AEOLIAN DATA ANALYSIS TO EVALUATE WIND EROSION POTENTIAL (CASE STUDY; SABZEVAR)

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ABSTRACT: More than 75 percent of Iran is located in arid and semi-arid and wind erosion is one of the most important processes in desert. Prevailing winds can shift sand dunes and affect their accumulation. Considering the location of Sabzevar in wind regime and because of the potential of region to form the sand dunes, investigation of wind processes is important. In this study after collected data during 1956-2010, studied the Indices of sand rose and wind rose as well as reviewed wind erosion potential of region. The results of sand rose show that the direction of sand is toward south west and UDI index is estimated about 0.55 in this region. These indicated that the potential of sand carrying and aeolian processes are in intermediate class in this region. The rate of DP calculated 386 VU and also in this sense is in intermediate class as well as sand discharge is 17.31 (kg/m.s). The result of wind rose showed that the frequency of east and northeast winds in region is high and then dominant southeast winds and this matched with the sand transport as well as the most erosive wind class is 4-6 m/s in this study.

Keywords: Wind erosion, Wind regime, Sand rose, Wind rose, Sand dunes, Sabzevar