

Basic elements for the ecosystem health of Lake Vrana Nature Park

Zoran Šikić

Department of Ecology, Agronomy and Aquaculture, University of Zadar, Croatia

zsikic@unizd.hr, 00358 98 330 555

Lake Vrana Nature Park has a great biodiversity value. There are a large number of different Mediterranean karst, wetland and water habitats and typical cultivated habitats.

Unlike previous scientific positions, it is commonly accepted that wetlands should be preserved because they contribute significantly to the ecosystem health.

Lake Vrana has lost its cryptodepressial character by Prosika Channel penetrating in the 18th century and merging with the Adriatic Sea. The wetland area of Lake Vrana was brought to the edge of survival, and with it the living world that depended on it, but the malarial problem was solved then, which until then had seriously threatened the health of the surrounding population.

The research methods used for this abstract include soil sampling and soil sample analysis, water sampling and water sample analysis, sea and lake water level measurement, and analytical data processing.

Measured data show that Lake Vrana is not burdened with the organic matter from the soil of the Vrana field, nor does it have any significant nitrogen leaching, nor are heavy metals present, but the copper concentration in the soil around Lake Vrana has a very abnormal distribution.

Due to the low water level, the water is rapid and very hot, and, in the warmer water, it significantly reduces oxygen solubility, resulting in massive flooding of organisms in the lake and large disturbances throughout the ecosystem.

The pressure on the ecosystem health of Lake Vrana Nature Park is largely anthropogenic, and in part related to global climate change.

Key words: ecosystem health, anthropogenic, climate change