises of ILE SAS.

- Weak parts of ILE SAS activities will be made weaker by systematic pressure on them and permanent attempt to improve the things. However, ILE SAS will do everything to make the strong parts of its structure, its activities and its effort stronger and stronger by everywhere present support of positive attitudes, newest and human approach to any of the arisen problems.

### **III. Partial indicators of the main activities:**

#### **1. Research output**

- i. List of the selected publications documenting the most important results of basic research. Total number of publications in the whole assessed period should not exceed the average number of the research employees**

- [1] HRNČIAROVÁ T. et al ( Izakovičová, Z., Pauditšová, E., Krnáčová, Z., Štefunková, D., Dobrovodská M., Kalivodová E., Moyzeová, M., Špulerová, J., Popovičová-Waters, J.): Landscape-ecological conditions of the development of Bratislava (*Krajinnoekologické podmienky rozvoja Bratislavy*). Bratislava: Veda, publishing house of Slovak Academy of Sciences, Institute of Landscape Ecology of SAS (*Veda, vydavateľstvo Slovenskej akadémie vied, Ústav krajinnej ekológie SAV*), 2006, 316 p., ISBN 80-224-0910-3.
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- [2] YOUNG, J. - HALADA, L. - KULL, T. - KUZNIAR, A.- TARTES, U. - UZUNOV, Y. - WATT, A. (eds) (... Halada, L., Bača, A., Petrovič, F., Oszlányi, J., David, S. ...) Conflicts between human activities and the conservation of biodiversity in agricultural landscapes, grasslands, forests, wetlands and uplands in the Acceding and Candidate Countries (ACC). A Report of the BIOFORUM project. Banchory: Centre for Ecology and Hydrology, 2004. 97 p.

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- [16] CHRASTINA, P. - BOLTIŽIAR, M. - MICHALÍK, P. - KRČMÁROVÁ, E. - MOLNÁROVÁ, K. - REBROVÁ, M. - MARGETÍN, M. - HUČKOVÁ, M. - KRIŠTOF, J. - BREZNIAKOVÁ, Z. - HANO, D. - ČUKAN, J. - RYBOVÁ, E. - VELKÝ, J. - MAŽÁROVÁ, E. - KOVÁČ, P. - PAVLOVIČ, P. - KRCHNIAK, M. - RIZEKOVÁ, A. - BALÚCH, M. - SLÍŽIKOVÁ, Z. - ZÁVODNÝ, M. - ŠUSTEKOVÁ, I. - GAŤAROVÁ, J. - KROŠLÁK, J.: The village Nové Sady 1156-2006 (*Nové Sady 1156-2006*). Nitra: Faculty of Arts of Constantine the Philosopher University (*Filozofická fakulta UKF v Nitre*), obec Nové Sady, 2006, 175 p., ISBN 80-969548-2-2.
- [17] IZAKOVIČOVÁ, Z. et al (Bezák, P., Boltžiar, M., Dobrovodská, M., Grotkovská, L., Hrnčiarová, T., Krnáčová, Z., Miklós, L., Miklošovičová, Z., Moyzeová, M., Oszlányi, J., Petrovič, F., Štefunková, D., Šimonides, I.): Science, landscape and the human environment (*Veda, krajina a životné prostredie*) Bratislava: Institute of Landscape Ecology of SAS (*Ústav krajiny ekológie SAV*), 2006, 76 p., ISBN 80-969272-7-2.
- [18] IZAKOVIČOVÁ, Z. et al. (Kozová, M., Spáčilová, R., Grotkovská, L., Moyzeová, M., Bezák, P., Cibira, P., Hreško, J., Petrovič, F., Štefunková, D., Paudišová, E., Špulerová, J., Oszlányi, J., Dobrovodská, M., Miklošovičová Z., Ružička, M., Boltžiar, M., Rosová, V., Kenderessy, P.): Integrovaný manažment krajiny I. Bratislava: Institute of Landscape Ecology of SAS (*Ústav krajiny ekológie SAV*), 2006, 118 p., ISBN 80-969272-8-0.
- [19] IZAKOVIČOVÁ, Z. et al (Grotkovská, L., Moyzeová, M., Cibira, P., Vodičková, M., Hreško, J., Štefunková, D., Halada, L., David, S., Kenderessy, P., Petrovič, F., Boltžiar, M., Grambličková, V., Imrichová, Z., Miklošovičová Z.): Integrovaný manažment krajiny II. Bratislava: Institute of Landscape Ecology of SAS (*Ústav krajiny ekológie SAV*), 2006, 224 p., ISBN 80-969272-9-9.
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- [21] MIKLÓS, L. - IZAKOVIČOVÁ, Z. et al (Boltžiar, M., Diviaková, A., Grotkovská, L., Hrnčiarová, T., Imrichová, Z., Kočická, E., Kočický, D., Kenderessy, P., Miklós, L., Moyses, M., Moyzeová, M., Petrovič, F., Špinerová, A., Špulerová, J., Štefunková, D., Váľkovcová,

Z., Zvara, I.): Atlas of representative geoecosystems of Slovakia (*Atlas reprezentatívnych geoeekosystémov Slovenska*). Bratislava: Institute of Landscape Ecology of SAS (*Ústav krajinskej ekológie SAV*), 2006, 124 p. + 6 maps. ISBN 80-969272-4-8. The publication has been issued in English and Hungarian too.

- [22] OLAH, B. - BOLTIŽIAR, M. - PETROVIČ, F. - GALLAY, I.: The development of landscape use of the Slovak biosphere reserves UNESCO (*Vývoj využitia krajiny slovenských biosférických rezervácií UNESCO*). Zvolen: Technical University in Zvolen (*Technická univerzita vo Zvolene*), 2006, 124 p., ISBN 80-228-1695-7.
- [23] PICHLER, V. - KROPIL, R. - KRIŠŠÁKOVÁ, I. - JAMNICKÁ, G. (eds): Compendium of project pre-proposals and call-lines developed on the ERA ENV platform. . Contributors: Bebej, J., Bielek, P., Černota, M., Ďurkovič, J., Gregor, J., Hamor, F., Jakubis, M., Juráni, B., Koreň, M., Majerčáková, O., Novák, V., Oszlányi, J., Saniga, M. Supuka, J., Szolgay, J., Válka, J. Zvolen: Technical University in Zvolen, (*Technická univerzita vo Zvolene*), 2006, 39 p., ISBN 80-228-1668-X.

#### **iv. List of other scientific outputs specifically important for the Organisation**

##### r. 2003

- [1] DAVID, S.: The results of the monitoring of the dragonflies (Insecta: Odonata) in the catchment of the Paríž stream (SW Slovakia). In *Ekológia* (Bratislava). Vol. 22, Supplement 2, 2003, p. 320-332, (0,246 - IF2002).
- [2] KUBÍČEK, F. - ŠOMŠÁK, L.: Aboveground herb and moss layer biomass in forest ecosystems of the Spiš region (East Slovakia). In *Ekológia* (Bratislava). Vol. 22, no. 1, 2003, p. 3-7, (0.246 - IF2002).
- [3] KANKA, R.: *Alnetum incanae* LÜDI 1921 v Belianskych Tatrách Mts. In *Biosozológia* (Bratislava). Vol. 1, 2003, p. 52-59.
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- [5] ŠOMŠÁK, L. - ŠIMONOVICHOVÁ, V. - KOLLÁR, J.: Phytocoenoses of pine forests in the central part of the Záhorská nížina lowland. In *Biologia*, Bratislava. Vol. 59, no. 2, 2004, p. 101-113, (0,183 - IF2003).

r. 2004

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r. 2005

- [8] UHRIN, S. - BAČA, F. A new locality of *Typha shuttleworthii* in Slovakia. In Biologia (Bratislava). Vol. 60, no. 1, 2005, p. 105, (0,059 - IF2004).
- [9] HREŠKO, J. - BOLTÍŽIAR, M. - BUGÁR, G.: The present-day development of landforms and landcover in alpine environment - Tatra Mts (Slovakia). In Studia Geomorphologica Carpatho-Balcanica. Vol. 34, 2005, p. 21-38.
- [10] KOLLÁR, J. - KANKA, R. - ŠIMONOVÍČ, V.: Boggy black alder forests (alliance *Alnion glutinosae* Malcuit 1929) of northeastern part of the Borská nížina lowland. In Phytopedon. Vol. 4, no. 2, 2005, p. 1-11.

r. 2006

- [11] HELEXOVÁ, A. - ŠOMŠÁK, L. - ANTONI, J. - KROMKA, M. - KOLLÁR, J.: The effect of sanitation measures on tree volume in young plantations of spruce (*Picea abies* (L.) K a r s t.) in forests of the village of Nálepkovo. In Ekológia (Bratislava). Vol. 25, no. 1, 2006, p. 102-112.
- [12] KALIVODOVÁ, E.: Bird communities of the water reservoirs and fish-ponds in tuhe Paríž creek catchment. In Ekológia (Bratislava). Vol. 25, no. 1, 2006, p. 44-52.
- [13] OLAH, B. - BOLTÍŽIAR, M. - PETROVIČ, F.: Land use changes, relation to georelief and distance in the East Carpathians Biosphere Reserve. In Ekológia (Bratislava). Vol. 25, no. 1, 2006, p. 68-81.
- [14] SVATOŇ, J. - GAJDOŠ, P. : Spiders of Gaderská and Blatnická dolina valleys in the southern part of Veľká Fatra Mts., Slovakia (Araneae). European arachnology 2005 (Deltshev, C. & Stoev, P., eds). In Acta Zoologica Bulgarica. Suppl. no. 1, 2006, p. 191-219.

- [15] IZAKOVIČOVÁ, Z.: New methodological procedures of the landscape-ecological planning in Slovak their application on the study area. In Djakonov, K.N., Landscape science: theory, methods, regional research, practice: Materials from the 11<sup>th</sup> International Landscape Conference (*Landšaftovedenije: teorija, metody, regionalnyje issledovanija, praktika: Materialy XI Meždunarodnoj landšaftnoj konferencii*), Moskva: Faculty of Geography, M.V. Lomonosovov University (*Geografičeskij fakultet MGU im. M.V. Lomonosova*), 2006, p. 661-662, (R) ISBN 5-89575-104-0.
- [16] KOZOVÁ, M. - IZAKOVIČOVÁ, Z. - OŤAHEL', J. - PAUDITŠOVÁ, E.: Theory, practice and education in landscape ecology and landscape planning in the Slovak Republic. In Djakonov, K.N., Landscape science: theory, methods, regional research, practice: Materials from the 11<sup>th</sup> International Landscape Conference (*Landšaftovedenije: teorija, metody, regionalnyje issledovanija, praktika: Materialy XI Meždunarodnoj landšaftnoj konferencii*), Moskva: Faculty of Geography, M.V. Lomonosovov University (*Geografičeskij fakultet MGU im. M.V. Lomonosova*), 2006, p. 754-756, (R) ISBN 5-89575-104-0.
- [17] MOYZEOVÁ, M.: Nontraditional forms of the environmental education. In Djakonov, K.N., Landscape science: theory, methods, regional research, practice: Materials from the 11<sup>th</sup> International Landscape Conference (*Landšaftovedenije: teorija, metody, regionalnyje issledovanija, praktika: Materialy XI Meždunarodnoj landšaftnoj konferencii*), Moskva: Faculty of Geography, M.V. Lomonosovov University (*Geografičeskij fakultet MGU im. M.V. Lomonosova*), 2006, p. 763-764. (R) ISBN 5-89575-104-0.

## v. Table of research outputs

Table **Research outputs** shows research outputs in number of specified entries; these entries are then divided by FTE employees with a university degree (from Tab. Research staff) for all Organisation at the respective year; finally these entries are divided by the total salary budget (from Tab. Salary budget).

Research outputs	2003			2004			2005			2006			total			
	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	averaged number per year	av. No. / FTE	av. No. / salary budget
monographs, books published abroad	0	0,00	0,00	2	0,07	0,21	1	0,03	0,10	1	0,03	0,10	4	1,0	0,03	0,10
monographs, books published in Slovakia	5	0,16	0,53	1	0,03	0,11	8	0,22	0,82	9	0,27	0,88	23	5,8	0,18	0,60
chapters in monographs, books published abroad	0	0,00	0,00	1	0,03	0,11	2	0,05	0,21	1	0,03	0,10	4	1,0	0,03	0,10
chapters in monographs, books published in Slovakia	3	0,10	0,32	0	0,00	0,00	2	0,05	0,21	0	0,00	0,00	5	1,3	0,04	0,13
CC publications	7	0,23	0,75	4	0,13	0,43	5	0,14	0,51	1	0,03	0,10	17	4,3	0,13	0,44
scientific publications indexed by other databases (specify)	0	0,00	0,00	0	0,00	0,00		0,00	0,00	15	0,46	1,47	15	5,0	0,15	0,52
scientific publications in other journals	16	0,52	1,71	14	0,46	1,50	26	0,70	2,68	24	0,73	2,36	80	20,0	0,61	2,07
publications in proc. of international scientific conferences	50	1,63	5,33	26	0,86	2,79	24	0,65	2,47	28	0,85	2,75	128	32,0	0,98	3,32
publications in proc. of nat. scientific conferences	21	0,68	2,24	33	1,10	3,55	23	0,62	2,37	29	0,88	2,85	106	26,5	0,81	2,75
active participations at international conferences	92	3,00	9,81	81	2,69	8,70	93	2,52	9,58	116	3,53	11,41	382	95,5	2,93	9,90
active participations at national conferences	36	1,17	3,84	70	2,32	7,52	61	1,65	6,28	81	2,46	7,96	248	62,0	1,90	6,43

#### vi. Renormalized publications<sup>2</sup>

*Renormalized publications = number of CC publications in the given year times authorship's portion of the Organisation times the journal impact factor in 2005 divided by the median impact factor in the research field*

Renormalised publications	2003			2004			2005			2006		
	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget
Renormalized publications	6,17	0,20	0,66	9,52	0,32	1,02	9,81	0,27	1,01	10,9	0,33	1,07

#### vii. Standard manuscript page count<sup>3</sup>

Standard manuscript page count	2003			2004			2005			2006		
	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget
page count	0	0,0	0,0	0	0,0	0,0	0	0,0	0,0	0	0,0	0,0

#### viii. List of patents and patent applications

[1] ----

[2] ...

#### ix. Supplementary information and/or comments on the scientific output of the Organisation

<sup>2</sup> This information is required only from the Organisations of the Section 2 of the Slovak Academy of Sciences.

<sup>3</sup> This information is required only from the Organisations of the Section 3 of the Slovak Academy of Sciences.



## 2. Responses to the scientific output

Table **Citations** shows specified responses to the scientific outputs; these entries are then divided by the FTE employees with a university degree (from Tab. Research staff) for all Organisation at the respective year; finally these entries are divided by the total salary budget (from Tab. Salary budget).

Citations	2002			2003			2004			2005			total			
	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	averaged number per year	av. No. / FTE	av. No. / salary budget
Web of Science	72	2,3	7,7	101	3,4	10,9	76	2,1	7,8	46	1,4	4,5	295	73,8	2,3	7,6
SCOPUS	0	0,0	0,0	2	0,1	0,2	10	0,3	1,0	3	0,1	0,3	15	3,8	0,1	0,4
(specify Database 1)	0	0,0	0,0	0	0,0	0,0	0	0,0	0,0	0	0,0	0,0	0	0,0	0,0	0,0
in monographs, conf. proceedings and other publications abroad	23	0,7	2,5	17	0,6	1,8	13	0,4	1,3	82	2,5	8,1	135	33,8	1,0	3,5
in monographs, conf. proceedings and other publications in Slovakia	97	3,2	10,3	242	8,0	26,0	101	2,7	10,4	79	2,4	7,8	519	129,8	4,0	13,5
in journals (periodicals)	87	2,8	9,3	53	1,8	5,7	50	1,4	5,1	86	2,6	8,5	276	69,0	2,1	7,2

### i. List of 10 top-cited publications and number of their citations in the assessment period

- [1] RUŽIČKA, M. - MIKLÓS, L.: Landscape-ecological planning (LANDEP) in the process of territorial planning. In *Ekológia (ČSSR)*. Vol. 1, no. 3 (1982), p. 297-312.- 82 citations
- [2] RUŽIČKA, M.: Landscape-ecological planning. LANDEP I. (*Krajinnookologické plánovanie. LANDEP I.*) Bratislava: Biosféra, 2000, 119 p. - 41 citations

- [3] RUŽIČKOVÁ, H. - HALADA, Ľ. - JEDLIČKA, L. - KALIVODOVÁ, E.: Biotopes of Slovakia. (*Biotopy Slovenska.*) Bratislava: ÚKE SAV, 1996, 192 p. - 29 citations
- [4] IZAKOVIČOVÁ, Z. - MIKLÓS, L. - DRDOŠ, J.: Landscape-ecological conditions of sustainable development. (*Krajinnoekologické podmienky trvalo udržateľného rozvoja.*) Bratislava: Veda, 1997, 186 p.- 22 citations
- [5] MIKLÓS, L. - IZAKOVIČOVÁ, Z.: Landscape as a geosystem. (*Krajina ako geosystém.*) Bratislava: Veda, 1997, 152 p. - 21 citations
- [6] RUŽIČKA, M.: Development trends in landscape ecology. In *Ekológia* (Bratislava). Vol. 15, No. 4 (1996), p. 361-367. - 14 citations
- [7] RUŽIČKA, M. - MIKLÓS, L.: Basic premises and methods in landscape-ecological planning and optimization. In Zonneveld, I.S., Forman, R.T.T. *Changing landscapes - an ecological perspective.* New York: Springer Verlag, 1990, p. 233-260. - 12 citations
- [8] GAJDOŠ, P. - SVATOŇ, J. - SLOBODA, K.: Catalogue of Slovakian spiders. I., II. -Katalóg pavúkov Slovenska Bratislava: Ústav krajinej ekológie SAV. 1999, 337 p., 315 p. - 9 citations
- [9] IZAKOVIČOVÁ, Z. - HRNČIAROVÁ, T. - MOYZEOVÁ, M.: Management ecologization of the Parná catchment. *Local Agenda 21. (Ekologizácia manažmentu povodia Parnej. Miestna Agenda 21.)* Bratislava: Združenie Krajina 21, 2001, 185 p. - 9 citations
- [10] RUŽIČKA, M. - RUŽIČKOVÁ, H.: Secondary landscape structure as a criteria of biological equilibrium. (Druhotná štruktúra krajiny jako kritérium biologickej rovnováhy.) In *Problems of Biology of Landscape. (Problémy biológie krajiny.)* Vol. 12 (1973), p. 23-61. - 9 citations

**ii. List of top-cited authors from the Organisation (at most 10 % of the research employees) and their number of citations in the assessment period**

- |     |                 |               |
|-----|-----------------|---------------|
| [1] | RUŽIČKA, M.     | 284 citations |
| [2] | MIKLÓS, L       | 113 citations |
| [3] | IZAKOVIČOVÁ, Z. | 84 citations  |
| [4] | HRNČIAROVÁ, T.  | 62 citations  |

iii. **Supplementary information and/or comments on responses to the scientific output of the Organisation**

*Other citations*

Citations	2002	2003	2004	2005	total	Average number per year
Citations in journals (periodical)	87	53	50	86	276	69

3. **Research status of the Organisation in the international and national context**

• **International/European position of the Organisation**

- i. **List of the most important research activities documenting international importance of the research performed by the Organisation, incl. major projects (details of projects should be supplied under Indicator 4). Collective membership in the international research organisations, in particular within the European Research Area**

[1] Multilateral projects within EU Sciences Programme

**European Topic Centre for Nature Conservation and Biodiversity V. - Contribution to EUNIS (European Union Information System)**

*– the most important international project in the year 2003.*

The aim of the project was to contribute to the establishment of the EUNIS information system and its implementation of Natura 2000 network. Animal species, listed in Annexes II of the Habitat Directive were subject of the first one. Data on relation of these species to habitat types were collected and generalized. Other tasks were related to preparation and submission of indicator fact sheets for ferns and bryophytes listed in Annexes II of the Habitat Directive. For these species 47 sheets were elaborated containing data about their distribution, habitat demands, ecosozological status, threats and population trends.

[2] 5<sup>th</sup> Framework Programme

**European valuation and assessment tool supporting wetland ecosystem legislation - inclusion of newly associated states - EVALUWET-NAS**

*– the most important international project in the year 2004*

The aim of the project is to prepare an action plan for the management of the important Ramsar Convention locality Parížske močiare wetland and its catchment area. GAJDOŠ, P. - DAVID, S. - PETROVIČ, F. (eds.) et al.: The National Nature Reserve of the Parížske močiare marsh. Landscape, biodiversity and nature protection. (*Národná prírodná rezervácia Parížske močiare. Krajina, biodiverzita a ochrana prírody.*) Nitra: Institute of Landscape Ecology of SAS, (*Ústav krajinnej ekológie SAV*) Bratislava, 2005, 195 s. ISBN 80-968120-6-8.

[3] 5<sup>th</sup> Framework Programme

**Scenarios for reconciling biodiversity conservation with declining agricultural use in the mountains of Europe - BIOSCENE**

*- the most important international project in the year 2005*

The goal of the project was to analyse and evaluate the biodiversity consequences of agricultural decline and restructuring in mountain areas of Europe to provide strategies and policy tools for reconciling the conservation of biodiversity with the potentially conflicting impacts of declining agricultural activities.

P. BEZÁK, Ľ. HALADA, F. PETROVIČ, M. BOLTÍŽIAR, J. OSZLÁNYI: Bukovské vrchy in „the Slovak Carpathian Mts. – landscape changes and trends. In: Mander, U., Helming, K., Wiggering, H. (eds.): Multifunctional Land Use - Meeting Future Demands for Landscape Goods and Services. Springer Verlag, In press.

[4] 5<sup>th</sup> Framework Programme

**Linking Pan-European land cover change to pressures on biodiversity – BIOPRESS**

*- the most important international project in the year 2006*

The goals of the project were:

-The production of a prototype product characterising land cover change in Europe from 1950 to 2000 (interpretation and analysis of the historical aerial photographs)

-To set up a GIS framework that will support and facilitate the integration of pan European spatial data sets

-To develop a spatially referenced product showing the main pressures on biodiversity (intensification, abandonment, afforestation, urbanisation) from the integration of data on land cover change and other environmental and socio-economic data

The main results of the project were published in the monograph: GERARD, F. - THOMSON, A. - WADSWORTH, R. - GREGOR, M. - LUQUE, S. - SANDRA, L. - HUITU, H. - KÖHLER, R. - OLSCHOFKY, K. - HAZEU, G. - MUCHER, S. - HALADA, Ľ. - BUGÁR, G. - PINO, J.: Land cover change in Europe from the 1950-ies to 2000. Aerial photo interpretation and derived statistics from 59 samples distributed across Europe. Eds. Olschofsky, K. - Köhler, R. - Gerard, F. Hamburg: Institute for World Forestry, University of Hamburg, 2006. ISBN 80-89088-46-5. 364 p.

other important international projects in the period 2003-2006

[5] Multilateral project within EU Sciences Programme

**PHARE - Nature Friendly Tourism development in the microregion of town Svätý Jur with support of Landscape–ecological Plan**

The aim of the project is the coordination and harmonization of proposed activities with natural and cultural-historical landscape potential in accordance with environmental protection and tourism development. Within the frame of the project were elaborated the following activities:

Completion of foundations for an monography, which makes accessible the thought of integrated land use with respect to possibilities of tourism development in harmony with protection of natural resources as well as promotion of environmentally valuable sites as well as developmental possibilities of human activities.

Elaboration and realization of an exhibition of the Natural Museum of the Biological station NNR Šúr in order to develop cognitive tourism.

KRNÁČOVÁ, Z. - ŠTEFUNKOVÁ, D. - DOBROVODSKÁ, M. - HRNČIAROVÁ, T. - PAVLIČKOVÁ, K. - PAUDITŠOVÁ, E.- POTOČKOVÁ, L. - KOŠOVIČ, P. - KUBÍČEK, F. - JANOTKA, V. - GAJDOŠ, V.: Integrated development of tourism in the microregion of the town Svätý Jur (*Integrovaný rozvoj turizmu v mikroregiónne Svätý Jur.*) Bratislava: Institute of Landscape Ecology of SAS, (*Ústav krajinnej ekológie SAV*), 2005. ISBN 80-9692720-5. 199 p.

[6] 5<sup>th</sup> Framework Programme

**The European dimension of the Global Observation Research Initiative in Alpine Environments (GLORIA) - a contribution to GTOS**

The aim of GLORIA was to establish an effective long-term observation network for detecting the effects of climate change on mountain biota on a global scale. 4 permanent monitoring plots for long-term ecological research and observation have been established in the Tatry Mts. They will serve for the comparative evaluation of the impact of climatic changes in high-mountain ecosystems according to GLORIA methodology. The publication "The Gloria Field Manual presents the original methodology for worldwide high-mountain ecosystem research. 4 scientists of ILE SAS are the co-authors of the publication. PAULI, H. - GOTTFRIED, M. - HOHENWALLNER, D. - REITER, K.- CASALE, R.- GRABHERR, G. (eds) (... Barančok, P., Kanka, R., Kollár, J., Oszlányi, J. ...) The GLORIA field manual - multi-summit approach. Global observation research initiative in alpine environments - a contribution to the global terrestrial observing system. Luxembourg: Office for Official Publication of the European Communities, 2004. 45 p. + 3 supplements. ISBN 92-894-4737-0.

[7] 5<sup>th</sup> Framework Programme

**European Platform for Biodiversity – BIOPLATFORM**

Goal of the project was to improve the effectiveness and relevance of European biodiversity research, fulfilling functions that provide significant components of a European Research Area on Biodiversity.

[8] 5<sup>th</sup> Framework Programme

**Effects of land-use changes on sources, sinks and fluxes of carbon in European mountains – CARBOMONT**

The main goals of project were:

- To quantify the annual carbon balance and its variability of the major European non-forest mountain ecosystems
- To determine and quantify the carbon pool components and their source/sink strength in mountain ecosystems under different land use and climatic conditions
- To identify and quantify interactions between the carbon and nitrogen To apply SVAT models for the investigated ecosystems
- To apply CO<sub>2</sub> exchange models for complex landscapes and to simulate how contrasting policy scenarios may alter landscape level carbon sequestration of selected study sites

[9] 5<sup>th</sup> Framework Programme

**A Framework for the co-ordination of biodiversity and habitats - BioHab**

The aim of the project was to produce a methodology for the co-ordination of consistent habitat information across Europe, which can then be linked to biodiversity protection measures. One of the main outputs is user friendly description of habitats at an appropriate level for consistent application throughout Europe and then, to show how these can be linked to measures of biodiversity.

[10] 5<sup>th</sup> Framework Programme

**European biodiversity forum implementing the ecosystem approach - NAS extension - BIOFORUM-NAS**

The main goals of the project were:

- to analyse the principal sources of conflict between biodiversity conservation and economic development
- to create a European level forum for dialogue between scientists and stakeholders in key thematic areas
- to identify measures for conflict resolution,
- to identify best practice in biodiversity management (e.g. Biodiversity Action Plans) at territorial level of proximity to European citizens (NUTS 3 or 4),
- to identify and evaluate methods for monitoring progress in resolving conflicts between economic development and biodiversity conservation at a national and European scale

Five scientists of the Institute are co-authors of publication: Young, J. - Halada, L. - Kull, T. - Kuzniar, A. - Tartes, U. - Uzunov, Y. - Watt, A. (Eds) (... Halada, L., Bača, A., Petrovič, F., Oszlányi, J., David, S. ...) Conflicts between human activities and the conservation of

biodiversity in agricultural landscapes, grasslands, forests, wetlands and uplands in the Accessing and Candidate Countries (ACC). A Report of the BIOFORUM project. Banchory: Centre for Ecology and Hydrology, 2004. 97 p.

[11] 6<sup>th</sup> Framework Programme

**Mobilising the European social research potential in support of biodiversity and ecosystem management - SoBio**

As main outcomes of project can be considered: assesment of current state of socioeconomical research in biodiversity field, identification of strenghts and weaknesses within the framework of European research space, elaboration of future socio-economical research plan, and management of ecosystems and establishment of interdisciplinary experts network.

IZAKOVIČOVÁ, Z., OSZLÁNYI, J., GROTKOVSKÁ, L., VÁLKOVCOVÁ, Z., KENDERESSY, P., DOBROVODSKÁ, M., MOYZEOVÁ, M., Mobilising the European social research potential in support of biodiversity and ecosystem management. National report I.,II., SOBIO – project of the 6th Framework Programme. Bratislava: ILE SAS, 2004, 39 pp., 77pp.

[12] 6th Framework Programme

**Sustainability Impact Assessment: Tools for Environmental, Social and Economic Effects of Multifunctional Land Use in European Regions – SENSOR**

Institute of landscape ecology of SAS joined the project consortium and participates on 4 work packages, M 3.2., M 6.1. and M 6.2. and M 7.4. Within the module 3.2., ILE SAS participates on elaboration of methodology for sustainability assessment on regional and European level, definition of environmental limits and indicators of SD and their incorporation into project indicators framework. The work within module 6.1. required activities such as contributing to elaboration of the sub-survey of European mountain sensitive regions for different social, economic and environmental conditions, investigating the key issues of sustainability and related impacts by the reviews of available literature (web sources, journals, existing surveys etc.) and providing evidence of depicted issues in concrete European regions. Module 6.2. is based on continuation of data gathering for the High Tatras sensitive area case study (e.g. relevant digital data describing physio-geographical and socio-economic characteristics of proposed sensitive region) coupled with acquisition of relevant statistical data mostly of demographical social and economical characteristics. Within module 7.4. ILE SAS participated on elaboration of the social survey 'Dynamic profile of the sensitive area case study "High Tatras" in Slovak Republic', organisation and realization of interviews for validation of Bioenergy policy case scenario, I. phase with representatives on national level.

[13] 6<sup>th</sup> Framework Programme

**A Long-Term Biodiversity, Ecosystem and Awareness Research Network - ALTER-Net** – a “Network of Excellence” funded by the EU’s 6<sup>th</sup> Framework Programme

ALTER-Net is a partnership of 24 organisations from 17 European countries which will develop durable integration of biodiversity research capacity at a European level. The aim is:

- create a network for European long-term terrestrial and fresh-water biodiversity and ecosystem research
- develop approaches to assess and forecast changes in biodiversity, structure, functions and dynamics of ecosystems and their services
- consider the socio-economic implications and public attitudes to biodiversity loss.

The work is being performed on numerous subprojects :

1. Biodiversity re-assessment and evaluation of its trends in 26 forest sites in the Carpathians
2. Threat to biodiversity through invasive non-native species – a long-term monitoring network
3. Critical scales for long-term socio-economic, biodiversity and ecosystem research
4. Urban lifestyle and urban biodiversity - subproject of ALTER-net project
5. Specific biodiversity issues – a rhetoric analysis - subproject of ALTER-net project
6. Improved description and mapping procedures for the monitoring of habitats and biodiversity on a pan-European scale
7. Indicators to monitor changes and conservation in Natura 2000 sites: A focus on drivers, pressures and states
8. Aggregating biodiversity indicators for policy purposes: sense or nonsense?

Mobility, summer schools and workshops are some activities of Alternet project. Research staff of ILE SAS worked in Alternet summer school as tutors and teachers in 2006. They taught the participants in fields of methodical questions of long-term research of ecosystems and social economic consequences of nature protection generally to sustainable development of regions. Within the framework of Alternet project two scientists of Institute took part in exchange programme in CEH Lancaster (Great Britain). They concerned with potential and value of establishing a Long-Term Socioecological Research Site. The outcomes of their research were presented in final report of study: The potential and value of establishing a Long-Term Socioecological Research Site in the North Pennines. The project is in its first half and will continue till 2009.

**Collective membership in the international research organisations, in particular within the European Research Area**

[14] The Institute is an expert of European Commission for nature protection matters in candidate countries. Institute experts participated on negotiations and provided scientific information and expertises to material submitted by the candidate countries.

[15] The Institute became a member of CONNECT consortium grouping prominent scientific institutes on the field of ecology.



- [16] The Institute is a member of PLANTA EUROPA – international organization for plant protection.
- [17] Since 2001, the Institute is an expert of European Environmental Agency in Copenhagen, which is managed directly by European Commission.
- [18] Institute is a member of Consortium of European Topic Centre for Nature Protection and Biodiversity (2001-2004) and European Topic Centre for Biodiversity (2005-2008), Paris. The Institute provided - through the consortium (staff namely: Oszlányi, J., Halada, L., Gajdoš, P., Bača, A., Izakovičová, Z., Ružičková, H., Kanka, R., Kalivoda, H.) - data connected with nature protection and biodiversity in 31 European countries and Turkey and they provided expertise on some parts of problems. European environmental agency issued an extensive publication about the environment by using of this information. The European Environment. State and outlook 2005. Copenhagen: European Environmental Agency, 2005, 570 p. ISBN 92-9167-776-0.
- [19] On September 1, 2002, the Institute became the Office for long-term ecological research in Central and Eastern Europe (CEE ILTER Office). The office keeps its activities till 2007. An international workshop “Regional Central and Eastern European ILTER Meeting“ took place in Východná, SK, on May 24-25, 2006.
- [20] For the period 2005-2008, the Institute became the expert of European Commission for Biodiversity. Institute experts participated on negotiations and provided scientific information and expertises to materials submitted by candidate countries (Bulgaria, Romania) and other countries.
- [21] ILE SAS scientist chaired the consortium of experts supervising the preparation of the publication “Progress towards halting the loss of biodiversity by 2010”

## **ii. List of international conferences (co-) organised by the Organisation**

- [1] Regular workshop of the project BIOFORUM (5<sup>th</sup> EU Framework Programme), title: “Participatory Multicriteria Decision Tools - Novel Instrument for Biodiversity Conflict Solution and Prevention”. Smolenice (Slovakia), 15 - 16 April 2003.
- [2] Field seminars of the project “Actions Austria - Slovakia”. Harmonization of the methods in the long-term ecological research of the alpine vegetation. 28 July - 3 August 2003 (Austria), 11 -16 August 2003 (Slovakia).
- [3] Seminar of the UNESCO program Man and Biosphere entitled “Funding possibilities - instructions for Biosphere Reserves “. Bratislava (Slovakia), June 2003
- [4] XIII<sup>th</sup> International Symposium on Landscape Ecological Problems. Mojmírovce (Slovakia), 30 September - 3 October 2003.

- [5] Field seminar Eco-village - Gömörszőlős, Miskolc (Hungary), 26 - 27 May 2003.
- [6] International conference "Geographical Aspects of the Central European Region". Brno (Czech Republic), 10 September 2003.
- [7] International conference of the BIOSCENE project. Košice (Slovakia), 19 - 22 October 2003.
- [8] Workshop of workpackage teams of the BIOSCENE project. Bratislava (Slovakia), 5 - 7 June 2004.
- [9] Annual Meeting of the BIOPRESS project. Bratislava (Slovakia), 18 – 20 October 2004.
- [10] V<sup>th</sup> International conference on the UNESCO Biosphere Reserves. Nová Sedlica (Slovakia), 29 September 2004.
- [11] International seminar "Life in Soil - V". Bratislava (Slovakia), 27 - 28 January 2004.
- [12] International scientific event "Biodiversity conservation and sustainable development in mountain areas". Lisbon (Portugal), April 2004
- [13] International conference linked to the project of Visegrad IV. Kazimierz Dolny (Poland), 17 June 2004.
- [14] Workshop "Social aspects of the biodiversity research" of the project SOBIO. Smolenice (Slovakia), 10 - 11 January 2005.
- [15] Workshop of the BIOHAB project. Poprad (Slovakia), 27 June - 1 July 2005.
- [16] Symposium "Botanical diversity of grasslands under pressure of changing environment" during XVII<sup>th</sup> International Botanical Congress. Vienna (Austria), 17- 23 July 2005.
- [17] 14<sup>th</sup> International Symposium on Landscape Ecology Research - "Implementation of Landscape Ecology in New and Changing Conditions". Stará Lesná (Slovakia), 4 - 7 October 2006. Organised in cooperation with IALE-SK and Department of Ecology and Environmental Sciences, Faculty of Natural Sciences of the Constantine the Philosopher University in Nitra.
- [18] Project SENSOR Cluster Meeting. Bratislava (Slovakia), 24 - 28 April 2006.
- [19] International seminar "Life in Soil – VII". Bratislava (Slovakia), 24 - 25 January 2006. Organised in cooperation with the Faculty of Natural Sciences, Comenius University in Bratislava.
- [20] 1<sup>st</sup> European Congress of Conservation Biology, Eger (Hungary), 22 - 26 August 2006, supported by Visegrad IV fund.
- [21] International conference of the ALTER-NET project (6<sup>th</sup> EU FP) "Smolenice challenge". Smolenice (Slovakia), 18 - 19 April 2006.

- [22] Regional Central and Eastern European ILTER meeting. Východná (Slovakia), 24 - 28 May 2006.
- [23] VI<sup>th</sup> National Conference on the UNESCO Biosphere Reserves in Slovakia. Nová Sedlica (Slovakia), 5 - 7 November 2006.
- [24] International seminar at the occasion of 60<sup>th</sup> anniversary of UNESCO and 30<sup>th</sup> anniversary of the "Man and Biosphere" program (MAB) entitled " Poly-functional Landscape Ecological System of the High Tatra Mts. National Park". Tatranská Štrba (Slovakia), 7 November 2006.
- [25] International scientific conference "Science and Research in the High Tatra Mts. National Park". Tatranská Štrba (Slovakia), 24 November 2006.
- [26] Ethics and Bioethics in Science and Education. Bratislava (Slovakia), 15 December 2006.

### **iii. List of international journals edited/published by the Organisation**

- [1] EKOLÓGIA (BRATISLAVA) – International Journal for Ecological Problems of the Biosphere. Edited by the Institute of Landscape Ecology of the Slovak Academy of Sciences, The Slovak Republic, Institute of Systems Biology and Ecology of Academy of Sciences, České Budějovice, The Czech Republic and Universität für Bodenkultur in Vienna (later BOKU), Austria in SAP - Slovak Academic Press Ltd. The journal is published four times a year.
- [2] EKOLÓGIA (BRATISLAVA) - Supplement 1/2003. [Ed.: Maňkovská, B.] 399 p.
- [3] EKOLÓGIA (Bratislava) - Supplement 2/2003. [Eds: Ružička, M., Hrnčiarová, T., Oľahel, J.] 400 p.
- [4] EKOLÓGIA (Bratislava) - Supplement 3/2003. [Eds.: Klimo, E., Kulhavý, J.] 198 p.
- [5] EKOLÓGIA (Bratislava) - Supplement 1/2004. [Eds: Krnáčová, Z., Hrnčiarová, T.] 413 p.
- [6] EKOLÓGIA (Bratislava) - Supplement 1/2005. [Eds: Těšitel, J., Kučera, T.] 149 p.
- [7] Supplement 2/2005. [Eds: Holecová] In press.
- [8] EKOLÓGIA (Bratislava) - Supplement 1/2006. [Eds: Krnáčová, Z., Hrnčiarová, T.] 247 p.
- [9] EKOLÓGIA (Bratislava) - Supplement 3/2006. [Eds: Ružička, M, Barica, J.M.] 281 p

#### **iv. List of edited proceedings from international scientific conferences and other proceedings**

- [1] Z. KRŇÁČOVÁ, T. HRNČIAROVÁ, M. DOBROVODSKÁ (eds): Landscape ecology - an international integrating tool in environmental issues. Abstracts of the 13th International symposium of problems of ecological research, 30. September - 3 October, 2003, Mojmirovce. Bratislava: Ústav krajinej ekológie SAV, 2003, 124 p.
- [2] BUGÁR, G. - BOLTŽIAR, M. (eds.): Implementation of landscape ecology in new and changing conditions. The 14th International Symposium on Landscape Ecology Research, 4-7 October 2006, Stará Lesná, Slovakia. Abstract proceedings. ILE SAS, Branch Nitra, 2006, 106 s.

- **National position of the Organisation**

- i. **List of selected most important national projects (Centres of Excellence, National Reference Laboratories, Agency for the Promotion of Research and Development (APVV/APVT), National Research Programmes, Scientific Grant Agency of the Slovak Academy of Sciences and the Ministry of Education (VEGA), and others)**

[1] **Landscape ecological evaluation of urban ecosystems** (VEGA project).

The objective of the project was to assess the quality of the environment in urban ecosystems with help of landscape ecological basic documents. This started from landscape ecological analysis and synthesis along with special interpreted properties such as visual quality of landscape structure, vulnerability, and load capacity of landscape by stress factors, ecological and cultural significance of landscape. The basic documents were needful to determine the landscape ecological quality and environmental problems of the territory. Determination of limits in the process of evaluation was a resultant phase of the landscape-ecological evaluation of urban ecosystems. Evaluation constituted the core of the decision-making process. In the course of evaluation the requirements of single activities on landscape-ecological conditions were confronted with the actually existing values of landscape. The proposed procedure in selected settlements of both the rural as well as urban type was applied.

[2] **Current status and changes of managed and abandoned meadows of Slovakia** (Vega project).

The synthesis of knowledge on meadow communities in Slovakia and its utilisation for proposals of management for respective meadows types are emphasized in this project.

Field work was focused especially on collection of meadow communities data from regions, poorly studied in the past. The database containing more than 2000 phytosociological records was developed using records collected both during project and in past. This database represents contribution to building of the national database of phytosociological records and will be used also for publication „Vegetation of Slovakia“(book series of VEDA publishing house).

Phytosociological synthesis of meadow communities of the Bukovské vrchy Mts., based on 10-years research, represents activities on the regional level. Current status, changes and trends of changes of rare and for conservation valuable community *Trollio-Cirsietum* in the whole area of distribution in Slovakia (upper Liptov region) was evaluated. Other part of the project was focused on data collection from meadow communities of volcanic mountains of Slovakia (especially orchard meadows) and first results are in print in *Polish Botanical Studies*. The study of alluvial meadows dynamics and related biodiversity of butterflies was realised in Záhorská nížina lowland and published in *Journal for Nature Conservation*.

The project results were used as input to the 5-th Framework project BioScene and were used also for report on conflict between man activities and biodiversity in other 5-th Framework project BIOFORUM. Four PhD thesis are prepared in framework of the project, one of them was finished and submitted for habilitation in December 2004.

**[3] Long-term ecological research in the Danube floodplain forests influenced by underground waterlevel changes (VEGA project).**

The results of the study at 6 plots achieved in 11th, 12th and 13th year after the hydropower plant Gabčíkovo has been put into operation were evaluated within the time series 1987 – 2005. 6 research plots belong to the world-wide network of ILTER (International long term ecological research). The groundwater level in this area has been changed in 1992. This consequently has influenced the growing processes and thus also the greatest part of the studied production-ecological characteristics. The groundwater level has been changed in two studied plots but the water is still within reach of the underground part of the production space of the ecosystems. Here, the reaction to the changes of growing conditions is very slight and the reaction of the growing forms (tree, shrub and herbaceous layers) is not significant. It means that the situation in greatest part of production-ecological characteristics is relatively stable and it is not possible to speak about positive or negative changes and tendencies. Significant changes have been assessed at the research plots where there came to the increase of groundwater level or to its decrease to the soil levels situated lower than is the reach of the root systems of the trees.

**[4] Determination of landscape-ecological potential for optimum development of the territory (VEGA project).**

The aim of project was to elaborate the main principles of further development of Bratislava city and its 17 parts on landscape-ecological base. Ecological, physiogeographical and socio-economical territory parameters were elaborated. They represent the base of landscape-

ecological optimal land use due to seven chosen activities for whole city territory (proposals of dwelling houses, apartment houses, arable land, vineyards, orchards, summer and winter recreation) and landscape-ecological potential of 17 city districts. Specification of landscape-ecological development of the city and thresholds determination of further development, were the main outcomes of publication. The work presents the methodical procedure – guide of solution not only for Bratislava but also for another areas. This kind of evaluation is of big importance, because decision making about future town development is realized on the basis of scientific knowledge with an application into the practice. Outcomes were presented in scientific monograph: HRNČIAROVÁ T. a kol. (Izakovičová, Z., Pauditšová, E., Krnáčová, Z., Štefunková, D., Dobrovodská M., Kalivodová E., Moyzeová, M., Špulerová, J., Popovičová-Waters, J.): Landscape-ecological conditions of the development of Bratislava (*Krajinnoekologické podmienky rozvoja Bratislavy*). Bratislava: Veda, publishing of Slovak Academy of Sciences, Ústav krajinej ekológie (Veda, vydavateľstvo Slovenskej akadémie vied), 2006. 316 p. (47 tables, 62 maps, 7 pictures, 20 orthophotos, 300 photos) ISBN 80-224-0910-3.

**[5] Integrated Landscape Management (APVV project)**

The main outcome of project was the elaboration of Integrated Landscape Management Model. It was based on integrated research of landscape in its three basic dimensions: environmental, social and economical and investigation of coherences and relations among dimensions. The aim was to define such landscape management which harmonizes social development of area with its natural, socio-economical and cultural-historical potential. The model consists of open system of methodical steps applicable everywhere. GIS supported environment enable its relatively wide and easy use anywhere else. The model was checked in several territory types: Slovakia, Trnava district, villages of Suchá nad Parnou, Zvončín, dispersed settlement of Pohronský Inovec and Trábeč, Tatras Biosphere Reserve etc. Outcomes of project were also applied in education – in the form of Study Programme and text book for universities: Integrated Landscape Management.

The most significant works:

IZAKOVIČOVÁ Z., A KOL. 2006: Integrated Landscape Management. ILE SAS, Šeft Bratislava, ISBN: 80 - 969272 - 8 – 0, ISBN: 80 - 969272 - 9 - 9

PETROVIČ, F., 2005: Landscape Development of dispersed Settlement In Area of Pohronský Inovec and Trábeč Mts. Bratislava: ILE SAS, 2005, 209 p. ISBN 80-9692-723-4.

**ii. List of national scientific conferences (co)-organised by the Organisation**

- [2] Students' scientific conference, Environmental section A, April 9.-10., 2003, Bratislava.
- [3] Workshop “Slovakia one year after Johannesburg, April 29.-30., 2003, Smolenice.
- [4] First meeting of stakeholders for BIOSCENE project, December 2, 2003, Snina.

- [5] Workshop of Arachnological section of the Slovak Entomological Society in cooperation with Institute of Forest Ecology and Institute of Landscape Ecology on the occasion of jubilees of Mgr. Jaroslava Svatoňa, RNDr. Zdenka Majkusa CSc., Doc. RNDr. Miroslava Krumpála CSc. NP Malá Fatra Information Centre, Štefanová, October 10-12, 2003
- [6] Workshop – Days of young ecologists and environmentalists, April 28-30, 2003, Nitra.
- [7] Workshop within EVALUWET project. I. Meeting of the users of the basin river Paris, March 5, 2003.
- [8] Workshop “Integrated landscape management”, June 29, 2004, Smolenice.
- [9] Meeting of managers in the territory of Východné Karpaty Biosphere Reserve, November 9, 2004, Snina.
- [10] Workshop “Sustainable development of tourism in the Slovenský kras Biosphere Reserve”, February 3, 2004.
- [11] Workshop “Learning together”, September 30, 2004, Suchá nad Parnou.
- [12] Establishing meeting of Slovak Biodiversity Platform, April 14, 2004, Smolenice.
- [13] Scientific conference on the occasion of the 30<sup>th</sup> jubilee of Arachnological section establishment “History and trends of arachnological research in Slovakia and Czech Republic”, September 9-12, 2004, Východná.
- [14] Second meeting of Slovak Biodiversity Platform, November 29, 2004, Smolenice.
- [15] Workshop “Integrated landscape management”, April 19, 2005, VÚVH Bratislava.
- [16] Workshop on the occasion of 40<sup>th</sup> jubilee of ILE SAS, March 7, 2005, Smolenice.
- [17] Workshop “Learning together”, June 29, 2005, Suchá nad Parnou.
- [18] Workshop of ILE SAS employees – presentation of project results, December 14-15, 2005, Smolenice.
- [19] Day of the open door of ILE SAS in the frame “Week of the Europe Union science”, project presentation “Learning together” November 9, 2005, Suchá nad Parnou.
- [20] Day of the open door of ILE SAS in the frame “Week of the European Union science”, November 17, 2005, Bratislava.
- [21] Training “How to write project proposals for 6<sup>th</sup> Framework Program”, August 30-31, 2005, Východná.
- [22] Third meeting of Slovak Biodiversity Platform, April 26, 2005, Bratislava.

- [23] Conference “History, present and future of nature conservation in the Landscape Protected Area of Ponitrie on the occasion of 20<sup>th</sup> anniversary of its declaration, October 20-21, 2005, Nitra.
- [24] Workshop of Rural-ETINET – 7<sup>th</sup> Framework Programs and its specifics, September 18, 2006, Bratislava.
- [25] Workshop “The call of Smolenice III, Integrated landscape management – a basic tool for sustainable development implementation, April 18-19, 2006, Smolenice.
- [26] Workshop “Science, landscape and environment”, November 22, 2006, Trnava.
- [27] Exposition “Science, landscape and environment”, November 23 - 30, 2006, Trnava.
- [28] Arachnofauna diversity with focus on the protected areas and vulnerable habitats, September, scientific conference, 14-17, 2006, Východná.

### **iii. List of national journals published by the Organisation**

- [29] ŽIVOTNÉ PROSTREDIE (Human environment) - Revue pre teóriu a tvorbu životného prostredia. Vydáva Ústav krajinnej ekológie SAV v vo vydavateľstve AEP - Academic Electronic Press, spol. s r.o. Vychádza 6x do roka.

### **iv. List of edited proceedings of national scientific conferences/events**

- [30] IZAKOVIČOVÁ, Z. (ed.), Zborník príspevkov z konferencie Slovensko rok po Johannesburgu. 29.-30.4.2003. Smolenice. (Conference proceedings Slovakia after a year after Johannesburg.) Bratislava: Ústav krajinnej ekológie SAV, 2003, 172 s.
- [31] IZAKOVIČOVÁ, Z. (ed.), Smolenická výzva III - Integrovaný manažment krajiny - základný nástroj implementácie trvalo udržateľného rozvoja. Zborník príspevkov z konferencie, Smolenice, 18.-19. apríla 2006. ( Smolenice challenge III - Integrated landscape manažment - basic tool of implementation of sustainable development.) Ústav krajinnej ekológie SAV, Bratislava, 248 s.

- **International/European position of the individual researchers**

- i. **List of invited/keynote presentations at international conferences, documented by an invitation letter or programme**



2003

- [1] GAJDOŠ, P. et al.: Introduction to the Paríž catchment. Project meeting. Sinaia (Rumania), 8.-12.5.2003.
- [2] HALADA, Ľ. – IZAKOVIČOVÁ, Z.: Bukovské vrchy Mts. study area, Slovakia. Kick-off meeting - BioScene. Wye (GB), 10.1.2003.
- [3] HREŠKO, J. – OSZLÁNYI, J.: Framework conception of the long term ecological research in the Western Tatra Mts alpine ecosystem. European-American workshop on Long term socio-environmental research. Motz (France), 1.-5.7.2003.
- [4] JANITOR, A.: Effect of climatic conditions on the morphogenesis and virulence activity of phytopathogenic fungi *Monilia fructigena* Pers. and *Monilia laxa* Aderh. et Ruhl. Medzinárodná konferencia o ochrane rastlín. Nitra, (SR) 16.-17.9.2003.
- [5] JANITOR, A.: Effect of ultraviolet radiation on the morphogenesis of the fungus *Schizophyllum commune* Fr. and *Stereum hirsutum* (Willd.) Gray. Medzinárodná konferencia Ekologické dôsledky kalamít v lesných porastoch a ich odstraňovanie. Zvolen–Kováčová (SR), 25.-26.9.2003.
- [6] JANITOR, A.: Ecological consequences of disasters in forest stands in years 1999–2004. Medzinárodná konferencia Ekologické dôsledky kalamít v lesných porastoch a ich odstraňovanie. Zvolen–Kováčová (SR), 25.-26.9.2003.
- [7] JANITOR, A.: Mycofloristical research during last 25 years in the locality of East Slovak Steel Works (Východoslovenské železiarne). Medzinárodná konferencia Nové trendy v ochrane lesa a krajiny. Zvolen (SR), 23.-24.1.2003.
- [8] JANITOR, A.: Mycorhizal fungi as bioindicators of contaminate environment. Medzinárodná konferencia Nové trendy v ochrane lesa a krajiny. Zvolen (SR), 23.-24.1.2003.
- [9] OSZLÁNYI, J.: International integration of environmental research at the Institute of Landscape Ecology of Slovak Academy of Sciences. 13th International symposium on Problems of landscape ecological research „Landscape ecology – an international integrating tool in environmental issues“. Mojmírovce, 30.9.-3.10.2003.
- [10] OSZLÁNYI, J.: Long-term ecological research. Vedecká rada Európskej environmentálnej agentúry. Kodaň (Denmark), 4.-5.3.2003.
- [11] OSZLÁNYI, J.: Scientific activities in Slovakian biosphere reserves. Zasadnutie Rakúskeho národného komitétu pre Program MAB. Wien (Austria), 28.3.2003.
- [12] OSZLÁNYI, J.: Scientific activities of Institute of Landscape Ecology SAS. Európska environmentálna agentúra. Kodaň (Denmark), 4.-5.3.2003.

- [13] OSZLÁNYI, J.: Situation in West Carpathians – Priorities in biodiversity conservation and research. Konferencia Priorities in biodiversity conservation and research in the NAS countries. Mitilini (Greece), 3.-21.2.2003.
- [14] OSZLÁNYI, J.: Socio-economical consequences of land-use and landscape changes – examples of 5 FP projects. Workshop Socio-political and economical impact of structural changes in European landscapes in the way of political integration. Zürich (Switzerland), 11.-14.3.2003.
- [15] OSZLÁNYI, J. – GAJDOŠ, P. – HALADA, Ľ.: Long-term species changes in abandoned pastures in Eastern Carpathians (Slovakia). ILTER meeting, Warszawa (Poľsko), 26.8-30.8.2003.
- [16] OSZLÁNYI, J. – HALADA, Ľ.: Long term study on biodiversity changes in abandoned grasslands in the Carpathians, Slovakia. Konferencia Global mountains biodiversity assessment. La Paz (Bolívia), 20.-23.8.2003.
- [17] OSZLÁNYI, J. – MINĎÁŠ, J. – PRIWITZER, T. – PAVLENDÁ, P. – ŠKVARENINA, J. – TUČEK, J. – BARANČOK, P.: The Slovak study site Poľana – first results. Meeting projektu CARBOMONT. Edinburgh (Great Britain), 10.-13.9.2003.
- [18] RUŽIČKA, M.: Assumptions of the development of landscape ecology in Slovakia. 13th International symposium on Problems of landscape ecological research „Landscape ecology – an international integrating tool in environmental issues“. Mojmírovce, 30.9.-3.10.2003 (Slovakia).

#### 2004

- [19] HALADA, Ľ. Landscape planning and related activities in Slovakia. – Seminár projektu Bioforum. Kent (Veľká Británia), 21.-23.4.2004.
- [20] JANITOR, A. Antagonism of tuhe fungi *Trichoderma harzianum* Rifai in relation to phytopathogenous fungi. Medzinárodá konferencia Život v pôde V. Bratislava (Slovakia), 27.-28.1.2004.
- [21] JANITOR, A. Powdery mildews of tuhe Horná Orava region. Konferencia s medzinárodnou účasťou Príroda Oravy. Dolný Kubín (Slovakia), 2.12.2004.
- [22] JANITOR, A. Inheritance of Igor Fábry for the Slovak mycology. Konferencia s medzinárodnou účasťou Príroda Oravy. Dolný Kubín (Slovakia), 2.12.2004.
- [23] JANITOR, A., KABÁT, V. Rare macromycetes of tuhe Horná Orava region. Konferencia s medzinárodnou účasťou Príroda Oravy. Dolný Kubín (Slovakia), 2.12.2004.
- [24] KENDERESSY, P. Attitude of the stakeholders in the study area Suchá nad Parnou village. Meeting ALTER-NET. Bristol (Great Britain), 6.10.2004.

- [25] KENDERESSY, P. Evaluation of the expert interviews. International meeting of the 6. Framework programme SoBio. Budapest (Hungary), 28.-30.9.2004.
- [26] OSZLÁNYI, J. A long-term biodiversity, ecosystem and awareness research network. ILTER Meeting. Manaus (Brazil), 1.-11.7.2004.
- [27] OSZLÁNYI, J. Results of the scientific projects and their utilisation in the management of nature protection in Slovakia. RURAL-ETINET Kick-off meeting. Bruxelles (Belgium), 19.-20.2.2004.
- [28] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z. Socio-economical research at ILE-SAS in connection with nature, biodiversity and cultural landscape protection. SOBIO Kick-off meeting. Tilburg (Denmark), 3.-4.3.2004 .
- [29] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z. Socio-economic research in the study area Paríž creek catchment. EU –LTSERNET meeting. Paris (France), 21.-23.3.2004.
- [30] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z. Socio-economic research in the study area Paríž creek catchment. Executive Co-ordinating Committee Meeting. Taipei (Taiwan), 1.-5.4.2004.
- [31] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z. Socio-economic research into issues related to the management of biodiversity and ecosystem. Executive Co-ordinating Committee Meeting. Taipei (Taiwan), 1.-5.4.2004.

## 2005

- [32] BUGÁR, G. – OSZLÁNYI, J.: BioPress – Linking Pan-European landcover changes to pressures on biodiversity. International conference Landscape scale biodiversity assessment, the problem of scaling. EPBRS meeting supported by BioPlatform. Budapest (Hungary), 31.3.-4.4.2005.
- [33] DOBROVODSKÁ, M.: Rural-Etinet network in Slovakia. Rural-Etinet project meeting. Visby (Sweden), 12.12.2005.
- [34] GERARD, F. – BREMS, E. – BUGÁR, G. – GREGOR, M. – HAZEU, G. – JANSSENS, E. - KOHLER, R. – KOLAR, J. – LUQUE, S. – MANCHESTER, S. – MUCHER, C.A. – OLSCHOFKY, K. – OSZLÁNYI, J. – PETIT, S. – PINO, J. – PONS, X. – ROSCHER, M. – SMITH, G. – SUSTERA, J. - THOMSON, A. – TUOMINEN, S. – HALADA, Ľ. – HREŠKO, J. – WACHOWICZ, M. – WADSWORTH, R. – WYATT, B. – ZIESE, H.: BioPress – Imagine Europe's landscape in 1950. Conference Communicating European Research 2005, Brusel (Belgium), 14.-15.11.2005.
- [35] HALADA, Ľ. Biodiversity conservation and sustainable development of mountain areas. International workshop Successful Restoration. Experience with Slope Grassing after Infrastructural Interventions. Banská Bystrica (Slovakia), 6.10.2005.

- [36] HALADA, L.: Way in which we can combine/merge/integrate/link CLC and EUNIS Habitats. – Expert meeting on landscape analysis and ecosystem accounting. - EEA, Copenhagen, (Denmark) 15.-16. 3. 2005
- [37] HRNČIAROVÁ, T., IZAKOVIČOVÁ, Z., : Landscape Planning – Tool Of Sustainable Land-Use. Slovak-Hungarian-German Matching Workshop, 6. – 7. 4. 2005, Leipzig (Germany)
- [38] IZAKOVIČOVÁ, Z.: We are Learning Together. Workshop Alter-Net, 12.- 14. 2. 2005, Brussels, Belgium
- [39] IZAKOVIČOVÁ, Z. AT ALL.: The Socio-Economic Research on the Field of Biodiversity - Results of the Sobio Project in the Slovak Republic, Sobio Workshop, 10. – 11. 1. 2005, Smolenice (Slovakia)
- [40] IZAKOVIČOVÁ, Z., KENDERESSY, P.: Environmentálne hodnotenie územia. Sensor projekt meeting, 21. – 23. marec 2005, Wageningen (Holland)
- [41] IZAKOVIČOVÁ, Z., GROTKOVSKÁ, L.: Effective Forms of the Communication on the Field of Biodiversity – Experiences from Slovak Republic. Workshop Alter-Net, 13.-16. 6. 2 005, Helsinky, (Finland)
- [42] JANITOR. A.: Effect of different environment factors on the growth and development ectomycorrhizal fungi of forests ecosystems on the territory of Slovakia. Konferencia s medzinárodnou účasťou Dreviny vo verejnej zeleni. Bratislava (Slovakia), 10.-11.5.2005.
- [43] JANITOR, A.: History, present state and perspective of knowledge in the field of mycology in Slovakia. Medzinárodná konferencia História, rozšírenie, ochrana a perspektívy využitia hľúzoviek v Karpatom regióne. Nitra (Slovakia), 21.9.2005.
- [44] JANITOR A: Wspólczesny stan badania grzybów trujących w tym grzybów halucynogennych w Slowacji. Konferencia s medzinárodnou účasťou The toxic mushrooms, including the halicogenic mushrooms growing in the Polish territory and bordering countries. Sklarska Poreba (Poland), 28.1.2005.
- [45] OSZLÁNYI, J.: Achievement of Slovak Biodiversity Platform in 2002-2004. EPBRS Meeting. Budapest (Hungary), 31.3.-4.4.2005.
- [46] OSZLÁNYI, J.: Biodiversity and ecology in national parks and biosphere reserves. Meeting Slovenskej akadémie vied a Poľskej akadémie vied. Bialowieza (Poland), 19.-21.4.2005.
- [47] OSZLÁNYI, J.: Biodiversity re-assessment and evaluation of its trends in 26 forest sites in the Carpathians. ALTER-NET Workshop Ecosystem functions, services and health: communicating the science to users. Rome (Italy), 7.-9.4.2005.
- [48] OSZLÁNYI, J.: Science and research in the Biosphere Reserve UNESCO Tatry. Konferencia pri príležitosti 80. výročia Krakovského protokolu Metamorfózy ochrany prírody v Tatrách. Stará Lesná (Slovakia), 28.-29.4.2005.

- [49] OSZLÁNYI, J.: Re-assessment of forest ecosystems biodiversity at 26 sites in the Carpathians within the ALTERNET project (Network of Excellence). Workshop on biodiversity Research at the ILTER. Colima (Mexico), 27.10.-2.11.2005.
- [50] OSZLÁNYI, J. - BEZÁK, P. - HALADA, Ľ. - BOLTIŽIAR, M. - PETROVIČ, F.: Bukovské vrchy in Slovak Carpathian Mountains. – landscape changes and trends. Multifunctional land use - meeting future demands for landscape goods and services. Tartu (Estonia) 26.-28.5.2005.
- [51] OSZLÁNYI, J. - GRODZINSKA, K. - POPESCU, F.: Plants and plant ecosystem at risk in the Carpathian Mountain Region. XVIII. International Botanical Congress. Wien (Austria), 17.-23.7.2005.
- [52] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z.: Evaluation of rural agricultural landscape in the transitive economics. SoBio Workshop. Segovia (Spain), 22.-23.9.2005.
- [53] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z.: Large-scale sustainable development of cultural landscape in East Slovakia. PAN Meeting. Baden (Austria), 21.-23.4.2005.
- [54] OSZLÁNYI, J. - KALIVODA, H.: Diversitas in Slovakia. Diversitas National Committees and Focal Point Meeting. Oaxaca (Mexico), 9.11.2005.

## 2006

- [55] BARANČOK, P.: Vplyv využívania vysokohorskej krajiny Belianskych Tatier na prírodné prostredie. (Influence of high-mountain land use of the Belianske Tatry mts on the environment.) Medzinárodná konferencia Veda a výskum pre potreby prírody v Tatranskom národnom parku. Tatranská Štrba (Slovakia), 24.11.2006.
- [56] DOBROVODSKÁ, M.: Project progress of Rural-ETINET. Meeting of the project Rural-ETINET. Rome (Italy), 30.11.-1.12.2006.
- [57] DOBROVODSKÁ, M.: Project progress of Rural-ETINET. Meeting of the project Rural-ETINET.(Island), 1.6.2006.
- [58] GAJDOŠ, P. - HALADA, Ľ. - SEDLÁKOVÁ, J. - DAVID, S. - HREŠKO, J. - HALABUK, A. - BOLTIŽIAR, M. - PETROVIČ, F. - MOJSES, M. - BUGÁR, G.: The influence of nitrogen and phosphorus additions on alpine grassland ecosystems (Western Tatra Mts. - Jalovecká valley). Implementation of landscape ecology in new and changing conditions. The 14th International Symposium on Landscape Ecology Research. Stará Lesná (Slovakia), 4.-7.10.2006.
- [59] HALADA, Ľ.: Analysis of HNV per country: Slovakia. EEA and JRC expert meeting for High Nature Value Farmland. Ispra (Italy), 22.-23.6.2006.

- [60] HALADA, Ľ.: The contribution of agri-environmental schemes to the biodiversity conservation in Slovakia. 1st European Congress of Conservation Biology Diversity for Europe. Eger (Hungary), 22.-26.8.2006.
- [61] HALADA, Ľ.: Some results of BIOPRESS project. – EIONET meeting. Copenhagen (Denmark), 1.-2.3.2006.
- [62] HALADA, Ľ. - BEZÁK, P. - OSZLÁNYI, J. - PETROVIČ, F. - BOLTÍŽIAR, M. - HALABUK, A.: Nature and society of the marginal mountain area: implications of past changes for predicting future. Implementation of landscape ecology in new and changing conditions. The 14th International Symposium on Landscape Ecology Research. Stará Lesná (Slovakia), 4.-7.10.2006.
- [63] IMRICHOVÁ, Z. - IZAKOVIČOVÁ, Z.: Ecologically optimal spatial and functional organization of landscape in the Tatry Biosphere Reserve of UNESCO. Sensor cluster meeting. Bratislava (Slovakia), 25.4.2006.
- [64] IMRICHOVÁ, Z. - IZAKOVIČOVÁ, Z.: Key problems of sustainability in Tatry mountains and the management conflicts. M6 Sensor meeting. Alice Holt (Great Britain), 16.2.2006.
- [65] IMRICHOVÁ, Z. - IZAKOVIČOVÁ, Z.: State of the art of data management for Sacs High Tatras. SENSOR Meeting. Saaremaa (Estonia), 18.-22.9.2006.
- [66] IZAKOVIČOVÁ, Z. - OSZLÁNYI, J.: Experience with the Panel work, projects selection, approval of the projects, management of scientific issues within the Panels, suggestions, proposals, other issues. Workshop The NATO science for peace and security programme in the Slovak Republic. Bratislava, 5.-6.10.2006.
- [67] IZAKOVIČOVÁ, Z.: Landscape management and sustainable development. Implementation of landscape ecology in new and changing conditions. The 14th International Symposium on Landscape Ecology Research. Stará Lesná (Slovakia), 4.-7.10.2006.
- [68] KENDERESSY, P.: Perception of environmental problems by local stakeholders in High Tatra mountains. M6 Sensor meeting. Alice Holt (Great Britain), 16.2.2006.
- [69] MAŇKOVSKÁ, B. - FLOREK, M. - OSZLÁNYI, J. - FRONTASYEVA, M.V. - ERMAKOVA, E.E. - PAVLOV, S.S. - GORYANOVA, Z.: Atmospheric deposition levels of chosen elements in the Slovak Republic. Seminár International Bryomonitoring Program 2000. Dubna (Russia), 18.-21.7.2006.
- [70] OSZLÁNYI, J.: Biosphere Reserves in the Carpathians. Konferencia European Platform for Biodiversity Research Strategy. Wien (Austria), 11.3.2006.
- [71] OSZLÁNYI, J.: The Carpathians - 1500 km mountain range in Europe. Medzinárodná konferencia Climate change impacts in European mountain regions - future challenges for research in FP7. Bruxelles (Belgium), 9.5.2006.

- [72] OSZLÁNYI, J.: Implementation of ILTER strategic and operational plans in Central and Eastern European countries. ILTER Coordinating Committee Meetings. Gobabeb (Namibia), 14.-18.8.2006.
- [73] OSZLÁNYI, J.: The Carpathians and their UNESCO biosphere reserves – utilization of science in their management. Medzinárodná konferencia Climate change impacts in European mountain regions – future challenges for research in FP7. Bruxelles (Belgium), 9.5.2006.
- [74] OSZLÁNYI, J.: MAB projects and Biosphere Reserves in the Carpathians-mountain research for management. Medzinárodná konferencia European Platform for Biodiversity Research Strategy. Wien (Austria), 11.3.2006.
- [75] OSZLÁNYI, J.: Scientific projects in the biosphere reserves UNESCO Tatry after the wind disaster.) 19.11.2004. Seminár Aplikace závěru ze zasedání EURO MAB Austria 205 na problematiku BR v ČR. Lednice (Czech Republic), 25.4.2006.
- [76] OSZLÁNYI, J. - DOBROVODSKÁ, M.: Preparation of best practice documentation in Slovak conditions. Meeting of the project Rural-ETINET. Reykjavik (Island), 2.6.2006.
- [77] OSZLÁNYI, J. - HALADA, Ľ.: High nature value farmland and rural areas - ecological aspects. ETC/BD Management Committee. Rome (Italy), 1.-5.5.2006.
- [78] OSZLÁNYI, J. - HALADA, Ľ.: Research and nature conservation in MaB Biosphere reserves in Slovakia and Romania. Medzinárodná konferencia European Platform for Biodiversity Research Strategy. Wien (Austria), 11.3.2006.
- [79] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z.: Agricultural rural landscape - Tranava region. Meeting Innoland – large-scale landscape experiment project. Muencheberg (Germany), 16.-17.10.2006.
- [80] OSZLÁNYI, J. - IZAKOVIČOVÁ, Z.: Mountain agricultural landscape – the East Carpathians. Meeting Innoland – large-scale landscape experiment project. Muencheberg (Germany), 16.-17.10.2006.
- [81] RICHARD, D. - HALADA, Ľ.: Potential value of various European-wide datasets for mapping High Nature Value Farmland Areas. EEA and JRC expert meeting for High Nature Value Farmland. Ispra (Italy), 22.-23.6.2006.
- [82] RUŽIČKA, M.: Introductory speech. Implementation of landscape ecology in new and changing conditions. The 14th International Symposium on Landscape Ecology Research. Stará Lesná, 4.-7.10.2006.

**ii. List of employees who served as members of the organising and/or programme committees for international conferences**

- [1] J. Oslányi – 3-krát/2003, 3-krát/2004, 1-krát/2005, 5-krát/2006
- [2] Z. Krnáčová – 1-krát/2003
- [3] T. Hrnčiarová – 1-krát/2003
- [4] M. Dobrovodská – 1-krát/2003
- [5] F. Petrovič – 2-krát/2003, 1-krát/2004, 1-krát/2005
- [6] Z. Izakovičová – 1-krát/2003, 1-krát/2005, 1-krát/2006
- [7] Z. Imrichová – 1-krát/2003
- [8] M. Moyzeová – 2-krát/2003, 1-krát/2005
- [9] P. Kenderessy – 1-krát/2003, 1-krát/2005
- [10] Ľ. Halada – 1-krát/2003, 2-krát/2004, 2-krát/2005, 1-krát/2006
- [11] P. Bezák – 1-krát/2003, 1-krát/2004, 1-krát/2005
- [12] K. Kis-Csáji – 1-krát/2003
- [13] A. Halabuk – 1-krát/2004
- [14] M. Boltížiar – 1-krát/2004, 1-krát/2005
- [15] G. Bugár – 2-krát/2004, 1-krát/2005
- [16] S. David – 1-krát/2004, 1-krát/2005
- [17] O. Ďugová – 1-krát/2004, 2-krát/2005
- [18] A. Janitor – 1-krát/2004
- [19] Z. Válkovicová – 1-krát/2005
- [20] A. Bača – 1-krát/2005
- [21] M. Ružička – 1-krát/2005
- [22] J. Hreško – 1-krát/2005
- [23] P. Gajdoš – 1-krát/2005,
- [24] N. Marcelová – 1-krát/2005
- [25] J. Sedláková – 1-krát/2005
- [26] P. Kiaček – 1-krát/2005



[27] J. Špulerová –2-krát/2006

**iii. List of employees who served as members of important international scientific bodies (e.g. boards, committees, editorial boards of scientific journals)**

- [1] Z. Izakovičová – secretary of SNK SCOPE – Scientific Committee on Problems on Environment
- [2] J. Oszlányi – Vice-chair of Scientific Comitee of ECNC - European Centre for Nature Conservation, Tilburg, NL
- [3] M. Ružička – member of C.I.C. - Commision on the Interpretation of the Environment of International Council for Game and Wild life Conservation
- [4] J. Oszlányi – member of Scientific Comitee of EEA - European Environment Agency, Copenhagen, from November 29, 2001 - for 4 years, from November 30, 2005 – for 3 years
- [5] J. Oszlányi – chair of Board of Consultants, 2006 (EEA - European Environment Agency, Copenhagen)
- [6] J. Oszlányi – member of UNESCO, Paris - Advisory Committee for Biosphere Reserves
- [7] J. Oszlányi – member of Bureau of Slovak Comission for UNESCO, member of Chairmanship SK UNESCO, (Slovak commission for UNESCO by ME SR)
- [8] J. Oszlányi - member of Department of Natural Sciences at Slovak Comission for UNESCO
- [9] J. Oszlányi – chairman of Slovak National Committee for UNESCO program „Man and biosphere“ - MAB
- [10] J. Oszlányi – member of Directors Consortium of CONNECT, (Directors Association)
- [11] F. Kubíček – member of Committee of ISRR - International Society of Root Research, Uppsala, Sweden
- [12] O. Ďugová – member of committee, chairman of section “Natural Environment” CZSMA of Czech and Slovak Microbiological Society
- [13] F. Kubíček – member of Slovak Experts Group for Danube River Problems
- [14] A. Janitor – member of Committee for experimental mycology of Czech Science Society for Mycology CZAS, Prague
- [15] A. Janitor – honorary member of Czech Mycological Society, Prague
- [16] A. Janitor – honorary member of La Societe Francaise de Phytopathologie, Paris
- [17] A. Janitor – member of FESPP - Federation of European Societies of Plant Physiology

- [18] Ľ. Halada – member of Society for Conservation Biology, Arlington, VA, USA
- [19] P. Gajdoš – member of Society for Conservation Biology, Arlington, VA, USA
- [20] T. Hrnčiarová – vice-chairman of Committee of IALE - International Association for Landscape Ecology – IALE SK
- [21] J. Hreško – secretary of Committee of IALE - International Association for Landscape Ecology – IALE SK
- [22] Z. Izakovičová – member of Committee of IALE - International Association for Landscape Ecology – IALE SK
- [23] Z. Izakovičová – delegate of Slovak Republic to NATO Environmental Security Panel, Brussels
- [24] J. Oslányi – member, 2005-2008 of NATO Environmental Security Panel, Brussels
- [25] J. Oszlányi – member of International Board of UNESCO Chair for ecological awareness FEE TU Zvolen
- [26] J. Oszlányi – member of executive committee for Middle and East European Region of ILTER - International Long-Term Ecosystem Research
- [27] J. Oszlányi – expert of Programme board of the Europe Committee „Global Change and ecosystems“, Brusel, to October 31, 2006
- [28] Z. Izakovičová – national delegate for Programme Committee – „Environment“ for 7th Framework Programme
- [29] L. Miklós – member of Editorial Board of LANDSCAPE ECOLOGY – international journal SPB Academic Publishing, The Hague
- [30] L. Miklós – member of Editorial Board of VESMÍR – journal, Prague
- [31] L. Miklós – member of Editorial Board of EUROPEAN NATURE
- [32] A. Janitor – member of Editorial Board of Plant Protection Science, Prague
- [33] T. Hrnčiarová – member of Editorial Board of Landscape Atlas of the Czech Republic, 2004-2007
- [34] J. Oszlányi – member of Editorial Board of Tájökológiai lapok (Journal of Landscape Ecology), Hungary
- [35] J. Oszlányi – member of Editorial Board of International Journal on Environment and Waste Management, USA

#### **iv. List of international scientific awards and distinctions**

- [1] The Institute scientist (P. Gajdoš, Ľ. Halada) worked as European Commission experts for plant and animal species listed in Annexes of the Lists of birds and habitats.
- [2] In 2003, five institute scientists worked as evaluators of the Sixth Framework Program of European Commission.
- [3] In 2004, J. Oszlányi was, for Slovakia, an expert in European Commission Program Committee "Global changes and ecosystems" (the Sixth Framework Program of European Commission).
- [4] In 2004, four institute employees worked as project evaluators of the Sixth Framework Program of European Commission.
- [5] Z. Izakovičová is a delegate for Slovakia in European Commission Programme Committee "Environment" (2006).
- [6] J. Oszlányi chaired the Commission III. (Natural, Human and Social Sciences) during the 33<sup>rd</sup> general Conference of UNESCO, 3-20. October 2005 (3 weeks).

#### **• National position of the individual researchers**

##### **i. List of invited/keynote presentations at national conferences documented by an invitation letter or programme**

###### 2003

- [1] OSZLÁNYI, J.: Vedecké projekty 5RP s cieľom implementácie zásad trvalo udržateľného rozvoja. (Scientific projects of the 5th FP with the aim of implementation of the principles of sustainable development.) Konferencia Slovensko rok po Johannesburgu. Smolenice, 29.-30.4.2003.

###### 2004

- [2] HALADA, Ľ. Ústav krajinej ekológie SAV a GMES. - Koordinačné poľsko-slovenské stretnutie programu GMES (Global Monitoring for Environment and Security). Zvolen, 15.10.2004.
- [3] JANITOR, A. Súčasný vedecký poznatky o význame húb z hľadiska výživy a zdravia človeka. (Present scientific knowledge of significance of mushrooms from alimentation and health of man.) Konferencia Výživa-potraviny-legislatíva. Detva, 22.-24.9.2004.
- [4] JANITOR, A. Výskum výskytu a regulácie škodlivých organizmov pri ochrane poľnohospodárskych kultúr na území Slovenska v rámci SAV. (Research of tuhe occurrence and regulation of harmful organisms in protection of acricultural crops in Slovakia within tuhe

frame of the Slovak Academy of Sciences.) Celoštátna konferencia Súčasný stav poľnohospodárstva a ochrany rastlín a východisková pozícia Slovenska pri vstupe do EU. Bratislava, 18.3.2004.

- [5] JANITOR, A. Význam fotobiológie pre experimentálnu mykológiu. (The significance of photobiology for experimental mycology.) Seminár – Biodiverzita húb Slovenska 4. Bratislava, 7.12.2004.
- [6] KRŇÁČOVÁ, Z. Teoreticko-metodické postupy pre integrovaný rozvoj turizmu na modelovom území mikroregiónu mesta Svätý Jur. (Theoretical-methodological procedures for integrated development of tourism in the model area of the microregion of Svätý Jur town.) Vedecký seminár s medzinárodnou účasťou Integrovaný rozvoj turizmu v environmentálne hodnotnom území mikroregiónu mesta Svätý Jur. Svätý Jur, 3.11.2004.
- [7] OSZLÁNYI, J. - HALADA, Ľ. - BEZÁK, P. - HALABUK, A. - BOLTÍŽIAR, M. Prvé výsledky riešenia projektu BioScene. (The first results of the solution of tuhe project BioScene.) V. národná konferencia o biosférických rezerváciách Slovenska. Nová Sedlica, 29.–30.9.2004.
- [8] RUŽIČKA, M. Doterajšie poznatky z environmentálnej výchovy a vzdelávania na vysokých školách. 4. národná konferencia Environmentálna výchova a vzdelávanie na školách v Slovenskej republike. Nitra, 15.-17.12.2004.
- [9] RUŽIČKA, M. Konceptia výučby v environmentálnej ekológii na školách v Slovenskej republike. 4. národná konferencia o environmentálnej výchove a vzdelávaní v školách Slovenskej republiky. Nitra, 15.-17.12.2004.
- [10] RUŽIČKA, M. Naša realita a večnosť. Prednáška pre doktorandov. Nitra, 8.3.2004.
- [11] RUŽIČKA, M. Tvorivé myslenie při výskume a výučbe. Prednáška pre doktorandov. Nitra, 8.3.2004.

#### 2005

- [12] DAVID, S.: Ekologické a ekozozologické hodnocení fauny vážek (Odonata) území v působnosti S-CHKO Ponitrie. Konferencia História, súčasnosť a perspektívy ochrany prírody v CHKO Ponitrie usporiadanej pri príležitosti 20. výročia vyhlásenia Chránenej krajinej oblasti Ponitrie. Nitra, 20 -21.10.2005.
- [13] GAJDOŠ, P.: Súčasné poznanie araneofauny Chránenej krajinej oblasti Ponitrie a jej okolia. Konferencia História, súčasnosť a perspektívy ochrany prírody v Chránenej krajinej oblasti Ponitrie usporiadanej pri príležitosti 20. výročia vyhlásenia Chránenej krajinej oblasti Ponitrie. Nitra, 20 -21.10.2005.
- [14] HREŠKO, J.: Výskum abiotických zložiek krajiny v CHKO Ponitrie. Konferencia História, súčasnosť a perspektívy ochrany prírody v Chránenej krajinej oblasti Ponitrie usporiadanej

pri príležitosti 20. výročia vyhlásenia Chránenej krajinej oblasti Ponitrie. Nitra, 20 - 21.10.2005.

- [15] JANITOR. A.: Patologické prejavy odumierania ovocných drevín indukované hubami. (Pathological manifestations of fruit trees extinction induced by fungi.) VII. zjazd Slovenskej spoločnosti pre vedy poľnohospodárskej, lesnícke, potravinárske a veterinárske pri SAV. Bratislava, 8.9.2005.
- [16] JANITOR. A.: Riešenie úloh a priority výskumu v ochrane rastlín v pôsobnosti SAV. (Task solutions and research priorities in plant protection.) I. Rastlinolekárske dni Slovenskej rastlinolekárskej spoločnosti. Nitra, 25.-26.1.2005.
- [17] JANITOR. A.: Smerovanie vedeckého poznania a výskumu v ochrane rastlín na Slovensku. ( Direction of scientific recognition and research in plant protection.) I. rastlinolekárske dni Slovenskej rastlinolekárskej spoločnosti. Nitra, 25.-26.1.2005.
- [18] JANITOR, A.: Súčasný stav a perspektíva vedeckého poznania v ochrane rastlín. (The present state and perspectives of scientific recognition in plant protection.) VII. zjazd Slovenskej spoločnosti pre vedy poľnohospodárskej, lesnícke, potravinárske a veterinárske pri SAV. Bratislava, 8.9.2005.
- [19] JANITOR, A.: Úloha vybraných drevokazných húb v procese odumierania marhúľ. (The task of selected fungi in apricot extinction.) VII. zjazd Slovenskej spoločnosti pre vedy poľnohospodárskej, lesnícke, potravinárske a veterinárske pri SAV. Bratislava, 8.9.2005.
- [20] JANITOR. A. - DANDÁR, A: Poslanie a úlohy Slovenskej spoločnosti pre poľnohospodárske, lesnícke, potravinárske a veterinárske vedy pri SAV. (The tasks of the Slovak society for agricultural, food and veterinary sciences by the Slovak Academy of Sciences.) Konferencia Problémy a úlohy rozvoja lesníctva na Slovensku. Zvolen, 1.4.2005.

#### 2006

- [21] OSZLÁNYI, J.: Krajinnno-ekologické hodnotenie biosférickej rezervácie Tatry. (Landscape-ecological evaluation in the Biosphere Reserve Tatry.) Konferencia Planéta Zem. Bratislava, 6.12.2006.
- [22] OSZLÁNYI, J.: Vedecké aktivity krajinných ekológov Slovenska v rámci európskeho výskumného priestoru. (Scientific activities of landscape ecologists of Slovakia within the European scientific space.) Workshop Smerom k integrovanému manažmentu povodia. Bratislava, 29.5.2006.
- [23] OSZLÁNYI, J.: Výskum krajiny v projektoch 5. a 6. rámcového programu Európskej komisie. (Landscape research in the projects of the 5th and 6th Frame programmes of the European Committee.) Konferencia Smolenická výzva III – Integrovaný manažment krajiny - základný nástroj implementácie trvalo udržateľného rozvoja. Smolenice, 18.-19.4.2006.

- [24] OSZLÁNYI, J.: Príspevok odborníkov k riešeniu situácie v Tatrách. (Contribution of specialists to the solution of the situation in the Tatry Mts.) VI. Národná konferencia o biosférických rezerváciách Slovenska. Nová Sedlica, 4.-6.9.2006.
- [25] OSZLÁNYI, J. - HALADA, L.: Výskumné aktivity Ústavu krajinnej ekológie SAV v Biosférickej rezervácii Východné Karpaty. (Research activities of the Institute of Landscape Ecology SAS in the Biosphere Reserve East Carpathians.) VII. národná konferencia o biosférických rezerváciách Slovenska. Nová Sedlica, 4.-6.9.2006.
- [26] RUŽIČKA, M.: Krajina ako objekt výučby a vzdelávania. (Landscape as the object of education and teaching). Smolenická výzva III – Integrovaný manažment krajiny – základný nástroj implementácie trvalo udržateľného rozvoja. Smolenice, 18.-19.4.2006.
- [27] RUŽIČKOVÁ, H. - DOBROVODSKÁ, M.: Druhovú bohaté trávne porasty v chotári obce Liptovská Teplička - produkt extenzívneho a polointenzívneho hospodárenia. (Species rich grass stands in Liptovská Teplička municipality - product of extensive and semi-extensive management.) Sympóziu krajiny, genofondu a biodiverzity trávnych ekosystémov kosbou v rámci trvalo udržateľného rozvoja. Pribylina-Levoča, 30.6.-4.7.2006.

**ii. List of employees who served as members of organising and programme committees of national conferences**

- [1] A. Janitor – 3 x /2003
- [2] H. Kalivoda – 1x /2003, 3x/2004, 3-krát/2005
- [3] T. Hrnčiarová – 1x/2003, 1x/2004
- [4] D. Štefunková – 1x/2003, 3x/2005
- [5] Z. Izakovičová – 1x/2003, 4x/2005, 3x/2006
- [6] M. Moyzeová – 1x/2003, 4x/2005, 3x/2006
- [7] L. Grotkovská – 1x/2003, 2x/2005, 1x/2006
- [8] O. Ďugová – 1x/2004
- [9] P. Gajdoš – 2x/2004, 2x/2006
- [10] F. Petrovič – 1x/2004, 1x/2005
- [11] J. Hreško – 2x/2004, 1x/2006
- [12] M. Ružička – 1x/2004, 2x/2006
- [13] S. David – 1x/2004, 2x/2006

- [14] Z. Imrichová – 1x/2005
- [15] E. Adamčeková – 3x/2005, 3x/2006
- [16] M. Dobrovodská – 1x/2005, 1x/2006
- [17] P. Kenderessy – 1x/2005
- [18] J. Špulerová – 1x/2005, 1x/2006
- [19] J. Oszlányi – 1x/2006
- [20] Z. Miklošovičová – 2x/2006

**iii. List of employees serving in important national scientific bodies (e.g. boards, committees, editorial boards of scientific journals)**

- [1] M. Ružička – editor-in-chief of Ecology Bratislava, up to October 31, 2006
- [2] J. Oszlányi – editor-in-chief of Ecology Bratislava, from November 1, 2006
- [3] J. Oszlányi, - member of editorial board of Ecology Bratislava
- [4] T. Hrnčiarová - member of editorial board of Ecology Bratislava
- [5] Z. Izakovičová - member of editorial board of Ecology Bratislava
- [6] R. Kanka - member of editorial board of Ecology Bratislava
- [7] P. Bezák - member of editorial board of Ecology Bratislava
- [8] Ľ. Halada - member of editorial board of Ecology Bratislava
- [9] P. Gajdoš - member of editorial board of Ecology Bratislava
- [10] J. Špulerová - member of editorial board of Ecology Bratislava
- [11] A. Halabuk - member of editorial board of Ecology Bratislava
- [12] H. Kalivoda - member of editorial board of Ecology Bratislava
- [13] O. Ďugová – member of editorial board of Phytopedon
- [14] E. Kalivodová – member of editorial board of Záhorie
- [15] M. Ružička – editor-in-chief of Životné prostredie – the journal for environmental affairs
- [16] T. Hrnčiarová – member of editorial board of Životné prostredie – the journal for environmental affairs

- [17] J. Oszlányi – member of editorial board of Životné prostredie – the journal for environmental affairs
- [18] D. Štefunková – member of editorial board of Životné prostredie – the journal for environmental affairs
- [19] J. Hreško - member of editorial board (SEKOS Bulletin of Slovak ecological society of SAS
- [20] M. Ružička - member of editorial board (SEKOS Bulletin of Slovak ecological society of SAS
- [21] J. Oszlányi - member of editorial board (SEKOS Bulletin of Slovak ecological society of SAS
- [22] Ľ. Halada - member of editorial board (SEKOS Bulletin of Slovak ecological society of SAS
- [23] P. Gajdoš J. - member of editorial board (Rosalia Bulletin of the Landscape Protected Area of Ponitrie)
- [24] J. Hreško - member of editorial board (Rosalia Bulletin of the Landscape Protected Area of Ponitrie)
- [25] S. David - member of editorial board (Rosalia Bulletin of the Landscape Protected Area of Ponitrie)
- [26] Z. Izakovičová – member of editorial board of Enviromagazín – a journal for environmental affairs
- [27] M. Ružička – member of editorial board of Enviromagazín – a journal for environmental affairs
- [28] M. Ružička – member of editorial board of Acta horiculture et regio tecture
- [29] A. Janitor - member of editorial board of Výživa a zdravie – a journal for nourishment and health
- [30] A. Janitor – chairman of editorial board of Bulletin of Slovak society for agricultural, food industry, veterinary and forestry sciences of SAS
- [31] A. Janitor – member of editorial board of Biotas Journal of biodiversity Slovakia
- [32] M. Ružička – members of major committee of Slovak Ecological Society of SAS
- [33] J. Hreško – members of major committee of Slovak Ecological Society of SAS
- [34] Ľ. Halada – vice-chairman of Slovak Ecological Society of SAS
- [35] J. Oszlányi – ecology ecosystem department chief of Slovak Ecological Society of SAS –
- [36] T. Hrnčiarová – member of execution committee of Slovak Geographical Society of SAS –



- [37] Z. Izakovičová – member of western Slovakia branch of Slovak Geographical Society of SAS
- [38] A. Janitor – merited member, member of central committee, chairman of terminological section of Slovak Botanic Society of SAS
- [39] A. Janitor – honorary member, vice-chairman, chairman of agricultural department, member of central committee of Slovak Society for Agricultural, Food Industry, Veterinary and Forestry Sciences of SAS
- [40] H. Kalivoda – member of section for entomology research of Slovak Entomological Society of SAS
- [41] P. Gajdoš – vice-chairman of arachnological section of Slovak Entomological Society of SAS
- [42] A. Janitor – vice-chairman of Slovak Mycological Society of SAS
- [43] A. Janitor – member of committee of Slovak Plant – Medic Society

#### **iv. List of national awards and distinctions**

- [1] P. Barančok – The Prize of University Comenius rector for diploma work of student Denisa Mišovičová „Geochemical evaluation of rock-soil-plant system in the selected area of the Belianske Tatry Mts”. Supervisor: Peter Barančok, July, 2003.
- [2] A. Janitor – Scientific Grant Agency of Ministry of Education and SAS granted him “Certificate on the final project evaluation” Reasons of early mass drying and leaf falling of *Aesculus hippocastanum*. Final project evaluation: Realized perfectly. Project supervisor: A. Janitor, March 2003
- [3] The Institute was granted “Honorary acknowledgement for Ecologisation of landscape management” granted by director of Incheba Ltd and Commission of 35<sup>th</sup> international chemical trade fair Incheba and 10<sup>th</sup> international exposition on environment protection (Ekotechnika) in Bratislava.
- [4] J. Oszlányi - honorary award for biological science development (2004, on the occasion of his jubilee).
- [5] Z. Izakovičová, M. Moyzeová, D. Štefunková, E. Adamčeková – Education Academy award in the category of “The Best Education Program” for preparing and realization of the project "Learning Together".
- [6] R. Kanka – On the base of Council of Guarantees (experts) won category "Agriculture, Forestry and Timbering" within award "Slovak student personality" for period of 2005/2005.

- [7] Z. Izakovičová, J. Oszlányi – In the frame of action “Slovak Scientist of 2005”, there were awarded for ecological study “Landscape ecological optimal spatial and functional use of Tatra Biosphere Reserve in the new, changed conditions”. (March, 2003).
- [8] A. Janitor – Presidium of Czech Academy of Agricultural Sciences granted him, as a member of editorial board, a thankful letter for "Professional approach in forming of Plant Protection Science scientific journal". (2006)
- [9] M. Ružička – President of the Slovak Republik awarded 2<sup>st</sup> Class Ľudovít Štúr Order
- [10] Július Oszlányi – Honourable mention “Researcher of the Year 2003” for the lifelong work in the field of research and protection of biodiversity - Journaliste-Studio Bratislava, jún 2004
- [11] Z. Izakovičová, L. Grotkovská, E. Adamčeková, M. Moyzeová - the Prize of “Fórum pedagogiky” awarded by Minister of Education SR for the best exposition on the exhibition “Fórum pedagogiky 2004” (Pedagogy Forum)
- [12] Z. Izakovičová, E. Adamčeková, M. Moyzeová – Honourable mention for the most creative exposition within the framework of INCHEBA exhibition.
- [13] Z. Izakovičová, M. Moyzeová - Appraisal of exhibit “Landscape Ecological Management” by the Prize “Modrá Planéta” (Blue Planet) (INCHEBA exposition april 2003)

**Supplementary information and/or comments documenting international and national status of the Organisation**

**Expertises for European Commission:**

- [1] NIEMTUR, S. – JAROSZEWICZ, B. – LAZAROV, S. – OSZLÁNYI, J. – BARBU, I. – TARTES, U. – NIEMELÄ, J. – BRAUN, V.: Unpublished expertise for European Commission: Conflicts between human activities and the conservation of biodiversity in forests in Europe, EU, 42 pp.

**Reports to the projects of 5<sup>th</sup> and 6<sup>th</sup> Framework Programme:**

- [1] IZAKOVIČOVÁ, Z., OSZLÁNYI, J., GROTKOVSKÁ, L., VÁLKOVCOVÁ, Z., KENDERESSY, P., DOBROVODSKÁ, M., MOYZEOVÁ, M., Mobilising the European social research potential in support of biodiversity and ecosystem management. National report I. SOBIO – project of the 6th Framework Programme. Bratislava: ILE SAS, 2004, 39 pp.
- [2] IZAKOVIČOVÁ, Z., OSZLÁNYI, J., GROTKOVSKÁ, L., VÁLKOVCOVÁ, Z., KENDERESSY, P., DOBROVODSKÁ, M., MOYZEOVÁ, M. Mobilising the European social research potential in support of biodiversity and ecosystem management. National report II. SOBIO – project of the 6th Framework Programme. Bratislava: ILE SAS, 2004, 77 pp.

- [3] BEZÁK, P., HALABUK, A., PETROVIČ, F., GAJDOŠ, P., IZAKOVIČOVÁ, Z., MOYZEOVÁ, M. EVALUWET - ILE SAS Contribution to The Final Project Report. Bratislava: ÚKE SAV Bratislava, branch Nitra, 2004, 111 pp.
- [4] IZAKOVIČOVÁ, Z. OSZLÁNYI, J. GROTKOVSKÁ, L. VÁLKOVCOVÁ, Z. KENDERESSY, P. MOYZEOVÁ, M. DOBROVODSKÁ, M. IMRICHOVÁ, Z.: Mobilising the European social research potential in support of biodiversity and ecosystem management. National Report SOBIO. ILE SAS , Bratislava, 2005, 81 pp.
- [5] BEZÁK, P., PETROVIČ, F., HALADA, L. HALABUK, A. BOLTÍŽIAR, M. IZAKOVIČOVÁ, Z. MOYZEOVÁ, M.: Slovakian Study Area (National Park of Poloniny): Sustainability Report. Report to the project BIOSCENE. Depon. ILE SAS Bratislava, branch Nitra, 2005, 62 pp. – msc.
- [6] HALLENBARTER, D. KRÄUCHI, N. IMRICHOVÁ, Z. PUTZHUBER, F.: European mountains in a changing environment. SENSOR, Deliverable 6.1.1.2006, 16 pp.

#### **Memberships in the foreign and national scientific institutes**

ILE SAS have registered 42 memberships of its employees in 19 foreign scientific bodies. The most important memberships are:

- [1] J. Oszlányi – member of the Central European Academy of Sciences and Art, Timisoara
- [2] J. Oszlányi, V. Šimonovič – member of IUFRO – the International Union of Forestry Research Organization, Vienna
- [3] L. Miklós – member of DLOF IALE - Dansk Landscap Oecologisk Forening IALE
- [4] L. Miklós – member of PERMACULTUR AUSTRIA
- [5] L. Miklós - member of IUCN – the International Union for Conservation the Nature (the World Conservation Union)
- [6] L. Miklós - member of CESP – the Commission on Environmental Strategy and Planning
- [7] L. Miklós – member of ECNC – the European Centre for Nature Conservation, Tilburg
- [8] Z. Izakovičová – member of the EU Biodiversity Science group
- [9] Z. Izakovičová – member of the Section Biosphere Reserve Concept and Urban Issues, UNESCO-MAB
- [10] P. Gajdoš – member of the International Society of Arachnology, Chicago, USA
- [11] P. Gajdoš – member of Soci t  Europ enne d'Arachnologie, Paris, France
- [12] P. Gajdoš – member of Suddeutsche Arachnologische Arbeitsgemeinschaft (SARA) Basel, Switzerland
- [13] S. David - registered member of Societas Internationalis Odonatologica, Bilthoven, Holandsko
- [14] F. Kub cek – member of B.I.O., Athens, Greece
- [15] A. Janitor – member of FESPP - Federation of European Societies of Plant Physiology

- [16] Ľ. Halada, P. Gajdoš – members of the Society for Conservation Biology, Arlington, VA, USA
- [17] P. Gajdoš - registered member of Societas Internationalis Odonatologica, Bilthoven, Holandsko

ILE SAS have registered 70 memberships of its employees in 18 national scientific bodies, e.g.: the Slovak Ecological Society of SAS, the Slovak Geographical Society of SAS, the Slovak Botanic Society of SAS, the Slovak Society for Agricultural, the Food Industry, the Veterinary and Forestry Sciences of SAS, the Slovak Zoological Society of SAS, the Slovak Entomological Society of SAS, the Association of Slovak Geomorphologists, the Slovak Forestry Society, the Society for Sustainable Development, the Czech and Slovak Microbiological Society, the Slovak Pedological Society, the Slovak Ornithological Society.

#### 4. Project structure, research grants and other funding resources

- **International projects and funding**

- i. **List of major projects within the European Research Area – 5th and 6th Framework Programme of the EU, European Science Foundation, NATO, COST, INTAS, CERN, etc. (here and in items below please specify: type of project, title, grant number, duration, funding, responsible person in the Organisation and his/her status in the project, e.g. coordinator, principal investigator, investigator)**

[1] 5<sup>th</sup> Framework Programme

**The European dimension of the Global Observation Research Initiative in Alpine Environments (GLORIA) - a contribution to GTOS**

*(Európsky rozmer globálnej observačno-výskumnej iniciatívy v alpskom prostredí - príspevok ku GTOS)*

grant number: EVK2-CT-2000-00056

duration: 2/2001 - 7/2003

funding: 103 000,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Peter Barančok, CSc.

[2] 5<sup>th</sup> Framework Programme

**European Platform for Biodiversity – BIOPLATFORM**

*(Európska platforma pre biodiverzitu – BIOPLATFORM)*

grant number: EVK2-CT-2001-20009

duration: 1/2001 - 4/2005

funding: 279 509,06,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Henrik Kalivoda, PhD.

[3] 5<sup>th</sup> Framework Programme

**Linking Pan-European land cover change to pressures on biodiversity - BIOPRESS**

*(Prepojenie Pan-Európskych zmien pokrytia krajiny a tlakov na biodiverzitu - BIOPRESS)*

grant number: EVK2-CT-2002-00178

duration: 1/2003 - 6/2006

funding: 8 638 364,185,- Sk

project leader: Ing. Július Oszlányi, CSc., Doc. RNDr. Juraj Hreško, CSc., RNDr. Ľuboš Halada, CSc.

[4] 5<sup>th</sup> Framework Programme

**European valuation and assessment tool supporting wetland ecosystem legislation - inclusion of newly associated states - EVALUWET-NAS**

*(Európske hodnotiace nástroje podporujúce legislatívu mokrad'ných ekosystémov – včlenenie asociovaných štátov - EVALUWET-NAS)*

grant number: EVK1-CT-2000-00070

duration: 11/2002 - 4/2004

funding: 1 082 000,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Peter Gajdoš, CSc.

[5] 5<sup>th</sup> Framework Programme

**Effects of land-use changes on sources, sinks and fluxes of carbon in European mountains - CARBOMONT**

*(Dôsledky zmien využívania krajiny na zdroje, pohlcovanie a toky uhlíka v európskych horských oblastiach - CARBOMONT )*

grant number: EVK2-CT-2001-00125

duration: 4/2002 - 10/2004

funding: 1 132 000,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Peter Barančok, CSc.

[6] 5<sup>th</sup> Framework Programme

**Scenarios for reconciling biodiversity conservation with declining agricultural use in the mountains of Europe - BIOSCENE**

*(Scenáre pre zladenie ochrany biodiverzity a poklesu poľnohospodárskeho využitia krajiny v horstvách Európy – BIOSCENE)*

grant number: EVK2-CT-2002-00167

duration: 12/2002 - 11/2005

funding: 2 281 182,48,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Ľuboš Halada, CSc.

[7] 5<sup>th</sup> Framework Programme

**A Framework for the co-ordination of biodiversity and habitats - BioHab**

*(Sieť pre koordináciu biodiverzity a habitatov - BioHab)*

grant number: EVK2-CT-2002-20018

duration: 12/2002 - 12/2005

funding: 490 196,32,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Ľuboš Halada, CSc.

[8] 5<sup>th</sup> Framework Programme

**European biodiversity forum implementing the ecosystem approach - NAS extension - BIOFORUM-NAS**

*(Európske fórum pre biodiverzitu – implementácia ekosystémového prístupu - BIOFORUM-NAS)*

grant number: EVK2-CT-2000-20006

duration: 11/2002 - 4/2006

funding: 1 553 273,65,- Sk

project leader: Ing. Július Oszlányi, CSc.

[9] 6<sup>th</sup> Framework Programme

**Mobilising the European social research potential in support of biodiversity and ecosystem management - SoBio**

*(Mobilizovanie potenciálu európskeho spoločenského výskumu na podporu manažmentu biodiverzity a ekosystému - SoBio)*

grant number: GOCE-CT-2003-505429

duration: 2/2004 - 1/2006

funding: 380 420,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Zita Izakovičová, PhD.

[10] 6<sup>th</sup> Framework Programme

**Economic and Technological Intelligence Project to Facilitate SMEs in Rural Areas to Participate in the Sixth Framework Programme Rural-ETINET**

*(Projekt ekonomicko-technických informácií na podporu účasti malých a stredných podnikov (MSP) vo vidieckych oblastiach v 6. Rámcovom programme Rural-ETINET)*

grant number: ETIS-CT-2003-508 500

duration: 12/2003 - 12/2006

funding: 1 911 575,54,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Marta Dobrovodská, PhD.

[11] 6<sup>th</sup> Framework Programme

**A Long-Term Biodiversity, Ecosystem and Awareness Research Network - ALTER-Net**

*(Výskumná sieť pre dlhodobý výskum biodiverzity, ekosystému a vedomia - ALTER-net*

grant number: GOCE-CT-2003-505298

duration: 4/2004 - 3/2009

funding: 4 254 847,7,- Sk

project leader: Ing. Július Oszlányi, CSc.

[12] 6<sup>th</sup> Framework Programme

**Biodiversity re-assessment and evaluation of its trends in 26 forest sites in the Carpathians - subproject of ALTER-Net**

*(Prehodnotenie biodiverzity a zhodnotenie smerovania jej vývoja na 26 lesných plochách v Karpatoch)*

grant number: GOCE-CT-2003-505298

duration: 1/2005 - 12/2006

funding: 695 675,57,- Sk

project leader: Ing. Július Oszlányi, CSc.

[13] 6<sup>th</sup> Framework Programme

**Threat to biodiversity through invasive non-native species – a long-term monitoring network - subproject of ALTER-Net**

*(Ohrozenie biodiverzity nepôvodnými inváznymi druhmi – dlhodobý monitoring)*

grant number: GOCE-CT-2003-505298

duration: 9/2006 - 9/2007

funding: 91 250,- Sk

project leader: RNDr. Peter Gajdoš, CSc.

[14] 6<sup>th</sup> Framework Programme

**Critical scales for long-term socio-economic, biodiversity and ecosystem research - subproject of ALTER-Net**

*(Kritické mierky pre dlhodobý socio-ekonomický, biodiverzitný a ekosystémový výskum)*

grant number: GOCE-CT-2003-505298

duration: 10/2005 - 9/2006

funding: 153 300,- Sk

project leader: Mgr. Peter Bezák, PhD., Mgr. František Petrovič, PhD.

[15] 6<sup>th</sup> Framework Programme

**Urban lifestyle and urban biodiversity - subproject of ALTER-Net**

*(Mestský životný štýl a mestská biodiverzita)*

contract number: GOCE-CT-2003-505298

duration: 10/2006 - 9/2007

funding: 207 685,- Sk

project leader: Mgr. Peter Bezák, PhD.

[16] 6<sup>th</sup> Framework Programme

**Site-specific biodiversity issues – a rhetoric analysis - subproject of ALTER-Net**

*(Lokálne špecifické otázky týkajúce sa biodiverzity – rétorická analýza)*

grant number: GOCE-CT-2003-505298 , ALTER-net/21

duration: 6/2005 - 12/2006

funding: 271 432,2,- Sk

project leader: Mgr. Peter Bezák, PhD.

[17] 6<sup>th</sup> Framework Programme

**Improved description and mapping procedures for the monitoring of habitats and biodiversity on a pan-European scale - subproject of ALTER-Net**

*(Zlepšený opis a postupy mapovania pre monitorovanie biotopov a biodiverzity na paneurópskej úrovni)*

grant number: GOCE-CT-2003-505298 , ALTER-net/2

duration: 10/2005 - 6/2007

funding: 65 317,7,- Sk

project leader: RNDr. Ľuboš Halada, CSc.

[18] 6<sup>th</sup> Framework Programme

**Indicators to monitor changes and conservation in Natura 2000 sites: A focus on drivers, pressures and states - subproject of ALTER-Net**

*(Indikátory pre monitorovanie zmien a ochrany lokalít Natura 2000: Zameranie na hnacie sily, tlaky a stavy)*

contract number: GOCE-CT-2003-505298 , ALTER-net/11

duration: 9/2005 - 2/2007

funding: 162 406,9,- Sk

project leader: RNDr. Ľuboš Halada, CSc.



[19] 6<sup>th</sup> Framework Programme

**Aggregating biodiversity indicators for policy purposes: sense or nonsense?  
- subproject of ALTER-Net**

*(Zoskupovanie indikátorov biodiverzity pre účely riadenia – zmysel alebo nezmysel?)*

grant number: GOCE-CT-2003-505298 , ALTER-net/3

duration: 7/2005 - 12/2006

funding: 136 760,- Sk

project leader: RNDr. Ľuboš Halada, CSc.

[20] 6<sup>th</sup> Framework Programme

**Sustainability Impact Assessment: Tools for Environmental, Social and  
Economic Effects of Multifunctional Land Use in European Regions  
(SENSOR)**

*(Hodnotenie trvalo udržateľných vplyvov: Nástroje pre environmentálne, sociálne  
a ekonomické vplyvy multifunkčného využitia krajiny v Európskych regiónoch - SENSOR)*

grant number: GOCE 003874-2

duration: 12/2004 - 12/2008

funding: 3 230 441,1,- Sk

project leader: Ing. Július Oszlányi, CSc.

[21] 6<sup>th</sup> Framework Programme

**Developing the EU Biodiversity Strategy -BIOSTRAT**

*(Príprava a tvorba stratégie EÚ o ochrana biodiverzity - BIOSTRAT)*

grant number: GOCE 036 847

duration: 1/2006 - 10/2009

funding: 1 047 449,9,- Sk

project leader: Ing. Július Oszlányi, CSc.

[22] Multilateral project within EU Sciences Programme

**European Topic Centre for Nature Conservation and Biodiversity IV. -  
Contribution to EUNIS (European Union Information System)**

*(Európske vrcholné stredisko pre ochranu prírody a biodiverzitu IV. - Príspevok k EUNIS)*

grant number: ZP 0080

duration: 7/2002 - 2/2003

funding: 1 499 836,9,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Ľuboš Halada, CSc., RNDr. Peter Gajdoš,  
CSc.

[23] Multilateral project within EU Sciences Programme

**European Topic Centre for Nature Conservation and Biodiversity V. -  
Contribution to EUNIS (European Union Information System)**

*(Európske vrcholné stredisko pre ochranu prírody a biodiverzitu V. – Príspevok k EUNIS)*

grant number: ZP 0112

duration: 5/2003 - 12/2003

funding: 2 435 930,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Ľuboš Halada, CSc.

[24] Multilateral project within EU Sciences Programme

**European Topic Centre for Nature Conservation and Biodiversity VI. –  
Contribution to EUNIS and overview on biodiversity-related projects**

*(Európske vrcholné stredisko pre ochranu prírody a biodiverzitu IV. - Príspevok k EUNIS)*

grant number: ZP 0142

duration: 5/2003 - 12/2004

funding: 1 400 000,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Ľuboš Halada, CSc.

[25] Multilateral project within EU Sciences Programme

**European Network for Long-Term Forest Ecosystem and Landscape  
Research COST-ENFORS**

*(Európska sieť dlhodobého výskumu lesných ekosystémov s krajiny COST-ENFORS)*

grant number: n/a

duration: 9/2003 - 12/2006

funding: 30 000,- Sk

project leader: Ing. Július Oszlányi, CSc.

[26] Multilateral project within EU Sciences Programme

**PHARE – Project pipeline for Operational Programme Basic Infrastructure  
Priority 2 - Environmental Infrastructure**

*(Podporný projekt pre operatívny program zabezpečenia základnej infraštruktúry – Priorita 2  
– Environmentálna infraštruktúra)*

grant number: AMS/451/LOT6

duration: 11/2003 - 6/2004

funding: 88 200,- Sk

project leader: Ing. Július Oszlányi , CSc., RNDr. Zita Izakovičová, PhD.

[27] Multilateral project within EU Sciences Programme

**PHARE - Nature Friendly Tourism development in the microregion of town Svätý Jur with support of Landscape – Ecological Plan**

*(Integrovaný rozvoj turizmu v mikroregiónne mesta Svätý Jur v súlade s ochranou prírody a s podporou krajinnoekologického plánu)*

grant number: SR 0113.04/0010

duration: 11/2003 - 11/2004

funding: 1 303 000, - Sk

project leader: RNDr. Zdena Krnáčová, PhD.

[28] Multilateral project within EU Sciences Programme

**PHARE - Learning together**

*(Učíme sa navzájom)*

grant number: 2002/000-642.03-0013

duration: 8/2004 - 7/2005

funding: 276 526,60 - Sk

project leader: RNDr. Zita Izakovičová, PhD.

[29] Multilateral project within EU Sciences Programme

**UNESCO - Landscape-ecological optimal territorial and functional utilisation of the Biosphere Reserve Tatry**

*(Krajinnoekologicky optimálne priestorové a funkčné využitie územia biosférickej rezervácie Tatry )*

grant number: 0154/2005

duration: 7/2005 - 2/2006

funding: 775 000,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Zita Izakovičová, PhD.

[30] Multilateral project within EU Sciences Programme

**UNESCO - Strengthening Capacities of Biosphere Reserves in Managing the Project Cycle**

*(Posilnenie kapacít v Biosférických rezerváciách pri menežovaní a riadení cyklu projektov)*

grant number: 0153/2005

duration: 7/2005 - 12/2005

funding: 372 000,- Sk

project leader: Ing. Július Oszlányi, CSc.

## ii. List of other international projects incl. funding

### [1] Project within intergovernmental agreement on scientific-technological cooperation

#### **Responsiveness of alpine vegetation to N inputs - A Comparison Between Central European and North American Sites**

*(Citlivosť alpínskej vegetácie na vstupy dusíka - porovnanie stredoeurópskej a severoamerickej lokality)*

grant number: NSF-0112281

duration: 1/2002 - 12/2006

funding: 617 963,13,- Sk (for climatic station)

project leader: RNDr. Ľuboš Halada, CSc.

### [2] Project solved in cooperation and with funding from abroad

#### **Conservation and Sustainable Use of Biodiversity through Sound Tourism Development in Biosphere Reserves in Central and Eastern Europe**

*(Ochrana a trvalo udržateľné využívanie biodiverzity prostredníctvom rozvoja turizmu v biosferických rezerváciách v Strednej a Východnej Európe)*

grant number: GEF-ETE-UNESCO-CEE (ZP 0114)

duration: 10/2003 - 3/2004

funding: 85 000,- Sk

project leader: Mgr. Lucia Grotkovská

### [3] Project solved in cooperation and with funding from abroad

#### **Harmonisation of methods of long-term ecological research in Alpine vegetation**

*(Harmonizácia metód v dlhodobom ekologickom výskume alpínskej vegetácie)*

grant number: ZP 0103 (Aktion Österreich-Slovakei)

duration: 11/2002 - 12/2003

funding: 384 686,3,- Sk

project leader: Ing. Július Oszlányi, CSc.

### [4] Project solved in cooperation and with funding from abroad

#### **National capacity needs self-assessment related to environmental management of global conventions (National Capacity Self-Assessment – UNDP/GEF)**

*(Identifikácia priorít a rozvoja kapacít pre plnenie záväzkov SR vyplývajúcich z globálnych environmentálnych dohovorov)*

grant number: ZP 0134

duration: 6/2004 - 3/2005

funding: 137 580,4,- Sk

project leader for part "Biodiversity" : Ing. Július Oszlányi, CSc., Mrg. Andrej Bača  
project leader for part "Landscape desertification and degradation": Doc. RNDr. Tatiana Hrnčiarová, CSc.

[5] Project solved in cooperation and with funding from abroad

**Landscape Atlas of Czech Republic**

*(Atlas krajiny Českej republiky)*

grant number: ZP 0133

duration: 12/2004 - 12/2007

funding: 330 000,- Sk

project leader: Doc. RNDr. Tatiana Hrnčiarová, CSc.

[6] Project solved in cooperation and with funding from abroad

**European Topic Centre for Nature Biodiversity**

*(Európske tématické centrum pre biodiverzitu)*

grant number: ZP 0142

duration: 1/2005 - 12/2005

funding: 427 823,26,- Sk

project leader: Ing. Július Oszlányi, CSc., RNDr. Ľuboš Halada, CSc.

[7] Project solved in cooperation and with funding from abroad

**Evaluation of the environmental impact of the CMO-Permanent crops**

*(Hodnotenie dopadov spoločnej poľnohospodárskej politiky pre trvalé plodiny na životné prostredie)*

grant number: ZP 0175

duration: 1/2005 - 10/2005

funding: 51 156,9,- Sk

project leader: Ing. Július Oszlányi, CSc.,

[8] Project solved in cooperation and with funding from abroad

**Evaluation of agroenvironmental measures (AEM)**

*(Hodnotenie dopadov agroenvironmentálnych opatrení na životné prostredie)*

grant number: ZP 0148

duration: 3/2005 - 2/2006

funding: 79 577,4- Sk

project leader: Ing. Július Oszlányi, CSc.

[9] Project solved in cooperation and with funding from abroad

**Inventory of terrestrial ecosystems dependent on underground water bodies in the upper Hron valley**

*(Inventarizácia suchozemských ekosystémov závislých od útvarov podzemných vôd)*

*v hornom povodí Hrona)*

grant number: 300035

duration: 9/2005 - 10/2007

funding: 91 200,- Sk

project leader: RNDr. Andrej Halabuk, PhD.

[10] Project solved in cooperation and with funding from abroad

**ASTRALE GEIE – Assistance and technical support for the tasks related to actions under the Life Programme**

*(Asistencia a técnica podpora pri riešení úloh programu LIFE)*

grant number: LIFE/2005/SI2.411036/ATA/053

duration: 7/2005 - 6/2009

funding: 1 996 654,- Sk

project leader: Ing. Július Oszlányi, CSc.

[11] Project solved in cooperation and with funding from abroad

**Mapping of main sources of pollutants and their transport in the Visegrad space**

*(Mapovanie hlavných zdrojov znečisťujúcich látok a ich transport v priestore krajín Visegrádskej štvorky)*

grant number: 1107-2006-IVF

duration: 11/2006 - 10/2007

funding: 243 593,- Sk

project leader: Ing. Július Oszlányi, CSc.

[12] Project solved in cooperation and with funding from abroad

**Cross Compliance Evaluation of environmental Limits in EU**

*(Vyhodnotenie dodržiavania krížovej zhody environmentálnych limitov v EÚ)*

grant number: IEEP 753

duration: 7/2006 - 5/2007

funding: 313 191,- Sk

project leader: Ing. Július Oszlányi, CSc.

[13] Project solved in cooperation and with funding from abroad

**European Topic Centre on Biological Diversity – ETC BD - 06**

*(Európske tematické centrum pre biologickú diverzitu - ETC BD - 06)*

grant number: specific agreement 3/3333/B2005.EEA-ETC/BD

duration: 1/2005 - 12/2008

funding: 800 000,- Sk

project leader: Ing. Július Oszlányi, CSc.

### iii. List of other important projects and collaborations without direct funding

[1] Active bilateral international project related to interacademic agreement

**Project SOLENDET - biomass studies**

*(Projekt SOLENDET - štúdium biomasy)*

duration: since 1/1992 permanent collaboration

project leader: Ing. Ferdinand Kubíček, DrSc.

[2] Other international project without direct funding

**Assessing the microbiological, biochemical, soil-physical and hydrological effects of remediation of degraded soils**

*(Vyhodnotenie mikrobiologických, biochemických, pôdno-fyzikálnych a hydrologických účinkov meliorácie degradovaných pôd)*

grant number: 2004SK0003

duration: 1/2004 - 12/2005

project leader: RNDr. Olívia Ďugová, CSc.

- **National projects and funding**

- i. **List of projects supported by the Agency for the Promotion of Research and Development (APVV/APVT), National Research Programmes, and their funding**

[1] APVT

**Influence of climatic changes on microbial biomass and connecting changes of transport soil properties**

*(Vplyv klimatických zmien na mikrobiálnu biomasu a s ňou spojené zmeny transportných vlastností pôdy)*

grant number: APVT-51-006502-05

duration: 8/2002 - 12/2005

funding: 1 328 000,- Sk

leader: RNDr. Olívia Ďugová, CSc.

[2] APVT

**Creation of environmental limits for sustainable development (on example of model territories)**

*(Tvorba environmentálnych limitov pre udržateľný rozvoj územia (na príklade modelových území))*

grant number: APVT-51-035102

duration: 1/2004 - 12/2006  
funding: 1 692 000,- Sk  
leader: Doc. RNDr. Tatiana Hrnčiarová, CSc.

[3] APVT

**Integrated Landscape Management**

*(Integrovaný manažment krajiny)*

grant number: APVT-51-037202  
duration: 1/2004 - 11/2006  
funding: 4 236 000,- Sk  
leader: RNDr. Zita Izakovičová, PhD.

[4] APVV

**Festival of the Landscape**

*(Festival krajiny)*

grant number: APVV LPP-0346-06  
duration: 11/2006 - 11/2008  
funding: 123 000,- Sk (year 2006)  
leader: RNDr. Zita Izakovičová, PhD.

[5] APVV

**Conservation and management of non-forest habitats in the agricultural landscape**

*(Ochrana a manažment nelesných biotopov v poľnohospodárskej krajine)*

grant number: APVV LPP-0135-06  
duration: 11/2006 - 11/2009  
funding: 69 000,- Sk (year 2006)  
leader: Doc. RNDr. Tatiana Hrnčiarová, CSc.

[6] APVV

**Landscape changes of the Biosphere Reserve Tatra in recent 200 years in relation to changing natural and socio-economical condition**

*(Zmeny krajiny Biosférickej rezervácie Tatry za posledných 200 rokov v kontexte vývoja spoločensko-ekonomických a prírodných podmienok)*

grant number: APVV LPP-0236-06  
duration: 11/2006 - 11/2009  
funding: 116 000,- Sk (year 2006)  
leader: Ing. Július Oszlányi, CSc.



- ii. **Number of projects supported by the Scientific Grant Agency of the Slovak Academy of Sciences and the Ministry of Education (VEGA) for each year, and their funding**

VEGA	2003	2004	2005	2006
number	9	11	11	10
funding (millions of SKK)	0,822	1,047	0.966	1,222

• **Summary of funding from external resources**

External resources	2003	2004	2005	2006	total	average
external resources (millions of SKK)	12,3	12,3	16,4	15,8	56,8	14,2
external resources transferred to cooperating research organisations (millions of SKK)	0,0	0,0	0,0	0,0	0,0	0,0
ratio between external resources and total salary budget	1,3	1,3	1,7	1,6		1,5
overall expenditures (millions of SKK)	32,2	35,6	39,5	37,4	144,5	36,1

**Supplementary information and/or comments on research projects and funding resources**

ILE SAS has worked on **20 international scientific-technological projects** (supported by SAS).  
The following projects are the government contracts and contracts with other bodies:

- [1] **Digital map of biotopes of the orographic unit of the Belianske Tatry Mts. (NATURA 2000)**  
*(Digitálna mapa biotopov orografického celku Belianskych Tatier v GIS (NATURA 2000))*
- [2] **Revitalization of water-course Dubová – proposal for the vegetation arrangement**  
*(Revitalizácia vodného toku Dubová – návrh vegetačných úprav)*

- [3] **Integrated catchment management, part: Identification of modules**  
(*Integrovaný manažment povodí, časť: Identifikácia modulov*)
- [4] **Landscape-ecological analyses of regions of Slovakia**  
(*Krajinnoekologické analýzy regiónov SR*)
- [5] **Integrated landscape management, part: Integration of borders of protected areas**  
(*Integrovaný manažment krajiny, časť: Integrácia hraníc chránených území*)
- [6] **Integrated catchment management, part: Landscape ecological base**  
(*Integrovaný manažment povodí, časť: Krajinnoekologická základňa*)
- [7] **Dendrological study - Čierna Voda /Chorvátsky Grob**  
(*Dendrologická štúdia – Čierna Voda /Chorvátsky Grob*)
- [8] **Field course - Eco-settlement**  
(*Terénny kurz Ekodédina*)
- [9] **The list of significant terrestrial ecosystems dependent on groundwater bodies in Slovakia**  
(*Súpis významných terestrických ekosystémov závislých od útvarov podzemných vôd na Slovensku*)
- [10] **Proposal of environment solution, nature protection, landscape formation, and of territorial system of ecological stability**  
(*Návrh riešenia životného prostredia, ochrany prírody, tvorby krajiny a územného systému ekologickej stability*)
- [11] **Cultural heritage**  
(*Kultúrne dedičstvo*)
- [12] **Pařížské močiare National Nature Reserve - landscape, biodiversity and nature conservation**  
(*NPR Pařížské močiare-krajina, biodiverzita a ochrana prírody*)
- [13] **Actualisation of the supraregional territorial system of ecological stability in accordance with NATURA 2000**  
(*Aktualizácia nadregionálneho územného systému ekologickej stability v súlade s NATURA 2000*)

- [14] **Environmental monitoring of the surrounding of Slovalco, Žiar nad Hronom**  
*(Environmentálny monitoring okolia Slovalco, a.s., Žiar nad Hronom)*
- [15] **Mapping of nonforest biotopes with assessment of appropriate state for every polygons in the territory of SKUEV 0130 Zoborské vrchy Mts.**  
*(Mapovanie nelesných biotopov so stanovením priaznivého stavu pre každý polygón na území SKUEV 0130 Zoborské vrchy)*
- [16] **Atlas of the representative geoecosystems of the Slovak Republic**  
*(Atlas reprezentatívnych geoeekosystémov Slovenska)*
- [17] **Local territorial system of ecological stability of the Slopná cadastre for land arrangement project**  
*(Miestny územný systém ekologickej stability k.ú. Slopná pre projekt pozemkových úprav)*
- [18] **Expertise to the environmental impact assessment study of the „Residential buildings and amenities development – locality Šúr, Slovenský Grob“**  
*(Posudok na zámer o posudzovaní vplyvov na životné prostredie „Bytová výstavba a občianska vybavenosť, lokalita Šúr, Slovenský Grob“)*
- [19] **Wind parks (Birds monitoring for the prepared wind parks localities)**  
*(Veterné parky (monitoring vtákov pre lokality pripravovaných veterných parkov))*

## **5. Organisation of PhD studies, other pedagogical activities**

- i. **List of accredited programmes of doctoral studies (as stipulated in the previously effective legislation as well as in the recently amended Act on the Universities)**

[1] **Ecology 15-21-9** (as stipulated in the previously effective legislation)

[2] **4.3.1 Landscape protection and landscape utilisation** (as in the recently amended Act on the Universities)

- ii. Summary table on doctoral studies (number of internal/external PhD students; number of students who completed their study by a successful thesis defence; number of PhD students who quitted the programme)

PhD study	31.12.2003			31.12.2004			31.12.2005			31.12.2006		
number of potential PhD supervisors	11			11			16			14		
PhD students	number	defended thesis	students quitted	number	defended thesis	students quitted	number	defended thesis	students quitted	number	defended thesis	students quitted
internal	9	0	1	11	0	1	9	4	5	11	0	0
external	12	2	0	11	3	6	11	4	0	12	2	0
supervised at external institution by the research employees of the assessed organisation	9	0	0	10	0	0	14	0	0	14	0	7

- iii. Postdoctoral positions supported by

**a) external funding (specify the source)**

Projects APVV-LPP focused to the creation of postdoctoral positions

**Conservation and management of non-forest habitats in the agricultural landscape**

project leader: Doc. RNDr. Tatiana Hrnčiarová, CSc.,

postdoctorand: RNDr. Jana Špulerová, PhD.

funding (year 2006): 69 000,- Sk

Project APVV-LPP focused to the creation of postdoctoral positions

**Landscape changes of the Biosphere Reserve Tatra in recent 200 years in relation to changing natural and socio-economical conditions**

project leader: Ing. Július Oszlányi, CSc.,

postdoctorand: RNDr. Martin Boltžiar, PhD.

funding (year 2006): 116 000,- Sk

**b) internal funding - the Slovak Academy of Sciences Supporting Fund of Stefan Schwarz**

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**iv. Summary table on pedagogical activities in undergraduate programmes for each year**

Teaching	2003	2004	2005	2006
lectures (hours/year)	309	348	266	444
practicum courses (hours/year)	207	213	111	379
supervised diploma works (in total)	25	31	13	26
members in PhD committees (in total)	4	7	8	12
members in DrSc. committees (in total)	2	0	0	0
members in university/faculty councils (in total)	1	1	0	0
members in habilitation/inauguration committees (in total)	4	4	1	1

**v. List of published university textbooks**

- [1] DRDOŠ, J. - MICHAELI, E. - HRNČIAROVÁ, T.: Geocology and Environmentalism. Environmental planning in regional development (Part II.) University text book. University of Prešov (*Geoekológia a environmentalistika. Environmentálne plánovanie v regionálnom rozvoji. II. časť. Vysokoškolské učebné texty, FHPV Prešovská univerzita*), Prešov, 2005, 130 p., ISBN 80-8068-343-3. <http://www.fhvp.unipo.sk/PU/FHPV/pdf/geoeko-enviro.pdf>
- [2] RUŽIČKA, M. - MIŠOVIČOVÁ, R.: Systemic Ecology (3rd amplified edition) Nitra, Biosphere association for landscape ecology development. (*Systémová ekológia (III. doplnené vydanie). Nitra, Združenie BIOSFÉRA pre rozvoj krajinskej ekológie*) 2005, 80 p. ISBN 80-968030-6-9.
- [3] RUŽIČKA, M. - MIŠOVIČOVÁ, R.: Landscape Ecology. Biosphere edition, C. series of textbooks, Nitra: Biosphere association, (*Krajinná ekológia. Edícia Biosféra, C. Série učebných textov, Vol. C 2. Nitra: Združenie Biosféra*) 2006, 131 p. ISBN 80-968030-7-7.

**vi. Number of published academic course books**

## **vii. List of joint research laboratories/facilities with the universities**

- [1] **Joint research laboratory (used name: Common Department) with the Department of Ecology and Environmental Sciences at the Faculty of Natural Sciences of the Constantine the Philosopher University in Nitra.** (The staff of the Institute of Landscape Ecology participates in pedagogical activities of the department, namely in teaching, consultations for Master and PhD students, supervision of seminars and diploma theses, organizing field courses and in Master and PhD examination committees.)

## **viii. Supplementary information and/or comments on doctoral studies and pedagogical activities**

In the assessed period the 3 researchers from ILE SAS supervised 9 docstudents at the other universities within other study programmes. Two of supervised docstudents have already defended their PhD. thesis.

## **6. Direct output to the society**

### **(applications of results, popularisation and outreach activities)**

#### **i. List of the most important results of applied research projects**

- [1] **Digital map of biotopes of the orographic unit of the Belianske Tatry Mts. (NATURA 2000)**

*(Digitálna mapa biotopov orografického celku Belianskych Tatier v GIS (NATURA 2000))*

The digital map of the Belianske Tatry Mts. orographical unit in the Scale 1:10 000 was evaluated on the base of assembled data. The GIS ArcView 3.1 was used for this purpose. This map was used as a part of the NATURA 2000 documentation in order to the enlistment of the Belianske Tatry into the NATURA 2000 network. In addition to the digital map the complete Access 2000 database included data, which characterise biotopes in the area of Belianske Tatry Mts as well as the database describing the distribution of vegetation units and particular significant taxons of flora was prepared. The mapping units were determined according to the The biotopes checklist of Slovakia (Stanová, Valachovič, 2002). There were selected, mapped and characterised 57 types of biotopes (formation groups). The project was solved to order of State Nature Protection of Slovak Republic.

**[2] Landscape-ecological optimal spatial and functional utilisation of the Biosphere Reserve Tatry**

*(Krajinno-ekologicky optimálne priestorové a funkčné využitie územia Biosférickej rezervácie Vysoké Tatry)*

Based on scientific knowledge and information the study "Landscape-ecologically optimal spatial and functional utilization of UNESCO Biosphere Reserve Tatry" was elaborated. It was submitted to Governmental Committee for Revitalization and Development of High Tatras Mts. (20. 12. 2005). The outcome was the proposal of Landscape-ecologically optimal utilization of Tatras Biosphere Reserve in new, changed conditions which resulted from wind calamity. The outcomes of project (landscape-ecological study) represent basic documents to authorities decision making process.

**[3] Proposal of environment solution, nature protection, landscape formation, and of territorial system of ecological stability**

*(Návrh riešenia životného prostredia, ochrany prírody, tvorby krajiny a územného systému ekologickej stability)*

In 2004 the Magistracy of the Capital of the SR of Bratislava elaborated the Proposal of the General City Plan of Bratislava which was commented by the Institute of Landscape Ecology of SAS from environmental aspect. The aim of expertise was to show that to what degree accepted the proposal the elements of nature protection, territorial system of ecological stability and natural resources. Then were evaluated and compared the development of nature protection (present and future state) with emphasis on applicable international conventions between 1994-2004; main collisions of interests were evaluated and compared. The proposed state of use with development of nature protection, territorial system of ecological stability as well as further ecostabilizational elements were compared. Possible environmental problems and proposed measures for their elimination were pointed out. The result of evaluation can influence the land use plan of the town and propose its change. HRNČIAROVÁ, T. A KOL. (Izakovičová, Z., Krnáčová, Z., Moyzeová, M.) Proposal of environment solution, nature protection, landscape formation, and of territorial system of ecological stability *(Návrh riešenia životného prostredia, ochrany prírody, tvorby krajiny a územného systému ekologickej stability)*. Exertízne posúdenie Návrhu územného plánu hl. mesta SR Bratislavy. Magistrát hl. mesta SR Bratislavy, Ústav krajinnej ekológie SAV), Bratislava, 2004, 65 p.

**[4] Learning together**

*(Učíme sa navzájom)*

The goal of the project was the improvement of environmental education and establishment of Natural environmental laboratory, as well as the involvement of inhabitants in environmental education and environmental protection. Project demonstrates the application of non-traditional forms of environmental education. It goes from less effective verbal education oriented to memorizing towards the creative education, focusing on understanding the

processes occurring in the landscape. One of the main outputs is the publication: CIBIRA, P. - IZAKOVIČOVÁ, Z. - MOYZEOVÁ, M. - ŠTEFUNKOVÁ, D. - ADAMČEKOVÁ, E. - MIKLOŠOVIČOVÁ, Z.: Learning together. Manual (Učíme sa navzájom. Wir lernen einander. Manuál. Handbuch.). Bratislava: Institute of Landscape Ecology of SAS (Ústav krajinej ekológie SAV), 2005, 160 p. ISBN 80-969272-1-3, which represents a handbook for formal and informal environmental education. It consists from the complex of working sheets focusing on the solution of environmental tasks. The exercises are aimed at the explanation of the environmental terms, description of the landscape-ecological process, and presentation of local cultural-historical dominants of the territory. In the solution of the project was involved the local educational and decision-making institutions of the village Sucha n. Parnou, like elementary school, municipality and hunting fellowship. The partner of project was Distelverein Deutsch Wagram/Austria.

**[5] Actualisation of the supraregional territorial system of ecological stability in accordance with NATURA 2000**

*(Aktualizácia nadregionálneho územného systému ekologickej stability v súlade s NATURA 2000)*

The aim why was the Atlas of representative geoecosystems of SR elaborated, was to make systematic scheme for diversity protection of conditions and forms of state life. It means to elaborate such a publication which contains all strategically important geoecosystems which need to be somehow protected. The strategic aim of defining the representative geoecosystems was to determine a representative geo-ecosystems for each territorial unit (region), and to determine a representative occurrence for each type of geo-ecosystem. Altogether 120 potential REPGES types were determined on the territory of the Slovak Republic. The results were presented in book publication in three language versions (Slovak, Hungarian, English):

MIKLÓS, L. - IZAKOVIČOVÁ, Z. et al (Boltižiar, M., Diviaková, A., Grotkovská, L., Hrnčiarová, T., Imrichová, Z., Kočická, E., Kočický, D., Kenderessy, P., Miklós, L., Mojses, M., Moyzeová, M., Petrovič, F., Špinerová, A., Špulerová, J., Štefunková, D., Válkovicová, Z., Zvara, I.): Atlas of representative geoecosystems of Slovakia (Atlas reprezentatívnych geoeosystémov Slovenska). Bratislava: Institute of Landscape Ecology of SAS (Ústav krajinej ekológie SAV), 2006, 124 p. + 6 maps. ISBN 80-969272-4-8.

**[6] Environmental monitoring of the surrounding of Slovalco, Žiar nad Hronom**  
*(Environmentálny monitoring okolia Slovalco, a.s., Žiar nad Hronom)*

The study deals with state of load of Aluminium plant in Žiar nad Hronom surrounding before 1995 when the old factory stopped the production and the state after new technology of Slovalco has been put in practice from years 1996, 1997, 2000, 2001, 2003 and 2005. Because of polluting substances have been accumulated in soil during 40 years, it is not possible to solve the problem immediately. In spite of excess of polluting substances permissible level is constantly decreasing, it is still high. The coefficient values of load in forest trees were: 29,4 in



2005; 19,4 in 2000 and 5,3 in 2005. Sulphur and flourine load have decreased significantly. The given results are part of expertise study, which iis main outcome of project: MAŇKOVSKÁ, B., OSZLÁNYI, J., FRONTASYEVA M., FLOREK, M.: Slovenský hlinikársky priemysel a okolie, , (Slovak Aluminium Industry and Local Environment), 2006, 54 pp.

## ii. List of the most important studies commissioned for the decision-making authorities, the government and NGOs, international and foreign organisations

- [1] IZAKOVIČOVÁ, Z. – MOYZEOVÁ, M.: Determinants of Landscape Stability. Pilot project. ILE SAS, Institute for Forecasting SAS, Institute for Sociology SAS. (*Determinanty stability krajiny. Pilotný projekt. ÚKE SAV, Prognostický ústav SAV, Sociologický ústav SAV*), 2003, 22 p.
- [2] IZAKOVIČOVÁ, Z. – MOYZEOVÁ, M.: Landscape-ecological conditions of sustainable development. ILE SAS, Institute for Forecasting SAS, Institute for Sociology SAS (*Krajinnoekologické podmienky trvalo udržateľného rozvoja. ÚKE SAV, Prognostický ústav SAV, Sociologický ústav SAV*), 2003, 38 p.
- [3] HRNČIAROVÁ, T. A KOL. (Izakovičová, z., Krnáčová, Z., Moyzeová, M.) Proposal of environment solution, nature protection, landscape formation, and of territorial system of ecological stability (*Návrh riešenia životného prostredia, ochrany prírody, tvorby krajiny a územného systému ekologickej stability*). Expertise of the Proposal of territorial Plan of the Capital of the SR of Bratislava. Magistracy of the Capital of the SR of Bratislava. Institute of Landscape Ecology of SAS (*Exertízne posúdenie Návrhu územného plánu hl. mesta SR Bratislavy. Magistrát hl. mesta SR Bratislavy, Ústav krajinnej ekológie SAV*), Bratislava, 2004, 65 p.
- [4] IZAKOVIČOVÁ, Z., GROTKOVSKÁ, L., KENDERESSY, P., MOYZEOVÁ, M., ŠTEFUNKOVÁ, D., VÁLKOVCOVÁ, Z.: Model of Landscape Ecological Management. Study. ILE SAS, Primary school Suchá nad Parnou (*Model ekologizácie hospodárenia v krajine. Štúdia. ÚKE SAV, ZŠ Suchá nad Parnou*), 2004, 158 p.
- [5] BUJNOVSKÝ, R. (ed.) (...HRNČIAROVÁ, T....) Identification of priorities and development of capacities for performing the obligations consequent on global environmental conventions. The evaluative report of capacities development requirements for UN Convention for fight against desertification. Bratislava: Ministry of Environment of the SR, Ministry of Agriculture of the SR UNDP/GEF and Soil Science And Conservation Research Institute, 2004, 32 pp.. (*Identifikácia priorít a rozvoja kapacít pre plnenie záväzkov SR vyplývajúcich z globálnych environmentálnych konvencií. Tematická hodnotiaci správa o potrebách rozvoja kapacít pre Dohovor OSN pre boj s dezertifikáciou. Bratislava: Ministerstvo ŽP SR v spolupráci s Ministerstvom pôdohospodárstva SR, UNDP/GEF a Výskumným ústavom pôdoznanectva a ochrany pôdy*)

- [6] DAVID, S.: Dragonflies (Odonata) on chosen localities of Medzibodrožie, Východoslovenská rovina Plain, (Faunistic, ecological protectively and site evaluation) (*Vážky (Odonata) na vybraných lokalitách Medzibodrožia - Východoslovenská rovina (Faunistické, ekologické, ochrannárske a stanovištné hodnotenie*)). Final report (Project Phare-tourism), depon in: SNP (Institute fo State Nature Protection) of the SR Banská Bystrica – Protected Landscape Area Latorica Administration, Trebišov, 2005, 38 pp and 39 pp of *supplement. (Závěrečná zráva (Projekt: Phare-turizmus), depon in: ŠOP SR Banská Bystrica - Správa CHKO Latorica, Trebišov, 2005, 38 s. + 39 s príloh)*
- [7] Z. IZAKOVIČOVÁ, J. OSZLÁNYI a kol. (M. BOLTIZIAR, J. HREŠKO, L. GROTKOVSKÁ, Z. IZAKOVIČOVÁ, P. KENDERESSY, J. OSZLÁNYI, F. PETROVIČ, Z. VALKOVCOVÁ): Landscape-ecologically optimal spatial and functional use of the Tatry UNESCO Biosphere Reserve, ILE SAS Slovak National Committee for programme UNESCO Man and Biosphere (MAB) (*Krajinno-ekologicky optimálne priestorové a funkčné využitie územia biosférickej rezervácie Tatry.*) Study. ILE SAS, MAB – Slovak National Committee (*Štúdiá. Ústav krajinej ekológie SAV, Slovenský národný komitét pre program UNESCO Človek a biosféra (MAB)*), Bratislava, november 2005, 181 pp + 7 maps
- [8] MAŇKOVSKÁ, B., OSZLÁNYI, J., FRONTASYEVA M., FLOREK, M.: Slovenský hlinikárenský priemysel a okolie, (*Slovak Aluminium Industry and Local Environment*), 2006, 54 p.
- [9] GROTKOVSKÁ, L. - MOYZEOVÁ, M. - ŠPULEROVÁ J. - IZAKOVIČOVÁ, Z. - BOLTIZIAR, M. - KENDERESSY, P.: Local territorial system of ecological stability, cadastre of Slopná village, the base for the Land Arragement project. (*Miestny územný systém ekologickej stability k.ú. Slopná pre účely projektu pozemkových úprav. ÚKE SAV*), ILE SAS Bratislava, 2006, 60 p. + 6 maps.
- [10] IZAKOVIČOVÁ, Z. - IMRICHOVÁ, Z.: Dynamic profile of the sensitive case study area „High Tatras“ in Slovak Republic. ILE SAS, Bratislava, 2006, 72 p.

### iii. List of the most important popularisation activities

- [1] **Press conference of Slovak Academy of Sciences on theme: Consequences of global changes to biodiversity – risks for Slovak nature and people** was held on 4 th of May 2005. Press conference was introduced by Dr. Peťko, head of Commision of Environment of the Slovak Academy of Sciences. Key presentation were focused generally on biodiversity, its state, changes, research and protection (L.Halada), biodiversity of grass communities and agriculture landscape (Z.Imrichova), activities of ILE SAS in biodiversity research and its participation in European projects aimed at biodiversity. They were succeeded by the questions concerning biodiversity and wider field of environment. At the

end there were provided interviews for media. Report from the conference was transmitted by TA3 TV.

[2] **Presentation of project "Learning together"** Special natural environmental laboratory can be included to the most significant scientific and popularisation activities of our Institute in the year 2005. Natural environmental laboratory was opened 28.6.2005 at presence of L. Miklós, Minister of Environment, T.Mikuš, Member of Parliament, O. Sersenová, Head of Regional Department of Environment, Ľ.Dauč, Deputy Mayor of the Trnava city, Ľ. Peťko, Head of the Commission for the Environment of SAS and of approximately 200 experts, teachers, community managers and general public. Also, the model lectures of environmental education were performed there. The competitions Ekoplágát and Súchovská fotografia which had been organized by ILE SAS in cooperation with Municipality, Primary school and local church community were appraised there. Second successful presentation of this project was held within the framework of Week of European Science, where approximately 30 participants-mainly experts, teachers, managers and the other staff took part there. The project was presented in local and regional press, in website [www.sav.sk](http://www.sav.sk), at international and national conferences - meeting Alter-Net (Brusel, Helsinki), International Conference of Environmental Education in Schools of the SR (Nitra), 40<sup>th</sup> Anniversary Workshop of ILE SAS, Conference Diversitas (Mexico), Conference SoBio (Segovia-Spain). Reports of project were transmitted by Markíza TV, Slovak Radio, Expres Radio. The project was presented on exhibitions - INCHEBA (Bratislava), Pedagogy Forum (Bratislava), EXPO (Japan) - as well. Project and its presentation was awarded by Price of Academy of Education within the framework of Lifelong Learning Week.

[3] **Seminar: Science, Landscape and Environment.** Institute of Landscape Ecology of SAS in Bratislava in cooperation with Regional Municipality of Trnava, University of SS Cyril and Methodius in Trnava organized the scientific seminar: Science, Landscape and Environment. It was held within the framework of the Week of European Science in the headquarters of Trnava Regional Municipality. The aim of seminary was to inform public about scientific results and activities and the way how to put scientific knowledge into practice which will guarantee effective protection and quality of environment. Seminary was held by patronate of Ministry of Agriculture, Head of Trnava Municipality and President of Slovak Academy of Sciences. It consisted of two parts: workshop and poster presentation. There were following important guests: Ing. Tibor Mikuš – Head of Trnava Higher Territory Unit, PhDr. József Kvarda – Deputy Head of Trnava Higher Territory Unit, Zdenko Čambál - Deputy Head of Trnava Higher Territory Unit, MUDr. Stanislav Križan - Member of Local Parliament of Trnava Higher Territory Unit, Mgr. Jozef Behul – Head of Local Governmental Office in Trnava, Ing. Jaroslav Jaduš – State Secretary Of Ministry of Environment of the Slovak Republic, prof. RNDr. László Miklós, DrSc. – Member of Parliament of the Slovak Republic, prof. MUDr. Fedor Čiampor, DrSc. – Head of The learned society of SAS, RNDr.

Igor Túnyi, CSc. – member of the Presidium of SAS člen predsedníctva SAV, prof. RNDr. Eduard Kostolanský, CSc. Rector of University of SS Cyril and Methodius in Trnava. Approximately 213 participants took part at the conference – representatives of National Council of the Slovak Republic, Ministry of Agriculture, Ministry of Environment, Slovak Centre for Agriculture Research of SAS, representatives of state and public sector, local governments, and scientific and educational institutions. The workshop consisted of lectures aimed at presentation of newest landscape-ecological methods and its legislative conditions in EU and SR. Poster presentation was based on 36 projects of various problems and territories and after the seminary the posters were exhibited at the University of SS Cyril and Methodius in Trnava. The exhibition was open to public daily from 23.11-30.11.2006. At the end of seminar it was announced **the Ecological Initiative of Trnava: “Young Trees for Slovakia”** and it was signed by all participants. At the end the participants planted the tree in front of the Trnava Municipality Office symbolically.

- [4] **High Tatras Mountains – land use and the further territory development** (popularization in media). Press conference, complex of contributions in press, performing the ideas in media were aimed at solution of current situation after the windstorm. Scientists from ILE SAS presented outcomes of study “Landscape ecological optimal spatial and functional utilization of the territory of the UNESCO Biosphere Reserve Tatry” This study aimed to propose the land utilization in new conditions, changed after the windstorm in November 2004. It damaged 14 % of TANAP territory, from that 7,1% was in 5th level protection territory, 7% was in Sites of European Community Importance and 1,5% was from Special Protection Areas. The study was funded by UNESCO (Emergency Aid Fund) which granted the National MAB Committee to elaborate this study. Study was made by research staff from several Institutes and Universities. Study respects full the Sevilla Strategy which is dominant scientific document for biosphere reserves of UNESCO. Study was submitted to the Government Committee of the SR for Revitalization and Development of High Tatras Mts. Scientific information, arguments and opinions were submitted to other competent authorities. The using of these scientific information is not only possible but also beneficial and necessary from regional and even international point of view. The outcomes will be used in proposal of new zonation of Biosphere Reserve and as landscape-ecological plan it can be used as basic material for Land Arrangement Documentation.
- [5] **INCHEBA BRATISLAVA** april 2003 – the Blue Planet Prize for exhibit “Landscape Ecological Management” – Z. Izakovičová, M. Moyzeová
- [6] **INCHEBA BRATISLAVA** april 2004 - poster presentation of Implementation of Sustainable Development and its Tools – SAS gained the Prize for the most creative exposition within the framework of INCHEBA – Z. Izakovičová, M. Moyzeová

**iv. List of patents issued abroad, incl. revenues**

[1] --

[2] ...

**v. List of the patents issued in Slovakia, incl. revenues**

[1] --

[2] ...

**vi. List of licences sold abroad, incl. revenues**

[1] --

[2] ...

**vii. List of licences sold in Slovakia, incl. revenues**

[1] --

[2] ...

**viii. List of contracts with industrial partners, incl. revenues**

[1] --

[2] ...

**ix. List of research projects with industrial partners, incl. revenues**

[1] --

[2] ...

#### x. Summary of outreach activities

Outreach activities	2003	2004	2005	2006	total
studies for the decision sphere, government and NGOs, international and foreign organisations	7	7	7	4	25
articles in press media/internet popularising results of science, in particular those achieved by the Organization	41	23	31	37	132
appearances in telecommunication media popularising results of science, in particular those achieved by the Organization	10	10	10	22	52
public popularisation lectures	6	7	11	4	28

#### xi. Supplementary information and/or comments on applications and popularisation activities

- [1] Elaboration of expert opinion "Favourable Species Status" for 5 dragonflies species with occurrence in Slovakia, for Ministry of Environment and State National Protection of the Slovak Republic. Problem is solved within the framework of PHARE project "Implementation of Habitats Directive and Birds Directive" (S.David)
- [2] Evaluation of methodical basement to protection of *Aesculus hypocastaneum* against *Cameraria ohridella*. For Ministry of Environment of the Slovak Republic (A. Janitor)
- [3] Cooperation with the "Podzemná voda s.r.o." company, Bratislava, critical review for Gabčíkovo hydropower plant (V.Šimonovič)
- [4] Forest Administration Gabčíkovo – cooperation at the VEGA projects 2/7017/22, 2/3078/23 a 2/6154/26 (J. Oszlányi, F. Kubíček, V. Šimonovič, J. Kollár). Gathering and providing of scientific information about forest communities in dyke space. The outcomes of project were used in silviculture of forests stands in the area (tree species combination, silvicultural system)
- [5] National Forest Centre in Zvolen and Research Department of Forest Research Institute Gabčíkovo – Observing and Study of Forest communities reached from Gabčíkovo water basin (VD) within the framework of VEGA project 2/6154/26 (J. Oszlányi, F. Kubíček, V. Šimonovič, J. Kollár). The outcomes of project were used for identification of forestry interventions.

- [6] State Forests of TANAP, Tatranská Lomnica. Cooperation within the framework of grant project – results of cooperation are scientific information about the state of ecosystems, and they are used in supervision and management of National Park (P. Barancok)
- [7] Elaboration of project: Realization of Shore Vegetation Planting within the framework of revitalization of lower part of Dubová stream. – for Piešťany town municipality (D.Štefunková)
- [8] Cooperation with BIOMO company, Trnava, in development of new preparations for biological protection of plants. (A. Janitor)
- [9] Cooperation with Encyclopaedic Institute of the SAS – reviewing and compilation of landscape-ecological terms in Encyclopaedia Beliana, encyclopaedic work in 12 volumes (T. Hrnčiarová)
- [10] Cooperation with Encyclopaedic Institute of the SAS – reviewing of encyclopaedia: Slovakia and the Slovaks in English (T.Hrnčiarová)
- [11] Institute for Forecasting SAS, Institute for Sociology SAS - expert participation in Technology Foresight programme (Izakovičová, Moyzeová)
- [12] Cooperation with Slovak Hydrometeorological Institute in Bratislava on elaboration of methodology for implementation of Water Directive (European Commission) in the Slovak Republic
- [13] Elaboration of Landscape Ecological Management for Suchá nad Parnou village – (Izakovičová, Štefunková, Moyzeová, Grotkovská, Kenderessy, Valkovcová)
- [14] Elaboration of critical review of bill: Environmental Impact Assessment - Izakovičová, Moyzeová
- [15] Cooperation with Ľudovít Štúr Institute of Linguistic, compilation of terms from landscape-ecological field in Monolingual Dictionary of Current Slovak Language in 8 volumes (T.Hrnčiarová)
- [16] Participation at implementation of sustainable development in the Slovak Republic – Izakovičová
- [17] Cooperation with Ministry of Environment of the Slovak Republic on bill of Landscape plan and on implementation of European Landscape Convention (T. Hrnčiarová).
- [18] Cooperation with Ministry of Environment of the Slovak Republic and Slovak Agency of Environment on elaboration of methods of Landscape-ecological plan processing for a region (T. Hrnčiarová, Z. Izakovičová)
- [19] Cooperation with Ministry of Agriculture of the Slovak Republic in education of projectants of Landscape Arrangement (T. Hrnčiarová).

- [20] Cooperation with Slovak Hydrometeorological Institute in Bratislava – preparing of implementation strategy of framework directive "Water in field of evaluation of terrestrial ecosystems which depend on underground waters formations" ILE SAS takes part in process of solving of pilot studies which are aimed to use in water-resources management (J.Oszlányi, A. Halabuk)
- [21] Three scientists from the Institute of Landscape Ecology of SAS (L: Halada, P. Gajdoš, S. David) took part in process of solving of one of the negotiation items of SR with EU (formation of NATURA 2000 network)
- [22] J. Oszlányi was delegated by Ministry of Foreign Affairs to the conference: International Coordinate Committee for UNESCO Man and Biosphere, Paris, 25.-29.10. 2004
- [23] Cooperation with Ministry of Environment of the Slovak Republic on elaboration of Environmental Academy Conception (Z. Izakovičová)
- [24] The results of landscape-ecological research of ILE SAS are presented yearly at the exhibitions INCHEBA, AGROKOMPLEX. Other presentations of ILE SAS were a part of the exhibitions "EKOFOTOGRAFIA" (Ecophotography) 2005, 2006, "FÓRUM PEDAGOGIKY 2004 – Kvalitná výchova a vzdelanie – kapitál v Európskej únii" (Pedagogy Forum 2004 – Quality Education and Knowledge - Capital in EU), Touring exhibition SAS Science for People – 50<sup>th</sup> Anniversary of foundation of SAS, Mushrooms Exhibition in Slovak National Museum, Bratislava, Žilina, Považské Museum Badín.

## 7. Background and management. Staffing policy and implementation of findings from previous assessments

### i. Summary table of personnel

Personnel	2003	2004	2005	2006
all personnel	56	55	62	57
research employees from Tab. Research staff	33	34	39	35
FTE from Tab. Research staff	30,68	30,12	36,88	32,88
averaged age of research employees with university degree	44	44,5	43,3	46.6



## ii. Professional qualification structure

Number of	2003	2004	2005	2006
DrSc.	3	3	3	3
PhD / CSc.	16	18	21	24
Prof.	2	3	3	3
Doc./Assoc. Prof.	2	1	2	2

## iii. Status and development of research infrastructure incl. experimental, computing and technical base (description of the present infrastructure, premises, and material and technical resources. Infrastructure, instrumentation and major technical equipment necessary for the achievement of the objectives specified in the research Concept)

Institute of Landscape Ecology SAS is an independent legal entity. As a grant organization, it's showing long-time positive economic results. The Institute is located in a building in the downtown of Bratislava and in the academical part of the City of Nitra (branch). The buildings in Bratislava and Nitra are the property of SAS. Seat of Institute in Bratislava and branch Nitra have their own library and conference room. Each room in Bratislava and Nitra is equipped with at least one personal computer, which is connected to reconstructed local computer network. There are also special computers for work with geographic information systems. Internet connection is provided with high-speed optical cable from the server of Computing Center of SAS. There are 58 computers in use, 9 of them are high-powered working stations for working with GIS and complicated graphics outputs processing. The Slovak Academy of Sciences has started to use economic software SOFTIP from 1.1.2007 and there was a need to buy server HP ProLiant ML150 for this software. There are also available 8 notebooks, 1 microbook, 4 scanners, 4 copy machines, 3 color printers, 13 monochrome printers, 2 dataprojectors, 4 GPS stations, 4 dictaphones, digitizer and backup generator. Software equipment is structured by individual needs of employees. The software basis includes Windows XP, Microsoft Office and Open Office 2.0.3. Specialized software includes ArcView 3.1, ArcGIS 8.1, IDRISI Kilimanjaro, Photoshop 7.0 a 8.0, Adobe Creative Suite CS, CANOCO a Corel Draw 9.0.

The institute is connected to internet with high-speed connection 100 Mb/s. Every employee has own e-mail account.

The equipment for terrain research and basic laboratory analyses is relatively old. There is still old equipment in use for plant species determination (microscopes, binoculars), biomass

dehydration, and measuring of biomass production. Three motor-cars are used in a terrain research.

### **Infrastructure, instrumentation and major technical equipment necessary for the achievement of the objectives specified in the research Concept)**

The main objectives of the research for next 4 years consist in:

According to the proposal objectives for the institute development, it is necessary to obtain enough money from grant's research projects for providing the infrastructure for quality scientific research.

Primary objectives for improving the infrastructure, instrumentation and technical equipment of the institute conformable with conception of the research are:

- to purchase the actual version of Slovakia ortophotomap
- purchasing and actualizing of special software and hardware for processing the remote sensing data and GIS maps
- to establish a site for the central research data archiving (buying a server and a special software, operator training, internal network rebuilding)
- to establish a stationary terrain station on the LTER localities

The further objectives, resulted from aim of the institute are mainly:

- to establish the terrain station Východná, improve the technical equipment of the building (buying the working station with internet connection, buying the basic laboratory instrumentation for a terrain research)
- to buy a terrain vehicle for the research in hard terrain
- to buy mobile working stations and to renew the GPS stations for exact mapping of research localities
- to equip sites in Bratislava and Nitra with the instrumentation for biotic analyses (driers, binoculars, microscopes for plant and animal species determination)
- to actualize hardware and software equipment for all scientific employees, to provide the schooling of the employees into internal courses, and also into special external courses.

### **iv. Status and development of bibliographic resources, activities of the Organisation's library and/or information centre**

The basic information centre (library) provides the following services for the researchers of the Institute as well as non-institutional users: loan of scientific literature, interlibrary loan service, international interlibrary loan service, international exchange of institution publications (45 exchange partners all over the world), recherches - classical and computer, following of the citation index in international databases, following of the citations of publication of the researchers of the Institute, consultancy in the biological-ecological terminology in foreign languages,

xerocopies of selected contributions for the library users. In the library is built the database of scientific papers from selected journals and books in the program ACCESS. At present the database contains 16 374 records of scientific papers and 5890 records of books.

The library has

- 5 005 monographs, proceedings
- 1 995 special publications
- 1 215 reprints
- 6 867 volumes of bound journals

#### **v. Describe how the results and suggestions of the previous assessment were taken into account**

As ILE SAS is a Contributory Organisation, its big effort is concentrated on gaining projects of different kind, the preparation of which, including planning, proposals elaboration and permanent load of work connected with them, is very demanding and exhausting.

On the other hand, these projects, mainly the EU funded projects, enabled the scientists to work in numerous landscape-ecological projects of basic character in close cooperation with top scientific institutes in Europe or under their coordination respectively. The strong competition environment enables the establishment especially of young scientists in the European Research Area. Along with the engagement in the EU scientific projects, the ILE SAS scientists did a lot in the improvement of their scientific qualification in the assessment period. This criterion was commented in the previous accreditation (1999-2002) as less successful. Every effort was done to improve the situation in this field. Now we can state, that especially the scientists of category II b changed their status substantially. In comparison with the assessed period 1999-2002, when we have 2 new PhD scientists, in the recent assessed period 2003 -2006 12 PhD scientific titles was awarded to the Institute's scientists. The PhD theses are of high quality and of high level. Based on the decision of the Board of Experts, one of the young ILE SAS' scientists was declared as the „Docstudent Personality of the Year 2006“ and won the 1st position in the science category of „Agriculture Forestry and Wood Processing“. This award was for his PhD Thesis and publications. PhD Theses of other scientists were published or the publications are under preparation. The structure of the scientists has been improved also by 1 new professor and by 2 assistant professors being in the inauguration process.

The Institute is very active in the publication of monographs (14 in 1999-2002 and 23 in 2003-2006). However less papers were submitted for publication in CC journals. It is necessary to state,

that the demanding work on numerous international and domestic projects, intensive engagements in the qualification improvement process and also the publication of results of scientific projects by means of monographs, intensive cooperation with decision making institutes, application of scientific results in practice including science popularisation take utmost of the energy and power of the scientists.

The ILE SAS scientists must respect the publication forms and means as they are strictly stated in the contracts (EU projects, APVV projects), where, as deliverables, the monographs, chapters in monographs, scientific presentations and in many cases electronically submitted scientific results is the accepted outcome of the project. Under these conditions also 215 papers in the reviewed proceedings and 379 scientific presentations at scientific events with international participation were delivered in the assessed period.

## **vi. Supplementary information and/or comments on management, research infrastructure, and trends in personnel development**

In years 2003 - 2006 the Institute of Landscape Ecology worked in following structure:

Section about sciences and research:

- Department of ecosystem analyses (Bratislava)
- Department of landscape-ecological syntheses (Bratislava)
- Department of biodiversity of ecosystems and landscape (branch Nitra)

Service and specialized formation:

- Economic-technical formation (Bratislava)
- Formation of scientific and technological information and editorials ( Bratislava)
- Research Station in Východná.

To 31.12. 2006 the total staff number was 57 employees, 35 employees with university degree engaged in research and development (PhD students excluded). There are 29 scientists, 9 special academic educated employees, 11 internal docstudents and 11 other employees. The average age of all primary employees of ILE SAS is 45 years and the average age of academic educated employees, engaged in research and development is 46, 6 years to 31.12. 2006.

Institute of Landscape Ecology owns building of Research station in Východná. Other buildings in Bratislava and Nitra are administered by the other SAS institutes. Due to a small financial grant from the Office of SAS, the building of Research station in Východná was reconstructed partially in 2005. Because of emergency conditions of heating system we have requested the Economic Committee of SAS for finance (cost of capital) for 2007, which could cover the cost of reconstruction and possibly the heating system restoration and the roof renovation that is almost yearly spoiled by the roof snowslip. The technical problems of building on Štefánikova 3, connected with physical state of building and technical state of equipments (electric wiring, water,

heating, windows leakage, etc.) and the building closing after 5 pm from the point of view of safety of the employees staying at office and property protection, still remain.

### ***Other information relevant to the assessment***

ILE SAS is the continuer of the Institute of Landscape Biology of Slovak Academy of Sciences (SAS), established in 1965, the first one in former Czechoslovakia which started to deal with the problems of landscape ecology in time when this discipline was not established yet. In 1975 the Institute was renamed and reorganized into the Institute of Experimental Biology and Ecology SAS. Since July 1990 the Institute operates under the current name - Institute of Landscape Ecology of Slovak Academy of Sciences (ILE SAS).

Since 1967 it organizes every three years regular international symposia on ecological problems of landscape. At the sixth Symposium in Piešťany in 1982 the International Association of Landscape Ecology (IALE) was founded.

The methodology of landscape-ecological planning LANDEP, which is included also in the Agenda 21 from the Rio Summit 92' as the suggested methodology for integrated approach to natural resource management was elaborated at the Institute of Landscape Ecology. It supports the international significance of the Institute. The methodology of landscape planning, which has the form of ecological carrying capacity methodology, analyses, syntheses and interpretations of abiotical, biotical and socio-economic landscape elements, was accepted by overseas experts at the opposite procedure. Landscape ecological plan, as a necessary part of territorial plan, was integrated in the Act No. 237 of 20 June 2000 amending the Act No. 50/1976 Coll. on territorial planning and building order (Building Act) as amended and on amendments of certain acts.

Labour efficiency of the Institute and his expert orientation are evidently demonstrated by commitment in development of theoretical, methodical and practical bases related to solution of substantial ecological and environmental problems with impact on whole society. The results of Institute's studies assisted the supreme organs of state power.

The science education and pedagogical activity are parts of the Institute activities. The Institute is accredited in two study programmes (in sense of the former and the recent Act on University study). In 2006 the Institute tutored 11 internal and 26 external docstudents. Our 3 scientists lead 8 docstudents in framework of other study programmes and in the other organisations. Except Constantine Philosopher University in Nitra the large pedagogical activity is concentrated on the Faculty of Natural Sciences of Comenius University in Bratislava, Slovak University of Technology in Bratislava, the Faculty of Ecology and Environmental Sciences of Technical University in Zvolen, the Faculty of Humanities and Natural Sciences of University of Prešov.

The Institute cooperates with overseas University as well - the Faculty of Tourism Recreation of „Eugeniusz Piasecki" University School of Physical Education (PL), University of Natural Resources and Applied Life Sciences, Vienna (A), the Faculty of Agronomy of Mendel University of Agriculture and Forestry in Brno (CZ). The workers of the Institute have established 2 departments in the Slovak Universities. Within their pedagogical activity they participate on elaboration of academic scripts and didactical tools.

The Institute regularly represents SAS at the popularization events organised for general public, and governmental bodies as AGROKOMPLEX, INCHEBA, “The Week of Science and Technology” and “The Touring Exposition of SAS.

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Bratislava, February 28, 2007

**RNDr. Zita Izakovičová, PhD.**

**Ing. Július Oszlányi, CSc.**

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Head of the Scientific Board of ILE SAS

Director of ILE SAS