

## INVESTIGATION OF CHANGES IN CLIMATIC VARIABLES USING CLIMATE SCENARIOS IN VARAMIN PLAIN, IRAN

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Climate change is currently one of the most important environmental challenges worldwide. Iran is among arid and semi-arid regions in the global climatic zonation. The evidence of historical meteorological data along with the forecasts of the country's climate indicates the occurrence of climate change phenomenon in recent decades with a continued trend in the future as elsewhere in the world. The agricultural sector is also most affected by the process of climate change due to the extensive and direct interactions with the environment. Varamin plain is located in Iran, 45 km to the South-east of Tehran. This research predicted the regional climate change for the periods of 2011-2030, 2046-2060, and 2080-2099 in most climatic scenarios (A1B, A2, and B1) compared to the base period (1986-2016) using the meteorological data generation model (LARS-WG) in this region. The percentage of changes in individual climatic parameters during these periods was then calculated in comparison with the base period. All estimated P-values were acceptable at a significant level of 1%, hence, it can be concluded that the LARS-WG model has the potential necessary to simulate the rainfall and temperature variables at the climatology station of the study area. Based on the results, total annual precipitation will decrease in the coming years. Also, the average temperature (average minimum and maximum temperature) will have an increasing trend in the future periods. The above-mentioned climatic changes will lead to a reduction in the yield of agricultural crops in the region.

### Biography

Negar Shahvari is a Ph.D. candidate and research assistant of Agricultural Economics at Tarbiat Modares University in Tehran, Iran. She was ranked 1st in the department of Agricultural Economics among MS candidates. So far, she has been ranked first with a GPA of 18.48 out of 20 among Ph.D. candidates. She has several national and international published articles. During her graduate study, she was involved in several Natural Resources and Environmental Economics researches. Moreover her dissertation topic and her research interest are focused on Climate Change impacts on Agricultural Produces

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