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Factors influencing hydrology of a riparian woody pasture in western Hungary

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Climate change induced droughts are a major threat to riparian ecosystems. Water scarcity can degrade such types of ecosystems but with reasonable water supply these valuable wetland ecosystems can be preserved or those that have deteriorated can be restored.

In the frame of this research we evaluated the hydrological reconstruction works of the Doroszló meadows habitat. Groundwater monitoring wells were installed at 4 selected locations in the area. Water table values and surface soil moisture were monitored in parallel. Hydrological parameters were recorded manually on a weekly basis. Data for the period from April 2019 to October 2021 were processed using statistical methods such as “treatment-control space-time deviations” and “double mass curve”.

As a result we found that water supply interventions had a detectable effect on the groundwater level and soil moisture of the area, but some modifying factors had also influenced the hydrology of micro locations. Therefore taking into account local effects is very important in case of the evaluation of a water supply project.

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