

## عنوان مقاله:

Processes of Climate Variability on Four Decade Time Scales in Salt Lake Basin of Iran

## محل انتشار:

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## خلاصه مقاله:

In discussing the climate of arid regions, where warming energy supply at the earth's surface is excessive and rainfall is deficient, one needs some comparative measure of aridity. The purpose of constructing an index or a model may be manifold. One such purpose is the assessment of the proneness of an area towards aridity or desertification, which would then allow implementing precautions. Hence we need an index of aridity. In this investigation, the Aridity Climate Index (ACI) was established. It was generated by use of statistics and drawing methods including collection, communication, correlation, regression line, data generation, and component analyses of meteorological information, using about 35 stations that have 40 years service from 1957 to 1996. The ACI ratio  $Z=(X_i-X)/S$  is based on principal components of the set of climatological data, with Z being the standard score, X the mean and  $X_i$  the variable of every class, and S their deviation. The present study has assessed the Salt Lake Basin of Iran through various statistical analyses and application of this index. This investigation indicates the dominant relation between climate and desertification/aridity. The index suggests climatic effects on desertification and is a suitable criteria for determining aridity and its propagation. This paper explores the climatic stresses that underline the precipitation and temperature. Based on this index, and its classification and 45 output maps, desertification limits have been determined from year to year by GIS and ILWIS software application. Also, the change of aridity zones of dry-lands in the Salt Lake Basin in every year of one long term has been accounted by ILWIS software. The conclusion of this investigation indicates that in climatic respect, the Salt Lake Basin of Iran is leading towards climatic desertification.

## کلمات کلیدی:

Climatic fluctuations, Aridity, Climatic Variability, Salt Lake Basin

## لینک ثابت مقاله در پایگاه سیویلیکا:

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