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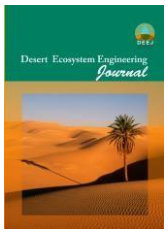

The Study of Desert Zone and Drought in Sharra Watershed Using Geomorphology Indexes

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Abstract

It is distinguished desert and non desert regions using geomorphology characteristics of a region including types, units and fascias. In this research, the desert plain of Shara in Hamadan province has been surveyed and has been determined desert regions using geomorphologic indexes. Intensity of climatic drought and role of hydrological drought on reinforcement of desertification were studied in this area. Shara plain boarders was determined using by topography maps 1:25000 scale and topography, geology, land use, erosion and hydrology maps was prepared using aerial photograph 1:20000 and TM, SPOT satellite images (2011) and software's ENVI and Arc GIS9. In order to determine intensity of drought was used from Medalous methods. The frequency and duration of hydrological drought using SPI index and temperature, precipitation and drought variations trend using Man Kendal method were computed. Considering the hydrogeomorphological ,climatological and morphodynamical conditions geological, climatologically, hydrological, the pediment has been developed as expanded and unit, type and geomorphologic fascias like those seen in central regions of Iran can be recognized in it. The geomorphologic unit of Sharra has been divided into plain and playa. It can be point to fan and pediment cone from recognizable types of the plain unit and from playa like unit to Kavir and desert. The facial of the microlithic Fans, ending Pediment, alluvial traces witness hills, clay and saltish extensions are the geomorphologic features of Shara desert plain which is well distinguishable. Due to such features Shara region is one of the desert regions of the country and by considering the geomoropological indicators it can be easily separate the desert from no desert that located in sensitive drought condition. Increasing of duration and frequency of hydrological drought, decreasing of precipitation, increasing of temperature significantly have increased drought in the region in recent years.

Keywords: Geomorphology, Desert, Drought, Sharra, Hamadan.

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