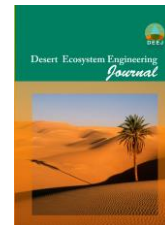




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Geomorpho-Pedological Analysis of Nebka Landscape in Sufikam Plain, Golestan Province

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Abstract

The operation of sand transport by erosive winds and its sedimentation around the obstacles such as plants leads to the appearance of the eco-geomorphologic phenomenon of nebka dunes in dry seasons of Golestan province. This study aims to identify the physicochemical characteristics of nebka sediments and compare its results with adjacent lands. Hence, the grain size distribution and morphometric characteristics of particles were determined for 30 samples in Sufikam plain in the Eastern border of Caspian Sea. Then, the relationships between the physicochemical properties were compared using Wilcoxon and T-test at 95%. Results showed that the prevailing wind direction is west to east which in our case is from sea to land. Analysis of sand rose graph indicates that the winds in spring and summer blowed the sediments from soil surface. Results showed that there were no significant differences between sorting of particles, fraction of very fine sand, silt, clay, EC, pH and organic carbon of nebka's head samples and its adjacent land. However, results of skewness index, mean diameter of fine sand, medium sand, coarse and very coarse sand, SAR and ESP proved to be statistically significant. Therefore, it can be concluded that the source of sediments is local.

Keywords: Nebka, Wind Erosion, Physicochemical Characteristics, Sufikam Plain, Golestan Province.

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