

Journal: GEOGRAPHICAL RESEARCH WINTER 2011 , Volume 25
, Number 4 (99); Page(s) 101 To 114.

Paper: THE ROLE OF WIND REGIME ON VALUE AND DIRECTION OF
SAND DUNES SEDIMENTS TRANSFERRING (CASE STUDY:
SABZEVAR)

Author(s): MESBAHZADEH T.*, AHMADI H.

*

Abstract:

The main objective of this study is evaluation and wind statistic analysis, investigation of wind regime role on discharge flow and direction of sediments transferring in the case study. Thus, Sabzevar station anemometer data duration 10 years statistic period (1996-2005) analyzed. Sand drift potential amount of study area is 160.9 v.u and result drift direction is west as well as sand flux is 22.335 m³/m. year by Lettau-Lettau equation. In view of wind erosion power, the study area classified to low class due to Fryberger & Dyne (1979) classification. Dominance of powerful and bidirectional winds that is indicated by unidirectional index value is 0.4 for this region that causes to transverse dunes (barkhanoid) and is an explanatory of powerful wind and bi-directional with obtuse angle. The area seasonal wind roses show that in whole of year seasons. the chief of predominated winds blow from east and northeast and southeast winds are in third rank the area yearly storm roses show that the percentage of winds with swifter than threshold velocity (upper than 6 m/s) are 12.5% that blow from east, northeast, southeast that most if these winds blow in spring and summer seasons and their direction are one-way but in autumn and winter are multidirectional.

Keyword(s): WIND REGIME, SAND DUNE, SAND DRIFT POTENTIAL,
RESULTANT DRIFT POTENTIAL, SABZEVAR