

Restoration of Pannonic sodic wetlands in Hungary

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Pannonian salt steppes and salt marshes occur only in a few countries of the European Union, mainly in the Pannonian bio-geographical region. The largest surface area and the centre of distribution of this habitat type are in Hungary, 99% of the Natura 2000 habitat type 1530 occurs in Hungary. Sodic pans surrounded by salt steppes and their associated salt-tolerant herbaceous communities of the Carpathian basin are the western representatives of the continental alkaline vegetation in the Pontic region. Sodic pans with open water surface differ significantly from the real lakes because of their special nutrient cycle which is of utmost importance for the conservation of their characteristic and valuable flora and fauna.

Böddi-szék is a sodic pan with open water surface, the extent of its area is significant with 18% of the open water surface sodic pan subtype of 1530 habitat type in Hungary.

The sodic pan and its catchment area changed to a significant extent due to anthropogenic effects which lead to disturbance in the special nutrient cycle of the sodic lake. The construction of a main drainage canal and its drainage ditches had caused significant damage on the sodic lake, as the canal literally halved the lakebed. Eutrophication and spreading of the marsh vegetation is a great threat. The canal and the spreading marsh vegetation cause serious habitat fragmentation. The negative effect of the eutrophication is seriously strengthened by the lack of sufficient number of grazing animals in the area.

A LIFE-Nature project was granted in year 2013 (LIFE12NAT/HU/001188) with the aim to restore the original water dynamics and natural habitats.

The main element of the project is the re-translocation of the bisecting canal to help the natural water cycles be operational again. The sustainable model of grazing will be set up and will be operational, converting previously neglected biomass to bioproduct. The irrigation provides possibilities of secured plant production on the arable fields adjacent to the new track of canal. Scientific-based monitoring of the project's efforts and socio-economic impacts is the background of the management planning which should be capable of continuous and dynamic adjustment to accommodate uncertainty, take advantage of new, monitoring based knowledge, and cope with rapid shifts in climatic, ecological, and socio-economic conditions.