Oceanography/Vol.9/No.35/Fall 2018/1/5-5

Consideration of Interpolation Methods on Precipitation and Temperature Data in Southern Caspian Sea Region (Summer and Winter)

Molavi Arabshahi, Mahboubeh[1*]; Shavali Koohshoori, Kowsar[2]

1- Assistant Professor Applied Mathematics Department, School of Mathematics, Iran University of Science & Technology, Iran. Email: molavi@iust.ac.ir

2- MSc. Student Applied Mathematics Department, School of Mathematics, Iran University of Science & Technology, Iran. Email: kowsarshahvali@mathdep.iust.ac.ir

Received Date: June 27, 2018 **Corresponding Author* *Accepted Date: October 15, 2018*

Abstract

The purpose of this study is to investigate interpolation methods for estimating and rehabilitating climate data. Due to the fact that two factors of rainfall and temperature are known as the most effective parameters in many applied decisions and in many studies of land physics, agriculture, hydrology, etc., climatic data are used. But climatic data are not always available at all intervals, or researchers need weather data to predict climatic conditions. In these cases, different interpolation methods are used. Therefore, in this research, existing methods for interpolation of climatic data in Ramsar, Babolsar and Bandar Anzali synoptic stations in period of 1951-2017 were evaluated. The results of the research indicated that the Neville and Spline interpolations provided a more accurate approximation for all studied stations. Other findings of the study were that temperature interpolation for the months of the summer season was less than the winter. There was also no significant difference between interpolations for different stations.

Keywords: *Interpolation, Temperature, Precipitation, Caspian Sea.*