REGIONALIZATION OF DEFICIT RUNOFF VOLUMES IN THE CZECH REPUBLIC

STRNAD, F.¹; MORAVEC, V.¹; HANEL, M.^{1,2}; VIZINA, A.^{1,2}; BERAN, A.^{1,2}; MELISOVA, E.^{1,2}; KOZIN, R.^{1,2}

¹Faculty of Environmental Sciences, Czech University of Life Sciences Prague ²TGM Water Research Institute, p. r. i.

Keywords: drought – deficit volume – return period – index-flood model

The aim of the study is the regionalization of the Czech Republic with respect to drought characteristics in individual catchments. The regionalization was done for a set of 133 catchments and for the period 1901–2015. The basic index describing the hydrological drought is the deficit discharge, i.e. the cumulative volume bellow 20th percentile of the monthly runoff distribution. The regionalization of drought characteristics was based on the mean precipitation, evaporation, total and base flow and hydrogeological districts. This regionalization was revised by experts. The deficit volumes in the simulation of the Bilan model were estimated and the statistical model for estimation of N-year deficit volumes was developed and validated