

Environmental Evaluation of Shoreline Zone of Abbas Abad Township to Oil Spill According to ESI

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Abstract

Shoreline is a zone between beach and sea. This zone is so fertilizing and have different ecosystems for great ranges of animals as nesting, feeding, breeding and shelter zone. One of the important pollutant factors in the marine ecosystems that has so much negative effect, is oil spill. Oil pots, as a result of oil spilling, have possibility to absorb in the biomass and marine ecosystem. ESI is an important factor to evaluate the shoreline zone to oil spill that provides a base for coastal resources due to probability of oil spilling with high sensitivity. Case study in this research is shoreline Zone of Abbas Abad Township located on the west of Mazandaran province and south of Caspian Sea. The base data for mapping included: physical and biological resources, human use of resources is done during summer and autumn of 2012, by scrolling through shoreline, observation and collecting existing documents in the zone, photography, questionnaire of local people and dotting with GIS. According to field study, data collecting and mapping, in this zone, 7 main categories and 9 subcategories are identified, that are known as 3A,4,5, 6B, 8A,8B, 8C,9B,10B. Based on sensitivity, identified rankings in the shoreline are two low sensitivity 3A and 4, two medium sensitivity 5 and 6B and high sensitivity 8A,8B, 8C,9B,10B. High sensitivity rankings are more than others and low sensitivity rankings covered more than 52% of this shoreline. The second level is for medium sensitivity with approximately 38%.

Keywords: Environmental sensitivity index, Geographical information system, oil spill, shoreline, Abbas Abad Township.