

Additional information

Justification for the criteria:

2. Eugen Draganović
Ministry of Environmental and Nature Protection Nature Protection Directorate
Republike Austrije 14 HR - 10000 Zagreb Republic of Croatia
tel.. +385 1 4866 110
fax. +385 1 4866 100
e-mail: eugen.draganovic@mzoip.hr

3. Jasminka Radović
State Institute for Nature Protection Trg Mažuranića 5
HR - 10000 Zagreb Republic of Croatia
tel. +385 1 5502 931
fax. +385 1 5502 902
e-mail: jasminka.radovic@dzzp.hr

4. Jelena Kralj
Institute of Ornithology
Croatian Academy of Sciences and Arts Gundulićeva 24
HR-10000 Zagreb Republic of Croatia
tel. +385 1 4825 401
fax +385 1 4825 392
e-mail: zjo@hazu.hr

Ecosystem services:**Social and cultural values:**

Vransko Lake area has a long history of being inhabited by human populations, due to its significance as a freshwater resource, but also due to fact that it has been often at the borderline of cultural and political happenings. Some archeological remains include the preromanic church at Crkvine locality which is currently being researched, peninsula Babin skoj with remains of Neolithic graves, Liburnian fortifications, refuge from the Late Antique period, Venetian sentry box. Romans had also left a trace of their technical skills, in the form of a 30 km long aquaduct from Vrana springs all the way to Zadar. Remains of an old Croatian village have been discovered next to the lake shore, obviously abandoned after the invasion of Turks at the beginning of the 16th century. The “han” built by a local admiral of the Turkish army presents the most western monument of civil Otoman architecture, and stands today next to the Vrana fortress, which was the most important Templar fort from 11th century.

Throughout history the site has been used mainly for agriculture and fishing, and it was because of enlarging of the agricultural land that the Vrana field hydromelioration system was built in the 18th century. During 20th century lake was considered for building accumulation for water supply, but these plans have been abandoned due to increasing salinization of the lake and the growing awareness of the need for lake protection as a nature reserve.

Today the lake's springs are used directly for water supply only in the drought periods but many springs and partly the underground karst aquifer upstream of the lake are used for water supply on regular scale. Agriculture is the main economic activity in the lake area, slowly being followed by tourism. The common path of agriculture, tourism and nature protection is seen in the implementation of environmentally friendly agricultural techniques, and creation of the Nature Park brand for products grown in the area. Commercial fishing is forbidden, so fishing has become a popular mode of recreation, followed by cycling, boating, walking.

Current scientific research and facilities:

The natural values of the Vransko Lake site have been well documented: flora and fauna inventoried, cadaster of cultural and historical heritage available, map of habitats on the scale 1:5,000 ready. Current research is focused mainly on hydrology and geohydrology of the lake and its catchment, as well as on influence of hydrological cycles on ecological processes and trophic state of the lake. Some research on the impact of human activities (agriculture) on water and sediment of the lake is also being conducted. Annual monitoring activities include monitoring of water quality, ornithofauna (wintering and breeding), bird ringing camp (monitoring of migratory ornithofauna), macrophytes (including the algae *Characeae*), several endangered habitats (Mediterranean wet grasslands and meadows listed in NATURA 2000) and bat fauna. Additional three-annual monitorings include fish, amphibians and reptiles, dragonflies, phytoplankton, zooplankton and benthos of the lake. Every autumn a comprehensive bird ringing camp is organized in order to monitor the role of Vransko Lake in bird migrations. The Ornithological Station with an observation hide is built in the Ornithological Reserve exactly for this purpose.

Current recreation and tourism:

The lake is used mostly for recreational fishing, with the fishermen being the most abundant group of visitors (average 2,200 visitors/year). The area is also popular for cycling (individual cyclists from April to October and a cycling marathon once a year), and there is occasional interest in kayaking and sailing. Tourism activities are not intensive, and mostly in the form of sightseeing and birdwatching (which is the only tourist activity taking place in the Reserve). Larger groups of visitors are accepted at visitors' centre away from the Ornithological Reserve. Total average number of visitors is about 9,000 visitors/year.

Current land use within the site:

The Vransko jezero Nature Park area is not inhabited. About 5,000 inhabitants live in villages on the site borders, and the villagers of Vrana are most oriented towards the area in their livelihood. Small part of the village inside the Ramsar site borders is planned in the spatial documentation as an eco village, in reality designed more as an apartment area. There is the camping site (capacity for cca 200 person) inside the site borders, and facilities for recreational riding. About 10-15 tourist agencies use the area for excursions. Recreational fishing and cycling are most frequent individual tourist activities. The Nature Park's management runs two information centers for educational purposes.

Current land use in the Vransko jezero Nature Park is visiting primarily and agriculture and cattle grazing. A cattle grazing is sporadic and extensive, helpful in conservation of the Mediterranean wet grasslands and meadows. Agriculture consists of 70% traditionally cultivated olive groves and 30% vegetables, grown on small plots in mosaic, but with intensive use of pesticides and fertilizers.

The water is used mostly for recreational fishing, and small amounts are used for irrigation of the arable land. In summer period the spring Begovača is used for additional water supply for the nearby villages.

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