

基于高分辨率遥感影像的大洋河河口湿地景观格局变化

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Changes of wetland landscape pattern in Dayang River Estuary based on high-resolution remote sensing image.

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摘要 综合考虑遥感数据源的高分辨率特性以及大洋河河口湿地土地覆被与土地利用现状,建立了适合不同分辨率的河口湿地景观分类体系,并通过高分辨率遥感数据计算了研究区景观格局指数和景观格局转移矩阵,分析了1984—2008年研究区景观格局动态。结果表明:1984—2008年,研究区湿地景观组分变化剧烈,湿地景观由天然湿地向人工湿地转化,湿地核心区域面积缩减,天然湿地最大斑块面积指数下降,破碎化程度加剧;人工湿地分布面积扩大,斑块数下降,聚合度增大,且最大斑块面积指数的增大趋势明显。研究期间,人类活动对湿地影响的加大以及河堤的修筑和围海养殖面积的增加是大洋河河口湿地面积减少的主要原因,也是该地区湿地功能退化的主要原因之一。制定科学合理的长期发展规划、建立湿地自然保护区、保护河道、制定严格的围海养殖用地监管制度和大力发展资源型旅游产业是河口湿地保护的主要措施。

关键词: 遥感 景观 湿地 大洋河

Abstract: Based on the comprehensive consideration of the high resolution characteristics of remote sensing data and the current situation of land cover and land use in Dayang River Estuary wetland, a classification system with different resolutions of wetland landscape in the Estuary was established. The landscape pattern indices and landscape transition matrix were calculated by using the high resolution remote sensing data, and the dynamic changes of the landscape pattern from 1984 to 2008 were analyzed. In the study period, the wetland landscape components changed drastically. Wetland landscape transferred from natural wetland into artificial wetland, and wetland core regional area decreased. Natural wetland's largest patch area index descended, and the fragmentation degree ascended; while artificial wetland area expanded, its patch number decreased, polymerization degree increased, and the maximum patch area index had an obvious increasing trend. Increasing human activities, embankment construction, and reclamation for aquaculture were the main causes for the decrease of wetland area and the degradation of the ecological functions of Dayang River Estuary. To constitute long-term scientific and reasonable development plan, establish wetland nature reserves, protect riverway, draft strict inspective regimes for aquaculture reclamation, and energetically develop resource-based tourism industry would be the main strategies for the protection of the estuarine wetland.

Key words: remote sensing landscape wetland Dayang River

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