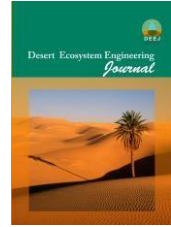




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Evaluation of Desertification Hazard in the Jaz_Murian region based on Analysis of Geology-Geomorphology criterion

Mojtaba Soleimani Sardo^{*1}, Abolfazl Ranjbar Fordoei², Sayed Hojjat Mousavi³

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Abstract

Recognition of desertification criteria and indices and determining the most effective factors on it are the first steps for logical planning to combat desertification. In this study, the sensitivity of the JazMurian region to desertification was evaluated using IMDPA model which is one of the desertification assessment methods in arid and semi-arid regions, on the basis of geologygeomorphology criterion. For this purpose, work unit map (Geo-bio faces map) was created by using geology, land use/land cover map, Landsat 8 satellite imagery and Google Earth data; accordingly, 21 work units were identified. In each unit, the "slope", "land use" and "erodibility" indices were weighted and combined with each other by calculating geometric mean of indices. The results showed that Jaz-Murian region was classified in three desertification hazard classes including low (I), moderate (II) and high (III), with 1971 km², 1743 km² and 2102 km² areas respectively. Most of the region classified in high hazard of desertification class that needs risk management plans. Land use had the most effects on desertification hazard in geology-geomorphology group, therefore it can be concluded that management strategies have to focus on this index to control desertification.

Keywords: Geomorphology Facies, Land Use, Erosion, IMDPA Model, Desertification Indices.

1. Ph.D. Student of Combating to Desertification, Dept. of Desert Sciences, University of Kashan, Iran

2. Associate Professor, Faculty of Natural Resources and Earth Sciences, University of Kashan, Iran

3. Assistant Professor, Faculty of Natural Resources and Earth Sciences, University of Kashan, Iran