

عنوان مقاله:

Comparability Analyses of the SPI and RDI Meteorological Drought Indices in South Khorasan province in Iran

محل انتشار:

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خلاصه مقاله:

Comparability analyses are performed to investigate similarities/differences of the standard precipitation index (SPI) and the reconnaissance drought index (RDI), respectively, utilizing precipitation and ratio of precipitation over potential evapotranspiration (ET₀). Data are from six synoptic stations in south Khorasan province in Iran. At the first for calculating SPI, the elevation-precipitation regression of each period was obtained then this relationship was applied on DEM layer using GIS software. The result showed that the most severity droughts occurred in 2008, 2000, 2006 and 2001 respectively. In order to obtain RDI index, we used yearly temperature, precipitation data from the stations and potential evapotranspiration were obtained by Thornthwaite method. The result showed that 4 stations classified in extremely and severely classes and there was no medium and small class in 2008. The results of RDI indicate that the frequency of droughts with high severity in this area. The calculation of the standardized RDI seems to be as complicated as the computation of the SPI

کلمات کلیدی:

SPI, RDI, ArcGIS9.3, Drought, South Khorasan

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