Abstract

The world is facing an unprecedented water crisis. As the largest water user globally, China accounts for 13% of the world's freshwater consumption. Additionally, China has risen to become one of the leading global economies, ascending to become the world's second largest economy in 2010. However, this progress has been achieved at the cost of massive resource consumption and intensified environmental pollution. Consequently, environmental problems, particularly those related to water, have been worsening rapidly. There is an urgent need for an institutional system that can adapt to societal needs and effectively achieve water environmental governance objectives.

The River Chief System (RCS) requires that the main leaders of the party and government at the provincial, municipal, county and township levels to serve as river chiefs for major rivers within their administrative jurisdictions. It has become one of the most important topics in China's policy agenda. Since its initial implementation in 2007 in Wuxi, Jiangsu Province, the system has been fully adopted across 31 provinces by 2017. This process, which followed the pathway of local innovation, central adoption and nationwide promotion, exemplifies the typical diffusion pattern of policy innovation in China. The primary objective of this research is to analyze the policy diffusion and prospects of the RCS, addressing the following three central questions:

- (1) What is the current research progress on the RCS? What are the main focuses and emerging trends in this field?
- (2) Why does diffusion of the RCS occur? How does diffusion occur? What are the outcomes of the diffusion?
- (3) What are the prospects of the RCS?

This research through extensive literature review and analysis, explores the current research hotspots and emerging research trends of the RCS. The findings indicate that research hotspots are concentrated in five areas: theoretical foundation, operational mechanisms, policy effects, challenges faced, and development directions. The research trends, primarily focus on the application of advanced technologies, public participation, the extension of this system to other environmental domains, and the advancement of the rule of law.

Then, this study analyzes the diffusion process and key characteristics of the system from three perspectives: the reasons for diffusion, the spatiotemporal pathways, and the outcomes of the diffusion. The findings indicate that the factors include both internal and external elements, as well as individual and organizational aspects. Mechanisms such as learning, imitation, competition, and coercion are critical forces driving the diffusion of the system. Temporally, the diffusion curve exhibits traditional S-shaped characteristics, while spatially, the diffusion progressed from the eastern to the central and then to the western regions, demonstrating both neighborhood and cross-regional effects. Vertically, the diffusion modes include both top-down and bottom-up approaches, while horizontally, intergovernmental learning is evident. Subsequently, the author explores the prospect of the system from the perspective of technological empowerment and offers policy recommendations on how to leverage technology to advance the system.

This study aims to provide readers with a comprehensive understanding of its current research status, offering insights for future studies and the system's continued development. Additionally, it may serve as a critical reference and a source of practical experience for water management initiatives in other countries.