**Investigation on Relation Between Wind Erodibility and Soil Physical and Chemical Properties in Hourolazim- Wetland Khuzestan**


## Abstract

Weatlands Mesopotamian historic wetlands, including the Hourolazim ongoing loss. Several reasons are cited for the loss of the natural and human factors fall into two categories. These factors have been high erodibility potential of wetland soils and the region as a secondary source of dust is introduced. In the study area due to restrictions such as exclusion zone, area mined and the military after visiting the area transects perpendicular to the wetland we've taken from the beginning to the end measured, then the coordinates of the GPS device moved It was 44 points on a surface with dimensions of 20 × 20 cm2 and 5 cm depth to zero at any point, soil samples were collected and transported to the laboratory for physical and chemical analysis. The amount of pH with a pH meter, EC meter conductivity of saturated extract, organic carbon method Walkley and Black, the percentage CaO to neutralize the hydrochloric acid method, soil texture by pipette, dissolved sodium concentration by flame photometer, calcium concentration and magnesium titration method, the amount of gypsum precipitated in acetone according to standard methods, MWD using dry sieving, Bulk density with aggregate method and carbonate and bicarbonate were measured by titration. The soil erodibility and wind erosion threshold velocity is directly measured in the area using a portable wind tunnel. Complexity of the soil system to explain the mechanisms involved in soil structural stability makes it difficult. In the study area away from the wetland of the amount of salinity, pH, sodium, magnesium, calcium, SAR, ESP, HCO3, bicarbonate, organic matter, moisture, and MWD is reduced and the amount of particles larger than 0/84mm crust and a bulk density increases. Because large amounts of minerals exist on the margin of wetland reduces the amount of particles larger than 0/84 mm can result. The results obtained were analyzed using SAS software. The results showed that 35% of organic matter and soil pH changes in the speed threshold to justify. Percent of particles larger than 0/84 mm and weight average particle diameter MWD 30 % the variation in wind erodibility justify. In addition to physical and chemical factors of soil type of the landuse also affects the erodibility of the area. The model with the lowest mean square error for the soil erodibility with landuse crust close to the 18/66 and 73/46 respectively. The soil wind erosion threshold velocity equation with the least mean square error in landuse use, 3/33 and 3/4 were obtained in a closed crust.



**Keywords: Wind Erodibility, Hourolazim, Dust Storm,Wind Erosion Mater**

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