Islamic Azad University-Ahar Branch
Geographic Space
An Approved Scientific, Research-based
Quarterly

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Ranking of Cities by Using of Climatic Stress Index (Case Study: Chaharmahal and Bakhtari Province)

Date received: 24 May 2012 Date accepted: 7 October 2013

Abstract

Climatic unfavorable conditions lead to limitation of activity. Therefore, application of climatic severity coefficient can lead to befitting distribution of economic potentialities. The climatic stress index is suitable scale for ranking of residential sites due to climatic severity coefficient. In this research by dint of ArcGIS 9.1 software, climatic data were analyzed and numeric maps of climatic stress index in cold and warm seasons were produced by Inverse Distance Weighted (IDW) interpolation method. Thereafter, quantity of these indices were extracted from the map on the basis of cites geographical location. Then cites of this Province have been ranked from 1 to 25 in cold and warm seasons out of consideration of index. Results of this research show that the climatic stress index can be used to give climatic hardness coefficient in any location. Investigation of mean of stress index in 25 sites of this Province show that, not only the

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number of cold months is more than those of warm month, but also hardness of cool in seven months of cold season is more severe of that in five months of warm season. Studying of monthly mean of climatic stress index shows that, Boldaji, Nafch and Chelgerd sites in cold season and Malkhalife and Lordegan sites in warm season have more hardness of climatic conditions.

Keywords: Climatic Stress Index, Chaharmahal and Bakhtiari Province, Interpolation, Ranking.

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