

(Spatial estimation of groundwater quality factors using geostatistical methods (case study: Shiraz plain

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چکیده :

Water quality mapping is the main procedure of this assessment. At present research, we compare efficiency of three interpolation techniques included inverse distance weighting, kriging and cokriging for predicting of some groundwater quality indices such as: Na⁺, TH, EC, SAR, Cl⁻ and SO₄²⁻. Data were related to 56 wells in Shiraz plain, Fars Province, Iran. After normalization of data, variogram was computed. Suitable model for fitness on experimental variogram was selected based on less root sum of square value. Then the best method for interpolation was selected, using crossvalidation, mean error and root mean square error. Results showed that for TH, EC, CL- SO₄²⁻ Cokriging had the lowest root mean square error and for SAR , Na⁺ inverse distance weighting technique had better result than geostatistical method to simulate groundwater quality indices. Finally, using geostatistical and Kriging methods, map of Groundwater were prepared in GIS environment

کلید واژه : Groundwater quality, Interpolation, Geostatistics, Shiraz plain

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