
PRINCIPLES OF APPROACH TO OPTIMIZATION OF WATER AND SOIL PROTECTION IN THE SVRATKA RIVER SUB-BASINS

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Presently a demand of sustainable maintenance of water quantity and quality is more and more accented in context of population booming and actual climate change. A research project no. QJ1620040, supported by the Czech Agricultural Research Agency, has started in 2016 with the aim to assess the options for reduction of water pollution both from point and non-point sources with suspended solids, nitrogen and phosphorus in drinking water sources catchments. Based on consultations with Povodí Moravy, s.p. (Morava River Management Authority), two model catchments were chosen in the Svratka river watershed: catchment of Bílý potok (near the Polička town) and Kuřimka. Monitoring of soils, sediments, water quality and hydrological characteristics and systematic terrain investigation proceeds in these model catchments. Results from the year 2016 show differences of both catchments in natural and agricultural conditions, degree of soil erosion and the extent of soil areas with low water and nutrient retention capacity. Pollution load pattern from point sources is different too in these catchments. Outputs of the project will be finished in 2018. A qualitative catchment hydrochemical model will be assembled as well as a methodics "Optimization of water and soil protection in drinking water resources basins". Further, a new utility design will be prepared for elimination of risky substances transport from small water reservoirs to streams.