



## **The effect of aridity on the soil–parent material–groundwater system in the Danube–Tisza Interfluve**

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It is generally believed that the effects of aridity in Hungary will predominate mostly in the Danube–Tisza Interfluve. In some opinions the area even will suffer from desertification soon. The question is that prognosis could turn to be real within a foreseeable time and what kind of effects can cause this?

The Danube–Tisza Interfluve situated in the Great Hungarian Plain, between the River Danube as the western border and the River Tisza as the eastern border. The area can be divided in three characteristic parts from west to east: the Danube Valley, the Danube–Tisza Interfluve and the Tisza Valley. In aridity and drought points of view the Interfluve territory building up dominantly from eolian sediments as wind blown sand and loess is important. This area is one of the most vulnerable and sensitive territory in Hungary.

Based on the analysis of the morphology, the relief, the hydrogeology, the geological buildup and the changes of the groundwater level in space and time in connection with climate and landuse, it was established that, reference marks to aridity appear only where climate changes meet inadequate landuse and water management. At the same time, in those areas where the landuse changed, for example a territory taken out of cultivation for natural protection, the process is the opposite; in this case the former wind blown sand „desert” became grassland.