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Detection of changes in the mean monthly and yearly discharges in Slovakia

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Due to climate change, the detection of changes in the long-term hydrological time series is an important topic in water management for timely set up of possible mitigation measures. In this contribution, the mean monthly and yearly discharges in Slovakia were analysed on the data from 43 selected water-gauging stations with hydrological regime minimally affected by human activities. The trend detection analysis of the mean monthly and yearly discharges in period 1961-2020 was concluded by Mann – Kendall trend test at significance level p = 0.05. The results of the trend analysis of the mean yearly discharges point out at the occurrence of statistically significant decreasing trend mainly in the western part of Slovakia. The trend analysis of the mean monthly discharges detected significant decreasing trend in the months of April, May, June, July and August. These results indicate possible changes in the mean monthly and yearly discharges in Slovakia and may be helpful in planning and policy making to mitigate the possible climate change impacts in Slovakia.

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