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## 论文

### 基于区域土地利用规划的黄河口湿地退缩风险分析

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#### 摘要:

为了解未来15 a土地利用长期规划对湿地变化的影响,明确建设用地扩张对湿地的威胁,揭示湿地丧失的潜在风险,制定积极的湿地保护策略,根据山东省垦利县2005年TM影像和2005—2020年土地利用规划数据,运用空间分析方法,分析了规划期间建设用地扩展对区域湿地的侵占威胁,并对湿地退缩的潜在风险进行了评估。结果表明:①研究区域现状湿地面积为107 497.80 hm<sup>2</sup>,占全区总面积的46.32%,湿地资源丰富;湿地类型多;②根据现有规划,到2020年,研究区建设用地平均每年将增长542.50 hm<sup>2</sup>;新增建设用地总量中,约29.54%是由湿地转换而来,湿地被建设用地扩展侵占比较严重;③规划期内,湿地面积呈下降趋势,约5 057.53 hm<sup>2</sup>的湿地将转变为建设用地;县域内各乡镇湿地减少的速度和幅度不同,区域差异较明显,其中董集乡和郝家镇变化幅度较大,垦利街道办事处、胜坨镇和永安镇也高于垦利县平均变化水平;在各类湿地类型的变化上,苇地减少幅度最大,15 a期间减少43.87%,灌溉水田面积减少最多,约2 211.75 hm<sup>2</sup>;④对湿地被建设侵占的风险分析表明,研究区内处于高风险的湿地面积共有17 024.45 hm<sup>2</sup>,低风险湿地面积约为29 846.89 hm<sup>2</sup>,无风险湿地面积为60 626.46 hm<sup>2</sup>,湿地损失的整体潜在风险较高。

**关键词:** 湿地退缩 风险分析 垦利县

### Risk Analysis on the Wetland Shrinkage of the Yellow River Estuary Wetland Based on the Land Use Planning

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#### Abstract:

With the rapid urban expansion in recent decades, the wetlands and farmlands of China's eastern coastal areas were increasingly destroyed. Many researchers have paid extensive attention to the phenomenon that wetland shrinkage and the landscape patterns change were the results of land-use and urban expansion. Kenli County of Dongying City in Shandong Province is located in the forefront of China's national development strategy named as "efficient ecological economic zone development in Yellow River Delta". As about 60% of the area of International Wetland Nature Reserve is located in the Yellow River Delta, Kenli County has plentiful of wetland resources. In order to know the effects of long-term land use planning on wetland changes, to clarify the threats of construction land expansion to wetland, to discover the potential risk of wetland loss and to develop positive wetland protection strategy, in this study, based on the TM Imagery of Kenli County in 2005 and the land-use planning data from 2005 to 2020, we analyse the threats of construction land expansion to wetland during the planning period by spatial analysis

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method and evaluate the potential risk of shrinkage wetland. The results showed that: 1) The present wetlands are distributed widely and the types are abundant; the area is 107497.8 hm<sup>2</sup>, which is 46.32% of the total study area. 2) According to the plan, the construction land will increase 542.5 hm<sup>2</sup> per year, of which 29.54% will be converted from the wetland, that is to say wetland occupation and encroachment by construction land is very serious. 3) During the planning period, the wetland area tends to decrease and about 5057.53 hm<sup>2</sup> of wetlands will be converted into built-up lands. The rate and extent of wetlands reduction of each village and town are different in Kenli County. In which, greater changes take place in Dongji Village and Haojia Town while changes in Kenli community office, Shengtuo and Yongan towns are above the average level. As for the wetlands type, the reed lands are the fastest in decline with a reduction of 43.87% in 15 years and the area decrease of irrigation fields is the largest, a reduction of approximately 2211.75 hm<sup>2</sup>. 4) Through the analysis, the high-risk wetland area is 17024.45 hm<sup>2</sup>, the low-risk is about 29846.89 hm<sup>2</sup>, while the non-risk is 60626.46 hm<sup>2</sup>; the overall loss of the wetland has high potential risk.

**Keywords:** wetland shrinks risk analysis Kenli County

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