



Determination of shifting of shoreline in the zone of Noor- the north part of Caspian sea by applying statistical regression linear and correlation analysis (CCA)

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Keyword: *coastline, regression, parameters of waves*

1. Abstract

Introduction: Gravel beaches often are wave – dominated; more over coarse – grained sediment is being increasingly used to replenish beaches that causes much charging along shoreline [1]. Limited understanding of governing beach morphology, prevents accurate changing of shoreline [2]. The question that sometime occur to our mind is what do waves affect on the changing of shoreline and what does the beach react to them? [3]. The analysis of shoreline changing and accurate predicting of changing of the width of beach platform is estimated by using linear regression statistical techniques [4]. Analyzing by this technique deals with identifying behavioral patterns of waves and its relation to shoreline positions [5]. The Canonical Correlation Analysis multi-variable analysis that deals with making connection between two sets of variables and identifying patterns in the sets of data simultaneously . In this study by choosing 3 stations is the Noor coastal zone located in north part of Caspian sea and daily measuring of shoreline changes and parameters of wave have been implemented during 6 months and this spots have been shown in the figure 1. Then by using statistical regression linear technique are proceeds to determine relationships between the changes of wave parameters and shoreline. This technique can predict of wave parameters and shoreline. This technique can deal with predicting the changes of shoreline.

2 - Methods