

عنوان مقاله:

Investigation of climatic extreme events of Northwest of Iran by using daily precipitation and minimum and maximum temperature

محل انتشار:

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

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نویسندگان:

M.M. Sohrabi - *Department of Irrigation, Faculty of Agriculture, Bu-Ali Sina University*

S. Marofi - *Department of Irrigation, Faculty of Agriculture, Bu-Ali Sina University*

B. Ababaei - *Irrigation and Reclamation Department, Soil and Water Engineering Faculty, University of Tehran, Karaj, Iran*

خلاصه مقاله:

It is hard to disguise the fact that climate change turns to a global crisis which is preoccupied most of scientists' mind. Northwest of Iran is one of the prominent area from agricultural point of view, and this area is a mountainous region, where fluctuations of various parameters of climate is ordinary. Therefore, this region is sensitive to climatic indices. Also it is the extreme events of climate which are playing key role in frequency and intensity of climatic events. In this study, Ardebil, Oroomiye, Tabriz, and Zanzan stations were investigated. Daily temperature (maximum and minimum) and precipitation data were used over the period of 1976 to 2007. Data were quality controlled and processing into indices of climate extremes. Although warm spell (WSDI) indicate slight declining trend, other temperature indices are compatible with warming. These indices put emphasis on quick pace of the climate of this region toward warm climate. Frost and cold days (FD and ID) and cold spell (CSDI) dramatically dwindle with regionally averaged showed -5.3, -6.3 and - 1.57days/decade respectively, while hot days and warm night indices (SU & TR) increase 1.7 and 0.07days/decade relatively. In comparison with Temperature indices, precipitation indices include smaller number of statistically significant trends. These indices indicate considerable decline. Annual rainfall, simple daily intensity, very wet day precipitation, maximum 1 and 5- day rainfall (PRCPTOT, SDII, R95p, RX1day and RX5day) decrease -2, -0.17, -0.03, -0.12 and 0.38mm/decade respectively. Although increasing in temperature is desirable because of cold climate in this region, in near future climate of this region will move toward arid climate; moreover intense decreases in precipitation indices will accelerate this movement. It is Tabriz station which indicates the most statistically significant trends, 18 indices have significant trends. This is maybe stems from higher concentration of CO₂ in the so-called station

کلمات کلیدی:

region, climate, temperature, precipitation and indices

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