



## **Water balance model for Slovenian balance regions**

M. Sraj, M. Brilly

University of Ljubljana, Faculty of Civil and Geodetic Engineering, Slovenia

(msraj@fgg.uni-lj.si)

In the study the Water Balance Model was applied for the Sava river watersheds in Slovenia. WatBal is widely used and was recommended also by the US EPA for a first evaluation of possible climate change impact in river basins. It was applied also for the whole Danube river basin water balance assessment in the frame of the IHP UNESCO project (Petrovič, 2002). The same simplified version of the model was applied for 12 balance regions of the Sava river and its tributaries in Slovenia with the areas between 390 and 1880 km<sup>2</sup>. The water divides were digitised manually in a scale of 1:50 000 or better. Elevation of the highest and the lowest point and the weighted mean areal elevation of each balance region were estimated from DEM. The WatBal model was applied for the period 1961–2000. The mean monthly values of precipitation, temperature and relative humidity for at least three meteorological stations and basin runoff are required as input data for the model. Potential evapotranspiration was calculated by the Budyko method. The results of the model were satisfactory. There were, however, some problems with the calibration procedure for mountainous and karstic balance regions.