

The Normative Analysis and Research on the Environmental Science Connotation of the Yangtze River Basin

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Abstract: Comprehensively strengthen the protection of the ecological environment of the Yangtze River is of great strategic significance for biodiversity conservation. And it's of great importance for breaking down administrative divisions and barriers, improving ecological environment, promoting regional cooperation and stimulating endogenous dynamics. Among them, the concept of "Ecological Priority and Green Development" occupies a dominant position. Although the local government launched a series of special rectifications around water sources, livestock area settings, chemical industries over the past decade. However, due to the lag of ecological legislation concept in previous work as well as the poor coordination, resulting in the current inadequate ecological development. Therefore, by using normative analysis and a combination of theory and practice analysis method, this article analyzes the environmental science measures and practical experience of the green ecological development of the Yangtze River basin in Hubei Province in recent years, designs the operable ecological construction plan for improving the urban environmental governance and proposes reform measures with the overall goal of improving the quality of the ecological environment, including establishing the eco-friendly values of "ecological-priority", remodeling of the concept of environmentalism, consolidating the cooperation between departments and raising citizens' law-abiding consciousness and so forth, to improve the efficiency of ecological environmental protection of the Yangtze River basin.

Keywords: Ecological Protection; Yangtze River Basin; Environment Protection;

Green Development

1. Introduction

The Yangtze River has unique geographical advantages and great potential for ecosystem development, and it's also an significant support for China's ecological environment improvement. As Chinese leader stressed at a symposium on promoting the development of the Yangtze River Economic Belt, On January 5, 2016, Yangtze River is the mother river of our Chinese nation, to promote the development of the Yangtze River Economic Belt, we must consider the long-term interests of the Chinese nation, put the restoration of its ecological environment in an overwhelming position, make great efforts to protect and not make great development, and strive to build it into a new way with beautiful ecology, smoother traffic, livable environment, unified low-carbon and scientific mechanism. Based on this overall strategic thought, the development of the Yangtze River basin must rely on the most stringent ecological system.

In recent years, the Chinese government has carried out a series of overall deployments on the themes of ecological civilization construction, ecological environment protection and the rule of law for ecological security.

For example, a series of specialized policies and regulations have been formulated on issues or projects related to the protection and development of the Yangtze River Economic Belt in Hubei Province, such as the development of green and intelligent transportation, the promotion of industrial integration and development, the cultivation of world-class industrial clusters, the construction of characteristic towns and beautiful villages, and the promotion of cultural innovation [1]. For example, the Measures for the Assessment of Cross-Border Cross-sectional Water Quality in the Yangtze River Basin, the Special Plan

for the Construction of the Integrated Three-dimensional Green Transport Corridor in the Yangtze River Economic Belt, the Regulations on the Prevention and Control of Water Pollution, the Measures for the Assessment of The Water Quality of the Cross-Border Section of the Yangtze River Basin, the Regulations on the Protection of Lakes and the Special Plan for the Development of green industries in the Yangtze River Economic Belt, etc., provide a strong guarantee for the ecological restoration and protection, green development and law enforcement supervision of the Yangtze River. However, in general, the current implementation of "Ecological Priority and Green Development" in Hubei Province still remain a few of loopholes that cannot be ignored, especially in the area of ecological rule of law. Not only the concept of lagging legislation needs to be updated, but also the fragmented legislative pattern is not conducive to the implementation of the "Ecological Priority and Green Development" related policies in the Yangtze River basin. In addition, there is still room for administrative law enforcement and cooperation between cities along the river in and around Hubei Province, as well as in relevant departments. Furthermore, the complexity and severity of ecological environment damage also aggravates the difficulty of judicial relief for ecological environment damage composed of administrative public interest litigation and civil public interest litigation. Last but not the least, the current national education on the ecological rule of law is relatively dated, and the content of the policy statements as well as the interpretation of regulations is not timely, which also makes the citizens difficult to effectively comprehend the connotation of the new development philosophy which attach great importance to ecological environment.

2. Research Fundamental and Existing Problems

The Yangtze River Basin involves a number of provinces, and there are large differences in ecological development and environment protection issues between upstream and downstream, and different interest demands require the implementation of the rule of law concept of environmental science and improvement from different aspects [2].

International Conference on Humanities, Social and Management Sciences (HSMS 2024)

As an important province along the Yangtze River basin and a strategic hub for the development of the middle reaches of the Yangtze River, Hubei Province has made many positive efforts in promoting the "rule of law process" of the protection and development of the Yangtze River basin in recent years, and has achieved a series of remarkable results in ecological restoration and green development. In recent years, Hubei Province has made huge efforts and achieved remarkable progress in promoting the process of green development of the Yangtze River Economic Belt and the rule of law, mainly reflected in the creation of policies and regulations and the strengthening of ecological restoration and environmental protection in accordance with the law.

On the one hand, Hubei Province has continuously strengthened its policy and regulatory initiatives aimed at promoting the green development of the Yangtze River basin, and on the basis of strictly complying with the overall requirements and deployment of *the Outline of the Yangtze River Economic Belt Development Plan* issued by the Chinese government in 2016, and focused on formulating and implementing a series of regulations and policy documents aimed at protecting the Yangtze River's ecological environment and promoting green development. This *Outline* covers 8 cities and counties in Hubei Province, and uses "forward" and "reverse" thoughts respectively to define the major implications of green development, including maintain the ecological security of the Yangtze River, enhance the comprehensive service capacity of the ecosystem, strengthen the construction of ecological protection system, and undertake the ecological red line and the total amount of resources constraint mechanism as a whole.

On the other hand, Hubei Province also follows the overall concept of "*Ecological Priority and Green Development*", carry out environmental protection and ecological restoration work according to the law strictly and implement a series of effective environmental protection and ecological restoration projects. That includes proceed industrial pollution control scientifically, dispose urban sewage and garbage on a regular basis, reduce non-point agricultural pollution, reduce ship pollution, etc [3]. For example, according to the Table 1, the government of Hubei Province initiated the

province's ecological protection red line survey and special rectification projects for chemical pollution along the river on the basis of special inspection of 137 centralized drinking water sources in 102 counties and cities in 17 cities and counties. Besides, in conjunction with the Outline and its geographical characteristics, Hubei Province formulated water quality compliance programs for 46 sections of 27 river basins, and implemented a total of 2,867 water pollution reduction projects. And based on that, local government also completed a comprehensive environmental remediation project for 1056 villages, designated 2,141 no

livestock zones and relocated or closed 2,931 live pig farms and 1,833 other livestock and poultry farms in the restricted areas. On the chemical governance side, local government adopted a hierarchical classification and disposal method, take "One move, Two prohibitions and One stop" policy towards the heavy chemical and paper industry enterprises along the river. A total of 92, 59 and 135 chemical factories or enterprises received administrative sanctions, abort or pause decisions, and move way or close for rectification within a limited time settlements respectively.

Table 1. An Overview of Ecological Restoration in the Yangtze River Basin in Hubei Province

Hubei Province (17 municipalities and states, 102 counties and cities)	Water resources governance	Special inspection for centralized drinking water resources (137)	
		Ecological red line survey (the whole province)	
		Heavy chemical industries governance along the river (the whole province)	
		Dictate section water standards (27 watersheds, 46 sections)	
	Water pollution reduction projects (2867)		
	Poultry governance	Relocation or closure within a limited period of time	Prohibition live pigs (2931)
			Other livestock (1833)
Chemical governance	Heavy chemical industries along the river (One move, Two bans, One stop)	Administrative sanctions (92)	
		Abort or pause (59)	
		Move away or close for rectification within a limited time (135)	

As is well-known, the ecological rule of law not only contains the institutional implications and civilization order requirements, but also needs to be realize through the construction of the rule of law [4]. Among them, it not only contains strict adherence to macro-policies, but also combines the characteristics of local environment protection to make adjustments according to discrepant local conditions. In addition, joint efforts should be make to combine the legislative concepts, rules and regulations supplements, law enforcement cooperation and law-abiding consciences. Based on the analysis of environmental statistics, in recent years, the total phosphorus emissions of industrial sources and living sources along the Yangtze River basin have shown an overall downward trend, but the proportion of the whole country has increased inversely [5]. Combined with the official published data, this paper uses normative analysis methods and scientific analysis methods to conclude the main defects and improvement countermeasures in the process of promoting the development of the Yangtze River basin in Hubei Province.

2.1 The Concept of Ecological Legislation Lags behind and Inadequate Legal Regulations

As mentioned above, although the development strategy and ecological legislation of ecological civilization established at the national level can lead local ecological environment and green development to a certain extent, combined with the actual ecologic environment status of different provinces and cities, the specific strategic planning in the suitability and operability still need to be strengthened and improved. In fact, China is still in the exploration stage of ecological civilization construction at present, it is not only difficult to overcome the obstacles of "terminal governance", but also hard to implement all development phases simply by carrying out special projects or campaigns at a macro-policies level.

Taking ecological criminal law as an example, compared with traditional environmental crimes, ecological crime in the context of ecological civilization construction is different in offenses, objects and also the harmfulness of

behaviors. The former is mostly focus on the direct destruction that damage environmental natural resources which is punishable, while the latter includes, but is not limited to, direct destruction such as pollutant emissions and behaviors that are difficult to show ecological hazards for a short time. That is, the object of ecological crime has been expanded to the ecological environment and living space of human beings and other living organisms, and the harm of such crimes is more serious than that of traditional offenses [6]. In addition, ecological information with the broad participation of multi-subjects can only be roundly collected by justice practitioners who uphold advanced ecological legislation concepts, and so can they provide comprehensive information for the promulgation of local legal norms.

Presently, the repressive legislative features in the green development process of the Yangtze River basin in Hubei Province are particularly prominent. Although we should affirm the positive effects of traditional legislative models in reducing ecological safety risks, combating illegal discharge of sewage, and implementing corporate responsibility, we still cannot ignore the damage that small and medium-sized enterprises, which are backward in industrial patterns and have no funds or technology to upgrade their ecological patterns, may do to ecological interests as ecological stakeholders.

2.2 The Law Enforcement Level Varies from Region to Region with Poor Departmental Cooperation

Firstly, as mentioned above, local government of Hubei Province has actually made outstanding efforts in promoting the development of the Yangtze River Economic Belt by adhering to the "Ecological Priority and Green Development" concept, and indeed achieved some positive results to some extent. Different functional departments, nevertheless, remain short of talent reserve, technological innovation, stable financial support and mechanism improvement, which become to the main obstacle in sustainable ecological civilization development. Some cities and counties even take little account of the actual investment in ecological environment protection as well as civilization construction, and fail to coordinate the relationship between ecological protection and ecosystem

development [7].

Secondly, the geographical characteristics of the development of the Yangtze River basin require that the ecological rule of law construction should always uphold the concept of "Globalization, Integration and Prospection". However, due to the differences such as economic development level, industrial structure characteristics and key development industry categories between Hubei Province and other provinces and cities, local governments may have different views when understanding "*Green Development*" concept and the degree of demand for supply-side structural reform will differ from each other inevitably as well. Especially when local governments fail to combine the characteristics of productivity layout, spatial pattern and industrial structure in the region, it's hard for authorities to make targeted and focused ecological development planning.

Thirdly, there're still remain some problems such as the inadequate and ineffective policies implementation, unclear authority and responsibility division, and administrative omission in the process of implementing the relevant policies. For example, during the assessing performance of the ecological governance, the indicators of resource consumption, environmental damage and ecological benefit had been relatively ignored by some administration departments. In addition, in the process of ecological management assessment, some departments neglect to examine the resource consumption, environmental damage or ecological benefits and other indicators, and do not set the assessment weights that reflect the leading value of "*Ecological Priority and Green Development*".

2.3 Unsatisfied Ecological Lawsuit Results

At present, the Yangtze River basin is in the late stage of rapid development, and the intensity of major pollutant discharges has declined, which has improved the quality of the water environment to a certain extent, but the stable improvement of the quality of the ecological environment also requires multi-departmental coordination [8].

On the one hand, many "multi-trial" mode environmental resources cases including civil, criminal and administrative cases, which involve various degrees of environmental

rights as well as obligations. Different types of litigation cases are adjudicated by diverse courts, such as the Environmental Court or the Specialized Environmental Resources Tribunal. These cases concerns not only the local governments and the specific environmental protection departments, but also closely related to the regional water conservancy departments and marine fisheries departments, which enjoy certain environmental administrative power. Especially in the specific context of the development of the Yangtze River basin it is especially necessary to take the dialectical relationship between ecological protection and green development into consideration.

On the other hand, different environmental cases may be more difficult to cognize or estimate than ordinary ones due to the varying ecosystem damage.

Besides, the criminal law involving environmental legal benefits also confronted with rule-based "*Consequentialism*" tendency and always take the "substantive legal interest infringement" as the criterion for the existing law, which aggravates the difficulty of causality determination and scientific evidence judgment of environmental pollution and damage results. In addition, the lack of scientific professionals or expertise makes it more difficult to determine the judicial determination of environmental damage cases.

3. The Method Application and Implementation Paths

3.1 Establish the Legislative Concept from "Anthropocentrism" to "Ecological-Centered"

Studies have shown that the influencing factors of the ecological carrying capacity of the Yangtze River basin have been dominated by environmental governance and energy conservation and emission reduction, and have gradually changed to be dominated by social progress and development [9]. Under the domination of the traditional "*Anthropocentrism*" legislative concept, we always put our own interests before the benefit of ecological and environmental legal interests, and legislative practices have to wait for the actual damage results before the criminal law evaluation.

Under the background of high-speed social development, this traditional

"*Anthropocentrism*" ecosystem assessment mode is hard to meet the needs of ecological protection, while cause long-term damage ultimately.

China is in the key stage of ecological civilization construction, industrial transformation and green development at present, and are in desperate need of the ecological legislation concept transformation from "Anthropocentrism" to "Ecological-Centered" in order to carry out far-sighted and forward-looking legislative adjustment for the development of the Yangtze River basin. That's because any industry factories or petrochemical plants, no matter how strict sewage drainage standard they have, may negatively contribute the ecological environment more or less. And the "Ecological-Centered" legislative purport always combine "ecological protection red line", "environmental quality bottom line", "resource utilization boundary" with "negative list for environmental industries" together throughout the whole process of the industrial production and environmental protection, and achieve a balance between the two value appeals in the true sense. Moreover, this transition can also bring together local governments, law enforcement and judicial departments as well as individuals together in environment comprehensive administration effectively. Especially for those heavy, energy-intensive chemical enterprises, the "Ecological-Centered" legislative variation may accelerate the transformation and upgrading of the enterprises, and substantially eliminate the deficiency of the "repressive" ecological protection measures in punishing the illegal docks, illegal sand mining and excessive pollution behaviors.

3.2 Attach Great Importance in Policy Planning and Regulation Supplement

Scientific legislation needs to take into account all aspects of legislative methods, strategies, techniques and procedures, and combine the basic social development situation of the whole country [10]. The rule of law between regions should always based on the coordination of interests, the promotion of sustainable development, the enhancement of the core competitiveness, and the consolidation of a sound environment for regional development. In view of the fact that

the Yangtze River passes through several provinces and cities in China, the development of the Yangtze River basin is bound to be inseparable from the coordination between the cities in the upper, middle and lower basins. Therefore, in order to promote the coordinated development and deeper integration between the upper and lower neighbor provinces and cities, not only the development needs of each region and ecological protection should be actually take into consideration to improve the consistency and individualization of the policies, but also the ecological protection branch areas such as water, soil and lake protection legislation should be prioritized. Only in this way can the loopholes in the ecological laws and regulations between different regions be filled up.

In addition, legislation is limited by the level of human thinking, the degree of exposure of objectives and also the social development status, thus it may inevitably reveal the hysteretic nature. Therefore, in order to eliminate the adverse effect of its essential attributes, we need to make great efforts of the "Ecological Priority and Green Development" concept, especially within the public participation domain. Besides, the "prevention-oriented" of ecological criminal law legislation model should be established by absorbing the rational elements from foreign legislative experiences [6], in order provides strong policy support and guarantee for ecological restoration and protection, green development and law enforcement supervision in the construction of the Yangtze River basin. That includes, on the one hand, strengthening the public's participation as an eco-law stakeholder, such as in the stage of deliberation and demonstration provided for by laws and regulations on green development in the overall construction of the Yangtze River basin. Specific procedures for public participation must be implemented to make ensure that the public can consult, learn and understand the whole process of the formation and publication of normative legal documents timely, such as collecting public comments frequently, establishing independent hotlines, offering periodic legislative consultations to encourage the participation of the general public. On the other hand, we should also establish a multi-effective, transparent and open supervision and credible mechanism to

provide all units and individuals with an available feedback approach and protect the privacy of whistleblowers. In this way, relevant functional departments can investigate more effectively and make sure the organizations or individuals who cause severe ecological pollution can bear the corresponding legal responsibility.

3.3 Strengthen Judicial Protection

Considering the geographical characteristics and the actual developing situation of the Yangtze River basin, especially the industrial structure and strong level of urbanization along the upper, middle and lower basins of the Yangtze River as well as the cities around the estuary, judicial protection should first be strengthen among the important cities and counties within the provinces.

For example, mutual legal assistance mechanisms, between the related provinces and cities, which led by "Ecological Priority and Green Development" concept, should be established to combine the judicial protection power for environmental resources, and make joint efforts between cities and districts and towns. In terms of Hubei Province, we should explore the establishment of a case demonstration mechanism led by the Hubei Provincial High People's Court, to provide courts with ecological environment infringement reference cases. By summarizing and selecting relevant cases that not only representative but also embody judicial justice, the guiding cases may offer direct and specific instructions to People's Courts at all levels, and help them carry out judicial trials smoothly. In addition, based on the core requirements of the Yangtze River basin construction, we should strengthen the trial of environmental resources such as environment pollution, severe deforestation, illegal and destructive mining, and rare and endangered protected animals hunting around the Yangtze River basins. Besides, we should pay attention to punish crimes that against the ecological environment of the Yangtze River, dereliction of duty in supervision or major safety accidents that cause serious environmental pollution consequences, especially when strictly adhere to the ecological protection red line and establish the ecological compensation mechanism as well as the water rights trading system along river basins. Remarkably, it

should be noted that in view of the hysteretic nature of environmental pollution damage, the implementation of a variety of coercive measures, such as pre-litigation restraining orders, interim injunctions and other effective measures should be taken to prevent further expansion of ecological damage.

4. Conclusion

The overall planning around the development needs of the integrated construction of the Yangtze River basin, which based on the actual situations, geographical and humane factors of the development status of the provinces and cities along the Yangtze River, is a reasonably and timely exploration from macroscopic aspects in China, and has take the differences between regions as well. As mentioned above, authorities from Hubei Province followed the "Ecological Priority and Green Development" demand in the process of the Yangtze River Economic Belt integrated construction, and launched a serious policies and regulations to strengthen the environmental protection and ecological restoration, which has gave full play to Wuhan, the capital city of Hubei Province, as the representative to lead the surrounding townships and has obtained remarkable results already. Transforming the legislative concept from "Anthropocentrism" to "Ecological-Centered", attaching great importance in policy planning and regulation supplement, strengthen judicial protection and departmental cooperation, and cultivating national awareness of environmental protection are the concrete approaches to implement the development layout of the Yangtze River Economic Belt.

Acknowledgements

Supported by "The Confirmation and Construction of Evidence-Based Sentencing Models", 2021 Shanghai Philosophy and Social Science Foundation Youth Project, No. 2021EFX010; "Research on Evidence-Based Sentencing Models under the Threshold of Digital Rule of Law", 2021 Ministerial Legal Research Project of China Law Society, No. CLS(2021)D30; "Application of Evidence-Based Models in the Field of Sentencing: Theoretical Obstacles and Resolve Solution", 2022 Shanghai University of Political Science and Law Youth Research Project, No. 2022XQN06; "The Political

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