

عنوان مقاله:

Prediction of Extreme Streamflow to Karkheh Dam Reservoir using Stochastic ARIMA Model

محل انتشار:

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نویسندگان:

Karim Hamidi machekposhti - *Department of Water Sciences and Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran*

Hossein Sedghi - *Department of Water Sciences and Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran*

,Abdolrasoul Telvari - *Department of Civil Engineering, Islamic Azad University, Ahvaz, Iran*

Hossein Babazadeh - *Department of Water Sciences and Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran*

خلاصه مقاله:

Extreme hydrological and meteorological events may cause major disasters and heavy Social and economic losses. Therefore, more studies have focused on extreme hydro-meteorological events in various climates and geographic regions. Based on 58 years of observed extreme streamflow data to Karkheh dam reservoir in Karkheh river basin at Khuzestan province in western Iran, the occurrence and changing trends of extreme streamflow indices, including the annual peak and maximum streamflows, were analyzed for Jelogir Majin hydrological station. We used stochastic ARIMA models for this series, through the Box and Jenkins time series modelling approach. The results indicated that among the selected models interpret from ACF and PACF, ARIMA(4,1,1) satisfied all tests and showed the best performance for extreme streamflows (annual peak and maximum discharges) occurred from 1958 till 2005. The model predicted extreme streamflow for ten leading years (2006 till 2015) showed the ability of the model to predict statistical properties of the extreme streamflow. The SAS and SPSS softwares were used to implement all of the .models

کلمات کلیدی:

Extreme Streamflow, ARIMA Model, Box-Jenkins Approach, Karkheh River

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