

The Evolution, Logic, and Prospects of China's Water Environment Governance Policies Since the Reform and Opening Up - An Analysis Based on Historical Institutionalism

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Abstract:

Water environment governance has always been a top priority in China's ecological environment construction. Through the analysis framework of historical institutionalism, China's water environment governance policies have gone through four stages since the reform and opening up: the initial stage, detailed development stage, key promotion stage, and comprehensive deepening reform stage. With the influence of key junctures and path dependence, policy changes exhibit a distinct "discontinuous-equilibrium" gradual transition characteristic. From a structural perspective, power relations, governance concepts, and institutional construction provide impetus for policy changes; through historical analysis, policies have undergone three changes due to the impact of key junctures, while also forming a certain period of "self-locking" state under the influence of path dependence. In the upcoming 14th Five-Year Plan period, China's water environment governance policies should pay more attention to legal guarantees, improved cooperation mechanisms, and guidance from new governance concepts.

Keywords:

Water Environment Governance, Historical Institutionalism, Policy Changes

1. Introduction

Since the reform and opening up, China has continuously emphasized the governance of water environment and successively issued a series of laws and regulations in the field of water environment. From the reform and opening up in 1978 to the beginning of the "14th Five-Year Plan" in 2021, China has made significant progress in water environment governance, basically forming a water environment governance system with Chinese characteristics, comprehensive coverage, and multi-field aspects. Despite the achievements in water environment

governance since the reform and opening up, there are still many unresolved issues in both theoretical aspects and specific practices of governance. Against the backdrop of governance in the context of China's modernization, the effectiveness of water environment governance must be highly valued. As a top priority in ecological environment governance, the construction of its governance system plays a crucial role in promoting the modernization of government and national governance systems and capabilities.

The current research in China mainly focuses on several aspects of water environment governance, including sorting and analyzing water environment policies, studying the effects and optimization paths of policy implementation, analyzing policy tools, and conducting comparative studies on water environment governance policies. Although the types of research on water environment governance in China are diverse and the outcomes are rich, there is still a lack of relevant studies from the perspective of historical institutionalism in the limited research on sorting water environment governance policies. Therefore, studying China's water environment governance policies is not only about tracing the history of policy changes but also about constructing the logic of water environment governance and providing strong guidance for future directions. This article, based on the analysis paradigm of historical institutionalism, uses the "discontinuity-equilibrium" theory and path dependence of historical institutionalism as the logical framework for the evolution of China's water environment governance policies. Building on this foundation, from a structural perspective, the article analyzes the sequential combination of social concepts, group interests, and political institutions as three political variables in the process of China's water environment governance, explaining the driving mechanisms behind the evolution of China's water environment governance policies. The structural perspective and historical perspective of historical institutionalism together form the analytical framework of this article.

2. Evolution of Water Environment Governance Policy in China

The water environment refers to the spatial environment in which water is formed, distributed, and transformed in nature. It includes various forms such as rivers, lakes, reservoirs, ponds, swamps, and groundwater. China has a large scale of water environment, with surface water and groundwater resources facing certain spatial and temporal differences and environmental issues, gradually becoming a top priority in China's environmental governance. The process of water environment governance in China has gradually entered the track of rule of law construction after the reform and opening up. By analyzing key points, the evolution of China's water environment governance policies since the reform and opening up can be divided into four stages.

2.1. Initial Construction Period (1978-1994): Emergence of Policy System

After the reform and opening up in 1978, with the development of society, economy, and environment, a series of environmental problems emerged in the water environment, leading to increasing pressure and resistance in China's water environment governance. Therefore, the revised Constitution of the People's Republic of China in 1978, for the first time at the level of the fundamental law of the country, provided guidance on water environment governance, stating that "mineral resources, water bodies, state-owned forests, wastelands, and other land and sea resources all belong to the whole people; the state protects the environment and natural resources, prevents pollution and other public hazards." This was the first time since the reform

and opening up that China had put forward guidance policies on water environment governance at the level of the fundamental law of the country. Although these guiding principles were somewhat brief and lacked supporting laws and policies, they laid a constitutional foundation for China's water environment governance. Subsequently, at the end of 1978, the Central Committee of the Communist Party of China forwarded the "Key Points of Environmental Protection Work Report." While this report did not specifically cover water environment governance matters, it was the first time that the key points of environmental protection work were clearly outlined in the name of the Party Central Committee, providing some guidance and reference for subsequent water environment governance policies. The promulgation and implementation of the "Environmental Protection Law of the People's Republic of China (Trial)" on September 13, 1979, propelled China's environmental governance to a new level. The implementation of this law marked the beginning of the rule of law process in China's water environment governance and also signified the initial establishment of China's water environment governance system.

2.2. Key promotion period (1995-2007): policy promotion

Starting with the promulgation of the "Regulations on the Prevention and Control of Water Pollution in the Huai River Basin" by the State Council on August 8, 1995, the country shifted towards emphasizing targeted and micro-level pollution control. Subsequently, more specific and actionable water environment governance policies were introduced at the national level. For instance, the "Interim Measures for the Prevention and Control of Water Pollution in the Songhua-Liao River Basin" were enacted by the end of 1995, outlining requirements for pollution control and environmental protection in that basin. In 1996, the National People's Congress Standing Committee revised the "Law of the People's Republic of China on the Prevention and Control of Water Pollution," adding provisions related to the governance of important water bodies. Concurrently, to further advance the key governance of water environments, the State Council approved a series of plans for key basin governance.

In 2000, the promulgation and implementation of the "Detailed Rules for the Implementation of the Water Pollution Prevention and Control Law of the People's Republic of China" comprehensively refined water pollution prevention and control policies, making water environment governance more operational and further advancing the depth of water environment governance in China. In 2002, the Standing Committee of the National People's Congress reviewed and passed the "Water Law of the People's Republic of China" (revised in 2002), which, compared to the 1988 Water Law, made many amendments and additions to relevant policies on water governance. Article 12 clearly states the establishment of river basin management agencies by the competent water administrative department of the State Council in important rivers and lakes designated by the state. Therefore, the 2002 Water Law further clarified the specialized institutions for water environment management, transforming water environment governance from centralized jurisdiction by the central government to professional institutional management, reflecting the trend of shifting towards targeted and specialized governance of water environment during this period. In 2006, the Director of the State Environmental Protection Administration delivered a report on the current water environment situation and water pollution prevention and control work to the 25th meeting of the Standing Committee of the Tenth National People's Congress. This report comprehensively summarized the

progress and issues in China's water environment governance in the past stage and outlined the goals of water environment governance during the “Eleventh Five-Year Plan” period. Consequently, China has basically established a comprehensive water environment governance policy system combining both point and surface measures.

2.3. Comprehensive Elaboration Period (2008-2014): policy construction

In 2008, the Standing Committee of the National People's Congress reviewed and passed the revised “Law of the People's Republic of China on the Prevention and Control of Water Pollution,” which detailed different measures for pollution control in industrial, urban, agricultural, and shipping sectors in its fourth chapter. This revised law emphasized the prevention-oriented concept of water pollution control and highlighted aspects such as coordinated governance, emergency management, water environment assessment, and legal construction. In 2009, the State Council approved and forwarded the “Interim Measures for the Implementation and Assessment of the Special Plan for the Prevention and Control of Water Pollution in Key River Basins,” which further strengthened the governance of water environments in key river basins in China by introducing assessment methods to evaluate the governance scientifically and institutionally. Subsequently, in 2010, there were partial adjustments, abolishments, and revisions made to some water environment governance policies.

The convening of the 18th National Congress of the Communist Party of China in 2012 marked a new stage in the development of ecological and environmental construction in China. Ecological civilization construction was elevated to a strategic height at the national level within the framework of the “Five-sphere Integrated Plan,” receiving unprecedented attention from the central to local levels. Consequently, laws and regulations such as the “Regulations on Hydrology of the People's Republic of China” (2013) were successively revised. In 2014, the Ministry of Water Resources abolished certain regulations on water environment governance, paving the way for a broader policy space for the future legal construction and transformation of water environment governance in China.

2.4. Period of deepening reform (after 2015): policy upgrading

After 2015, during the period of deepening reforms, there was a transformation and upgrade of the policy system in China's environmental protection laws. The implementation of the new Environmental Protection Law in 2015 marked a significant change in the landscape of water environmental governance in the country. This law provided clear provisions on supervision, environmental protection, pollution prevention, information disclosure, and public participation. It also shifted the environmental protection goals from promoting social development to sustainable economic and social development, offering more specific and modern top-level guidance for water environmental governance in China. Subsequently, revisions to higher-level laws such as the Water Law of the People's Republic of China (2016) and the Regulations on Water Administration of the People's Republic of China (2016) further complemented and improved the policy system for water environmental governance in the new era. Additionally, alongside the continuous updates and adjustments to higher-level laws, local water environmental governance policies have been gradually established, for instance, Yunnan Province revised its Regulations on Water Administration and Regulations on Soil and Water Conservation in 2015 and 2018 respectively.

After 2015, both central and local water environmental governance policies in China have been continuously revised and improved, while the governance system itself has been undergoing gradual transformation. At the end of 2016, the General Office of the CPC Central Committee and the General Office of the State Council issued the “Opinions on the Comprehensive Implementation of the River Chief System,” which quickly gained popularity nationwide as a new milestone in China’s water environmental governance system. Although Zhejiang Province had established the River Chief System for water environmental governance as early as 2003, it had not received attention at the central level and its governance effectiveness was minimal. By 2016, in response to the frequent water environmental issues and the practical needs of deepening reforms, water environmental policies began to spread nationwide, making China’s water environmental governance more specific, operational, and supported by institutional and legal safeguards. Consequently, China’s water environmental governance policy system entered a new period of development and transformation.

3. The Structural Transformation Logic of Water Environment Governance Policies

Looking at the evolution of water environment governance policies in China, the three main political variables are the comparison of interests, progress in ideas, and macro institutional reforms. Different macroeconomic and political systems in different periods have provided corresponding policy arenas for water environment governance. Against this backdrop, the comparison and bargaining of interests among different stakeholders constitute the main driving force behind the evolution of water environment governance policies. Additionally, the transformation of societal, governmental, and individual environmental governance concepts forms the logical framework for the evolution of water environment governance policies in China. Therefore, the combination of interests, ideological views, and macro institutions at different times has led to the development of water environment governance policies in different stages.

3.1. The influence of interests on policy evolution

Interests represent the preferences of different entities. During a specific historical period, changes in the interests of various parties can disrupt the balance of interests. At this point, institutional changes can effectively adjust the comparison of interests among the parties, leading to a new equilibrium stage [1]. Therefore, the comparison of interests among different entities constitutes one of the main driving forces behind the evolution of water environment governance policies in China. The evolution of water environment governance policies in China mainly involves key stakeholders such as the public sector, the general public, and the private sector.

(1) Power game between central government and local government

After the reform and opening up in 1978, China was still in a transitional period from a highly centralized planned economy to an orderly and efficient market mechanism for several years. During this phase, the central government continued to play the role of an all-powerful government to some extent. Local governments mostly followed the pre-reform “plan-execution” mode, with their autonomy yet to be fully unleashed. Consequently, water environmental governance policies in China during this period were mainly determined and decided by the central government,

with little autonomy or legislative power given to local governments and departments. Therefore, water environmental governance policies in China during this period were mainly led by the central government, often presented in the form of macro environmental policies and national laws. In the mid to late 1990s, as the country gradually transformed government functions, the once all-powerful government began to shift towards a limited government. The interests of local governments were increasingly recognized by the central government, which no longer simply used the “plan-execution” mode to coordinate central and local relationships. Consequently, in the late 1990s, some policies related to local water environmental governance gradually entered the agenda. The “Regulations on the Prevention and Control of Water Pollution in the Huai River Basin” (1995) was the first systematic regulation issued by the State Council regarding local water environmental governance. Subsequently, a series of policies related to the governance of key local water bodies were successively issued and implemented.

Entering the new century, with the establishment and improvement of the market economy, there were new changes in the vertical intergovernmental relations. Ongoing government function reforms such as “delegating power, strengthening regulation, and improving services” continuously promoted the streamlining and efficiency of government development, while also dynamically adjusting the interests between the central and local governments. Comprehensive deepening of reforms led to the continuous delegation of power by the central government and the expanding autonomy of local governments. Water environmental governance increasingly adopted a guiding or even cooperative government governance mechanism, further strengthening the fundamental support role of local governments in the water environmental governance landscape. Consequently, local water environmental governance policies became more diverse, further driving the modernization of China’s water environmental governance policy system.

(2) The government’s consideration of the public interest

On the one hand, water environment management relies on human efforts, while on the other hand, the ultimate goal of water environment management is to benefit people. Therefore, the general public will always be one of the main driving forces behind the changes in water environment management policies. Policy formulation originates from the party and the government, and must take into account the interests of the general public. Since the reform and opening up, China has gradually begun to emphasize the role of people in water environment management, with increasing attention to the public’s environmental protection interests. The 1989 “Environmental Protection Law” highlighted the role of individuals in environmental protection. By 2014, the revised “Environmental Protection Law” provided clearer provisions on the role of individuals in environmental governance, reflecting the fundamental role of public interests in environmental protection, whether in establishing the principle of public participation or defining individual environmental protection responsibilities. Similarly, the implementation of water environment management policies has transitioned from early trial methods to modern practices such as public hearings and open solicitation of opinions, further demonstrating the government’s continuous emphasis on the interests of the general public. At the same time, the government itself is constantly transforming its governance philosophy, especially in the new era, with the continuous emphasis on a people-centered governance philosophy and the establishment of an innovative and citizen-satisfactory service-oriented government. This shift has made China’s water environment management more influenced by the

relationship between the general public and the government, and more dependent on the government's full consideration of citizens' interests.

3.2. Changes in governance concepts promote policy changes

When Weir Margaret analyzed the operational mechanisms of Keynesianism in the UK and the US, he pointed out that it was the differences in ideas that led to different outcomes of Keynesianism in the two countries [2]. Therefore, to a large extent, the changes in China's water environment management policies are also the result of changes in ideas. Water environment management policies are not only guided by the ecological and environmental governance concepts of the ruling party but also the result of continuous improvement in the overall societal environmental protection concepts.

(1) The change of the ruling party's concept of water environment governance

The Communist Party's concept of water environment governance plays a guiding role in China's water environment governance policies, which essentially reflect the Party's governance philosophy. Since the reform and opening up, the Party's water environment governance policies have undergone a transformation from "administrative command management" to "key management" to "cooperative governance" to "sustainable governance" in terms of the concept of water environment governance. From the late 1990s to the mid-1990s, the Party's water environment governance concept mainly exhibited the characteristics of "administrative command" [3]. This was manifested in water environment policies emphasizing the government's leading role in water environment management, with the government bearing the majority of water environment management responsibilities. With further deepening of the reform and opening up, the Party's water environment governance concept gradually shifted to "key governance." This was specifically reflected in the issuance of the "Regulations on the Prevention and Control of Water Pollution in the Huai River Basin" in 1995, followed by the introduction of a large number of local key river basins or water body environmental governance policies. It is noteworthy that from the reform and opening up to the early 21st century, the Party's water environment concept underwent a transition from macro to micro, but still remained within the framework of traditional government management concepts. In the new century, with further opening up to the outside world, the Party's governance concept underwent further transformation. Although China explicitly put forward the concept of water environment governance after the 18th National Congress of the Communist Party of China, in the early 21st century, the Party's water environment governance concept began to exhibit clear characteristics of "governance" or "cooperative governance." Similarly, entering a new era, as the Party attached importance to ecological civilization construction and integrated it into the overall layout of the "Five-sphere Integrated Plan," the Party's water environment governance concept underwent another innovation. The continuous introduction of concepts such as "Lucid waters and lush mountains are invaluable assets" and policies related to the "community of shared future for mountains, rivers, forests, farmlands, lakes, and seas" further promotes the transformation of China's water environment governance policies towards modernization, scientificity, and sustainability.

(2) The progress of the concept of social water environmental protection

The advancement of social ideologies or the gradual emphasis on water environmental governance by society, although not decisively shaping water environmental governance policies, is as essential as society and the environment carry numerous individuals and organizations. Therefore, the evolution of water environmental governance policies needs to consider the driving force of the overall renewal of social ideologies. At the beginning of the reform and opening-up policy, the long-term implementation of the planned economic system suppressed the social environment and atmosphere, leading to the overall disregard or unconsciousness of the concept of water environmental protection in society. With the continuous deepening of reform and opening-up, enterprises and individuals gradually engage in water environmental governance. In order to regulate the landscape of water environmental governance during this period, policies concerning the participation of the social public, private enterprises, and the third sector gradually emerged, with related policy documents increasingly emphasizing the roles and responsibilities of various social entities in water environmental governance. Although during this period, society as a whole began to possess awareness of water environmental protection, most of it was passively generated and accepted under the “directive” mobilization of the central government and the Party. As we entered the 21st century, further opening-up to the outside world deepened, and individuals and organizations in society began to autonomously engage with the concept of water environmental protection. In this context, the spirit of autonomy and sense of responsibility of the social public and organizations have become stronger, leading to an increasing enthusiasm for participating in water environmental governance. The societal concept of water environmental protection has shifted from passive acceptance to autonomous engagement. Especially since the 18th National Congress of the Communist Party of China, the growing awareness of societal participation in water environmental governance has gradually promoted the implementation of innovative measures such as outsourcing contracts, third-party assessments, and public supervision in water environmental governance, highlighting the explicit role of social ideologies in the evolution of water environmental governance policies in our country.

3.3. Policy changes derived from institutional construction

(1) Policy foundation: establishment of economic system

The economic foundation plays a decisive role in the superstructure. The governance of water environment and economic development complement each other, especially under the guidance of sustainable environmental governance concepts such as “Lucid waters and lush mountains are invaluable assets.” It is essential to pay attention to the positive interaction between the two. Since the reform and opening up, the economic system reform has steadily progressed, leading to the establishment of a socialist market economy system, which has significantly increased China’s productivity and economic strength while also bringing about various water environment issues. In the background of this, in the 1980s and 1990s, the country successively introduced policies such as the “Environmental Protection Law” and the “Water Law” to regulate economic activities that may have adverse impacts on the water environment. During this phase, water environment governance policies were more directive and regulatory in nature. After joining the World Trade Organization in 2001, China’s economic development entered a new stage. However, the rapid economic growth has generated more water environment issues that the existing policy systems were not equipped to handle. Consequently, economic development

has spurred the creation of more water environment governance policies. Post-2012, concepts related to the relationship between economic development and environmental governance, such as the “Two Mountains Theory,” have emerged continuously.

(2) Policy mapping: political system reform

The political system, as a key factor in political variables, is one of the important driving forces emphasized by historical institutionalism for significant changes. Since the reform and opening up, political system reform has progressed in parallel with economic system reform [4]. From a macro perspective, until before 1992, China’s political system reform was steadily advancing, still bearing the characteristics of the planned economy era. This led to a strong “command-execution” feature in China’s water environment governance policies during this period. The convening of the 14th and 15th National Congresses of the Communist Party further clarified the direction of government function transformation, institutional reform, streamlining, and efficiency enhancement in China’s political system reform. Moreover, the delegation of power to local levels expanded local autonomy, gradually increasing the discourse power of local governments in water environment governance. Therefore, the continuous advancement of political system reform optimized government levels, enhanced the participation efficiency of local governments in water environment governance, and promoted the implementation of key water environment governance at the local level, thus facilitating the transition of China’s water environment governance policies towards targeted governance. In the 21st century, as political system reform progresses alongside economic development entering deeper waters, several institutional reforms have driven the transition of water environment governance institutions, making them more specialized and professional. Particularly since the 18th National Congress of the Communist Party, water environment policies have undergone systematic adjustments along with the deepening reforms in the country. The emergence of a series of new water environment governance policies at both central and local levels, as well as the abolition or revision of old policies, reflects a comprehensive transformation and upgrade of water environment governance policies under the backdrop of deepening reforms in the new era. From a medium and micro perspective, the establishment of environmental inspection systems and the River Chief System have further refined China’s water environment governance policy network. Thus, the transformation of the national political system not only acts as a catalyst for China’s water environment governance policies but also directly reflects the evolution process of China’s water environment governance policy system.

4. Historical Change Logic of Water Environment Governance Policies

4.1. Key node: Opportunity for change of water environment governance policy

Historical institutionalism considers key nodes as the cornerstone of institutional analysis, emphasizing the “discontinuous” impact of key nodes on the equilibrium state under institutional path dependence. The analysis of key nodes needs to focus on three aspects: the “early stage”, the “middle stage”, and the “late stage”. The early stage refers to the antecedents and reasons for the emergence of key nodes, the middle stage refers to the process mechanisms and logical implications of key node operation, and the late stage refers to the significant effects and lasting impacts generated by key

nodes. According to Collier, the emphasis of key node analysis lies in the final part, namely the significant or lasting impacts of key nodes. Therefore, key nodes have caused a disruptive effect in the process of institutional development, leading to institutional change and altering the direction of institutional development. Since the reform and opening up, China's water environmental governance policies have undergone three policy transitions influenced by key nodes, resulting in a transition path of water environmental governance policies from macro-management to targeted management, cooperative governance, and sustainable governance.

(1) Beginning of water environmental governance

In July 1994, a severe water pollution incident occurred in the Huai River [5]. This serious water environmental pollution incident directly exposed significant loopholes in China's water environmental governance field, leading to the first rupture in China's water environmental governance policy. Prior to this incident, China's water environmental governance system was very general, with gaps in legislation at the local and micro levels, leading to difficulties in policy implementation such as lack of guidance, unclear regulations, and ambiguous operations in water environmental governance. Following this vicious water pollution incident and considering the frequent occurrence of floods and water pollution incidents in the Huai River Basin, the Party and the state immediately attached great importance to it. Consequently, in 1995, State Council Decree No. 183 was issued, along with the implementation of the "Interim Regulations on the Prevention and Control of Water Pollution in the Huai River Basin." This regulation was the country's first basin legislation. The promulgation of this regulation was not only of great significance for improving the water environment in the Huai River Basin but also further promoted the construction of China's basin governance and water environmental governance system. Following the promulgation of the "Interim Regulations on the Prevention and Control of Water Pollution in the Huai River Basin," a series of basin governance policies and key water body environmental governance policies were successively introduced, driving the transition of China's water environmental governance towards targeted governance.

(2) The policy system has been comprehensively refined

Since the summer of 2007, severe water pollution incidents have frequently occurred in many parts of China. Starting from the water pollution incident in the Songhua River Basin in 2005, the country entered a high incidence period of water pollution accidents. In just two years, serious water pollution incidents erupted in various basins such as the Beijiang River, Qi River, Songhua River, Baiyangdian, and Xinjiang River. The outbreak of the Taihu Lake and Shuyang water pollution incidents in 2007 marked China's entry into a phase of intensive water pollution outbreaks [6]. In response to a series of major water pollution incidents since 2005, the country revised and implemented the Water Pollution Prevention and Control Law of the People's Republic of China in 2008. This legal revision firstly detailed the categories of water environmental pollution for classified management. Secondly, considering the transboundary characteristics of basins, it emphasized comprehensive basin management and regional coordination. It also highlighted the roles and responsibilities of enterprises and individuals in water environmental governance, further improving monitoring, supervision, and reward and punishment measures. Lastly, the law emphasized the sustainability and prevention principles in water environmental governance. In 2009, the Water Law and the Soil and Water

Conservation Law of the People's Republic of China were also revised, enhancing the main responsibilities and cooperation mechanisms in water environmental pollution control. Consequently, China's water environmental governance policies experienced a second rupture after the intensive outbreaks of water pollution incidents in 2007, leading to a more refined and sustainable transition in water environmental governance policies.

(3) Governance policy transformation

In 2015, the enactment of the strictest environmental protection law in history, the revised Environmental Protection Law of the People's Republic of China (2015), greatly transformed China's water environmental governance policy system in the new era and created a favorable policy space for the diffusion of the River Chief System policy. By the end of 2016, the General Office of the Communist Party of China Central Committee and the General Office of the State Council issued the "Opinions on the Comprehensive Implementation of the River Chief System," expanding the River Chief System as a national water environmental governance system nationwide. In June 2017, the newly revised Water Pollution Prevention and Control Law for the first time included the River Chief System in the legal policy framework of China's water environmental governance at the national level. As a result, the River Chief System started to be fully implemented nationwide as a new starting point for China's water environmental governance system. Under the promotion of the River Chief System concept, more and more governance concepts have emerged in the field of water environmental governance. In 2018, the General Office of the Communist Party of China Central Committee and the General Office of the State Council issued the "Guiding Opinions on Implementing the Lake Chief System in Lakes," initiating the implementation of the Lake Chief System on a broader scale. Meanwhile, local authorities are actively exploring new mechanisms for water environmental governance under the River Chief System, with concepts like "Reservoir Chief System," "Beach Chief System," and "Bay Chief System" emerging frequently, reflecting the positive exploration and vivid practice of local water environmental governance. Therefore, the introduction of the River Chief System policy can be seen as the most recent key turning point in the evolution of China's water environmental governance policies, with its intermittent effects driving the precise, systematic, responsible, and modern development of China's water environmental governance policies.

4.2. Path Dependence: the historical choice of water environmental governance policies

Historical institutionalism emphasizes the role of path dependence in regulating the state of institutional equilibrium during the analysis of institutional change. Path dependence theory, originating from the field of economics, is borrowed by historical institutionalism to indicate that once a certain institution is chosen, there is a high probability that it will continue along that institutional pattern because the benefits of choosing that institution may be the greatest and the costs of changing the institution and exiting it are very high [2]. Therefore, historical institutionalism uses path dependence theory to explain why institutions persist long-term and remain in a state of equilibrium. Path dependence, together with critical junctures, forms the historical analysis framework of institutional change. The mainstream institutional analysis framework emphasizes the coordination and integration of the two, thereby promoting institutions to move from disruptive equilibrium towards gradual transformation,

which is consistent with the historical analysis framework in this article [7]. While conducting path dependence analysis, it is important to note that although path dependence is a form of “lock-in” for institutions, this state of lock-in has both positive and negative feedback mechanisms. Path dependence can on one hand promote the survival of institutions, but on the other hand, it may also hinder institutional change, leading to a period of stagnation in institutional transformation[8]. Therefore, from the perspective of path dependence, China’s water environmental governance policies are clearly influenced by the costs of political system reform and governance concepts, resulting in a phenomenon of policy “lock-in” for a certain period of time.

In terms of the costs of political system reform, even though political system reform in China has progressed in parallel with economic system reform since the reform and opening-up, political system reform is more complex and intricate. Water environmental governance policies stem from the political system, and if political relationships cannot be straightened out and political institutions cannot operate efficiently, then the water environmental governance policy system cannot be established. Up until the mid-1990s, China’s political system reform was in a phase of steady adjustment. Therefore, during this period, China’s water environmental policies, following the 1979 “Environmental Protection Law (Trial)”, were under high pressure, with a scarcity of laws and regulations, displaying characteristics of directive management. Due to the long-term influence of the political characteristics of the planned economy era during this period, the costs of political system reform were notably high, leading to a slow progress in political system reform. Entering the 21st century, China’s political system reform gradually entered a more challenging phase, with frequent occurrences of “black swan” and “gray rhino” events highlighting the difficulties faced by the reform. Consequently, after being influenced by disruptive junctures, water environmental governance policies gradually moved towards a stable state, specifically transitioning towards orderly advancement in central and local legislation. In the new era, against the backdrop of comprehensive deepening reforms, although adjustments have been made to water environmental governance policies, they are still overall transitioning and developing towards modern governance.

Regarding governance concepts, the transition of concepts is a relatively lengthy process. Since the reform and opening-up, at the government level, China’s water environmental governance concepts have undergone a gradual shift from management to governance. The dominance of management concepts persisted until the late 1990s, with the government’s management concepts leading to water environmental governance policies displaying characteristics of government orientation. During this stage, water environmental governance measures were relatively singular, mainly consisting of government macro-management or coercive measures with obvious characteristics of point source governance and post-event management. Such government management concepts not only led to the “self-locking” of water environmental governance policies under government management concepts but also to some extent hindered the transformation and upgrading of water environmental governance policies. However, entering the 21st century, influenced by foreign “governance” concepts, water environmental governance began to gradually gain attention. Governance concepts demonstrate richer means, more diverse subjects, more scientific methods, and an emphasis on performance, leading China’s water environmental governance to continuously strengthen policies under the guidance of

governance concepts. Since the 18th National Congress of the Communist Party of China, more policies related to water environmental governance have been introduced, with governance methods becoming more scientific and modern. However, from a long-term historical perspective, these policies are all derived under the path dependence of governance concepts, fundamentally not breaking away from the core features of governance concepts. Therefore, under the path dependence effect of the 20th century, management concepts to some extent exhibit a negative feedback effect, while the emergence of governance concepts continuously drives water environmental policies to undergo positive feedback and self-enhancement.

5. Conclusion and Prospect

Since the reform and opening up, China's water environment governance policies have undergone multiple stages of changes, and they have now reached a level of legal and scientific sophistication. However, there is still a certain gap between the effectiveness of water environment governance and the people's aspirations for a better life. The 14th Five-Year Plan period is a crucial juncture for the modernization of China's ecological environment. How to construct an ecological community of mountains, rivers, forests, farmlands, lakes, and grasslands under the new development concept is a question that needs further consideration in water environment governance. Looking at it from a historical institutionalism perspective, future water environment governance policies need to focus on several key points.

Currently, significant progress has been made in the construction of water law in various fields such as the Water Law, the Law on the Prevention and Control of Water Pollution, and the Law on Soil and Water Conservation. Since the 18th National Congress of the Communist Party of China, against the backdrop of comprehensive deepening reform and ecological civilization construction, water environment governance policies have been continuously optimized and adjusted, yet some policy gaps still exist. Additionally, the evolving water environment governance policy system has brought about issues like conflicts in provisions, unclear responsibilities, and inadequate safeguards. Therefore, on one hand, there is a need to strengthen top-level design to address more policy gaps. For example, the upcoming Yangtze River Law and Yellow River Law will be beneficial supplements to the cross-basin water environment governance policy system. On the other hand, it is crucial to enhance legal support, introduce more detailed policy implementation rules to make them operational, and further clarify the roles and positions of diverse entities in water environment governance. Moreover, increasing environmental supervision and relevant punitive measures will further institutionalize water rights.

China's water environment governance model has gradually shifted from traditional government control to a collaborative governance model. However, this collaborative governance is still relatively new. While central government accountability and target control over local governments have had some success, solely relying on the government itself is no longer sufficient to address the complex and intricate water environment issues of the current stage [9]. As the relationship between government and enterprises becomes clearer, companies are becoming more dynamic in participating in water environment governance. Similarly, the increasing autonomy and participation rights of the public have made them important actors in water environment governance, and the third sector is gradually converging in the field. The involvement of numerous entities necessitates the establishment and improvement of cooperative platforms and mechanisms. It is essential to collectively build a positive

interactive pattern involving multiple participants. This requires the government to delegate power adequately and empower society to stimulate participation and interaction. Furthermore, on platforms where multiple entities participate, a governance mechanism that integrates the rule of law, moral governance, and self-governance should be established to make the water environment governance system more diverse and orderly.

From a historical institutionalism perspective, ideologies can both promote policy changes and hinder policy development. Therefore, the importance of ideologies in water environment governance is self-evident, emphasizing the guiding role of ideologies is crucial. China's water environment governance ideologies have transitioned from management to governance. Since the 18th National Congress, under the guidance of governance ideologies, a rich and diverse conceptual system for water environment governance has been established. Ideologies such as "Lucid waters and lush mountains are invaluable assets" and the concept of an ecological community of mountains, rivers, forests, farmlands, lakes, and grasslands with Chinese characteristics have further propelled the scientific and modern development of China's water environment governance. In the 14th Five-Year Plan period, it is not only important to imbue water environment governance ideologies with new connotations but also to continually strengthen their guidance over governance practices. Through the influence of scientific, modern, and sustainable ideologies in water environment governance, the modernization and transformation of China's water environment governance policies can be further advanced.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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References

- [1] Qin, X.; Zhu, S.N. Key Nodes, Driving Mechanisms, and Environmental Policy Changes (1978-) - An Analysis Based on Historical Institutionalism. *Journal of Sichuan Administration Institute*, 2022, 1-15.
- [2] Weir, M.; Skocpol, T. State structures and the possibilities for 'Keynesian' responses to the Great Depression in Sweden, Britain, and the United States. *Bringing the state back in*, 1985, 107.
- [3] Liu, J. Changes and Implications of the Party's Leadership in Ecological Environment Governance Concepts and Practices. *Journal of Inner Mongolia Agricultural University (Social Sciences Edition)*, 2022, 1-12.
- [4] Fang, N.; Zhang, Q. The Process and Logic of China's Political System Reform. *Cultural Horizons*, 2017, 06, 27-36.
- [5] Yu, Z.P.; Xu, Q.J.; Wei, J.; Hu, S.; Li, A.M.; Xie, X.C.; Song, Y.N. The 70-year Governance Journey of the Huai River and Prospects for the "14th Five-Year Plan". *Journal of Environmental Engineering Technology*, 2020, 10(05), 746-757.

- [6] He, X.Z.; Li, Z.Q. Institutional Defects in China's Environmental Governance Policies and Their Corrections - A Case Study of the “Taihu Lake Algal Bloom Incident”. *Journal of Hubei University of Economics (Humanities and Social Sciences Edition)*, 2009, 6(03), 5-6.
- [7] Duan, Y.B.; Hou, R. Research on Path Dependence as a Model of Institutional Change. *Economic Issues*, 2016, 02, 24-31.
- [8] North. *Institutions, Institutional Change, and Economic Performance*. Shanghai: Sanlian Bookstore, 1994, 138.
- [9] Chen, H.S. Legalization of Environmental Inspection System: Positioning, Dilemma, and a Way Out. *Law Review*, 2017, 35(03), 176-187.



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