



Management of groundwater resource using mathematical modelling, case study river Iška fan (Slovenia)

Branka Bracic Zeleznik (1), Mitja Janza (2), Barbara Cencur Curk (3), Jerca Praprotnik Kastelic (3), Gregor Robic (4), and Daniel Kozelj (4)

(1) Public Water Supply Company JP VODOVOD-KANALIZACIJA d.o.o. Ljubljana, Research Department, Ljubljana, Slovenia (branka.bracic.zeleznik@vo-ka.si), (2) Geological Survey of Slovenia, (3) University of Ljubljana, Faculty of Natural Sciences and Engineering, (4) University of Ljubljana, Faculty of Civil and Geodetic Engineering

The river Iška fan is an important drinking water source. Since 80's the water field Brest is in operation. For more than 20 years there was no problem with quantity of groundwater, so the abstraction was mainly from shallow wells. But in the last ten years there are more and more problems with groundwater availability; especially the shallow wells have been very often dry.

The sensitivity of the Iška fan aquifers is evident from groundwater level fluctuation analysis. The groundwater quantity is influenced so by human activities as by climate changes. Within the CAMARO-D project different scenarios will be studied, such as scenarios of land use changes in the recharge area of Iška river and scenarios of different pumping regimes of groundwater. The scenarios will be simulated with integrated river-aquifer model and results will be used to set up measures and management plan for sustainable groundwater use of these important water resources.