عنوان مقاله:

Application of an Artificial Neural Network Model for estimating of Water Quality Parameters in the Karun River, Iran Service Unavailable

محل انتشار:

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خلاصه مقاله:

Population growth and increasing agricultural and industrial activities result in reducing water quality, climate change, and changed the rainfall pattern as well as the hydrological cycle. In the present study, artificial neural networks (ANN) applied deduced and expand models to predict the monthly values of dissolved oxygen (DO), and electrical conductivity (EC) in the Karun River at stations positioned at Ahwaz and Gotvand sites in Iran. To analyze the water quality, the monthly data of four main parameters and discharge between ۱۹۹۸ and ۲۰۱۰ were selected. The correlation coefficient, root mean square error, and mean absolute error as statistical criteria were utilized for evaluating the model performance. Finally, the potential of ANN on simulating relevancy between water quality parameters is examined. Results indicated the neural networks can discern the pattern of water quality parameters to offer an appropriate prediction of changes in water quality data of the Karun River.Population growth and increasing agricultural and industrial activities result in reducing water quality, climate change, and changed the rainfall pattern as well as the hydrological cycle. In the present study, artificial neural networks (ANN) applied deduced and expand models to predict the monthly values of dissolved oxygen (DO), and electrical conductivity (EC) in the Karun River at stations positioned at Ahwaz and Gotvand sites in Iran. To analyze the water quality, the monthly data of four main parameters and discharge between ۱۹۹۸ and ۲۰۱۰ were selected. The correlation coefficient, root mean square error, and mean absolute error as statistical criteria were utilized for evaluating the model performance. Finally, the potential of ANN on simulating relevancy between water quality parameters is examined. Results indicated the neural networks can discern the pattern of water quality parameters to offer an appropriate prediction of changes in water quality data of the Karun River.

کلمات کلیدی:

Artificial Neural Networks, Predicting, Water Quality Index, Khuzestan province