Influence of land use histories on vegetation and ecosystem services of restored wetlands in Tumen River basin, China

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Wetlands are among the world's most productive and valuable ecosystems. They are important habitats for a variety of flora and fauna, and are vital ecosystems that provide diverse services. They not only are essential for ecological functions such as maintaining biodiversity, controlling floods, and removing pollutants, but also serve necessary economic functions in rice and fish production, transport, and hydropower energy. Despite this, they have suffered a loss of 54%–57% of their area worldwide, which continues under pressures from agriculture, urban expansion, industrialization, and resource extraction. Conservation and restoration of wetland ecosystems is important issues for conservation biodiversity and sustainable use of ecosystem services. In this study, we focus on the lower of Tumen River, Northeast China where the wetlands decreased dramatically because of reclamation. Our objective was to determine the influence of land use and management histories on vegetation structure and ecosystem services and future analyse their associations with environmental factors. The results of this study are of great significance to the impact of management measures on wetland ecosystems, as well as the analysis and evaluation of vegetation restoration.

Keywords: land use histories, vegetation dynamics, wetland restoration, ecosystem services

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