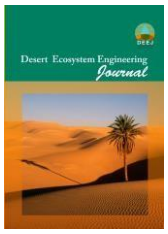
DEEJ (2015) 4 (6) 27-34

University of Kashan

Desert Ecosystem Engineering Journal

Journal homepage: http://deej.kashanu.ac.ir



Investigating the trend of salinity changes using remote sensing and GIS (Case study: South Khuzestan)

Mombeni Maryam[1], Arekhi Saleh[2], Arami Seyed Abdolhossein[1]

Received: Feb/06/2015 Accepted: Apr/24/2015

Abstract

Desertification means Land degradation in arid, dry sub-humid due to various factors such as climate change and human activity which is one of the considerable problems. Soil Salinity also is one of the main causes of desertification. One of the dynamic properties of soil is the soil salinity; this characteristic is one of the main problems in arid and semi-arid areas which much of the territory of Iran is in these areas. Khuzestan is one of the provinces where the salinity problem is considered as the main problem for farming. Especially the southern part of the province, where the land has a heavy texture and underground water level is high, but they have capability to get reclamation. This study investigated changes in soil salinity in the area of about 11869.207 hectares of land in Khuzestan province, satellite images Landsat relating to the years of 1973, 1990 and 2000 were geometrically corrected and then were used as the main data. Images in the form of maps and tables were presented in four periods after correction of classification in GIS systems. Generally, the results show a significant increase in the vast of saline soils in 28 years.

Keywords: Soil salinity, RS, GIS, image processing.

1. PhD student desertification, Gorgan University, Maryam.mombeni@yahoo.com

2. Assistant Professor University of Golestan, Department of Geography and Geographic Information Systems Arekhi1348@yahoo.com