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International Law and Enforcement Efforts for Pollution Management in the High Seas

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Abstract

The high seas or the oceans which may be considered under no specific legal jurisdiction are still subject to the pollution which overwhelms the world. These oceans are generally considered under international law, which is difficult to one, prove and ascribe obligation to states, and two, to create and enforce. With this paper, I will investigate the most current policy regarding the management in places which are largely ungoverned and how well enforcement of these policies is being maintained. This in turn will reveal how well the international legal order is adhering to its goals of sustainability and cleaning our world. The main aim is to collect and analyze the general trends among various international agreements regulating the trash in the high seas, the main principles and policies. Then the enforcement and the de facto situation of how these agreements are applied by states, if at all.

Keywords: High seas pollution, International Law, Enforcement effectiveness

I. Introduction

The environmental crisis is not a new concern, the past five years have seen an explosive effort from institutions to curb the effects of climate change. The oceans, which cover over two-thirds of our world, are a major concern for the changing climate due to its importance in keeping equilibrium on our planet and the amount of human activity which is reliant upon them. In 2021, more than 90 percent of all goods were transported by ships[1], as the global economy functions through the sea, the issue of regulating this area is of major concern for governments across the globe. However, most of the oceans are outside of the jurisdiction of one state, these waters are referred to as the High Seas and could be at risk of creating a vast physical space on Earth where lawless activity may occur.

In 1958, the UN "Convention on the High Seas" was held in Geneva, one of a four-part larger UN Convention on the Law of the Sea (UNCLOS). The Convention focused on defining and creating the legal rules States would be bound by when sailing through international waters. It defines the High Seas in Article 1 as "all parts of the sea that are not included in the territorial sea or in the internal waters of a State."[2] This definition was expanded later by UNCLOS

[1] Top Four Modes of Transport (Sanders 2022)

[2] UNICLOS (United Nations 1958)

III, which established Exclusive Economic Zones (EEZ). Different from the territorial sea where states enjoy full sovereignty, the EEZ confers a "sovereign right" to the coastal state as they may exercise special rights regarding the use of marine resources and exploration.[3] Disregarding these three types of ocean waters filed under a specific jurisdiction, the remaining 64 percent of oceans are considered the High Seas or International Waters.[4] The lack of national jurisdiction covers over half of the global oceans, conferring the rights of governance and regulation over the high seas to the international legal system. It has complex rules and systems, but the primary international organization which sustains the legal framework of the High Seas is the UN shared with the specialized organization called International Maritime Organization, part of the UN family.

However, the reliance on the International Legal Order (bodies, institutions, treaties, etc.) only serves to complicate the management of complex issues of the High Seas, such as marine protection, navigational safety, and pollution prevention. The jurisdictional challenges and protection of the environment tend to be at odds with one another in this international arena. The protection of the marine environment is supported by dozens of international treaties, yet the lack of enforcement and obligatory status of these agreements often leaves the de facto situation of the environment at risk. Agreements which focus on internal waters, national waters, and EEZ's require less examination as States are more interested in protecting areas which are directly under their sovereign powers. The exercise of these powers out into international jurisdiction become less and less stringent.

This paper will attempt to delve into the historical and modern international rules which provide a regulatory framework over the prevention of pollution in the High Seas, such as the London Convention and Protocol, MARPOL, and other relevant regulations around this area. The general continuities of these agreements will highlight the broader issues the High Seas currently faces in the fight for marine environment protection. The gaps or intentional holes left in these laws should provide insight into the continual maltreatment of the High Seas regarding waste, and how the international legal system may not be truly interested in the management and protection of these ungoverned Seas. This in turn highlights the broader difficulties of international law, reflecting on the uneven application of legal frameworks.

2. Governing the High Seas: Timeline Overview

As aforementioned, the governance of the High Seas began with the UNCLOS I, more specifically the "Convention on the High Seas".[5] The Convention was focused on developing general rules and principles by which States would be bound to follow when navigating, fishing, using marine resources, etc. in International waters. The primary goal of the original convention was to provide regulations

[3] No. 15749 (United Nations 1972)
[4] What is High Seas Governance? (Sapsford 2022)
[5] (United Nations 1958)

that would protect ships as they sailed through these oceans. Articles focus on issues such as piracy, the requirement to fly a flag on a ship, free and equal access to the sea, ability of states to lay cables beneath the oceans, and the prevention of pollution. Article 24 requires that each State party to the Convention create regulation to prevent pollution by the "discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil,". The specification on oil by specific outlets creates many loopholes for States to jump through during this time, however this Convention is the first mention of the regulation by States on pollution in the High Seas. Article 25 of the Convention uses similar language to address the dumping of radioactive waste, notably the word "prevent". The specifics of the law must be considered in this scenario. The Convention intentionally leaves the decision on how to "prevent" pollution arising from their dealings in the High Seas up to the states themselves. In international legal frameworks it is not uncommon to award states the discretion to make their own regulations, however the convention gives very few guidelines on the further requirements to be included in States preventive measures. When the specifics are left to the States and the requirements are broad, it is a likely scenario that States will be less stringent because it is in the state's best interest to do so. The wide margin of discretion leaves the door open to create very loose guidelines for themselves to follow in order to freely conduct activity.

Seeing this as the beginning of the management of waste in the High Seas sets a low bar for states to adhere to and subsequently poor enforcement. Additionally, the Convention gives primacy to future international regulations for prevention of pollution, regarding that States "shall cooperate with the competent international organizations in taking measures for the prevention of pollution". The referral to international organizations the ability to monitor measures taken by States ensures the potential for a common standard of implementation which may not be outlined in the Convention itself but later by non-specified IGO's. This insurance policy within the Convention also begins the complex relationship between the international bodies which attempt to create regulation over the High Seas and the de facto ability to enforce these standards on States, which continues through the later laws on the High Seas.

2.1 London Convention

Following the Convention on the High Seas and MARPOL entry into force on September 30th, 1968, the next major international convention to address the High Seas and the most pivotal for the following decades was the London Convention in 1975. This Convention was held by the UN, then in 1977 International Maritime Organization (aka IMO) took over the activities of the convention as a part of their mandate as a specialized authority of the UN to set "global standards for the safety, security and environmental performance of international shipping."[6]

[6] Introduction to IMO (IMO 2022)

IMO was established much earlier, in 1948, by its own convention, holding many other conferences and conventions to create regulatory schemes for other areas surrounding shipping such as safety of life, marine preservation, etc, previous to the conception of the London Convention. The organization recognized the issue of pollution within the ocean as a main organizational function which needed to take precedence in future activities, spurred by the Torrey Canyon oil spill in 1967,[7] leading to the formulation of the London Convention.[8]

Formally, "The Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter" or the London Convention focuses on the prevention of "dumping" of waste matter into the ocean. Currently 87 States are party to the Convention, including Russia, the United States, UAE, and Brazil. As defined in the first Article of the convention, the overarching obligation of contracting parties is to both collectively and individually "promote the effective control of all sources of pollution of the marine environment, and pledge themselves especially to take all practicable steps to prevent the pollution of the sea by the dumping of waste and other matter that is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea." The use of "dumping" is taken to mean any debris disposal from any vessel or aircraft or man-made structure, as well as disposal of vessels and aircrafts in the ocean.[9] The definition is very broad in these terms, however this is intentional in order to cover all gaps that States may try to squeeze through. In Article 1, soft, more suggestive terms are utilized when referring to the obligations on states such as "promote" and "practicable steps to prevent". The specifics are elemental to the binding nature of the Article.Also included in the definitions, the "Sea" is any waters which are not the internal waters of a State, meaning the obligations of states extend beyond national jurisdictions and intp the High Seas. This definition is one of the first protective measures regarding the High Seas and defines the jurisdictional scope of the Convention. The importance of this should not be understated, the application of these obligations de facto will be discussed later in the paper.

The Convention concerns itself mostly with prohibiting the disposal of specific types of goods which it considers to be the most harmful to the marine environment. In later Annex II , "black-listed" and "gray-listed" items are prohibited under the convention fully, rather than a simple recommendation by the Convention. The prohibited materials are listed by composition (such as items made significantly of copper, zinc, cyanides, fluorides, etc)[10]. The Annex includes that should a vessel wish to incinerate prohibited materials while at sea, a special permit must be

[7] The Torrey Canyon Oil Spill occurred in 1967 when an SS SuperTanker which ran aground on rocks off the south-west coast of the United Kingdom in 1967, spilling an estimated 25–36 million gallons of crude oil into the sea. Many countries were affected by this and attempted efforts to mitigate the event including bombing the spill area, however the damage to the environment was done.

[8] Brief History of IMO (IMO 2023)

[9] London Convention, Art III

[10] London Convention Annex II, 1

requested of the State, which will trigger the application of the Regulations for the Control of Incineration of Wastes and Other Matter at Sea.[11] The legal disposal at sea is still a possibility for vessels should states grant the permit, subverting the structural certainty for the prohibition of these materials. The Regulations for the Control of Incineration of Wastes and Other Matter at Sea requires that an inspector, paid for by the vessel wishing to dump the materials, be present and able to properly apply the formal requirements, operational systems aboard the vessel, practical availability for alternatives, correct issuance of permits etc.[12] The purpose of the regulations essentially goes back on all the previous prohibitions established by the convention, undermining the purpose of the Convention itself. States have no tangible reason to hold themselves accountable for the adherence to the Convention, as they hold all discretion when implementing measures and there exists a legal way to circumvent obligations. The IMO is given the power to supervise the application of these obligations, and alongside Joint Group of Experts on Scientific Aspects of Marine Environmental Protection (GESAMP)[13] create general guidelines for the implementation of the Convention, however their power is merely consultative. The Contracting Parties have conferred no real power onto the IMO for enforcement and punishment for the omission of obligations. This creates a major gap between the creation and application of law, as well as disastrous effects to the environment.

2.2 London Protocol

The Protocol was adopted by the contracting Parties of the Convention in a special meeting held in 1996, as an addition to the existing agreement, with the aim to phase out of the Convention and effectively replace it with the Protocol. The contracting parties had many motivations for replacing the convention with the Protocol, mainly regarding the deferring approach between the two agreements. The Protocol aimed at modernizing and expanding the Convention, with a greater emphasis of protecting the marine environment in general, as the world became more and more wary of the threat of environmental crisis. The Protocol was meant to expand upon the scope of the Convention, instead of "black-listing" items, the Protocol includes a "reverse list".[14] A more precautionary approach to the regulation of waste management, meaning that all dumping is prohibited except the items on the list, whereas the Convention only prohibited certain materials and aimed to "prevent" the dumping of other matter. Article 3 expressly states this intention, requiring parties to take "appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects."[15] Greater restrictive measures ensure a new level of compliance and the expansion to the general protection over the marine

[11] Resolution LDC 20(9) (United Nations 2005)
[12] (United Nations 1972)
[13] Oceans and Seas (GESAMP 2023)
[14] 1966 Protocol to the Convention on the Prevention...(IMO 2006)
[15] London Protocol, Art 3

environment as a whole. The high seas is not specifically mentioned in the Protocol, however the requirement that "the polluter should, in principle, bear the cost of pollution"[16] emphasizes that the vessel which pollutes the waters will be held responsible, not allowing these materials to drift from one part of the environment into other jurisdictions for another party to clean.

The geological coverage also is expanded, including the "storage of wastes in the seabed, as well as the abandonment, or toppling, of offshore installations (Article 1)." This does not concern the high seas directly, as many of these types of works are done within EEZ, however as the debris for all types of ocean activities may spread into other parts of the environment; including new prohibitions which create a much wider effect is one of the main objectives to the Protocol. The application of obligations in the Protocol are more pragmatic, providing a step-by-step assessment for the implementation and rewarding of dumping permits (Annex III), creating a consistent application framework for administrations. Where the Convention merely offered factors for consideration when issuing permits, the Protocol ensures a greater standard of due diligence.

Related to the due diligence of the parties, Article 11 requires that a Meeting of Contracting Parties to establish procedures and mechanisms for compliance be held no more than two years after the entry into force. Far more procedural and structural framework is built in as compared to the Convention, offering a higher probability that obligations of the agreement be fulfilled. The enforcement of the Protocol is more concrete as provided by Article 19, which defines the depository duties of the IMO Secretary-General and spells out the Secretariat duties necessary for the administration of the Protocol.[17] Annex III includes the possibility for settlement of disputes between contracting parties over a breach of the convention outlining the ability to establish an Arbitral Tribunal following a request to the IMO Secretariat. A special tribunal solidifies the Protocol in a way its predecessors never did. A court is essential for the recognition of violations and potential reward of damages to parties, providing a new level of security over the application of the agreements. With the law able to be maintained and managed by a body (IMO) and the power of that body to host a hearing for States to settle disputes, two areas of the law are consolidated within the broader legal scope, steeping the High Seas in a deeper level of protection from pollution.

The Protocol was last altered in 2006 with amendments allowing the "storage of carbon dioxide (CO2) under the seabed,"[18] The amendments included different regulations in the storage of carbon dioxide, however this sort of carbon capture will still be subject to certain regulations, in order to protect the seabed. Since the final amendments, the Protocol has enveloped the original Convention and

[16] London Protocol, Art 3
[17] London Protocol, Art 19
[18] (IMO 2006)

remained the primary Treaty on the direct disposal of wastes into the sea, with the IMO reporting ensuring performance. Although the London Convention and Protocol were not created with the specific measure of protecting the high seas, the frameworks established by these two agreements have been essential for maintaining a level of international understanding on what is and is not permitted in the open waters.

2.3 MARPOL

The International Convention for the Prevention of Pollution from Ships (MARPOL) was adopted in 1973 by IMO, around the same time as the London Convention, however where the London Protocol and Convention center around the general disposal of waste into the ocean, MARPOL focuses on sea-borne operations.[19] As referenced in the name of the Convention, the agreement focuses on the pollution coming off of ships operations and accidents, however, before the Convention even entered into force, the Protocol on the convention was adopted 1978, to amend the Convention in response to in response to a spate of tanker accidents in 1976-1977[20]. The Protocol effectively absorbed the original agreement, and the new instrument entered into force in November of 1983.

The Convention, similar to London, began a very vague and not fully binding agreement which allowed a lot of discretion to the parties in how they would adhere to the "standards" set out in the convention. The Convention was mostly concerned with setting up fundamental rules and principles on the management of ships at sea regarding areas such as inspection, "prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention"[21], reporting mechanisms for incidents regarding harmful substances, etc. Reflecting the same method as the London Convention, states could interpret and apply in their own manner how the Convention could apply to them. After the incident which triggered the Protocol, a much more concise and structured framework was provided for in regards to the aforementioned areas. Protocol I stipulates how and when ships must make reports on accidents at sea. The subject of the Protocol is mentioned in Article 1, "the master or other person having charge of any ship involved in an incident…shall report the particulars of such incident without delay and to the fullest extent possible in accordance with the provisions of this Protocol." The successive Articles give the specific guidelines and references on how, what to include, where to send, and all supplementary procedures a ship may need to know when taking these measures. Providing such a diligent

[19] The role and development of global marine conventions: Two case histories. (Nauke and Holland, n.d., 74)

[20] Throughout the winter of 1976-1977, around 6 tanker oil spills occurred around the United States. THese incidents included The tanker *Sansinena* exploded in Los Angeles Harbor, California, on Dec. 17, 1976, spilling 1.3 million gallons of heavy oil, Christmas Eve 1976 *Oswego Peace* spilled 5,000 gallons of bunker fuel into New London Harbor, Connecticut, etc.

[21] ART 1 MARPOL

framework breathes life into the regulation itself, so rather than the agreement existing as a sort of fiction in the legal system, there is a manifest way for these laws to be applied.

Protocol II of the Protocol brings the potential for Arbitration over disputes and violations of the agreement. This provision was included in the original MARPOL, however, as is the theme, this provision was not fully fleshed out. The Articles of Protocol II provide the possibility, the procedure, the formation for the Arbitrators (selected from IMO), and the awarding of damages and remuneration to the damaged party.

The real substantive issues which expand and make MARPOL a majorly important treaty to the regulation of pollution in the High Seas are found in the Annexes which have been added over the past 30 years, the most recent of which was in 2005. Annex II seeks to create "criteria and measures for the control of pollution by noxious liquid substances carried in bulk", however in the scope of regulation, the mention is that this dumping must be at least 12 miles away from the nearest land, so the prohibition does not apply to ships in international waters. Annexes which may protect the High Seas from pollution are Annex III on the "Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form", Annex IV "Prevention of Pollution by Sewage from Ships", and Annex V "Prevention of Pollution by Garbage from Ships",[22] as they apply to all ships and mention the prohibition of such actions. Despite this, the element which all of these regulations share is the limitation of scope. Annex V specifies in Regulation 3 that disposal of garbage may be permitted 25 nautical miles from shore for "for dunnage, lining and packing materials which will float" and 12 nautical miles for "food wastes and all other garbage including paper products, rags, glass, metal, bottles, crockery and similar refuse"[23], meaning that the so-called prohibition of trash is merely based on the visible effect this trash would have on the shoreline of a country. The regulation also specifies that if the garbage is grinded into small pieces, it may be dumped 3 nautical miles from shore. Here lies the general and relevant issue with the current international system for pollution in the High Seas. Even if these Annexes attempt to expand on MARPOL very meaningfully, overtime broadening the horizons on what actually affects the marine environment, they do so with stipulations. This willingness by the international legal system to create more serious regulations over time highlights the international consensus, but only to a surface level.

3. De Facto Jurisdictional Application

As previously examined, the issue with international treaties lies with the de facto application of these obligations. When regulating outside of a national jurisdiction, the international law may face challenges in holding states accountable for the application of the requirements committed to in agreements. It is not as if these states do not

[22] MARPOL (IMO 2009)

[23] ANNEX V MARPOL

wish to consent to these treaties nor that they do not have the intention to uphold standards. Rather, the crux of this issue remains in that there is no direct enforcement of the law except by the contracting parties themselves. It is as if citizens were obliged by one another to follow the law, but there was no centralized authority to oversee the entire project. The High Seas, as previously mentioned, lies beyond the national jurisdiction of any state, leaving the physical area susceptible to misuse and further degradation. The international agreements attempt to solve this problem through multiple legal maneuvers. The implementation of regulation standards (international agreements aforementioned as well as further implementation of new guidelines by MEPC and IMO)[24] are a very admirable step in the aim at protecting these areas, but lack a central authority leading to the de facto application of any of the created standards up to States and the self-monitoring of ships.

Additionally seeing as the ocean is a massive landscape, the monitoring of the on-goings at sea also pose a huge issue. The largely impossible task of monitoring the application of rules because of the inaccessibility of the geological aspect in itself. What incentive do ships and states have for applying these rules when no one is watching? The question may not have the answer that is best for the environment, but this is the reason that the treaties are designed in such an adverse manner. The wording of the treaties implies that States do not wish to burden themselves with any real change, let alone provide a concrete solution to the problem of pollution in the High Seas. However, the wording may not be for this intention. When it comes to the application of the law in the international sphere, the general principles are much easier for States to abide by than specifics. The international law is based on consent by States, and rarely will a state confer freedoms of sovereignty to another body or institution. The agreements reflect this and attempt to "guide" States in a certain direction, but application and specificities can always be controlled by the contracting state. In International Agreements leaving these ambiguities to the States allows more states to feel comfortable to join an agreement.

A commonality shared by the mentioned agreements regards States exercising effective control over non-arbitrary ideas and which rely on real action by the state to be sufficient in their creation. Treaties regarding peace or trade among States potentially have fewer substantive steps for governments, as they may be simply about allowing a certain action to take place, without interference. Controlling pollution in the High Seas requires a certain action and due diligence by the State, adding to the overall burden of the agreement. The action attached to certain aspects of the agreements are the monitoring of correct disposal methods, sanctioning ships who do not follow protocol, etc. which in turn obliges the state to create new agencies, budget restrictions, regulatory standards among others. The legal obligation is a nice sentiment for countries

[24] Responding to Marine Pollution Incidents (IMO 2022)

to be bound to in principle, but the real daily operations will not be done by the international sphere but by the States themselves. Even with the IMO or another international body having guiding power or attempting to harmonize regulation, the de facto application of both the law and the obligations lies with States.

This may be the precise reason the issue of trash still runs rampant in the High Seas today. MARPOL and the London Protocol have existed for decades, yet illegal dumping persists. A study by PNAS researchers on a remote island attempted to prove how much waste in the seas came from ships by observing the changing national source, type of trash, and amount accumulated over two decades, concluding that "73% of accumulated and 83% of newly arrived bottles, [were] made in China. The rapid growth in Asian debris, mainly from China, coupled with the recent manufacture of these items, indicates that ships are responsible for most of the bottles floating in the central South Atlantic Ocean, in contravention of International Convention for the Prevention of Pollution from Ships regulations."[25] On this island which is considered to be in the High Seas, the results were clear that the dumping of waste by ships remains a huge issue despite the current treaties and regulations. Also in the High Seas are the "garbage patches" in each gyre, one in the Indian Ocean, two in the Atlantic Ocean, and two in the Pacific Ocean with a garbage patch of varying sizes[26]. These gyres are in the middle of continents, constituting the High Sea being the main area that trash is accumulating. According to a study in 2018, the "Great Pacific Garbage Patch (GPGP) was estimated to be approximately 80,000 tonnes", with over 46% comprised of fishing nets, aka forbidden dumping materials.[27]

4. The Future of Regulation

"Legislation alone is not sufficient and enhancement of environmental awareness through education is necessary in order to reduce the input of plastics to the marine enf .vironment. Gathering information on attitudes and motives for plastic disposal practices of seafarers could help to develop programmes targeted at shipping."[28]

The studies and de facto situation of the High Seas garbage patches and remote islands full of global sources of trash prove that the current system is not a final solution to this problem. The legislation is not yet sophisticated enough to properly control the management of the seas. The lack of enforcement and accountability leaves the oceans vulnerable. The current legal order leaves too much discretion to States who may not be interested in abiding by their obligations. This calls for a renaissance in international environmental law.

[25] "Plastic Pollution from Ships."(Čulin and Bielić 2016)
[26] Garbage Patches (NOAA 2023)
[27] Evidence that the Great Pacific Garbage Patch is rapidly accumulating plastic (Lebreton, L., et al, 2018)
[28] Rapid Increase in Asian Bottles in the South Atlantic Ocean Indicates Major Debris Inputs from Ships. (RyanPeter G et al. 2019)

The future of regulation should not rely on States good will to be applicable. In many ways, international law has found an avenue for States who are not contracting parties to still be bound by certain rules through customary international law. This mechanism fills in the gaps, where some states may not be a party to MARPOL, they might still be obligated to follow certain principles the treaty sets out by the mere fact that a greater number of States are bound. Additional gaps do not lie solely on the scope, but also on the wording within the treaties. The suggestive tones found throughout the agreements must be made more concrete, with less room for interpretation from a State who does not wish to follow the treaty the way it was intended. This would promote greater uniformity among national provisions and allow other States to call out violations more effectively. With regard to the violations of the treaties, throughout their long history, the ability to access a court created improved visibility of the law. If States become more willing and diligent to bring violations forward to these tribunals, setting real consequences for breaches, the number of violations may decrease. The more use the contracting parties make out of the law, the more "real" these obligations will be.

Overall, the High Seas are in danger of being overrun by malpractice and waste, which must be curbed by more material obligations to save the non-jurisdictional waters from further degradation.

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