



Biosphere reserve integrated monitoring in Škocjan Caves Regional Park

V. Debevec Gerjevič, B. Peric

Park Škocjanske jame, Slovenija (vanja.debevec@psj.gov.si / Fax: +386 5 70 82 105 / Phone: +386 5 70 82 100)

The Kras is significant for its rich history of research that was carried out to discover unique natural phenomena, endemic species and plants, archaeological and architectural peculiarities of the area.

The area of Škocjanske jame was designated as Unesco World Heritage Site in 1986. The Parliament of the Republic of Slovenia founded the Škocjanske jame Regional Park in 1996 and enacted two legal documents: Škocjan Caves Regional Park Act and Decree on the founding of the Public Service Agency Park Škocjanske jame, Slovenia.

Škocjanske jame – Škocjan Caves are the first described underground karstic wetland in the world. Ramsar Convention designated cave system as Wetland of international importance in 1999.

In 2004 the park with proper zonation was designated as Man and Biosphere (MAB) locality named Karst Biosphere Reserve.

Biosphere Reserve Integrated Monitoring (BRIM) is a scientific programme developed at UNESCO headquarters with emphasis on research activities in implementation of MAB principles in biosphere reserve.

BRIM programme is prepared for Škocjan Caves and its upper surface. In our presentation we would like to stress following activities accompanied with filed work reports, data evaluation and experiences as well.

A correlation between significance of research activities and monitoring will be presented in terms of following guidelines:

- establishing unique methods and standards for improving the efficiency and compat-

ibility of data;

- contributing knowledge to the data network and enable access to information that contribute to knowledge about world heritage, its preserving and conservation;
- on-time intervention in case of reduced habitat quality or threats to safety and health of visitors, employees and inhabitants.
- to reach a unique surveillance in the region and easier assay of the status;
- active role in establishing plans regarding special planning and making the assays of influence of certain projects on the environment.
- conserving and protecting the world natural and cultural heritage
- play an active role in monitoring elsewhere in the world, leaning on the gained experience and work done.

Following activities will be presented as a model in implementation of BRIM programme:

- making studies and constant monitoring of tourist impact on the cave microclimate;
- making demographic studies on impact of tourism, economic development, and technology on substantial development of the Park and karst area;
- study on efficiency of current education methods with proposed improvements;
- interpretation of natural and cultural heritage;
- measurements of radon concentration in the cave system;
- monitoring of cave microclimate and an assay of influence of tourist visit to vulnerable underground ecosystem
- assembling and applying automatic meteorological station in Škocjan,
- monitoring of hydrological properties of the Reka River flow before the caves and after leaving the underground system.