

DROUGHT IDENTIFICATION AND MONITORING

Jana Poórová, Zuzana Danáčová, Katarína Melová, Lotta Blaškovičová

Slovak Hydrometeorological Institute, Bratislava, **Slovak Republic**

*Corresponding author: Dr. Melová Katarína, Slovak Hydrometeorological Institute, Jeséniova
17, 833 15 Bratislava, Slovak Republic, katarina.melova@shmu.sk*

Historically some years are being referred to as dry or very dry ones, but they can be defined as dry from different points of view – climatological (precipitation deficit), hydrological (water deficit in surface waters and groundwater), agricultural (plants suffering from soil moisture deficit) etc.

Identification and monitoring of the hydrological drought (in connection with water scarcity as well) is becoming one of the most important tasks of present surface water hydrology, also according to the increasing public interest. Analyzing the data series from state surface water monitoring network the periods of low flow can be relatively easily selected. However, one of the crucial steps in this evaluation is the definition of limit values (thresholds).

After the definition of these limit values, based on statistical analysis of long-term data series we can examine the drought periods. Depending on the selected threshold value, the characteristics of drought periods (duration, deficit volume, minimum values etc.) may vary significantly in time and space. Based on these analyzes, we can make regionalization according to the appearance of drought periods and trends of minimum discharges in Slovakia.

Actually the on-line presentation on web site of Slovak Hydrometeorological Institute of the flow situation in selected water-gauging stations is being prepared, where the actual daily discharge values are graphically compared with long term low-flow characteristics for particular stations, to set an easily understandable visualization, whether the drought situation is becoming serious.