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# Emerging developments in China's ship-induced oil pollution damage liability regime: a perspective from the revised draft of China's maritime law

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This article examines China's evolving legal framework for ship-induced oil pollution damage liability system, focusing on the *2024 Draft Amendment to the Maritime Law*. Historically, the development of this system in China has been achieved through accession to international conventions, domestic legislative transformation, and the improvement of supporting systems. However, fragmented rules and outdated liability limits hindered effective compensation. *DAML* introduces a dedicated chapter on oil pollution damage, establishing strict liability for shipowners, defining compensation scope, and mandating an "Insurance and Fund" dual safeguard system. It further clarifies joint liability for multi-ship spills and conflict-of-law rules favoring the *lex loci damni*. The study argues that this revision bridges gaps between international standards and domestic law while addressing judicial inconsistencies. In order to refine this system, this article conducts an analysis in conjunction with *DAML* revision text and puts forward optimization suggestions from four perspectives: improving the legal system, providing case law guidance, enhancing government supervision, and perfecting supporting legal safeguards.

## KEYWORDS

China's maritime law, ship-induced oil pollution damage, marine environment protection, marine pollution governance, legal liability

## 1 Introduction

According to *UNCLOS Part XII*, marine pollutants mainly include vessel-source pollution, land-based pollution, pollution from dumping, pollution from seabed activities, and pollution through or from the atmosphere ([United Nations, 1982](#), p. 101). As a significant category of vessel-source pollution, pollution from ship fuel oil possesses extensive diffusivity and persistent polluting characteristics, potentially leading to severe

TABLE 1 Laws related to ship-induced oil pollution damage in China.

Number	Law name
1	<i>Maritime Law (1993)</i>
2	<i>Fisheries Law (2013)</i>
3	<i>The Measures for the Implementation of Civil Liability Insurance for Vessel-induced Oil Pollution Damage (2013)</i>
4	<i>Law on Prevention and Control of Water Pollution (2017)</i>
5	<i>Provisions of the Supreme People’s Court on Several Issues Concerning the Trial of Cases Involving Liability for Damage to Marine Natural Resources and Ecological Environment (2017)</i>
6	<i>Regulation on the Prevention and Control of Vessel-induced Pollution to the Marine Environment (2018)</i>
7	<i>Civil Code (2020)</i>
8	<i>Provisions of the Supreme People’s Court on Several Issues Concerning the Trial of Cases Involving Compensation for Vessel-Source Oil Pollution Damage (2020)</i>
9	<i>Maritime Traffic Safety Law (2021)</i>
10	<i>Marine Environment Protection Law (2023)</i>
11	<i>The revised draft to the Maritime Law (2024)</i>

TABLE 2 International laws related to ship-induced oil pollution damage.

Law name	Effective date	Date of china’s accession
<i>International Convention on Civil Liability for Oil Pollution Damage, 1969</i>	1981.4.8	1980.1.30
<i>Protocol to the International Convention on Civil Liability for Oil Pollution Damage, 1969</i>	1981.4.8	1996.9.29
<i>International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969</i>	1975.5.6	1990.2.23
<i>Protocol Relating to Intervention on The High Seas in Cases of Marine Pollution by Substances other than Oil 1973</i>	1983.3.30	1990.2.23
<i>Final Act of The International Conference on Marine Pollution, 1973</i>	1983.10.2	1983.7.1
<i>International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990</i>	1995.5.13	1998.3.30
<i>Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage, 1969</i>	1996.5.30	1999.1.5
<i>Protocol of 1992 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971</i>	1996.5.30	1999.1.5
<i>International Convention on the Control of Harmful Anti-Fouling Substances on Ships, 2001</i>	2008.9.17	2011.3.6
<i>International Convention for the Control and Management of Ships Ballast Water and Sediments, 2004</i>	2017.9.8	2018.10.22

TABLE 3 Relevant provisions and main contents in the draft revision.

Chapters and articles	Summary
Chapter 12, Article 226	This article defines the scope of compensation for ship-induced oil pollution damage at the legal level.
Chapter 12, Article 227	This article stipulates that the liability for compensation for ship-induced oil pollution damage shall be borne by the owner of the ship that caused the oil spill.
Chapter 12, Article 228	This article defines the shipowners may limit liability by law, unless pollution was caused intentionally or through reckless conduct with knowledge of probable damage.
Chapter 12, Article 229	This article regulates joint and several liability in cases of oil spills involving multiple ships.
Chapter 12, Article 230	This article explicitly stipulates the entities obligated to purchase mandatory ship-induced oil pollution insurance.
Chapter 12, Article 231	This article specifies the entities responsible for contributing to the fund.
Chapter 12, Article 232	This chapter does not affect the shipowner’s right of recourse against third parties.
Chapter 12, Article 233	This article clarifies the scope of application of this liability and defines the terms “Ships” and “Oils”.
Chapter 12, Article 234	This article sets out the scope of entities exempt from liability, clarifying the entities eligible for exemption while establishing exceptions where subjective fault exists.
Chapter 12, Article 235	This article sets the compensation limits for oil pollution damage liability.
Chapter 12, Article 236	The article stipulates that a limitation fund shall be established in the competent court and shall be deemed as established by all liable parties.
Chapter 12, Article 237	This article regulates both the imposition and release of asset preservation measures.
Chapter 12, Article 238	This article stipulates the distribution ratio of the limitation fund and the principles for allocating associated rights.
Chapter 12, Article 239	This article clarifies the scope of application of this Section, defines the term “fuel oil”, and specifies the scope of application for shipowners.
Chapter 12, Article 240	This article specifies parties exempted from liability for bunker pollution damage compensation.
Chapter 12, Article 241	This article governs the application of invoked provisions.

marine ecological consequences. “Oil spill risks can be described as complex risks, characterized by high levels of uncertainty as well as ambiguity, i.e. values, risk interpretations and perceptions, and framings of individuals (Tuulia et al., 2022, p. 2).” Ship-induced oil pollution damage refers to the environmental pollution and economic losses caused by the escape or discharge of oil substances from ships during normal operation or accidents. It usually covers the damage to marine ecology and coastal property caused by oil spills. From a legal perspective, compensation for ship-induced oil pollution damage is an extremely complex issue, influenced by numerous factors. These include: cargo oil versus fuel oil; persistent oils versus non-persistent oils; tankers versus non-tankers; whether the pollution arises from a single-ship incident, a collision between

two ships, or a multi-ship collision incident (forming different combinations with the aforementioned factors); oil pollution damage with international factors versus oil pollution damage with domestic factors; oil pollution damage that can be reasonably separated and attributed to individual sources or not; liability borne separately according to the pollution damage each caused versus joint and several liability (where each ship's specific liability is determined by its proportion of collision fault); limitation of liability for oil pollution damage versus general limitation of liability for maritime claims; and the application of international conventions versus domestic law.

At the level of international law, there are multiple specialized international conventions that regulate liability for ship-induced oil pollution damage. These conventions constitute the core of the international legal system for liability and compensation for ship-induced oil pollution damage. Many countries have established liability for ship-induced oil pollution damage by joining these conventions and translating them into domestic law. Due to the particularity, complexity, and severity of ship-induced oil pollution damage, many countries will also formulate specialized laws and regulations to address this issue. They aim to ensure more detailed and targeted provisions for the prevention, control, and compensation of ship-induced oil pollution damage. This has formed a mixed model with international conventions as the main body and domestic legislation as a supplement. For example, the compensation liability system for ship oil pollution damage in the UK is based on both international conventions and its own domestic legislation. On the contrary, the United States mainly relies on domestic legislation to regulate liability for ship oil pollution damage.

Maritime law is the collective term for the legal norms regulating marine transportation and ship-related relations. It serves as an important body of foreign-related law governing and standardizing these maritime relations. Maritime law plays a significant role in regulating these relations, safeguarding the legitimate rights and interests of all parties involved, and promoting the development of shipping and trade. Some countries' maritime laws include relevant content on liability for ship oil pollution damage, which integrates various legal systems in the maritime field and covers liability for ship-induced oil pollution damage. Of course, not all countries have established liability for ship-induced oil pollution damage in maritime law. On November 4, 2024, the *Draft Amendments to the Maritime Law* (hereinafter referred to as *DAML*) were submitted for their first reading before the Standing Committee of the 14th National People's Congress. Compared to the current *Maritime Law*, *DAML* specifically add a chapter dedicated to "Liability for Ship-induced Oil Pollution Damage". This chapter provides detailed provisions on issues such as the scope of compensation, apportionment of liability, the establishment of funds, and the duties of relevant entities. This represents a new institutional initiative to strengthen China's marine ecological and environmental protection (*The National People's Congress, 2024a*). This marks a step towards the alignment and further refinement of China's legal framework

concerning liability for ship-induced oil pollution damage and its remedial system with international legal standards.

This article reviews the development of China's regime for compensation of ship-induced oil pollution damage, analyzes the motivations behind China's efforts to refine this regime, interprets the relevant content on ship-induced oil pollution damage within *DAML*, and finally proposes optimization approaches for China's ship-induced oil pollution damage compensation system.

## 2 Development of China's ship-induced oil pollution damage system

In the last several decades, China has advanced ship-induced oil pollution damage liability regime through accession to international conventions, enactment and refinement of domestic legislation, implementation of a compulsory liability insurance framework, enhancement of civil compensation mechanisms, and regulatory restructuring of supervisory institutions. (Domestic and international laws related to ship-induced oil pollution damage are detailed in [Table 1](#) and [Table 2](#)).

### 2.1 Accession to international conventions

On January 30, 1980, China acceded to *International Convention on Civil Liability for Oil Pollution Damage* (hereinafter referred to as *CLC*) ([International Maritime Organization, 1992](#)). *CLC* entered into force on April 30, 1980. Pursuant to Article II of *CLC* a tonnage threshold of 2,000 gross tons was established for liability applicability, and a mandatory civil liability insurance framework for ship-induced oil pollution was implemented. "However, as evidenced by some cases, the compensation limits under *CLC* proved insufficient for catastrophic oil spills ([Lao, 2019](#), pp. 59-60)." The convention was subsequently amended by four protocols: *CLC1976*, *CLC1984*, *CLC1992*, alongside *CLC2000*. *CLC1976* replaced the "poincaré franc" with "special drawing rights" as the unit of account, prompting China, as a contracting state, to adopt special drawing rights for oil pollution damage calculation. *CLC1984* failed to enter into force. *CLC1992* and *1992 Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage* (hereinafter referred to as *FUND1992*) enhanced compensation ceilings. But *FUND1992* applies solely to the Hong Kong ([International Maritime Organization, 1992](#)).

On December 9, 2008, China acceded to *International Convention on Civil Liability for Bunker Oil Pollution Damage 2001* (hereinafter referred to as *Bunker2001*), which entered into force for China on March 9, 2009 ([International Maritime Organization, 2001](#)). "It imposes strict liability on the ship owner whose ship causes pollution damage, imposes compulsory insurance against leakages of bunker oil and also provides a path of direct action for claimants filing a claim directly with the insurer ([Pascal, 2022](#), p. 127)." Pursuant to Article 7 of the *Bunker2001*, flag

States shall require ships exceeding 1,000 gross tons to maintain a valid “Civil Liability Certificate for Bunker Oil Pollution Damage”<sup>1</sup>. The minimum insurance coverage shall be determined by limits of civil liability for ships as provided.

“The international petroleum business involves high risks and high rewards for investors (Norman and Maria, 2021, p. 66).” China’s accession to these conventions marks a significant step. This move aligns its legal framework on ship-induced oil pollution damage liability with international standards in the broader field of maritime law. This process involves formal recognition and ratification of the conventions; domestic legislative incorporation of convention provisions into binding legal instruments; and protection of interests of all relevant stakeholders both domestically and internationally, thereby initiating a process of institutionalization, legalization, and internationalization.

## 2.2 Promulgate and amend the maritime law and other relevant laws

The institutional framework governing ship-induced oil pollution damage in China commenced with the 1999 revision of the *Marine Environment Protection Law* (hereinafter referred to as *MEPL*). Article 66 thereof expressly mandates that “the State shall perfect and put into practice the civil liability system of compensation for ship-induced oil pollution”. It also establishes the risk-sharing principle, explicitly institutes the ship-induced oil pollution insurance and compensation fund scheme, and thereby lays the legal foundation for subsequent legislation (Ministry of Ecology and Environment of the People’s Republic of China, 2023a). The enactment of *Civil Code* (hereinafter referred to as *CC*) in 2020 introduced in its Book VII on Tort Liability, compared to the former *Tort Liability Law*, not only the addition of “destruction of ecological systems” as a causation act. But it also achieved coordinated protection of private and public interests in environmental tort liability through provision supplementation<sup>2</sup>. This has thus created a pathway for effective articulation between the *CC* and environmental protection statutes, enabling substantive interaction between general and special laws.

As a significant foreign-related law governing maritime relations, the *Maritime Law* (hereinafter referred to as *ML1993*) officially entered into force on July 1, 1993 (The State Council of People’s Republic of China, 2020a). Nevertheless, this legislation contains relevant provisions on limitation of liability for maritime claims exclusively within Chapter 11. Crucially, Article 208 explicitly excludes nation’s claims for compensation for oil pollution damage prescribed by the international conventions on civil liability for oil pollution damage (Wang, 2007, p. 24). This signifies that the *ML1993* merely addresses the applicable law concerning limitation of liability for oil pollution damage involving foreign elements, while leaving the institutional framework for ship-induced oil pollution liability unestablished under its provisions.

The principal drafting phase of the *ML1993* occurred in the 1980s, an era when the planned economy system retained dominant influence in sectors such as transportation and foreign trade. State-owned enterprises held primary market shares in shipping and foreign trade. Marine transportation was predominantly undertaken by China Marine Shipping Group Company, China National Foreign Trade Transportation (Group) Corporation, and China National Chartering Corporation. Coastal shipping was chiefly operated by the Dalian Maritime Administration, Shanghai Maritime Administration, and Guangzhou Maritime Administration under the Ministry of Communications. The Ministry of Communications regularly implemented planning, allocation, and scheduling for maritime transport of most essential goods concerning national livelihood. Strict planned management governed coastal and inland waterway transportation, with freight rates and port charges entirely government-mandated. Foreign trade was principally coordinated by the former Ministry of Foreign Economic Relations and Trade through specialized import-export companies. Constrained by the prevailing planned economy during its drafting phase and the nascent stage of market-oriented reforms, the institutional architecture of the *ML1993* retains distinctive imprints of its drafting period.

## 2.3 Establishment of civil liability insurance

“The existing legal system for oil pollution damage compensation establishes two civil liability entities, which means that the actual compensation for oil pollution damage is shared by the shipping and insurance industries and the petroleum industry, which jointly provide adequate compensation to victims of oil pollution damage (Zhang and Xu, 2004, p. 386).” The civil liability insurance system for ship-induced oil pollution damage in China has evolved from non-existence to preliminary establishment and progressive refinement. With the 1999 revision of the *MEPL*, Article 66 introduced for the first time the mandate to “establish a ship oil pollution damage insurance system” (The State Council of People’s Republic of China, 2005). Subsequently, the *Regulations on the Prevention and Control of Marine Environment Pollution by Ships* were promulgated in 2009 (hereinafter referred to as *RPC2009*). Pursuant to its Article 51, these regulations expressly require all shipowners operating within China’s jurisdictional waters to procure civil liability insurance for ship-induced oil pollution damage, with the sole exemption applying to ships below 1,000 gross tonnage transporting non-oil substances (The State Council of People’s Republic of China, 2018). This legislation formally established China’s compulsory insurance regime for ship-induced oil pollution damage liability.

In 2010, *Measures of People’s Republic of China for the Implementation of Civil Liability Insurance for Ship-induced Oil Pollution Damage* (hereinafter referred to as *ICLI2010*) were promulgated. As pivotal supporting regulations for the civil liability insurance system addressing ship-induced oil pollution damage, this regulation comprehensively governs: scope of application; designated competent authorities; insurance procurement requirements; statutorily mandated insured

<sup>1</sup> Article 7 of *Bunkers Convention*.

<sup>2</sup> Articles 1229, 1232, and 1234 of *China Civil Code*.

amounts; administration of insurance certificates; and regulatory supervision and legal liabilities ([The State Council of People's Republic of China, 2010](#)). This framework preliminarily established the institutional architecture for the compulsory liability insurance regime pertaining to ship-induced oil pollution damage.

In 2013, the Ministry of Transport adopted *Decision of the Ministry of Transport on Amending the Measures of the People's Republic of China for the Implementation of Civil Liability Insurance for Ship-induced Oil Pollution Damages*. The law revised *ICLI2010* with particular emphasis on insurers-related provisions ([The State Council of People's Republic of China, 2013](#)). In 2020, the Ministry of Transport solicited public comments on the *Measures of People's Republic of China for the Implementation of Civil Liability Insurance for Ship-induced Oil Pollution Damage (Revised Draft for Comments)*. The draft proposed to: expand the scope of application under the *ICLI2010*; adjust the subject matter of insurance and insured amounts; introduce new requirements for insurance certificates and their administration; enhance supervision; and further clarify legal liabilities ([The State Council of People's Republic of China, 2020b](#)). Collectively, these legal provisions constitute the framework of China's civil liability insurance regime for ship-induced oil pollution damage.

## 2.4 Improve the civil compensation system

"Whether in the civil law system or the common law system, damages are based on the general principle of restitution, i.e., the compensation paid by the liable party should be based on restoring the injured party to the state they were in before the damage occurred ([Cao, 2023](#), p.25)." Under China's legal framework, the civil compensation regime for ship-induced oil pollution damage comprises two triggering mechanisms. One is ship-induced oil pollution damage insurance. And the other one is ship-induced oil pollution damage compensation fund. While initially developed in parallel during the foundational stage of the regime, their subsequent evolution has diverged significantly.

In 2011, the *Provisions of the Supreme People's Court of China on Several Issues Concerning the Trial of Cases Involving Compensation for Ship-induced Oil Pollution Damage* (hereinafter referred to as *TCIC*) were issued. *TCIC* clarified jurisdiction, liability determination, and compensation limits for such cases ([Supreme People's Court of China, 2011](#)). After this, *The Measures for the Collection and Use of the Ship-induced Oil Pollution Damage Compensation Fund* (hereinafter referred to as *MCUCF*) came into effect in 2012. *MCUCF* established standardized procedures for the fund's financing, utilization and administration, thereby providing more reliable fiscal safeguards ([Ministry of Finance and Ministry of Transport, 2012](#)).

In 2018, the *Provisions of the Supreme People's Court of China on the Trial of Cases Involving Compensation for Damage to Marine Natural Resources and the Ecological Environment* confirmed administrative authorities' standing to initiate public interest

litigation ([Supreme People's Court of China, 2017](#)). "At a global level, environmental damage is considered a non-market external social cost ([Irina et al., 2023](#), p. 184)." The 2020 amendment to *TCIC* enhanced its alignment with the *CC*'s environmental liability provisions, notably strengthening support for ecological restoration costs ([Supreme People's Court of China, 2020a](#)).

Regarding the compensation fund mechanism, alongside institutional design improvements, academic circles advocate for raising the per-incident compensation limit and expanding the scope of covered incidents. Against this backdrop, China's civil compensation system for ship-induced oil pollution damage continues to evolve and mature.

## 2.5 Reforming management institutions

"High-hazard industries share risks and needs but their regulation is also defined by the capacities of both regulatees and regulators ([Alejandra and Luis, 2023](#), p. 385)." Surveying the evolution of China's ship-induced oil pollution damage regime reveals a trend of progressive institutional refinement and international harmonization. More fundamentally, it showcases a transformation from fragmented oversight to integrated governance. Prior to 2012, China lacked a dedicated administrative authority for ship-induced oil pollution damage, with marine environmental enforcement dispersed across multiple agencies.

The year 2012 marked a pivotal institutional realignment when the *MCUCF* designated maritime administrations under the Ministry of Transport as the exclusive collection entity, signifying the fund's transition to centralized administration ([Ministry of Finance and Ministry of Transport, 2012](#)).

In 2015, the *Chinese Ship-source Oil Pollution Compensation Fund Administration Committee* (hereinafter referred to as *CFAC*) was formally established. *CFAC* coordinates fund utilization decisions. Simultaneously, the subordinate *Claim Settlement Center for Ship-induced Oil Pollution Damage* assumed operational responsibility for claim processing and technical support, completing the shift from decentralized management to central coordination ([Chinese Ship-source Oil Pollution Compensation Fund, 2015](#)).

Consequently, China's ship-induced oil pollution damage administration has progressively achieved unified exercise of authority with clearly defined responsibilities, while the operational mechanisms and functions of *CFAC* continue to be refined.

## 3 Institutional drivers for improving China's system for addressing ship-induced oil pollution damage

The fundamental objectives underlying *ML1993* are to regulate marine transportation and shipping relations, thereby safeguarding

the lawful rights and interests of all parties. Furthermore, they aim to advance the high-quality development of maritime transport and economic trade, while also protecting the marine ecological environment ([Chinese Ship-source Oil Pollution Compensation Fund, 2024a](#)). Since its enactment, *ML1993* has accumulated extensive judicial practice and played a pivotal role in regulating maritime carriage and shipping relations, thereby facilitating the growth of shipping and trade. “Taking an overview of the situation since the enactment of the *Maritime Law*, it is clear that the law remains aligned with the practical needs of China’s judicial trials and the development of the shipping economy. Its international character, advancement, and foresight from the time of its enactment are still maintained, and scholars continue to hold it in very high regard to this day ([Fu, 2006](#), p. 151).” The revision of the *ML1993* is an important step in China’s efforts to strengthen the rule of law relating to foreign affairs. It is also an inevitable requirement for developing the maritime economy and responding to new situations in international trade. The revision of the *ML1993* primarily addresses immediate gaps in China’s legal system and responds to the practical needs of maritime justice. It also aligns the law with the current development of maritime shipping and trade. On a broader level, the revision enhances marine ecological environmental protection and achieves greater integration between domestic and international laws.

### 3.1 Supplementing gaps in the legal system

Over the past few decades, China’s legal system for addressing ship-induced oil pollution damage has been characterized by multiple laws issued by different authorities. This has resulted in inconsistent legal solutions for the same issues. There has been a lack of coordination and cooperation between the relevant systems and operational norms, and even within the same law, there are often ambiguous or contradictory provisions. “Additionally, the judicial process must also take into account certain restrictions imposed by international conventions ([Zhao and Wang, 2012](#), p. 126).” A comprehensive revision signifies a holistic legislative amendment undertaken by statutory authorities. The proposed amendments to *ML1993*, introducing a dedicated chapter on liability for Ship-induced oil pollution damage, directly target the most critical legal deficiencies.

China is a party to the *CLC*, yet its liability limits have not undergone substantive adjustment for nearly three decades. This stagnation has created a fundamental misalignment with the rapidly evolving shipping industry. “In prior oil spill cases, compensation funds available under the *CLC* proved insufficient to cover actual losses ([Yang, 2024](#), p. 8).” This significant shortfall demonstrates the inherent delays in updating international conventions. It also exposes deficiencies in China’s domestic implementation mechanisms when adopting such treaties.

Consequently, the revision process demands adherence to scientific legislative principles. Core concepts and well-established provisions in *ML1993* require rigorous examination to ensure systemic stability and continuity. Simultaneously, it must

proactively align with international rules and practices to further refine the legislation for better accommodation of high-standard opening-up requirements. This is also the usual practice in many countries with well-established systems for dealing with oil pollution damage to ships. “For example, the clear purpose of the (American) Congress in passing the *Oil Pollution Act* was to protect wildlife and natural habitats from future oil spills ([6th Cir., 2021](#), p. 1912)”.

Prior to the revision, relevant norms governing ship-induced oil pollution damage in China were distinctly fragmented. These norms were scattered across multiple legal instruments, including the *MEPL*, the *Measures of the People’s Republic of China for the Implementation of Civil Liability Insurance for Vessel-induced Oil Pollution Damage*, and various judicial interpretations from the Supreme People’s Court. This situation resulted in a poorly integrated legislative framework. Although existing regulations and judicial interpretations address specific aspects of oil pollution compensation, they occupy a lower position in the hierarchy of laws. This ultimately impedes coherent coordination between administrative oversight and judicial remedies. Particularly in cases devoid of foreign elements, a substantive legal vacuum persists. The new dedicated chapter will catalyze systematic remediation of these legislative lacunae in China’s ship-induced oil pollution damage regime.

### 3.2 Responding to the practical needs of maritime judicial adjudication

“The remedies available in tort invariably tilt towards economic compensation of affected individuals, they are temporally backward looking, and they tend to ignore the wider socio-political dynamics of concerned communities ([Daniel, 2021](#), p. 435).” In essence, the refinement of China’s ship-induced oil pollution damage regime constitutes a systemic response to practical challenges in maritime adjudication, born of profound reflection on accumulated judicial experience. This phenomenon of conflicting judgments extends beyond China, as courts globally have long grappled with tensions between international and domestic law. They also face the normative dilemma of concurrent general and special laws (*lex generalis* vs. *lex specialis*), which persistently triggers inconsistent rulings in factually similar cases. “This limitation is reflected, for one thing, in the fact that the legal system for the prevention and control of pollution from offshore drilling platforms and pipelines is not fully compatible with the legal system for ship-induced oil pollution damage. For another, it is reflected in the conflict between transboundary marine governance regulations caused by the diffuse nature of marine pollution itself ([Wang and Wang, 2024](#), p. 118)”.

On the one hand, *CLC* applies to ship-induced oil pollution damage involving foreign elements, yet no authoritative uniform definition of “foreign elements” exists. On one hand, there is a multiplicity of legal bases available for adjudicating such cases, coupled with judicial divergence in statutory interpretation. This situation inevitably engenders inconsistent application of law and contradictory rulings, even among factually comparable disputes.

Illustratively, the Yan jiu you No.2 (PKULAW, CLI.C.244770, 2004) and Min ran gong No.2 (PKULAW, CLI.C.874994, 2000) cases presented virtually identical circumstances regarding shipping routes, vessel tonnage, and contaminated waters, but yielded diametrically opposed legal outcomes: the former applied the *ML1993* and *MEPL*, while the latter invoked *CLC*. Specifically, in the Yan jiu you No.2 case, the court found that there were no foreign-related factors in the case, and therefore applied *ML1993* and *MEPL*. This judgment established the principle of applying domestic law to determine the responsibility of the parties in domestic ship oil pollution compensation cases. The person responsible for oil pollution may enjoy the limitation of maritime compensation liability in accordance with domestic laws and regulations. In Min ran gong No.2 case, the vessel was only carrying bulk cargo oil of less than 2000 tons. And there are no foreign factors involved in the case. But the court applied *CLC* to make the judgment. The court tends to recognize that domestic coastal transport vessels and their responsible persons are subject to the provisions of international conventions on liability limitations. This case provides important judicial practice basis for the handling of similar cases. Furthermore, while the *ML1993* generally mandates limitation of liability for oil pollution damages barring statutory exceptions, Article 1232 of the *CC* imposes punitive damages for environmental pollution (Supreme People's Court of China, 2020b). This normative collision perpetuates judicial controversy over whether civil compensation may override statutory limitation ceilings. The ongoing statutory amendments will furnish authoritative adjudicative frameworks, propelling the legal relief system beyond *ad hoc* judicial balancing toward authentic rule-based governance.

### 3.3 Matching the current status of marine trade development

Currently, shipping has entered a new era characterized by digitalization, intelligence, and green development, with efficiency, safety, and environmental protection as its core values. This development marks the fourth revolution in the shipping industry. It follows the three previous revolutions: steam-powered ships in the mid-19th century, internal combustion engine-powered ships in the early 20th century, and containerization in the mid-20th century. “This revolution is expected to have a broader scope and a longer-lasting impact (Hu, 2025, p. 5).” This refinement of the ship-induced oil pollution damage regime responds to the endogenous demand for perfecting the legal framework. It also addresses mounting pressures driven by the rapid growth of the shipping industry. As a pivotal component of integrated transport systems, the shipping industry sustains socioeconomic development and major national strategies while advancing Chinese modernization. Maritime transport shoulders approximately 95% of China's foreign trade volume (Ministry of Transport, 2024a), with petroleum imports exceeding 400 million metric tons from January to September 2024 (Zhongshang Industrial Research Institute, 2024), 92% of which were imported via

maritime transport (CITIC Futures Internationalization, 2025). Parallel to technological advancements and industrial growth, ships now evolve toward larger dimensions and specialized configurations. This trend toward bulk carriers significantly amplifies collision or contact accident risks and elevates single-event loss thresholds. When evaluating port cargo throughput and ship traffic density, the contamination hazards from bunker fuel leakage warrant heightened vigilance (China Shipowners Mutual Assurance Association, 2025). Any oil spill incident, exacerbated by increased ship scale and cargo volatility, may trigger severe marine pollution generating colossal economic losses.

During its drafting, *ML1993* extensively incorporated then-prevailing international conventions, as well as customary rules reflecting international maritime practices and standard contract templates. Subsequent to its enactment, however, international maritime legislation has remained highly dynamic, witnessing the emergence of newly adopted or substantially revised conventions and private instruments. These international treaties, private rules, and contractual frameworks reflect contemporary developments in shipping and global trade, capturing novel legislative trends. As a result, they are bound to exert significant impacts on maritime and international trade practices. “Consequently, amending the *Maritime Law* by integrating sound and progressive elements aligned with evolving industry realities from such international statutes becomes imperative (Si, 2023).”

### 3.4 Improve the marine environment protection system

“Influential players in the oil industry and certain government officials have struggled to prevent and clean-up the oil pollution (Chika and Nik, 2021, p. 1).” The refinement of China's ship-induced oil pollution damage regime will enhance coordination with statutory frameworks like the *MEPL*, providing legislative backing for marine ecological conservation systems. “In China, it is stipulated under *Civil Code* that enterprises should compensate for the total spill cost. However, the actual compensation tends to be far less than the total spill cost in China and the actual compensation globally (Zhong et al., 2022, p. 986).” Clearer delimitation of liability and more granular specification of compensation scope will establish concrete legal bases for marine environmental damages. This will ensure victims receive full and prompt compensation while also strengthening the statutory safeguarding of marine ecosystems. This aligns seamlessly with the *Integrated Land-Sea Governance and Polluter Pays Principle* enacted in the newly effective *MEPL* (Ministry of Ecology and Environment of China, 2023b), fulfilling requirements for marine ecosystem restoration.

Concurrently, the “Insurance and Fund” institutional design ensures risk dispersion through insurance mechanisms alongside compensation stability via funds. This system not only elevates pollution damage redress capacity but also critically reinforces economic safeguards for marine ecological preservation.

### 3.5 Coordinating domestic law and international law

“While there are international laws to manage oil spills since the 1950s, the process of aligning domestic legal frameworks with these international norms is complex (Phindile et al., 2021, p. 2).” The Polluter Pays principle established by *CLC*, serving as the fundamental tenet of ship-induced oil pollution compensation, takes precedence during the subsistence of the relevant legal relations. Under this oil pollution liability framework, the polluter bears strict liability. “The entire oil pollution legal system is designed around this basic principle to achieve the objectives of protecting the marine environment and protecting victims of oil pollution (Si and Wu, 2022, p. 13).” This principle designates the owner of the oil-spilling ship as the sole liable entity—even where spills result from collisions caused by third-party ships, victims may claim only against the polluting party. Non-polluting colliding ships are liable solely for property damage to the oil itself, exempted from direct environmental liability. “Overall, compensation for environmental damage caused by ship pollution under international conventions is not consistent with the current legislation of some countries and regions and lags behind general legislative developments (Zhang, 2022, p. 155).”

However, amid the trend toward larger ship dimensions and increasingly complex shipping finance models, the singular liability mechanism confronts dual dilemmas. First, disproportionate risk allocation manifests when polluters’ compensation, which is capped by convention limits, proves inadequate for actual losses. This injustice is compounded when non-polluting at-fault parties evade environmental liability, thereby creating a fault-liability dissociation paradox. Second, recovery mechanisms remain largely inoperative—despite convention-preserved recourse rights, actual recovery rates are critically low due to limitation of liability defenses, resulting in failed risk transfer.

From the perspective of comparative law, the systems for ship-induced oil pollution damage in various countries around the world are not consistent. The United States is not a contracting party to *CLC*. The core of the US ship-induced oil pollution damage system is the *Oil Pollution Act of 1990* (hereinafter referred to as *OPA90*). *OPA90* has established a strict and unlimited liability system. (US Congress, 1990) And *OPA90* stipulates that the responsible party shall apply very strict standards of limited liability. At the same time, *OPA90* requires the government to establish an Oil Spill Liability Trust Fund, which is funded by taxes levied on imported and domestically produced oil. Overall, the US regime for ship-induced oil pollution damage is characterized by strictness, high compensation amounts, and a wide range of compensation scopes.

The ship-induced oil pollution damage regime of EU is a comprehensive legal system based on international conventions and supplemented and strengthened through EU legislation. The EU’s regime for ship-induced oil pollution damage is mainly based on *CLC* and *FUND1992*. At the same time, the EU has established stricter preventive measures, monitoring methods, and criminal penalties for ship-induced oil pollution damage through legislation, reflecting a high standard of protection concept. Compared with the

United States, the compensation scope of the EU ship-induced oil pollution damage system is narrower, and the application of limited liability is easier.

China has revised its *ML1993* to supplement and improve its regime for ship-induced oil pollution damage. This revision ensures the regime’s strict implementation in accordance with the internationally accepted “Polluter Pays” principle. This move aims to further bridge the gap between domestic law and international law and to coordinate domestic law with international law. Of course, as a fundamental law, *DAML* contains many provisions that are principled and guiding. When used for the trial of cases related to ship-induced oil pollution damage, the specific legal application, compensation standards, and other legal systems need to be systematically improved through the formulation of supporting laws and regulations. And this part of the content will be further elaborated in the fourth and fifth parts.

## 4 Interpretation of the section on oil pollution damage in *DAML*

*DAML* introduces Chapter 12 Liability for “Ship-induced Oil Pollution Damage”, comprising 3 sections and 16 articles to address compensation for marine environmental pollution damage (Chinese Ship-source Oil Pollution Compensation Fund, 2024b). Section 1 adopts provisions from the *CLC* and *Bunker2001*, establishing joint and several liability among multiple ships for indivisible pollution damage. As a legal proper noun, joint and several liability governs the situation where two or more defendants are found responsible for the same injury or loss to a plaintiff. Sections 2 and 3 regulate liability for persistent oil cargo pollution and bunker fuel pollution respectively, substantially aligning with *CLC* and *Bunker2001* regimes. Overall, *DAML* revisions feature the following seven key amendments. (The main contents of each article in the new chapter on ship-induced oil pollution damage are detailed in Table 3).

### 4.1 Establishing duties for seafarers (including the master) to protect the environment by preventing or mitigating oil pollution damage

*DAML* Chapter 3 “Crew Members”, Article 37 provides: “The master shall take necessary measures to protect the ship and all personnel on board, documents, postal matters, goods, and other property carried, and prevent ships from polluting the marine environment.” Article 40 provides: “...direct crew members to close oil tank valves and other equipment to prevent or minimize pollution.” Compared to *ML1993*, Article 35 only stipulated that the master shall protect the safety of the ship and the property of persons on board. In contrast, the new law emphasizes the captain’s environmental protection responsibilities as the vessel’s core manager. This shift marks a clear breakthrough from the traditional “shipowner-centric” approach. The captain is required to take necessary measures to prevent environmental pollution during normal navigation. Furthermore, following a maritime accident, the captain must

actively take measures to minimize damage and pollution to the marine environment. Additionally, *DAML* introduces environmental protection obligations for crew members (including the captain), reflecting a legislative preference for ecological protection and aligning with “Polluter Pays” principle of the *MEPL*. Furthermore, *International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers* already includes requirements for captains and officers on watch to avoid causing marine pollution due to improper operations or accidents ([Maritime Safety Administration, 2005](#)). As a signatory to this convention, China’s new law establishing environmental protection obligations for crew members (captains) also demonstrates alignment with international conventions.

## 4.2 Defining the scope of compensation for ship-induced oil pollution damage

“If the damage to the environment itself (ecological damage) cannot be adequately compensated, the basic principle of environmental law that polluters should bear the costs will be greatly challenged, and ecological and environmental damage will not be adequately remedied or effectively curbed ([Zhu, 2006](#), p. 99).” *DAML* Chapter 12, Article 226, for the first time clearly defines the scope of compensation for ship-induced oil pollution damage at the legal level. The scope of compensation for ship-induced oil pollution damage primarily includes the following four aspects. First, property damage other than that of the ship caused by ship-induced oil pollution damage and the loss of income arising therefrom. Second, the expenses incurred for taking preventive measures in order to prevent or mitigate the ship-induced oil pollution damage and losses caused by preventive measures. Third, loss of income arising from environmental damage caused by oil pollution. Fourth, expenses for the reasonable measures taken or to be taken for the rehabilitation of the polluted environment. From the specific provisions of *DAML*, it essentially inherits the provisions of Article 9 of *Provisions of the Supreme People’s Court on Several Issues Concerning the Trial of Cases of Disputes over Compensation for Vessel-induced Oil Pollution Damage*<sup>3</sup> and aligns with the compensation scope framework of the *CLC*. While aligning with international conventions, it reflects a comprehensive coverage of compensation for oil pollution damage. Additionally, including the costs of environmental restoration measures within the statutory scope of compensation can to some extent address the operational gaps in Article 42 of the *MEPL* regarding “Ecological Restoration Liability”.

## 4.3 Clarify the principles of liability for compensation for ship-induced oil pollution damage

*DAML* Chapter 12, Article 227, explicitly stipulates that the liability for compensation for ship-induced oil pollution damage

shall be borne by the owner of the ship that caused the oil spill. This provision transforms Article 3 of the *CLC* based on the direct causal link between the polluting act and the damage, clearly establishing that the new law continues to adhere to the principle of strict liability, i.e., “Polluter Pays”. Meanwhile, Paragraph 2 strictly defines the grounds for exemption from liability, specifying four such grounds. The principle that “the party responsible for the oil spill is liable for compensation”-i.e., the shipowner of the oil-spilling ship bears liability-serves as the basis for determining the civil liability of the party responsible for oil pollution damage. The shipowner of the oil-spilling ship has very limited grounds for asserting exemption from or mitigation of liability. The shipowner that caused the oil spill shall first bear liability for compensation for the resulting pollution damage. Subsequently, the liable owner may seek reimbursement from the non-spilling ship in accordance with the legal framework governing collision damage compensation. Article 229 regulates joint and several liability in cases of oil spills involving multiple ships. If two or more ships leak oil and the damage is “unreasonably separable”, the owners of the spilling ships shall bear joint and several liability. This institutional design draws inspiration from the *CLC* and *Bunker2001*, but in practice, defining “reasonably separable” may become a judicial challenge. To enhance judicial efficiency, it is not inconceivable that judicial rulings may generally lean toward joint and several liability.

## 4.4 The state shall establish a system of liability insurance for ship-induced oil pollution damage and a compensation fund system.

*DAML* Chapter 12 Articles 230 and 231, clearly stipulate that the state shall establish a system of liability insurance and compensation funds for ship-induced oil pollution damage. The inclusion of a separate chapter and explicit legal provisions reflects the structural improvement of the legislative framework for the relief system for ship-induced oil pollution damage.

Article 230 explicitly stipulates the entities obligated to purchase mandatory ship-induced oil pollution insurance, namely, shipowners must purchase civil liability insurance for ship-induced oil pollution damage in accordance with relevant regulations. Unlike previous regulations, *DAML* extends the coverage of mandatory oil pollution insurance to all oil-carrying ships engaged in both international and domestic voyages. Additionally, this article grants victims the right to claim compensation directly from the insurer, thereby preventing situations where victims are left without recourse due to the bankruptcy of the shipowner.

Article 231 specifies the entities responsible for contributing to the fund, namely the owners of goods or their agents’ receiving cargoes of persistent hydrocarbon mineral oils transported by sea within the territory of China. *DAML* stipulates that the fund must be used for its designated purpose and authorizes the competent authorities responsible for its collection, use, and management. The compensation fund system serves as an effective supplement to the shipowners’ liability insurance system for oil pollution damage and

<sup>3</sup> Article 9 of *Provisions of the Supreme People’s Court on Several Issues Concerning the Trial of Cases of Disputes over Compensation for Ship-induced Oil Pollution Damage*.

further safeguards the rights and interests of the injured parties. From the perspective of legislative design, the new law actively addresses issues of marine environmental protection and ship oil pollution compensation at the institutional level. It further focuses on ensuring the scientific rationality and orderly operation of this management system. This dual approach reflects a comprehensive and sophisticated legislative strategy.

#### 4.5 Liability for damage caused by pollution from oil carried by ships

*DAML* Chapter 12, Section 2, stipulates the liability for oil pollution damage caused by the carriage of bulk oil by ships. Article 233 clarifies the scope of application of this liability and defines the terms “Ships” and “Oils”. This aligns with the scope of application of the *CLC*, ensuring consistency with international conventions while reducing legal application difficulties in judicial practice caused by ambiguous definitions.

Article 234 sets out the scope of entities exempt from liability, clarifying the entities eligible for exemption while establishing exceptions where subjective fault exists. By defining the entities exempt from liability, it preliminarily allocates responsibility among parties involved in oil pollution incidents, ensuring strict accountability for negligent conduct while avoiding undue liability for innocent third parties.

Article 235 sets the compensation limits for oil pollution damage liability, consistent with the provisions of *CLC*. By clearly defining liability limits, this provision provides shipowners with a predictable range of compensation risks, facilitating their reasonable planning of insurance and finances. It also provides the insurance market with clear pricing and risk assessment criteria, thereby regulating the standardized development of the relevant insurance market.

#### 4.6 Liability for damage caused by ship fuel pollution

*DAML* Chapter 12, Section 3, stipulates liability for ship’s fuel pollution damage. In terms of content and structure, it is basically consistent with Section 2, but differs in scope of application and similar in terms of exemptions. Section 2 establishes methods for calculating liability limits for ships of different tonnages, while Section 3 directly refers to the provisions of Chapter 11. Additionally, compared to Section 2, Section 3 draws on different international conventions in the formulation of its provisions. Section 3 references *Bunker2001*. When considering the content of the two sections together, they cover different types of oil pollution damage, achieving comprehensive regulation of liability for Ship-induced oil pollution damage. By distinguishing between different types of oil and liability subjects, the law establishes specific liability provisions and compensation limits. This approach reflects the refinement and scientific nature of the legislation, thereby enhancing its adaptability and effectiveness.

#### 4.7 Clarifying the rules on the application of law in foreign-related matters

*DAML* Article 306 of Chapter 15, “Application of Laws in Foreign Relation” provides explicit provisions on the application of law in cases of liability for oil pollution damage caused by ships: “The laws of the place where the consequence of the oil pollution damage takes place shall apply to the liability for ship-induced oil pollution damage.” In legal terminology, *lex loci damni* means the laws of the place where the consequence of the damage takes place. The location where the oil pollution damage occurs is often the place where the victim is located or where the damage is most severe. Applying the law of the place where the damage occurs reduces the difficulty of determining the applicable law, allows victims to quickly obtain appropriate compensation and relief under local law; Applying the law of the place where the damage occurs facilitates evidence collection, damage assessment, and enforcement of compensation, thereby effectively improving judicial efficiency and reducing judicial costs; Applying the law of the place where the damage occurred allows for a more accurate assessment of the environmental damage. This accurate assessment enables the timely and precise implementation of environmentally appropriate restoration measures. The ultimate goal is to minimize the impact of oil pollution on the marine environment. Additionally, Article 296 addresses the application of law in cases where provisions of domestic law conflict with those of international treaties. Except where reservations have been declared, provisions of international treaties concluded or acceded to by China shall take precedence over conflicting domestic provisions. In the absence of such provisions, international customs may be applied.

In terms of legal application, it should be specifically pointed out that when oil pollution damage occurs within the high seas, such as in the case of a collision between two foreign vessels. According to *CLC* and *Bunker2001* conventions, if the vessel involved is registered in a country that has joined these international treaties, the provisions of the conventions shall take precedence. Consequently, the domestic laws of the place where the ship-induced oil pollution damage occurs will not apply in such cases. If international conventions are not covered or cannot be directly applied, the law of the country where the court handling the case is located can become supplementary governing law. At the same time, the application of the law also involves *DAML* and *Law of the People’s Republic of China on Choice of Law for Foreign-related Civil Relationships* (Hereinafter referred to as *CLFCR*) ([The Central People’s Government of the People’s Republic of China, 2010](#)). The issue of content conflict. According to Articles 3 and 44 of *CLFCR*, parties may explicitly choose the law applicable to foreign-related civil relations in accordance with legal provisions. If the parties agree to choose the applicable law after the occurrence of the infringement, while the law of the place where the infringement occurred applies to the liability for infringement, the agreement shall be followed. Therefore, the application of the law of the place where the consequences of ship-induced oil pollution damage occur is not a mandatory provision. When Chinese courts accept foreign-related oil pollution damage cases, they may not

strictly apply the laws of the place where the damage consequences occur. Instead, they may allow the parties to choose the applicable law through agreement.

## 5 Optimal pathways for improving China's ship-induced oil pollution damage regime

“Fossil fuels have been powering our development since the industrial revolution and continue to be the main source of energy today, despite the rapid growth of low-carbon technologies (Daria, 2024, p. 819).” In the subsequent revision of *ML1993*, China will inevitably prioritize the establishment of a systematic and comprehensive regime for ship-induced oil pollution damage. This objective will remain central even after the revision is completed and promulgated, guiding further improvements to the legal framework. Consideration could be given to improving the supporting legal system and publishing typical cases to provide guidance on case law.

### 5.1 Improving the legal framework

Under the legislative opportunity presented by the addition of dedicated chapters on ship-induced oil pollution liability in *ML1993*, China's liability regime for such damage requires urgent attention. There is a critical need to systematically reconstruct the supporting legal norms to ensure coherence and effectiveness. The core approach to perfecting this auxiliary legal framework lies in establishing a three-tier regulatory structure: At the primary tier, the amended *ML1993* serves as the supreme legal authority, clarifying fundamental aspects including liability basis, limitation amounts, and exemption grounds. The intermediary tier employs administrative regulations as the pivotal mechanism to bridge gaps in domestic incorporation of relevant international conventions. This tier integrates and upgrades existing rules, including further refinements to regulations such as *RPC2018* (Ministry of Ecology and Environment of People's Republic of China, 2023). Such refinements ensure hierarchical statutory coherence across the legal framework. The tertiary tier implements departmental rules and technical standards to unify damage assessment metrics and operationalize legislative provisions.

During this normative reconstruction, three tiers of conflicts require resolution: First, concerning punitive damages under *CC* Article 1232, intentional pollution shall constitute the requisite conduct for imposing such damages in oil pollution compensation cases. Second, regarding liability-exemption clauses in insurance contracts<sup>4</sup>, supporting legislation must reinforce compulsory coverage for ship-induced pollution insurance, expressly prohibiting pollution exclusion clauses. Such contractual terms shall be null and void irrespective of insurer disclosure. Third, for conflicts between departmental rules and industry standards, a conflict resolution mechanism shall prioritize norms conducive to

ecological restoration, establishing the ‘primacy of marine environmental interests’ principle.

The ultimate objectives are achieving hierarchical coordination and systemic coherence through the above legislative architecture. Top-tier design employs statutory law to anchor liability frameworks, middle-tier regulations weave compensation networks, and base-tier technical standards deliver operational guidance. Concurrently, this foundation innovates mechanisms for international treaty incorporation, systematically harmonizing domestic and international law to ensure both global alignment and distinctive Chinese characteristics.

Regarding the issue of punitive damages, *DAML* did not exclude the application of punitive damages. Article 1232 of the *CC* clearly stipulates that the subjective state of the infringer who constitutes punitive damages liability for ecological environment damage should be “intentional”. In the event of accidental pollutant emissions from incidents such as safety production accidents or maritime accidents causing serious damage to the marine ecological environment, the infringer generally does not possess direct intent. Determining liability in such cases requires an assessment of whether indirect intent can be established. Indirect intent refers to the subjective state in which the perpetrator anticipates the consequences of their actions and allows them to occur. Indulgence refers to the act of the perpetrator not taking measures to avoid the consequences of their actions, even though they do not wish for them to occur. According to Article 6 of the *Interpretation of the Supreme People's Court on the Application of Punitive Damages in the Trial of Cases of Disputes over Ecological Environment Tort* (The Supreme People's Court, 2022), the infringer's intention to harm the ecological environment should be comprehensively judged. This assessment is based on factors such as the infringer's professional experience, background, and scope of business. Additionally, it must consider whether they have faced administrative penalties or criminal investigations for the same or similar acts. Other critical factors include the type of pollutant involved and the specific manner of environmental pollution or ecological damage. For example, if a captain is still sailing despite knowing about a defect in the ship's equipment, it constitutes “intentional”. As an experienced captain, he was able to foresee a series of accidents that would occur if the ship continued to sail in the event of equipment defects, but he did not take action to repair or order a halt to the voyage for rectification. If oil pollution damage occurs in this situation, the captain should be judged as indirectly intentional and therefore should bear punitive damages liability.

### 5.2 Providing case law guidance

At present, Chinese maritime judicial practice has accumulated several landmark cases concerning ship-induced oil pollution liability. These cases provide critical references for addressing inconsistent legal application and resolving ambiguities in liability determination during judicial proceedings. For example, *Symphony* case, was the first effective judgment in China to clarify the nature of

<sup>4</sup> Article 17 (2) of *Insurance Law of People's Republic of China*,

cleanup costs, the nature of cleanup actions, and whether such actions are subject to restrictions (QingDao Maritime Court of People's Republic of China, 2023). This case is the first effective judgment in China to determine the nature of the clean-up agreement, the corresponding clean-up behavior, and the limitation of the clean-up fees under the contract signed between the offshore oil tanker owner and the clean-up company using samples from the maritime authority in accordance with legal provisions. It is also the first judgment in China to clarify the compensation liability of the ship-induced oil pollution liability insurer in the context of such offshore oil tanker-related ship-induced oil pollution incidents. Specifically, this judgment clearly defines the ship-induced oil pollution liability insurer's compensation obligations to the injured party affected by the ship-induced oil pollution. These furnish novel approaches and guidance for adjudicating analogous subsequent cases. "Future research should investigate differences in individual damage from comparatively more diverse environmental disaster cases and develop detailed processes and alternatives that reflect the needs of each subject (Jae-Hyuck, 2021, p. 8)".

However, the current scarcity of guiding cases and divergent judicial practices among courts hinder uniform adjudication of similar cases. Future optimization of China's oil pollution liability regime requires institutionalizing the precedent-based guidance mechanism. First, recurrent contentious issues from numerous ship-induced pollution cases shall be catalogued to identify representative case typologies, establishing a case supply chain through tiered court reporting. A dynamic selection framework for guiding cases shall be developed through comprehensive evaluation of complexity, representativeness, jurisprudential significance, and societal impact. Second, standardized release procedures-covering designated releasing authorities, fixed intervals, and uniform formats-shall ensure timely and accurate publication. Third, the legal standing of guiding cases must be elevated by enhancing their analytical rigor, establishing precedential primacy in citation, and where warranted, requiring written justification for deviations. Finally, a closed-loop adjudicatory feedback system shall incorporate matured jurisprudential rules into relevant statutory instruments. This approach will give full effect to precedents in ship-induced oil pollution liability governance, thereby enhancing judicial efficiency and upholding judicial credibility. Furthermore, it will furnish robust judicial safeguards for marine ecological conservation and sustainable maritime development.

In a non-case law country like China, the implementation of the above suggestions inevitably encounters some institutional obstacles and judicial practice resistance. We should overcome the difficulties of using typical cases to guide judicial trials in the future by constructing a dynamic selection framework for guiding cases. From a legal perspective, establishing a case guidance system itself is an important aspect for courts to fulfill their judicial duties in accordance with the law and ensure the unified and correct implementation of the law. Establishing and improving the case guidance system is of great significance in unifying legal application and judgment standards, enhancing judicial efficiency, and

promoting judicial fairness. On one hand, it should be clarified that "typical oil pollution liability cases" are selected and announced by the Supreme People's Court, and included in the "Gazette of the Supreme People's Court". On the other hand, according to *Work Procedures for the Construction and Operation of the Case Base of the People's Courts* (The Supreme People's Court of the People's Republic of China, 2024) Article 29 and *Detailed Rules for the Implementation of the Provisions of the Supreme People's Court on Case Guidance* (PKULAW, 2015) Article 9, maritime courts shall be granted the effect of "reference". The guiding case of ship oil pollution damage will also be cited as a reason for judgment, but not as a basis for judgment.

### 5.3 Strengthen government supervision

"Notification and operational competence stages are vital in an actual oil or chemical pollution event (Uçak, 2022, p. 7)." During this strategic window for reforming the ship-induced oil pollution damage liability regime, enhanced oversight is essential for its improvement. This entails establishing a comprehensive regulatory system characterized by clearly defined responsibilities, coordinated division of labor, and full coverage. "Thus, future studies should focus on engendering marine oil spill hazard risk reduction models with a powerful stance on the role of joint government-industry multi-level networks (Sabela-Rikhotso et al., 2022, p. 23)." First, the government shall take the lead in creating a multi-department coordination mechanism. This mechanism must clarify duties and authorities across agencies while strengthening collaboration among maritime, ecological & environmental, and transport authorities. "In best practice, an oil spill contingency plan should be updated regularly (Pascal, 2021, p. 664)." China should establish an interagency coordination command center, while middle-tier transport authorities undertake macro-level coordination, integrating prior operational experience to provide resource support and policy guidance for pollution prevention. Maritime regulators shall leverage their expertise in ship supervision, focusing on equipment inspection and daily oversight for oil pollution control, taking timely measures against noncompliant ships. Ecological or environmental departments shall prioritize marine environmental monitoring and assessment, utilizing technical means to track post-spill ecological changes for evidence-based liability determination and damage evaluation. "The oil spill volume from ships is relatively small and the maritime jurisdictions should have the capability to take quick response actions because the spilled volume of oil in one maritime accident is not too large to be handled (Wu et al., 2021, p. 312)." Regular joint conferences and enforcement actions will ensure seamless and effective oversight, shifting regulation from fragmented approaches to coordinated precision. Furthermore, integrated capabilities across the prevention-monitoring-response-assessment continuum must be strengthened. This will be achieved through increased funding for equipment upgrades and the construction of an intelligent digital monitoring system with advanced technical capacities. "At the same time, intergovernmental cooperation should be strengthened to establish a governance alliance for substantive oil pollution damage regimes. Setting up an environmental regulatory

agency with head office all over the entire countries involved that will see to maintenance of environmental quality is another good policy (Akwasi et al., 2021, p. 9”).

## 5.4 Supporting legal guarantees

In this era of institutional transformation, substantive optimization of the liability regime necessitates corresponding upgrades within its supporting legal framework. First, the foundational role of scientifically targeted legal awareness initiatives lies in integrating newly amended statutory requirements for crew competence. This integration will be achieved by incorporating mandatory training provisions into *Rules of the People's Republic of China for the Administration of Seamen Training* (Ministry of Transport, 2024b). Echoing disclosure obligations for standard contractual clauses, charter parties must include explicit notifications regarding pollution liability. Promoting revised legal provisions via port electronic displays will narrow cognitive gaps among maritime stakeholders. Second, refining environmental public interest litigation mechanisms is vital for enforcing oil pollution liability. “Ecological rights are closely related to the common interests of all humankind and all ethnic groups. They are crucial to ensuring the sustainable development of resources. Compared with other legal rights, ecological rights are more public in nature. Therefore, adjustments to ecological legal relations must transcend the limitations of fairness and justice and conform to the rules of development (Liu, 2011, p. 190).” *Civil Procedure Law of People's Republic of China* (The National People's Congress, 2023) should expand standing to qualified environmental NGOs and procuratorates, enabling preventive actions against high-risk ships. Evidence rules and enforcement procedures require optimization to reconcile tensions between liability allocation and ecological remediation. Third, specialized adjudicatory capacity guarantees legitimate and rational case resolution. Establishing dedicated maritime pollution tribunals in key maritime courts with interregional jurisdiction-staffed by experienced judges and technical specialists-will address technical complexities. Continuing judicial training on evolving domestic and international jurisprudence enhances adjudicative quality. Ultimately, cultivating professional talent secures the regime's long-term viability. Maritime institutions should develop specialized sub-disciplines in marine environmental law through tailored curricula and academic exchanges, strengthening continuing legal education. Cross-disciplinary expertise in environmental and marine sciences must complement legal professionals to provide specialized input for damage assessment and remediation planning, delivering sustained intellectual support.

## 6 Conclusion

Looking back at the revision process of *Maritime Law*, it can be found that improving the system of ship-induced oil pollution damage can be said to be undisputed. *DAML* had already added a

chapter on ship-induced oil pollution damage during its initial review in November 2024. In June 2025, the National People's Congress conducted a second review of *DAML* and solicited public opinions on the new draft. We can see that although the new draft has added content such as the protection of crew labor rights, there have been basically no changes to the part of ship oil pollution damage. (The National People's Congress, 2024b) It can be foreseen that the new *Maritime Law* will soon undergo its third review and even be passed by a vote.

The addition of the specialized chapter “Liability for Ship-induced Oil Pollution Damage” in the *DAML* marks a historic transition in China's ship-induced oil pollution liability regime, from fragmented legislation to systematic integration. This article advances institutional reform through a tripartite approach. First, refining the liability framework. Following international conventions such as the *CLC*, it codifies the strict liability principle of “Polluter Pays”. The legislation further defines four compensation categories, including property damage, preventive costs, and environmental restoration measures, and establishes joint liability mechanisms for multi-ship spills. Second, constructing a relief system. It legally mandates shipowners to obtain oil pollution liability insurance (Article 230)-allowing victims direct claims against insurers-while establishing a national compensation fund financed by cargo owners, forming a dual-layer “Insurance and Fund” safeguard. Third, bridging domestic and international rules. Foreign-related cases apply “the law of the place where oil pollution damage occurs”. Domestic governance is strengthened through dynamic adjustments to liability limits and institutional reforms (e.g., establishing a Ship Oil Pollution Compensation Fund Committee).

The eventual enactment of a fully amended *Maritime Law* will significantly bolster China's maritime legal system and align with its high-level opening-up strategies. It will facilitate smoother domestic-international economic circulation and lay a solid legal foundation for China's expanded role in global marine governance. Furthermore, this legislative advancement will provide robust judicial support for advanced openness and maritime power development while contributing Chinese wisdom and solutions to global marine governance.

## Author contributions

RH: Data curation, Methodology, Resources, Supervision, Visualization, Writing – original draft, Writing – review & editing. LW: Data curation, Software, Supervision, Writing – original draft, Writing – review & editing. HL: Data curation, Methodology, Software, Supervision, Writing – original draft, Writing – review & editing.

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## References

- 6th Cir. (2021). Environmental law-agency discretion aversion-sixth circuit holds that agencies are not bound by the ESA or NEPA when reviewing oil spill response plans. *Harvard. Law Rev.* 134, 5. doi: 10.2307/27028687
- Akwasi, G. B., Murad, A. B., Edmund, N. U., and Festus, V. B. (2021). Investigating the pollution haven hypothesis in oil and non-oil sub-Saharan Africa countries: Evidence from quantile regression technique. *Resour. Policy* 73, 102119. doi: 10.1016/j.resourpol.2021.102119
- Alejandra, E., and Luis, E. M. (2023). Regulatory policy choice in post-reform contexts: The case of industrial safety regulation in Mexico's oil and gas industry. *Regul. Governance* 18, 2. doi: 10.1111/rego.12548
- Cao, X. G. (2023). The legislative theory and adaptation of the limitation of liability system-centered on the revision of the chinese maritime law. *Chin. J. Maritime. Law* 34, 25.
- Chika, E. O., and Nik, N. N. H. (2021). Evaluating escalation in oil pollution and its framing: approaches used by the print media for coverage. *Environ. Res. Commun.* 3, 11. doi: 10.1088/2515-7620/abdb7c
- China Shipowners Mutual Assurance Association (2025). 2024 Ship Safety Risk Report. Available online at: <https://www.Chinapandi.com/index.php/cn/loss-prevention-menu-cn/loss-prevention-content-cn/6009-lp-01-2025-2024> (Accessed June 11, 2025).
- Chinese Ship-source Oil Pollution Compensation Fund (2015). The use and management agency of the China Ship Oil Pollution Damage Compensation Fund. Available online at: <https://www.sh.msa.gov.cn/zjzg/88133.jhtml> (Accessed July 20, 2025).
- Chinese Ship-source Oil Pollution Compensation Fund (2024a). Draft Amendment to the Maritime Law. Available online at: <https://www.sh.msa.gov.cn/hydt/102668.jhtml> (Accessed June 8, 2025).
- Chinese Ship-source Oil Pollution Compensation Fund (2024b). *Explanation of the "Maritime Law of People's Republic of China (Draft Amendment)"*. Available online at: <https://www.sh.msa.gov.cn/hydt/102746.jhtml> (Accessed June 16, 2025).
- CITIC Futures Internationalization (2025). Energy Country Profiles: China-Introduction Report 20250606. Available online at: <https://internationalservice.citicsf.com/en/researchReport/reportDetails?researchId=3040713> (Accessed June 11, 2025).
- Daniel, B. (2021). Transnational experts wanted: Nigerian oil spills before the dutch courts. *J. Environ. Law* 33, 2. doi: 10.1093/jel/eqab008
- Daria, S. (2024). Climate change and oil and gas production regulation: an impossible reconciliation? *J. Int. Econ. Law* 26, 4. doi: 10.1093/jiel/jgad032
- Fu, T. Z. (2006). Basic principles and approaches with respect to the amendment of the maritime law of the China. *Modern. Law Sci* 28, 151.
- Hu, Z. L. (2025). One construction of China's autonomous knowledge system of maritime law. *Chin. J. Maritime. Law* 36, 5.
- International Maritime Organization (1992). International Convention on Civil Liability for Oil Pollution Damage (CLC). Available online at: [https://www.imo.org/en/about/conventions/pages/international-convention-on-civil-liability-for-oil-pollution-damage-\(cl-c\).aspx](https://www.imo.org/en/about/conventions/pages/international-convention-on-civil-liability-for-oil-pollution-damage-(cl-c).aspx) (Accessed April 17, 2025).
- International Maritime Organization (2001). International Convention on Civil Liability for Bunker Oil Pollution Damage (BUNKER). Available online at: [https://www.imo.org/en/about/conventions/pages/international-convention-on-civil-liability-for-bunker-oil-pollution-damage-\(bunker\).aspx](https://www.imo.org/en/about/conventions/pages/international-convention-on-civil-liability-for-bunker-oil-pollution-damage-(bunker).aspx) (Accessed April 17, 2025).
- Jae-Hyuck, L., and Do-Kyun, K. (2021). Analysis of the discriminatory perceptions of victims on damage from environmental pollution: A case study of the hebei spirit oil spill in South Korea. *Land* 10, 10. doi: 10.3390/land10101089
- Lao, H. (2019). The IMO marine environment protection conventions that China accessed over the years and the implementation situation (Part I). *China Maritime. Saf.* 10, 59–60. doi: 10.16831/j.cnki.issn1673-2278.2019.10.022
- Liu, J. Y. (2011). Discussion on claim for environmental damages from oil spill with regard to marine ecological public interests. *China Soft. Sci* 5, 190.
- Maritime Safety Administration (2005). International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978. Available online at: <https://www.msa.gov.cn/public/documents/document/mduz/nduy/~edisp/20150505053452380.pdf> (Accessed June 16, 2025).
- Ministry of Ecology and Environment of People's Republic of China (2023a). *The marine environmental protection law of people's republic of china, (1999 Edition)*. Available online at: [https://www.mee.gov.cn/ywzg/fgbz/fl/202310/t20231025\\_1043942.shtml](https://www.mee.gov.cn/ywzg/fgbz/fl/202310/t20231025_1043942.shtml) (Accessed July 20, 2025).
- Ministry of Ecology and Environment of People's Republic of China (2023b). *The Marine Environmental Protection Law of People's Republic of China*. Available online at: [https://www.mee.gov.cn/ywzg/fgbz/fl/202310/t20231025\\_1043942.shtml](https://www.mee.gov.cn/ywzg/fgbz/fl/202310/t20231025_1043942.shtml) (Accessed July 20, 2025).
- Ministry of Finance and Ministry of Transport (2012). Notice of the Ministry of Finance and the Ministry of Transport on Issuing Administrative Measures for the Collection and Use of Compensation Funds for Ship-Induced Oil Pollution Damage. Available online at: [https://www.mof.gov.cn/gkml/caizhengwengao/2012wg/wg201207/201210/t20121022\\_689158.htm](https://www.mof.gov.cn/gkml/caizhengwengao/2012wg/wg201207/201210/t20121022_689158.htm) (Accessed July 20, 2025).
- Ministry of Transport (2024a). 95% of the import and export freight volume is carried by maritime transport. Available online at: <https://news.qq.com/rain/a/20240711A01XK900> (Accessed June 10, 2025).
- Ministry of Transport (2024b). *Rules of People's Republic of China for the Administration of Seamen Training*. Available online at: <https://xxgk.mot.gov.cn/2020/gz/202112/W020240510394637120968.pdf> (Accessed June 20, 2025).
- Norman, N., and Maria, B. G. (2021). Look before you leap: are your oil patch liability clauses enforceable? (An analysis under civil law jurisdictions with emphasis on Brazil). *J. World Energy Law Business* 14, 1. doi: 10.1093/jwelb/jwab004
- Pascal, K. P. G. (2021). Legal framework for marine oil pollution from ships in Thailand. *Int. J. Mar. Coast. Law* 36, 4. doi: 10.1163/15718085-bja10076
- Pascal, K. P. G. (2022). Legal protection of the marine environment from ship-source oil pollution: progress and challenges in Tanzania. *J. Afr. Law* 66, 1. doi: 10.1017/S002185532100036X
- Phindile, T. Z. S., Dewald, V. N., and Livhuwani, D. N. (2021). A critical analysis of the legal frameworks governing oil spill management in South Africa (Article). *Mar. Policy* 127, 104433. doi: 10.1016/j.marpol.2021.104433
- PKULAW (2015). Detailed Rules for the Implementation of the Provisions of the Supreme People's Court on Case Guidance. Available online at: [https://www.pkulaw.com/en\\_law/729421fabe81ce4cbdfb.html](https://www.pkulaw.com/en_law/729421fabe81ce4cbdfb.html) (Accessed September 1, 2025).
- PKULAW, CLIC.244770 (2004). Yantai Salvage Bureau v. Shandong Rongcheng Fishery Co., Ltd. (dispute over compensation for vessel-induced oil pollution damages). Available online at: [https://www.pkulaw.com/en\\_case/a25051f3312b07f38a5ff1a6b0cfd9a79566f2f9f2fb58bdfb.html](https://www.pkulaw.com/en_case/a25051f3312b07f38a5ff1a6b0cfd9a79566f2f9f2fb58bdfb.html) (Accessed June 11, 2025).
- PKULAW, CLIC.874994 (2000). Application for Limitation of Liability for Oil Pollution Damage Compensation by China Shipbuilding Fuel Supply Fujian Co., Ltd. Available online at: <https://www.pkulaw.com/pfn/a25051f3312b07f38a569647e7808ea70bfacac993b17fbdfb.html?keyword=%E4%B8%AD%E5%9B%BD%E8%88%B9%E8%88%B6%E7%87%83%E6%96%99%E4%BE%9B%E5%BA%94%E7%A6%8F%E5%BB%BA%E6%9C%89%E9%99%90%E5%85%AC%E5%8F%B8%E7%94%B3%E8%AF%B7%E6%B2%B9%E6%B1%A1%E6%8D%9F%>

E5%AE%B3%E8%B5%94%E5%81%BF%E8%B4%A3%E4%BB%E9%99%90%E5%88%B6%E6%A1%68%20&way=listView (Accessed June 11, 2025).

Qingdao Maritime Court of People's Republic of China (2023). Qingdao Company sues Symphony Company and Beiyang Company for Ship Pollution Damage Compensation Dispute. Available online at: <https://www.sdcourt.gov.cn/qdhsfy/spgk/sfws/dxal38/22960361/index.html> (Accessed July 20, 2025).

Sabela-Rikhotso, P. T. Z., Niekerk, D., and Nemakonde, L. D. (2022). Enhancing coordination for effective management of oil spill pollution in South Africa. *Int. J. Disaster. Risk Sci* 13, 1. doi: 10.1007/s13753-022-00392-8

Si, Y. Z. (2023). Difficult journey and brilliant achievements - commemoration for the 30th anniversary of the implementation of the Chinese maritime law. *Chin. J. Maritime. Law* 34, 13–14.

Si, Y. Z., and Wu, X. (2022). Historical research on the principle of “the one who leaks oil pays the compensation” and its application in collision accidents. *Chin. J. Maritime. Law* 33, 13.

Supreme People's Court of China (2011). Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Cases of Disputes over Compensation for Ship-induced Oil Pollution Damage. Available online at: <https://www.msa.gov.cn/msacnmsfsg/hsfg/attachment/download/f95113f88b684f4d8bfc6264989b3956> (Accessed July 20, 2025).

Supreme People's Court of China (2017). Provisions of the Supreme People's Court on Several Issues concerning the Trial of Cases Involving Disputes over Compensation for Damage to Marine Natural Resources, Ecology and Environment. Available online at: <http://gongbao.court.gov.cn/Details/ab0b7d39f94ae7743891c11a4a592c.html> (Accessed July 20, 2025).

Supreme People's Court of China (2020a). *Provisions of the Supreme People's Court on Several Issues concerning the Trial of Cases Involving Disputes over Compensation for Damage to Marine Natural Resources, Ecology and Environment*. Available online at: <http://gongbao.court.gov.cn/Details/a65dc1676298039d87fccd375f7fd7.html> (Accessed July 20, 2025).

Supreme People's Court of China (2020b). *The Civil Code of People's Republic of China*. Available online at: <https://www.court.gov.cn/zixun/xiangqing/233181.html> (Accessed June 10, 2025).

The Central People's Government of the People's Republic of China (2010). Law of the People's Republic of China on Choice of Law for Foreign-related Civil Relationships. Available online at: [https://www.gov.cn/flfg/2010-10/28/content\\_1732970.htm](https://www.gov.cn/flfg/2010-10/28/content_1732970.htm) (Accessed September 1, 2025).

The National People's Congress (2023). The Civil Procedure Law of People's Republic of China. Available online at: <http://www.npc.gov.cn/c2/c30834/202401/P020240108541839745616.pdf> (Accessed July 1, 2025).

The National People's Congress (2024a). China plans to amend the maritime law to improve the application of law in foreign-related matters. Available online at: [http://www.npc.gov.cn/c2/c30834/202411/t0241105\\_440548.html](http://www.npc.gov.cn/c2/c30834/202411/t0241105_440548.html) (Accessed April 17, 2025).

The National People's Congress (2024b). Revision of Maritime Law (November 2024-). Available online at: <http://www.npc.gov.cn/npc/c1773/c1848/c21114/hsfxd/> (Accessed September 3, 2025).

The State Council of People's Republic of China (2005). The Marine Environmental Protection Law of People's Republic of China. Available online at: [https://www.gov.cn/ziliao/flfg/2005-09/01/content\\_27996.htm](https://www.gov.cn/ziliao/flfg/2005-09/01/content_27996.htm) (Accessed April 26, 2025).

The State Council of People's Republic of China (2010). Measures for the Implementation of Civil Liability Insurance for Ship-induced oil pollution Damage in People's Republic of China. Available online at: [https://www.gov.cn/zhengce/2010-09/26/content\\_2603328.htm](https://www.gov.cn/zhengce/2010-09/26/content_2603328.htm) (Accessed April 26, 2025).

The State Council of People's Republic of China (2013). Measures for the Implementation of Civil Liability Insurance for Ship-induced oil pollution Damage of People's Republic of China. Available online at: [https://xxgk.mot.gov.cn/2020/gz/202112/t0211228\\_3633616.html](https://xxgk.mot.gov.cn/2020/gz/202112/t0211228_3633616.html) (Accessed April 26, 2025).

The State Council of People's Republic of China (2018). Regulation on the Prevention and Control of Vessel-induced Pollution to the Marine Environment.

Available online at: [https://www.gov.cn/zhengce/zhengceku/2009-09/16/content\\_4799.htm](https://www.gov.cn/zhengce/zhengceku/2009-09/16/content_4799.htm) (Accessed April 26, 2025).

The State Council of People's Republic of China (2020a). *The Maritime Law of People's Republic of China*. Available online at: [https://www.gov.cn/guoqing/2020-12/24/content\\_5572935.htm](https://www.gov.cn/guoqing/2020-12/24/content_5572935.htm) (Accessed April 18, 2025).

The State Council of People's Republic of China (2020b). *Notice of the Ministry of Transport on Soliciting Public Comments on the Measures for the Implementation of Civil Liability Insurance for Ship-induced oil pollution Damage of People's Republic of China (Revised) (Draft for Comments)*. Available online at: [https://www.gov.cn/xinwen/2020-08/18/content\\_5535473.htm](https://www.gov.cn/xinwen/2020-08/18/content_5535473.htm) (Accessed April 26, 2025).

The Supreme People's Court (2022). The Interpretation of the Supreme People's Court on the Application of Punitive Damages in the Trial of Cases of Disputes over Ecological Environment Tort. Available online at: <http://gongbao.court.gov.cn/Details/035a6959df0f50df093f54b844f09f.html> (Accessed September 1, 2025).

The Supreme People's Court of the People's Republic of China (2024). Work Procedures for the Construction and Operation of the Case Base of the People's Courts. Available online at: <https://www.court.gov.cn/fabu/xiangqing/431662.html> (Accessed September 1, 2025).

Tuulia, P., Sakari, C. K., and Päivä, H. (2022). Enhancing science-policy interface in marine environmental governance: Oil spill response models as boundary objects in the Gulf of Finland, Baltic Sea. *Mar. Policy* 135, 104863. doi: 10.1016/j.marpol.2021.104863

Uçak, Ş. Ş. (2022). Impact analysis on the oil pollution response services of the European Maritime Safety Agency during the Covid-19 pandemic, (2006-2020). *Mar. pollut. Bull.* 174, 113220. doi: 10.1016/j.marpolbul.2021.113220

United Nations (1982). United Nations Convention on the Law of the Sea. Available online at: [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf) (Accessed September 3, 2025).

US Congress (1990). H.R.1465-Oil Pollution Act of 1990. Available online at: <https://www.congress.gov/bills/101st-congress/house-bill/1465?q=%7B%22search%22%3A%22oil+pollution+act%22%7D&s=1&r=3> (Accessed September 3, 2025).

Wang, M. L. (2007). *A Study on the Legal System of Compensation for Ship-induced oil pollution Damage* (Chongqing: Southwest University of Political Science and Law), 24.

Wang, X. D., and Wang, M. K. (2024). Systematic construction of the Chinese marine oil pollution prevention and control legal framework in the context of ‘dual carbon’ goals. *China Popul. Resour. Environ.* 34, 118.

Wu, B., Zhang, J., Yip, T. L., and Soares, G. C. (2021). A quantitative decision-making model for emergency response to oil spill from ships. *Maritime. Policy Manage.* 48, 3. doi: 10.1080/03088839.2020.1791994

Yang, W. (2024). *The actual losses amount to over 3 billion yuan, but the compensation is less than 500 million yuan* (Xinhua Daily Telegraph), 8. Available online at: <http://mrxd.cn/content/20240319/Page01DK.htm>

Zhang, Y. Y. (2022). Reflection on the inadequate compensation for environmental damage caused by ship pollution-the possibility of full compensation. *J. Int. Econ. Law* 2, 155.

Zhang, X. L., and Xu, G. P. (2004). Two-tier parties bearing the obligation of compensation for damage of oil pollution from ships. *Wuhan. Univ. J. (Philosophy. Soc. Sciences)*. 57, 386.

Zhao, W., and Wang, H. (2012). Study on legal accountability of marine pollution caused by oil spill from ships. *J. Comp. Law* 6, 126.

Zhong, H. L., Yi, S. L., and Yip, T. L. (2022). A quantitative liability risk assessment of oil spills in oil ports: the case of the Guangdong-Hong Kong-Macao greater bay area. *Maritime. Policy Manage.* 49, 7. doi: 10.1080/03088839.2021.1925988

Zhongshang Industrial Research Institute (2024). Statistical Analysis of China's Crude Oil Import Data from January to September 2024: A Slight Decrease in Import Volume. Available online at: <https://www.askci.com/news/data/maoyi/20241023/152811272966849128161485.shtml> (Accessed June 10, 2025).

Zhu, X. (2006). On ecological compensation under the framework of “International convention on civil liability for bunker oil pollution damage” and “International oil pollution compensation funds” (IOPC). *Political. Sci Law* 2, 99.