

# Research on the cooperation dynamics of local governments in cross-regional environmental governance under the background of regional integration in the Yangtze River Delta

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**Abstract:** *The Yangtze River Delta region is an important intersection of the "the Belt and Road" and the Yangtze River Economic Belt. With a highly developed economy, it is an area with serious ecological degradation and environmental pollution. In addition to the fact that cities in the region are adjacent to each other and the cross regional characteristics of environmental pollution itself, cross-border pollution and pollution disputes often occur. The solution to this problem is to strengthen the cooperative governance between local governments. Under this guidance, the cooperative power of local governments in cross-regional environmental governance has become a focus. Therefore, it is proposed to change the traditional concept of local government environmental cooperative governance; Improve the local government ecological cooperation governance system; Strengthen the local government ecological cooperation governance mechanism; Improve the technical level of local governments in ecological governance cooperation, with a view to promoting the effective cooperation of local governments in cross-regional environmental governance.*

**Keywords:** *Yangtze River Delta regional integration; Local government; Cross-regional environmental governance; Motivation for cooperation*

## 1. Introduction

The connotation and extension of the integration of the Yangtze River Delta are very rich, covering almost all fields and aspects of the economic, social, cultural and ecological construction of "three provinces and one city". In 2018, the regional integration of the Yangtze River Delta rose to a national strategy, aiming to create a national high-quality development model area, and lead the development of the entire Yangtze River Economic Belt and East China with the "integration" and "high-quality" development ideas. Therefore, in the context of integration, local governments in the Yangtze River Delta have become a consensus to jointly deal with cross-border environmental issues. However, at present, the cross-regional environmental governance mechanism in the Yangtze River Delta is still at the initial stage, and there are problems such as difficulty in formulating collaborative objectives, unclear responsibilities of governance subjects, and lack of unified standards for environmental governance<sup>[1]</sup>. Therefore, it is necessary to study the cooperation impetus of local governments. It is possible to analyze the power sources formed by local government stakeholders, such as local governments at all levels, the public, environmental non-governmental organizations, consultation experts at all levels, and the news media, as well as the forces such as force, pressure, and thrust formed by the interaction of these power sources and their coupling field force system, for example, pressure is like a "supervisor" in the power system, As long as there is external pressure to promote, local governments can cooperate more efficiently. In short, under the overall situation of regional integration in the Yangtze River Delta, it is very important to promote local governments to cooperate in tackling cross-regional environmental problems, which is conducive to achieving ecological integration in the Yangtze River Delta and promoting high-quality development.

## **2. Analysis of the current situation of local governments' cooperation in environmental governance in the Yangtze River Delta**

### ***2.1. Cooperative treatment of air pollution***

The coordinated control of regional air pollution began in 2008. In 2008, Jiangsu, Zhejiang and Shanghai provinces and cities jointly signed the Cooperation Agreement on Environmental Protection in the Yangtze River Delta Region, and proposed a number of environmental governance cooperation plans. The agreement proposes to improve the environmental access standards, gradually unify the charging standards of enterprise pollution charges, and strengthen the control of regional air pollution. In 2012, two provinces and one city signed the "2012 Yangtze River Delta Joint Prevention and Control Cooperation Framework for Air Pollution" in Zhejiang Province, reaching a consensus on the development of joint prevention and control plans for air pollution, strengthening the exchange and cooperation of air prevention technology and management, taking the lead in establishing PM2.5 monitoring points in key pollution prevention and control areas in the Yangtze River Delta, and jointly solving regional air pollution problems<sup>[2]</sup>. In January 2014, the Yangtze River Delta Air Pollution Prevention and Control Cooperation Group was established in Shanghai and held its first meeting, marking the official launch of the Yangtze River Delta air pollution prevention and control cooperation mechanism. At the meeting, the principles of cooperation across the Yangtze River Delta were determined as "consultation and overall planning, responsibility sharing, information sharing, joint prevention and control".

### ***2.2. Cooperative treatment of water pollution***

In December 2016, the Yangtze River Delta Water Pollution Prevention and Control Cooperation Group was established and held its first meeting, which meant that the joint prevention and control of water pollution in the Yangtze River Delta was fully launched. In 2018, the second meeting of the Yangtze River Delta Regional Water Pollution Prevention and Control Cooperation Group was held in Suzhou. The meeting exchanged in-depth information on the regional water pollution prevention and control cooperation, and emphasized that environmental governance should highlight key and difficult points, improve the water pollution collaborative governance mechanism, and maintain water and sewage at the same time. In order to coordinate the interests between different regions, the Yangtze River Delta took the lead in exploring the ecological compensation mechanism in the treatment of transboundary water pollution. For transboundary basins, the water quality benefit areas should give certain economic compensation to the water quality contribution areas to balance the interest disputes between different regions<sup>[3]</sup>.

## **3. The dynamic composition of cross-regional cooperative governance of local governments in the Yangtze River Delta**

### ***3.1. Gravitational factors of local government cooperation***

Gravitational mechanism is the endogenous power of local government's environmental cooperation governance, that is, the motivation of local government's cooperation, which is in a fundamental position in the cooperative power system. The attraction of cooperation between local governments mainly includes: first, the goal of cooperation is in line with the interests of different administrative regions. This is especially true when a local government cannot independently assume the responsibility for governance<sup>[4]</sup>. The second is to meet the promotion demands of local government officials. In the context of the rapid development of the construction of ecological civilization, the state has adjusted the performance assessment indicators, and gradually introduced institutional measures such as the natural resources asset retirement audit and the life-long accountability system for major environmental accidents, so that the share of environmental indicators has increased.

### ***3.2. Pressure factors of local government cooperation***

Pressure is one of the external forces of local government cooperation, and the cooperation between local governments must be driven by external pressure. The role of the pressure mechanism can make the affected object have the mentality of "having to do", thus forming a sense of urgency of cooperation between local governments. It mainly includes: the first is to build a public service-oriented

government and strengthen the necessary requirements of the legitimacy of government existence. The second is the inevitable requirement of reducing administrative costs and building a performance-based government. The third is the necessary requirement to deal with the pressure of external public opinion<sup>[5]</sup>.

### ***3.3. Thrust factors of local government cooperation***

Thrust is a force to promote cooperation between local governments from the outside. In the cooperative governance of ecological environment across administrative regions, the push can often form a good external environment atmosphere. The main factors that constitute the thrust mechanism are: first, the top-down vertical thrust formed by the policy guidance of the central government. The second is the lateral thrust inspired by typical experience. The third is the external driving force formed by the cross-regional development of non-governmental organizations and enterprises. In the case of a consensus on the governance of multiple subjects of ecological civilization, the barriers between administrative regions have been further broken, which, to a certain extent, constitute the driving force for the cooperation between local governments from the bottom up.

## **4. Analysis of Resistance Factors of Cross-regional Cooperation of Local Governments in the Yangtze River Delta**

### ***4.1. The conceptual resistance in local government's environmental cooperative governance***

#### ***4.1.1. The pursuit of economic interests by administrative regionalism driven by rational economic man***

In order to pursue the maximization of their own economic interests, some local governments have adopted a tolerant attitude towards enterprises with serious pollution, and units with environmental pollution have also been slack in fulfilling their environmental regulatory responsibilities, only in exchange for more fiscal revenue and gain the right to control and control the fiscal revenue<sup>[6]</sup>. Some local interest disputes in the process of environmental pollution control are illegitimate interests. For example, in violation of national laws and regulations, construction of industrial zones and industrial parks in violation of regulations, tolerance of excessive pollution discharge by enterprises, and pollution of local environment.

#### ***4.1.2. The promotion appeal of local government officials under the unreasonable performance evaluation system***

The existing government performance evaluation system based on the GDP growth rate has some defects, and the "one size fits all" approach will also have a counterproductive effect on the entire evaluation system<sup>[7]</sup>. For example: 1. blindly monitor economic growth and expand investment; 2. Neglecting environmental governance leads to low efficiency of pollution control. In this case, the government is more likely to engage in repetitive construction, blindly pursue economic performance while ignoring environmental indicators, and even sacrifice the environment in order to pursue personal achievements.

### ***4.2. Institutional Resistance in Environmental Cooperative Governance of Local Governments***

#### ***4.2.1. Existing environmental protection laws and regulations still have defects***

Environmental pollution accidents still occur from time to time, new environmental problems continue to emerge, and China is still facing a severe environmental situation. On the one hand, it reflects that there are still problems in existing laws and regulations, such as the narrow coverage of laws and regulations, the lack of relevant provisions and the vague and inaccurate individual provisions. On the other hand, it can also reflect that we still have some lag in legislation and lack corresponding legal protection.

#### ***4.2.2. The institutional framework of joint prevention and control is far from mature***

China has also established a joint prevention and control mechanism between local governments, such as the regional air pollution prevention and control leading group, regional environmental protection agreement, and regional air pollution prevention and control joint meeting system, but the institutional framework of joint prevention and control is far from mature. There are problems not only

in decision-making, but also in implementation. In particular, its joint meeting system is not perfect. In most cases, it is a kind of emergency communication. Due to the lack of legal and institutional guarantees, it is not authoritative and sustainable.

#### ***4.2.3. The institutional effectiveness of the legal system is difficult to implement***

The lack of relevant legal provisions and the relative lag of legislation are the important reasons for the difficulty in implementing the institutional effectiveness of the legal system. For example, although the current Law on the Prevention and Control of Air Pollution has been significantly revised on the basis of the old law, it does not give citizens the basic right to air purification. In addition, the unclear accountability mechanism is another reason why the existing legal system is difficult to implement. Local governments often fail in environmental supervision due to some reasons such as "implementing local protection, carrying out regional economic construction, personal political achievements and misunderstanding of management concepts". Enterprises try to reduce their social responsibilities based on the demand of profit maximization. The public and public opinion supervision belong to the external pressure mechanism of environmental pollution, and its supervision role must also be based on a clear accountability mechanism and incentive mechanism. This has resulted in insufficient impetus and pressure for the implementation of the law.

### ***4.3. Mechanism Resistance in Environmental Cooperative Governance of Local Governments***

#### ***4.3.1. The fiscal expenditure is unbalanced, and the weak local governments lack interest compensation and protection***

Under the background that the current compensation policy for direct interests between local governments has not been implemented, especially in areas with large differences in fiscal expenditure capacity, local governments lack compensation and interest protection, which is easy to cause the superficiality and even failure of local government cooperation<sup>[8]</sup>. Moreover, the ecological benefit compensation mechanism is not complete now, and some fields are even in a state of absence. Even according to the existing compensation mechanism, there are many problems that need to be solved in terms of compensation objects and standards, compensation methods, balance of interests between the subject and the object, symmetry of compensation willingness, fund audit and responsibility constraints.

#### ***4.3.2. The sharing mechanism of environmental information among local governments is not sound***

The lack of systematism, uniformity and standardization of environmental protection information has greatly limited the statistics and management of environmental protection information of multiple subordinate units by the institute-level management departments. When implementing the "joint prevention and control" policy, local governments still need to spend a high cost to obtain information from each other. The management methods of environmental protection information in many regions can no longer meet the needs of increasingly complex environmental protection management.

### ***4.4. Technical resistance in local government environmental governance cooperation***

#### ***4.4.1. The application standard of ecological environment quality detection technology is not uniform***

The disunity of the application standards of the ecological environment quality detection technology is also the reason why it is difficult to form a long-term mechanism for environmental governance. For example, for air pollution, in practice, there are many problems of inconsistent standards in the application of air quality monitoring technology. Although the air quality monitoring tools of environmental protection departments in different regions are obtained through government procurement, they should be carried out in a specific monitoring process. Even if the Ambient Air Monitoring Code (Trial Version) is used as the standard, it is difficult to completely unify the technical operation process. We should also make corresponding adjustments according to the specific situation.

#### ***4.4.2. The scientific level of joint prevention and control environmental governance technology is not high***

Taking haze pollution as an example, the occurrence of haze has a very close relationship with human activities and climate conditions. Urban construction and industrial activities lead to an increase in gas emissions. Once the emissions of these gases exceed the environmental capacity, it will destroy the atmospheric circulation mechanism and lead to an increase in the concentration of fine solids. At

present, the state vigorously advocates the "green economy" and advocates the control of haze from the source. A large number of enterprises' products have also been launched, which has provided convenience for achieving good results in the control of haze. However, in general, the control of haze shows a low level in science and technology, which is mainly reflected in the lag in the end treatment technology innovation and the lag in green product innovation.

## **5. The way to improve the driving force of the cross-regional cooperative governance environment of local governments in the Yangtze River Delta**

### ***5.1. Change the traditional concept of local government's cooperative governance of ecological environment***

#### ***5.1.1. Change the traditional development concept of local governments that only pursue economic interests***

Local governments should promote the coordinated development of economic and environmental protection. We are required to give full consideration to the carrying capacity of the environment, change the traditional development concept of single pursuit of economic interests, and take the path of sustainable development, so as to realize the intergenerational equity of the development of contemporary people and future generations, and never deprive future generations of the right to development [9]. We should abandon negative and passive thoughts such as "environmentalism" and "ecologism", and try our best to protect the environment actively and actively.

#### ***5.1.2. Break the assessment system of government officials dominated by economic efficiency indicators***

Relevant units must introduce specific measures to accelerate the construction of ecological civilization, and incorporate environmental protection indicators into the incentive mechanism and responsibility mechanism for the construction of ecological civilization. Local government officials should be responsible for the environmental quality of the atmosphere, water and soil within their jurisdiction. If they fail to pass the environmental responsibility assessment, they will be held accountable. Raising the weight of environmental assessment and reducing the weight of GDP assessment are entirely based on the consideration of limiting the impulse of some officials to achieve political achievements.

### ***5.2. Improve the system of local government environmental cooperative governance***

#### ***5.2.1. Improve existing environmental protection laws and regulations***

First, strengthen research, introduce and improve environmental laws and regulations that adapt to the transformation of economic development mode in the new era. Second, timely revise and improve the current environmental laws and regulations. Third, reducing pollution emissions, environmental performance assessment, environmental compensation and environmental taxes should be included in the whole environmental protection laws and regulations, and form a systematic legal system to make China's environmental law enforcement more effective. Fourth, clarify the legal responsibilities in the field of environment, especially the legal responsibilities of the government and its environmental authorities.

#### ***5.2.2. Improve the mechanism of joint prevention and control***

Establish environmental information exchange and sharing mechanism among environmental protection departments in various regions, establish regional heavy pollution weather early warning consultation and linkage mechanism, establish environmental emergency linkage mechanism, establish cross-border environmental pollution dispute coordination and handling mechanism, establish linkage law enforcement mechanism, establish work consultation and communication mechanism, etc., so as to continuously improve the ability and level of environmental pollution supervision and response to sudden environmental pollution accidents, and effectively curb the degree of pollution, Protect public health.

#### ***5.2.3. Ensure the implementation of laws and regulations***

First of all, it is necessary to clarify the responsibilities, which must be implemented in the document, and the responsibilities of each department must be specified in detail. Secondly, we must

pay close attention to the implementation of the work, strictly implement it, and comprehensively set off a "big storm" of ecological environment improvement. We should carry out the most strict law enforcement, hold high the sword of law, severely punish environmental violations, and create the most stringent environmental law enforcement area. We should carry out the rectification with the strictest accountability, strictly implement the "Party and government responsibilities" and "double responsibilities for one post", and seriously pursue and hold accountable those who fail to implement their responsibilities.

### ***5.3. Strengthen the mechanism of environmental cooperation and governance of local governments***

#### ***5.3.1. Strengthen the balance of fiscal expenditure, and tilt the policy towards vulnerable local governments***

It needs to be coordinated by the superior government, and some preferential policies for the people should be inclined to places with weak economic development. First of all, in terms of fiscal expenditure, we can tilt to these areas to ensure the people's living standards and the normal operation of local governments. Secondly, in terms of industrial structure transformation, some sustainable advantage projects can be implemented in these places as far as possible, and environmental governance can be used as an opportunity to accelerate the upgrading of industrial structure in areas with weak economic development and promote high-quality economic development.

#### ***5.3.2. Strengthen information construction and realize the exchange and sharing of environmental indicator information***

It is necessary to make full use of the potential of existing information systems on the basis of existing information sources. Conduct a comprehensive evaluation of the existing information system, and optimize, update and merge it according to the current new regulatory requirements. The department head must be able to create a higher data platform for the upper ecological environment, digitize the ecological environment into a "one book", conduct scientific analysis, dynamic evaluation, real-time feedback and release water, gas, soil and environmental data, and provide reference for supporting high-quality environmental development.

### ***5.4. Improve the technical level of local governments in environmental governance cooperation***

#### ***5.4.1. Unify the standards for the application of ecological environment quality detection technology***

First, unify the organization and leadership, and straighten out the ecological environment monitoring system and mechanism. The second is to unify the planning and layout, and comprehensively build an ecological environment monitoring network covering all elements, with reasonable layout and perfect functions. The third is to unify the system and improve the quality of ecological environment monitoring data. Fourth, unify data management and deepen the application of ecological environment monitoring data. Fifth, unified information release and improved environmental trust the credibility and authority of information.

#### ***5.4.2. Improve the scientific level of joint prevention and control ecological governance technology***

To improve the scientific level of joint prevention, control and governance, we should start from improving the ability of collaborative work and scientific supervision. First of all, with the goal of strengthening the supervision ability and improving the supervision level, focusing on standardizing the working procedures and strict supervision according to law, comprehensively improve the work efficiency and law enforcement level, and build an environmental protection team that understands business, can supervise, is good at supervision, and adapts to the requirements of environmental protection work in the new situation. Strengthen the digital supervision of environmental protection and improve the scientific supervision level. The second is to strengthen the capacity of scientific and technological supervision, including all fixed pollution sources into environmental supervision, especially the environmental supervision of elevated sources, and realize real-time online monitoring of key sources.

## **6. Conclusion**

The purpose of this article is to clarify the basic pattern of the local government cooperation dynamic system in the cross-administrative region ecological environment governance, and explore its

constituent elements and their interactions. The second is to explore the resistance factors and deep-seated reasons in cooperative governance, and put forward targeted countermeasures and suggestions accordingly. Through research, it is found that it is not enough to rely on the top-level design and technology and capital investment for the cross-administrative region ecological environmental governance. In the current government-led environmental governance pattern, effective environmental governance requires that local governments first seek a conceptual consensus on the identification of ecological values, and then adjust the functions and actions of the government. Therefore, it is particularly necessary to take the cooperative power of local government governance as the logical starting point of the research. At the same time, the focus on the cooperation impetus of local governments in cross-administrative region environmental governance not only provides a new perspective for cross-administrative region ecological environmental governance, but also has certain guiding significance for local governments to strengthen cooperation in economic, political and cultural construction.

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