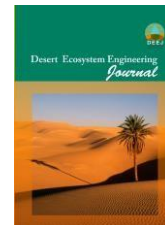




University of Kashan

Desert Ecosystem Engineering Journal

Journal homepage: <http://deej.kashanu.ac.ir>

Study of the Morphometric Characteristics of *Halocnemum strobilaceum* Nebkhas Type in Mighan Playa(Arak)

Hamid Toranjzar¹, Azadeh Fathi²

Received: Oct/25/2015

Accepted: Feb/20/2015

Abstract

Nebkhas, which are formed by shrubs, are a common phenomenon in arid and semiarid landscapes and play important roles in preventing soil erosion and nutrient loss. *Halocnemum strobilaceum* is one of the important indigenous plant species of Mighan playa that can not only protects itself against wind erosion but also reduces sediment removal and can forms Nebkha phenomenon. This study aims at examining the role of *Ha strobilaceum* in controlling wind erosion (Nebkha formation), and its morphometric relation with the accumulated sand in marginal dune land of Mighan playa, Arak, Iran. This study performed at an area of 1000 square meter. In order to analyze the morphometric characteristics of Nebkhas and the amount of accumulated sand in this Vegetative type, parameters including length, width and height of the Nebkhas and canopy cover of *Ha strobilaceum* were measured separately. The results reveal that *Ha strobilaceum* can stabilize 74.1m³h¹ equal to 118/56 ton/ha that average is a remarkable number considering the dimensions of the Nebkhas and can prevent soil erosion. So, there are correlation among Nebkha volume and large diameter and canopy area, ($r=0.68^*$). and There was no significant relationship between Nebkha volume and plant height (from the top Nabka).

Keywords: Arak, *Halocnemum strobilaceum*, Nebkha, Playa, Wind Erosion.

1. Assistant Professor, Agriculture and Natural Resources Department, Arak Branch, Islamic Azad University, Arak, Iran (Corresponding Author), Email: H-Toranjzar@iau-arak.ac.ir

2. Graduate Student, Islamic Azad University of Arak, Iran