

Legal protection of the Red Sea waters from pollution by pharmaceutical waste carried by ships within the framework of the regional convention and international conventions

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Abstract

The international community has taken care of protecting the environment from pharmaceutical waste, which is considered one of the most dangerous wastes that cause environmental pollution, especially pollution of the marine environment due to the disposal of waste by illegal methods internationally. Therefore, this research article aims to identify the legal protection of the Red Sea water from the pharmaceutical waste that may be disposed of by transcontinental ships. Through the analysis and interpretation of the legal rules specified in international agreements for the protection of the marine environment from waste. And the measures put in place for that, by following the comparative descriptive-analytical method. The results of the study indicated the existence of the regional agreement to preserve the environment of the Red Sea and the Gulf of Aden in 1982, which gave legal protection to the waters of the Red Sea in addition to an international agreement. The most important recommendation of the study is the need to codify explicit rules in the 1982 regional agreement to protect the environment from pharmaceutical waste.

Keywords: pollution - pharmaceutical waste - ships - the marine environment of the Red Sea, Jeddah Convention 1982 AD - international agreements.

INTRODUCTION

The United Nations General Assembly established ethical rules for the protection of the human environment and natural resources in the 2010 World Compact for Nature where marine pollution by pharmaceutical waste is considered hazardous. Shipborne Practices of Unethical Practices, The process of their disposal at sea contributes to the introduction of many genetic mutations that turn into new bacterial mutations (Hashem 2005) harmful to human health and the marine environment, including the conventions that have been concerned with the protection of the marine environment globally, the 1973 MARPOL Convention on the Prevention and Modification of Marine Pollution from Ships, and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal 1998,

which established obligations on States with regard to the management of hazardous wastes and clarified responsibility. Compensation resulting from transboundary movements of wastes.

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How to cite this article: Zubeida Abdul Hadi A teem, Legal protection of the Red Sea waters from pollution by pharmaceutical waste carried by ships within the framework of the regional convention and international conventions, J PHARM NEGATIVE RESULTS 2022;13: 858-862.

Access this article online

Quick Response Code:



Website:
www.pnrjournal.com

DOI:
10.47750/pnr.2022.13.04.117

At the regional level, the countries bordering the Red Sea and the Gulf of Aden, represented by: (Palestine, the Hashemite Kingdom of Jordan, the Republic of Djibouti, Saudi Arabia, the Republic of Sudan, the Democratic Republic of Somalia, the Arab Republic of Egypt, and the Republic of Yemen) issued the Regional Convention for the Preservation of the Environment of the Red Sea and the Gulf of Aden, known as the "Jeddah Convention" of 1982. It entered into force in August 1985, It has made commitments to itself to address issues of pollution of the marine environment. Through joint and coordinated programs between them and the establishment of a regional body to take care of this. The Basel Convention on the Control of the Transport of Hazardous Wastes is complementary to the Jeddah Convention as the Regional Authority for the Conservation of the Red Sea Environment. In accordance with Article III of the Jeddah Convention of 1982, the Regional Commission for the Conservation of the Environment of the Red Sea and the Gulf of Aden has prepared two additional protocols:

- Protocol on the Protection of the Marine Environment from Land-based Activities.
- Protocol on Biodiversity and Establishment of the Network of Protected Areas.

METHODOLOGY:

The research discussed the regulatory legal aspects of shipborne pharmaceutical waste by defining pollution in its general sense and addressing the definition of wastes and their legal regulation in international conventions and the Red Sea Convention, the legal liability of ships, and measures put in place to combat pollution.

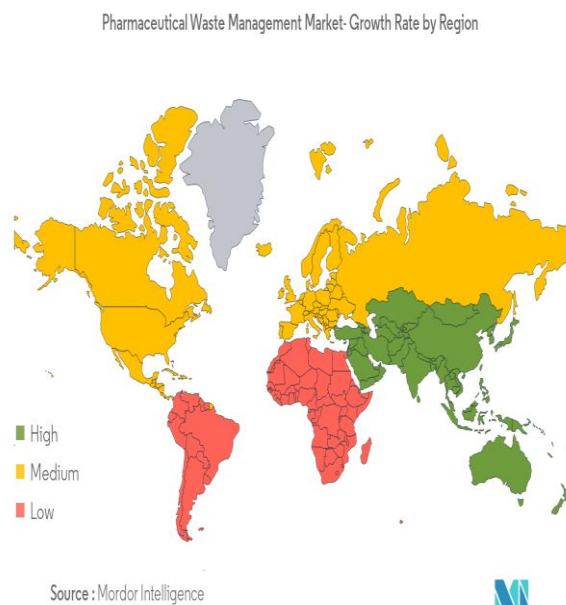
LITERATURE REVIEW:

Scientific studies have proven the presence of pharmaceutical waste in water in study by(Nyaga, M.2020(The study confirmed the need for safe disposal, and raising the level of public awareness about proper disposal methods, A study of (Tahrani,2018) proved the presence of a percentage of pharmaceutical waste antibiotics in wastewater and Mediterranean water near Tunisia and recommended the need for effective treatment of pharmaceutical waste. The Hernández-Morales 2021 study confirmed the presence of pharmaceutical waste in the Mediterranean, Hawaiian, and Baltic Seas and recommended three scientific strategies to protect Baltic Sea waters from pharmaceutical waste, including amendments to the MARPOL Document Annex IV. As the study (Rutala, 1992) confirmed the presence of proportions of medical waste in the waters of the East, West, and Gulf Coasts of the United States of America, while on the scale of our study the study of(Ali, A. M., Rønning2017) confirmed the presence of a percentage of pharmaceuticals on the coast of the Saudi

Red Sea, Um on the scope of legal protection, we review a study (Sadiq, Abdul Wahab 1417 AH) entitled Environmental Pollution) clarified the ways Islam protects the environment from pollution represented by food pollution, air pollution, water, and oil pollution, and the study has come out on the issuance of legislation on the protection of the environment in the Arab world, including the Kingdom of Saudi Arabia, however, there is an urgent need to develop more legislation to preserve the environment, and there is a study (Saber, Muhammad 1421 AH) entitled Man and pollution of the environment, which is research submitted to King City Abdul Aziz for Science and Technology, the study aimed to identify environmental pollutants in general, and its results have shown the need for environmental awareness. Through the review of previous studies, we find that most of those studies targeted environmental pollution in general, and did not expose pharmaceutical waste that can be disposed of across borders by ships crossing the seas. , which has not received much attention from researchers because of the difficulty of obtaining accurate statistics on them. This study complements those studies and is more specific because it deals with the rules for the protection of the marine environment in the Red Sea from pharmaceutical waste that may be disposed of by transcontinental ships.

Objectives

The map below shows the growth rate of pharmaceutical waste in the world. Thus, the research aims to identify the legal protection of the Red Sea environment from pharmaceutical waste disposed of through ships.?



Materials and Methods:

The study followed the descriptive inductive approach by studying the Marbol Convention of 1973, the Basel Convention1998, and the Regional Convention for the Conservation of Red Sea Waters with global reports on the

volume of pharmaceutical wastes around the world and their disposal and management policy.

Results

International and regional conventions have agreed on the instrument causing marine pollution and limited it to humans by direct action and ships, where the Convention on the Prevention of Marine Pollution Caused by the Dump of Wastes and Other Materials of the Year (MARPOL 1973) defined ships that cause marine pollution: are waterborne vehicles. The Jeddah Convention of 1982 defined it as any water, air, amphibious, or aerial vessel of any kind, including boats intended for flow on water, boats, submarines, floating vessels, whether driven by itself or not, fixed or mobile flat floats, and any other installations. The 1982 Regional Convention for the Conservation of the Waters of the Red Sea (Jeddah) established measures to protect the marine environment from all kinds of pollution by shipborne waste and made no reference to pharmaceutical waste. In a 2011 UN report, he explained that chemical and pharmaceutical waste in most developing countries could usually be disposed of either with the rest of municipal waste or incinerated in cement furnaces. Chemicals and pharmaceuticals may be disposed of in river or sea waters. In countries that do not have facilities to process them, resulting in pollution of the marine environment (UN Report 2011). The 1982 Regional Convention for the Conservation of the Waters of the Red Sea (Jeddah) established measures to protect the marine environment from all kinds of pollution by shipborne waste but made no reference to pharmaceutical waste. With an international ban on ships in the Regulation on the Prevention of Marine Pollution from Ships "MARPOL" 1973 and its Protocols and Amendments 2021 in Article(53)of the Marpol Convention of 1973 AD where the transfer of harmful substances is prohibited. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal is designed to limit the movement of hazardous wastes between States, specifically to prevent the movement of hazardous wastes from developed to least developed countries. The Convention also aims to reduce the quantity and toxicity of wastes generated, to ensure as environmentally sound management as possible, and to assist LDCs in the environmentally sound management of hazardous wastes and other wastes they generate (Taher 2021). Despite this, a 2011 United Nations report indicated that chemical and pharmaceutical wastes are usually disposed of in most developing countries, either with the rest of municipal waste or by incineration in cement kilns. Chemical and pharmaceutical materials may be disposed of in river waters or seas. In countries that do not have facilities to treat it, which leads to pollution of the marine environment (United Nations report 2011).

Discussion/Conclusion

The general concept of environmental pollution:

Pollution in its general sense is a deliberate or spontaneous change in the shape of the environment (Hadi 1998). Environmental pollution is a physical, chemical, or biological change that leads to a detrimental effect on air, water, or soil that leads to damage to human health and other living organisms and depletes natural resources (Al-Sayed 2010). Article 10 of the International Convention for the Prevention of Pollution from Ships (MARPOL Convention of 1973) defines it as the introduction of wastes through human activity directly or indirectly into the sea that results in or is likely to have harmful effects such as damage to living resources and marine ecosystems, endanger human health, impede marine activities, including fishing and other legitimate uses of the sea, degrade the quality of seawater for use, and limit the possibility of such use. The preamble to the Regional Convention for the Conservation of the Environment of the Red Sea and Gulf of Aden 1982 stipulates that the pollution of the marine environment in the Red Sea and Gulf of Aden water group (within the framework of integrated ecosystems) by oil, minerals and other harmful or toxic substances arising from marine activities on land or sea, in particular the discharge of these substances without discrimination or control, constitutes an increasing threat to marine life, human health and the use of beaches and facilities for recreational purposes).

The legal concept of pharmaceutical waste:

Wastes are defined in Article 8 of the 1996 Protocol to the Convention for the Prevention of Marine Pollution from the Dumping of Wastes and Other Substances (London Convention of 1982) as elements and substances of various kinds, forms, and nature. The process of turning waste into the sea is defined in the London Convention in Article (4) as any deliberate dumping by a sea of waste or other materials from ships or storage of waste or other materials on the seabed from ships.

The Basel Convention of 1989 defines it in article 3 as "- substances or objects that are being disposed of, intended to be disposed of or are required to be disposed of on the basis of the provisions of national law;

The Basel Convention established rules for the management of hazardous wastes, where Article(2) defines waste management as the Collection, transport, and disposal of hazardous wastes or other wastes, including subsequent care of disposal sites, Pharmaceutical waste was considered hazardous waste that must be controlled and not dumped within the oceans and seas

The dumping of wastes at sea is defined in Article I of the International Convention on the High Seas 1982 as "any deliberate discharge into the sea of excreta or other materials".

Pharmaceutical wastes are defined in Article I, paragraph 6, of the Unified Law as the unified system for the management

of healthcare waste in the States of the Cooperation Council for the Arab States of the Gulf (those wastes that are left behind from preventive or therapeutic activities or from the production and preparation of pharmaceuticals, drugs, and medicines that are damaged or expired.) Article 4 clarifies that pharmaceutical waste medicines :

It includes waste from the manufacture and preparation of medicines, pharmaceuticals, damaged or expired pharmaceutical products, contaminated pharmaceutical products, serums, and vaccines, and includes containers and tools used in their production, packaging, and distribution

The World Health Organization has defined it as pharmaceuticals: expired, unused and contaminated drugs and vaccines; Pharmaceutical waste includes: expired, unused, liquid, and contaminated pharmaceutical products, medicines and vaccines, and tools used in the handling of medicines (such as vials). Cleaning materials and disinfection materials containing heavy metal elements

. Chemical and pharmaceutical wastes account for 3 % of chemical waste. United Nations Report 2011)

Responsibility and measures to face emergency situations for the disposal of pharmaceutical waste from ships:

We did not find explicit provisions related to the control of pharmaceutical wastes in the Regional Convention for the Conservation of the Waters of the Red Sea 1982 by reference to the Basel Convention, we find that it tightened the liability with financial compensation for the damaged, in accordance with Article 4 of the Basel Protocol on liability and compensation resulting from the transboundary movement of hazardous wastes and their disposal. Any person who has caused or participated in the occurrence of the damage shall be liable for damages resulting from his failure to comply with the provisions of the implementation of the Convention or for his intentional or reckless wrongful conduct, negligence, or omission. This article does not affect the domestic laws of the Contracting Parties governing the liability of employees and workers who disposed of waste. In accordance with Article (194) of the 1982 Convention on the High Seas, the State shall take measures to protect territorial waters from contaminants of ships using the best scientific means available to it and consistent with their capabilities, which shall prevent pollution from ships, ensure the safety of maritime operations and prevent the deliberate and unintentional discharge of ships' debris.

After the discovery of pollution in the Red Sea due to disposed waste, the provisions of article III of the Protocol on Regional Cooperation in the Control of Pollution by Oil and Other Harmful Substances in Emergency Cases 1982 can be applied, where a number of measures have been put in place that the countries bordering the Red Sea can take to face the dangers of pollution in emergency situations within the framework of regional and national bases, where they have to develop an emergency plan, whether individually or through bilateral or multilateral cooperation to face maritime situations. Emergency to combat ship waste in accordance

with article 2 thereof, in order to achieve this, the State shall do the following:

- Establishment of a maritime emergency center whose tasks will be: Collect information related to emergency response
- Coordination of pollution control training programs.
- Communication system, with international global and regional organizations.

The MARPOL Convention of 1973 stipulates that States have the right to take against all merchant ships, whatever flag they raised, all measures called for by the need to protect their territorial and internal waters from pollution (Al-Syriani 2006). Years of damage, either the Basel Convention has established a period of 10 years from the date of the accident to file a claim for compensation or 5 years from the date of its knowledge (Article 13)

Owner's Liability for Errors of His Followers :

Disposal of pharmaceutical waste if it occurs from the master and his subordinates during or because of the work: the owner of the ship shall be liable for it based on the rules of tort and shall not be liable for damage except to the extent of the value of the ship. If the damage is caused by the owner or processor of the ship, he is liable for the fault resulting from his personal actions, this liability in origin is a specified liability, so that all his funds are guaranteed to meet the debts (. Nickelic. 2021)

penalties

The Basel Convention left penalties to national laws. Article (230) of the Convention on the High Seas stipulates that only monetary penalties may be imposed in connection with violations committed by foreign ships within the territorial sea of national laws and regulations or applicable international norms and standards to prevent, reduce and control pollution of the marine environment except in the case of a deliberate and serious act of pollution within the territorial sea. The affected State shall notify the flag State of any measures relating to the seizure of the vessel.

Conclusion

The rise of pharmaceutical waste around the world has caused the codification of rules for the legal protection of the marine environment from disposable methods, however, there are no international legal rules for pharmaceutical waste and its disposal at sea so that we can apply them to the protection of the Red Sea, Except for the general rules of the Basel Convention on the Control of Transboundary Hazardous Wastes of 1998 and the Marpol Convention, on the Prevention of Pollution by Ship Wastes of 1973. The study found the existence of a regional convention, but it sets general rules for post-pollution protection measures and the convention does not mention pharmaceutical wastes among its rules, leaving it to the international conventions to which the signatory countries are parties, and the study recommends

the need to establish rules for the disposal of pharmaceutical waste at sea with the development of electronic ship control. The encouragement of scientific research related to research in the proportions of pollution of the Red Sea by the waste in this field because of the lack of studies related to it. The study recommends the establishment of specialized seminars on marine pollution from pharmaceutical wastes and the establishment of a unified registry system in which all the names of owners of ships transiting the territorial sea engaged in the transboundary movement of wastes are recorded.

Acknowledgments

The author is grateful to Prince Sultan University, Kingdom of Saudi Arabia for the financial support granted to cover the publication fee of this research.

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