

SLOVAKIA/HUNGARY

Caves of Aggtelek Karst and Slovak Karst

Brief description

The variety of formations and the fact that they are concentrated in a restricted area means that the 712 caves currently identified make up a typical temperate-zone karstic system. Because they display an extremely rare combination of tropical and glacial climatic effects, they make it possible to study geological history over tens of millions of years.

1. Introduction

Year(s) of Inscription 1995, 2000

Agency responsible for site management

- Ministry of the Environment of the Slovak Republic
Environmental Policy and Law Division
Nam. L. Stura 1, 812 35 Bratislava
Slovakia
email: horacikova.anna@enviro.gov.sk
website: www.enviro.gov.sk
- Správa slovenských jaskýň (Slovak Caves Administration)
Hodžova 11, 031 01 Liptovský Mikuláš
Slovakia
email: caves@ssj.sk
website: <http://www.ssj.sk>
- Aggtelek Nemzeti Park
Aggtelek National Park
3758 Jósvalő
Tengerszem oldal 1
Hungary

2. Statement of Significance

Inscription Criteria N (i)

Justification as provided by the State Party

SLOVAKIA: Proposed nature heritage is an example of development of a unique karst geosystem with the elements of uncommon beauty, Conforming to the article 2 of Convention it can be considered a group of nature phenomena made up of physical and biological formations, which have

from the aesthetic or scientific standpoint an extraordinary world value.

All the caves, chasms as well as the other karst forms are constituents of one geomorphological unit the Slovak Karst and its southern continuation in Hungary. Therefore they belong to the same physical-geographical formation, to the same biogeographical area, just as the ecosystems are of the same type. Suggested nature heritage is propounded to include in the list of the world heritage in accordance with the Convention in virtue of the criteria: iii) and partially as well iv)

The nature heritage suggested for inclusion in the world heritage is made up of the remarkable subterranean cave systems with a unique and unrevolving sinter and aragonite decoration.

The underground cave systems as well as karst surface are also an important and significant place of natural occurrence of the surviving endangered species of animals of a great scientific value. In addition to its subterranean chambers have a major speleoarchaeological significance,

From the caves of the territory is known so far the highest stalagmite in the world with a height of 32,7m, the only cave with an aragonite decoration in this country, abyss with an ice filling, which is a unique phenomenon in the Middle Europe area considering its height above the sea level. We can register here an occurrence of caves from a juvenile stage (the Gombasecká Cave) to the aged stage (the Silická ľadnica Ice Cave), various kinds of sinter decoration as are 2-3 m long plumes or drums, shields and pagoda-like stalagmites etc. The cave system Baradla-Domica is the second longest in this country.

Suggested nature heritage complies with the demand of integrity, for one thing the territory of concentrated occurrence of caves includes too the national park and the protected landscape area, in which besides endokarst occur as well all forms of surface karst. Besides, this represents an area with a decisive influence on retention and presentation of endokarst.

HUNGARY: Proposed nature heritage is an example of development of a unique karst geosystem with the elements of uncommon beauty. The nomination was made on the basis of the Aggtelek and Slovak Karst as a group of nature phenomena made up of such physical and biological formations, which have some aesthetic or scientific standpoint of an extraordinary world value.

All caves and shaft-caves as well as the other karst forms are constituents of one geomorphological unit

of the Slovak and Aggtelek Karst. Therefore they belong to the same physical-geographical formation, to the same biogeographical area just as the ecosystems of the two areas are the same type. Suggested nature heritage is propounded to include in the list of the world heritage in accordance with the Convention's criteria: iii) and partially iv) too.

The nature heritage suggested for inclusion in the world heritage is made up of the remarkable subterranean cave systems with unique and unrevolving karst decoration.

The underground cave systems as well as the karst surface are also an important and significant place of natural occurrence of the surviving endangered species of animals, with great scientific value also. In addition the subterranean chambers have a major speleoarcheological significance.

The Baradla cave is the longest cave in Hungary and the highest stalagmite in the country, the "Observatory" can be seen in the cave with its 19 metre height. The Baradla-Domica cave system is 25 kilometer long. There are a lot of considerable dripstone forms in the caves of Aggtelek Karst such as the botryoidal stalactites and different helictite variations can be found in the Rákóczi caves and the Rejtek shaft-cave. The Kossuth cave is remarkable because of its particular cross sections of its galleries and its pulsating water capacity. The Béke cave has long time medical tradition in the treatment of lung-disease and asthmatic illness.

Suggested nature heritage complies with the demand of integrity, for one thing the territory of concentrated occurrence of caves includes the national park and the protected landscape area too.

As provided in IUCN evaluation

CASK is typical of many Karst localities in Europe. Its special distinctions are that it has a great number of caves (712) of different types found in a concentrated area. The caves themselves are of moderate extent and are not as long, deep or decorated as are other world caves. Research at the site by geologists, biospeleologists, mineralogists and paleontologists has been extensive (though little known outside the region) and demonstrates the importance of the site to science.

A significant aspect of CASK is that it has undergone a great deal of fossilization and later exhumation of landscape features and subsurface groundwater routes. In other words, many karst features, after having formed, were buried by later sediment and then later reactivated or exhumed by

erosional removal of the sediment. The resulting karst features contain a great deal of evidence pertaining to the geologic history of the last several millions (or even tens of millions) of years. The present karst landscape has been developing intermittently since the late Cretaceous Period (about 100 million years ago). Pollen of Cretaceous age is present in the sediment fill in a cave near Gombasek, Slovakia. Relics of pre-Pleistocene karst (i.e., more than about 2 million years old) are very distinct in the Slovak Karst, and many of them show evidence for sub-tropical and tropical climates forms. These include rounded hills that are relics of tropical karst later modified by Pleistocene periglacial weathering. This is a very unusual combination of climatic effects that is probably better documented in the Slovak Karst than anywhere else in the world. Finally CASK's particular suite of paleokarst features is very unusual in showing a combination of both tropical and glacial climates. The site thus meets criterion (i) for natural sites as an area which represents an outstanding example of on-going geological processes and is a significant geomorphic feature. The caves are well protected and the site meets the relevant conditions of integrity for this criterion.

Committee Decision

Bureau (July 1995): The Bureau recommended that the World Heritage Committee inscribe the nominated property on the basis of criterion (i), considering that the site is an outstanding example of on-going geological processes and a significant geomorphic feature. The karst formations and caves contain the geologic history of the last several millions of years with an unusual combination of climatic effects and paleokarst features. The Bureau noted: (1) that cultural values of prehistoric cultures in the caves have not been assessed, and (2) that strict control of the area is needed from surface activities such as agricultural pollution, deforestation and soil erosion.

Session (1995): The Committee inscribed the nominated property on the basis of criterion (i), considering that the site is an outstanding example of on-going geological processes and a significant geomorphic feature. The karst formations and 712 caves contain the geologic history of the last several millions of years with an unusual combination of climatic effects and paleokarst features. The Committee requested the Centre to write to the national authorities to recommend that control is needed over surface activities such as agricultural pollution, deforestation and soil

erosion that could effect the independent resources.

Bureau (June 1998): The Bureau noted that the Ravines of the Slovak Paradis and the Dobsinska Ice Cave are part of an extensive karst plateau with numerous deep ravines, waterfalls, surface karst phenomena and caves containing speleothems and ice. The natural values of the Ravines of the Slovak Paradis and the Dobsinska Ice Cave are considered to be of national and regional significance. The current nomination thus does not meet World Heritage criteria. The Bureau decided to refer the nomination back to the State Party and asked the Slovak authorities to consider incorporating the Dobsinska Ice Cave portion into the nearby site of the Caves of Aggtelek Karst and Slovak Karst, already recognised as a World Heritage site, shared by the Slovak Republic and Hungary.

Bureau (November 1998): The Bureau at its twenty-second session decided to refer the nomination back to the State Party and asked the Slovak authorities to consider incorporating the Dobsinska Ice Cave portion into the nearby site of the Caves of Aggtelek Karst and Slovak Karst, already recognized as a World Heritage site. The Bureau was informed that the State Party indicated that it did not consider the site belong to the same karst as the Aggtelek and Slovak Karst, but rather to the Spis-Gemer karst. The State Party suggested it as a possible addition to the cultural World Heritage site of "Spisky Castle with its surroundings". ICOMOS commented that the connection with this site was so marginal as to not be justified. The natural values of the Ravines of the Slovak Paradis and the Dobsinska Ice Cave are considered to be of national and regional significance. The current nomination thus does not meet natural World Heritage criteria. The Bureau recommended the Committee not to inscribe the site on the World Heritage List.

Session (1998): The Committee recalled that the Bureau at its twenty-second session decided to refer the nomination back to the State Party asking the Slovak authorities to consider incorporating the Dobšinská Ice Cave portion into the nearby World Heritage site of the Caves of Aggtelek Karst and Slovak Karst. The Committee was informed that the State Party indicated a number of options including as a possible addition to the cultural World Heritage site of "Spisky Castle with its surroundings". The Committee noted that the natural values of the Ravines of the Slovak Paradis and the Dobšinská Ice Cave are considered to be of national and regional significance. The current nomination thus

does not meet natural World Heritage criteria. The Committee did not inscribe the site on the World Heritage List.

Bureau (June 2000): The Bureau recommended to the Committee that Dobšinská Ice Cave be incorporated as part of the Caves of the Aggtelek Karst and Slovak Karst World Heritage site. Although this ice cave is a relatively small (6km²) and specialised feature, it does add variety to the existing site. It would not merit inscription on its own but its features relate to and complement the Caves of Aggtelek Karst and Slovak Karst. The Bureau encouraged both State Parties to regulate activities in the adjacent watershed which may affect the integrity of the Caves of the Aggtelek Karst and Slovak Karst World Heritage site.

Session (December 2000): The Committee approved the incorporation of the Dobšinská Ice Cave as part of the Caves of the Aggtelek Karst and Slovak Karst World Heritage site. Although this ice cave is a relatively small (6km²) and specialised feature, it does add variety to the existing site and its features relate to and complement the Caves of Aggtelek Karst and Slovak Karst.

- Statement of Significance adequately defines the outstanding universal value of the site
- No change required

Boundaries and Buffer Zone

- Status of boundaries of the site: adequate
- Buffer zone: adequate

Status of Authenticity/Integrity

- World Heritage site values have been maintained

3. Protection

Legislative and Administrative Arrangements

- Protective legislation is in place in Slovakia, but no details are given. Protective legislation in Hungary: 7/1984 OKTH Decree (establishment of the National Park); Act 1996/LIII on nature conservation (all caves are under ex lege protection); 11/1997 KTM Decree and 2/2001 KöM decree (successive enlargements of the Aggtelek National Park) Management Plan of Aggtelek National Park and Management Plan of the caves of Aggtelek Karst.
- The protection arrangements are considered highly effective in Hungary and sufficiently effective in Slovakia

4. Management

Use of site/property

- Visitor attraction, national park, scientific research, medical therapy, cultural activities (concerts) (Hungary); also research activity with some caves closed to the public (Slovakia)

Management /Administrative Body

- Steering group: Formally constituted in Hungary in 1985; legally constituted in Slovakia in 1970
- Site manager: in Slovakia with responsibilities in addition to another job; in Hungary the Aggtelek National Park Directorate acts as a managing and administrative body of the caves (with various other responsibilities: research, protection and interpretation of natural assets)
- Levels of public authority who are primarily involved with the management of the site: national & regional (Hungary); national only (Slovakia)
- The current management system is highly effective in Hungary and sufficiently effective in Slovakia

5. Management Plan

- Management plan is being implemented; Implementation commenced: in 1997 for both countries
- Considered adequate by both State Parties
- Responsibility for over-seeing the implementation of the management plan and monitoring its effectiveness: Ministry of Environment & Water (Hungary), Ministry of the Environment (Slovakia)

6. Financial Resources

Financial situation

- Budget sources: (Hungary) National Park budget; (Slovakia) Department of the Environment and any revenues from the site
- Bi-lateral: (Hungary) PHARE project, Environmental Protection Fund; (Slovakia) Japan International Cooperation Agency, Structural Fund of the European Union
- Sufficient

7. Staffing Levels

- Number of staff: Hungary- 60, Slovakia- 15

Rate of access to adequate professional staff across the following disciplines:

- (Hungary) Very good: interpretation, education; Good: conservation, management, visitor management; Average: promotion
- (Slovakia) Good: conservation, management, promotion, interpretation, education, visitor management

8. Sources of Expertise and Training in Conservation and Management Techniques

- Scientific institutions: professional environmental engineer for staff (Hungary)
- Training on site management: guide training, specialized seminars, particularly for spelological staff in both countries
- Needs: could use more biospelology expertise training

9. Visitor Management

- Visitor statistics: no statistics available for either country
- Trend: (Hungary) stagnate; (Slovakia) increasing
- Visitor facilities: both countries have visitor centres, information maps, restaurants or refreshment areas, trail information, souvenir shops, guided tours
- A tourism management plan is available for the site in both countries

10. Scientific Studies

- Studies related to the value of the site, risk assessment, monitoring exercises, archaeological surveys, visitor management
- In Hungary only - condition surveys
- In Slovakia only - risk assessment
- Studies used for management planning, budgeting and conservation
- In Slovakia, World Heritage status has led to more focus on speleological, geological and hydrological studies

11. Education, Information and Awareness Building

- An adequate number of signs referring to World Heritage site
- World Heritage Convention Emblem used on publications
- Adequate awareness of World Heritage among: visitors, local communities, local authorities in Hungary and in Slovakia

- Events: (Slovakia) exhibitions and education programmes
- Web site available: accessed through National Park in Hungary, Slovak Caves Administration in Slovakia
- Local participation: no steps have been taken at this time

Future actions:

- Hungary: Increase training programmes
- Slovakia: Increase promotional activities and create a separate World Heritage site website

12. Factors affecting the Property (State of Conservation)**Reactive monitoring reports**

- World Heritage Bureau sessions: 24th (2000); 26th (2002)
- World Heritage Committee sessions: 25th (2001)

Conservation interventions

- Extensive cave restoration in selected caves, regulations of visitors, infrastructure installation and maintenance
- Present state of conservation: good

Threats and Risks to site

- Agricultural pressures, rock stabilization problems of caves, (Hungary) illegal mining and archaeological activity visitor and tourism
- Specific issues: vandalism, poor farming and forestry practices (Slovakia)
- Emergency measures taken: continuous monitoring, guard services, periodic cave closures

13. Monitoring

- A Formal monitoring programme exists
- Measures taken: various condition surveys, (such as formation, flora and fauna, rock safety, artificial building, etc.), hydrological surveys, visitor control mechanisms

14. Conclusions and Recommended Actions

- Main benefits of WH status: Conservation is mentioned by both State Parties, and Economic benefits specifically by Hungary
- Strengths of management: better publicity, staff training, and improvements to the technical infrastructure are mentioned by both State Parties
- Weaknesses of management: (Hungary) Training is needed, especially retraining of guards; (Slovakia) road access needs to be improved, and more promotion of the site