

前植物生产层

基于RS和GIS的黄河口湿地景观变化研究——以垦利县为例

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摘要:

研究以垦利县为例, 在遥感和地理信息系统的技术支持下, 将马尔柯夫模型引入湿地景观格局分析和预测中, 利用1987年和2004年2个时期的卫星影像研究黄河口湿地景观格局的动态变化。研究表明, 至2010年, 湿地总面积不断减少, 尤其是天然湿地, 其中河流水面、苇地、滩涂和滩地, 较1987年分别减少了2 724.7、19 629.1、23 737.2和3 269.1 hm²。人工湿地总面积也有所减少, 但水库水面面积却增加了10 213.8 hm²。在现有的人类作用强度的情况下, 黄河口湿地景观格局可达到一个相对稳定的状态, 天然湿地面积仅占研究区总面积的6.8%, 而人工湿地的面积是研究区总面积的19.17%。

关键词: RS; GIS; 黄河口湿地; 景观变化; 马尔柯夫模型

Study on the landscape variation of the wetland around estuary of the Yellow River based on RS and GIS——A case study in Kenli County

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Abstract:

Based on RS and GIS technologies, the Landsat TM image in 1987 and 2004 were used as data resource to study the dynamic changes of the wetland landscape around the estuary of the Yellow River with Markov model. The results showed that the area of the wetland reduced, especially the natural wetland, reeds, seashore and bottomland by the end of 2010. Compared to that in 1987, the corresponding area decreased by 2 724.7, 19 629.1, 23 737.2 and 3 269.1 hm². The wetland landscape structure will reach a relatively stable status in the future, i.e., the natural wetland area will only account for 6.8% of total land area and it will be 19.17% for the artificial wetland area.

Keywords: RS GIS Yellow River estuary wetland landscape change Markov model

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