



## Trends of rainfall as a support for integrated water resources management in Syria

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### ABSTRACT

The objective of this study was to investigate rainfall trends in chosen climatic stations in Syria. Syria is prone to extreme climate events such as drought and flood. Annual as well as seasonal rainfall trends were detected by Mann–Kendall statistical test. The Sen's slope was applied to identify the magnitude of those trends. The results achieved for rainfall revealed more frequent significant decreasing trends. Achieved results can be the basis for the development of water resources management plans and within the framework of risk assessment they will address all aspects of risk management focusing on prevention, protection, preparedness (including forecasts and early warning systems) and taking into account the characteristics of specific area. The Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report concluded that precipitation has generally increased over latitudes north of 30° over the period of 1900–2005 and decrease in the Mediterranean and southern Asia. In the presented paper, we evaluate out coincidence with the IPCC report – decreasing rainfall in Syria.

*Keywords:* Rainfall time series; Mann–Kendall test; Trend analysis; Water resources management

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