research, the sewage network had not been yet constructed in Mikepércs, thus the inhabitants collected the sewage in septic tanks. In Mikepércs the tanks usually had not adequate insulation and therefore the majority of the sewage (more than 90% according to our estimations) was emitted into the soil. As there are sandy soils around the settlement the sewage can filter into the soil and reach easily the groundwater level at depth of about 1.5-3 m below ground surface. According to our preliminary expectation, we have detected significant pollution in most of the groundwater wells in Mikepércs, especially concerning orthophosphate, nitrate and ammonium pollutants, which concentrations were much over the hygienic limit value. Besides the watering of animals, sometimes people drink groundwater so we can say that consuming of groundwater can cause both human and animal health risk.

Measure of heavy metal load in the floodplain of the river Tisza

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The quality of the River Tisza is significantly influenced by the industrial activity of Ukraine and Romania. The main problem is the heavy metal pollution which can be in dissolved form in the water or attached to colloidal particles in the sediments. In this paper an investigation of soil samples taken from the floodplain of the river was carried out. Surface samples were collected and profiles were created. As, Cd, Co, Cu, Ni, Pb and Zn concentrations were determined. The results show significant and continuous heavy metal load. ANOVA test was carried out and the metal concentration in the upper layer of the active floodplain is proved to be considerably higher than in the reclaimed side. Regarding copper and zinc, in addition to the total metal content, their percentage available for plants (Cu and Zn percentages measured in the Lakanen-Erviö solution) is also more in the active floodplain than in the reclaimed side (copper: 27%, zinc: 47%). Discriminance analysis can identify the location of the soil samples (correlate to the levee) with 92% accuracy. Soil profile shows increased heavy metal loads in the top layer of the soil and proved that the accident in 2000 was not the only pollution occurrence. Based on the results we came to the conclusion that the pollution comes constantly with the sediments from the over arm of the River Tisza and its tributaries.

The role of the time factor in the hydrothermal metallogenesis related to the Neogene volcanism in the Carpathian-Pannonian Region

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Sudbuction-related terrestrial igneous/volcanic environments provide one of the most favorable conditions for hydrothermal ore genesis as recorded by world-class volcanic-hosted