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Analysis of Rainfall Fluctuations in Ahar

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Abstract

Rainfall is the most variable climatic element. Spatial and temporal distribution because of its widespread use in agriculture, water resources, industry, the operation of dams and irrigation is important. According to the study of rainfall behavior in the Ahar area that is one of the important agriculture regions on North West of Iran; monthly rainfalls data of this station during statistical period (1965-2005) have been obtained from meteorological organization. To achieve research objectives, the methods of moving average, SPI index and graphical Mann-Kendal tests were used. Applications of the moving average annual rainfall data indicate an increase in rainfall phases (second half 1970) and lower (second half 1990), respectively. Mann–Kendal

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test although volatility and the significant reduction trend in the amount of winter precipitation approved, but showed no significant trend in total precipitation for the period of most months, other seasons and a total annual precipitation. Also SPI method confirmed the tendency of regional climate trends toward shorter drought periods. Results of this research can support the programmers in confrontation with negative precipitation variations and also using of the climatic potentials of the region.

Keyword: Rainfall Fluctuations, Ahar, Mann-Kendal, Moving Average, SPI.

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