

Abstract

The rapid growth at industrial activities result of increasing greenhouse gases in recent decades,so the global imbalance had caused that this phenomenon called climate change.This phenomenon will affect the hydrological parameters directly. So that low-latitude and sub-tropical regions with reduced rainfall and high-latitude regions showed an increase in the amount of rainfall. Increased precipitation leading to increased extreme events such as floods. This event partially, the loss of life and property brought irreparable and in areas where rainfall is reduced, greatly increased water stress and drought caused be. In this study, we tried to climate change in the period (2011-2100) was a good atmosphere general circulation models using the output of the region under A1B, A2 and B1 scenarios of the IPCC fourth report and RCP26, RCP45, RCP60 and RCP85 scenarios of the IPCC fifth report on climate parameters of the four synoptic stations in Isfahan province and Zayandeh Rood river flow investigated. Of river basin due to the geographical location of its properties, a very important catchment area in the country. The study of climate change and water allocation in different parts of the river dam, is an imperative. Results showed that the downscaling rainy season from early spring to early winter under the Scenarios fourth report and the fifth report from early spring to late winter scenarios can be pasted. Also under all scenarios, the increase in temperature was obtained. Then, using the data obtained for future periods and with the help of software SWAT, runoff was coming. The results, reported an increase in runoff in the summer under scenarios of increased runoff in the spring under the scenarios reported in the fourth and fifth, respectively. To study the effect of climate change on river dam water allocation, water evaluation and planning model (WEAP) was used. WEAP model results for seven different scenarios to assess and meet the needs and level of reliability in the domestic, industrial, agriculture and the environment were compared with each other.

Keywords: Climate Change, General Circulation Models, Report the fourth and fifth scenarios, River flow, SWAT, WEAP



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