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Abstract

All the necessary water for life on earth originates from rain. For this reason, it is important to understand the spatial and temporal patterns of rainfall and their variability in order to gain knowledge about the balance of water dynamics for water resources management, and to plan strategies for solving many problems such as predicting natural hazards caused by heavy rain. The principal objectives of this paper are to validate an optimum interpolation method for the spatial analysis of monthly precipitation in Iraq. The root-mean-square error (RMSE) of the verification stations (the error of the predicted value at the station location from the observed value at the station). The mean error (ME) was used to detect any bias in the estimates. In this paper, we used the kriging interpolation to estimate the rainfall distribution in Iraq. Geostatistical interpolation techniques were implemented in a Geographic Information System (GIS) to study the spatial variability of monthly TRMM in Iraq using different models (Spherical, Exponential and Gaussian).

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Index Terms

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Keywords

GIS Kriging Spherical Model TRMM Interpolation Iraq.