**ASSESMENT 1**

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# Introduction

This assessment focuses on the topic of the 1972 London Dumping Convention and MARPOL. In order to complete the assessment, the 1972 London Convention and MARPOL are going to be discussed thoroughly. In addition to it, various regulations are also going to be discussed here. Moreover, the traditional approach to those regulations is also going to be analysed here. In the approach, various laws and regulations mentioned in both the protocol and conventions are also going to discuss thoroughly.

The challenges of these two conventions in regulating dumping practices are also going to be identified here. Furthermore, the gaps in the conventions are also going to be analysed here. In the end, possible potential solutions for the identified limitations are also going to be identified in the study.

# The 1972 London Dumping Convention and MARPOL

## Introduction

The 1972 London Dumping Convention is known as ***‘The Convention on the Prevention of Marine Pollution by Dumping of Wastes and other matters.’***It is the first global convention on marine pollution. This convention addressed the issue of dumping waste in the ocean. In order to protect marine life and the environment from all human activities, a convention was held in London. It can be found that until 1970, the ocean was used as the dumping ground for waste and nobody was concerned about it. However, when the possible impacts came to light, various countries came together to address the issue. All these factors lead to the introduction of various regulations such as the 1972 London Convention and the 1996 London Protocol.

## Background

Various types of research showed that dumping waste is harming marine life and the environment which are important for humanity. Until 1970, all the waste produced on the land and the boats, vessels and ships were dumped in the oceans (epa.gov, 2019). All these factors led to a negative impact on marine life and the environment.

In order to address that issue and protect marine life and the environment, various countries came together and signed a treaty. This treaty is known as ***‘The Convention on the Prevention of Marine Pollution by Dumping of Wastes and other matters’*** or in simple terms 1972 London Convention. This treaty came into force in 1975 (imo.org, 2019). It is governed internationally. The convention gives permission to a few materials to be dumped in the ocean after critically reviewing them to ensure that the material will pose a threat to both human life and marine life. In addition to it, the convention also highlighted the importance of recycling and preventing pollution (rkcmpd-eria.org, 2022). According to the treaty, countries have to ensure that every waste is recycled before dumping them into the sea. Recycling and reducing waste can impact the respective country in terms of increasing the growth of the economy. Moreover, it will also help in preventing pollution.

## Purpose of the Convention

The main purpose of the 1972 London Convention is to prevent and decrease marine pollution by controlling waste dumping by countries through regulation. Another objective of this convention is to protect marine lives and the environment as it is an important factor for the existence of humanity (noaa.gov, 2019). In order to control and regulate dumping, various hazardous materials that can pose a threat to marine life and the environment are black and greylisted. In addition to it, few materials are permitted for dumping and also have to be reviewed to ensure that they do not pose a threat to the environment. However, it is also mentioned in the treaty that specific grey-listed materials can be dumped in the ocean with special permits issued by the respective government after meeting certain criteria for dumping.

## Contracting parties

Addressing the issue related to marine life, the marine environment and pollution, a total of 87 countries came together in the convention organised by the ***United Nations Conference on the Human Environment***. All the presented countries signed the treaty and vowed to decrease the waste dump according to the regulations. Such countries are- Australia, Argentina, Afghanistan, Brazil, Belgium, Bolivia, Canada, China, Costa Rica, Denmark, Egypt, France, Germany, Italy, Japan, the United States and the United Kingdom.

## London Protocol

In order to convey the laws and regulations proposed in the 1972 London Convention, the London Protocol was introduced in 1966. This protocol is also known as the ***‘1996 Protocol to the Convention on the Prevention of Marine Pollution by the Dumping of Wast5es and other matters.’*** The protocol states that all hazardous materials can not be dumped in the ocean (leap.unep.org, 2019). In addition to it, the only materials that cannot possibly pose a threat to both human life and Marine life can be dumped in the ocean under strict protocol. This protocol takes a precautionary approach to dumping waste in the ocean. This protocol came into play in 2006 and more than 53 countries are now enlisted for maintaining the protocol (Canada, 2022). It also focuses on marine geoengineering activities such as ocean fertilization.

In order to control the waste dumping by the countries and manage the dumping management effectively, all the countries under both the convention and protocol developed various documents for guidance jointly. The London Protocol prevent contracting parties from exporting waste to other countries (iea.blob.core.windows.net, 2019). The main aim of this protocol is to eventually replace the 1972 London Convention. The 1972 London Protocol focuses on the dumping of a few waste materials in the ocean. However, the 1966 London Protocol prevents all materials from dumping into the sea.

## MARPOL

MARPOL stands for the International Convention for the Prevention of Pollution from Ships. The main aim of the convention is to prevent pollution from the boats and vessels operating in the sea. This convention was adopted in 1973. It was updated in 1978 addressing several tanker accidents (lr.org, 2019). The regulations of the conventions aim to control and minimise the pollution from ships. In the regulations, it has been stated that all ships with the flag of the country which is a member of the conventions need to comply with it. In addition to it, the regulations are applied to any vessels of any type operating in the ocean such as fixed platforms, floatable platforms, hydrofoil boats and cushion vehicles.

# The traditional approach to dumping regulation

For dumping wastes, there have been various laws and regulations mentioned in the conventions. All the laws and regulations are going to be discussed here.

## The 1972 London Convention

In order to address the issues related to marine life and the marine environment, the 1972 London Convention was introduced. This convention was called for by the ***United Nations Conference on the Human Environment***. All 87 presented countries took the vow to decrease their waste dump./ In order to govern the dumping waste management of the member countries various regulations and ways to control dumping waste were introduced.

In the regulation, there are a total of 21 articles that focuses on the reduction of pollution and saving marine life.

***Article 1:*** This article states that every member country has to take effective measures individually in order to control pollution of the marine environment. In addition to it, they have to take practicable steps to prevent the dumping of waste in the ocean that can impact both marine life and human health.

***Article 2:*** This article focuses on the effective measure taken by the respective members of the convention according to their capabilities such as economic and scientific.

***Article 3:*** This article refers to the definitions of dumping, vessels and sea. In the article, it has also mentioned the definition of dumping does not include the dumping of waste from man-made structures at sea (un.org, 2019). It can also be found that dumping does not include the dumping of waste by aircraft.

***Article 4:*** This article highlights the materials that are prevented from dumping. Moreover, it is also mentioned in the article that there are specific items that are grey-listed. These items require special permits for dumping and the dumping process will be done in front of the national authority.

***Article 5:*** This article states that Article 4 will not be applicable when it is found to pose a threat to the health of humans in some cases such as natural disasters. However, it is also stated in the article that if during such cases dumping proves to be the only way to prevent threats to humans, then such dumping would be carried out with a special permit (epa.gov, 2019). In addition to it, that respective country shall consult with other member countries.

***Article 6:*** In this article, it has been stated that every country to create an appropriate authority that will govern the dumping management of that respective country. Moreover, that authority will issue both special and general permits required for dumping. The authority will also keep records of all the necessary details related to every dumping process such as the place of dumping and method of dumping.

***Article 7:*** This article focuses on the application of effective measures to implement the regulations of the convention. In the article, it has been stated that the regulations applied to any type of vessel in the open sea of the member country.

***Article 8:*** This article states that countries sharing a common interest in protecting marine life and the environment should collaborate and cooperate, especially for dumping.

***Article 9:*** This article focuses on the collaboration of member countries for the training of scientific and technical personnel. This article also focuses on the supply of various equipment between the member countries.

***Article 10:*** This article focuses on the development of the procedure for liability and settlement aligning with international law. This article states that if any member country is responsible for the damages caused to the environment by dumping, then the respective country has to be liable for it.

***Article 11:***  This article from the 1972 London Convention has also stated that from their consultation in the settlement of disputes of dumping wastages. They also proposed the settlement of disputes about interpretations and applications of these conventions.

***Article 12:*** In this article, contracting parties request to promote themselves as they are concerned about the protocols. They also associate with different specialized agencies as well as with many international bodies who are also working towards environmental issues and marine life protection especially. They also focus on pollutants such as hydrocarbons, oils, nauseous and hazardous matter from vessels and also wastages from aircraft, vessels and ships as well.

## MARPOL

This convention was introduced to control the pollution from boats and ships operating in the sea. There are a total of 6 annexes in the convention.

***ANNEX 1:*** This annex refers to the regulations for the prevention of pollution by Oil. These regulations focus on the pollution exerted by ships and tankers (amsa.gov.au, 2019). They also include accidental oil discharge. According to the regulations. the new tankers have to have double hulls.

***ANNEX 2:*** This annexe refers to the regulations for the control of pollution by Noxious liquid substances in Bulk. In these regulations, a total of 250 substances were included in the list and these focus on the discharge criteria for the control of pollution.

***ANNEX 3:*** This annex refers to the regulations for the prevention of pollution by harmful substances carried by sea in packaged form. These regulations came into play in 1992 and focus on the control of pollution by harmful substances as per the IMGD code.

***ANNEX 4:*** This annex refers to the regulations for the prevention of pollution by sewage from ships. These regulations focus on the control of pollution by the sewage of ships. Sewage exerted by ships into the sea is prevented by these regulations.

***ANNEX 5:*** This annex refers to the regulations for the prevention of pollution by garbage from the ships. These regulations focus on the control of garbage dumped into the sea by ships operating in the ocean (imo.org, 2019). These regulations prevent ships from dumping garbage into the sea.

***ANNEX 6:*** It refers to the regulations for the prevention of air pollution from ships. These regulations introduced a limit on the emission of sulphur oxide and nitrogen oxide from ships.

It can also be found that various member countries use different Acts to implement MARPOL. Such examples includes-Australia in order to implement MARPOL uses the Protection of Sea Acts 1983 and the Navigation Act 2012. Other acts that are used to implement MARPOL are Marine Order 91, 2014.

# The challenges of the two conventions in regulating dumping practices

The 1972 London Dumping Convention and Marpol are one of the most important conventions which were held to take actions to prevent the marine environment from pollution from ships and their waste. These both conventions have taken various rules and regulations in order to prevent dumping waste in the seas. The 1972 London Dumping Convention implemented various laws which clearly stated that any kind of waste from ships, vessels, aircraft and man-made wastages was as well. These wastages are extremely harmful to aquatic life and the marine environment. MARPOL convention has issued various protocols which to reduce different sources of dumping wastages. However,m there are various challenges which are associated to regulate the dumping process.

Conventions have been issued to regulate wastage from ships, vessels and from aircraft however it does not provide any regulation in other resources such as sea mining which is also one of the reasons for marine pollutants. On the contrary, marine debris is extremely harmful, to aquatic animals and plants as well. Plastic and microplastics are one of the major threats which are related to marine dumping as it is not biodegradable (Dąbrowska *et al.,* 2021). Thus, managing these is extremely difficult in the dumping process. These conventions do not have any proper information about the harmful prohibited substances which are also harmful to the ocean and its wildlife as well. Therefore it becomes difficult to maintain the dumping process.

On the other hand, the MARPOL convention has focused on oil substances, sewage from ships, and garbage from ships and vessels which are extremely crucial substances for marine pollution. However, during the implementation of these protocols most of the coastal areas people are not aware of these thus, they do not follow the protocol properly.

The MARPOL conventions have also stated the sulphur content in the fuel need to be maintained, however, it is also difficult to maintain these.

On the contrary, conventions have stated various disposal resources from ships outsides however, these do not include any pollution due to the noise of ships underwater. Ships, vessels and aircraft produce a high frequency of noises for which wildlife in the ocean is extremely harmful. Those animals sometimes lose their hearing as well. Ocean species use various sounds to understand their activities and also their every day works to survive. However, high-frequency noise creates a vibration in the water for which they become extremely fearful as well. Therefore, both MARPOL nor the 1972 London Dumping Convention have not described this pollution which also greatly affected the lives of marine species (Epa.gov, 2023).

These two conventions have taken various protocols and rules to reduce the disposal of the wastages from ships, vessels and aircraft however, they did not include waste from any particular industries which are also one of the major reason for marine pollution. There is a lack of implementation of these protocols and also of maintaining these properly. They also do not enforce any strict fines for violation of these protocols. In order to, regulate dumping wastage properly there still remain some challenges as radioactive wastage can not be prevented properly.

# Gaps in the conventions and their limitations

The 1972 London dumping convention and the international convention for the Prevention of Pollution from Ships are two important International agreements aimed at addressing marine pollution. However, both conventions have certain gaps and limitations that needed to the address to effectively tackle the challenges posed by marine pollution. Introducing the different elements that can be involved in the various enforcement and derived it with gaps and limitations incorporated and involved in the 1972 London Dumping Convention as the Convention on the Prevention of marine pollution by Dumping of Waste prohibits the dumping of certainly had substances into the sea and establishes are regulatory Framework for the dumping of other waste. Including different waste materials and involving different channels that can be introduced in various forms and involve different support that can be included in different patterns and leads to introduce the various involvement of waste material. However, there are several gaps in the convention such as

* ***Limited scope:*** the convention focuses on dumping waste from ships and aircraft and does not adequately address other sources of marine pollution such as Land base sources of sour installing and seabed mining activities. This lives significant gaps in the regulation of marine pollution from these sources (International Maritime Organization, 2023).
* **Lack of a comprehensive list of prohibited substances:** the convention does not provide a comprehensive list of substances that are prohibited from being dumped at sea. Instead, it releases a General prohibition on dumping substances that are level to create hazardous to human health harm leaving resources and marine life management interfaced with other ligament uses of the sea. This lack of specificity leaves room for interpretation and may result in inconsistencies in enforcement (Stöfen et al., 2022).
* ***Limited enforcement mechanism:*** the convention lakh robust enforcement mechanism to ensure complaints by parties. It realizes many self-reporting and voluntary compliance with little emphasis on monitoring reporting and verification. These make it difficult to track and hold parties accountable for their dumping activities (Ferraro & Failler, 2020).

Similarly, MARPOL is a global Treaty adopted by the International Maritime Organization to prevent pollution from sleep also has the limitation**:**

* ***Limited coverage:***MARPOL primarily focus on pollution caused by oil Chemicals and harmful substances packaged from sewage and garbage from sheep and does not adequately address other types of marine pollution such as air emission and underwater noise. This level of gaps in the regulation of these types of pollution from ships can have significant environmental and health impacts on Marine ecosystems (Hussain, Khan & Memon, 2023).
* ***Implementation challenges:***While MARPOL sets out clear standards for the prevention of pollution from seats, there are challenges in implementing this standard uniformly across all countries. Wearing the level of capacity, resources and infrastructure among the countries can result in inconsistent enforcement and compliance.
* ***Lack of effective penalties:*** MARPOL does not establish informed penalties for noncompliance and penalties for violation are often left to the distillation of individual countries. This can result in these parties' penalties and may not serve as sufficient the trend to prevent pollution from ships.
* ***Flag of convenience:***the practice of a flag of convenience where ships are registered in countries with leg regulations can be exploited to bypass Street pollution prevention measures under Markel. This can result in seats operating with lower environmental standards and posing a higher risk of pollution (Chen, 2021).

While the **1972 London dumping convention and MARPOL** have been important in addressing marine pollution there are gaps and limitations that need to be addressed to effectively tackle the challenges posed by marine pollution. This includes addressing the Limited scope of coverage, lack of species in prohibited substances, enforcement mechanism implementation challenges, lack of effective penalties and the issue of flag convenience. Convenience through monitoring, reporting and verification mechanisms and hormone penalties for non-compliance can help to improve their effectiveness in preventing marine pollution and protecting Marine ecosystems.

# Potential solutions and improvements to address these limitations

There are several potential solutions and improvements that can be considered to address the limitation of the 1972 London dumping convention and MARPOL and straighten their effectiveness in preventing marine pollution.

* ***Expanded scope:*** One potential solution is to expand the scope of both conventions to include other sources of marine pollution beyond seats and aircraft. These could include regulating land base sources of pollution of sour installation and see Bad mining activities. These would be achieved through an amendment to the convention or by developing complementary agreements to address this is specific sources of pollution. A more comprehensive approach to marine pollution prevention and Management (Wang, Zhang & Zhang, 2023).
* ***A specific list of prohibited substances:*** another potential improvement is to develop a specific list of substances that are prohibited from being dumped at the sea under the 1972 London dubbed convention. This could provide clear guidance to parties on what substances are not allowed to reduce inconsistencies in the interpretation and enforcement. The least could be periodically updated based on scientific research and Technology advancement to keep it relevant and effective in addressing emerging pollutants.
* ***Strengthened enforcement mechanism:*** enhancing the enforcement mechanism of both conventions can be a crucial solution. This could include straightening monitoring and reporting and verification requirements and establishing a robust system for regular inspection and Audit to ensure comprehensiveness by parties. Improved Corporation and coordination among countries Regional organisations and international bodies can also help to enhance enforcement efforts. Send some Samsung and what is for non-complaints should be clearly defined uniform and deterrent enough to discourage violation.
* ***Enhance implementation measures:*** Implementing MARPOL consistently across all the countries can be challenging due to the wearing level of capacity and resources. Their four providing technical assistance capacity building and financial support to developing countries can help improve their implementation efforts. Straightening port state control measures that allow countries to inspect entering their port for compliance with MARPOL retirement can also be effective in deterring violations. The holder can also help improve compliance with MARPOL requirements.
* ***Addressing flag to convenience:*** taking steps to address the issue of the flag of convenience can be crucial in preventing pollution from seats. This could involve establishing stickers around Regulation and oversight for seats registered under the flag of convenience and answering that such is held to be the same environment standard as those registered under the flag of countries with stronger regulation. International Corporations and Information sharing countries can also be in hand to detect and for analysis that engages in illegal activities including pollution under the flags of convenience.
* ***Strengthened cooperation and coordination:*** enhanced cooperation and coordination among countries Regional organizations and international bodies can help to address the limitation of both conventions. This good includes sharing waste practices Information and Technology for pollution prevention and joint efforts in research and development of innovative solutions between the Government industry and Academy and civil society can also help in developing comprehensive strategies and creativity to prevent marine pollution.
* ***Emphasis on prevention and sustainable practices:*** both conventions can further emphasize the importance of pollution prevention and step sustainable practices. This food includes promoting the use of cleaner technology and practices in shipping and other activities that may impact the Marine environment. Encouraging the adoption of circular economy principle waste reduction measures and environmentally friendly alternatives can help to minimize the generation of waste and pollutants that may end up in the oceans (Nielsen *et al.,* 2020). Emphasizing the practices and applying various changes intended for the advancement of different projections is the key issue faced by the regional and organisational structure. Indicating different changes that can be estimated to derive the various impact that can be involved in different patterns and can also involve waste material involvement. Waste material such as used plastic should be cleaned and the water seas should be intended to keep it safe. With the involvement of different waste materials, different elements can be involved for cleaning substances and involving different patter that can be initiated from the different fluctuations.
* ***Regular view and updating of the convention:*** regular view and updating of the convention to reflect scientific advancement emerging Threats and challenging trends in effectively addressing current and future challenges. Involving a range of stakeholders including scientists, policymakers, industry representatives and civil society organizations in the view process can help in identifying and addressing gaps and limitations (Linnebjerg *et al.,* 2021).

# Conclusion

Upon conducting the study, it can be stated that protecting marine lives and the marine environment is very much important as it can also impact human lives. In order to address such issues, various countries came together and signed various treaties which are famously known as the 1972 London Convention and MARPOL. Upon completing the study, it is possible to gain insights into the various regulations that can be proven beneficial for protecting marine life. In the above study, the various challenges of dumping regulations are also identified. It can be found that these regulations do not focus on marine pollution such as underwater noise. In addition to it, possible ways to address the limitations have also been identified in the above study.

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