

Sarolta Ebesfalvy:

Land use on the Bereg Plain

The Upper-Tisza region is situated to the north of the confluence of the Tisza and Bodrog rivers. It can be divided into several areas: the Szatmár Plain, the Bereg Plain, Rétköz and Bodrogtörzs. The area borders the Ukraine and Romania to the north and east respectively, and the Nyírség region of Hungary to the south and west.

The surface of this area was mainly formed by the flow of the two rivers, which was the primary force in soil evolution processes, as well. The water system here is still living, forming and being formed. The junctions of many tributaries are located in this area, as well as many small water courses, both natural and artificial.

The area lying North of the Tisza-Batár boundary is the Bereg Plain. This is a transitional area between the Great Plains and the foot-hills of the Carpathians. The most elevated landscape elements here are the island-like small ranges, belonging to the foot-hills of the Carpathians: the Great Mountain in Tarpa and the Tiptop Mountain in Barabás.

On maps from the 17th and 18th centuries this area was almost fully covered by forests. Unforested areas could only be found next to villages: this was where the arable lands were also located. This natural situation is also depicted by the seals, or coats-of-arms of the Bereg villages: most of them contain a living tree and a fish (Csiszár 1987).

With regard to nature and its management the most important forests were oak. These gave raw materials for building and the basis for pig-rearing. Willow and poplar woodlands, unimportant from the point of view of forest management, were the usual vegetation next to the River Tisza. On the raised peninsulas, created by the river meanders, the so called 'szegs', (such as Jándiszeg, Bagiszeg, etc.), there were orchards and hayfields. (In local language use 'szeg' means a shrubby meadow interspersed with orchards). This land flooded each year. Thanks to the regular deluges the local people had enough wood, fish and game, and there were rich yields of hay and fruits.

The major river regulation and embankment works had a major impact on the whole of the Great Plains by changing the hydrological conditions of hundreds of years. The regularly flooding rivers were forced into dams, and as a result of these works, the water course of the River Tisza became more extreme. Dikes were built for flood protection, so that in consequence the once united floodplain of the river became divided into floodplains and flood protected areas.

Owing to the disappearance of the floods the Bereg Plain itself became drier, and the space available for the water dependent biocoenoses reduced. A rapid drying out process started on the areas protected by water defences, and the water plains isolated here became increasingly arid. Because of the reduction in groundwater levels the biocoenoses of the former marshlands and swamps could take shelter only on the lowest areas of this land. By the 19th century the original woody-swampy land had changed, very much as a result of human activity. Through the clearing of the unbroken tracts of forest and the partial drainage of the morassic-swampy areas the conditions allowing for extensive animal breeding and tillage, meadow and hay-field management were established (Rakonczay 1988).

In recent years, however, with weather trends becoming more and more extreme, the effect of the lacking water has become more expressed. Because the appropriate natural features are absent or denuded, the artificial inland-water draining channels drain away any precipitation even in those periods when holding this water would be essential. At the same time, evaluating quantities of water is not at all clear-cut. The amount optimal for forests and hay-meadows is higher than the optimal for arable land. Selecting the appropriate cultivation systems and methods of utilization adapted to the given conditions of the area would not only ameliorate the deficit of available water, but could also contribute to the preservation of natural values and the typical Bereg landscape. We need to understand that floodplain management is the appropriate form of land utilization – requiring less financial input but more careful attention.

On the Bereg Plain the basic prerequisite to applying traditional management methods is the improvement of the water supply of the area by retaining incoming waters and by water drainage regulated in the periods of flooding. The local people know these conditions because they experience the effects of the prevailing weather conditions each year: on the Bereg Plain the main problem is not the lack or excess of water but the inappropriate distribution of the water available in this area. Therefore, waters must be managed. The water drained to the area and constantly remaining in the hollows, depressions or 'stream beds' compensates for deficits in soil moisture during heavy droughts, and during dry periods evaporation of these water spots decrease the danger of atmospheric drought: trees in the forest, grass of the hayfields and arable crop will still be able to grow.

The soil of the Bereg Plain is floodplain soil which needs regular water supplement, possibly water cover. After the flood in 2001 the submerged arable lands provided outstanding average yields.