

## **An Investigation of Rainfall Changes in KanganCity During Years 1964 to 2003**

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**Abstract :** In this study, attempts were made to examine and analyze the trend for rainfall changes in Kangan City, Booshehr Province, during the time span 1964 to 2003, using seven rainfall threshold indices based on 50 climate extremes indices approved by WMO-CCL/CLIVAR. These indices include days with heavy precipitations, days with rainfalls, frequency of rainfall threshold values, intensity of rainfall threshold values, percentage of rainfall threshold values, successive days of rainfall, and successive days with no precipitation. Results are indicative of the fact that Kangan City climatic conditions have become more dried than before. Indices days with heavy precipitations and days with rainfalls do not show a certain trend in Kangan City. Frequency, intensity, and percentage of rainfall threshold values in the station under investigation do not indicate a certain trend. In analysis of time series of rainfall extreme indices, generally, it was revealed that Kangan City is influenced by general factors of global warming. Calculation of values for the next 10 years based on ARIMA models demonstrates a continuation of warming trends in Kangan City. On the whole, rainfall conditions in Kangan City have experienced more dry periods compared to the past, the trend which is also observable for next 10 years.

**Keywords :** climatic indices, climate change, extreme temperature and precipitation, time series

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