

## Drought analysis in Jordan under current and future climates

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**Abstract** Droughts have adverse socioeconomic, agricultural, and environmental impacts that can be reduced by assessing and forecasting drought behavior. The paper presents detailed analyses of both meteorological and vegetative droughts over the period from 1970 to 2005. Standardized Precipitation Index (SPI) and Normalized Difference Vegetation Index (NDVI) have been used to quantify drought according to severity, magnitude and spatial distribution at the Hashemite Kingdom of Jordan. Results suggest that the country faced during the past 35 years frequent non-uniform drought periods in an irregular repetitive manner. Drought severity, magnitudes and life span increased with time from normal to extreme levels especially at last decade reaching magnitudes of more than 4. Generated NDVI maps spatial analyses estimate crop-area percentage damage due to severe and extremely severe drought events occurred during October, December, and February of 2000 to

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