

Challenges and Solutions of Environmental Public Interest Litigation in Ship Pollution Cases-Focusing on Standing and Compensation Standards

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Abstract: This paper examines the application logic, institutional barriers, and potential improvements of environmental public interest litigation (EPIL) in ship pollution cases from the perspective of Chinese judicial practice. By analyzing landmark cases and comparing international experiences, it clarifies the root conflicts between EPIL and the special rules of maritime law, such as the limitation of liability for maritime claims, and explores the construction of a new litigation mechanism that balances marine ecological protection and the sustainable development of the shipping industry. Focusing on two core issues-standing of plaintiffs and standards of compensation-the study systematically analyzes the practical challenges of EPIL in ship pollution incidents and proposes institutional reforms aligned with both Chinese judicial practice and international conventions. The ultimate aim is to promote a scientific, efficient, and operable mechanism for environmental litigation concerning ship-source pollution.

Keywords: Environmental Law; Public Interest Litigation; Ship Pollution; Marine Environmental Protection

1. Introduction

With the rapid development of the global shipping industry, marine pollution caused by ships has become an increasingly severe threat to oceanic ecosystems. Traditional maritime law is primarily efficiency-oriented and lacks timely adaptation to the needs of ecological protection. As an emerging legal instrument, environmental public interest litigation (EPIL) still faces significant legal conflicts, technical obstacles, and coordination difficulties at the international level when applied to ship pollution cases[1]. In practice, ecological damages are often too

substantial to be covered by individuals or private entities. Private litigation typically focuses on direct economic losses, lacking adequate motivation and resources to address the restoration of marine ecological systems. Thus, the judicial system becomes the final safeguard for marine environmental protection[2]. Given the public nature of ecological harm caused by ship pollution and the inherent limitations of private rights-based litigation, many environmental damages remain unremedied in a timely manner.

Theoretically, traditional maritime law focuses on regulating economic relations in shipping, while environmental law centers on ecological protection. There is a lack of systematic theoretical integration between these two bodies of law. Through an in-depth analysis of Chinese judicial practice, this paper seeks to provide theoretical foundations for building a maritime justice system that prioritizes ecological concerns.

Practically, ship-source pollution in public marine areas faces the "tragedy of the commons" dilemma. Conventional administrative regulation has proven insufficient in effectively deterring such violations. EPIL serves to mobilize social oversight, fill regulatory gaps, address difficulties in ecological damage assessment and compensation enforcement, and help translate China's judicial practices into internationally recognized rules. In doing so, EPIL also enhances China's discourse power in global ocean governance and provides legal support for the strategic goals of becoming a maritime power and achieving carbon neutrality targets.

2. Institutional Analysis and Practical Challenges

2.1 Dual Restrictions on Environmental NGOs

According to Article 58 of the Environmental

Protection Law and Article 55 of the Civil Procedure Law, environmental NGOs must satisfy two cumulative conditions to initiate EPIL: registration at or above the municipal level with districts, and having no record of legal violations for five consecutive years. These requirements originated from the 2014 Judicial Interpretation on Environmental Public Interest Litigation. However, they result in an overlapping restriction based on both "jurisdiction of registration" and "organizational qualification." Given the fluid and cross-jurisdictional nature of ship pollution, this framework inherently conflicts with the territorial registration principle under the Regulations on the Registration of Social Organizations.

2.2 Prosecutorial Dilemmas in Substitutionary Litigation

Procuratorates typically emphasize "actual effectiveness" as the basis for litigation-i.e., whether environmental damage has been remedied-which, although consistent with the public interest objective, fails to accommodate the objective laws of ecological restoration, including natural recovery cycles, technical limitations, and complexities in administrative enforcement[3]. According to Article 41 of the Rules on Public Interest Litigation by the People's Procuratorates, the exercise of prosecutorial litigation power requires dual prerequisites: "discovery during duty performance" and "absence of qualified plaintiffs." This cautious principle of intervention delayed action in the "Zhoushan Oil Spill Case," where key evidence was lost as the procuratorate waited for the environmental authority to transfer the case, during which the oil dispersed into international waters. In contrast, the U.S. Oil Pollution Act (OPA) authorizes federal prosecutors to directly initiate lawsuits. China's Special Maritime Procedure Law, however, lacks mechanisms to connect prosecutorial investigations with maritime damage appraisals.

2.3 Functional Overlap of Administrative Agencies

Article 89 of the Marine Environmental Protection Law grants administrative agencies "priority in compensation claims." This principle caused conflicts in the "Bohai ConocoPhillips Case," where administrative fines clashed with

ecological compensation. According to the Ministry of Finance's Guidelines for Managing Marine Ecological Damage Compensation Funds, agencies may only recover direct economic losses, whereas Article 1235 of the Civil Code stipulates that ecological restoration costs must be pursued through EPIL. This institutional fragmentation has led to double claims in practice: e.g., an administrative agency imposes a fine of 5 million yuan, followed by the procuratorate's claim of 230 million yuan in ecological damages. Since being designated as eligible plaintiffs under Article 55 of the 2012 Civil Procedure Law, administrative bodies initially failed to actively participate in litigation and only began doing so after the 2017 reform of the ecological damage compensation system[4].

3. Case Analysis and Controversial Focal Points

3.1 Institutional Barriers to Standing

The 2018 "Sanchi" oil tanker collision in the Yangtze River Estuary-the first major international oil spill EPIL case in China-exposed deep-rooted issues in the legal framework for standing in environmental litigation. In this case, the China Biodiversity Conservation and Green Development Foundation (hereinafter "CBCGDF") filed suit as the plaintiff but faced strong challenges from the defendant regarding its legal standing. Although CBCGDF is a nationally registered NGO and theoretically qualified to litigate, the oil spill affected multiple maritime jurisdictions. The defendant argued that CBCGDF's registration in Beijing lacked geographic relevance to the pollution site in the Yangtze River Estuary, thereby failing to satisfy the requirement under Article 55 of the Civil Procedure Law that a plaintiff must be "related to the place where the pollution occurred." This argument was upheld by the court, which dismissed the claim for lack of evidentiary support.

Meanwhile, prosecutorial intervention was delayed due to procedural constraints. Under the Pilot Plan for EPIL by Prosecutorial Organs, prosecutors may only step in when no qualified plaintiff is available or the qualified plaintiff declines to sue. As the CBCGDF's eligibility was under review, critical oil pollution evidence deteriorated due to ocean currents and weather conditions, severely compromising the accuracy

of subsequent ecological damage assessments. A similar issue arose in the 2011 Penglai 19-3 oil field spill in the Bohai Bay. Fishermen in Hebei and Shandong provinces filed civil lawsuits in 2011, which were dismissed for "insufficient evidence." Environmental NGOs only began to intervene in 2015[5]. These delays, caused by strict standing rules, have resulted in litigation occurring only after administrative remedies fail-often too late to prevent further damage. Additionally, local protectionism sometimes impedes court acceptance of such cases, especially when local authorities seek to protect corporate interests, further hindering the advancement of EPIL[6]. Even when prosecutors await administrative outcomes, oil pollution may already have dispersed into the open sea, making evidence collection virtually impossible. The legal requirement of "absence of a qualified plaintiff" as a precondition for prosecutorial action thus hampers timely evidence preservation. Notably, the joint litigation strategy by prosecutors and social organizations in the "Sanchi" case offers a promising model to overcome this dilemma.

3.2 Ambiguities in Compensation Standards

The "Sanchi" incident resulted in the discharge of approximately 111,300 tons of condensate oil, causing long-term ecological damage to fishery resources in the Yangtze Estuary. The China Environmental United Certification Center, acting as plaintiff, claimed compensation for 20 years of fishery resource restoration. However, the unique volatility of condensate oil cast doubt on the applicability of traditional oil pollution assessment models. The court ultimately held: "Current evidence does not establish a necessary causal link between the leaked substances and a 20-year reduction in fishery yields." Furthermore, compensation fund management lacked transparency. According to the Ministry of Finance's Administrative Measures for the Collection and Use of Ship Oil Pollution Damage Compensation Funds, 168 million yuan in compensation was placed in a dedicated Shanghai municipal finance account. However, the fund's allocation for ecological restoration was not explicitly designated. The absence of mandatory disclosure requirements deprived the public and environmental organizations of access to fund usage details, violating Article 53 of the Environmental Protection Law, which guarantees the public's right to know.

China's Marine Environmental Protection Law only provides a broad mandate to "restore marine ecology" without setting concrete standards. The appraisal and evaluation of damages in marine EPIL cases are particularly complex. Public interest harm is indeterminate in scope, without fixed boundaries or time limits, making quantitative evaluation extremely challenging[7]. In the Penglai 19-3 case, the 1.683 billion yuan ecological compensation was settled through administrative negotiation rather than judicial adjudication, raising concerns about transparency[6].

In contrast, the U.S. Oil Pollution Act (OPA 1990) explicitly includes Natural Resource Damage (NRD) within its compensation framework and establishes a scientifically grounded assessment system[8]. China's Civil Code Article 1234 imposes liability for ecological restoration but leaves the compensation of "pure economic loss" (e.g., reduced fishery income) ambiguous[5]. Though a special account was created in the "Sanchi" case, the lack of transparency and professional oversight in fund utilization falls short of international norms such as those under the IMO's Guidelines on Oil Pollution Damage Compensation.

4. Coordinated Paths to Institutional Improvement

Faced with the evolving need to balance marine ecological protection and the development of the shipping industry, China's environmental public interest litigation (EPIL) system for ship-source pollution stands at a critical juncture for structural reform. A close examination of the "Sanchi" and Bohai Bay oil spill cases reveals that institutional reconstruction is not merely a matter of improving judicial efficiency-it is a key component of modernizing national ocean governance.

4.1 Expanding Standing for Plaintiffs

From a rights-based perspective, EPIL represents the legal embodiment of a direct right granted to certain actors to protect the environment and uphold the public interest. In contrast, under public law, environmental litigation involves the delegation of natural resource ownership and the right to sue to the state when administrative authorities fail to curb environmental degradation effectively[9]. To align the civil liability framework with the practical demands

of ecological protection, it is essential to abandon the Marine Environmental Protection Law's rigid principle of administrative priority in favor of a dual-track remedy model that allows parallel access to both administrative and judicial remedies. Administrative compensation claims must not preclude qualified environmental organizations from exercising their rightful access to the courts.

Organizations that have obtained professional certification in marine environmental protection should be exempt from geographic jurisdiction restrictions and be granted standing to initiate cross-regional lawsuits. Regarding inter-agency coordination, procedural rules should require administrative authorities to transfer relevant case materials to the procuratorate for recordation whenever administrative penalties are imposed. Similarly, when social organizations file EPIL claims, administrative bodies should be legally obligated to share any pollution evidence in their possession.

Building on the principle of "reversal of the burden of proof," courts should refine the plaintiff's preliminary evidentiary standard to require only a "high likelihood of polluting conduct." More complex causation issues-particularly those involving technical proof-should be rebutted by the defendant. In terms of statutes of limitations, a special time-limit rule tailored to EPIL should be established, aligning the litigation period with the delayed manifestation cycle of ecological damage. Pre-trial preservation procedures also need enhancement: procuratorates should be empowered to take evidence preservation and injunctive actions prior to formal case filing to prevent loss of evidence or further harm.

It is also crucial to clearly define the identity and role of procuratorates in different procedural stages, ensuring that their exercise of public interest litigation authority remains within necessary boundaries and effectively balances dual objectives: environmental protection and legal supervision[10].

4.2 Refining Compensation Standards

The establishment of a robust and coherent compensation system requires coordination across three dimensions: technical guidelines, legal rules, and financial management.

On the technical front, a tiered and classified ecological damage assessment system should be developed. Drawing from the U.S. Oil Pollution

Act, ecological damage can be categorized into three stages: emergency response, mid-term restoration, and long-term rehabilitation. The emergency phase focuses on immediate cleanup and emergency treatment costs; the mid-term phase includes expenses for artificial restoration measures; and the long-term phase addresses continued losses in ecosystem service functions. This phased approach conforms to the natural progression of ecological harm and enhances the precision of evaluations.

To improve objectivity, a standardized national database of "pollution damage coefficients" should be created. Key variables such as species sensitivity and pollutant degradation cycles should be codified to unify assessment benchmarks.

In terms of legal rules, the priority is to clearly delineate the scope of compensation. Losses in ecosystem service functions, prevention costs, monitoring and assessment expenses, and pure economic losses must be explicitly included in the compensable categories. The introduction of punitive damages is also necessary to strengthen deterrence. Practically, punitive damages should be guided by a tripartite framework: (1) the severity of the polluter's conduct; (2) the gravity of resulting ecological harm; and (3) the polluter's post-incident response attitude. This ensures targeted and proportionate penalties[11]. In the ongoing reform of China's legal framework for marine pollution, the proposal to introduce punitive damages has garnered increasing attention. Its primary objective is to deter unlawful conduct and strengthen accountability by substantially raising the cost of violations. However, from an implementation perspective, this proposal still lacks sufficient specificity, particularly in terms of quantifying the "seriousness" of the conduct and clarifying how such a mechanism would interact with the existing system of liability limitation in maritime law.

At the core of the punitive damages regime is the imposition of monetary penalties exceeding actual damages, aimed at punishing malicious intent, gross negligence, or repeated violations. Yet, current legislative or policy proposals have not established a clear evaluative framework for determining the severity of such conduct. Specifically, there remains considerable ambiguity regarding the distinction between "gross" and "ordinary" negligence, the criteria for identifying subjective malice on the part of

polluters, and whether factors such as the scope and duration of ecological harm or public reaction should be incorporated into the assessment. The absence of precise indicators and judicial guidelines may result in inconsistent enforcement, jeopardize the fairness of judicial outcomes, and generate legal uncertainty for enterprises, thereby weakening the predictability and deterrent effect of the law.

Moreover, China's existing Maritime Law and the Regulations on the Prevention and Control of Pollution from Ships to the Marine Environment provide for a liability limitation regime in ship-source pollution cases. Under these provisions, shipowners' liability is capped unless gross negligence or intentional misconduct is established. This limited liability regime serves a legitimate purpose in balancing the financial viability of maritime enterprises with environmental responsibility. Introducing a punitive damages mechanism alongside this system may create legal conflicts or confusion in judicial application. For example, in cases where both limited liability and punitive damages are invoked, it remains unclear which legal principle should take precedence. Should punitive damages only apply where the liability cap has been pierced—such as in cases of willful misconduct? These questions call for careful clarification and alignment in future legislative design.

Therefore, the effective incorporation of punitive damages into China's marine pollution legal regime requires a focus on institutional coherence and operational feasibility. Legislative reforms must define clear applicability thresholds, establish measurable standards for evaluating the severity of violations, and explicitly articulate how the punitive damages mechanism interfaces with existing liability limitation rules. Only through such a coordinated approach can punitive damages serve their intended role as a functional legal tool for environmental protection, rather than a symbolic reform lacking practical enforceability.

Innovations in fund management are essential to guarantee the effectiveness of compensation. Drawing inspiration from Canada's Marine Conservation Fund[12], China should consider establishing a "Special Marine Ecological Restoration Trust" tailored to national conditions. This trust could be governed under a "four-party separation of powers" model: the polluter as grantor; a professionally qualified public

foundation as trustee; the procuratorate as supervisory body; and the local government of the affected marine area as beneficiary. This structure ensures both professional fund management and robust oversight.

The United States' *Oil Pollution Act* of 1990 (OPA) and Canada's *Oceans Protection Plan* (OPP) have played significant roles in addressing marine pollution and safeguarding ecological security within their respective jurisdictions. However, when considering the transplantation or adaptation of these mechanisms into China's legal and economic context, several inherent limitations and compatibility issues emerge.

To begin with, the OPA establishes a relatively comprehensive liability framework that includes a strict liability regime, capped compensation limits, and the creation of a national oil spill liability trust fund to ensure timely response and remediation. Nevertheless, this framework is not fully compatible with China's current legal and economic conditions. On one hand, a strict liability system presumes that enterprises possess robust financial and insurance capacities. In China, however, a substantial portion of maritime operators are small or medium-sized enterprises with limited risk resilience. Direct adoption of the U.S. model could impose excessive financial burdens, potentially stifling industry development. On the other hand, the OPA relies heavily on a centralized federal enforcement mechanism, with the United States Coast Guard playing a pivotal role. In contrast, China's maritime and environmental enforcement is characterized by fragmentation across multiple agencies, lacking the unified and efficient coordination necessary to support a similar centralized enforcement structure. Furthermore, the mature insurance system and trust fund management infrastructure that underpins the OPA has not yet been fully developed in China, which increases the risk of disconnection between legal norms and institutional capacity in practical application.

In comparison, Canada's *Oceans Protection Plan* embodies a strong ecological orientation and emphasizes public participation, aiming to achieve long-term marine ecosystem protection through sustained governmental funding and collaborative governance with Indigenous peoples. However, this governance model does not align seamlessly with China's institutional environment. The legal recognition and

self-governance rights of Indigenous peoples in Canada provide a realistic foundation for their involvement in environmental governance and fund administration. China, by contrast, lacks a comparable legal category of "Indigenous peoples," and the formal mechanisms for civil society and public participation in environmental governance remain underdeveloped. As such, direct replication of Canada's co-governance model would likely fall short of achieving its intended outcomes. Moreover, the OPP depends on Canada's stable fiscal capacity and high levels of governmental transparency. In China, local governments often face budgetary constraints in environmental spending, and designated funds may suffer from inefficiencies and weak oversight, undermining the long-term sustainability of any analogous fund-based mechanism. Importantly, the OPP prioritizes ecological considerations, which can impose stringent constraints on coastal economic activities. This approach may create friction with China's dual imperative of balancing environmental protection with continued economic growth.

In conclusion, while both the OPA and OPP offer valuable reference points for enhancing China's legal response to marine pollution, their institutional logic and operational mechanisms present significant challenges when applied to China's distinct legal structure and economic conditions. Therefore, in drawing lessons from these foreign models, China should ground its legal reforms in domestic realities-carefully evaluating the pathways for selective and incremental adoption-to gradually establish a marine pollution control regime that is both effective and contextually appropriate.

5. Conclusion

In the course of reforming the environmental public interest litigation (EPIL) system to better address ship-source pollution, a number of forward-looking proposals have emerged at the legislative level. These include establishing ecological damage compensation trusts, introducing punitive damages, and expanding the scope of eligible plaintiffs. However, despite the theoretical appeal of these proposals, their practical implementation continues to face substantial institutional and operational obstacles, which must be resolved through more refined institutional design and the development of supporting mechanisms.

To begin with, while the concept of an environmental damage compensation trust offers the promise of closed-loop management and long-term utilization of ecological restoration funds, its implementation raises significant challenges regarding stable funding sources, lawful fund utilization, and effective oversight. At present, China's fiscal investment in environmental protection remains largely reactive, with limited channels for proactively supporting dedicated trust funds. If such trusts are to rely solely on damages awarded from litigation, they may be constrained by lengthy adjudication timelines and low actual recovery rates, thereby undermining their ability to serve as a sustainable financial foundation for restoration projects.

Secondly, deficiencies in judicial capacity and technical support present a critical bottleneck to the effective implementation of these reforms. Ship pollution cases often involve trans-regional fact-finding, complex ecological damage assessments, and high standards of evidence. Yet, many grassroots courts and local environmental authorities lack sufficient expertise, technical tools, and litigation experience to manage such cases effectively. This gap in institutional competence impairs both the quality of adjudication and the accuracy of environmental damage valuation.

Moreover, the existing coordination mechanisms for public interest litigation remain underdeveloped. Functional overlaps and communication barriers persist between prosecutorial organs and administrative agencies, particularly in the transfer of case leads, the provision of expert support, and the determination of legal responsibility. These institutional frictions further complicate the operationalization of reforms and hinder the overall effectiveness of the EPIL system in marine pollution contexts.

Accordingly, promoting the effective role of environmental public interest litigation in ship-source pollution control requires more than legislative innovation. It demands simultaneous improvements in fiscal capacity, professionalization of the judiciary, and inter-agency coordination. Only through addressing these dual challenges-both institutional and capacity-related-can the envisioned reforms achieve their intended impact in practice.

Improving the system of environmental public

interest litigation is a complex, systematic endeavor that must be promoted simultaneously through legislative refinement, judicial practice, and the construction of supporting mechanisms. Regarding standing, legislative reform is needed to dismantle barriers to plaintiff qualification and to foster a litigation framework that enables diverse actors to participate collaboratively. As for compensation standards, it is imperative to establish a scientifically sound, well-reasoned damage assessment system while innovating the models for managing compensation funds.

Future reform efforts must adhere to the modern environmental justice philosophy of "prevention first, remedy second." By grounding reforms in China's national realities while drawing from advanced international experience, China can develop a litigation system for ship-source pollution that ensures qualified plaintiffs, unified standards, and efficient procedures. Such a system will provide robust legal support for protecting the marine environment and promoting the sustainable development of the shipping industry. Ultimately, this reflects not only a necessary refinement of the current legal framework, but also a vital step toward realizing the concept of ecological civilization and building a "Beautiful China."

References

- [1] Luo Ying. Research on the Mechanism for Coordinating Marine Ecological Damage Compensation and Environmental Administrative Penalties[J]. Journal of Hebei University of Environmental Engineering, 2024, 34(2): 30–37.
- [2] Han Lixin, Yang Qihao. Empirical Study on the Identification of Marine Ecological Damage: Based on 71 EPIL Cases[J]. Journal of Dalian Maritime University (Social Sciences Edition), 2025, 24(1): 1–11.
- [3] Li Jinhong. Study on the Confirmation of Defendant Qualification in Administrative Environmental Public Interest Litigation[N]. Jiangsu Economic Daily, 2025-05-09(T04).
- [4] Zhang Xiaoping. Rethinking the Standing of Environmental Administrative Agencies in Civil EPIL[J]. South China Sea Law Review, 2025, 9(02): 101–110.
- [5] Zhou Lingyun. Series of Lawsuits Arising from the Bohai Bay Oil Spill Incident[J]. Green Horizon, 2016(12): 47–48.
- [6] Yan Xiumei. Brief Analysis of the Penglai 19-3 Oil Field Spill in Bohai Bay[J]. Finance and Economics, 2012(24): 21–22.
- [7] Feng Shuying, Ma Liping. Dilemmas and Solutions in the Appraisal and Evaluation of Marine Environmental Damages in Civil EPIL[J/OL]. Journal of Hebei University of Environmental Engineering, 1–6 [2025-06-11]. [<https://doi.org/10.13358/j.issn.2096-9309.2025.0318.04>]
- [8] Zhai Yaning. Legal Issues in Marine Oil Pollution Prevention in China-Reflections from the Bohai Bay Oil Spill[J]. Strategic Decision Research, 2014, 5(01): 84–104.
- [9] Li Yonglin. Institutional Integration of Ecological Damage Compensation and Environmental Civil EPIL[J]. Journal of Heilongjiang Ecological Engineering Vocational College, 2024, 37(04): 78–84.
- [10] Zhan Shanggan, Liu Suting. Staged Positioning of Prosecutorial Roles in Environmental Administrative Public Interest Litigation[J]. Journal of Jiangxi University of Science and Technology, 2025, 46(02): 24–33.
- [11] Chen Haisong. Constructing a System of Ecological Damage Compensation Aligned with National Governance Needs[J]. Social Science Digest, 2025(02): 118–120.
- [12] Wang Meili, Wu Yongxia. Discussion on the Major Marine Pollution Assistance Fund System in the Northwest Pacific[J]. Academic Exploration, 2018(07): 74–79.