ЕКОЛОГІЧНА БЕЗПЕКА

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THE CURRENT STATUS OF LEGAL ENVIRONMENTAL PROTECTION AGAINST POLLUTION OF INLAND WATERWAYS

Improving the current national legislation in the field of aquatic environment, in particular inland waterways, is the most important task of modern rule-making, legal science and practice. The effectiveness of the protection of water basins and inland waterways largely depends on the improvement of legislation not only in the environmental field, but also in referred areas related to the use of the aquatic environment. The article analyzes the main factors that negatively affect the ecological status of inland waterways, in particular the main types of pollutants, namely: transport vessels of various types, passenger and pleasure craft, farms, industrial waste, etc. The article provides an analysis of the current national legislation of Ukraine in terms of prevention of water pollution and analysis of compliance with international, in particular European standards. The inconsistency of the norms of the national legislation with the international standards in the ecological sphere is noted. Problems of practical implementation of measures to prevent pollution of rivers, canals, etc. are identified. On the basis of previous researches of experts in the ecological sphere, further ways for improvement of the basic directions of development in a policy of ecological safety at sea of Ukraine are offered.

Key words*: ecology, pollution, European standards, national legislation, prevention.*

Formulation of the problem. Water resources are limited natural objects, and their role in ensuring the existence of humans, fauna and flora is particularly important. With the development of social production, development and growth of industry, increasing demand for inland waterway transport there is a need to develop standards and measures for the protection of the environment as a whole, as all natural resources are closely interconnected and water resources projects in particular.

Legal protection of water is a system of legal, organizational, economic and other measures aimed at rational use of water resources, prevention and elimination of pollution, littering, depletion of water, improvement of their condition, ensuring a special regime of water use for environmental, medical, spa and wellness goals.

The main negative impact on water (water basins) are through pollution, clogging and depletion. The meaning of the concepts of clogging and depletion is disclosed in Art. 1 of the Water Code of Ukraine. Water pollution is the entry of pollutants into water bodies. Water pollution is the introduction of foreign objects and materials into water bodies that adversely affect the state of water. Water depletion is a reduction in the amount of water in water objects[1].

Analysis of recent research and publications. Legal aspects of the protection of inland waterways, rivers and environmental security in Ukraine as a democratic state governed by the rule of law, which is responsible to society for the preservation of the natural environment, are

becoming increasingly important. This is due to the fact that river transport, in accordance with the directions of the state policy of Ukraine in the field of protection of water bodies and environmental safety is classified as a significant polluter of the environment. MM devoted his works to the study of these issues. Pidluzhna, V. Lebedev, I. Voevodina.

The purpose of the research. The purpose of the study is to analyze the current international and national legislation in the field of prevention of water pollution in the context of identifying and implementing measures to prevent pollution of inland waterways. To achieve this goal, it is necessary to identify the current state of pollution of inland waterways and to study a number of international and national acts on the protection of inland waterways from pollution and to propose further directions of environmental safety policy on water objects.

The main results of the research. Water transport is the oldest type of transport. Until the advent of transcontinental railways (second half of the XIX century), it remained the most important mode of transport. Even the most primitive sailing ship covered four to five times the distance in a day than a caravan. The transported cargo was larger, the operating costs were lower. Water transport still retains an important role. Due to its advantages (water transport is the cheapest after the pipeline), water transport now covers 60-67% of the world's freight turnover. Inland waterways transport mainly bulk cargo - construction materials, coal, ore - transportation of which does not require high speed (this affects competition with faster road and rail transport). Water transport has no competitors in sea and ocean transportation (air transportation is very expensive, their total share in cargo transportation is low), so ships carry various types of goods, but most of the cargo is oil and petroleum products, liquefied gas, coal, ore.

Given the intensity of the use of inland waterways for commercial shipping, it can be noted that most of the pollution is water river transport, as one ship discharges from 20 to 50 m3 of polluted sewage per month. According to Art. 67 of the Water Code of Ukraine, all vessels and other vessels must be equipped with tanks for collecting sewage and other polluted water, which must be systematically transferred to special treatment facilities for cleaning and disinfection. However, unfortunately, many of the owners of water transport vehicles do not comply with these requirements due to savings and discharge untreated domestic wastewater directly into the river [2].

Pollution and clogging of inland waterways is mainly due to the use of various types of vessels - both transport and pleasure. Inland waterways according to Article 1, Clause 11 of the Law of Ukraine "On Inland Water Transport" include surface waters (except for seaports, navigable canals and inland waters), classified by the Cabinet of Ministers of Ukraine in the prescribed manner to the category of navigable, enshrined in the Resolution Cabinet of Ministers of Ukraine 36136 "On approval of the list of inland sea waters and inland waterways classified as navigable" from 09.02.2022 (Law and Resolution) The list was developed and adopted pursuant to the Law of Ukraine "On Inland Water Transport" and Water Code of Ukraine, which includes 80 navigable areas.

Inland waterway sections of Ukraine included in the European Agreement on the Most Important Inland Waterways of International Importance as elements of the category E waterway network. These include 18 sections. Other navigable sections of inland waterways include 13 rivers and 5 reservoirs. The areas of inland sea waters include 18 seaports and 24 approaching sea canals. The document regulates all waterways, allows you to clearly define the parameters of operational dredging or increase the dimensions of the course, in particular, in the formation of the plan of road works [3].

According to environmentalists who have made a classification of polluting water from ships, the most common pollutants in rivers are sewage and bilge water. Black water is sewage from toilets and medical facilities that may contain harmful bacteria, pathogens, viruses, intestinal parasites and harmful nutrients. Discharge of untreated or inadequately treated

wastewater can cause bacterial and viral contamination of fisheries, posing a risk to public health. Nutrients in wastewater such as nitrogen and phosphorus contribute to excessive algal blooms, which consume oxygen in the water and can lead to the death of fish and the destruction of other aquatic organisms.

Gray water is wastewater from sinks, showers, galleys, laundry and on-board cleaning. It may contain a variety of contaminants, including fecal coliforms, detergents, oil and grease, metals, organic compounds, petroleum hydrocarbons, nutrients, food waste, medical and dental waste. Waters are also very damaging to water bodies. Bilge water may also contain solid wastes and contaminants that contain high levels of oxygen, oil and other chemicals [4].

In addition to ships, the sources of river water pollution include the following:

Farms. Contamination with large amounts of chemical fertilizers, pesticides, herbicides, insecticides and organic wastes that are washed away and enter surface and groundwater, as well as pollution from large livestock complexes. It should be noted here that in order to prevent pollution of surface waters and further aquatic environment, it is essential to strengthen control over discharges that occur precisely as a result of farm activities. Strengthen responsibility for the unauthorized discharge of hazardous wastewater into water objects.

Industrial waste. The main water pollutants include chemical, oil refining and pulp and paper mills, the mining industry, and municipal wastewater. Mercury, copper, fluorine, radioactive particles, iron - "gifts" to rivers from industrial enterprises. Among water pollutants, synthetic detergents have a special place, which are extremely stable and stored in water for years.

Oil leaks. Oil and oil products cause special damage to water bodies, which form a film on the water surface, which impedes gas exchange between water and the atmosphere and reduces the oxygen content of water. As a result of spilling 1 ton of oil, the film covers 12 km2 of water. Clots of fuel oil, settling to the bottom, kill bottom microorganisms involved in the process of self-purification of water. Due to the decay of these sediments contaminated with organic matter, harmful compounds are released, including hydrogen sulfide, which poisons all the water in the river.

Solid waste. Water pollution occurs due to the accumulation of insoluble impurities - plastic bottles, bags, gravel, sand, clay, silt, which is washed away with rainwater from plowed areas (fields). Siltation of rivers is due to the plowing of floodplains and deforestation. Solid particles reduce the transparency of water, inhibit the development of aquatic plants, kill the gills of fish and other aquatic animals, impair the taste of water, and sometimes make it completely unfit for consumption.

Thermal pollution. Water pollution occurs due to the discharge of heated water from thermal power plants, nuclear power plants and other energy facilities. Warm water changes the thermal and biological regimes of water bodies and has a detrimental effect on their inhabitants. Water heated to a temperature of 26-30 ° C has a depressing effect on fish and other inhabitants of the reservoirs, and if the water temperature rises to 36 ° C, the fish dies. In addition, the discharge of warm water into rivers leads to eutrophication, ie accelerated overgrowing of algae and seawater.

Atmospheric pollution. The presence in the air of ash, ash, soot and various gases that fall into the river with precipitation. Oxides of nitrogen and sulfur, combined with oxygen and moisture, cause acid rain, which pollutes the environment [5].

The main measures to prevent pollution of the water basin by transport vessels include:

- prohibition of dumping of polluting waste from vessels in inland waters;
- adoption of international agreements on the cessation of the dumping of all types of waste from ships and the discharge of oil cargoes, water polluted by them in the high seas and oceans within the established zones;

- equipping ships with additional means and facilities for the disposal or disposal of certain types of waste, as well as for the temporary accumulation of part of the waste with their subsequent disposal ashore for disposal or recycling;

- development of new ship designs that would better guarantee the safety of oil cargoes, even in emergency situations.

Conclusions. Analyzing the views of scientists and experts in the field of ecology, it can be noted that today attention is paid to various aspects of preventing pollution from inland waterway vessels and reducing the impact of inland navigation on the environment, namely: a) focus on legislation on wastes generated as a result of ship operation; b) on the modernization and greening of the inland navigation fleet; c) on the economic activity of ports in the context of its impact on the environment; d) take into account further steps to implement the "green agenda" in inland navigation, etc.

The most relevant for the prevention of environmental pollution from inland waterway vessels and river-sea vessels are: prevention of water pollution from inland waterway vessels; reduction of greenhouse gas emissions; reduction of ballast water discharge volumes. It is important to agree with experts that the most important measures to ensure a smooth transition of the inland waterway industry to zero-emission transport are: development of infrastructure necessary for the efficient use of alternative fuels; coordinated policies at the regional and international levels; promoting the commissioning of ships built using decarbonization technologies, as well as a sufficient level of funding and the development of appropriate harmonized norms and standards.

Among the most important current issues usually considered at each session of the Inland Transport Committee of the United Nations Economic Commission for Europe were the decision to prepare a fourth revision of the List of Key Characteristics and Parameters of the Category E Waterway (Blue Book), together with the beginning of the development of a new classification of European inland waterways, proposed by the World Association of Water Transport Infrastructure (PMACS). It is believed that the urgent need for a thorough update of the Blue Book is long overdue, and revision of the publication together with the development of a fundamentally new classification of inland waterways will quickly take into account all recent changes in routes of European shipping rivers and canals [6].

Ukrainian inland navigation rules do not contain the rules contained in the European Inland Navigation Rules (CEVNI) and contain rules applicable to inland waterway transport in the European Region. These include vessel draft marks and scales, ship visual alarms, audible alarms and radiotelephony, waterway marking and navigability, navigation rules, parking rules, signaling and data requirements, water pollution prevention and disposal regulations. The European regulations, which, by the way, are constantly updated, specify the legal and technical basis for national rules for inland waterway navigation in UNECE member states [7]. Therefore, given the commitments made to Ukraine, it is essential to bring national legislation into line with European standards. We should also pay attention to the legislation of other countries, such as Canadian legislation in the field of pollution prevention in the Great Lakes, namely the Great Lakes regulations.

ЛІТЕРАТУРА

1. Information recourse. URL: https://skalapodilska-gromada.gov.ua/news/23-17-00-31-01-2018/ (Date of application: 01.06.2022)
2. Pidluzhna M.M. Problems of legal regulation of wastewater and subsalt water treatment in Ukraine.URL: http://www.sd4ua.org/wp-content/uploads/2015/02/Pidluzhna.docx. (Date of application: 30.05.2022)

3. Press-release: The Cabinet of Ministers approved the List of inland sea waters and inland waterways classified as navigable. URL: https://maritimebusinessnews.com.ua/2022/02/21/284154/ (Date of application: 02.06.2022)
4. Impact of shipping on the environment. URL: https://uk.wikipedia.org/wiki)/vplyv (Date of application: 28.05.2022)
5. Press release: Pollution of rivers in Ukraine: causes and consequences. URL: https://ns-plus.com.ua/2019/07/10/zabrudnennya-richok-ukrayiny-prychyny-ta-naslidky/ (Date of application: 20.05.2022)
6. Press release: Employees of the State Hydrographic Service took part in the 60th session of the Working Group on Unification of Technical Regulations and Safety Rules at the Higher Education Institution. URL: https://maritimebusinessnews.com.ua/2022/02/23/284585/ (Date of application: 31.05.2022)
7. News. Press-release: Ukraine must modernize the Rules of Inland Navigation, - State Hydrography. URL: https://legalhub.online/transport/ukrayina-maye-osuchasnyty-pravyla-sudnoplavstva-vnutrishnimy-vodnymy-shlyahamy-derzhgidrografiya/ (Date of application: 25.05.2022)

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«СУЧАСНИЙ СТАН ПРАВОВОГО ЗАБЕЗПЕЧЕННЯ ЗАХИСТУ ВІД ЗАБРУДНЕННЯ ВНУТРІШНІХ ВОДНИХ ШЛЯХІВ»

Вдосконалення національного діючого законодавства у сфері охорони водного середовища, зокрема внутрішніх водних шляхів, являє собою найважливіше завдання сучасної нормотворчої діяльності, юридичної науки і практики. Ефективність охорони водойм, внутрішніх водних шляхів багато в чому залежить від досконалості законодавства не тільки в екологічній сфері, а й в суміжних галузях, які пов'язані з використання водного середовища. В статті здійснюється аналіз основних факторів, які негативно впливають на екологічний стан внутрішніх водних шляхів, зокрема зазначені основні види забруднювачів водного середовища, а саме: транспортні судна різних типі, пасажирські та прогулянкові судна, фермерські господарства, промислові відходи тощо. В статті наданий аналіз діючого національного законодавства України у частині попередження забруднення водного середовища та аналіз відповідності міжнародним, зокрема європейським стандартам. Зазначається невідповідність норм національного законодавства міжнародним стандартам в екологічній сфері. Визначаються проблеми практичної реалізації заходів щодо запобігання забрудненню річок, каналів тощо. На підставі попередніх досліджень фахівців в екологічній сфері, запропоновано подальші шляхи удосконалення основних напрямків розвитку політики екологічної безпеки на морі України.

Ключеві слова: *екологія, забруднення, євпропейські стандарти, національне законодавсва, попередження.*