Temperature simulation of southwestern Iran during (۲۰۱۵-۲۰۵۰) using data from the general air circulation model

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Abstract

In recent years, global warming and climate change have been associated with dire consequences for human societies. Changes in climate patterns can lead to severe floods, extreme heat and cold, more frequent droughts, and global warming. This increase in global warming has upset the Earth's climate balance and caused widespread climate change in most parts of the world, known as climate change. Therefore, identifying temperature patterns in the future can be very useful in meteorological studies and other related sciences. This research work was done in ۲۰۱۹ in Ahvaz. The aim of this study is to simulate the temperature in the period of ۳٦ (۲۰۵۰-۲۰۱۵) using data from the general air circulation model in southwestern Iran. In this study, the EH۵OM database was used to simulate daily temperature. After extracting the data, spatial and temporal distribution of temperature patterns using ArcGIS software was performed using common cryogenic zoning statistics (OK) techniques. Using the data of the general air circulation model during the ۳٦-year period, the monthly, seasonal and annual temperature patterns of the region, mediation and relevant maps were drawn. Based on the results of the prevailing temperature patterns in the annual period, it is fully consistent with the topography of the study area, which indicates the strong effect of altitude on temperature. The highest average simulated temperature per year is related to Mahshahr port station with ۲٦,۲۵ C and the lowest temperature belongs to Aligudarzwith ۱۲,۵٦ C. Also, in July, with the standard deviation of ۳,۹, the highest temperature was obtained in all stations, and in January, with the standard deviation of ٤,٦, the lowest temperature was obtained.

Keywords: temperature, general air circulation model, simulation, topography.

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