

عنوان مقاله:

Effect of Dam Construction on Lake Urmia: Time Series Analysis of Water Level via ARIMA

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خلاصه مقاله:

Lake Urmia is one of the water bodies that face severe drought conditions nowadays. Therefore, the present study aimed to study monthly time series of the lake water level. Modeling the series was accomplished in two ways. First, all data were used to analyze the water level time series of the lake. Although the results of generating were quite well, the results of validity test were not satisfying. Second, only water level data after the year ۱۹۹۵ were used, which showed a continuously decreasing trend. These data start from the year when dam constructions and operations in Urmia Watershed were increased one by one. The values of R^2 and RMSE were ۰.۹۹, ۰.۰۰۱ m, respectively, for generating the data at this stage. These values were ۰.۹۳ and ۰.۰۳ m for the validity test of the model (from ۲۰۰۵ to ۲۰۰۹). The results of our study show that the lake water level behavior changed after ۱۹۹۵ due to constructing many dams in Urmia Lake Watershed.

کلمات کلیدی:

Lake Urmia, Water level, Trend, ARIMA, دریاچه ارومیه, تراز سطح آب, روند, آریمما

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