

Social Economy Effects on Wetlands Change in China during Three Decades Rapid Growth Period

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Abstract : Wetlands are one of the essential types of ecosystems in the world. They are of great value to human society thanks to their special ecosystem functions and services, such as protecting biodiversity, adjusting hydrology and climate, providing essential habitats and, products and tourism resources. However, wetlands worldwide are degrading severely due to climate change, accelerated urbanization, and rapid economic development. Both nature and human factors drive wetland change, and the influences are variable from wetland types. Thus, the objectives of this study were to (1) to compare the changes in China's wetland area during the three decades rapid growth period (1978-2008); (2) to analyze the effects of social economy and environmental factors on wetlands change (area loss and change of wetland types) in China during the high-speed economic development. The socio-economic influencing factors include population, income, education, development of agriculture, industry, infrastructure, wastewater amount, etc. Several statistical methods (canonical correlation analysis, principal component analysis, and regression analysis) were employed to analyze the relationship between socio-economic indicators and wetland area change. This study will determine the relevant driving socio-economic factors on wetland changes, which is of great significance for wetland protection and management.

Keywords : socioeconomic effects, China, wetland change, wetland type

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