



When the Flag Fails: Reassessing Flag State Responsibility for Marine Pollution by the Shadow Fleet

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Abstract

Background: Shadow fleet threatens Indonesia's maritime sovereignty, particularly in cases of marine pollution caused by vessel activities. Incidents involving MT Arman 114 and MT Freya reveal gaps in flag state responsibility that infringes upon Indonesian waters. In this context, tensions emerge between coastal State stability and flag State obligations, exacerbated by the evasive and regulatory-avoidant characteristics of shadow fleet operations. **Methodology:** This study employs a normative legal methodology using both a statutory and a conceptual approach. The secondary data are derived from instruments such as the 1982 UNCLOS, MARPOL 73/78, the 2001 ILC Draft, the 1974 SOLAS, as well as Indonesian regulations, namely Law No. 17 of 2008 and Law No. 32 of 2009, and relevant legal principles. The data are analyzed qualitatively to assess the conformity between *das sollen* and *das sein*. **Objectives:** This research discusses the legal implications of the shadow fleet regarding Indonesia's maritime sovereignty. It principally examines how effectively the UNCLOS framework governs flag State responsibility for shadow fleet concerning the risk of marine pollution ion coastal State waters. **Findings:** UNCLOS establishes the flag state's responsibility for marine pollution resulting from shadow fleet practices through the genuine link principle. In practice, however, remediation burdens frequently shift to coastal States and private actors as flag States often fail to discharge their obligations. **Novelty:** This research provides a distinct scholarly contribution by examining the foundational dimension of the implications of environmentally harmful shadow fleet practices, specifically the responsibility of the flag State.

Keywords: *flag state responsibility; shadow fleet; marine pollution; unclos 1982; illegal sts transfer*

Abstrak

Latar Belakang: Fenomena *shadow fleet* mengancam kedaulatan maritim Indonesia melalui aktivitas sembarangan kapal yang beresiko pencemaran lingkungan laut. Kasus *shadow fleet* seperti MT Arman 114 dan MT Freya menggambarkan celah tanggung jawab negara bendera yang melanggar kedaulatan perairan Indonesia. Dalam hal ini stabilitas maritim negara pantai dan tanggung jawab negara bendera kapal saling terbentur, karena karakteristik *shadow fleet* yang mengakali aturan. **Metodologi:** Metode yuridis normatif digunakan dengan pendekatan perundang-undangan dan pendekatan konseptual. Data sekunder yang digunakan bersumber dari antara lain UNCLOS 1982, MARPOL 73/78, Draft ILC 2001, SOLAS 1974, serta peraturan Indonesia, yaitu Undang-Undang Nomor 17 Tahun 2008 tentang Pelayaran dan Undang-Undang



Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup, serta prinsip-prinsip hukum yang relevan. Data tersebut dianalisis secara kualitatif untuk mengkaji kesesuaian antara *das sollen* dan *das sein*. **Tujuan:** Penelitian ini bertujuan menganalisis implikasi yuridis *shadow fleet* terhadap kedaulatan lingkungan Indonesia. Fokus utamanya adalah menilai efektivitas kerangka UNCLOS dalam mengatur pertanggungjawaban negara bendera terkait *shadow fleet* atas risiko pencemaran laut di wilayah perairan negara pantai. **Temuan:** Negara bendera tidak bisa dilepaskan dari tanggung jawab atas kerusakan lingkungan laut yang timbul akibat praktik *shadow fleet*, sebagaimana ditegaskan dalam UNCLOS 1982. Namun demikian, dalam praktiknya, pemulihan kerusakan lingkungan justru lebih banyak dibebankan kepada negara pantai dan aktor privat, sementara negara bendera cenderung tidak menjalankan kewajiban remedialnya secara optimal. **Keunikan:** Penelitian ini memberikan kontribusi kebaruan yang spesifik mengkaji aspek dasar tanggung jawab negara bendera kapal dalam praktik *shadow fleet* yang mencemari lingkungan laut.

Kata Kunci: tanggung jawab negara bendera; armada bayangan; pencemaran laut; unclos 1982; transfer minyak ilegal

A. Introduction

Since the recognition of the principle of archipelagic states in the 1982 Law of the Sea Conference, Indonesia has gained a significant amount of additional territory¹. This status grants sovereignty and broad sovereign rights, whereby Indonesian waters now encompass internal waters, archipelagic waters, the territorial sea, the exclusive economic zone, as well as the continental shelf. All these areas are of great strategic value to national interests, as one of the functions of Indonesian waters is as a means of shipping and transportation². This significance is underscored by the volume of global traffic; according to the Review of Maritime Transport 2008 published by the United Nations Conference on Trade and Development (UNCTAD), maritime trade was projected to increase by 44 percent by 2020 and is expected to double by 2031³.

However, this increasing density of maritime traffic presents a double-edged sword; it creates a complex environment frequently exploited by illicit actors to conceal their activities amidst legitimate shipping, leading to the rise of a phenomenon known as the shadow fleet. The term shadow fleet⁴ generally refers to a fleet of ships operating with highly opaque methods, including rapid and repeated changes of ship flags, manipulation of shipping documents, and the deliberate deactivation of the Automatic Identification

¹ Belardo Prasetya Mega Jaya et al., *Hukum laut internasional: suatu pengantar dan sejarah perkembangannya*, Cetakan ke-1 (Depok: PT RajaGrafindo Persada, 2024).

² Yulia Wiliawati, Danial Danial, and Fatkhul Muin, "Eksistensi UNCLOS 1982 Dalam Upaya Penegakan Hukum Laut Internasional Di Perairan Negara Pantai," *Sultan Jurisprudence: Jurnal Riset Ilmu Hukum* 2, no. 2 (October 2022): 290, <https://doi.org/10.51825/sjp.v2i2.17064>.

³ Ismah Rustam, "Tantangan ALKI Dalam Mewujudkan Cita-cita Indonesia Sebagai Poros Maritim Dunia," *Indonesian Perspective* 1, no. 1 (June 2016): 10, <https://doi.org/10.14710/ip.v1i1.10426>.

⁴ Chiusa Simone, "Russia's Shadow Fleet: A Masterclass in Sanctions Evasion," *Geopolitical Monitor*, March 27, 2025, <https://www.geopoliticalmonitor.com/russias-shadow-fleet-a-masterclass-in-sanctions-evasion/>.

System (AIS). In Resolution A.1192(33), the International Maritime Organization (IMO)⁵ also defines the shadow fleet or dark fleet⁶ as a fleet of ships engaged in illegal activities primarily to evade sanctions, insurance costs, and to circumvent safety and environmental regulations. This fleet is characterized by high-risk practices such as turning off AIS tracking to avoid detection, evading port state control inspections, operating without adequate insurance, and using non-transparent corporate governance, all of which disregard industry standards and endanger maritime safety and the marine environment. These practices cause such ships to go undetected by monitoring authorities and surrounding traffic, thereby significantly increasing the risk of maritime accidents⁷.

One of the frequently observed impacts of these practices is ship-to-ship (STS) operations. Besides being illegal, these operations are also prone to oil spills that disrupt aquatic ecosystems, whether due to the old condition of the ships, bad weather, or operational negligence resulting from inadequate maintenance or execution in locations that are difficult to detect⁸. These operations explicitly pose a risk of marine pollution under Article 1 paragraph 1 (4) of UNCLOS 1982⁹, which refers to the introduction by man, directly or indirectly, of substances or energy into the marine environment which results in such deleterious effects as harm to living resources and human health. Because of this, the IMO explicitly states that the shadow fleet is a serious threat to the safety of seafarers and the global maritime environment¹⁰. The existence of the risk of marine pollution due to shadow fleet practices certainly demands an international legal framework capable of regulating and controlling shipping activities effectively. International law of the sea has provided regulatory mechanisms aimed at balancing the freedom of navigation and the protection of the rights of coastal states from marine pollution and other detrimental activities. Article 90 of UNCLOS 1982 affirms, in essence, that every state has the right to sail ships flying its flag on the high seas. However, this right does not stand alone; it is followed by the obligation of the flag state to exercise its jurisdiction and control in administrative, technical, and social matters over ships flying its flag, as regulated in Article 94 paragraph (1) of UNCLOS 1982. Although this legal

⁵ International Maritime Organization, *URGING MEMBER STATES AND ALL RELEVANT STAKEHOLDERS TO PROMOTE ACTIONS TO PREVENT ILLEGAL OPERATIONS IN THE MARITIME SECTOR BY THE "DARK FLEET" OR "SHADOW FLEET"* (London, 2023), [https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1192\(33\).pdf](https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1192(33).pdf).

⁶ Alex Prezanti and Isaac Levi, *POLICY BRIEFING: TACKLING THE RUSSIAN 'SHADOW' FLEET*, Policy Briefing (Centre for Research on Energy and Clean Air (CREA), 2024), <https://energyandcleanair.org/publication/policy-briefing-tackling-the-russian-shadow-fleet/>.

⁷ Prezanti and Levi.

⁸ Rüdiger Stempel, "HELCOM's Role in Promoting Sustainable and Safe Shipping and Maritime Security in the Baltic Sea Region," *Discover Sustainability* 6, no. 1 (August 2025): 7, <https://doi.org/10.1007/s43621-025-01612-z>.

⁹ United Nations Convention on the Law of the Sea, UNCLOS 1982 (1982), art. 1 Paragraph 1 (4).

¹⁰ Damas Jati, "IMO Ingatkan Peningkatan Risiko Pengoperasian Tanker 'Shadow Fleet'," *Indonesia Shipping Gazette*, January 16, 2025, <https://indoshippinggazette.com/2025/imo-ingatkan-peningkatan-risiko-pengoperasian-tanker-shadow-fleet/>.

framework is available, practice on the ground shows a gap between norms and implementation. This is reflected in several concrete cases in Indonesia.

In 2023¹¹, the Indonesian Maritime Security Agency (Bakamla) seized an Iranian-flagged supertanker, MT Arman 114, in the North Natuna Sea for allegedly conducting illegal oil transfers, manipulating AIS to show a false position in the Red Sea, and dumping oil into the sea. The ship carried 272,569 tons of light crude oil with a value reaching Rp4.6 trillion (approximately US\$304 million). These alleged violations were uncovered while the ship was performing a ship-to-ship transfer with the Cameroon-flagged MT S Tinos, which was reported to have been scheduled for decommissioning since 2018. A similar incident also occurred in 2021 involving two tankers, namely the Iranian-flagged MT Horse and the Panamanian-flagged MT Freya, which were detected in Kalimantan waters. Both ships were seized after the crew failed to respond to radio calls. Bakamla stated that the crew were suspected of various violations, including not flying a national flag, deactivating identification systems to avoid detection, and conducting illegal oil transfers¹².

In this international context, the shadow fleet has grown significantly and now accounts for about 10% of global seaborne oil transportation, as mentioned in recent research by Rodriguez-Diaz, Alcaide, and Endrina¹³ in "Shadow Fleets: A Growing Challenge in Global Maritime Commerce." The study identifies key operational indicators such as AIS deactivation, manipulation of ship information, and the use of high-risk old vessels. They emphasize that this phenomenon not only causes economic disruption and facilitates sanction evasion but also presents significant environmental risks, thus requiring an adaptive regulatory framework and more advanced technological solutions.

Turning the focus to Indonesian waters, research by Naomi Margaretha Ghokmaria Sirait¹⁴ titled "Implikasi Hukum Internasional dan Nasional dalam Kasus Transfer Minyak Ilegal oleh Kapal Tanker MT Horse dan MT Freya di Perairan Indonesia" concludes that the violations committed by MT Horse and MT Freya constitute serious violations of the right of innocent passage and transit passage as regulated in UNCLOS 1982. Illegal activities such as unauthorized STS transfers, AIS deactivation, and marine pollution within Indonesia's jurisdictional waters have been firmly addressed through national legal mechanisms aligned with international standards. The Batam District Court's ruling against the ship's captain not only affirms Indonesia's sovereignty as a coastal state but also establishes a new legal standard that the abuse of the right of innocent passage will not be tolerated. Furthermore, this serves as an important evaluation for the government

¹¹ Stefano Sulaiman and Fransiska Nangoy, "Indonesia Seizes Iranian-Flagged Tanker Suspected of Illegal Oil Transshipment," *Reuters*, July 12, 2023, <https://www.reuters.com/world/indonesia-seizes-iranian-flagged-tanker-suspected-illegal-transshipment-oil-2023-07-11/>.

¹² Asia Times, "Indonesia Seizes Iranian and Panamanian Tankers," *Asia Times*, January 25, 2021, <https://asiatimes.com/2021/01/indonesia-seizes-iranian-and-panamanian-tankers/>.

¹³ Emilio Rodriguez-Diaz, Juan Ignacio Alcaide, and Nieves Endrina, "Shadow Fleets: A Growing Challenge in Global Maritime Commerce," *Applied Sciences* 15, no. 12 (June 2025): 1, <https://doi.org/10.3390/app15126424>.

¹⁴ Naomi Margaretha Ghokmaria Sirait, "Implikasi Hukum Internasional Dan Nasional Dalam Kasus Transfer Minyak Ilegal Oleh Kapal Tanker MT Horse Dan MT Freya Di Perairan Indonesia," *Media Hukum Indonesia (MHI)* 3, no. 2 (July 2025): 510.

to continue increasing monitoring capacity and the integrity of the national maritime legal system. Similarly, research by Annisa Rizky Julieta and Made Maharta Yasa¹⁵ regarding "Penegakan Hukum Kasus Pelanggaran Hak Lintas Damai Kapal Tanker Iran dan Panama di Indonesia" discusses violations of the right of innocent passage by MT Freya and MT Horse, specifically related to STS transfers, AIS blackouts, and violations of the Indonesian Archipelagic Sea Lanes (ALKI). On the other hand, research by Gunawan, Fathi, and Ghiffara¹⁶ regarding the seizure of MT Arman 114 in "Analyzing MT Arman 114 Case: Dispute Settlement in Seizure of Ship's Action under International Law". The research emphasizes that while flag state jurisdiction is a primary principle, the resolution of this case relies heavily on the dispute settlement mechanisms as regulated in Part XV of UNCLOS 1982. Therefore, further legal proceedings are expected to involve diplomatic negotiations or compulsory adjudication through the International Tribunal for the Law of the Sea (ITLOS) or the International Court of Justice (ICJ) to ensure a fair outcome in accordance with international law.

The discourse from the perspective of the Coastal State was put forward by Yoshifumi Tanaka¹⁷ in his article "Regulation of Ship-to-Ship Transfer Operations in the Exclusive Economic Zone: Possible Actions on the Dark Fleet?". Tanaka argues that coastal states have a strong legal basis in positive international law to regulate STS operations by the dark fleet in the Exclusive Economic Zone, and rejects the notion that such activities are immune to the laws of the coastal state, even within the framework of the principle of freedom of navigation. Although existing literature has provided important insights regarding law of the sea violations and enforcement procedures, no literature specifically discusses the responsibility of the flag state for its negligence in its administrative, technical, and social supervision of ships sailing under its flag. This remains a crucial area of study, considering that UNCLOS 1982 regulates such supervision seriously. To bridge the gap in the existing literature, this study aims to analyze the legal implications of the shadow fleet on the environmental sovereignty of Indonesian waters by evaluating the mechanism of flag state responsibility in ship supervision to prevent marine pollution. This research provides a new contribution by examining the fundamental aspect of flag state responsibility regarding the operational impact of the shadow fleet, particularly concerning marine pollution.

Therefore, this study raises two main problem formulations: first, how UNCLOS 1982 regulates flag state responsibility in the prevention and control of marine pollution; and second, how these provisions and responsibility mechanisms are applied to shadow fleet practices that threaten the sovereignty and environmental integrity of Indonesia as a coastal state.

¹⁵ Annisa Rizky Julieta and Made Maharta Yasa, "PENEGAKAN HUKUM KASUS PELANGGARAN HAK LINTAS DAMAI KAPAL TANKER IRAN DAN PANAMA DI INDONESIA," *Kertha Desa* 11, no. 3 (March 2023): 1884.

¹⁶ Yordan Gunawan, Muhammad Fathi, and Mustafad Ghiffara, "Analyzing MT Arman 11 Case: Dispute Settlement in Seizure of Ship's Action under International Law," *Al-Daulah: Jurnal Hukum Dan Perundangan Islam* 14, no. 1 (April 2024): 61–85, <https://doi.org/10.15642/ad.2024.14.1.61-85>.

¹⁷ Yoshifumi Tanaka, "Regulation of Ship-to-Ship Transfer Operations in the Exclusive Economic Zone: Possible Actions on the Dark Fleet?," *The Korean Journal of International and Comparative Law* 13, no. 2 (November 2025): 265–69, <https://doi.org/10.1163/22134484-12341231>.

B. Discussion

1. The Flag State's Responsibilities in The Prevention and Control of Marine Pollution Under UNCLOS 1982

Fundamentally, flags function as emblems of identity and manifestations of sovereignty. However, within the maritime domain¹⁸, this role evolves into a pivotal legal instrument. A maritime flag does not merely signify a vessel's nationality; it establishes the exclusive jurisdiction of the flag state over that vessel. Consequently, this attribution of nationality imposes binding legal obligations, rendering the flag state fully responsible for ensuring the vessel's seaworthiness and compliance with international standards¹⁹.

In doctrinal analysis, the forms of such responsibility are further classified into two main categories²⁰: political and material responsibility. Political responsibility generally takes the form of sanctions or coercive measures against the violating state, such as sovereignty restrictions or demilitarization, applied according to the severity of the offense. Conversely, material responsibility focuses on economic aspects by mandating the restoration of actual harm through mechanisms like reparations, restitution, or substitution to compensate for the damage caused.

The concept of state responsibility in the perspective of international law is recognized as an obligation arising from the commission of an "internationally wrongful act" involving a breach of an international obligation towards another state, as codified in the Draft Articles on Responsibility of States for Internationally Wrongful Acts (ILC Articles 2001) drafted by the United Nations. This responsibility possesses two cumulative elements: (1) the attribution of an act to the State, and (2) the occurrence of a breach of an applicable international obligation²¹. Therefore, the omission caused by the relevant authorities in supervising and ensuring the seaworthiness of vessels sailing under its flag constitutes a form of "internationally wrongful act" that is directly attributable to the State. Meanwhile, for ship operators or owners who cause damage to the waters they traverse, the principle of strict liability applies. This principle emphasizes that liability for marine environmental damage arises *ipso facto*, without requiring proof of fault or negligence²². In the Indonesian legal system, this principle is explicitly adopted through Article 88 of Law Number 32 of 2009 on Environmental Protection and Management. This provision stipulates that any party whose activities involve hazardous and toxic

¹⁸ Christina Violeta Br. Manik and Andesvan Gumay, "Analisis Proses Penggantian Bendera Kapal Asing Menjadi Kapal Bendera Indonesia Di Subdirektorat Pengukuran Pendaftaran Dan Kebangsaan Kapal," *Journal Marine Inside*, June 1, 2024, 3, <https://doi.org/10.62391/ejmi.v6i1.73>.

¹⁹ Zahra Ahmed, "Flags on Ships: A Detailed Guide," *Marine Insight*, January 9, 2025, <https://www.marineinsight.com/marine-navigation/flags-on-ships-a-detailed-guide/>.

²⁰ Nurilloev Shavkat Shukhrat Ugli, "THE FOUNDATIONS OF STATE RESPONSIBILITY IN INTERNATIONAL LAW: AN IN-DEPTH ANALYSIS OF KEY PRINCIPLES AND NORMS," *European Journal of Contemporary Business Law & Technology: Cyber Law, Blockchain, and Legal Innovations* 1, no. 9 (September 2024): 103, <https://doi.org/10.61796/ejcbt.v1i9.1031>.

²¹ International Law Commission), *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (United Nations, 2001), art. 2.

²² Roberto Octavinus Cornelis Seba, "Implementation of the Strict Liability Principle in Combating Marine Pollution in North Nias Sea: A Review of Indonesia's National Interests," *Nakhoda: Jurnal Ilmu Pemerintahan* 24, no. 1 (June 2025): 2, <https://doi.org/10.35967/njip.v24i1.807>.

substances (B3) or pose a serious threat to the environment shall be held strictly liable for the resulting damages, circumventing the necessity to prove an element of fault²³.

This article focuses on the responsibilities of state actors as mandated by Article 94, paragraph (1) of UNCLOS 1982, which obliges the flag state to exercise effective jurisdiction and control over all administrative, technical, and social matters concerning the ship²⁴. This obligation is predicated upon the preceding provisions of Article 91, paragraphs (1) and (2) of UNCLOS 1982²⁵, which expressly state that every state possesses the sovereign authority to determine the conditions for the grant of nationality to ships, the registration of ships in its territory, and the right to fly its flag. Furthermore, these provisions necessitate the establishment of a genuine link between the state and the ship, alongside the issuance of official documentation as valid proof of the vessel's nationality. This genuine link serves as the legal nexus for the flag state's exclusive jurisdiction in supervising the vessel. Historically, this principle was intended to demonstrate a substantive economic and social connection between the shipowner and the registering state, ensuring that the relationship extends beyond mere formal administrative acts of registration²⁶.

The concept of the "genuine link" is further elucidated in Article 5, paragraph (1) of the 1958 Convention on the High Seas, which mandates that a state must effectively exercise its jurisdiction and control in administrative, technical, and social matters over ships flying its flag²⁷. Subsequently, the interpretation regarding the scope of this responsibility was significantly expanded by the International Tribunal for the Law of the Sea (ITLOS) in the SRFC Advisory Opinion. In its decision, specifically in Paragraph 117²⁸, the Tribunal stated that the phrase in particular in Article 94 paragraph (2) of UNCLOS indicates that the list of flag state obligations is indicative, not exhaustive. This implies that a State cannot rely solely on the list of actions stipulated in the article to exercise effective jurisdiction and control; rather, it is obliged to adopt additional administrative measures to ensure that vessels flying its flag are not involved in activities violating the law. Furthermore, Paragraph 119²⁹ of the decision asserts that should violations persist and be reported by another State, the Flag State possesses an absolute obligation to

²³ Undang-Undang Republik Indonesia Nomor 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup, Pub. L. No. 32 (2009).

²⁴ United Nations Convention on the Law of the Sea, art. 94 paragraph 1.

²⁵ United Nations Convention on the Law of the Sea, art. 91 paragraphs 1 and 2.

²⁶ Serhii Kuznietsov, "The 'Genuine Link' Concept: Is It Possible to Enhance the Strength?," *Lex Portus* 7, no. 6 (December 2021): 66, <https://doi.org/10.26886/2524-101X.7.6.2021.3>.

²⁷ Paweł Krężel, "THE MEANING AND EVOLUTION OF THE 'GENUINE LINK' CONCEPT AND ITS PRACTICAL IMPLEMENTATION 40 YEARS AFTER THE ADOPTION OF THE 1982 UN CONVENTION ON THE LAW OF THE SEA," *Prawo Morskie*, February 1, 2023, 73, <https://doi.org/10.24425/pm.2023.147840>.

²⁸ Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC), ITLOS Rep. 2015 4 (International Tribunal for the Law of the Sea 2015), ¶ 117, https://www.itlos.org/fileadmin/itlos/documents/cases/case_no.21/advisory_opinion_published/2015_21-advop-E.pdf.

²⁹ *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)*, 119.

investigate and take necessary remedial actions to rectify the situation. The fulfillment of these obligations must be firmly grounded in the principle of due diligence³⁰. This principle asserts that flag State responsibility may arise in scenarios where the State, as a responsible actor, fails to execute its duty of care toward vessels under its flag. Due diligence encompasses a series of obligations in the form of oversight and control measures that must be undertaken by the flag State. Within the framework of international law, these obligations have been formulated normatively; thus, negligence in the application of the due diligence principle may be qualified as a violation of international law.

Nowadays, numerous shadow fleet activities have been detected, with vessels turning off their AIS systems to conceal their movements while engaging in illegal practices. These practices contravene the International Convention for the Safety of Life at Sea (SOLAS) 1974, which mandates ships to activate AIS for navigational safety and transparency of vessel movement³¹. Moreover, practices that neglect administrative and technical aspects may also result in an increased risk of marine pollution. Such practices clearly contradict the flag State's obligation to ensure that ships flying its flag comply with international rules and standards, as well as applicable national laws, regarding the prevention, reduction, and control of pollution of the marine environment. It also contradicts the duty to ensure effective enforcement against such violations wherever they occur, as stipulated in Article 217, paragraph 1 of UNCLOS 1982³².

Article 217, paragraph 2 affirms the obligation of the State to prohibit the sailing of vessels that have not met or do not meet the requirements of international rules and standards, including requirements relating to design, construction, equipment, and crewing³³. Greenpeace³⁴ reports that tankers failing to comply with administrative provisions and international standards, characterized by aging vessels, various technical defects, a history of disabling AIS, and the conduct of high-risk STS cargo transfers, significantly increase the potential for accidents. This risk is further aggravated by the absence of adequate insurance protection for such tankers; consequently, in the event of an oil spill, the burden of environmental restoration costs is potentially shifted to the State and the public. However, UNCLOS 1982, in Article 192, envisions the realization of the obligation of every State to protect and preserve the marine environment³⁵. This is

³⁰ Andi Putra Sitorus et al., "Reconstruction of Flag State Responsibility in Addressing Illegal Fishing Justly," 1, December 2025, 3731," *International Journal of Environmental Sciences* 11, no. 8 (December 2025): 3731, <https://doi.org/https://doi.org/10.64252/e3p3s370>.

³¹ International Convention for the Safety of Life at Sea (SOLAS) (1974), chap. v, reg. 19.2.4.

³² United Nations Convention on the Law of the Sea, art. 217 paragraph 1.

³³ United Nations Convention on the Law of the Sea, art. 217 paragraph 2.

³⁴ Greenpeace, *A List of Previously Unsanctioned Crude Oil Tankers Older than 15 Years That Have Exported Oil from Russia Several Times since the Start of the War and Do Not Have Adequate Liability Insurance to Cover Potential Damage Caused by Accidents and Oil Spills* (Greenpeace, 2024), 1, <https://www.greenpeace.org/static/planet4-sweden-stateless/2024/10/fb3d5709-greenpeace-shadow-fleet-baltic-tankers-list.pdf>.

³⁵ United Nations Convention on the Law of the Sea, art. 192.

reiterated in Article 194 paragraph 2 of UNCLOS 1982, which obliges every State to take all measures necessary to ensure that activities under their jurisdiction or control do not cause damage or pollution to the environment of other States³⁶. Other provisions, such as the International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78, also specifically³⁷ regulate the prevention of marine pollution; Annex I targets oil pollution from ships (including illegal discharge), and Annex VI controls air pollution from shipping activities by establishing maximum emission limits for sulfur oxides (SO_x) and nitrogen oxides (NO_x) from ship exhaust, as well as strictly prohibiting the deliberate emission of ozone-depleting substances. This regulation is strengthened through the designation of Emission Control Areas (ECAs), which enforce stricter emission standards for SO_x, NO_x, and particulate matter to minimize environmental impact in specific water areas. Although Port State Control under MARPOL Annex VI Regulation 19 grants authority and obligation to the port State to conduct inspections of foreign ships, the primary responsibility for ensuring compliance with pollution prevention provisions remains with the flag State. This is affirmed in MARPOL Annex VI Regulation 11, which obliges the flag State to exercise effective oversight and law enforcement over ships flying its flag. The failure of the flag State to discharge these obligations cannot be transferred to the port State and may be qualified as a breach of international obligation, thereby triggering liability under Article 217 of UNCLOS.

2. The Relevance and Application of the Provisions of the 1982 UNCLOS Regarding the Flag State's Liability for Maritime Pollution Resulting from Shadow Fleet Activities in Indonesia

Based on the provisions of Article 2 of UNCLOS 1982, Indonesia holds the position of a coastal State because it possesses a land territory bordering the territorial sea, so that its sovereignty extends to the land, internal waters, and territorial sea. On the other hand, Indonesia fulfills the requirements of Article 46 of UNCLOS 1982 as an archipelagic state because it consists of large and small islands forming a unity of political, economic, social, and historical territory. This dual status provides global legitimacy to the concept of the *Wawasan Nusantara*³⁸ since the ratification through Undang-Undang Nomor 17 Tahun 1985 tentang Pengesahan United Nations Convention on The Law of The Sea. Referring to the provisions in Chapters II, III, and IV of UNCLOS 1982, Indonesia as a coastal state as well as an archipelagic state holds full sovereign rights over various water areas covering internal waters, archipelagic waters, territorial sea, up to strait areas. This is

³⁶ United Nations Convention on the Law of the Sea, art. 194 paragraph 2.

³⁷ International Maritime Organization, "International Convention for the Prevention of Pollution from Ships (MARPOL)," *International Maritime Organization*, n.d., accessed November 9, 2025, [https://www.imo.org/en/about/conventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-\(marpol\).aspx](https://www.imo.org/en/about/conventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-(marpol).aspx).

³⁸ Dwi Grace Rosalia Silalahi, "Analisis Perkembangan Batas Laut Indonesia Di Wilayah Perairan Indonesia, Menurut Hukum Laut Indonesia Maupun Hukum Laut Internasional," *Jurnal Hukum Indonesia* 2, no. 2 (April 2023): 72, <https://doi.org/10.58344/jhi.v2i2.23>.

affirmed through Article 87 paragraph 1 of UNCLOS 1982³⁹, that all states, whether coastal or land-locked, have the right of freedom of navigation on the high seas. This freedom includes the right to sail, fly over the high seas, lay submarine cables and pipelines, as well as other activities that. On the other hand, Indonesia as a coastal state and archipelagic state also has the obligation to guarantee the right of innocent passage and the right of archipelagic sea lanes passage⁴⁰. However, such freedom is not absolute, because its use must be for peaceful purposes and must not endanger the interests of other states nor damage the marine environment, as emphasized in Article 88 of UNCLOS 1982⁴¹. Furthermore, within the provisions of Chapter XII of UNCLOS 1982 it is also regulated regarding the protection and preservation of the marine environment by every state in general. The implementation of these rights and obligations reflects the principle of balance between state sovereignty and collective international interests in the sustainable utilization of the sea. However, the essence of this principle is threatened by the operation of the shadow fleet which ignores international safety standards.

Shadow Fleet activity has caused serious pollution in Indonesian waters, as seen in the case of the supertanker MT Arman 114 flying the Iranian flag arrested by BAKAMLA in the North Natuna Sea in 2023 due to conducting illegal oil transfers together with MT. S TINOS flying the Kribi flag, performing waste dumping into the sea, as well as manipulating tracking systems. This incident⁴² is the impact of high-risk maritime operations without strict regulatory oversight, where the disregard for safety procedures triggered a spill of light crude oil rich in toxic compounds such as benzene and polycyclic aromatic hydrocarbons. Through the process of oil weathering and emulsification, these pollutants spread widely as well as persist for a long time in the sea, causing a double ecological risk in the form of acute toxicity for organisms and chronic impacts through hydrocarbon accumulation in the food chain. Moreover, this massive degradation of water quality damages the ecosystem structure systematically, from the inhibition of phytoplankton photosynthesis to the damage of apex predator tissues, which reflects the failure of structural governance in protecting Indonesia's marine ecosystem from long-term damage. When examined through the lens of the principle of strict liability, the marine pollution caused by MT Arman 114 gives rise to liability for any party whose conduct results in damage, without the necessity of proving fault, as stipulated in Article 88 of Law Number 32 of 2009⁴³ concerning Environmental Protection and Management. Furthermore, the principle of strict liability imposes an obligation upon the State to undertake all necessary measures to prevent, reduce, and control marine environmental pollution.

³⁹ United Nations Convention on the Law of the Sea, art. 87 paragraph 1.

⁴⁰ Dikdik M. Sodik, *Hukum laut internasional dan pengaturannya di Indonesia*, Cetakan kedua, edisi revisi (Bandung: Refika Aditama, 2014).

⁴¹ United Nations Convention on the Law of the Sea, art. 88.

⁴² Aulya Ananda Alsha Nuraini, *Environmentalism beyond Borders: The MT Arman 114 Oil Spill and the Politics of Marine Protection in Indonesia*, December 19, 2025, 28, <https://doi.org/10.5281/ZENODO.17983038>.

⁴³ Undang-Undang Republik Indonesia Nomor 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup, art. 88.

Another shadow fleet phenomenon occurred on January 24, 2021, Bakamla RI in its patrol found super tanker ships flying the flags of Panama and Iran, MT Freya and MT Horse in the middle of conducting transfer of oil between ships/ STS without a permit in the territory of Indonesian waters. Then, MT Freya performed oil spilling into the sea which risked damaging the environment of Indonesian waters. Both ships and their captains were processed legally for violations of shipping provisions and protection of the Indonesian marine environment⁴⁴. STS is a practice that is relevant to Kayvanfar's explanation⁴⁵ that strict international sanctions against Iran's energy sector not only halted oil exports, but also fundamentally changed the way oil was distributed. Both violations above are rooted in the failure of oversight, namely the deactivation of AIS which resulted in massive ecological damage. Specifically the violations of the ships in manipulating AIS contradict the SOLAS 1974⁴⁶ requiring ships to activate AIS for shipping safety and transparency of ship movement. In this case, those violations display the non-compliance of the flag state over the ship to the principle of Due diligence, which provides obligations in the form of oversight and control actions to the flag state. This violation has brought serious legal implications towards the flag state responsibility based on the UNCLOS 1982 framework.

In this regard, such violations may first be analyzed within the framework of State responsibility based on Draft Articles on Responsibility of States for Internationally Wrongful Acts (ILC Articles 2001) particularly Article 2, it is established that State responsibility arises when two cumulative elements are fulfilled, namely the attribution of conduct to a State and the existence of a breach of an applicable international obligation⁴⁷. First, in the case involving the Iranian-flagged MT Horse and the Panamanian-flagged MT Freya, the act of marine pollution committed by MT Freya can be analyzed within this framework. Pursuant to Article 4 of the ILC 2001⁴⁸, the conduct of any State organ shall be considered an act of that State under international law, regardless of the function it performs, whether legislative, executive, judicial, or otherwise. A State organ, in this context, includes any entity having such status under the internal law of the State. In Panama, through Decree Law No. 7 of 1998⁴⁹, the Panama Maritime Authority (PMA) was established with the mandate of ensuring compliance with the United Nations Convention on the Law of the Sea and other relevant international maritime instruments. Under the PMA, the Directorate General of Merchant

⁴⁴ Badan Keamanan Laut Republik Indonesia, "Bakamla RI Pantau MT Horse Dan MT Freya Keluar Wilayah Indonesia," *Badan Keamanan Laut Republik Indonesia*, May 29, 2021, https://www.bakamla.go.id/publication/detail_news/bakamla-ri-pantau-mt-horse-dan-mt-freya-keluar-wilayah-indonesia.

⁴⁵ Kamyar Kayvanfar, "Iran's Shadow Fleet Fuels Maritime Environmental Risks," *The Observer Research Foundation Middle East*, November 1, 2026, <https://orfme.org/expert-speak/irans-shadow-fleet-fuels-maritime-environmental-risks/>.

⁴⁶ International Convention for the Safety of Life at Sea (SOLAS), c. v, reg. 19.2.4.

⁴⁷ International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, art. 2.

⁴⁸ International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, art. 4.

⁴⁹ Republic of Panama, *Decree Law No. 7 of 10 February 1998*, Art. 4 (6)

Marine (DGMM), pursuant to Law No. 57 of 2008⁵⁰, is entrusted with exercising flag State functions, including conducting inspections, supervising vessels, and ensuring that ships flying the Panamanian flag comply with international standards on safety, security, and marine environmental protection. Accordingly, PMA and DGMM qualify as State organs within the meaning of Article 4 of the ILC 2001. Therefore, any acts or omissions in carrying out supervisory obligations over vessels flying the Panamanian flag, including failing to prevent or adequately respond to marine pollution caused by MT Freya, are attributable to the State of Panama. The same reasoning applies to MT Arman, whereby the Ports and Maritime Organization (PMO), in its capacity as the maritime administration of Iran, exercises flag State jurisdiction and control over vessels flying the Iranian flag. Accordingly, any act or omission arising from the PMO's failure to discharge its supervisory obligations may be attributable to the Islamic Republic of Iran⁵¹. In this instance, the flying of the flags of Iran (MT Arman) and Panama (MT Freya) created a *prima facie*⁵² genuine link pursuant to Article 91 of UNCLOS 1982.

Once a vessel receives its flag identity, the flag State is legally mandated to exercise effective jurisdiction and control over said vessel. Although the physical acts of oil spills and illegal ship-to-ship transfers were committed by private actors, specifically Ocean Mark Shipping Inc. and Captain Chen Yi Qun, this does not automatically absolve the flag State of responsibility. The granting of a flag identity obligates the State to maintain strict administrative, technical, and social oversight under Article 94 of UNCLOS 1982. When a flag State fails to conduct such oversight, this failure triggers an omission, which constitutes a standalone breach by the State. Consequently, both elements of state responsibility remain fulfilled. The provision of a flag identity must not be a mere passive administrative formality via an open registry, it must be accompanied by active measures to ensure the vessel complies with international standards. This argument is further reinforced by Article 94 of the 1982 UNCLOS⁵³, which stipulates that flag States bear an absolute obligation to effectively exercise jurisdiction and control over their vessels as an embodiment of the genuine link principle as provided under Article 91(1)⁵⁴. This obligation encompasses technical, administrative, and social aspects to ensure that all vessels comply with international standards aimed at preventing maritime accidents and marine pollution. However, the involvement of Iranian- and Panamanian-flagged vessels in illegal STS oil transfers resulting in oil discharge indicates a failure of the flag States to implement the principle of due diligence.

⁵⁰ N.d.; Law No. 57 of 6 August 2008, The General Merchant, art. 187, para. 25.

⁵¹ Ports and Maritime Organization, *INDIAN OCEAN MEMORANDUM OF UNDERSTANDING ON PORT STATE CONTROL* (Tehran, Iran, n.d.), 43–44, https://www.equasis.org/Fichiers/Statistique/MOA/PSC%20Annual%20Reports%20Indian%20Ocean%20MoU/PSC_ANNUAL_REPORT_IOMOU_2008.pdf?

⁵² Literally, *prima facie* means “at first sight” or based on what appears to be true at first glance. In the context of this dispute, it refers to preliminary evidence of ownership of the ship's flag. See more in “*Prima Facie*,” *Cambridge Dictionary* (Cambridge University Press), <https://dictionary.cambridge.org/dictionary/english/prima-facie>.

⁵³ United Nations Convention on the Law of the Sea, art. 94.

⁵⁴ United Nations Convention on the Law of the Sea, art. 94 paragraph 1.

Under the due diligence principle, Iran and Panama may be held responsible if it is proven that they failed to take necessary measures to supervise the activities of their vessels, thereby allowing such vessels to operate as part of the shadow fleet, which poses a threat to Indonesia's marine environment. In general, the absence of strict supervision creates opportunities for activities that violate the provisions of Part XII of the 1982 UNCLOS, particularly Article 194 paragraph 3 (b)⁵⁵, which obliges all States to prevent pollution from vessels under their jurisdiction.

Marine pollution is also specifically regulated under MARPOL. From the perspective of MARPOL, MT Arman 114 and MT Freya violated the provisions of MARPOL Annex I, particularly Regulation 34 concerning the control of oil discharge. Under Regulation 34(1)⁵⁶, any discharge of oil into the sea is strictly prohibited unless six cumulative conditions are fulfilled. In this case, the vessels failed to meet the third condition, namely that the vessel must be "proceeding en route." Since the oil spill occurred during STS operations, where the vessels were stationary or had very limited movement within the waters of a State, this requirement was not satisfied, rendering the discharge unlawful under the Convention. Therefore, the responsibility of Iran and Panama must not be limited to granting nationality to vessels, but must also extend to accountability for their failure to properly supervise vessels flying their flag, which results in ecological harm.

Furthermore, Iran and Panama are obliged to conduct investigations and, where appropriate, initiate legal proceedings against vessels that violate international environmental regulations, regardless of where the violation occurs, as mandated by Article 217(4) of the 1982 UNCLOS⁵⁷. However, in practice, both Iran and Panama, as flag States, have failed to enforce the law against such vessels. If this situation persists, the integrity of the international law of the sea regime will be undermined, and the burden of environmental restoration will continue to be disproportionately borne by coastal States. In addition to the obligations of flag States, Article 73(1) of the 1982 UNCLOS⁵⁸ also provides that Indonesia, as a coastal State, has full authority to enforce its laws in order to protect natural resources within its Exclusive Economic Zone. This authority includes measures such as boarding, inspection, arrest, and judicial proceedings. Furthermore, Article 220(2)⁵⁹ emphasizes that judicial proceedings constitute an integral part of law enforcement mechanisms to ensure compliance with the coastal State's national laws, in line with the 1982 UNCLOS. Indonesia, as a coastal State, exercised this authority through Decision of the Batam District Court Number 941/Pid.Sus/2023/PN Btm⁶⁰. In this ruling, the panel of judges held that the Captain of MT Arman 114 was legally and convincingly proven guilty of committing a criminal act

⁵⁵ United Nations Convention on the Law of the Sea, art. 194 paragraph 3 (b).

⁵⁶ International Maritime Organization, "International Convention for the Prevention of Pollution from Ships (MARPOL)" Annex I, Reg 34, paragraph 1.

⁵⁷ United Nations Convention on the Law of the Sea, art. 217 paragraph 4.

⁵⁸ United Nations Convention on the Law of the Sea, art. 73 paragraph 1.

⁵⁹ United Nations Convention on the Law of the Sea, art. 220 paragraph 2.

⁶⁰ Putusan Pengadilan Negeri Batam Nomor 941/Pid.Sus/2023/PN Btm, 941/Pid.Sus/2023/PN Btm (Pengadilan Negeri Batam 2023).

resulting in the exceedance of seawater quality standards, in violation of Article 98(1) of Law Number 32 of 2009 on Environmental Protection and Management, as amended by Law Number 6 of 2023 concerning the Stipulation of Government Regulation in Lieu of Law Number 2 of 2022 on Job Creation, in accordance with the first alternative charge. For his actions, the Captain of MT Arman 114 was sentenced to seven years of imprisonment and a fine of IDR 5,000,000,000, with a subsidiary penalty of six months' imprisonment in the event of non-payment. Considering that the defendant's actions had the potential to damage the marine ecosystem in Indonesian waters, particularly in the Natuna Sea, as highlighted by the panel of judges as an aggravating circumstance, the principle of strict liability under Article 88 of Law Number 32 of 2009 on Environmental Protection and Management should have been applied. Under this principle, the Captain should bear absolute liability for the damage caused without the need to prove fault. A similar situation is reflected in Decision of the Batam District Court Number 234/Pid.Sus/2021/PN Btm⁶¹, in which the Captain of MT Horse was found guilty of violating Article 193(1) of Law Number 17 of 2008 on Shipping due to the discharge of oil waste that polluted Indonesian waters. The case resulted in a sentence of one year of imprisonment with a probation period of two years, along with a fine of IDR 2 billion, with a subsidiary penalty of three months' imprisonment. Both decisions demonstrate that the ultimate consequence of violations committed by vessels flying foreign flags often culminates in the domestic courts of the coastal State, while overlooking the fact that flag States should also bear responsibility for their negligence in supervising vessels flying their flags, which become involved in illegal activities detrimental to other States. This reflects a disregard for the principle of due diligence and related international legal instruments by flag States.

C. Conclusion

Based on a comprehensive analysis of the concepts, regulations, and various cases previously discussed, it can be concluded that the responsibility of the flag State is not merely confined to the granting of nationality to a vessel; rather, it encompasses an affirmative obligation to prevent, monitor, and take enforcement action against any violation of international law, including marine pollution caused by affiliated shadow fleet operations. UNCLOS 1982 establishes a tiered framework of flag State responsibility through the principle of exclusive jurisdiction, which necessitates the existence of a genuine link between the State and the vessel. In the context of environmental protection, UNCLOS 1982 further affirms that the flag State bears the primary responsibility for ensuring that its vessels comply with applicable international standards. Consequently, it is imperative that future international legal mechanisms be strengthened, moving beyond a singular focus on individual liability and restoration efforts by coastal States.

⁶¹ Putusan Pengadilan Negeri Batam Nomor 234/Pid.Sus/2021/PN Btm, 234/Pid.Sus/2021/PN Btm (Pengadilan Negeri Batam 2021).

Instead, there must be a concerted effort to enforce flag State accountability more explicitly, whether through diplomatic channels or international dispute resolution forums. Strengthening these mechanisms is critical not only to implementing the mandates of UNCLOS 1982 in safeguarding the sovereignty of coastal States but also as a manifestation of respect for the dignity and supremacy of international law.

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