

Measurement, modelling and analysis of hydrological and hydrogeological processes and trends in a marsh area

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Abstract The marshy area of Ljubljana Moor, extending from the southern part of Ljubljana city to Krim-Mokrc karstic mountains, is a large plain area with a mosaic of meadows, fields, ditches and copses of alders spread out over 160 km², originating some two million years ago through the sinking of an extensive area of the Ljubljana basin. The sedimentation basin of Ljubljana Moor is filled in the central part with lacustrine and marshy sediments and on the borders of the basin are the gravel fans. It is an area of different interests and the water, surface and groundwater, have a crucial role in specific land use. It is an important drinking water resource, it is an agricultural area, an area of Natura 2000 and Natural Park area with high biodiversity and an area for urban development. Established groundwater level measurements and surface water level and discharge measurements are important data for analysing trends of hydrological and hydrogeological characteristics of the area in input for modelling of surface and groundwater flow and their interactions at flood events and during drought.

Key words surface water; rivers; groundwater; flooding; drinking water source