

Additional information

Physical features of the site

The Borsodi Mezőség is basically a flat, slightly aslope area on the alluvium of the Sajó and Hernád rivers. The floodplain was formed by streams originating from the Bükk Mts. (Ostorospatak, Tardi-ér, Csincse-patak, Hór-patak, Kácsi-víz) in the Pliocene and Pleistocene. In the Quaternary the surface was modified by the small streams. The depth of the alluvial sediments at Tiszababolna village reaches 240 metres. Nowadays on the surface only Holocenic deposits can be found, mostly sand and loessy mud. The section of the depression along the Tisza River (called: Borsod Floodplain) ensures the active connection with the neighbouring landscape units. The completely flat plain is interrupted by small mesomorphological formations, such as abandoned river beds and sandy hills. The kurgans (mounds) are typical morphological features of the territory, but their origin is antropogenous.

The climate is semi-arid, semi-humid forest steppe, with average annual precipitation of 560-590 mm, the maximum of rainfall is concentrated to the end of the winter and early summer period. The mean annual temperature is about 9,8-9,9 °C, lower than the neighbouring landscape units of the Great Hungarian Plain (e.g. Hortobágy) due to the cooler spring period and the cold winter period.

The last section of the river Tisza was regulated in the Borsodi Mezőség between 1936-39. The effect of this work was negative from the viewpoint of the extent of the wetland habitats, especially which are closer to the line of the river Tisza. The water supply of the streams from the mountains is still continuous and noteworthy. The second negative effect was caused by the canalization program when the main canals were built (Tiszavalki-main canal, Sulymos main canal, etc.). The last – and final – pressure which led to drainage of the ‘puszta’ took place when the Kisköre Reservoir (“Tisza Lake”) was built (1980’). In the framework of this development the Csincse canal was built up to collect the natural streams originating from the mountains and to conduct safely the water from the area in addition “reducing the amount of places overgrown by wetlands”.

Physical features of the catchment area:

As a result of the regulation works during the last century the natural catchment area of the marshland and steppe units of the Heves-Borsodi-Plain site were fragmented and the natural watercourses flooding the marshes were cut off. The various agricultural projects implemented in the 1950-ies seriously decreased the local catchment areas to a further reduction of the already limited marsh area.

The water supply from the site is originated from the karstic Bükk Mountains. Therefore the water quantity and quality is naturally accessible. The higher protection level of the mountains can serve the wetland protection goals of the lowland territories.

Noteworthy fauna:

The site also plays an important role in bird migration. The number of Common Cranes has increased significantly in the last 5 years (5000 migrant plus 2-300 staying individuals in summer period). In the 80’-ies very few and casual nesting of the Greylag Goose was known.

After the first phase of the water restoration the nesting population grew to 500 pairs which increases to more than 5.000 individuals in late summer. In autumn huge flocks of White-fronted Goose and Bean Goose visit the agricultural lands. Some Eastern distributed globally threatened birds have considerable strong nesting population on the site (national and EU importance), such as Great Bustard, Saker, Imperial Eagle, Marsh Harrier, Red-footed Falcon, Roller.

Noteworthy flora

The flora and vegetation is characteristic and similar in many ways with the chain of lowland territories (“puszta”) along the River Tisza. The flora is richer where the mozaic-complexes of the dry habitats and wetlands occur together. On the loessy ridges and old anthropogenous formations (such as kurgans, borderlands between municipalities, dykes) rich steppe flora is in blossom (*Phlomis tuberosa*, *Inula germanica*, *Adonis vernalis*, *Salvia* spp.). The flora of the alkalic parts is not so affluent, very specialized salt-tolerant species grow which have mostly eastern distribution (Eurasian, Pontic, Pontic-Pannonian, Eastern-Mediterranean) pattern, such as *Beckmannia eruciformis*, *Pholurus pannonicus*, *Plantago schwarzenbergiana* (endemic!), *Cirsium brachycephalum* (endemic, on the Annex III. of HD!), *Artemisia santonicum*, *Limonium gmelini* subsp. *hungaricum* (endemic!), *Aster tripolium* subsp. *pannonicum* (endemic!), *Ranunculus polyphyllus* (endemic).

The most vulnerable habitats are the non-alkalic hayfields along the floodplain of the River Tisza, which were mostly degraded by the water regulation, intensive afforestation and the infection by the alien species. The remnant and characteristic elements of this habitat are the following (all protected by the law): *Gentiana pneumonanthe*, *Orchis laxiflora* subsp. *elegans*, *O. morio*, *Iris spuria*, *Peucedanum officinale*, *Clematis integrifolia*.

The pondweed communities are in expansion in the region due to the water restoration with such remarkable and threatened species like *Nymphaea alba*, *Nuphar luteum*, *Nymphoides peltata*, *Stratiotes elata*, *Utricularia australis*. Originally they occur on ox-bow lakes but through the wide canals they have started to recolonize the “puszta” part also.