

## Detecting Trends in Annual Discharge and Precipitation in the Chott Melghir Basin in Southeastern Algeria

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**Abstract :** In this study, data from 30 catchments in the Chott Melghir basin in the semiarid region of southern East Algeria were analyzed to investigate changes in annual discharge, annual precipitation over the 1965-2005 period. These data were analyzed with the aid of Kendall test trend and regression analysis. The results indicate that the major variations in all catchments discharge in Chott Melghir correspond well to the precipitation. Changes in total annual discharge of Chott Melghir were lower than changes in annual precipitation. Annual precipitation decreased by 66 percent and annual discharge decreased by 4 percent. No significant trend is detected for annual discharge and precipitation at major catchments up to 95% confidence level. The decreasing trend in Chott Melghir discharge is mainly attributed to the decrease of precipitation.

**Keywords :** trends, climate change, precipitation, discharge, Kendall test, regression analysis, Chott Melghir catchments

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