

Study on the coupling of climate change litigation and Three-in-One Trial Mechanism for environmental litigation

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ABSTRACT

Global climate change public interest litigation faces multifaceted challenges. Theoretically, a robust legal framework remains absent to substantiate such litigation. Practically, it grapples with procedural barriers including restrictive standing doctrines, evidentiary complexities in establishing causation, and indeterminacies in judicial remedies. China's innovative "Three-in-One Trial Mechanism" — a specialized judicial model integrating civil, criminal, and administrative environmental proceedings — enhances resource allocation and adjudicative efficiency in environmental justice. Empirical analysis of China's climate-related public interest cases suggests this mechanism holds potential to address systemic gaps in climate litigation. However, given the distinct legal contours between conventional environmental public interest litigation and climate-focused claims, its application may necessitate further refinements to accommodate the unique evidentiary and normative demands of climate disputes.

KEYWORDS

climate change public interest litigation; Three-in-One Trial Mechanism; environmental public interest litigation

1 Overview of Public Interest Litigation on Climate Change in China

In recent years, climate change public interest litigation has proliferated globally. Since the first documented case in 1997, it has evolved into an international judicial phenomenon reflecting humanity's collective urgency to confront climate crises^[1]. Meanwhile, China's Three-in-One Trial Mechanism, initially conceptualized in the 1980s and progressively operationalized, employs specialized environmental courts or collegiate panels to holistically adjudicate interconnected civil, criminal, and administrative dimensions of a single environmental dispute. Against the backdrop of rising climate litigation caseloads, this study examines how this mechanism — as both a theoretical framework and institutional practice — could mitigate persistent challenges in climate litigation through differentiated approaches from traditional environmental public interest claims, thereby carving out an independent jurisprudential space for climate justice.

Since the Reform and Opening-Up, China's economic growth has been heavily reliant on coal consumption. However, following its accession to the *Paris Agreement* in 2016 and the commitment to achieve a carbon emission peak by 2030, the nation's green development paradigm has progressively aligned with environmental imperatives. Despite this shift, climate change public interest litigation in China remains nascent compared to conventional environmental public interest litigation, marked by underdeveloped theoretical frameworks. The field entered a formative phase only after pivotal policy interventions: the State Council's *13th Five-Year Plan for Greenhouse Gas Emission Control* (2016) and the Supreme People's Court's *White Paper on China's Environmental and Resource Adjudication* (2017), which explicitly prioritized climate change in judicial agendas^[2].

Characterized by limited precedents, procedural indirectness, and a policy-driven reliance on procuratorate-led public interest litigation, China's climate litigation faces systemic hurdles including legislative gaps, ambiguities in liability attribution, and scientific complexities in proving climate causation.

Judicial practices in this domain remain fragmented, with most cases framed as air pollution disputes. Early indirect engagements with climate issues include the 2009 *All-China Environment Federation v. Guizhou Phosphorus Chemical Enterprise* case, where water pollution claims incidentally addressed energy consumption patterns. A milestone emerged in 2015 with *Friends of Nature v. Ningxia Ruitai Technology Co.*, where the court ordered compensation for atmospheric remediation due to excessive fluoride emissions, tentatively linking greenhouse gases to climate harm. Recent years, however, have witnessed incremental breakthroughs as courts grapple with the *Dual Carbon Goals* (peaking carbon by 2030, neutrality by 2060), signaling evolving judicial responsiveness to climate imperatives.

In conclusion, while China's climate change public interest litigation has historically progressed slowly through environmental litigation pathways, accelerating policy and judicial reforms suggest a transformative trajectory.

2 Overview of the modus operandi and advantages of triple jeopardy

The "Three-in-One Trial Mechanism" in China's environmental adjudication refers to a judicial model where courts, in pursuit of specialized environmental justice, consolidate civil, administrative, and criminal environmental cases under a single specialized environmental tribunal, rather than distributing them across separate divisions. This institutional

innovation aims to provide holistic and integrated judicial protection for ecological resources^[3]. Scholarly consensus recognizes this mechanism's capacity to standardize judicial criteria, enhance adjudicative efficiency, and safeguard stakeholders' rights in environmental disputes. Crucially, it addresses systemic challenges inherent in environmental judicial specialization, particularly the complexity and idiosyncrasy of environmental cases.

First, environmental litigation often involves interdisciplinary complexities where a single case may span multiple legal domains (e.g., pollution-triggered health damages requiring civil compensation and regulatory violations warranting administrative penalties). Traditional fragmented adjudication across divisions risks procedural redundancies and resource misallocation. The Three-in-One Mechanism mitigates these inefficiencies by centralizing jurisdiction, thereby optimizing judicial resource utilization. Second, the geographic specificity of environmental cases has led to inconsistent rulings across jurisdictions, undermining judicial predictability. By establishing unified jurisdictional standards for case acceptance and adjudication, this mechanism enhances doctrinal coherence. It ensures equitable access to justice by increasing the likelihood of comparable outcomes for factually analogous cases, irrespective of regional disparities. Third, judges within this framework are selected for their technical expertise in environmental science and law, enabling them to navigate evidentiary complexities (e.g., ecological damage quantification, causal chain analysis) and coordinate multidisciplinary resources (e.g., expert panels, environmental monitoring data). This professionalization strengthens the integrity of fact-finding processes and the legitimacy of verdicts.

3 Feasibility of coupling climate change public interest litigation with the triple jeopardy model

Climate change public interest litigation, with climate impacts as its legal subject, faces inherent limitations across proposed doctrinal pathways. Predominant approaches — including climate tort litigation, ecological damage compensation claims, climate administrative litigation, and preventive climate public interest litigation — exhibit systemic flaws:

- **Climate tort litigation**, anchored in *ex post facto* remedies, conflicts with the precautionary essence of climate governance, undermining its viability for accountability.
- **Ecological damage compensation claims**, essentially a subset of tort law, require prior environmental harm as a precondition, contradicting the anticipatory nature of climate justice.
- **Climate administrative litigation** struggles with evidentiary burdens (e.g., proving specific agency malfeasance) and restrictive standing rules.
- **Preventive public interest litigation**, though conceptually aligned with precaution, risks judicial overreach by bypassing specialized administrative oversight^[4].

The **Three-in-One Trial Mechanism** offers a structural remedy to these challenges:

3.1 Enhancing Adjudicative Competence & Legal SystemizationBy consolidating judicial resources, this mechanism empowers specialized tribunals

- Strengthen *scientific review capacity* for assessing climate-related "damage" claims (e.g., probabilistic attribution models);
- Compensate for legislative gaps in China's climate governance through *de facto norm-setting* (e.g., clarifying GHG emission thresholds and interagency responsibilities);
- Catalyze *legislative evolution* via precedent accumulation, bridging judicial practice and statutory reforms.

3.2 Optimizing Procedural Efficiency

Climate litigation frequently involves intersecting civil, criminal, and administrative claims. Traditional parallel proceedings often result in *coordination failures* and decade-long delays (e.g., concurrent pollution-related criminal penalties and civil compensation claims). The integrated jurisdiction model enables *sequential yet consolidated adjudication*, mirroring its success in streamlining complex environmental cases.

3.3 Clarifying Liability Attribution & Evidentiary Standards

Per Japanese jurist **Ken'ichi Kakegawa's** theory, *legal standing* hinges on plaintiffs demonstrating "immediate necessity for judicial relief" (i.e., actionable harm)^[5]. Yet climate litigation faces *attribution complexities*:

- **Causal indeterminacy**: Linking specific emitters (e.g., coal plants) to particular climate harms (e.g., coastal erosion) requires overcoming *scientific polycentricity* (e.g., *Lliuya v. RWE AG*^[6], where individualized emissions accounting proved contentious).

- **Evidentiary burdens:** Proving emitter-to-harm causality demands multidisciplinary inputs often beyond plaintiffs' capacities.

The Three-in-One Mechanism addresses these through:

- **Expert panels:** Court-appointed committees (e. g., climatologists, econometricians) to evaluate attribution under judicial oversight;

- **Procedural hybridization:** Applying *criminal evidentiary rigor* to establish fault, *civil presumption rules* to shift burden of proof, and *administrative legality reviews* to assign regulatory accountability.

4 Opinions and Suggestions on the Integration of Three Trials from the Perspective of Climate Change Litigation

The integration of three trials is essentially an organizational model that consolidates different types of cases into a single tribunal, thereby saving litigation resources. It also facilitates the exchange of information between criminal, civil, and administrative cases, resulting in a more comprehensive litigation perspective and more impartial judgments.

President Xi Jinping has emphasized the need to create a new landscape for climate governance, establish a new system for climate governance, and adhere to new approaches in climate governance. The "dual carbon" goals are a crucial directive for China's climate governance actions, with the public interest reflected in the fact that carbon emissions are related to every entity. The public interest litigation system is undoubtedly one of the best paths to safeguard the public's climate interests. Leveraging the outcomes of environmental public interest litigation to establish litigation institutions is also a significant way to strengthen climate change public interest litigation^[7]. In this context, the integration of three trials model can place greater emphasis on the construction of public interest litigation. While merging the three tribunals, it can also attempt to initiate litigation in the public interest, thereby expanding public interest practices in multiple dimensions. Implementing the "dual carbon" concept and establishing a new litigation institution within the context of climate change litigation is the pathway for the integration of three trials to couple with climate change litigation. Secondly, the integration of three trials in climate change public interest litigation needs to pay attention to procedural coordination and the integration of evidence rules.

5 Conclusion

In current climate change litigation, there are five factions, each facing issues such as unclear causation, difficulty in determining plaintiff eligibility, and challenges in evidence collection to varying degrees. The integration of three trials, which consolidates litigation resources and leverages the expertise of judges, can address these shortcomings. As a mature litigation organizational model in China, the integration of three trials can be applied to environmental public interest litigation, with its advantages compensating for the deficiencies in current environmental public interest litigation, making it feasible overall. Applying the integration of three trials model in climate public interest litigation requires focusing on the application of the "dual carbon" concept, paying attention to procedural coordination and the integration of evidence rules, and strengthening enforcement and relief measures. Thus, the integration of three trials model can be better utilized in climate change public interest litigation to protect the rights of parties, promote climate change litigation legislation, and advance institutional improvement.

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