The Karkheh River Streamflow Forecast based on the Modelling of Time Series

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ABSTRACT

Autoregressive integrated moving average (ARIMA) models are appropriate for the annual streamflows (annual peak and maximum and also mean discharges) of the Karkheh River at Jelogir Majin station of Karkheh river basin in Khuzestan province in western Iran, through the Box- Jenkins time series modelling approach. In this research among the suggested models interpreted from ACF and PACF, ARIMA(4,1,1) for all annual streamflows satisfied all tests and showed the best performance. The model forecasted streamflow for ten leading years showed the ability of the model to forecast statistical properties of the streamflow in short time in future. The SAS and SPSS softwares were used to implement of the models.

Keywords: