

Abstract:

A large part of our country's land, from the ancient times is out of ecological balance due to natural and human factors, and subsequently, desertification is started with land degradation. Desertification, as a serious problem has affected many countries in the world and much research has been done inside and outside the country to assess and provide a desertification map, which led to the regional and local models. Jorika area located in the Province of Sistan and Baluchestan and Zabol city is an arid area and prone to desertification with an average annual rainfall of 55 mm, and annual evaporation is 4500 mm. The study of maps of wind erosion and climatic factors in this area show that this area has a problem of wind erosion and sand storms. In this study, it is tried to investigate the severity of desertification and land degradation, with emphasis on vegetation and soil of the area, using ESAs method. The ESAs method is one of the newest methods to evaluate the severity of desertification and land degradation. four parameters of soil quality, quality of vegetation, climate quality and characteristics of land management are needed for the assessment and mapping of desertification using the ESAs method. In this study, factors affecting wind erosion of the area are determined according to giving value to each criterion based on a model of desertification. To do this, work units in the area, must be specified and then all effective factors on the wind erosion of the area must be evaluated in each of work units and then in the entire region and finally, the classification of the severity of desertification must be identified using ESAs which led to the mapping of desertification, and then, the most effective measure in desertification of the area where be determined.

Keywords: desertification, assessment, ESAs, Sistan Jorika area



University of Zabol
Graduate school
Faculty of Water and Soil
Department of Range and Watershed Management

**The Thesis Submitted for the Degree of M.Sc
in the field of Range Management**

Evaluation and Mapping of Desertification Intensity using ESAs Model in Jorika Region of Sistan

Supervisors:
Dr. A.Pahlevan ravi.

Advisor:
M.Taheri

By:
Mehdi Rashki

February 2016