

Nature trail "Oborou Hvězda", information board No.7 - Natura 2000 and wetland

([Natura2000 a mokřad](#) - informace v českém jazyce)

Wetlands in the stream's wold

Wetlands are among the most significant ecosystems, not only in Bohemia, but worldwide. They are mostly waterlogged areas with high levels of groundwater, or they form a transition between the land and the water. Wetlands take up 6 % of the Earth's surface, but they are capable of producing up to 8-times more green mass than a wheat field, holding back twice as much water compared to artificial reservoirs.



The following can be considered as a wetland ecosystem: pools, swamps, peat moors, fens, waterlogged meadows, lake rims, and flood-plain woods. In the past, all these ecosystems regularly formed a part of the countryside. However, as the human settlements extended and agriculture spread, wetlands became rather burdensome for men, as they offered no benefits. Wetlands were drained and turned into fields, settlements, or systems of ponds.

The significance of a wetland can be assessed from several different points of view:

Regarding ecology and nature protection, there are numerous rare and protected kinds of plants and animals. A majority of these species is very closely tied to the wetland system and any violation or damage of a wetland means extinction of these species. The protection of wetland species originally started as a reaction to the ever decreasing surface areas of the wetlands, therefore also of areas of their natural habitat.

Regarding water economy, wetlands represent important water reservoirs and protection from floods. Water is gathered in these areas in the periods of rains, and it then slowly returns to the countryside in the dry parts of the year, in the form of springs, streams and rivers. This creates important natural balance in the countryside.

The cleaning capability of wetlands is also very important. Sedimentary water coming to the wetland with rain slows down, soil particles settle down, and water becomes clean. However, the wetlands are also capable of cleaning water from chemical point of view. Water soiled by washings from fields and by waste water usually contains high amounts of nitrogen and phosphorus, which causes the so-called eutrophication of water (propagation of weed and cyanophytes). And the wetlands are capable of partial removal of these substances from water, having use for them.

Wetlands occupy a significant place in residential systems as well. We mostly know them as reed growth around ponds, but there are also waterlogged meadows or stream banks. Some people only see sludge, smell and mosquitoes in the wetlands. However, the wetlands play a significant role in the residential systems. Due to their ability to retain sufficient water reserves, they can release this water in the air during the dry periods of the year, thus moistening the neighbourhood. In this way, the wetlands positively influence the dust levels, the occurrence of allergens, also increasing the air humidity by the vaporization of retained water. Further on, the wetlands produce substances strengthening immunity and substances against stress. Their air-conditioning effect is also very important. The wetlands can use the sunshine to evaporate water, thus regulating the surrounding temperature, preventing the overheating of the countryside.

There is a locality No. CZ 0113001 in the local wetland, significant on a European level, whereas this system is generally known under the name NATURA 2000. The territory was proposed to this type of protection due to the occurrence of protected and endangered species of a land snail named narrow-mouthed whorl snail. Amphibians like the common newt, common toad, or common frog

Wetland (river wold) ecosystem services – source: ENKI o.p.s. Třeboň

- Water retention during floods (reducing the risk of floods)
- Retention of nutrients in the biomass and in the soil (improved quality of water)
- Formation of the biomass and accumulation of organic matters in the soil
- Support for the food chain and biodiversity (natural diversity)
- Oxygen production
- Temperature balancing – air-conditioning effect due to water evaporation
- Recreation, aesthetic function, releasing substances to increase immunity and substances against stress

The estimated values of services provided for by 1 ha of wetlands (river wold) per year

Flood-prevention services CZK 25,000
Production of aerial biomass CZK 20,000
Biodiversity CZK 284,000
Oxygen production CZK 1,750,000
Air-conditioning services CZK 14,000,000
Support for the short cycle of water CZK 14,250,000
The overall value of services provided for by 1 ha of wetlands amounts to CZK 30,364,000 per year.

Nature trail "Oborou Hvězda":

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8. [Oborou Hvězda - mokřad a mokřad - informace v českém jazyce](#)