



Protection of the Marine Environment from Pollution by Dumping within the Framework of International Agreements



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Abstract

Dumping, an ancient marine pollutant, has become a critical environmental issue. Protecting the marine environment from harmful waste and toxic residues is an urgent global duty. Various international agreements address this, with some focusing specifically on dumping, such as the Oslo Convention (1972) and the London Convention (1972). Others, like the United Nations Convention on the Law of the Sea (1982), provide broader protections against all pollution origins. This presentation will explore the protective measures these agreements offer to safeguard the marine environment from dumping.

Keywords

marine environment;
pollution;
dumping;
international agreements;
protection.

الكلمات المفتاحية

البيئة البحرية ؛
التلوث ؛
الاغراق ؛
الاتفاقيات الدولية ؛
الحماية.

حماية البيئة البحرية من التلوث بالإغراق في إطار الاتفاقيات الدولية

ملخص

بعد الإغراق من أقدم الملوثات التي تلحق بالبيئة البحرية حيث يرجع الى العصر الذي استغل فيه الإنسان البحر، وقد أصبح اليوم من أهم القضايا المثارة ، وباتت المحافظة على البيئة وحمايتها منه أهم واجب عاجل على عاتق البشرية جمعاء. وبالنظر إلى الآثار الضارة بالتوازن الإيكولوجي للبيئة البحرية والتي يسببها اغراق النفايات و الفضلات السامة ، فقد تعددت الاتفاقيات العالمية المتعلقة بحماية البيئة البحرية من التلوث بالإغراق، غير أنها ليست على صورة واحدة في تحقيق هذه الحماية ، فقد جاءت بعضها لتقرر حمايتها للبيئة البحرية من الاغراق بصفة خاصة كمصدر للتلوث ، وتمثلت في اتفاقية أوسلو لعام 1972، واتفاقية لندن لعام 1972 ، في حين جاءت أخرى لتضفي الحماية اللازمة لعموم مصادر التلوث ، بما فيها الإغراق ، وتمثلت اساسا في اتفاقية قانون البحار لعام 1982 . وسنحاول في هذه الدراسة التطرق الى مختلف القواعد الحمائية التي جاءت بها هذه الاتفاقيات لحماية البيئة البحرية من التلوث بالإغراق.

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I- Introduction:

The seas, which make up 71% of the Earth's surface, have been vital to human life from the beginning of time. They play a major role in maintaining the global biological balance. They also supply fresh water, are a rich source of different minerals, plants, and animals, and offer a host of other advantages that support the interests of all people, particularly those connected to maritime navigation, which guarantees the ease of transportation and travel. From the beginning of human history, according to historical records, people have viewed the seas as rich fishing grounds and open channels for communication. Their usage and exploitation were also controlled by the idea of freedom for all.

But there's been a growing amount of strain on these marine ecosystems, which keep the seas healthy. Human activity is largely responsible for these pressures, as is the application of extremely sophisticated technology tools to increase and intensify ocean-related commercial activity in response to the expanding requirements and wants of humankind. Contamination of the oceanic environment is a severe issue as a result of this upset of the equilibrium.

Numerous contaminants enter the ocean ecosystem, including oil pollution from ships, pollutants from the ocean floor or atmosphere, and wastewater from sewage and industrial discharges from river outlets and drains. Apart from the aforementioned forms of environmental pollution, the ocean's ecology also faces a more hazardous kind of pollution that arises from the act of disposing of garbage into the ocean.

For a very long time, people believed that rivers and seas could hold whatever garbage or substance dumped into them, whether on purpose or accidentally as a result of different activities. But by the early 20th century, it was evident that even with their immense size and scope, oceans have a finite amount of material they can absorb. It became apparent that the risks of environmental contamination posed by disposing of waste in the open environment were beginning to negatively impact the ocean's ecology, because the items being disposed of are frequently hazardous, poisonous, or damaging. The purposeful act of handling waste in the natural environment is characterized by a prepared desire to harm the ocean's ecology and a conscious intention to do so. This supports the claim that handling waste that pollutes the environment and releases it into the natural world is always illegal since it has both moral and material components. Because of the potential harm it causes, international measures must be made to avoid it at all costs. A comprehensive program is urgently needed to counteract and minimize the effects caused by this form of environmental degradation in the oceans.

One of the most important issues affecting the ocean ecosystem today is the handling of waste that ends up in the natural surroundings. This problem has social, economic, and environmental aspects. It has evolved into a global problem that transcends national boundaries, garnering attention from all around the world and forcing itself into the debate over potential remedies.

Numerous international accords have been reached as a consequence of the global community's attempts to tackle this terrifying occurrence since tackling it is beyond the capacity of individual governments to handle this scary menace. Rather than localized ones, our study will concentrate on the global ones.

As a result, now that the world community has acknowledged the necessity of cooperative global accords, **what are the most important protective regulations established by these agreements to protect the ecosystem of the ocean from Environmental contamination by Handling of refuse in to the natural surroundings? And what are the main obligations they impose on states?**

Given the relevance of the ocean environment, it is imperative that the problem of Ensuring the preservation of marine ecosystems from pollution caused by waste disposal. of global agreements be addressed. It is essential to maintaining the Earth's ecological balance, gives humans food, and produces fresh water. It is also a rich supply of different minerals and resources, a convenient way to travel and communicate, and a great place for tourist and leisure. Because of this, it is imperative that its integrity be violated and that methods to preserve it be investigated.

It is important to note that the main goals of our study are to introduce the main area of concern for ocean ecosystem safeguarding, to comprehend the main threat to this ecosystem—environmental contamination caused by the handling of refuse in the natural surroundings—and to identify the key global obligations, regulations, and protective measures imposed by international agreements in order to protect the marine ecosystem from the harmful effects of waste disposal.

In response to the problem, we previously raised, we will address the study topic according to the following plan:

- The Concept of the ecosystem of the ocean and the Problem of Its Environmental contamination by Handling of refuse in to the natural surroundings
 - The Concept of the ecosystem of the ocean and Its Legal Definition
 - The Concept of Oceanic ecosystem contamination by Handling of refuse in to the natural surroundings and Its Risks to the ecosystem of the ocean
- Global Agreement Safeguarding of the ecosystem of the ocean from Environmental contamination by Handling of refuse in to the natural surroundings
 - Safeguarding of the ecosystem of the ocean from Environmental contamination by Handling of refuse in to the natural surroundings in Specific Global Agreements
 - Safeguarding of the ecosystem of the ocean from Environmental contamination by Handling of refuse in to the natural surroundings within the structure of the General Agreement regarding maritime laws 1982

In our study, we will rely on the descriptive, analytical, and comparative methods when necessary.

II– The Concept of the ecosystem of the ocean and the Problem of Environmental contamination by Handling of refuse in to the natural surroundings:

There is no denying that one of the most important and hazardous problems confronting humanity today is the poisoning of maritime ecosystems. The ocean ecosystem's assets and components, both living and non-living, are suffering from the effects of environmental contamination to an alarming degree due to the advancement of massive industrial societies and incredible scientific advancements. This is signaling a slow collective suicide of all organisms within this near-death ecosystem.

Refuse handling that ends up in the environment is one of the most serious ways that environmental contamination threatens the ocean's ecosystem. The materials that are being dumped are hazardous and harmful, endangering the integrity of the ecosystem and making its safeguarding necessary.

As our research focuses on protecting the ocean's ecology from the disposal of waste in its natural habitat, let's start by discussing the idea, significance, and legal definition of the term. The idea of environmental contamination will next be explained, along with the hazards involved, by handling waste that enters the environment.

II.1. The Definition of the Ocean Ecosystem Concept and Law:

The ecosystem of the ocean is very important because of its large area on Earth's surface and its relative quantity of water compared to land. Its meaning, significance, extent, and legal definition shall thus be established in this section.

II.1.1. Definition and Importance of the ecosystem of the ocean:

There are several notions related to the ocean environment, which we shall discuss one after the other without going into the idea of the natural surrounds alone. The significance of it will then be emphasized.

II.1.1.1. Definition of the ecosystem of the ocean:

The description of the ocean's ecosystem is inextricably tied to its most important term: the ocean. Given that the ecosystem of the ocean is one of the components that make up the natural surroundings, the following definitions will include both the meaning of the term "environment" and the meaning of "ocean."

A. Linguistic Definition of the ecosystem of the ocean:

The term "environment" in language is derived from the triliteral verb (bawā' a), from which the term (tabawwā' a) is derived, meaning to settle or reside in a place (Al-Zayyat, Al-Najjar, & Qader, p. 75). The noun derived from this verb means the place or residence. Hence, the natural surroundings are the place or home where a living organism resides. This meaning can also extend to the condition of the living organism, such as natural, social, economic, or political environments, among others (Warith, 2006, p. 18).

This term is defined in the "Larousse" dictionary as "a set of natural and artificial elements that constitute the structure of an individual's life (Khaira, 2018)."

In the "Robert" dictionary, the term environment is defined as "a set of natural, physical, chemical, biological, cultural, and social elements that can influence living organisms and human activities (Al-Daher, 1999, p. 08)."

In terms of language, the ocean is defined as a vast body of water that contrasts with land and can be either fresh or salty (Allah, 2010, p. 203). Because of its breadth and openness, the ocean is termed "Ocean" (baḥr), yet the phrase is mostly used to refer to salty water. This definition of the ocean is consistent with that given by the "Al-Waseet" dictionary, which describes it as "a vast and large body of water, predominantly salty." Although it is defined as "a large body of water, whether salty or fresh" in "Lisan al-Arab," salty water is the term that is most frequently used (Warith, 2006, p. 23). Anything attributed to the ocean is therefore seen as marine.

Linguistically, the ecosystem of the ocean means "the habitats associated with salty waters (Saeed & Al-Humaidi, 2008, p. 08)."

B. A Terminological Definition of the Ocean Ecosystem:

The ocean ecosystem typically lacks a single integrated terminological definition. On the other hand, the terms "ocean" and "environment" have certain meanings.

Setting: "Everything surrounding humans, including living components like Flora and fauna and abiotic elements like minerals and water, air, weather, and more," is how it is terminologically described (Al-Adli, 2003, p. 17). "The totality of natural, biological, social, cultural, and economic factors that have a direct or indirect, immediate or delayed impact on living organisms and human activities" is another definition of the natural surroundings (Rateb & Hafiz, 2007, p. 16).

Ocean: It is defined terminologically as "vast bodies of salty water and the land beneath them (Al-Ghanimi, 1974, p. 693)," or as "areas of salty water connected to each other naturally and freely (Bashir, 1974, p. 276)."

Salinity is the primary distinguishing feature of the ocean. Geographically, any salty water body is considered an ocean. However, certain water bodies may be regarded as oceans by geographers but not by global law scholars, such as the Dead Ocean, because it is not connected to other oceans. The legal connotation of the ocean includes its surface, ocean bed, and subsoil, encompassing geographic meanings and navigational routes (Maryam, 2013, p. 16).

C. Legal Definition of the ecosystem of the ocean:

The term "oceanic ecosystem" is relatively new. Rephrase the following sentence, changing it completely into a unique sentence: in the field of global law. Traditionally, this field used the term "ocean" to refer to the areas of the Earth's surface covered by salty water, connected without barriers. The ocean was defined as "saltwater surfaces that form an integrated unit on the entire Earth and share a single hydrographic system (Maryam, 2013, p. 16)."

This traditional concept of the ocean remained prevalent in global law until the seventh session of U.N Summit regarding the regulations of the Ocean, held in Geneva and New York in 1978. Throughout this session, the term "oceanic ecosystem" was introduced to encompass all forms of living organisms, both animal and plant, residing in the oceans, along with the ocean water, ocean bed, and subsoil containing natural assets (Saeed & Al-Humaidi, 2008, p. 76).

This contemporary idea of the ocean ecosystem became institutionalized with the 1982 implementation of the United Nations Agreement for the Regulation of the Ocean, which elevated it to a prominent position in international legal theory. According to contemporary scientific terminology, the ocean's ecosystem is either a complex web of life or a variety of ecosystems. Studying a particular unit in time and space, together with all living things inside it, under certain climatic and meteorological circumstances, as well as the relationships within the dynamics of organisms and their interactions with the surrounding environment, are all part of this approach. (Walid, 2008, p. 933).

The description offered by the Montreal Guidelines for the Safeguarding of the Ocean's Ecosystem Against Land-Based Origins was a little vague, even if the U.N. Agreement governing ocean laws established a clear environmental notion of the seas. According to the recommendations, the ocean's ecosystem is "the marine area extending, in the context of waterways, to the boundaries of inland water bodies, encompassing tidal influences wave zones and saltwater passages." But this concept didn't approach it from an ecological standpoint; instead, it focused mostly on the natural surrounds' geographical extent.

Given this, the term "ocean ecosystem" refers to a network of naturally occurring, freely linked saltwater bodies. This encompasses their surface, ocean bed, subsoil, and the living things (plant and animal) and natural resources they contain, which together form the various aspects of marine biodiversity and work as a cohesive ecosystem. This definition is in line with the legal definition of the ocean ecosystem found in some Arab countries' legal systems.

"Ensuring the safety of Egypt's coastline and ports from potential hazards of environmental contamination, and the Safeguarding of the natural surroundings of The jurisdictional waters of the territorial ocean and exclusive economic zone living and non-living natural assets, and the Safeguarding of natural assets within the jurisdictional waters and the submerged landmass extending from the shoreline," for example, is what Article 48 of Egyptian Law No. 04 of 1994 concerning the Safeguarding of the aquatic environment from environmental contamination defines.

Ocean ecosystems are distinct from aquatic environments under Federal Law No. 24 of 1999 of the United Arab Emirates, which addresses environmental safeguarding and development. Article 1 defines the ocean environment as "marine waters and the natural assets, plants, marine life, including fish and various other organisms within them, the air above them, and the structures or projects established within them." In contrast, the aquatic environment is defined as:

"the ecosystem of the ocean and inland waters, including groundwater, springs, and canyons, along with their natural features assets, plants, fish, and various other organisms in the ecosystem within them, the air above them, and the structures or projects, whether fixed or movable, established on them."

The Algerian lawmaker, in contrast to the parliamentarians described above, did not define the ocean's environment in detail. The goals of environmental safeguarding and its constituent parts in Articles 2 and 4 of the Law on Environmental Safeguarding were instead discussed in relation to the framework of sustainable development. ([Articles 02, 04 of Law 03/10, 2003](#)).

II.1.1.2. Importance of the ecosystem of the ocean:

Without a question, the ocean's ecology has never been given as much attention as it receives at this time. Multiple approaches are employed to underscore the significance of the ocean's ecosystem:

A. Biological Importance of the ecosystem of the ocean:

Because of its ecological significance, the ocean ecosystem contributes significantly to the environment. Natural and unrestricted connection and impact between its areas are made possible by its linked portions. The ocean's ecology plays a major role in maintaining climatic equilibrium. This is made possible by its exceptional ability to absorb heat at the surface and its coolness below, which allow it to take in a significant portion of the solar energy that strikes Earth. This causes some of the water to evaporate into the sky, where it is then carried by rising winds to create clouds that travel in the direction of land, resulting in rainfall that supplies fresh water for other land-dwelling species. ([El-Amin & Ghouti, 2017](#)).

The ocean's ecology is remarkable for its capacity to take up carbon dioxide. This happens as a result of the photosynthesis carried out by phytoplankton suspended in vast amounts in ocean water. Carbon atoms are transformed into organic stuff during photosynthesis, and oxygen is released and dissolved in the water, which is then used by other living organisms in the ecosystem of the ocean ([Warith, 2006, p. 26](#); [Hashim, 1991, p. 21](#)). considering the alarming rate at which carbon dioxide levels are increasing on Earth, posing significant threats to humans and the natural surroundings, we realize the crucial role of the ecosystem of the ocean in helping to reduce its concentration in the atmosphere ([Al-Fitni, 2014, p. 15](#)).

B. Economic Importance of the ecosystem of the ocean:

The ecosystem of the ocean offers significant economic benefits, most notably:

- Food supply: The ocean's ecology provides a vital supply of food, especially through its fisheries resources, which helps to ensure food security.
- Mineral and Petroleum Resources: The ocean's ecology provides a wealth of minerals and petroleum that is equal to or greater than that found on land. This includes sulfur in the Gulf of Mexico, diamonds off the coast of South Africa, tin in the coastal seas of Thailand and Malaysia, and coal mines deep within British and Japanese waters ([Balout, 2019, p. 279](#)).
- Energy Source: Because of tidal movements, wave activity, and temperature differences between the warmer surface waters and the colder depths, the ocean ecosystem is also an essential source of energy. These elements are all utilized to produce energy ([Al-Taie, 1984, p. 29](#)).
- Transportation and Communication: The ocean's ecosystem is one of the most significant and effective forms of transportation, in addition to the advantages already discussed. Goods that airplanes cannot carry can be transported via ships and marine channels.

C. Strategic Importance of the ecosystem of the ocean:

The seas' ecological and economic significance has brought attention to their political strategic relevance. Countries are concentrating more and more on taking as much wealth as they can out of the seas. The idea of sovereignty and control over the oceans has developed since the Middle Ages, and this strategic significance has been the main driver behind it. This concept has evolved over time to take on different forms, defenses, and arguments appropriate for the times, changing in importance with each age.

Due to these interests, the world community has become divided into two groups: developed countries, who lack even the most basic technical capabilities in this crucial area, and maritime nations, who have vast naval fleets and cutting-edge tools and technologies that allow them to dive and explore the ocean's depths in order to further their policies and goals. As a result, wealthier nations unfairly use the waters. This strategic importance adopts a dynamic posture, fluctuating in accordance with national power and political and economic objectives, and broadening in accordance with the legal distinctions within this context. (Mansouri, 2015).

II.1.2. Legal Definition of the Ocean Ecosystem:

According to the 1982 United Nations Agreement governing ocean rules, the ocean ecosystem consists of the following components:

II.1.2.1. Internal Waters:

This is the water region that is closest to the coast and has a direct connection to it; it is located on the shoreward side of the baseline that is used to calculate the territorial ocean's breadth (Article 08, 1982). Other areas of internal seas subject to the prevailing system, such as bays, enclosed or partially contained oceans within a single state's borders, ports, harbors, and docks, are included in Article 08 of the Agreement. Internal waters are a section of the ocean environment that are under the jurisdiction of the coastal nation. That nation uses its rules to exercise its administrative, legislative, and judicial power.

II.1.2.2. Territorial Ocean Environment:

This area of the ocean extends oceanward and is close to the state's coastline. Not more than twelve Beyond the baselines, extending nautical miles into open waters as specified in Article 1 of the United Nations Agreement of 1982 concerning ocean laws. The coastal state is given the authority to control the establishment of navigation facilities, customs, health laws, and other matters. The state may also utilize its territorial ocean's natural resources, so long as it doesn't interfere with foreign ships' ability to sail through these seas lawfully. Along with this sovereign right comes the duty to protect the ocean's ecology, forbidding coastal nations from taking part in activities that degrade the environment or upset its natural equilibrium (Maryam, 2013, p. 27).

II.1.2.3. Contiguous Zone:

This section starts at the territorial ocean's edge and goes oceanward for a maximum of 12 nautical miles. Article 33 of the Agreement states that the contiguous zone and coastal waters shall not be more than 24 nautical miles combined. The coastal state has the power to enforce laws and rules pertaining to immigration, customs, taxes, and health inside this region. It also has the power to penalize any violations of international law, particularly those that compromise the integrity of the ocean's ecology.

II.1.2.4. Exclusive Economic Zone (EEZ):

This zone lies outside and alongside the territorial ocean, stretching up to 200 measured from the baselines marking the extent of the territorial ocean (Article 08, 1982). Regarding the exploration and exploitation of living resources in the seas above the ocean bed and non-living resources located on the ocean floor of the exclusive economic zone, the law acknowledges the coastal state's sovereign rights in this zone.

II.1.2.5. Continental Shelf:

The continental shelf of a coastal state is defined by Article 76 of the 1982 United Nations Agreement respecting the Laws of the Ocean as containing the ocean bed and subsoil of underwater areas that extend beyond its territorial ocean, naturally extending from its land territory to The outer boundary of the continental margin is determined if it stops. The shelf reaches 200 nautical miles beyond the territorial ocean's baselines at that point. It is possible to increase this distance to 350 nautical miles from the same baselines in situations where underwater extensions exist.

The coastal state has sovereign rights over the continental shelf under Article 77 of the Agreement, which gives it the freedom to explore and take use of its natural resources. Therefore, the state needs to put in place sufficient safeguards to stop environmental contamination in these waterways.

II.1.2.6. High Oceans:

All areas of the ocean that are not a part of a state's territorial ocean, exclusive economic zone, internal waters, or archipelagic seas are collectively referred to as the high oceans ([Article 86, 1982](#)). All states, coastal or landlocked, have access to this territory. Since the ocean environment is a shared legacy of mankind, everyone has a broad and shared commitment to preserve the marine ecosystem and its biodiversity in all of its forms ([Balout, 2019, p. 281](#)).

II.2. Contamination of the oceanic ecosystem from the handling of waste in the natural environment and the risks this poses to the ocean's ecology:

One of the oldest and most harmful kinds of oceanic ecosystem pollution is the handling of waste items that are poisonous or destructive to the environment. The concept of the freedom of the high seas has increased the risks associated with it because developed nations, in particular, have abused this right, using the high seas as a disposal area for their wastes from agriculture, industry, and other sources. Damage has resulted from this that puts both people and the environment at danger. Therefore, the first step in any legal treatment of environmental contamination is unquestionably to accurately define the concept of oceanic ecosystem contamination by handling waste in the natural surroundings and emphasizing its risks. This is also crucial for determining any safeguarding measures for the ocean ecosystem.

II.2.1. The idea that handling waste in the environment might contaminate the oceanic ecosystem:

We should first define marine ecosystem contamination, concentrating on its legal definition within the framework of international agreements, before we can construct a definition of environmental contamination by handling waste in the natural environment.

II.2.1.1. Definition of Oceanic ecosystem contamination:

The following is the definition of oceanic ecosystem contamination as given by the 1973 MARPOL Agreement (Global Agreement for the Prevention of Environmental contamination from Ships): "those substances which, when mixed with ocean water, are attributed to causing hazards to human health, harming marine life, marine assets, and aquatic biodiversity, damaging the properties of ocean water, or hindering the lawful activities conducted at ocean."

Other accords pertaining to the conservation of oceanic ecosystems, such the 1976 Mediterranean Ocean Environmental pollution Agreement, are consistent with this notion of pollution. Article 02, paragraph 1, states: "Environmental contamination is the introduction of any element or form of vital force into the ocean ecosystem by humans, either directly or indirectly. This can have negative effects on the ecosystem, including harm to living things, danger to human health, obstruction of ocean activities such as fishing, degradation of the quality of the water used for these activities, and a decrease in the enjoyment of the ocean."

In a similar vein, Article 1 of the Kuwait Regional Agreement of 1978, which sought to promote cooperation for environmental safeguarding of the ocean ecosystem from environmental contamination, states: "Oceanic ecosystem contamination means human-induced introduction, whether directly or indirectly, of any materials or power origins into the ecosystem of the ocean, resulting in detrimental effects on living materials, threatening the well-being of people, posing obstacles to activities at sea, such as angling, deteriorating the quality of ocean water, and reducing the possibility of recreational facilities."

Furthermore, marine pollution is defined as the introduction of chemicals or energy into the ocean's ecosystem by humans, whether directly or indirectly, by estuaries (Paragraph 04 of Article 01 of the 1982 U.N. Agreement respecting the regulations of the Ocean). This activity has the potential to have negative effects on marine ecosystems and organisms, human safety, disruption of oceanic activities like fishing, loss of marine facilities, deterioration of ocean water quality, and disruption of other lawful uses of the ocean.

This definition is noted to be in close agreement with some regional agreements regarding the protection of the ocean ecosystem from environmental contamination. One such agreement is the definition from the Kuwait Regional Symposium in 1978 regarding the development and protection of the ocean ecosystem and the coastal regions of the Gulf, the 1982 Red Ocean and Gulf of Aden – Jeddah Agreement, and the 1976 Barcelona Agreement ([Maryam, 2013, p. 39](#)) for the Safeguarding of the Mediterranean Sea along the shores Environmental contamination.

The Stockholm Declaration of 1972 defined oceanic ecosystem contamination as "the human-initiated introduction, whether directly or indirectly, of materials or forces into the ecosystem of the ocean, resulting in detrimental consequences like damage to living assets, hazards to human health, hindrance to marine activities, including angling, impairment of the quality for use of ocean water, and reduction of facilities." It is important to note that this definition is nearly identical to that definition. ([Al-Jamil, 1998, p. 30](#))."

II.2.1.2. Definition of disposing of waste in an environmentally friendly manner:

The handling of waste in the natural environment has been established by several international agreements and national regulations. It was specified in Article 03, paragraph 01, section "a" of the 1972 London Agreement, which dealt with the avoidance of maritime ecosystem pollution by the management of wastes ocean other materials into the ocean. This definition included any intentional discharge of waste or compounds from ships or airplanes.

Therefore, paragraph 04 of the same article regarded as handling refuse both the intentional discharge of waste or substances from ships, aircraft, platforms, or artificial installations into the natural environment, as well as the deliberate handling of refuse from the aforementioned sources into the ocean.

The term "discharge" was introduced in the MARPOL 73/78 Agreement to describe a range of activities pertaining to environmental pollution that are associated with marine navigation. It defined discharge broadly to mean any ship activities that cause environmental pollution and cause harmful compounds to mix with ocean water. Despite this wide view, the MARPOL Agreement specifically prohibits direct emissions of harmful chemicals into the ocean as a result of operations related to the exploitation and extraction of natural resources on the ocean floor and ocean bed. Therefore, while maritime drilling platforms are defined as ships under the terms of the Agreement, MARPOL does not cover environmental damage resulting from their operation.

As per Article 01 / 5 – A (1-2) of the United Nations Agreement on the Regulation of the Sea, the deliberate disposal of waste or other materials originating from ships, aircraft, platforms, or comparable artificial structures into the ocean is considered as refuse handling in the natural environment. As long as it supports the goals of the 1972 London Agreement on waste disposal and the 1982 United Nations Agreement governing ocean laws, this definition also includes the placement of items for uses other than disposal. (Warith, 2006, p. 61).

Article 01/5 – A (1-2) definition is similar to that in Article 3, paragraph 1, section C of the London Agreement of 1972. (Article 03, 1972).

II.2.2. Hazards of environmental contamination from disposing of waste in the open environment and affecting the ocean's ecology:

Contamination of the oceanic ecology due to the handling of waste in the natural environment Materials that are harmful or poisonous have long contaminated ocean ecosystems. It describes the deliberate handling of compounds from ships, aircraft, offshore constructions, or their equipment into the water, as well as substances from other ocean-going materials. Under the principle of the freedom of the high seas, countries, especially developed ones, have misused their rights toward the high seas, turning them into a disposal ground for their industrial, agricultural, and other wastes, increasing the risks of environmental contamination by handling refuse in the natural surroundings.

Therefore, handling waste in the open environment entails the intentional discharge of harmful and hazardous elements, which will surely have an adverse effect on the ocean's ecology, endangering its integrity and lessening the advantages it offers.

Food security is threatened by the potential for environmental contamination from the handling of waste in the wild, particularly when it comes to fish populations, which are a major source of food for many nations. It also endangers human health and interferes with maritime activities, such as fishing. Additionally, it lessens the enjoyment of and lowers the quality of the ocean water utilized. Moreover, it undermines the advantages of the ocean ecology for tourism and enjoyment.

III- International Agreement preventing environmental pollution and preserving the ocean's ecology by managing waste in its natural habitat:

One of the most serious pollutants endangering the environment and safety of the ocean is the handling of garbage into the natural surroundings. As a result, the international community has come to understand that a number of international accords are required in order to get rid of, minimize, or regulate this kind of environmental damage. Many international agreements seek to prevent environmental contamination of the ocean's ecosystem. These include general agreements that address various sources of environmental contamination and specific agreements that address the handling of waste in natural settings. The main agreement that addresses environmental contamination origins is the 1982 United Nations agreement regarding ocean regulations.

The most significant safeguards put in place by these agreements to prevent environmental pollution of the ocean ecosystem through the handling of waste in its natural habitat will be covered in the sections that follow.

III.1. Protection of the Ocean's Ecosystem from Trash Handling in the Natural Environment under Certain International Agreements:

Certain international accords tackle specific sources of pollution in maritime environments, delineating legal protocols to counter, eradicate, diminish, or manage these sources.

The 1972 Oslo Agreement and the 1972 London Agreement are the two most pertinent particular accords because our study is focused on handling trash in natural settings; we will address each of them separately.

III.1.1. The 1972 Oslo Agreement on the Prevention of Contamination of Oceanic Ecosystems by the Management of Ship and Aircraft Waste in the Natural Environment:

This section will cover the history and objectives of the Agreement, as well as the primary responsibilities placed on governments to handle waste in a way that preserves the ocean's ecology from environmental damage.

III.1.1.1. Origin and Purpose of the Agreement:

On February 15, 1972, the nations that took part in the ecosystem of the ocean contamination symposium held in Oslo, Norway, from October 9 to 12, 1971, signed the Oslo Agreement on the Prevention of Oceanic ecosystem contamination by Handling of refuse in to the natural surroundings from vessels and airplanes. The Accord became operative on April 7, 1974 ([Hashim, 1991, p. 275](#)).

The goal of the agreement is to safeguard the ocean's ecology from environmental degradation brought on by the disposal of hazardous materials from airplanes and ships into the adjacent natural areas. It stipulates the necessary steps and protocols to stop discarded garbage and debris from spreading or being transferred to regions that are not covered by the Agreement. ([Article 03, 1972](#)).

III.1.1.2. States' obligations to handle garbage in a way that respects the environment in order to prevent environmental pollution of the ocean ecosystem:

The Agreement regulates the disposal of some waste kinds through prior authorization that is given on an individual basis, but it outright forbids the handling of garbage in the natural environs for some waste types. In general, it is forbidden to handle or release garbage into the natural environment without first obtaining authorization from the appropriate national authorities. ([Articles 05 to 07, 1972](#)).

Article 04 of the Agreement mandates that member states coordinate their policies on actions taken to prevent environmental contamination of the maritime ecosystem by managing trash in the natural surroundings.

Article 08, paragraph 1 of the Agreement permits the contracting states' ships and aircraft to dispose of garbage in the event of a force majeure.

In light of the decisions made by specialized organizations and agencies, Article 12 encourages the parties to come to an agreement on the creation of additional scientific and technical ocean initiatives that will encompass the ocean for alternative methods of sharing information and getting rid of harmful materials.

Article 15 lays out a series of duties for the states in its paragraphs and parts. According to Section 01, states are prohibited from disposing of garbage from aircraft and ships that fall under their national authority in the natural environment, regardless of whether the ships are registered in the state or flying its flag and are carrying goods that will be disposed of in the ocean. It also covers vessels operating under the flags of other states that are positioned in the ports of the contracting states in order to get rid of trash or materials. Additionally, when it comes to disposing of trash in the natural environment in maritime areas within the national jurisdiction of those governments, ships are governed by coastal nations. Ships and aircraft that are granted sovereign immunity under international law are excluded from this article's section (6).

Sections 4 and 5 of Article 15 further require the contracting states to enforce the stipulated penalties for noncompliance and to work with other states to share information on occurrences affecting the handling of garbage in the natural surroundings near the ocean.

In addition, the contracting states agreed to guarantee that, in line with other states, the monitoring and inspection agencies (ships and aviation) submit reports on occurrences that they learn about. One criticism of this is that the committee established to carry out the monitoring job was not given the ability under the Agreement to impose harsher fines in order to guarantee that its regulations were enforced more effectively.

Citing Articles 16 and 17 of the Agreement, they declare that each contracting state is responsible for carrying out the terms and responsibilities of the Agreement on its own. The committee established by the contracting states is responsible for supervising this implementation. Its duties include monitoring the condition of the ocean in accordance with the Agreement's provisions, handling refuse-related license requests, and overseeing the Agreement's execution.

One criticism of the Agreement is that it does not contain any liability regulations; thus, in the event that any of the Agreement's terms are broken, the general laws of liability will take effect.

III.1.2. The London Convention, established in 1972, aimed to prevent marine pollution via the disposal of waste and other materials.

This agreement is specifically designed to safeguard the ocean's environment from one particular kind of pollution: the disposal of waste in its natural habitat. We shall talk about its history and personal application below, as well as the responsibilities it places on us to safeguard the ocean's environment from trash and garbage. Managing trash in the natural environment.

III.1.2.1 Origin and Individual Scope of the Contract:

A governmental symposium was conducted in London from October 30 to November 13, 1972, in response to the suggestions made at the Human Environment Symposium No. 86 / D, which took place in Oslo in 1972. 82 nations, 21 observer governments, and six international organizations participated in this symposium, which led to the creation of this agreement. The founding members, which included the US, Mexico, and the former USSR, signed it ([Hashim, 1991, p. 237](#)).

The Agreement's personal scope forbids the handling of waste by ships, airplanes, and other maritime constructions in the natural environment. Nonetheless, in accordance with international law, it does not apply to aircraft, ships, or other constructions that have worldwide immunity.

Regarding ships and planes that have immunity, Article 7, Paragraph 4 calls for the application of the principle of honesty. Each party shall use these units in a way that is compatible with the objectives of the Agreement, and must report to the organization the results of such use. Section 1 of Article 7 lists the vessels and aircraft covered by the Agreement's provisions.

III.1.2.2. States are required by the treaty to preserve the maritime environment from contamination by dumping:

The Agreement's Articles 1, 2, and 12 stipulate that improving effective management over all marine ecosystem sources is essential. Contamination of the environment by the handling of garbage and other materials and refuse in the natural settings.

The Agreement mandates that states take all reasonable, affordable, and technically sound steps at their disposal, either singly or jointly, to avoid contaminating the environment by handling waste in the surrounding ecosystem. It also highlights the need to work with specialized international institutions to coordinate policy in order to save the ocean environment.

Additionally, each state has the sovereign right to utilize its maritime resources in accordance with its environmental policy, as recognized by Article 10 of the Agreement. It is the duty of states to make sure that activities falling under their purview do not degrade the ocean environment, either inside or outside of their borders.

The Agreement completely prohibits the handling of wastes and other items included in Annex I, paragraphs 5 and 7, in the natural environment. Additionally, it establishes a conditional restriction on the handling of wastes and products mentioned in Annex II of the Agreement, as well as the need for specific prior authorization before handling refuse in the natural environs. A conditional prohibition requiring general authorization for further items harming the ocean ecosystem is included in Article 4/1.

In the event of a force majeure, Article 5 of the Agreement permits the unrestricted handling of garbage in the natural environment, provided that the measures done result in the least amount of harm to humans and marine life. States are required to report such circumstances and the actions taken to the organization created by the parties.

Article 06, which mandates the establishment of authorities or agencies responsible for awarding special permits for the handling of refuse in the natural surroundings of substances indicated in the Agreement's annexes, compels governments to do in order to carry out the terms of the Agreement.

The Agreement just mentions "cooperation in developing procedures for determining liability and settling disputes arising from the Handling of refuse in to the natural surroundings of waste and other detrimental materials at ocean" in relation to liability for breaking its terms. Due to the statement's extreme generality and lack of explicit responsibility guidelines, general liability principles found in international law must be used. Any breach of the responsibilities outlined in the Agreement is considered illegal, making the state party that violated it accountable ([Saeed & Al-Humaidi, 2008, p. 465](#)).

The 1958 Geneva Agreement on the High Seas requires every state to take the necessary precautions to prevent ocean environmental contamination by handling refuse in the natural surroundings and radioactive waste, and to abide by all policies and guidelines established by global bodies concerned, given the seriousness of environmental contamination

by handling refuse in the natural surroundings. In order to prevent the pollution of the maritime ecosystem by operations using radioactive materials or any harmful energy, it also requires all states to collaborate with these organizations, in addition to the MARPOL 1973 Agreement on the Prevention of Environmental contamination from Ships (El-Amin & Ghouti, 2017, p. 438).

III.2. Protection of the Ocean's Ecosystem from Trash Handling in Natural Environments in Compliance with the 1982 United Nations Convention on the Regulation of the Ocean:

Regarding broad measures for safeguarding the ocean ecosystem from environmental pollution from all sources, the 1982 United Nations Convention on the Law of the Sea (UNCLOS) is the most extensive. This Agreement establishes a set of general duties and standards that are binding on its parties, organizing the safeguarding of the ocean ecosystem (the provisions of Part 12, 1982; Warith, 2006, pp. 98-104). The safeguards for each sort of pollution that affects the ocean's ecology are then described in depth, including how to prevent environmental contamination caused by handling trash in the surrounding area. According to Article 210 of the Agreement, governments are required to safeguard the ocean's ecology against environmental pollution:

- "Legislation and regulations must be put in place by nations in order to handle waste in the natural environment to avoid, reduce, and control environmental pollution of the ocean ecosystem.
- In order to avoid, reduce, and manage such environmental damage, nations must take extra steps as needed.
- These laws and policies have to ensure that disposing of waste in the open air can never happen without permission from the states' appropriate authorities.
- To avoid, mitigate, and manage such incidents, nations seek to develop global and regional rules, standards, and recommended practices, especially through diplomatic forums or successful international organizations.
- pollution of the environment, which will be periodically reexamined as needed.
- Discarding waste in the open environment the coastal State, which has the right to control, approve, and supervise such operations, must expressly provide prior consent for any activity carried out within its territorial sea, exclusive economic zone, or continental shelf. removing trash into the open air after properly consulting other states that can be negatively impacted because of their geographic position.
- When it comes to avoiding, reducing, and controlling environmental pollution, domestic laws, regulations, and activities must be on par with or better than international norms."

IV- Conclusion:

In conclusion, It is important to recognize that the ocean's ecology has drawn a lot of interest from throughout the world. This is clear from the description of the idea and the list of the main pollutants endangering its integrity, the most serious of which is environmental pollution caused by handling waste in the open environment.

- **Contamination of the environment caused by handling trash in the open:** This issue has been addressed by the 1972 London Agreement and the 1972 Oslo Agreement, which forbid environmental contamination when it comes from ships and aircraft, with the exception of operations pertaining to exploration and exploitation or those involving materials used for scientific oceanographic purposes. Despite the fact that both agreements concentrate on the environmental damage caused by ships and airplanes, they also contain the same exclusions for these activities that are protected by sovereign immunity under international law, giving state sovereignty precedence over the preservation of maritime ecosystems.
- **Criticism of the 1972 Oslo Agreement:** The efficacy of the Agreement's terms is limited since it is criticized for ignoring the committee that the contracting parties established to supervise the application of fines. Rather, it gives the contracting states this power with regard to duties that are imposed.
- **Criticism of the 1972 London Agreement:** In the event of a force majeure, the agreement permits the unauthorized handling of waste in the open environment, which might have a detrimental effect on the maritime ecology. Protection as a result of the absence of a precise guideline for determining exceptional situations, which governments are free to interpret.
- **Neglect of Global Liability Rules:** Both Agreements fail to address global liability rules adequately, preferring instead to general global law principles.

In summary, The Oslo and London Agreements were created to protect the ocean's ecology from environmental pollution by managing garbage from aircraft and ships that enter the surrounding area. They did not, however, discuss how to handle garbage that comes straight from the land via pipelines and coastal facilities and is dumped into the natural environment.

International agreements, such as the United Nations Agreement on Ocean Regulations, have mandated different duties on the contracting nations and addressed protection measures for the ocean environment from handling waste in the natural surroundings. We propose the following actions to activate the terms of these agreements:

- **The Importance of Regional and Worldwide Collaboration:** Boost regional and international collaboration to handle waste in the environment to prevent environmental degradation of the ocean's ecology.
- **Creating a Force Majeure Standard:** To stop governments from applying the force majeure clause in an arbitrary manner, it is important to clearly specify the condition that permits the illegal handling of garbage in natural areas.

- **Dealing with the Deficits in International Agreements:** Modify international agreements to address the issues raised and fix their flaws.
- **Promoting Engagement and Validation:** Encourage all nations to take part in and join any events that are meant to safeguard the ocean's environment, and to do it as soon as possible. Additionally, nations must ratify international agreements designed to safeguard the ocean's ecology, especially against environmental degradation caused by improper disposal of waste in open spaces.

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