

## INTERNATIONAL LEGAL REGULATION OF PROTECTION OF THE OCEANS FROM POLLUTION AS A RESULT OF WASTES DUMPING IN ORDER TO THEIR BURIAL

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**Abstract:** Today, the protection of the World Ocean from pollution is the most important problem, and the fate of all mankind depends on its solution. The World Ocean is the central supplier of oxygen for our planet, is a valuable communication system, a storehouse of natural resources and major ecological environment, which has the ability not only to store biological and mineral resources, but also to reproduce them. There is no need to prove the fact, that only due to the ability of the World Ocean to self-purification its waters are still viable. However, the rapid process of pollution from various sources indicates, that the cleansing process of the Ocean slows down, and in the near future this will lead to global ecological disaster. Since the second half of the 20th century, such a large amount of wastes has been accumulated and discharged into the seas and oceans, and so much poisonous substances have been emitted into the soil and into the atmosphere, as never before. Leading maritime powers are interested in the active use of the World Ocean. They develop new tools for its use, whereas the ecological component of this impact is not a priority. Since the middle of the last century, a special attention of the world community has been attracted not only by pollution from ships in the process of their exploitation, but the dumping at sea of industrial wastes, including radioactive. Nevertheless, the specific steps for the preparation of appropriate rules, governing this issue, have been taken much later. The problem of the World Ocean pollution by dumping of wastes in order to their disposal was considered in the present article, the process of legislation development in this area was analyzed. On the basis of data of modern scientific researches, possible ways of preventing further rapid contamination of the Ocean, in consequence of such influences, were defined.

**Keywords:** the World Ocean, pollution, provision of security, waste disposal, dumping, cooperation.

### 1 Introduction

The World Ocean covers 71% of the entire surface of the Earth. It is a continuous water shell, which surrounds the continents and directly participates in the formation of climate on our planet. The Ocean is the main supplier of oxygen, which is produced by plankton in the process of photosynthesis and provides the world's population with proteins, taken in with food. Nevertheless, the technological revolution has reduced its biological productivity several times in recent decades. To date, the question of whether the World Ocean is under threat has already ceased to be debatable. The possibility of its water for self-purification, which has existed for millions of years, is gradually being lost.

The World Ocean is a landlocked reservoir. A huge amount of polluting and poisonous substances (biological, chemical, radioactive) every day comes in its waters, from every possible source: oil, sewage, products of processing of large industrial enterprises, ballast waters, which are the source of spread of alien pathogens. Only individual components of all these substances can be processed by the smallest single-celled microorganisms. Some pathogenic bacteria die under the influence of sunlight and the bactericidal property of oxygen, dissolved in water (Bannikov et al, 1999). The rest of elements either settle on the bottom, or are mistakenly perceived as food and consumed by fish and marine mammals, causing all kinds of mutations and diseases, or form vast oily films on the surface of the water and prevents the penetration of sunlight and oxygen (Enric, 2015). According to leading experts, there are practically no clean natural water bodies in the world, the water in which could be suitable for drinking. Many rivers still exist only due to the wastewater, daily dumped in them (Valiullina et al, 2016).

There is no need to prove, that pollution from ships is the most constant source of pollution of the World Ocean. For a long period of time, large industrial countries practically uncontrolledly dumped in the sea all kinds of wastes, which were not connected with the process of normal vessel operation.

Dumping is the disposal of wastes in the sea, any deliberate removal of wastes and other materials from ships, platforms and other artificially constructed at sea structures, aircrafts, as well as any form of deliberate destruction of ships, aircrafts, platforms, etc. (Sukharev et al, 2003).

International documents and legislative acts of the majority of states contain categorical prohibition against such activities. Nevertheless, the statistics on the waste disposal are disappointing.

For a long time, industrially developed countries dumped various wastes in the sea completely uncontrollably. Regarding radioactive wastes, the only safe way to get rid of them, as was erroneously assumed, was a burial in the seas and oceans. Wastes were packed in 200-liter metal drums, poured with concrete and dumped into the sea. This was justified by the consideration that such wastes will lose their harmfulness after a long stay in the depths of the sea, and in addition it was assumed, that the metal tanks will reliably contain the toxic substances. Nevertheless, conducted scientific research has proved that in less than ten years such tanks cease to be sealed and radioactive substances begin to get into waters of the World Ocean, rapidly destroying its environment.

Ilyin A.V. wrote in his works that if it were possible to drain the Atlantic waters, mankind would see extremely gloomy and frightening landscapes. Thousands of devastated, rusty containers, scattered randomly on the bottom of the Ocean would instantly disprove all the statements of the ideologists of such burial. In April 2012, 100 years have passed since the wreck of the Titanic. It has shown to us a holistic picture of what could happen with the ideal metal structures for a comparatively short time. The same happens with containers with radioactive wastes. However, the radioactive substances themselves do not disappear anywhere, but precipitate, impregnating and poisoning the entire upper layer of bottom sediments (Ilyin et al, 2011).

### 2 Methods

As a methodological basis of the study, the method of system-structural analysis was used. It allowed to understand the importance of ensuring the protection of the World Ocean from pollution, as a result of dumping of wastes in order to their disposal. To solve the tasks of the study, in addition to general scientific methods, specific scientific methods were used, namely: formal-logical, historical, comparative law, legal modeling, and logical methods, such as analysis and synthesis, induction and deduction, generalization and comparison.

### 3 Results And Discussions

In 1948, the United Nations established the Intergovernmental Maritime Consultative Organization (IMCO). The purpose of the organization was to provide the cooperation of states with regard to the exchange of information, discussion of shipping issues, its impact on the state of the World Ocean waters (International Maritime Organization, 1984). At the same time, it is during this period, that the marine environment becomes a place for utilization of all types of wastes: nuclear (outworn nuclear facilities, spent nuclear fuel, chemicals, oil products). So, for the period from 1949 to 1982, England conducted thirty-four burials of solid radioactive wastes in more than fifteen areas of the North Atlantic, the Irish Sea in the Canary Islands, the English Channel, the Bay of Biscay. The total weight of containers, buried at the bottom was 74052 tons. Together with Britain, Belgium carried out more than fifteen burials of SRW to the North Atlantic and the Bay of Biscay with a total mass of 23,100 tons. Holland made fourteen burials in the North Atlantic with a weight of 19,162 tons. The USA carried out a disposal of SRW in the Atlantic in an amount of 560261 containers, their weight

remained unknown. In Russia, the largest number of burials was made at the coast of Kamchatka and the Sea of Japan. The liquid radioactive wastes in the Far Eastern seas were dumped up to 1991 (Grachev et al, 2004).

Until 1972, there were not enough records of the volumes and types of materials, buried in ocean waters. However, several reports were sufficient to assess the extent of such pollution. So, according to the estimation of the National Academy of Sciences of the USA in 1968, the annual volume of dumping was 100 million tons of oil products, 2-4 million tons of acid chemical wastes from cellulose plants, more than 1 million tons of heavy metals of industrial wastes and more than 100,000 thousand tons of organic chemical wastes.

According to the US Environmental Protection Agency (EPA) between 1946 and 1970, more than 55,000 containers with radioactive wastes were found in the Pacific Ocean. Since 1951 - 1962 almost 30,000 thousand containers with radioactive wastes were dumped in three ocean areas off the east coast of the United States (What was dumped into the ocean before 1972).

Gradually, the degree of prevalence and the degree of harmfulness of the buried substances have grown to such an extent, that they caused general alarm and put on the agenda the need for international regulation of this type of activity.

For a long time, the only multipartite agreement, regulating the problem of the World Ocean pollution from ships, as a result of dumping, was the International Convention for the Prevention of Marine Pollution by Oil. It was adopted at a diplomatic conference by the International Maritime Consultative Organization (IMCO) in London, on May 12, 1954. This Convention, as amended in 1962, 1969, 1971, mainly regulated issues, connected with oil pollution and did not provide for significant items, concerning the pollution from dumping.

The London Convention 1972 became the starting point in the regulation of the deliberate disposal of harmful wastes in the World Ocean. The Convention introduced two types of dumping:

1. Disposal (discharge) of wastes and other materials into the sea from ships, aircrafts, platforms or other artificial structures, located at sea.
2. Foundering in the sea of ships, aircrafts, platforms and other artificial structures.

The concept of "dumping" does not include:

1. Operational wastes, i.e. the result of normal operation of ships, aircrafts, etc.;
2. Placing of materials in the sea for scientific research, creating so-called artificial islands;
3. Disposal of wastes from exploration and exploitation of seabed resources (Zharkova et al, 2006).

It should be noted that, the 1972 Convention does not regulate the dumping of those materials, which are transported by ships or aircrafts as cargoes. Absolute prohibition was imposed on organochlorine compounds, mercury and mercury compounds, cadmium and cadmium compounds. The same list, which was called "black", included oil, radioactive wastes, as well as materials, made for biological and chemical warfare. An exception was foreseen only for substances, rapidly dehydrated at sea (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. December 1972).

In 1988, one of the Italian companies buried hazardous wastes illegally in Nigeria. As a result, the ship "Karin B" for a long time moved from one state to another, not knowing how to get rid of the poisonous cargo. This and other cases of sale of hazardous toxic wastes by the rich countries to the poor, forced the world community to adopt the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, on March 22, 1989 at the diplomatic conference in

Basel. It came into force in 1992. Currently it includes 182 countries. In spite of so progressive nature, the 1989 Convention aroused many questions and disputes. One of the drawbacks was the lack of agreed list of hazardous wastes. Many countries, especially those with a low level of social and economic development, do not consider their wastes hazardous, and the level of pollution control is very weak or nonexistent. As a result, uncontrolled export of toxic substances from countries, which are not the participants of the 1972 Basel Convention, can be made.

On May 1, 1995 Russia ratified the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. For the purposes of maximum implementation of the Convention, the Government of the Russian Federation issued Resolution № 442 "On transboundary movement of wastes" on July 17, 2003, where all wastes, in terms of the degree of destructive impact on the environment, were divided into two Annexes. The export and import of wastes, specified in Appendix №1 is carried out strictly under license. The transit of wastes included in Appendix №2 to the territory of the Russian Federation is prohibited, and the export from its territory is carried out under license (Resolution of the Russian Federation Government from July 17, 2003).

In 2001, the United Nations initiated negotiations on the provision of a chemical safety program, the completion of which was marked by the adoption of the Stockholm Convention on Persistent Organic Pollutants. Today, the Convention is the main document, regulating the protection of the environment from the effects of hazardous chemical compounds, which are persistent, toxic, capable of decomposition, volatilization and spread over long distances, both in air and in water (Stockholm Convention on Persistent Organic Pollutants. Stockholm, May 2001).

The twelfth meeting of the Conference of the Parties to the Basel Convention and the seventh meeting of the Conference of the Parties to the Stockholm Convention were held on 5-11 May, 2015 in Switzerland. The key issues, concerning the safe disposal of hazardous wastes were considered there. In addition to the above, particular chemical wastes were brought under the jurisdiction of the Conventions, and other constructive decisions were made, aimed at protection of the environment from hazardous substances and wastes.

Maritime vessels are not the main source of pollution of the World Ocean, since the main pollution comes from land. Nevertheless, it is the Ocean and its protection that is the object of intensive international legal regulation.

Part XII of the 1982 United Nations Convention on the Law of the Sea "Protection and preservation of the marine environment" contains the basic rules for the prevention of pollution of the World Ocean from various sources, including pollution from ships. The Convention fills the gaps in the definition of spatial jurisdiction limits of States with regard to the management of waste disposal issues and fixes their right to regulate dumping not only within the territorial sea, but also on the continental shelf and in the economic zone. (United Nations Convention on the Law of the Sea (UNCLOS) / December 1982)

The provisions of the Convention provide for the need to ensure the interconnection between norms and standards, established by the international organizations in the field of the World Ocean protection, and the rules of each individual state. This relationship is due to the fact, that in the protection and preservation of the Ocean, all mankind is interested, since the damage, caused in the territory of one state, may spread to neighboring territories. Consequently, not only the parties to a specific treaty, but all other states should be bound by obligations to implement the provisions of international and regional agreements, in order to ensure a unified policy for the implementation of agreed measures to control the pollution of the World Ocean.

#### 4 Deductions

Summarizing all the above, it is possible to formulate the following directions in the activities of states on protection and preservation of the World Ocean from pollution, resulting due to the disposal of wastes:

1. It is necessary to forbid utterly the utilization and disposal of the 1<sup>st</sup> Class wastes, defined as extremely hazardous at the sea-bed (polonium, plutonium, plumbous oxide, hydrogen fluoride, trichlorodiphenyl, etc.). This is due to the fact, that placing such wastes in a mobile environment, in the hydrosphere, with the expectation of dilution to a harmless consistency, is unreliable. The half-life of radioactivity of many radioactive wastes can be hundreds of millions of years. Immersion of such substances to the bottom of the Ocean in metal containers, filled with concrete, is also not safe because of the fairly rapid depressurization of the tanks' casing - the metal is oxidized, concrete is destroyed.
2. It is assumed, that it is necessary to carry out complex measures to monitor the condition of containers, disposed with poisonous substances on the seabed, in order to check their tightness, and to take urgent measures to protect the World Ocean from pollution.
3. The theory about the possibility of placing containers with radioactive wastes and other spent fuel at the lower level of the Earth's surface, namely the preservation of containers with radioactive substances under a layer of fine-dispersed bottom sediments, up to 10-15 km thick, is groundless and unsupported by scientific research.
4. Taking into account the fact, that the protection of the World Ocean is a task of universal importance, and the damage, caused to its environment, will necessarily affect the interests of more than one state, the delay of signing of international treaties on issues, related to placing on the bottom, dumping and disposal of dangerous substances, is unfounded.
5. Increasing the level of environmental co-management, that means joint management of activities for the development of the World Ocean by international organizations, regional communities, governments and non-governmental organizations, and other stakeholders, should become the central task of the world community in order to improve the state of the World Ocean.

#### 5 Conclusion

The development of the structure of processing plants, the implementation of new inventions in the field of waste management, the raising of the environmental education level, the implementation of comprehensive environmental monitoring and assessment of the state of the World Ocean environment, the exchange of data between states on the status of certain water bodies - all of this in combination leads to the suspension of the process of rapid pollution of the World Ocean, as a result of wastes dumping.

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