

STUDY OF THE PROCESSES OF POLLUTION SPREADING In the study area of the Trnovo-Banjšice plateau

In accordance with the work programme we carried out the following activities:

1. Acquisition of meteorological data (for 2 stations in 30-minute intervals, for 10 stations daily data; web page of the Environmental Agency).
2. Measurements of water levels or discharges, electrical conductivity, and temperature in 30-minute intervals (Soča River, Kajža Hubelj, and Podroteja springs).
3. Chemical analysis of water and sediments (Kajža, Mrzlek, Hubelj, Podroteja, and Divje jezero springs).
4. On April 24, 2014, we injected 6 kg of uranine from surface into a karst fissure in the area of Malo polje near Col. Seven springs at the border of the Trnovo-Banjšice plateau were sampled. The tracer appeared in the Podroteja and Divje jezero springs at the end of May, and the highest concentration was reached at the end of June 2014. Regarding the time of the peak concentration (0,52 mg/m³ in Podroteja and 0,37 mg/m³ in Divje jezero) and the distance between the injection point and the springs the dominant apparent velocity of flow towards Podroteja was assessed to 7 m/h and towards Divje jezero to 5,8 m/h.

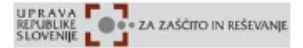
Images of the field work:



Installation of divers for measurement of water level, electrical conductivity, and temperature at the Kajža spring.



Measurement of physical parameters and sampling of water for chemical analysis at the Kajža spring.





Measurement of physical parameters and sampling of water for chemical analysis at the Hubelj spring.



Measurement of physical parameters and sampling of water for chemical analysis at the Mrzlek pumping station.



Measurement of physical parameters and sampling of water for chemical analysis at the Divje jezero spring.



Installation of divers for measurement of water level, electrical conductivity, and temperature at the Soča River.



A tracer test with tracer injection in the area of Malo polje near Col was carried out to define the watershed between the Hubelj and Podroteja springs.



A fluorescent tracer uranine was injected in a karst fissure on April 24, 2014.



Samples were collected manually at 2 springs and with automatic samplers at 5 springs; at the Hubelj and Podroteja springs field fluorimeters were additionally installed.



At the end of July 2014 the tracer appeared in the Podroteja and Divje jezero springs.