AMENDMENT/PROPOSAL

Agenda item	Vjetrenica Cave, Ravno
Draft Decision	46 COM 8B.4
Submited by the Delegation of	Türkiye
Co-Author(s) (if any)	Kazakhstan, Belgium
Date of submission	24/07/2024

The World Heritage Committee,

1. Having examined Documents WHC/24/46.COM/8B and WHC/24/46.COM/INF.8B2,

~~2. Refers the nomination of Vjetrenica Cave, Ravno, Bosnia and Herzegovina, back to the State Party, taking note of the potential of the nominated property to meet criterion (x), in order to allow the State Party to:~~

~~a) Complete, clearly map out and adopt the zonation of the Protected landscape Vjetrenica-Popovo polje, and demonstrate in additional information that sufficient~~ Nominations to the World Heritage List WHC/24/46.COM/8B, p.14 ~~water quality and water inflow into the Vjetrenica cave system will be guaranteed in the long term,~~

~~b) Increase funding and staffing for the management of the nominated property, and provide additional information to demonstrate that sufficient funding and staffing is provided for the implementation of the management plan and for the protection and management of the nominated property in the long term;~~

~~3. Recommends the State Party to:~~

~~a) Explore to what extent it could be possible to envisage in future a potential serial transnational extension to enable a complete representation of the Dinaric Karst, including in relation to criteria (viii) and (x),~~

~~b) Provide in the additional information maps detailing the zonation of Protected landscape Vjetrenica-Popovo polje.~~

2. Inscribes the Vjetrenica Cave, Ravno, Bosnia and Herzegovina, on the World Heritage List on the basis of criteria (x),

3. Welcomes full acceptance of IUCN recommendations by the State Party, to ensure additional resources to further enhance capacities of the Public Institution "Vjetrenica", as highlighted by IUCN.

4. Welcomes confirmation of the State Party that sufficient water quality and water inflow into the Vjetrenica cave system is guaranteed in the long term,

5. Adopts the following Statement of Outstanding Universal Value:

Brief synthesis

Vjetrenica is one of the longest caves in Bosnia and Herzegovina. Topographic mapping is still in progress, meaning that its length exceeds the published 5699 m (Lučić & Sket, 2003). According to recent exploration and mapping, its length is 7.323,9 m meters (Ozimec et al., 2021.). In the past, the cave drew attention for its strong movements of air or 'wind' that blows from the cave in warm months and into the cave in cold months. The cave is located in the south Dinaric karst, between the Popovo polje plains (East Herzegovina) and Dubrovnik (Adriatic Sea, Croatia), as part of the Trebišnjica river system, the longest losing stream in Europe. The region is characterised by strong tectonic and geodynamic activity, high purity of carbonate (99.98%) and 2,000 millimetres of annual rainfall. For the first time in the world, biospeleological research of Vjetrenica established a cave hygropetric habitat, with a thin layer of water covering rocks.

In Vjetrenica, 231 taxa were detected in Vjetrenica: two types of bacteria, 14 fungi, 35 protista and 180 animals, with 96 cave-dwelling taxa. It is the very particular environmental conditions of the cave that provide a habitat for rare and threatened fauna. The cave also bears historic importance. Examples of leopards from Vjetrenica are known globally as best preserved and the most complete skeletons of its kind, with greatest importance in palaeontology. The remains are a testament to period spanning from 29000 to 37000 years and corroborate the fact of their existence in earlier Pleistocene. Vjetrenica is both a natural and archaeological site.

The cave system of Vjetrenica and its surroundings is presented as a well-conserved manifestation of karst topography that boasts a wide range of natural features. Most passages in Vjetrenica Cave are wide and high along their entire length across four levels: Main Level, Upper Level, Lower Level and Vertical Level. The Main Level is semi-horizontal and the longest passage in the cave, running from the cave entrance almost to the furthermost point of the cave while the Upper Level consists of five passages which are up to 120 m above the Main Level. The Lower Level is approximately 10 to 30 m below Main Level. The Vertical Level, is reported to consist of deep pits that lead from the surface to the cave, and allow strong winds up to 8.5m per second in the cave system. The cave also harbours several smaller streams and water pools, the largest of which is the Great Lake (Veliko jezero), some 180 m in length. Several sizeable chambers are almost entirely filled with rock blocks, slabs, in the form of piles tens of metres high.

Vjetrenica Cave not only holds one of the richest, if not the richest cave fauna in the world, it also includes the richest subterranean amphipod community worldwide. Moreover, the nominated property has been recognised as one of the world's most important biodiversity hotspots for cave-dwelling fauna. The nominated property also harbours gastropods with a high variability in size and ecology out of which all but one are endemic to either Popovo Polje or the southeastern Dinaric Karst.

Vjetrenica Cave is also considered an exceptional example of single-genus diversity. For instance, there are nine species of the subterranean amphipod genus Niphargus found at the nominated property.

Criterion (x): Natural Habitat for in situ-conservation of biological diversity

The nominated property stands out with its remarkable cave biodiversity and endemicity. Vjetrenica Cave is considered one of world's most important biodiversity hotspots for cave-dwelling fauna. There are 85 troglobiotic taxa and 56 stygobites, which is unparalleled globally. A total of 231 taxa of subterranean biodiversity has been recorded, including 14 fungi and 35 protist species. Vjetrenica Cave also stands out as an exceptional example of single-genus diversity – the nine species of the subterranean amphipod genus Niphargus, which may represent the highest subterranean single-genus diversity of any location in the world.

The exceptional endemicity of the nominated property is illustrated by its stygofauna, of which 78% are only found in the Dinaric region. The only subterranean tubeworm in the world (Marifugia cavatica) dwells in Vjetrenica Cave. In addition, several of the species found in Vjetrenica Cave are tertiary and pre-tertiary relict species, which can be considered living fossils, whose closest living relatives went extinct a long time ago. The nominated property also hosts 21 plant species that are endemic to the Balkans.

Integrity:

The area of the Vjetrenica cave and its surroundings adequately represents both natural and cultural, terrestrial and aquatic features, as well as processes of importance for the long-term conservation of the rich biodiversity and exceptional natural beauty. Vjetrenica Cave is the most important and unique element of biodiversity of this part of the region and beyond. The area around the Vjetrenica cave also protects all major terrestrial vegetation species and important species habitats. The nomination of the Vjetrenica cave will include all the features that make up the outstanding universal value of the property. In addition, to an internationally renowned site of Vjetrenica Cave, the nominated area includes lesser-known and as yet unexplored sites. We are thus in a position to permanently maintain the integrity of the designated property with the help of existing protective measures and safeguard provisions.

Vjetrenica Cave is a complex underground system that has not yet been fully explored, offering exceptional opportunities for further exploration of the karst underground of the

Dinarides, primarily along the lines of physical speleology, geology, hydrology, ecology, biospeleology, paleontology, archeology; but also underground climatology, tectonics and more.

Research brings us new insights about caves themselves, hydrogeological and ecological relations, the present living world extremely rich endemic species and many other aspects important for this area, but also for the community as a whole.

The main threats to the integrity of the property include a wide range of anthropogenic influences (physical devastation, changes in the habitat and ecology of the cave, waste accumulation, collection and disturbance of cave fauna, uncoordinated urban development, population growth in the area above and around caves, old infrastructure, illegal interventions at springs and tourist pressure). However, all these threats are being mitigated through the management plan as well as through existing spatial planning documents and these being in preparation.

Protection and management requirements:

The nominated site enjoy the highest degree of protection in accordance with the national legislation in place, and it is guided by the management of the nominated property is guided by a management plan that was adopted by the government of the Herzegovina Neretva Canton and the Municipality of Ravno in 2021 that is valid until 2031. The management plan has been harmonized with the Law designating the Protected landscape Vjetrenica-Popovo polje and with the Spatial Plan of the Municipality of Ravno.

6. Recommends that the States Party gives consideration to the following:

a) Further improving the consistency of mapping and zoning of the Protected landscape Vjetrenica-Popovo polje, especially within the new Spatial Plan of the Municipality of Ravno that is being developed

b) Ensure that the hydrology management, including water quality and water inflow in the property, is sufficiently monitored by responsible institutions.

7. Requests the State Party to submit to the World Heritage Centre by 1 December 2025 a report on the implementation of the above-mentioned recommendations for review by IUCN.