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INFLUENCE ON THE ENVIRONMENT OF THE COASTAL AREA IN JIAOZHOU BAY OF CHINA

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Abstract

Jiaozhou Bay, a shallow semi-closed bay surrounded by Qingdao City, has become one of the most important industrial zones in Shandong Peninsula, China. The sound development of Jiaozhou Bay is crucial to the Qingdao regional economy and ecosystem, but rapid urbanization and industrialization of Qingdao have imposed numerous environmental stresses on Jiaozhou Bay. The influence of anthropogenic activities on the environment of Jiaozhou Bay is discussed based on satellite images, bathymetric maps and field survey data of validating remote sensing and GIS data. The results show that Jiaozho Bay has been in a significant stage of shrink in the area of Jiaozhou Bay about 37% from 1863 to 2003, the tidal influx reduction of 29% from 1863 to 1992. The mariculture area increased from 28.82 km^2 in 1988 to 49.15 km^2 in 2000. Wastewater and contaminants discharging into the Bay have been increasing since the 1950s. These resulted in significant changes in shrinking in area, reduction in tidal influx, the pollution of water quality and surface sediment.

Key words: anthropogenic influence, environment, Jiaozhou Bay, mariculture area, satellite images

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