

## عنوان مقاله:

Investigation of temperature and precipitation indices by using RClimDex and R software in Semnan province

## محل انتشار:

اولین کنفرانس بین المللی منابع آب با رویکرد منطقه ای (سال: 1388)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

In spite of profound impact of extreme events on frequency and intensity of various climatic events, in many of developing countries, such as Iran, there has been a paucity of information on trends in daily climate and climate extremes. In this study 2 stations (Shahroud and Semnan) situated in Semnan province have been investigated. We use daily temperature (maximum and minimum) and precipitation data over the period of 1966 to 2006. Data were quality controlled, and processing into indices of climate extremes, and the indices were calculated by RClimDex which is based on R software and is developed and maintained by the Climate Research Branch of Meteorological Service of Canada. Temperature extremes show patterns consistent with warming over most of the analyzed indices in both Shahroud and Semnan stations, with 10 and 8 statistically significant trends respectively, which are correspond to the same indices. From 1961 to 2006 cold days and nights has decreased, while over the same period the incident of extreme hot days and nights has increased. Therefore, growing season length (GSL) has increased over the studied period. Except simple daily intensity (SDII) index in Semnan station, other precipitation indices do not illustrate statistically significant trends across the whole region. These indices show increasing trend in annual rainfall (PRCPTOT), simple daily intensity, maximum 1-day and 5-day precipitation (RX1day and RX5day). However, the results of other precipitation indices indicate a declining trend in the intensity of rainfall. In spite of the results of the precipitation indices which may lead to less run off and more effective rainfall, the temperature trends increase sharply and dramatically. Therewith, the climate of the region is approaching arid climate

## کلمات کلیدی:

Index, trend, temperature and precipitation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/83090>



