ENVIROMAGAZÍN

Summary 5/2004

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TANAP stays our most significant national park

The introductory article focusing on the ecological disaster that affected the High Tatra mountains on 19 November 2004 and bringing the statement of the Minister of Environment of the Slovak Republic about the situation in the Tatra National Park (TANAP) after the disaster.

Everything relates with everything and in environment it applies doubly
Vladimír Benko, SEA

In the foreword the author speaks about the importance and need of information on environmental informatics the 5th issue of Enviromagazín is devoted to. Articles in this issue focus on the philosophy of environmental information collection, creation and processing. (page 3)

Information systems in environmental sector
Vladimír Benko, SEA

Several expert organisations under the Ministry of Environment of the Slovak Republic, such as the Slovak Environmental Agency, the State Hydrometeorological Institute, the Slovak Inspectorate of the Environment, focus on environmental information monitoring, evaluation, and popularization for several years already. All current information systems in

environmental sector have been built on the principle of environmental information collection, verification and provision to users.
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The first conference will launch a new tradition

The article brings information on the Enviro-i-forum 2005 conference to be held in June 2005 under the auspices of the Ministry of Environment of the Slovak Republic. The organiser of the conference is the Slovak Environmental Agency in cooperation with the Technical University in Zvolen. It will focus on legislation and creation of information systems in environmental field.
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Aarhus convention, a revolutionary step towards environmental democracy
Marián Markotán, MoE SR

After the entry to EU, the Slovak Republic assumed all obligations ensuing from its membership. One of them is the ratification of the UN Economic Commission for Europe (UNECE) Convention to Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, known also as Aarhus Convention that entered into force on 30 October 2001. Some countries acceded to it, others, like the Slovak Republic, undertook to ratify it.
(page 6-7)

What will you find at CD ROM at the enclosure to this Enviromagazín

CD ROM contents: Information brochure about environment development in the years1993 to 2003; Regional State of Environment Reports with indicator comparisons for 2001 and 2002; State of the Environment Report of the Slovak Republic for 2002; selected works of the Informatics and Monitoring Department of the Slovak Environmental Agency and other interesting information from the field of environmental protection and improvement.
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Information system of environment monitoring became necessary
Alžbeta Trulíková, SEA

The information system, together with the monitoring system of environment, is an instrument providing information about the state and trends in environmental field to several levels of users. Their implementation is a basis for meeting the right of every citizen of timely and full information on the state of environment, on reasons and consequences of current situation. The possibility of obtaining objective and comparable ecological information contributes to more efficient decisions and measures for environment improvement and for preservation of sustainable development. The functionality of both systems depends to a certain degree on the implementation of the adopted Act on Free Access to Information and Act on Collection, Keeping and Dissemination of Information on Environment.
(page 8-9)

State of the Environment Report of the Slovak Republic
Zuzana Lieskovská, SEA

The obligation to publish every year the State of the Environment Report of the Slovak Republic is embodied in the Constitution. The Ministry of the Environment of SR fulfils this obligation in cooperation with the Slovak Environmental Agency and other institutions of the environmental sector and other involved sectors. The Report focuses on the evaluation of the quality of environmental components – air, water, soil, minerals, flora and fauna and provides information on the state of landscape protection and creation, environmental regional division of Slovakia, selected risk factors and other information.
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Fulfilment of information requirements in international context
Zuzana Lieskovská, SEA

The system of environmental information collection and evaluation, besides its significance at the national level, is ever more important also from the point of view of Slovakia´s involvement in international structures. Provision of information and evaluation reports to the European Commission (fulfilment of reporting obligations) is one of important obligations resulting for the Slovak Republic as the new EU Member State.
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Seniors met under the Kráľova hoľa hill
Ján Kleinert

A report from the jubilee 10th meeting of the Seniors´ Club of Slovak Nature Protection that was held in Pusté Pole near Vernár under Kráľova hoľa.
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Exchange of geographical information within the environmental sector
Martin Tuchyňa, SAŽP CEI

Availability and efficiency of geographical information is contingent on the existence of infrastructures and systems enabling effective collection, administration and distribution of geographical information to all kinds of users. Central geographic system of the environmental sector [http://atlas.sazp.sk/cgs] is a project providing this kind of solutions. The main objective is to create a platform for mutual sharing of geographical information in the environmental sector and also by public.

The first digital map of Europe

The European Environment Agency presented to public on 17 November 2004 the first digital map of landscape changes that occurred in Europe since 1990.

Building a database distributed applications in the Slovak Environmental Agency(SEA)
Erich Pacola, SAŽP CEI

The main objective of the Information system is to share environmental information between public administrations, governmental organizations, citizens, scientific institutions etc. In the last few years SEA has redesigned a lot of information systems, which have been designed as distributed database applications. Before, partial flat databases were maintained at many computers by desktop database applications in SEA. SEA programmers analyzed all data, which were stored in Excel sheets or Access database tables to this time. A new data models

were created using database design tool and organized to entity relationship diagrams. Then, empty database structures were created in Oracle database and data were imported to this new structures. Later on the programmers decided to rebuild the old architecture of existing database applications. A new strategy was proposed to build distributed information systems using Delphi™ and its revolutionary DataSnap ™ (before Inprise's Multi-tier Distributed Application Services (MIDAS)) and IntraWeb ™ technology. DataSnap™ is a proprietary Borland technology that enables data (in packets) to be sent across a medium over a distributed network or a file system. IntraWeb™ is a component-based Web development framework written in Delphi™ by AtoZed Software. Some of the immediate benefits which have been acquired by using these technologies were: centralized business logic, thin-client, automatic error reconciliation, briefcase model, fault tolerance and load-balancing.

Slovak Environmental Catalogue of data sources – a metadata system of environmental sector
Martin Tuchyňa, Lucia Kazárová, Ján Cimerman, SEA

The increasing request for information calls for their simple identification and effective searching. This demand can be solved by metadata – data about data – describing existing data. Therefore the Slovak Environmental Agency has developed the Slovak Environmental Catalogue of Datasources CDS [http://www.iszp.sk/katalog/] for systematic administration of metadata within the environmental sector.
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Land cover of Slovakia and its changes identified within the CORINE Land Cover
Ján Feranc, Geographical Institute of the Slovak Academy of Sciences (SAS), Naďa Machková, SEA

Remote sensing data represented mainly by aerial and satellite images provide up-to date information about Earth surface objects. Satellite images were the basic source of information for the CORINE Land Cover project, the objective of which was development of digital thematic layers about Europe´s land cover in the scale 1:100 000 including land cover of the Slovak Republic. It is a successful culmination of the 10-year work of the Slovak Environmental Agency on this unique project.
(page 18-19)

Occurrence of Echinococcus Multilocularis in Slovakia or parasites through satellites
Martina Miterpaková, Parasitological Institute of SAS, Naďa Machková, SEA

Within the cooperation of the Parasitological Institute of SAS with the Slovak Environmental Agency the occurrence of the parasites *Echinococcus Multilocularis* and *Trichinella spp*. was mapped at the territory of Slovakia and subsequently regularities of their occurrence were analysed in relation to geographic and ecological factors.

Map Server of the Slovak Environmental Agency
Rudolf Navrátil, SEA

Slovak Environmental Agency (SEA) is the governmental organization of the Slovak Ministry of Environment, responsible for the administration of the Environmental Information System

of the Slovak Republic. The main goal of the Information system is to share environmental information between public administrations, governmental organizations, citizens, scientific institutions etc. Internet Map Server is part of the Information system for providing spatial environmental data to the public. Paper deals with technological solution of the SEA's Internet Map server including data collection, data processing and data presentation. Used technology consists of Oracle 9i database, ArcSDE application server, ArcIMS map server, ArcGIS clients and database thin clients based on DATASNAP™ (DELPHI 7) three tier architecture. SEA's Map server is available on: www.sazp.sk/mapserver
Selected applications of the SEA's Map server: Catalogue of the Protected Trees in Slovakia, State Archive of the Protected Areas in Slovakia, Landscape Atlas of Slovakia, Surface Water Quality in Slovakia, Soil Monitoring System in Slovakia, Waste Management in Slovakia, NATURA 2000 areas in Slovakia.
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Database applications in environmental state administration
The role of information system of environmental offices
Mariana Dlhošová, Ján Cimerman, SEA

Information system of environmental offices has been built and operated at the Slovak Environmental Agency as the first approved project according to the Act on the governmental information system. It will ensure the information support for the execution of the state administration in the field of environmental protection and improvement. The project has been divided into 8 subsystems. The article informs about legislation amendments leading to the current structure of the project and the state of individual subsystems implementation.
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New software for negative phenomena monitoring in nature
Ján Žitniak, Matej Pagáč, SEA

In the Slovak Environmental Agency, the first version of software for monitoring of negative phenomena in nature has been developed during rather a short time. It was called ReadShape and its primary objective is to help conservators to monitor endangered areas with geographical precision (such as fire, fish kill, traffic accident or dangerous objects – illegal landfills, wastes, etc.). A conservator will record an endangered area by GPS equipment, and by means of relevant hardware (notebook, PDA, mobile phone) he will send measurement data to a head office, e,g, to the Slovak Environmental Agency. Communication between the conservator and the head office is done by ReadShape application. ReadShape interprets practically immediately the measured data at the display of a portable computer by means of map images.
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Europe must implement measures to reduce impacts of climate changes
Source: EEA 2004

There exists clear evidence that global warming was caused during the last 50 years by human activities, especially by greenhouse gases emissions, e.g. carbon dioxide from fossil fuels burning. Carbon dioxide concentration in the lower layer of atmosphere is the highest ones during at least 420 thousand years – and maybe even during 20 million years – and it is in 34% higher than it was before the intensive development of industrial production. In 1997, individual governments approved the Kyoto protocol – the international convention on the

reduction of emissions of six greenhouse gases – the first step to reverse this unfavourable trend.
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Energy from renewable sources
Villages discover gradually possibilities of forest biomass
Peter Farárik

An interest in forest and agricultural biomass use in power industry increases. Mainly mountain regions show such interest. The author of the article brings concrete examples and experience from the Banská Bystrica region. Everywhere in the world people hope that biomass will become the alternative energy source and that it will replace in future a great portion of non-renewable sources. Also Slovakia, after its entry in the European Union, undertook to increase the percentage of electric energy production from renewable sources.
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Le Mercantour National Park – the region of miracles, chamois and orchids

Interesting data and pictures from one of six French national parks – Le Mercantour.
(page 30-31)

Historical bases of environmental policy and environmental legislation (IV)
Jozef Klinda

A continuation of the series about history of environmental policy and environmental legislation from the era of ancient Egypt. The author writes about the significance of a calendar from the environmental point of view. At the end of this chapter he states that world would look differently without Sumerians and Egyptians.
(page 32-34)

World heritage

Another part of the series about the most important localities of the world natural heritage presents following areas: Brazil – Jaú National Park, Mexico – rock paintings in Sierra de San Francisco, Canada – Dinosaur Provincial Park, India – Manas wild nature sanctuary
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