نویسنده:

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خلاصه مقاله:

Prediction and estimation of runoff from snowfall and a quantitative understanding of its various production processes is considered as one of the important topics in hydrology. Therefore, the quantitative and qualitative achievement of it with a systemic approach in this regard is of importance since it forms the basis of studies of construction projects in various fields of development and exploitation in water resources and hydraulic structures and other environmental areas in the watersheds. Regarding the fact that snow cover represents the amount of stored water, so spatial-temporal (spatiotemporal) monitoring of snowmelt runoff is of great importance in hydrological forecasting in this region.The determination of the amount of snowmelt runoff is a function of regional characteristics and the availability of regional data. Therefore, in order to achieve this, ground operation and the creation of a denser network of snow survey stations are needed, which is almost impossible and is not economical. Therefore, in this study, in order to simulate runoff and estimate the share of snowmelt runoff in Marboreh River, simultaneously, optical satellite data and hydrological modelling of runoff are used as advantages. So that, snow product of the ۸-day MODIS at ۵۰۰-meter resolution was used to calculate the snow cover. Finally, the results obtained from runoff simulation by the coefficient of determination and subtracting volume, which were obtained at ۰.۹۳ and ۳.۴۸ respectively, indicate the high accuracy of the simulation for the area under study.

کلمات کلیدی:
runoff, hydrology, Snow cover, Simulation, MODIS