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## LANDSCAPE PATTERN AND DESIGN FOR THE ECOSYSTEM IN CONSTRUCTED WETLAND

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### **Abstract**

The urban eco-environment is greatly affected by the ecosystem and landscape pattern of the wetlands nearby. Based on geological information system (GIS), this paper explores the landscape, plant distribution and animal distribution in a constructed wetland of the Yellow River Basin through field survey, identifies the landscape pattern of the ecosystem in the study area through correlation analysis, and thoroughly evaluates the health of the wetland ecosystem based on statistical results. The main conclusions are as follows: First, the water body has the greatest impact on landscape integrity of the constructed wetland, followed by the woodland. The two factors, together with other landscape types, form the overall landscape of the study area. Second, the landscape of the ecosystem in the study area features good continuity, as evidenced by the low degree of fragmentation. Third, the study area enjoys a normal ecological resilience, but has an average ecological value. The research findings lay the theoretical basis for restoring the ecosystem of constructed wetlands, as well as designing, optimizing and evaluating landscape patterns.

*Keywords:* constructed wetland, ecosystem, landscape design, landscape pattern

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