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Questionnaire-based Survey to Explore the Impact of The Diffusion of The River Chief System Policy in Yantai

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Abstract: In response to his call for environmental governance, and in order to build a clean and beautiful home, government agencies have been committed to finding effective policies and measures to control river water pollution, and the "river chief system" came into being. However, the "River chief system" is not smooth in the implementation of the policy. As a self-created governance policy of Wuxi, it inevitably has local characteristics. And whether a policy applicable in Wuxi can also achieve good results in Yantai? Based on the research method of questionnaire, this paper explores the effectiveness and shortcomings of the implementation of the "river chief system" in Yantai City, and puts forward suggestions to improve the "river chief system" or measures to solve the problem of river pollution, so as to make the "river chief system" more dynamic and vital in Yantai and achieve actual results.

Keywords: River chief system, Policy diffusion, River governance, Yantai City.

1. Research Background

Rivers are a visible and tangible part of nature and an important reference point for residents to measure the state of an area's environment. In recent years, river management has become a thorny issue for the central government and even local authorities, as river pollution is not only difficult to eradicate but also greatly reduces the quality of life of residents. In recent years, in response to Xi Jinping's call for environmental management, and in order to build a clean and beautiful home, government agencies have been working to find policy measures that can effectively combat water pollution in rivers, and the "river chief system" has emerged to study and apply the "river chief system "[1]This is a major breakthrough in local government policy innovation and an important step in the fight against river pollution.

China's river chief system is still in a period of exploration, and as it spreads to surrounding areas, it generates river management performance, as well as problems that would not occur in the region. Different geographies, different modes of government management, and different river pollution conditions all create different problems, and these benefits and problems are the focus of this study. The questionnaire was used to study the popularity of the "River Chief System" among Yantai citizens, the effectiveness and shortcomings of the policy diffusion, and to propose recommendations or solutions to make the "River Chief System" more vibrant, vital and effective in Yantai.

2. Concept Identification

In August 2007, Wuxi City issued the "Wuxi City River (Lake, Reservoir, Dang, Storms) section water quality control objectives and assessment methods (for trial implementation)" in order to solve the problem of serious river pollution, the river section water quality test results into the main party and government of each city and county district The municipalities and counties that do not report on time or refuse to report or misrepresent water quality testing results will be held accountable according to the relevant regulations.[2]

The Opinions on the Comprehensive Implementation of the River Chief System[3] stipulates that under the "River Chief System" policy, the "river chief" is a leading party and government cadre who is responsible for implementing the main responsibilities of the local government in accordance with the law and cooperating with other departments to better protect water resources and prevent and control water pollution. The aim is to improve the effectiveness of river pollution control and the ecological environment through a strict accountability mechanism.

The "River Chief System", as a self-invented river management policy in Wuxi, is not only adapted to the specific situation of the city but also has obvious Chinese characteristics, and is an innovation in management in line with Chinese management logic and inertia [4]. It takes the environmental condition as one of the performance assessments for the "river chiefs", and decides on the rewards, punishments, and promotions based on the assessment results, using the policy power to change the focus of the "river chiefs" from purely economic benefits to both economic and ecological benefits. The "two-handed" model [5]. And instead of the original decentralized management structure, the "river chief system" has improved the four-level river chief system from the province to the city, county and village, making full use of the power of the grassroots government and the people to jointly manage rivers [6].

3. Questionnaire Survey and Analysis of The Application of The River Chief System in Yantai City

3.1. Questionnaire design

This paper is based on a review of the literature on the "River Governor System" and a survey of Yantai citizens' knowledge of the "River Governor System" based on an understanding of the specific situation of river pollution management in Yantai. "The questionnaire was divided into three parts. The questionnaire is divided into three main parts. The first part aims to understand the basic information of the citizens and to ensure the diversity of the data sample. The second part focuses on understanding the popularity of the 'River Chief System' and the public's satisfaction and support for river pollution control measures. This is used as a basis for analysing the effectiveness of the river pollution control system in Yantai and the policy issues that exist in the process of its implementation. The third section focuses on collecting effective water management measures in the minds of the public and acceptable ways of publicising the "River Chief System", and uses this as a basis for making suggestions to improve the "River Chief System" policy.

3.2. Selection of research subjects

3.2.1. Government

The government, as the main body implementing the "river manager system", is the first choice for research. The government is also the key to the implementation and successful innovation of the system, i.e. the government is at the source [7]. A survey of government employees' understanding of the "river chief system" and their attitudes towards the implementation of the "river chief system" can provide a clear and intuitive picture of the importance the local government attaches to the "river chief system". The degree and depth of understanding of the "River Chief System" by the local government. If government employees show their approval and support for the system in the questionnaire, it is at least evidence that the environment for the development of the system is favourable.

3.2.2. Enterprises

Enterprises are important participants, promoters and defenders of policy innovation [8]. On the one hand, enterprises have a lot of social, economic and technical resources, so mobilizing them to pay attention to the "river chief system" policy is conducive to adapting to local conditions and correcting deviations in the implementation of the "river chief system" policy. At the same time, with the strong financial and intellectual support of enterprises, they can extend the strategic vision of policy makers and develop more sustainable strategic planning, so that the "River Chief System" can be developed in the long term. On the other hand, large heavy industries are the main culprits of river pollution, so involving these enterprises in the "River Chief System" and encouraging them to take on social responsibility, self-management and self-restraint can have an immediate effect on river pollution.

3.2.3. The public

Public participation is an important part of promoting the modernization of environmental governance system and governance capacity in the new era and political context [9]. The active participation of the public in the "river chief system" can raise the awareness of the main body of environmental management, enhance the sense of responsibility and "master", participate in politics through democratic evaluation, the mayor's mailbox, etc., and put pressure on government departments through various ways of laziness, negligence and other bad behavior The government's efficiency will be improved. At the same time, a questionnaire survey of the public will provide the most direct insight into the popularity of the "River Chief System" in Yantai, and whether the public is satisfied with the current situation of the rivers, so as to analyse whether the "River Chief System" has achieved the desired effect in Yantai.

3.3. Questionnaire data processing and analysis

A total of 103 questionnaires were collected in this survey, of which 8 were invalid and 95 were actually valid. In the distribution of this questionnaire, the main subjects who filled in the questionnaire were mainly undergraduate students aged 18-35, with a high level of education and at an age when they can accept a lot of new things (Figure 1, Figure 2).

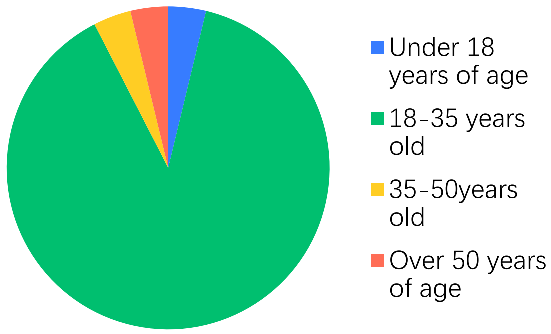

Figure 1. Age structure of questionnaire respondents

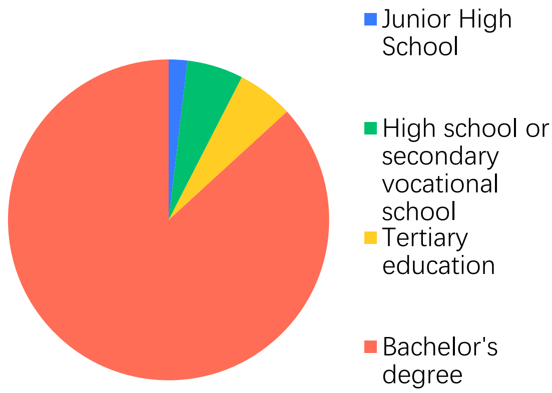

Figure 2. Education level of questionnaire respondents

The purpose of the second part of the five questions is to investigate the popularity, public satisfaction and support of the "River Chief System". This paper analyses the collected data quantitatively and calculates the weight of each indicator to analyse the current situation of the "River Chief System" in Yantai City.

This paper found that nearly 59.8% of Yantai citizens were completely unaware of what the "River Chief System" was, while only 16.67% of respondents clearly expressed their knowledge and understanding of the "River Chief System" (Figure 3). The above figures show that Yantai's "River Chief System" policy is not very popular, and there is still a long way to go to increase the influence of the "River Chief System" and make Yantai citizens aware of it. The only way to support and promote the "River Chief System" is for the public to understand it.

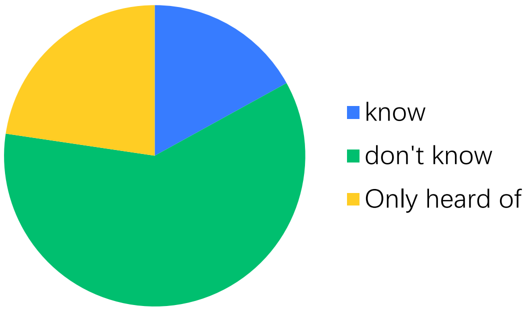

Figure 3. Yantai people's understanding of the river chief system

4. Status of Implementation of the River Governor System policy in Yantai

4.1. Results of the implementation of the river chief system policy in Yantai

Yantai City has promoted the "river chief system" and the ecological and environmental quality of water sources has been significantly improved. The linkage mechanism works to form a strong synergy in water management, and the pollution of rivers has been significantly improved, making up for the lack of governance by government departments alone in the past. This has made Yantai's title of "ecological city and beautiful Yantai" more worthy of its name, and has also provided experience for other regions to learn from [10].

Although the popularity of the "river chief system" is not widespread among Yantai citizens, it is clear from the research data that most Yantai citizens are satisfied with the condition of Yantai's rivers (Figure 4), and the contribution of the "river chief system" in achieving these satisfaction figures cannot be ignored.

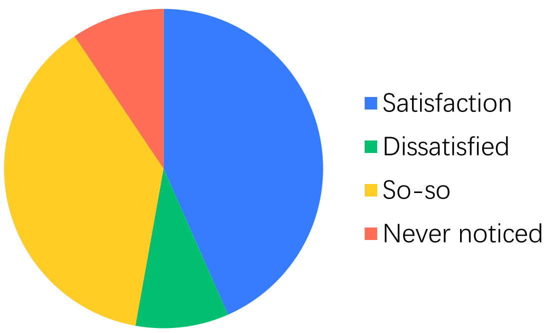

Figure 4. Yantai people's satisfaction with Yantai's water environment

Although the "river chief system" has not been introduced to every household, it is encouraging to see that Yantai citizens are not averse to participating in river management and even take a proactive approach, indicating that they are very concerned about the state of their rivers and have a strong sense of responsibility and participation (Figures 5 and 6).

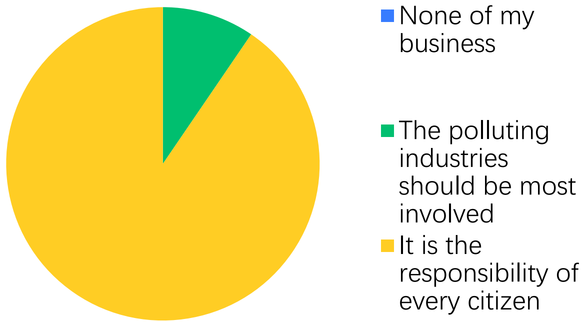

Figure 5. Views of Yantai citizens on the River Chief System

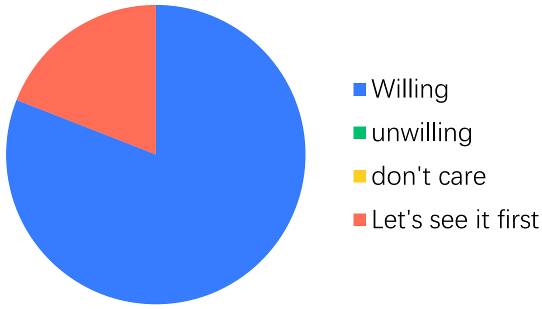

Figure 6. Yantai citizens' positive level of participation in river pollution control

4.2. Problems in the implementation of Yantai's river chief system policy

4.2.1. Possible over-reliance on administrative power

There is a problem of neglecting social forces in the implementation of the "river chief system". The strengths of Yantai's "river chief system" are that it mobilises sufficient internal resources, but the weaknesses are that the general public is not sufficiently educated about the "river chief system", and that Yantai citizens know little about the state of the rivers and are only superficially aware of river pollution. They are not sufficiently aware to take the initiative to protect the river environment. Without the importance of local residents' role in river pollution control, there is no way to mobilize citizens' enthusiasm, and with citizens unable to participate and the government unwilling to publicize the system, the "river chief system" becomes an "exclusive" policy within a closed government system [11].

4.2.2. Accountability for the "river chief system" is difficult to implement

Although the "river chief system" is the responsibility of the "river chief", and there is also a lifetime accountability system to check it, few "river chiefs" are really dismissed for failing to manage the river well. When serious pollution problems occur in rivers, the "river chiefs" will find many objective reasons to "exonerate" themselves for not managing the river properly. This also reveals another loophole in the implementation of the "river chief system": the lack of supervisors for the "river chiefs" in the "river chief system" and the lack of guidance and supervision from higher levels for the "river chiefs". The "river chief" lacks guidance and supervision from higher levels and feedback from lower levels [12]. When the real problem of ineffective river pollution control arises, many of the objective reasons that "river chiefs" can find are not verifiable.

5. Suggestions for Improving The "River Chief System" in Yantai

In the survey of Yantai citizens' understanding of the "river chief system", it is important to summarise the opinions of Yantai citizens in order to improve the democratic nature of the "river chief system" policy, and to incorporate the suggestions of experts in order to improve the scientific nature of the policy. The combination of the two will ensure that the results of the improved policy are reasonable and effective.

5.1. Scientific assessment system

The central government should clarify the policy objectives of the "river chief system" when it is introduced in Yantai, including the assessment criteria for both economic and environmental aspects, and include the assessment results in the performance indicators of officials and implement open government affairs, which is conducive to the government Internal, public and superior assessment of river pollution control. In order to ensure the scientific nature of the assessment results, Yantai City should develop differentiated assessment indicators according to local conditions, adopt different assessment standards for rivers and lakes with different pollution conditions and ecological environments, and adopt different assessment standards for "river chiefs" in different areas to avoid a "one-size-fits-all "[13].

5.2. Parallel local governments to strengthen linkages

In order to avoid the problem of fragmentation in "local management", local governments should strengthen the linkage with the Yantai municipal government, establish a coordinated governance model, break the geographical restrictions, and share the responsibility for river pollution control in the watershed [14]. Local governments should try to abandon the negative view of competing with each other or colluding with interests and establish a good mentality of serving the people and creating a green ecological environment together [15]. However, in order to avoid the dilemma of "nine dragons ruling water" when local governments are linked, a major river chief or chief administrator can be elected by internal nomination or democratic election, and a special river management agency can be established to be responsible for the coordination within the river basin, but this is not an easy task and requires each "river chief However, this is not easy and requires the "river chiefs" to voluntarily give up certain powers, such as resource allocation and management, to promote regional information sharing, joint decision-making and supervision, and coordinated enforcement [16].

5.3. Sound accountability mechanism

As mentioned above, the "river chief system" can evade responsibility because of the lack of transparent monitoring and control mechanisms, so a sound accountability mechanism is particularly important. The accountability mechanism should include not only the internal supervision department of the same level of government, the higher supervision and management department but also the lower level departments and the public, forming a comprehensive accountability system. [17] Governments at all levels are responsible for monitoring whether the government implements the "river chief system" in accordance with the directive, whether it effectively controls The government at all levels is responsible for monitoring whether the government implements the "river chief system" in accordance with the directives, whether the pollution of rivers is effectively controlled and whether rewards and punishments are imposed according to the pollution control of rivers to ensure that the "river chiefs" have equal rights and responsibilities [18].

5.4. Social mobilization

There are two main reasons why measures to improve the river system are more relevant and easier to implement: firstly, they are proposed by the public, and they are inevitably the most significant problems in river pollution management that cannot be ignored and are the most "visible" major sources of pollution, so a breakthrough can have an immediate effect. Secondly, based on the findings of the survey, the public's involvement and ownership of the river will be enhanced by mobilising the public's perspective.

In the 11th question of the questionnaire, "What do you think are the most effective measures for urban sewage treatment?", "Proper treatment of people's household garbage" and "discharge of factory sewage after treatment meets the standards" got the same number of votes (Figure 7), which also confirms the importance of social participation in river pollution control.

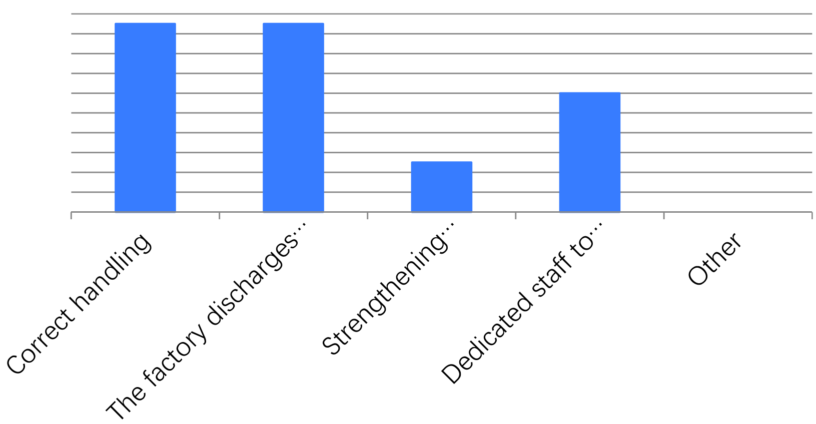

Figure 7. Information on what Yantai citizens consider to be effective measures for river pollution control

In order to avoid over-reliance on administrative power, the public, social organizations, charitable organizations, public welfare organizations and other social actors should be mobilized to participate in river governance to form a pluralistic co-governance [19]. At the same time, the government should let go of unnecessary functions, optimize resource allocation, encourage and support the development of public welfare social organizations, shift the centre of gravity of governance downward, and build a diversified and decentralized governance pattern [20]. In order to form a joint governance pattern mobilized by the whole society, the government should implement open government affairs, publicize important matters, establish a smooth information communication channel to facilitate the transmission of major policies from the government downwards and timely feedback from the public upwards, respond to the public's keen concern about river governance, and promote the interconnection of information between the government and the public under the premise of ensuring the authenticity, accuracy and reliability of information, so as to realize The public's expectations for river management are met.

6. Conclusion

As a new river management policy in recent years, the "river manager system" has been very dynamic and creative. At the same time, the implementation of the "River Chief System" has resulted in significant improvements in the water environment, clarification of government responsibilities and economic development over the past few years, which is proof that the implementation of the "River Chief System" is a wise move and an urgent priority for the management of river pollution. However, the implementation of the "River Chief System" in Yantai City is also plagued by inconsistencies in authority and responsibility, difficulties in accountability and ineffectiveness. This paper uses a questionnaire survey to study the pollution control of rivers and the "river chief system" in the eyes of Yantai citizens, and proposes to improve the accountability mechanism, strengthen the linkage between parallel governments, encourage public participation and form a scientific assessment system, so that the "river chief system" can really be effective.

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