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Evaluation of physical sensitivity of Mazandaran coastline based on ESI

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Abstract

Coastal area produces biological resources and covers the supporting processes which are important to local, regional and global environment. So the procedure of socio-economical development guidance in coastal areas will employ the most effective and edaptable coastal areas sensitivity criteria to develope the effective management of coastals. As a results the coastal area will be preserved reduced and rationally and permanently used and recognized. This reality shows the necessity of special care to coastal areas protection. In this research the ESI method of NOAA is used for physical categorizing of Mazandaran coastline against the release of polluted material specially oil. The study area in this research considered part of shore that on land coastal use stretched to 3 KM from backshore boundary and marine boundary corresponds to depth line of -10 meters. Then based on proposed models by NOAA and divided by using Geographic Information System(GIS). As a result the total 214557/68 hectare study area consist of 66/88 percent sheltered sand/mud flats , 9/13 percent mixed sand and gravel beaches, 15/79 percent exposed, solid man-made structures, 8/02 percent vegetated low banks and 0/15 percent scrub-shrub wetlands. The study result shows that 84/18 percent of coastal area in case of oil pollution holds the pollutant material which easily cannot be cleaned.Therefor special attention must be paid to coastal management in this province.

Introduction

Coastal areas are sensitive lands that are influenced by both marine and land ecology. The sensitive aquacultures and habitats are in these areas. This areas not only are significant recreation but also supports fishing activities and transportation industries. Because coastal area is the last place which collect marine and land pollutant, the pollutant collection permanently threaten these areas the border between the land and ocean often cannot be determined by drewing a line on the map. But gradual change and transfer is distinguishable.This transferring area is called coastal area [1]. Marine sensitive areas that can be recognize in the internal waters coastals,land waters, the exclusive and econ omical and free waters area, are areas that has sensitive marine-coastal resources or dependent on the sea and this sensitivity is because of biodiversity, animates food, endanger species, vulnerable and scares, vital community on the verge of ecological