Evaluation of Morphoscopy and Granulometry Characteristics of Nebkha Sediments

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1 Introduction
Nabkhas are sand dunes that form around vegetation. They have been reported in many parts of the world. Nabkhas are often associated with areas having degraded soil and vegetation. In these landscapes, information on the formation, structure and growth of coppice dunes can provide distinct clues about environmental changes. Therefore, to evaluate and control desertification resulting from vegetation change it is critical to understand the coppice dune dynamics. Many studies have showed the importance of aeolian processes, including the erosion of sediments and their deposition under the shrub canopies. This study focused on evaluation of morphoscopy and granulometry characteristics of nebkhna sediments in Shahdad-Kerman.

2 Materials and Methods
The study was conducted in the Southwest Lut playa, Shahdad, Kerman province. A coppice dune was selected. The height of the selected dune was measured from the base of the dune to the center of the mesquite canopy, which typically protrudes about 15m. Sediment sampling was conducted on the top 10cm of the sediment. Sediments were sampled every 0.5m coppice dune. The samples were transported to laboratory for determining morphoscopy and granulometry characteristics such as sorting and skewness and sediments physiochemical properties such as EC, pH, SAR, particle size distribution (sand, silt and clay).

3 Results and Discussion
The samples belonging to lower part of nebkhna had higher EC than those of the upper parts. Average pH of the samples was 4.23. Mean grain size for sediments on the upper and lower parts of the dune was 208μm and 115μm, respectively. Mean sorting was 1.29. The lower samples are generally better sorted compared with the upper samples. Skewness of grain-size distribution was 0.16-0.82. Mean kurtosis of all the samples was 1.74. The results of kurtosis showed that the upper samples exhibited the lowest kurtosis. The results of morphoscopy showed distance of deposited sediments around Nebkha from...
their source area was approximately 20-50 km exhibiting their short distance from source area.

**Keywords:** Nebkha; Granulometry; Morphoscopy; Shahdad

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