

## **Abstract**

Land degradation in arid, semiarid and semihumid arid areas is called desertification if it is resulted from human activities and climatic conditions. Such a phenomenon is recognized as a severe embracing problem and brings upon diverse non-compensatory damages to economical and social areas. To date, several methods are taken to estimate intensity and provide desertification map all over the world, which have their own disadvantages and constraints to local factors. ESAs model is a new method which was represented by European commission and is applied in most countries of Europe and Middle East. Determining the primary factor of desertification in agiven area, specifying desertification criteria and sub-criteria and at last sketching the current map of desertification were the goals in this study. It has been tried to identify and evaluate main factors in desertification intensity in Jazink region of Sistan and in every faciousin this study. Evaluating every criterion was done on the basis of ESAs desertification model. Using aforementioned methods every criterion in planning units was studied and for each information layer is developed and then the out puts are used as input to GIS environment and for each criterion information layer is built. Finally, through intersecting of information layer geometrical average, four under study criterion (soil, continent, plant coverage and management) in the area were resulted on the basis of ESAs model. Based on the generated map, 21.76% (34070.3 ha) of the area hadfragile type with moderate intensity and 21.93% (34336.2 ha) of it was of critical type with low intensity and also 49.81% (77971.5 ha) of the area had critical type with moderate intensity. In the end, were identified as the main anthropogenicand desertification factor in the studied area.

**Key words:** Desertification ‘Assessment ‘ESAs ‘Jasinak Sistan Region.