

Water Quality Assessment Using Entropy Based Water Quality Index and Application of a New Clustering Approach

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چکیده :

Groundwater quality assessment is a decisive process in operation, conservation and restoration of these valuable resources. Groundwater Quality Indices (GWQI) are the most popular tools for monitoring and assessing the quality of water resources. It is achieved using experimental indices with inappropriate parameters. Current study uses Entropy Based Water Quality Index (EBWQI) to assess groundwater quality of Dehgolan aquifer situated in Kurdistan province. Samples includes 10 chemical parameters describing water quality of aquifer system. After computation of each sample water quality index, a new clustering method is proposed based on Multi Objective optimization for EBWQIs data sets interpretation, which is called (MOC). For comparison the result taken from this approach, other clustering methods such as SOM, FCM and K-mean were taken into account for EBWQIs clustering and all methods accuracy were validated by Spearman Rank Correlation Test (SRCT). Results probated the MOC function in comparison to other methods

کلید واژه : Groundwater, EBWQI, Clustering, Multi Objective Optimization

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