

Jurisdiction Allocation and Enforcement Guarantee of Cross-Border Environmental Litigation in Pollution Control-An Analysis of Conflict Coordination and Cooperation Paths in the Greater Bay Area

Chengran Li

Zhongnan University of Economics and Law, Wuhan, Hubei, China

Abstract: With the accelerating integration of the Greater Bay Area, environmental problems such as cross-border air pollution, river basin water pollution, and illegal transboundary transfer of solid waste have become increasingly prominent. As the different legal systems, frequent jurisdictional conflicts and inadequate judicial cooperation mechanisms in cross-border environmental litigation have severely undermined the regional coordinated governance of the ecological environment. Traditional jurisdiction rules are difficult to adapt to the special pattern of “one country, two systems, three legal jurisdictions”, and ad hoc, case-based cooperation cannot meet the needs of long-term governance. Focusing on the construction of cross-border environmental litigation jurisdiction, this paper, on the basis of analyzing the practical dilemmas and institutional causes in the Greater Bay Area and supported by the theories of functional equivalence, procedural coordination and reciprocal recognition of results, constructs a well-structured and efficient cross-border environmental litigation jurisdiction system. It proposes a tripartite jurisdiction model combining basic jurisdiction, priority jurisdiction and agreed jurisdiction, improves the jurisdictional conflict coordination mechanism, and promotes the regional environmental justice from fragmentation to coordination and from ad hoc to institutionalization, so as to provide a rule-of-law path for cross-jurisdictional ecological and environmental protection.

Key words: Cross-border Environmental Pollution; Environmental Litigation; Jurisdiction Allocation; Functional Equivalence; Greater Bay Area

1. Introduction

Against the backdrop of highly integrated regional economy, the ecological environment of the Guangdong-Hong Kong-Macao Greater Bay Area is highly interconnected and integrated. The natural mobility of environmental elements such as air, water and soil makes environmental pollution prone to cross administrative boundaries, forming typical cross-border environmental risks. However, the Chinese mainland, Hong Kong and Macao implement different legal systems, judicial systems and jurisdiction rules, leading to phenomena of competing jurisdiction or mutual prevarication over the same cross-border pollution case, obstructed relief channels for victims, and difficulty in holding polluters accountable.

At present, academic research on environmental governance in the Greater Bay Area mostly focuses on administrative cooperation, legislative coordination, ecological compensation and other fields^[1]. Research on the systematic construction of cross-border environmental litigation jurisdiction is still relatively weak, especially lacking a systematic design of jurisdiction rules under the framework of “functional equivalence, procedural coordination and reciprocal recognition of results”. In view of this, this paper, centering on jurisdiction allocation and based on the special institutional scenario of the Greater Bay Area, explores jurisdiction rules with legitimacy, rationality and operability, which is of great theoretical and practical significance for promoting the modernization of regional environmental governance and deepening interregional judicial cooperation.

2. Jurisdictional Conflicts in Cross-Border Environmental Litigation in the Greater Bay Area

2.1 Main Forms of Jurisdictional Conflicts in Cross-Border Environmental Litigation

Jurisdictional conflicts in cross-border environmental litigation in the Greater Bay Area mainly fall into two categories: first, positive conflicts, meaning courts of two or more jurisdictions claim jurisdiction over a case, resulting in repeated filing, procedural delays and conflicting judgments; second, negative conflicts, meaning relevant courts refuse to accept the case on the ground of lack of jurisdiction, making judicial relief for environmental rights unavailable.

In practice, conflicts mainly occur in scenarios where the place of pollution and the place of damage belong to different jurisdictions, the domicile of an enterprise is separated from the place of pollution discharge, and cross-border mobile pollution occurs^[2]. Due to different jurisdictional bases, identification standards and procedural rules, similar cases may lead to completely different jurisdictional conclusions in the three regions.

2.2 Institutional Roots of Jurisdictional Conflicts

First, differences in jurisdictional structure lead to different jurisdictional bases. The Chinese mainland takes statutory connecting points as the core, such as the place of tort and the domicile of the defendant; Hong Kong follows common law principles of “effective control” and “forum conveniens”; Macao mainly takes the domicile of the defendant and the place of damage as the basis. The underlying logics of the rules are different and difficult to be naturally compatible.

Second, there is no unified standard for the identification of key connecting points. Core concepts such as “place of pollution occurrence”, “place of damage” and “place of act implementation” are interpreted differently by the three regions, and identification is especially difficult in dynamic cross-border cases such as air transmission and river basin pollution.

Third, interregional judicial cooperation remains at a shallow level. Existing cooperation is mostly case-based communication and experience exchange, lacking an institutionalized dispute resolution mechanism for jurisdictional conflicts. Once conflicts arise, there is no clear, efficient and binding coordination path.

Fourth, public policy reservations are overused.

Some cases are refused jurisdiction or recognition on the ground of “public policy”, further exacerbating judicial barriers and increasing the cost of cross-border rights protection.

Overall, the jurisdictional dilemma of cross-border environmental litigation in the Greater Bay Area results from the combined effect of institutional differences, rule deficiencies and inadequate mechanisms, which must be resolved through systematic reconstruction of jurisdiction rules.

3. Core Concepts and Theoretical Framework for Jurisdiction Allocation of Cross-Border Environmental Litigation

3.1 Functional Equivalence: The Value Benchmark of the Jurisdiction System

Functional equivalence emphasizes that the unification of legal provisions and procedural forms in the three regions is not pursued, but the equivalent realization of environmental judicial governance functions^[3]. Regardless of how jurisdiction rules are designed, they should take the common goals of “finding facts, remedying damage, holding responsibilities accountable and preventing pollution”.

In jurisdiction allocation, functional equivalence requires courts of the three regions to form roughly consistent standards in three dimensions: case acceptance thresholds (referring to the criteria and conditions for initiating cross-border environmental litigation), liability determination logics (referring to the basis and reasoning for identifying environmental tort liability), and rights protection levels (referring to the scope and intensity of remedies for environmental rights and interests). Such consistency ensures that cross-border environmental cases can achieve similar governance effects and justice outputs no matter which jurisdiction they are under.

3.2 Procedural Coordination: Operational Guarantee for Jurisdiction Operation

Procedural coordination is the key path to rational allocation of jurisdiction, aiming to reduce conflicts and improve efficiency through process connection, standard unification and information exchange^[4].

It is specifically reflected in: coordination of jurisdictional identification standards, coordination of filing and acceptance procedures,

coordination of evidence and fact identification, and coordination of jurisdictional dispute resolution procedures. Through procedural coordination, the dispersed judicial system can form joint forces and avoid unnecessary jurisdictional confrontations caused by procedural differences.

3.3 Reciprocal Recognition of Results: Institutional Support for Jurisdictional Effectiveness

Reciprocal recognition of results requires that jurisdictional decisions exercised properly and legally without violating regional common interests be respected and recognized by courts of the three regions, without repeated review or arbitrary negation.

The core significance of reciprocal recognition of results is to stabilize jurisdictional expectations, reduce litigation costs and strengthen judicial authority, so that jurisdiction allocation is truly binding and effective, and cross-border environmental litigation shifts from “conflict and confrontation” to “trust and cooperation”.

4. Construction of the Cross-Border Environmental Litigation Jurisdiction System in the Guangdong-Hong Kong-Macao Greater Bay Area

This paper proposes to construct a “tripartite jurisdiction model” guided by functional equivalence, procedural coordination and reciprocal recognition of results, forming a jurisdiction system with clear levels, definite order and smooth coordination.

4.1 Basic Jurisdiction: Establishing Generally Applicable Statutory Jurisdiction Rules

Basic jurisdiction is the default jurisdiction rule for cross-border environmental litigation, applicable to general cases without special provisions^[5].

Combined with the legal traditions of the three regions and the characteristics of environmental cases, three statutory connecting points are established:

- 1) The place where the polluting act is implemented: the place where direct pollution occurs such as discharge, dumping, stacking and emission initiation;
- 2) The place where damage occurs: the place where personal, property and ecological

environment rights are infringed;

- 3) The domicile or principal business place of the defendant: the place of registration and actual operation and management of an enterprise.

Basic jurisdiction adopts the principle of “first to file” for conflict resolution. The court that first files the case obtains jurisdiction, which shall be respected by other courts to avoid repeated litigation.

4.2 Priority Jurisdiction: Strengthening Public Interests and Professional Adjudication

For major, sensitive and complex cross-border environmental cases, priority jurisdiction rules are established to ensure the appropriateness and authority of case trial.

- 1) Priority of the place of damage: cases with concentrated damage, numerous victims and significant ecological impacts shall be under the jurisdiction of the court of the place of damage for better rights relief;
- 2) Priority of ecologically sensitive areas: cases involving key areas such as drinking water source reserves, important wetlands and national parks shall be under the priority jurisdiction of the court where the sensitive area is located;
- 3) Priority of specialized environmental courts: centralized jurisdiction by courts with professional capacity in environmental resource trials to improve the professionalism and scientificity of adjudication.

Priority jurisdiction does not deprive jurisdiction, but establishes the trial order to ensure that cases are heard by the most appropriate courts.

4.3 Agreed Jurisdiction: Supplementing Flexible Space for Party Autonomy

Parties may agree in writing to choose a court of jurisdiction without violating exclusive jurisdiction, harming public interests or excluding the legitimate rights of vulnerable victims.

Agreed jurisdiction shall meet the following conditions:

- 1) Choosing a court with a real connection to the case;
- 2) Not excluding the statutory relief channels of victims;
- 3) Not violating public order commonly recognized by the three regions;
- 4) The content of the agreement is clear and unambiguous.

Agreed jurisdiction can improve dispute

resolution efficiency and enhance predictability, serving as a useful supplement to statutory jurisdiction.

4.4 Joint Review Mechanism for Jurisdictional Conflicts

To effectively resolve jurisdictional disputes, a joint review mechanism for jurisdictional conflicts in cross-border environmental litigation in the Greater Bay Area is established.

- 1) Triggering conditions: jurisdictional disputes arise between courts or parties raise reasonable objections;
- 2) Coordination subject: a joint review panel composed of judicial coordination institutions of the three regions;
- 3) Review criteria: functional equivalence, convenience of litigation, protection of public interests, professionalism and efficiency;
- 4) Effectiveness arrangement: written coordination opinions shall be formed with guidance and binding force to ensure rapid resolution of jurisdictional disputes.

The joint review mechanism is the core carrier for procedural coordination and reciprocal recognition of results, which can upgrade case-based cooperation to an institutionalized and normalized dispute resolution path.

5. Improvement of Supporting Systems for the Operation of the Jurisdiction System

5.1 Unifying Jurisdictional Identification Standards and Guiding Typical Cases

Unify the identification of key concepts such as “cross-border pollution”, “place of damage” and “place of act implementation” by formulating operational guidelines and issuing typical cases, so as to reduce jurisdictional conflicts caused by differences in understanding and stabilize judicial expectations.

5.2 Establishing a Cross-Border Environmental Judicial Information Sharing Platform

Realize interoperability and sharing of filing information, evidence materials, jurisdictional dispute matters, trial progress and other information, provide technical support for procedural coordination and reciprocal recognition of results, reduce communication costs and improve cooperation efficiency^[6].

5.3 Strengthening the Construction of

Interregional Judicial Coordination Organizations

Establish a normalized coordination institution responsible for rule connection, dispute coordination, case summary and experience promotion, so as to promote the stable operation of the jurisdiction system and gradually form a stable, mature and replicable cooperation model.

6. Conclusion

Jurisdiction allocation of cross-border environmental litigation in the Guangdong-Hong Kong-Macao Greater Bay Area is a key rule-of-law issue for regional environmental governance under the framework of “one country, two systems, three legal jurisdictions”. Faced with practical dilemmas such as divergent jurisdiction rules, frequent conflicts and insufficient cooperation, traditional jurisdiction theories and scattered cooperation models cannot provide long-term solutions.

Guided by the core concepts of functional equivalence, procedural coordination and reciprocal recognition of results, this paper constructs a tripartite jurisdiction model combining basic jurisdiction, priority jurisdiction and agreed jurisdiction, supported by a joint review mechanism for jurisdictional conflicts. This system not only respects the institutional differences of the three regions, but also unifies the functions of environmental justice; it not only clarifies jurisdictional boundaries and orders, but also maintains necessary flexibility and efficiency.

This system helps to fundamentally resolve jurisdictional conflicts, smooth rights relief, strengthen pollution liability, promote environmental justice in the Greater Bay Area from ad hoc cooperation to institutional coordination, provide a solid judicial guarantee for high-quality protection of the regional ecological environment, and also offer important reference for other cross-jurisdictional and cross-regional environmental governance in China.

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