

## International Legal Regulation of Ocean Pollution Prevention from land-Based Sources

**Ksenia B. Valiullina\***

Kazan Federal University, 18 Kremlevskaya Street, Kazan, Russia

**Adel I. Abdullin**

Kazan Federal University, 18 Kremlevskaya Street, Kazan, Russia

### Abstract

The world ocean is an integral system, directly influencing the climate of the whole planet, the plant and the animal world, the processes of life and human activity. The result of the World Ocean space, its waters and resources intensive use is the problem of its protection against pollution. It is one of the new challenges and threats to the security of states. Nevertheless, of all natural objects, this most important component of the Earth hydrosphere is most exposed to pollution. Thus, according to expert estimates, most of the total amount of the world ocean pollution is conditioned by terrestrial sources, which are the least manageable by international law due to their location on the territory of a certain sovereign state. Coastal areas are exploited by a man very actively and bring the greatest economic benefit. And, thus, this zone is the center of the greatest anthropogenic impact on the waters and the living resources of the World Ocean. Entering the coastal marine areas located on the shores of industrialized countries, the amount of pollutants is so high that it can rightly be considered as a global environmental problem of an international character with a rapid movement and distribution, capable to predetermine the fate of the entire oceans. Therefore, it is quite natural that from the middle of the twentieth century this problem became a key issue for states, academic circles, international specialists and put them before the need to develop a mechanism for its international legal and national regulation as soon as possible.

**Keywords:** The world ocean; Pollution sources; Terrestrial sources; Protection and conservation; Cooperation; Environmental safety.



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### 1. Introduction

According to the expert estimates, most of the total amount of the World Ocean pollution is conditioned by land-based sources. At that, the specified kind of pollution sources is the least manageable in international law, as they are located on the territory of a certain sovereign state, and, consequently, the regulation of pollutant incoming into water bodies is regulated at the national level. More than half of the world population lives on the sea and ocean coasts, actively exploiting the waters and the resources of the world ocean, hence it is not difficult to imagine all the amount of pollution that enters the seas and the oceans of the Earth every day.

When the thing is about the pollution from land-based sources a special harm to the oceans is caused by the discharge of untreated water from industrial enterprises, household and agricultural wastes, the wastes generated during dredging operations in ports,

carried out during the construction of berths, with the extraction of biological resources, during the laying of pipelines under water and other underwater works, during the disposal of garbage, various categories of harmfulness, including the burning of plastic and other wastes that fall into the World Ocean not only with groundwater and runoff, but also through the atmosphere. All of the abovementioned pollution types lead to a rapid pollution of the world ocean, sometimes causing irreparable damage to its waters and resources.

One of the key sources of pollutants is the river runoff, with tons of suspended solids, salts, heavy metals and other organic pollutants that disturb world ocean structure, balance, and ecosystem integrity every day. As an example, one can cite the violation of the historically developed equilibrium in the water environment of Lake Baikal, located on RF territory, the unique lake of our planet, which, according to scientists, could provide the whole mankind with water for almost fifty, more than 100 km<sup>3</sup> of Baikal water has been contaminated in recent years. More than 8,500 tons of oil products, 750 tons of nitrates, 13,000 tons of chlorides, oxides, dioxides, plastic wastes and other pollutants enter the waters of the reservoir annually. Scientists believe that only the size of the lake and the volume of its water mass, as well as the still preserved but rapidly lost ability to self-purge, save the lake ecosystem from complete degradation ([Ecological problems of Lake Baikal](#)).

One should also note the damage caused to the marine environment as the result of industrial waste dumping into the sea. Thus, in one of the provinces of Canada (British Columbia), they determined the discharge of waste from mines in the mining industry, which has been carried out on the southern coast of the province for almost 80 consecutive years. Nowadays, as the result of this kind of impact, the sediments, formed due to the discharges, are disastrous for bottom organisms. Thus, the indigenous population is not able to fish for shelf fish, because their population decreased by in many times after such a pollution, many fish species are on the verge of extinction, and

\*Corresponding Author

their habitat not only decreased, but became uninhabitable in some areas. According to scientists, it will take many years to return this section of the World Ocean to a livable state (Marochkin, 2012).

In addition, considering the issue of the World Ocean pollution from land, it is certainly not possible to leave without attention the issue devoted to the pollution of the World Ocean by plastic. According to Greenpeace estimate, plastic has clogged our entire planet in less than a century, from the equatorial forests to the Arctic seas. Today, the ocean is rightly called "plastic", because, according to UNESCO estimates, it contains 150 million tons of plastic and 23 million tons of chemical additives to it, which settle on the bottom, spread in the water column, or cover the surface of the seas and oceans with a dense film, preventing the penetration of sunlight, vital for the waters and living resources of the World Ocean. Unlike many other contaminants, plastic does not sink, it is not dissolved or decomposed, it gets caught by ocean currents by ocean currents, and is transported to the areas with calm water, where unique plastic dumps are developed, the largest of which is the "Great Plastic Spot" which was found in the northern part of the Pacific Ocean. The currents take plastic debris to the remotest corners of the world, including the remote Arctic waters and the waters of Antarctica. This means that the most pristine and fragile areas of our planet are under threat. All plastic appeared about 60 years ago in the form that we know. Its main advantage and disadvantage is longevity, that is, all plastic ever produced, still exists on our land in one form or another. Eighty percent of all plastic comes to the world ocean from land, the remaining twenty come from fishing industry, fishing and other vessels. These are plastic bags, disposable plastic dishes, fishing nets, the particles and the granules of plastic contained in cosmetic and detergent products falling into the World Ocean with river runoff, plastic debris that falls into the oceans and seas after its burning. Not all plastic waste remains unchanged on water surface, most, under the influence of sea water, sunlight breaks up into tiny particles, forming a chemically dangerous mixture of plastic, which is many times more toxic than large parts for ecosystems. Nowadays, a rapid pollution of the world ocean with plastic is a problem of concern to the entire international community. It is no coincidence that the focus of attention of the United Nations Conference on the Ocean, which was held on June 5, 2017 in New York, was the overcoming of sea pollution threat by plastic from all possible sources. It is primary issue due to the scale of such pollution and the disastrous consequences that will follow in the absence of active actions concerning this trend, not only for the waters of the seas and oceans, but also for the animal world, and, first of all, for a man. The founder and the president of the Danish organization Plastic Change, Heinrich Bech Pedersen noted the following: "where does plastic finish its journey? In fish? In birds? On the beaches? Deep into the seabed? Where does all that plastic garbage go? It is in us, it is in people" (Tahavieva and Nigmatullina, 2017).

## 2. Methods

The system-structural analysis method is used that helps to reveal the importance of the World Ocean protection from pollution out of land-based sources as a methodological basis of the study. For the purpose of modern interpretation of convention norms, the most promising methodology is the combination of methods of historical and political science and international legal analysis. In order to solve the problems that are the basis of the research, in addition to general scientific methods, they used the private, as well as the formal-logical method, the method of comparative law and legal modeling, as well as some logical techniques, such as induction and deduction, generalization and comparison, contributing to a qualitative and a detailed study of the proposed topic (Suaria *et al.*, 2016).

## 3. Results and Discussions

Despite the fact that pollution from land-based sources adversely affects, above all, the environment of marine areas in enclosed and semi-enclosed seas or near the coasts of industrialized countries, the volume and the speed of pollutant movement entering the marine environment allow us to speak about this form of pollution as a global problem threatening the balance of the world ocean. In this regard, it could not remain unnoticed, and already during the Third United Nations Conference on the Law of the Sea, a number of international legal agreements were adopted providing directions for States to take measures on marine environment protection from pollution by land-based sources or containing specific instructions on the need for urgent measures in the fight against this type of pollution. Thus, at this time, a number of agreements are being developed and adopted that contain common obligations of states to take measures on marine environment protection from pollution by land-based sources, such as: the Convention of 1976 for the Protection of the Mediterranean Sea against Pollution (Barcelona); The Regional Convention on the Cooperation for the Protection of the Marine Environment from Pollution, 1978 (Kuwait), the Convention on Cooperation for the Protection and the Development of the Marine and Coastal Environment of the West and Central African Region, 1981 (Abidjan), the Lima

Convention for the Protection of the Marine Environment and Coastal regions of the South-Eastern Pacific Ocean, 1981. The agreements specifically aimed at sea and ocean pollution fight from land-based sources, namely the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974, Paris, the Convention on the Prevention of Marine Pollution from Land-Based Sources, the Athens Protocol on the Protection of the Mediterranean Sea from Pollution by Land-Based Sources, 1980, and the Lima Protocol on the Prevention of Pollution from Land-Based Sources, 1983.

The ecological and the legal definition of "marine environment pollution" concept was proposed back in 1969 by the Joint Expert Group on the Scientific Aspects of Marine Environmental Protection (GESAMP), which refers to the supply of a substance or energy to the marine environment that poses a risk to human health; harms living resources; impedes the implementation of marine activities (including fishing); affects the deterioration of sea water

quality; helps to reduce the useful properties of water. The regional agreements mentioned above define the concept of "pollution from land-based sources" in relation to the marine environment. Thus, in the Framework Convention for the Protection of the Marine Environment of the Caspian Sea, "the pollution from land-based sources" is defined as marine pollution from all types of point and dispersed sources located on land, introduced in it by water or air, either directly from the coast, or in the process of any pollutant removal from land through a tunnel, a pipeline or by other means (Nesterenko, 1989).

A common feature of the above regional agreements is the presence of applications containing a list of hazardous substances and materials that, if they enter a water body, can cause damage, both to the waters and the resources of the World Ocean, and to the interests of the water users. In addition, the agreements, inter alia, stipulate the need for a close cooperation between states on the issues of marine environment protection, the joint research on its status and pollution monitoring, and also provide for the establishment of

permanent bodies whose duty will be to monitor the implementation of the Convention provisions, the development of the programs which eliminate the effects of pollution from land sources, the development of recommendations for amendments and expansion of harmful substance list.

At the same time, despite the importance of these agreements, they contain a number of significant shortcomings, which include the following ones, in our opinion: the lack of a clear definition of pollutants (the pollutants of the World Ocean) coming from land; the absence of prohibitive norms for dumping even very dangerous pollutants from land; the lack of norms and procedures governing the issue of State responsibility for caused damage; the use of too general wordings with respect to the obligations of states aimed to protect the oceans from pollution out of land sources (United Nations Convention on the Law of the Sea, 1982).

All abovementioned agreements aimed to prevent the pollution of the world ocean from land are regional ones, and although marine pollution from land-based sources, along with other pollution sources, pose a real threat to the existence of the World ocean, It is worth acknowledging that the regulation of this area is rather weak. An essential shortcoming in this regard is the absence of a universal act (United Nations Convention on the Law of the Sea, 1982), which would regulate this type of pollution in detail.

In the United Nations Convention on the Law of the Sea (1982), namely in Part XII, on the protection and the preservation of the marine environment from various sources of pollution, the provisions on land-based pollution are formulated rather briefly, in a general form. So, the Art. 194 provides for the provision that the measures taken to protect and control pollution of the marine environment are aimed to reduce the release of toxic and other, especially toxic and persistent harmful substances from land sources as much as possible. The specified obligation is specified in art. 207 and 213 of the Convention, which identify the most significant types of pollution, including rivers, estuaries, pipelines and drainage structures. The use of the

phrase "including" is the indication that this list is not an exhaustive one. Besides, the term "land-based sources" are not used almost in the regional agreements mentioned above, which contributes to the emergence of a different approach possibility to the interpretation of "terrestrial" notion.

It is impossible to disregard the Montreal Provisions (1985) on the Protection of the Marine Environment from Pollution out of Land-Based Sources, the document, although of a recommendatory nature, but at the same time intended that the governments of different countries will use the general provisions fixed in them for agreement preparation, both at the regional and global levels. The Regulation norms are based on the premise that almost all types and kinds of pollution that are more or less related to land-based activities, such as urban, industrial and agricultural land sources, the stationary and mobile ones, should fall under the notion of "land sources", the discharges of which penetrate the marine environment, as well as the sources of marine pollution, as the result of activities carried out on land and mobile structures located in the sea within the jurisdiction of States, except for the cases, when the relevant sources fall under the operation of international treaties (Sapozhnikov *et al.*, 1984).

The UN Convention excluded the pollution from the list of land pollution sources through the atmosphere, associated with the activities on the seabed and with artificial islands, installations and facilities under the jurisdiction of the coastal state, the legal status of which is provided by other articles of the Convention. In our opinion, such an approach seems quite feasible, since it contributes not only to the differentiation of different types of pollution, but also to the detailed regulation of the above-mentioned sources of pollution, which cause a significant harm to the state of the World Ocean, its waters and resources. In addition, the Convention (Article 207) contains the list of state responsibilities with respect to the protection of the world oceans from land-based pollution, which is quite extensive and includes the obligation to adopt the laws and the regulations at the national level in accordance with the norms established in existing international treaties and agreements; to take preventive measures to prevent the pollution of the World Ocean, the damage to its waters and resources, to preserve its integrity; to strive for an active international cooperation on the protection of the marine environment from pollution, ensuring the strict implementation of the Convention standards, supporting developing countries, taking into account their regional characteristics, economic opportunities, as well as the need for economic development (Lindsley and Tonhauser, 2011).

## 4. Conclusions

Summarizing all mentioned above, they would like to conclude that despite the importance of the problem of the world ocean pollution prevention from land-based sources and the attempt of the international community to legislatively fix the main provisions that contribute to the adoption of a number of constructive measures to ensure the protection of the world ocean from pollution with a more detailed reading of the convention provisions, reveals a rather mild, not fully binding nature of the specified requirements, as well as the existence of complex wordings that

hinder their implementation in practice. In our opinion, this is primarily due to the reluctance of a number of economically developed countries to assume additional financial burden following the adoption of unified norms and standards (for example, the United States, which has not yet signed the UN Convention on the Law of the Sea, 1982), and, at the same time, with the desire of developing countries to recognize their special interests, determined by the need for economic development and the inability to comply with the provisions of the Convention standards in some cases due to the lack of funding.

Thus, in the absence of a universal nature act, the level of international legal regulation development concerning the marine pollution from land-based sources depends more on the degree of regional legislation development, as well as on national legal institutions related to the regulation of marine area, freshwater river basin pollution, the use and the disposal of waste.

Currently, most of the coastal states have adopted the relevant legislation governing the control of marine pollution from land.

At the same time, it can not be asserted that those industrialized countries, in which the series of laws have been introduced in recent years, solve the problem of ocean pollution successfully. A fairly large number of normative acts on the protection of the oceans from pollution in the systems of national legislation of these states creates an illusory picture of legal regulation effective mechanism only at first glance. However, in reality it has a large number of gaps and shortcomings. The broad practice of these states on the introduction of national legal measures to ensure the protection of the world oceans from pollution does not contain preventive measures most often, and is just a belated response to the ecological crisis that has resulted from predatory attitudes to the world oceans, as the most important object of the Earth's hydrosphere, and to nature as a whole.

## 5. Summary

The pollution from land-based sources directly affects the sovereign rights of States, in particular their right to the self-management of natural resources under their jurisdiction in accordance with their policies in the field of environmental protection. These rights are fixed in the UN General Assembly Resolution "Inalienable sovereignty over natural resources" issued on December 14, 1964. The UN Convention on the Law of the Sea of 1982, has specified it a little to confirm this right in Art. 193, having referred to the clearly designated duty of the states at the implementation of the given right "to protect and save the marine environment". Nevertheless, there are no specific restrictions that are mandatory for all states regarding discharges from land. This is due mainly to the fact that many countries see a serious obstacle to the development of the national economy in the establishment of international requirements for land-based discharge limitation.

Nevertheless, the existence of provisions enshrined in (United Nations Convention on the Law of the Sea, 1982), despite their sufficiently general nature, creates the conditions for the further development of legal regulation concerning the protection of the World Ocean from land-based sources, both internationally and at the national level. And, moreover, it allows us to conclude that there is a common duty to protect the marine environment from pollution out of land-based sources in the international maritime law of coastal states and landlocked states.

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