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Title: Climate Change in Jordan: A Comprehensive Examination Approach

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Abstract: Problem statement: Jordan is experiencing harsh water shortage in different parts of the country due to high fluctuations in annual precipitation; the only source of water. In addition, heat waves are becoming more frequent in the region. Precipitation decrement and summer heat waves are being blamed on global warming. This study aimed to detect trends in weather parameters in Jordan. Approach: Data from six meteorological stations distributed around Jordan were analyzed using several parametric and nonparametric statistical approaches including Mann-Kendall, Linear Regression, Cusum, Rank Sum, Student's t-test, Rank Difference, Auto Correlation and Skewness-Kurtosis Normality test. Results: The results indicated that there are no visible trends indicating an increase or decrease in the annual precipitation and maximum temperature. However, there are good to strong trends indicating that annual minimum temperature has increased in the last decade while annual temperature range has decreased. Conclusion: Decreasing temperature range proved that the Earth's atmosphere is becoming more efficient in trapping terrestrial infrared radiation, which is accountable for the global warming.