

**POSZTER SZEKCIÓ / POSTER SESSION****Data on the landscape history of the Mártély Landscape Protection Area**

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River regulation has created a distinctively Hungarian landscape type in the floodplain. To preserve this, the Mártély Landscape Protection Area was created in 1971 as an open-air museum of Tisza regulation. The river regulation, which radically changed the earlier natural conditions, was completed by the last decade of the 19th century with the "development" of the Mártély diversion cut. The changes in land use over the last 130 years had a major impact on the natural habitats of the floodplain. These shifts (collectivisation of agriculture, the proliferation of short rotation coppice plantations, the decline of grazing livestock, the abandonment of hand-worked floodplain orchards, the disappearance of small-tool fishing) have resulted in a loss of structural diversity in the habitats along the Tisza valley, which were not compensated by the newly implemented protection measures itself. Understanding the ecological context of past processes is essential for planning future conservation management. The changes are relatively well traced on the basis of available maps and aerial photographs. In addition, a LIDAR image of the area was taken in 2015. Its high data density allows us to carry out micro relief analysis at a resolution that is relevant for planning of conservation management and evaluation of results:

- in some cases, traces of land use several decades earlier can be clearly identified, often in places where aerial photographs do not provide this information;
- the spatial structure of invasive, non-native woody vegetation infesting the shrub and lower canopy can be identified and proper management can be planned;
- the hydrodynamics of floods impacting the floodplain and their spatial relationships can be interpreted.

My poster shows landscape history features of the southern part of the site, the Barci meadow, identified on the basis of the sources listed above.

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**Ceramics-Based Catalyst for Treating Exhaust Gases of SI Engine**

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A quick overview of the increasing pollutants worldwide shows a parallel movement toward strict legalization to limit contamination of air before it gets out of hand, however, in this paper, we are discussing a source of emissions that is yet to receive its' deserved attention rendered in non-road mobile machinery. Our proposal to solve