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"Gheorghe Asachi" Technical University of Iasi, Romania

THE SPATIOTEMPORAL EVOLUTION AND INFLUENCING FACTORS OF ECONOMIC-ECOLOGICAL COUPLING COORDINATION LEVEL IN THE YANGTZE RIVER ECONOMIC BELT OF CHINA

Ran Wu[1], Yan Liu[1,2*]

[1]*School of Geography and Environmental Science, Guizhou Normal University, Guiyang 550025, China*
[2]*Qiushi College (School of Digital Humanities), Guizhou Normal University, Guiyang 550025, China*

Abstract

Promoting the coordinated development of ecological and economic systems in the Yangtze River Economic Belt represents a crucial step in achieving China's sustainable development strategy. This study employs the coupling coordination degree model and dynamic spatial durbin model to investigate the evolutionary characteristics and influencing mechanisms of the coupling coordination relationship between economic development and ecosystem services across 1028 county-level units in the Yangtze River Economic Belt from 2011 to 2021. The findings reveal that: (1) the coupling coordination degree demonstrates significant temporal persistence with a lagged effect of 0.6858; (2) while showing an overall improvement trend, the development is characterized by persistent imbalance between economic development and ecosystem services; (3) spatial analysis identifies substantial disparities with low-value units concentrated in urban districts; (4) factor decomposition distinguishes total retail sales of consumer goods as a strong positive driver with long-term indirect effects of 0.3911, while industrial structural transformation exhibits negative impacts with long-term direct effects of -0.0061. Furthermore, taking upstream Guizhou as an example, its industrial structural transformation exerted localized negative effects, revealing regional specificities within the coordination development process. This paper underscores the necessity for region-specific policies that account for heterogeneous spatial effects, providing crucial insights for promoting coordinated ecological-economic development.

Key words: coupling coordination level, influencing factors, regional disparities, Yangtze River economic belt

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* Author to whom all correspondence should be addressed: E-mail: l1115y@sina.com