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Occurrence of the precipitation deficit periods in Slovakia

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Geographic position of Slovakia creates preconditions for existence of the temporary precipitation deficit periods resulting in drought mainly during transition seasons (spring and autumn) as well as summer. Not only precipitation deficit but also precipitation surplus represents a trouble that cause increasingly more significant and widespread damages.

The long-term time series of daily precipitation totals available from the end of 19^{th} century, respectively from the beginning of the 20^{th} century to present period have made us possible to analyze the incidence of the precipitation deficit period in Slovakia. Selected meteorological stations from which the daily precipitation totals data sets are available within the above mentioned period are situated in different natural and climatological conditions in Slovakia. In the paper we deal with the statistical trend and frequency analysis as well as with the annual regime and regional extent analysis of the precipitation deficit periods incidence at selected meteorological stations in Slovakia.

In the term of precipitation deficit period occurrence the southern lowland regions of Slovakia represent potentially the most endangered areas by drought. However our experience from climatological practice indicates increasing risk of the precipitation deficit incidence even in other region of Slovakia. The ascending extent of regional of precipitation deficit period is also very significant.