

sensed images of MSS and TM in the year of 1978、1989、2000 and 2009, key reasons of change of coastline in the last 31 years are analyzed. The conclusions are as follows:

(1) In the last 31 years, the coastline length increased 187.32 km, with an average speed of 6.04 km/a;

(2) The coastline moved seaward 959.2241 km² with the speed of 30.9427 km²/a, and moved landward 0.4934 km² with the speed of 0.0159 km²/a, that is, 958.7307 km² land area increased in total;

(3) Transformation of coastline types is mainly from natural types to artificial types.

(4) Change of the conditions of sediment deposition, construction and extension of saline, cultivated fields and harbors were the main driving factors causing the change of Laizhou Bay coastline.

Coastline extraction based on remote sensing technology has the advantage of high spatial and temporal coverage, but it is possible that same features may have different spectral properties and different objects could reflect the same spectrum, therefore, it will affect the accuracy of coastline extraction to some extent. In addition, because of the resolution of remote sensing images, the precision of coastline length and location in this paper is limited.

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