# Institutional Mechanism of River Chief System from the Theoretical Perspective of Pressure System

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**Abstract:** The pressure system is the theoretical abstract of the governance structure of local government in China, and the operation model of river chief system fully reflects the typical characteristics of the pressure system. From the operation process, the determination of objectives of river chief system, the establishment of the river chief and his responsibility, and the assessment of river chief are the specific embodiment of the system index determination, index decomposition, indicator completion and indicator evaluation of the pressure system. The above operation process aggregate the three system elements of the pressure system, among which the administrative contract clarifies the responsibility subject and its responsibility content, the administrative localization management defines the responsibility area of system, the performance evaluation provides the source power of system responsibility. The three mechanisms are intertwined and coupling into one, which reveal the institutional logic of system, and highlight the internal mechanism of the powerful incentive effect of river chief system.

Keywords: The Pressure System; River Chief System; Institutional Mechanism

#### 1. Introduction

River chief system is a measure of water pollution control. The river system was pioneered by Jiangsu Wuxi in response to the blue-green algae event in Taihu in 2007. Since then, other provinces and cities have gradually carried out the exploration and practice of river chief system (Take Zhejiang Province as an example. The Huzhou City, which across the lake from Wuxi, learned from the river system in 2008. By 2013, Zhejiang had decided to implement the river chief system. Refer to "The opinions of the Zhejiang provincial Party committee and the Zhejiang Provincial People's Government on the full implementation of the river length system to further strengthen the water environment control work" (Zhejiang Province Committee [2013] No. 36)). After nearly 10 years of development and improvement, the operation mechanism of the river chief system is becoming more and more mature, which reflects the strong vitality of the system. Based on this, in December 2016, the CPC Central Committee and the general office of the State Council jointly issued "Opinions on comprehensively advancing the river system", this opinion clearly stipulates that by the end of 2018, the river length system should be established in all rivers and lakes throughout

Under the guidance of the idea of running the country according to law, strengthening and improving the legislation of water pollution control is the main measure for the state to curb and solve the situation of water pollution. The Chinese government put the "water pollution prevention law" as the core guiding ideology, and formulated a systematic system and measures, such as environmental impact assessment system, the total control system, sewage permit system and sewage exceed the standard after series of punishment. These measures have realized the prevention, control and ex post disposal of water pollution control ( In order to meet the needs of new water pollution control, "The Water Pollution Control Act" adopted in 1984 was revised two times in 1996 and 2007 respectively.). But these foreign system measures have not achieved the proper effect in our country, and the water pollution situation is more and more serious. The river chief system is a new measure of pollution control created by our country, and the effect is remarkable. What is the institutional logic behind this? The answer to this question involves the deep change of our country's environmental governance concept and governance style. It is of great academic value, so it has aroused heated debate in the academic circles. The academic circles have mainly formed the following three representative viewpoints: The first view is the responsibility theory. This view holds that the river system effectively implements the responsibility of the local government for protecting the environment, thus seizing the key to pollution control [1]; The second view is contracting. This view holds that the river system has developed a "responsibility system for environmental protection objectives" into "environmental protection target responsibility contract system". This view emphasizes the territoriality of environmental governance administrative responsibility, which improves the enthusiasm and initiative of local governments to fulfill their environmental regulatory responsibilities <sup>[2]</sup>; The third view is the theory of political achievements. This view holds that the past pollution abatement effect is not significant, this is because China long-term put GDP growth as a leading cadre of local performance evaluation of the main indicators <sup>[3]</sup>.

These theories have expounded the inherent mechanism of river chief system from different angles, and each has its own reason. But river length system is the integration mechanism of local government's overall responsibility for water environment governance, and these theories only focus on one section of the whole structure, while ignoring other important components [4]. At the same time, these theories are only a preliminary summary of the common rules and practices of the river system, and lack of further refining, deepening and sublimation. At present, it is a critical period for the full implementation of the river length system, therefore, the accurate understanding of the system mechanism of river length has important guiding significance for the implementation of the "opinions on comprehensively advancing the river system". This paper attempts to make a comprehensive and deep analysis of the operation mechanism and Institutional Logic of the river chief system.

# 2. Connotation of the Pressure Type System

#### 2.1. Concept de Finition of the Pressure Type System

The concept of "the pressure system" was first proposed by the research group led by Professor Rong Jingben, which is the theory summary of operational mechanism of China's local government. In a research report, the research group led by Professor Rong Jingben defined "pressure system" as: "The quantitative management system and material evaluation system adopted by the first level political organization (county, township) in order to achieve economic indicators." [5] The definition reveals the basic characteristics of the pressure system, but inevitably, there are some limitations. For example, task decomposition and assessment are the core features of the pressure system, so it is necessary to refine them in the definition. In our opinion, the pressure system is the theoretical expression of the operation mode of local government in our country.

### 2.2. The Operation Process of Pressure Type System

The operation of the pressure system is divided into the following four stages <sup>[6]</sup>:

The first is the determination of indicators and tasks. The indicators and tasks mainly come from administrative

indicators and the targets and tasks of the government at the same level for the purpose of completing the requirements of the higher authorities. Indicators and tasks include monthly, quarterly, annual, and even three, five, ten, and so on, in which annual indicators and tasks are generally the most important.

Followed by the allocation of indicators and tasks. Indicators and tasks are often distributed from higher level to subordinate level in the form of letters of responsibility. The position target responsibility system is the institutionalized form of allocation index and task. The indicators and tasks that have been identified are allocated downward in the form of accountability.

Third, the completion of indicators and tasks. As soon as the lower level has accepted the targets and tasks assigned by the higher level, the lower level will try its best to complete it.

Finally, the assessment and evaluation of indicators and tasks. The indexes and tasks at different times will be evaluated at the corresponding time points, and the corresponding rewards and punishments will be carried out according to the assessment results. The Political award are mainly political evaluation and promotion, and economic incentives are wages and bonuses or promotions.

## 2.3. Theoretical Connotation of Pressure Type System

The operation of the pressure system depicts the management features of our local governments. We divide the theoretical connotation of the pressure type system into the following three major factors ( It is worth noting that although these three elements are elaborated, they are coupled as a whole and form a framework that supports and coordinates each other.): The first is the administrative level contract system. The so-called "administrative level contract system" means that under the special pressure system of our country, the responsibility of the administrative management and public service is assigned from higher level government to lower level government. In order to facilitate the contract, the functional departments of each level of government are corresponding to the higher level government, so that the tasks of the higher level government contracting out should be solved in the different functions of the government at the same level. For each specific level of local government, the higher government is the administrative contracting party, and he is the contractor of administrative affairs. In this way, the gradual contracting out process of administrative affairs is the gradual transfer process of government functions and affairs. At the same time, in order to define the liability of the contractor, heads of local administration is the general contractor and the first responsible person, therefore, the government must give the heads of local administration and global power [7].

The second kind is territorial management. The so-called territorial management refers to the division of administrative boundaries by region. A certain level of government is responsible for the administrative divisions at the corresponding levels. Territorial management and administrative services to gradually contract, which for the local government and its general contractor logo clearly defined jurisdiction area [8]. The third is performance appraisal. The so-called performance evaluation refers to the higher officials to assess the work of junior officials, and the results of the assessment as the official appointment and accountability of the main criteria. In this way, the superior government can take performance assessment as a baton to encourage and promote lower level [9].

# 3. The Operation Process of River Thief System

To investigate the relevant regulations and practices of the river chief system, the operation process of the system is basically corresponding to the three stages of the pressure system task:

#### 3.1. Establishing Objectives

River chief system is a new measure to control serious water pollution, and all the related institutional documents about river system have obvious result oriented characteristics. At the same time, because pollution control is very urgent, the objective and tasks of the river system must be practical and accessible. Take Wuxi as an example, Wuxi has clearly put forward the overall goal of "three steps" in the relevant system regulations: The first stage is that by the end of 2008, Wuxi had basically eliminated the problem of black and odor in the river; The second stage is that by the end of 2010, Wuxi will completely eliminate black and foul water; The third stage is that by the end of 2012, Wuxi has completed the environmental renovation and ecological restoration of the river channel (Refer to "About the full establishment of" River (Lake, reservoir, swing, GUI) system to strengthen the river (Lake, reservoir, swing, GUI) comprehensive renovation and management decision "( Wuxi development and Reform Commission No. [2008]55).). The practice of river system in other areas is basically the same.

#### 3.2. Decomposition Task

In order to realize the overall objective and task of river chief management, the provinces and cities, counties and towns are determined according to the nature of rivers, and the responsibilities and tasks of each river length are defined accordingly. In Jiaxing, for example, in 2012, the "opinions on the establishment of a comprehensive river length system" promulgated by the Jiaxing Municipality stipulated that the river length of the municipal, county and town levels should be determined according to the

nature of the river. At the same time clearly stipulates that the "long river" is the first responsible person, responsible for guiding, coordinating and supervising the work of governance work, promote the river cleaning, sewage outfall closure, illegal cleaning, river dredging, ecological restoration and water quality improvement work comprehensive governance.

#### 3.3. Assessment

The assessment of river chief system usually adopts the method of combining daily assessment with annual assessment. Daily assessment is mainly to supervise the implementation of river chief system, and put forward the corresponding rectification opinions; The annual assessment is mainly to assess the water environment indicators, and promptly ranked the situation; For the responsible departments, water environment control should be included in the target responsibility system of each department. In view of the result of river length system, economic and political rewards and punishments are mainly carried out in different regions. Economic reward and punishment mechanism can promote the river long margin system. The political reward and punishment mechanism is to incorporate the results of river water quality assessment into the achievements of local government officials, and even implement the "one vote veto system" [10].

# 4. Institutional Logic of River Length System

## 4.1. River Chief System and Administrative Level Contracting

The operation of river chief system embodies the characteristics of administrative contract system. As mentioned earlier, there are two main functions of the administrative contract awarding system: The first function is to identify the responsible bodies at all levels of government; The second function is to progressively decompose administrative matters. The former defines the subject of river governance, and the latter defines the responsibility of river governance. It is very important for river pollution control and ecological protection to clarify the responsibility subject and content of river channel governance. The management system of water environment in our country has many problems, such as multiple subjects and confusion of responsibilities. This is the main cause of the worsening water environment in our country [11]. The river chief system implements the responsibility of water environment protection to the party and government leaders, and assigns specific responsibility content, which completely solves the problem of the failure of control.

### 4.2. River Chief System and Territorial Management

River chief system is a specific means for local governments to govern the internal water environment. Under the river chief system, the vertical integrated river channel is often divided by the horizontal jurisdiction, which reflects the characteristics of the territorial management of water pollution control. Because the river ecological integrity, carrier mobility, elements of interdependence, multi-function unity, therefore, scientific and reasonable management must consider all the river basin, so as to ensure and realize the comprehensive benefits of river function<sup>[12]</sup>. In fact, the "water law", which was revised in 2002, clearly stipulates that the state must implement a combination of river basin management and administrative regional management of water resources. On this basis, since 2003, China's major river management systems have built a basin management related coordination mechanism [13]. But so far, watershed management has not been effective. More typical is Haihe River. As early as 2003, eight provinces, autonomous regions and municipalities directly under the central government signed the Declaration on cooperation in the Haihe River Basin, but the introduction of the new mechanism did not reverse the Haihe River pollution problem (Source: "slight pollution of surface water in the first half of the year, severe pollution of Haihe River", http://news.163.com/13/0820/11/96NI6O9O00014JB6.ht ml.).

The idea of basin management is based on the defects of traditional regional management. However, this theory is quite different from the scientific concept of watershed management, but its practical effect is remarkable, which has become a puzzling paradox in river governance. In order to solve this paradox, we must deeply understand the localization management mechanism, which is an important feature of the administrative structure of local government in our country. The core function of territorial management is to cooperate with the administrative contract system, which defines the responsibilities of administrative contractors. As mentioned above, administrative contractors are often the leaders of the first class government, and they are also the chief contractors of the economic development in the administrative area. The river chief system will implement the responsibility of pollution control, ecological protection and economic development in the same main body, which will help coordinate and coordinate various resources and overcome the drawbacks of economic development. Although in line with the characteristics of watershed management mode of river ecosystem itself, but contrary to our local government local management architecture, which can not effectively integrate administrative resources of the local government in the basin, so it is difficult to achieve the goal of governance.

#### 4.3. River Chief System and Performance Evaluation

Performance evaluation and evaluation mechanism is the source of motivation for the operation of river length system.

Water pollution control is a public service, and the government plays a leading role. But the main reason for the deterioration of the water environment often lies in the government, which is because local government officials put GDP growth at the first place, which will be relatively ignored environmental policy [14]. Therefore, the core of water pollution control is to design a reasonable incentive mechanism, this mechanism will unify the political aspirations of local government officials and water pollution control targets, so as to effectively promote the local government environmental protection performance. This is the function of the assessment system of river chief system. Our province, city, county and township officials are in a political promotion game pattern, their performance evaluation mechanism is the main criterion to determine the outcome of the game competition, which promoted the fierce competition between them, also formed the so-called "political tournament" [9]. The assessment results of pollution control will be included in the performance evaluation of the principal responsible person, which will inevitably promote the enthusiasm and initiative of the local government's principal responsible for pollution control.

#### 5. Conclusions

The three institutional elements of the pressure system carry out their duties in the operation of the river system. The responsibility system and its content of river chief system are defined by the administrative contract system. Territorial management defines the responsibility area of river chief system. Performance evaluation provides the source of responsibility for the river system. But the three are not isolated from each other, but influence each other and support each other. The system of contract awarding by administrative levels provides objective and task for territorial management and performance evaluation. Localized management defines the scope for administrative level contract system and performance evaluation. And performance evaluation provides incentives for administrative level contracting system and territorial management

In fact, the integration mechanism of the Trinity is not confined to the river system. In recent years, China has also implemented other remarkable policies and measures for environmental governance, such as "energy conservation and emission reduction", administrative restrictions, and "party and government responsibility". This shows that China has gradually developed a pattern rich in local characteristics, while highlighting China's major innovations in the path and concept of environmental governance.

Of course, the river system also inherited the inherent defects of the pressure system. For example, the "Pan politicization" of government responsibility leads to the lack of the corresponding legal consciousness of local government; The operation of the local government has a strong "personal" color, while the power of the first responsible person is magnified [15]. These problems are widely existed in the practice of river system, so it has aroused the academic circles to query the Long effect, scientific and legal regularity of river chief system [16]. But as mentioned above, the establishment and rapid development of river chief system is not an "emergency measure", but is rooted in the specific administrative structure of our country. Not simply putting the river system into the environment and the rule of law, or strengthening public participation that can solve all problems [17]. Therefore, we should carefully consider the institutional environment and constraints, and distinguish the advantages and disadvantages of the system structure, and then put forward feasible reform proposals. All these have to be done further theoretical and empirical research.

### 6. Acknowledgements

This paper is a part of the research results of the program "Governmental Incentive Mechanism of Water Pollution Control in Zhejiang Province" (Item Number: 14JDST02YB) from the Key Research Institute of Philosophy and Social Sciences of Zhejiang Province (Center for Ecological Civilization of Zhejiang Province at Zhejiang Sci-Tech University).

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