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# Overview of New Regulations on Reception and Handling of Ship Waste

## *Osvrt na nova pravila o prihvatu i rukovanju brodskim otpadom*

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### Abstract

In 2019, a new Directive (EU) 2019/883 on port facilities for the reception of ship-generated waste was adopted at the level of the European Union, repealing the old Directive 2000/59/EC of 2000 (hereinafter: Directive (EU) 2019/883). In order to implement the Directive (EU) 2019/883 into the national legal system, in 2021 the Republic of Croatia adopted a new Ordinance on the terms and methods of maintaining order in ports and other parts of the internal sea waters and the territorial sea of the Republic of Croatia (hereinafter: Ordinance) and thus transposed the new regulations on the delivery and handling of ship-generated waste into the Croatian legal system. The aim of the paper is to present the new solutions for the reception and handling of ship-generated waste from the Directive (EU) 2019/883 and to compare the solutions from the Directive (EU) 2019/883 with the Croatian legal framework for the reception and handling of ship-generated waste through a comparative analysis. Finally, an assessment of the creation of an adequate legal framework for the reception and handling of ship-generated waste in Croatian ports is provided, as well as suggestions for filling existing legal gaps. An analysis of the Croatian legal framework has shown that there are mutual inconsistencies, and that there is a need to revise the provisions of the Maritime Code and the Ordinance when receiving and handling of ship-generated waste.

### Sažetak

*Na razini Europske unije je 2019. godine usvojena nova Direktiva (EU) 2019/883 o lučkim uređajima za prihvata isporuke brodskog otpada, kojom se stavlja izvan snage Direktiva 2000/59/EZ iz 2000. godine (u daljnjem tekstu: Direktiva (EU) 2019/883). Kako bi se implementirala Direktiva (EU) 2019/883 u nacionalni pravni sustav, Republika Hrvatska je 2021. godine donijela novi Pravilnik o uvjetima i načinu održavanja reda u lukama i na ostalim dijelovima unutarnjih morskih voda i teritorijalnog mora Republike Hrvatske (u daljnjem tekstu: Pravilnik), te su na taj način novi propisi o predaji i rukovanju brodskim otpadom preneseni u hrvatski pravni sustav. Cilj rada je predstaviti nova rješenja za prihvata i rukovanje brodskim otpadom iz Direktive (EU) 2019/883, te usporediti rješenja iz Direktive (EU) 2019/883 s hrvatskim zakonskim okvirom za prihvata i rukovanje brodskim otpadom kroz komparativnu analizu. Dana je procjena formiranja odgovarajućeg pravnog okvira za prihvata i rukovanje brodskim otpadom u hrvatskim lukama, kao i prijedlozi za popunjavanje postojećih pravnih praznina. Analiza hrvatskog pravnog okvira pokazala je da postoje neusklađenosti te da je potrebno revidirati odredbe Pomorskog zakonika i Pravilnika tijekom prihvata i rukovanja brodskim otpadom.*

### KEY WORDS

ship waste  
port reception facilities  
waste reception and handling plan  
EU regulation  
the Republic of Croatia

### KLJUČNE RIJEČI

brodski otpad  
lučki uređaji za prihvata  
plan prihvata i rukovanja otpadom  
uredbe EU  
Republika Hrvatska

## 1. INTRODUCTION / Uvod

Despite the efforts of the International Maritime Organization (IMO) and the European Union (EU), waste is still dumped into the sea, causing significant environmental, social and economic costs [1] [2] [3] [4]. There are several reasons for this. One of them is certainly the lack of port reception facilities.

Even if they exist, they are often not suitable for receiving a particular category of ship-generated waste. While waste is sorted on board in accordance with the provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL Convention), the reception of this sorted waste by the Port Authority or authorized operators is not possible

and it is received in the same containers [5]. Without proper reception of properly sorted waste from ships, its further recovery in the waste management chain cannot be ensured, and thus its harmful impact on the environment cannot be prevented.

Since the Commission Communication of 2 December 2015 entitled "Closing the Loop – An EU Action Plan for the Circular Economy" recognizes the lack of motivation of ships to deliver waste to port reception facilities, the cost recovery system was redefined, and the application of indirect compensation by the ship has been prescribed regardless of the waste delivery [6].

The aim of the paper is to determine whether Croatian regulations on the reception and handling of ship-generated waste are harmonized with international and EU regulations. It also analyses and determines the conformity of the legal norms contained in the *Maritime Code*, the *Ordinance* and the *Decree on the conditions and manner of maintaining order in ports* (hereinafter: *Decree*), and makes recommendations for their revision. The aim of the paper is also to determine the obligations of individual stakeholders in the ship waste management system and to identify possible obstacles in its implementation.

The paper is divided into six parts. The second part reviews the literature on the legal regulation of the reception and handling of ship-generated waste at the EU and national levels, the system of fees for the reception of ship-generated waste, and the impact of certain activities such as cruise tourism on the port system. The third part is devoted to the activities of the IMO in the field of reception and handling of ship-generated waste. The fourth part analyses the provisions of the *Directive (EU) 2019/883* related to the scope of application, the obligation to adopt a waste reception and handling plan and the rights of stakeholders in case of dissatisfaction with the service provided. The fifth part is devoted to a detailed analysis of the Croatian regulations on the reception and handling of ship-generated waste. The last part contains final considerations and proposals for the elimination of the identified discrepancies.

## 2. LITERATURE REVIEW / *Pregled literature*

Numerous authors have dealt with the subject of ship-generated waste in various segments. In 2017, Svaetichin and Inkinen [7] spoke about the importance of having an appropriate legal framework and management system in place as a prerequisite for successful ship-generated waste management. They advocate for uniform legal regulations and procedures in ports, as well as an assessment system that leads to better environmental protection and maintains the equal competitiveness of ports. In his 2020 paper, Argüello [8] talks about the need to legislate ship waste handling in a broader context and assesses the integration of ship-generated waste management into the broader EU waste legislation and national waste management plans. It also clarifies how and to what extent the obligations under the *Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Waste Framework Directive 2008/98/EC)* apply to ship-generated waste management [9]. In their 2022 paper, Puig et al. [10] focused on the environmental management system in the European port sector and pointed out that the general trend of EU ports is to be proactive in terms of environmental management and implementation of the green transition. For port authorities, the main challenge in the greening process is often the limited impact it can have on the many activities and operations that take place in the port. In 2008, De Langen and Nijdam [11] conducted an analysis of the impact of different fee systems for receiving ship-generated waste in three leading north-western European ports. The analysis found significant differences in the fee systems and showed that these differences “distort the playing field”. The disruption puts pressure on ports not to adopt the most environmentally friendly charging system.

In scientific circles, special attention is paid to the relationship between cruise tourism and its impact on the

environment. In their 2018 paper, Slišković et al. [12] analysed data on the delivered amounts of ship-generated waste from passenger ships in the three main passenger ports in Croatia: Dubrovnik, Split, and Zadar. It emphasizes the importance of proper assessment of the amount of ship-generated waste and the establishment of an appropriate ship-generated waste management system. In 2019, Nikčević [13] concluded that pollution of the marine environment by cruise ships with various substances is a potential threat and a major problem for the regions through which cruise ships pass. In order to enhance the positive impacts of cruise tourism and reduce the negative ones, it is important to formulate and implement an appropriate legal measure. In 2019, Ntente et al. [14] presented the activities of Greece regarding the establishment of an appropriate system for the reception and handling ship-generated waste. It is emphasized that IMO promotes voluntary cooperation between ports and the maritime sector in solving such problems, which highlights the urgency of developing a legal framework for waste management.

In their paper from 2020, Andres et al. [15] conclude that the legal regulation of ship waste management in Spanish ports is contained in different regulations and has many differences depending on the specifics of each port. In their 2016 paper, Keçi and Metalla [16] point out that waste management planning and its implementation is an important economic, technical, environmental and administrative issue for Albanian authorities. They also advocate an integral approach to management that includes coordination mechanisms between government agencies, local self-government bodies, the public sector and the private sector.

The review of the literature shows that the issue of systematic management of ship-generated waste attracts the attention of the scientific public, as well as the efforts of the states to establish an appropriate legal framework. Although international standards and rules exist at the level of the EU, countries encounter certain difficulties in their implementation. The establishment of a system for the reception and handling of ship-generated waste depends on the category and number of vessels calling at a particular port, the length of stay in the port, the area of navigation, etc. In addition to the reception and further recovery of ship-generated waste, other issues include the existence of appropriate reception facilities, the establishment of a system of fees that is not a deterrent for ships, the education of stakeholders on the importance of protecting the marine environment, and the role of control bodies to sanction the violation of regulations.

## 3. IMO ACTIVITIES IN THE PREVENTION OF SEA POLLUTION BY SHIP WASTE / *Aktivnosti IMO-a u sprječavanju onečišćenja morskog okoliša brodskim otpadom*

The protection of the marine environment, along with the safety of navigation, is one of the fundamental tasks of the IMO, which has worked continuously for more than half a century to improve preventive measures and mechanisms to protect the marine environment from various sources of pollution. The most powerful instrument is certainly the MARPOL Convention, which sets out numerous operational and technical requirements for ships in six annexes [5]. The standards and measures concern the prevention of pollution by oil (Annex I), the prevention of

pollution by noxious liquid substances (Annex II), the prevention of pollution by harmful substances carried by sea in packaged form (Annex III), the prevention of pollution by sewage from ships (Annex IV), prevention of pollution by garbage from ships (Annex V) and prevention of air pollution by ships (Annex VI) [5].

The MARPOL Convention requires that cargo residues and waste that cannot be discharged into the sea in accordance with the prescribed requirements should be transferred to port reception facilities. The issue of the use of port reception facilities is governed by provisions 38 of Annex I, 18 of Annex II, 12 of Annex IV, 7 of Annex V and 17 of Annex VI [5, 17].

Annex V of MARPOL Convention imposes a prohibition on the discharge of ship-generated waste into the sea, except in exceptional cases. In order to dispose of ship-generated waste in an environmentally friendly way, several mechanisms have been established to monitor the implementation of the requirements. The obligation to keep a Garbage Record Book on board, as required by Provision 9 of Annex V, applies to all ships of 400 gross tonnage and above, and to all ships certified to carry 15 or more persons [5].

Information on every disposal or incineration of waste has to be recorded in the Garbage Record Book, and it must be kept for two years from the last entry.

In addition to the Garbage Record Book on board, a ship has to have a Ship Waste Management Plan that prescribes procedures for the collection, separation, and processing of waste, i.e. the preparation of waste for delivery to port reception facilities [5].

In order to successfully implement the requirements for on board waste sorting and on land waste delivering, states should provide adequate reception facilities, especially within special areas. Port reception facilities must meet two requirements, first adequacy, i.e., sufficient capacity for receiving ship-generated waste and second, the process of receiving and disposing of ship waste must be designed so that it does not result in unnecessary detention of the ship in port. To meet this second condition, the administration of each state should establish an organized system with well-developed cooperation and communication with operators and other stakeholders.

The Marine Environment Protection Committee (MEPC) adopted the *Consolidated Guidance for port reception facility providers and users* (MEPC 1/Circ./834/Rev.1) in 2018. It represents an appropriate consolidation of previous documents as it includes the Guidelines for good practice for operators and users of port reception facilities (MEPC.1/Circ.671/Rev.1, as well as other four documents related to port reception facilities (MEPC.1/Circ.469/Rev.2, MEPC.1/Circ.644/Rev.1, MEPC.1/Circ.645/Rev.1 and MEPC.1/Circ.470/Rev.1) [18].

This document is intended for members of the ship's crew who are required to collect, properly select and deliver ship-generated waste to port reception facilities, as well as to port reception facility operators who are responsible for the timely and efficient receipt of ship-generated waste for further processing. This instruction provides examples of good practices for ship owners, masters and operators and examples of good practices for port reception facility operators, as well as three standard forms. The first relates to the ability to report the inadequacy of port reception facilities. The second form is used prior to the ship's arrival in port and refers to the prior notice of ship-generated waste delivery, in which the master

provides information on the type and quantity of waste he or she intends to deliver to port reception facilities at a particular port. In order for operators to keep data on collected waste in a uniform manner, a special form, a *Waste Delivery Receipt*, has been designed. Since these certificates are submitted to both the authorities that manage the ports and the relevant state authorities, they provide a good method for collecting data on the type and amount of waste collected [18].

In addition to the *Consolidated Guidance for port reception facility providers and users*, the MEPC also adopted the Action Plan in 2018 to address marine plastic litter from ships. The Action Plan was adopted in order to help address the problem of ship-generated plastic release into the marine environment.

The Action Plan defines eight expected outcomes with prescribed actions to achieve them by 2025. The first outcome aims to reduce the generation of plastic waste from fishing boats. The second outcome relates to reducing the contribution of shipping to marine plastic waste generation in general.

The insufficient efficiency of port reception facilities is also identified as one of the weak points in this Action Plan, so one of the outcomes of the Action Plan is precisely aimed at improving this efficiency. Another outcome is to raise the awareness of stakeholders on the importance of proper ship waste management is also an outcome. This can certainly influence the successful implementation of the established requirements. The need for continuous information and guidance on the application of good practices is not only addressed to seafarers, but also to other stakeholders such as operators and concessionaires who perform certain economic activities in the port area, so the establishment of appropriate training programmes is also encouraged.

One of the outcomes relates to improving the understanding of the legal framework to address the problem of plastic waste in the sea. The objective is to monitor the results of the established system, analyse the advantages and disadvantages and adopt measures to improve it [18].

In summary, the IMO is committed to finding solutions for the environmentally friendly management of ship-generated waste, and the MARPOL Convention itself has been the basis for the adoption of numerous other documents, particularly those adopted at the EU level.

#### **4. NEW EU REGULATIONS ON SHIP WASTE RECEPTION AND HANDLING / *Nova pravila Europske unije o prihvatu i rukovanju brodskim otpadom***

The fact that almost two decades have passed since the adoption of the first *Directive 2000/59/EC*, which regulates the issue of receiving waste and cargo residues from ships, was sufficient reason for the EU to revise the existing regulations and adopt new legislation that would follow the solutions at the international level. The *Directive (EU) 2019/883* on port reception facilities for the delivery of waste and cargo residues from ships brings EU law in line with international obligations under the MARPOL Convention. It has been amended several times since 2000 and significantly tightens the regulations on the possibility of discharging ship-generated waste and cargo residues into the marine environment. The increase in maritime traffic, both cargo and passenger, inevitably leads

to an increased volume of ship-generated waste that should be transferred to port reception facilities and then forwarded for further processing or recovery. This poses certain challenges for the authorities managing the ports and the overall waste management system at the state level. The *Directive (EU) 2019/883*, like its predecessor, is the main instrument for achieving more environmentally friendly maritime transport.

The paper analyses the scope of the *Directive (EU) 2019/883*, the role of the waste reception and handling plan, which is the basic document for the implementation of the prescribed procedures and measures, and the possibility for port users to raise complaints if they are not satisfied with the quality of ship waste reception service.

#### **4.1. Application scope of the Directive (EU) 2019/883 / Polje primjene Direktive (EU) 2019/883**

The scope of the *Directive (EU) 2019/883* is defined in Article 3 in relation to both ships and ports. The *Directive (EU) 2019/883* applies to all ships, regardless of their flag, that dock in any of the ports of the Member States or sail within the ports of the Member States.

However, two groups of ships are exempt from its application. The first group is warships and public ships. The second group consists of ships engaged in port activities, including ships used for fuel supply, cargo handling, mooring, collection of ship-generated waste and cargo residues, pilotage and towing, as described in the *Regulation (EU) 2017/352 of the European Parliament and of the Council establishing a framework for the provision of port services and common rules on financial transparency of ports* [19, 20].

Notwithstanding the exemption from application, the Member States are encouraged to take measures to ensure that ships falling outside the scope of the *Directive (EU) 2019/883* deliver their waste in a manner consistent with that *Directive* where possible.

The *Directive (EU) 2019/883* applies to all ports of the Member States to which these ships normally call. It should be noted that the *Directive (EU) 2019/883* is not based on the classification of ports according to their importance, so that small ports, or ports of local importance, are included. However, there is an exception for small, non-commercial ports, characterized by sparse or low traffic of purely recreational craft. They may be exempt from the requirement to prepare and implement a waste reception and handling plan if their waste reception facilities are integrated into a waste management system operated by or on behalf of the municipality concerned. In this case, it must be ensured that the information on the waste management system is made available to the users of these ports [19].

The effectiveness of the establishment and implementation of an appropriate system for the reception and handling of ship-generated waste will certainly depend on the information available to the Port Authority. In order to obtain data on the ships that commonly call at a particular port, the entity that manages the port should keep continuously and responsibly a database of ship records, which has proven to be an appropriate problem or shortcoming. Data on the number and category of ships that commonly call at the port will provide the basis for deciding on the required capacity of port reception facilities and the need to contract with appropriate operators.

#### **4.2. Waste reception and handling plan / Plan prihvata i rukovanja brodskim otpadom**

The basic document setting out the procedures and conditions for the delivery, reception and further processing of ship-generated waste is the waste reception and handling plan. Member States shall ensure that an appropriate waste reception and handling plan is prepared and implemented for each port. The *Directive (EU) 2019/883* provides for the possibility of two or more neighbouring ports in the same geographical region jointly preparing a *Ship Waste Reception and Handling Plan*, although the need for port reception facilities and their availability should be identified separately for each port. This possibility is based on the criterion of efficiency and it is expected to be used in cases where a single Port Authority manages several ports in its area. The *Directive (EU) 2019/883* imposes another condition, namely the adequate commitment of each port. In the implementation of this measure, the question of how to determine this commitment will arise. The main contribution of an individual port will be to collect data on turnover or the number and type of facilities used that usually affect the port, as well as data on the amount and type of ship waste received.

The adoption of the plan will be preceded by another activity, namely the consultation with interested parties. In contrast to the *Directive 2000/59/EC*, which considered port users as the relevant parties in the first place (Article 5 paragraph 1), the *Directive (EU) 2019/883* extends this scope [19, 21]. The very wording of the provision of Article 5 paragraph 1 of the *Directive (EU) 2019/883* suggests that consultation is mandatory primarily with port users or their representatives, while it is left to the discretion of the managing body of the port in the case of others. These may include local authorities, port reception facility operators, organizations implementing extended producer responsibility obligations and civil society representatives.

The *Ship Waste Reception and Handling Plan* shall be approved at least every five years. A comparison with the *Directive 2000/59/EC* shows that the validity period of the *Ship Waste Reception and Handling Plan* has been extended from three to five years [21].

The revision of the plan can be done earlier the operation of the port changes significantly. The *Directive (EU) 2019/883* suggests what these changes may include. They are structural changes in traffic to the port, the development of new infrastructure, changes in the demand and availability of port reception facilities and new onboard waste treatment techniques. The *Directive 2000/59/EC* provides that the re-approval of the plan is required *whenever there is a significant change in the operation and functioning of the port* [21].

The plan specifies, among other things, the procedure for the exchange of information during the delivery and reception of ship waste. In order to avoid unnecessary delays or detention of a ship in port and to provide operators with appropriate port reception facilities in a timely manner, the ship is required to provide information on ship-generated waste prior to arriving at the port. According to Article 6 paragraph 1 of the *Directive (EU) 2019/883*, the shipowner, agent or master of the ship is obliged to provide the data [19]. Comparing this solution with the provision of the *Directive 2000/59/EC*, only the master of the ship is responsible for sending this information. The data is submitted electronically using the prescribed form *Prior notice*

of waste delivery. The ship is obliged to keep the information from the *Prior notice of waste delivery* at least until the next port of call. Ships engaged in liner shipping with frequent and regular berths in the port may be exempted from the obligation to send prior notification of the delivery of ship-generated waste if the prescribed conditions are met.

#### 4.3. Procedure of appeal / *Postupak ulaganja prigovora*

Member States shall ensure the availability of port waste reception facilities. These reception facilities should meet the requirements of ships normally calling at the port so as not to cause unnecessary delays.

Article 4 paragraph 3 of the *Directive (EU) 2019/883* sets out the procedures and forms to be used when port reception facilities are not suitable and refers to the use of the forms as adopted by the IMO [19].

The entity that manages the port is required to establish a special commission to receive complaints from ships that relate to the inadequacy of port facilities. The commission also reports all complaints to the relevant ministry. In order to ensure transparency and exchange of data on the condition of port reception facilities, States are required to provide data on the investigation conducted to the IMO, as well as to the flag state of the ship that filed the complaint. In order to prevent this remedy from being abused and complaints from being filed frequently and without good reason, the MEPC has published a special form (*Format for reporting alleged inadequacies of port reception facilities*) that must be used by all ships to which the *Directive (EU) 2019/883* applies.

Member States are required to inspect 15% of ships calling at their ports to verify compliance with waste regulations. In 2022, the Commission adopted the *Commission Implementing Regulation (EU) 2022/90 of 21 January 2022 laying down detailed rules for the implementation of the Directive (EU) 2019/883 of the European Parliament and of the Council as regards the details of the Union risk-based targeting mechanism for the selection of ships for inspection*. This Implementing Regulation establishes a mechanism for the selection of ships for inspection based on common criteria, so that the selection is carried out in the same way throughout the EU [22].

Member States shall ensure that any party involved in the delivery or receipt of ship-generated waste may claim compensation for damage caused by undue delay. The question is what constitutes *undue delay* and how to prove that it has occurred. This is a very important issue as it represents the legal basis for claiming damages. Since the *Directive (EU) 2019/883* does not define the concept *undue delay*, the Commission must fill the relevant legal gap by explaining the meaning of the concept in its future guidelines for interpretation.

## 5. LEGAL REGULATION OF SHIP WASTE RECEPTION IN THE REPUBLIC OF CROATIA / *Pravno uređenje prihvata broskog otpada u Republici Hrvatskoj*

In the Republic of Croatia, the *Maritime Code*, the *Decree on the conditions to be met by ports*, and the *Ordinance* prescribe the obligation to deliver ship-generated waste and to adopt and implement the *Ship Waste Reception and Handling Plan*.

## 5.1. Obligation to deliver ship waste according to the provisions of the Maritime Code / *Obveza predaje broskog otpada prema odredbama Pomorskog zakonika*

Provisions on the obligation to deliver ship-generated waste are contained in Part Three, Chapter Ia of the *Maritime Code*, which relates to protection against pollution from maritime facilities, and in Chapter III, which contains the provisions on ports and other parts of inland waters. The *Maritime Code* imposes a general prohibition on the discharge and disposal of solid and liquid waste, oily water, faecal matter and cargo residues from a maritime facility, as well as any other substances polluting the sea, air, or coast, into the sea and onto the coast (Article 49 b). It also prescribes the obligation to deliver ship-generated waste to port reception facilities (Article 49c) [23].

The master of the ship is obliged to deliver all ship-generated waste to port reception facilities before leaving port, unless previously submitted data indicates that the ship's capacity intended for waste collection is sufficient for all ship-generated waste to be collected on the planned voyage to the port where it will be delivered (Article 49d paragraph 2) [23]. Obligated to adopt and implement the *Ship Waste Reception and Handling Plan* are Port Authorities and concessionaires of special purpose ports (Article 56a). An important mechanism for the protection of the marine environment is contained in the misdemeanour measures for violations of the prescribed procedures. The ship master, a member of the crew, the shipowner, the shipper and the company, as well as the responsible person in the legal entity are considered as responsible persons [23].

Since the described solutions are based on the *Directive 2000/59/EC*, it is necessary to initiate the procedure for amending the *Maritime Code* in order to harmonize it with the new *Directive (EU) 2019/883*. The amendments to the *Maritime Code* should include the definition of *ship waste* and *cargo residues*, harmonization of the legal terminology starting from the *Ship Waste Reception and Handling Plan* (the *Maritime Code* uses the term *Plan for the reception and handling of waste and cargo residues*). It should also establish the system of charges and the criteria for their reduction in accordance with the solutions in the *Directive (EU) 2019/883* and regulating the procedure in case of inadequacy of port reception facilities.

## 5.2. The Decree on the conditions to be met by ports / *Uredba o uvjetima kojima moraju udovoljavati luke*

The *Decree on the conditions to be met by ports* was adopted in 2004 based on the *Maritime Domain and Seaports Act*. It has not been updated and its solutions are based on the *Directive 2000/59/EC*, which has since been repealed. Therefore, the *Decree* is not an appropriate legal source for regulating the reception of ship-generated waste.

The *Decree* addresses the issue of ship-generated waste reception on three occasions: adoption of the definition of waste and waste reception facilities (Article 2), obligation to adopt a plan (Article 3 of the *Decree*), and obligation to submit annual reports on the condition of the facility to the competent ministry [24]. Ship-generated waste is defined as all waste, including faecal matter and residues, generated during the operation of the ship and referred to in Annexes I, IV and V of MARPOL Convention, excluding cargo residues. This provision is deficient because it does not cover MARPOL Convention

Annexes II and VI, which cover measures for preventing the pollution of the marine environment by residues of harmful chemicals in bulk and the prevention of air pollution by ozone-depleting substances and residues from exhaust gas purification [24].

Article 3, paragraph 1, item 7 of the *Decree* provides for the obligation of the port to inform port users of the location of reception facilities, together with a description of the type of waste and cargo residues from ships that can be received, and instructions on how to use the reception facilities, the list of operators and services offered, the description of the unloading procedure and reporting procedures on the bulletin board. The new provisions of the *Directive (EU) 2019/883* prescribe a new way of communicating the intention to deliver ship-generated waste to port reception facilities, electronically or on the official website of the Port Authority, so this provision is not satisfactory.

The last provision on the reception of ship-generated waste refers to the obligation to provide data to the competent ministry. Pursuant to Article 14 of the *Decree*, concession holders in ports are obliged to inform the competent ministry once a year about the condition of the facilities for receiving waste and cargo residues from vessels [24]. Comparing this provision with the one from the *Ordinance*, it is clear that it only contains data on the condition of the facility, but not data on the amount and type of waste collected, the categories and types of vessels that have called at the port in the past year and the duration of the stay, as well as data on the total annual cost of receiving, collecting and processing waste by type of waste.

### 5.3. Ship waste reception and handling in accordance with the Ordinance / *Prihvat i rukovanje brodskim otpadom sukladno Pravilniku*

#### 5.3.1. Application scope of Chapter V of the Ordinance / *Polje primjene Glave V. Pravilnika*

The implementation of the *Directive (EU) 2019/883* in the Croatian legal system was achieved by adopting a new *Ordinance on the conditions and manner of maintaining order in ports and other parts of the internal sea waters and territorial sea of the Republic of Croatia* in 2021.

The provisions on the reception and handling of ship-generated waste are contained in Chapter V of the *Ordinance*. This *Ordinance* introduces new terms that are important for the reception, handling, storage and treatment of ship-generated waste such as: port reception facility, port reception facility operator, passively fished waste, sufficient storage capacity, regular and frequent berths in the port and processing. The *Ordinance* from 2021 also changed the definition of ship-generated waste and cargo residues. The ship required to deliver ship-generated waste is defined extensively. It includes ship, submarine, yacht, boat, fixed offshore facility or floating facility, unless otherwise specified in the provisions of the *Ordinance* (Article 57, paragraph 1, item 1) [25].

Ship-generated waste means all waste, including cargo residues, generated during the operation of a ship or during loading, unloading and cleaning operations and falling within the scope of Annexes I, II, IV, V and VI of the MARPOL Convention, as well as passively fished waste. The *Directive 2000/59/EC* did not recognize passively fished waste as a category of waste, but the *Directive (EU) 2019/883* introduced passively fished waste. The Republic of Croatia, as a Member State, is obliged to ensure the collection of data on monitoring the volume and quantity of passively fished waste and to inform the Commission. The Commission is obliged to publish

the first report on the amount of passively fished waste by 31 December 2022, and the next reports every two years.

The introduction of a new definition of ship-generated waste, as well as additional categories of waste, requires an amendment to the existing implementing legal acts, which should be made by the body managing the port. The port management body should adopt a new *Ship Waste Reception and Handling Plan*. It should prescribe the procedures and conditions for receiving ship-generated waste according to the new categorization of ship waste, but also provide appropriate port reception facilities or, if they are not able to receive and further process ship waste independently, conclude a concession agreement with the relevant operators. The port reception facility operator shall be the port management body or any legal or natural person to whom the port management body has granted a concession, in accordance with the provisions of special regulations, to carry out a registered port waste reception activity in the port area open to public traffic or to operate on the basis of a commercial contract in a special purpose port [25].

The *Ordinance* regulates the procedure for submitting information on the intention to deliver ship-generated waste in a specific port, and establishes deadlines and possible exemptions from its application [10]. The prescribed procedure allows for the best possible planning of ship-generated waste reception by the authorized operators, thus avoiding unnecessary detention of ships in port. In order to relieve the administration from the obligation to provide prior information on ship-generated waste, certain types of ships are exempted, namely: ships with a gross tonnage 300 and less, warships, public ships, liners, fishing boats, traditional ships and yachts with an overall length of less than 45 meters (Article 65) [25]. The possibility of exemption is based on the application of the *Directive 2002/59/EC* establishing a navigation control system and a Community information system (Article 2).

#### 5.3.2. Ship waste reception and handling plan / *Plan prihvata i rukovanja brodskim otpadom*

Article 61 paragraph 1 of the *Ordinance* requires the entity managing the port to adopt the *Ship Waste Reception and Handling Plan (Plan)*, which refers to the Port Authority in case of a port open to public traffic and to the concession holder in the case of a special purpose port. Although the *Directive (EU) 2019/883* provides for the possibility of adopting a *Plan* for a period of up to five years, the *Ordinance* provides that the *Plan* shall be adopted for a period of three years, unless substantial changes have been made. In this case, it is necessary to carry out the procedure of harmonization of the *Plan* earlier than the prescribed deadline. The implementation of the *Plan* is monitored by the competent *Harbour Master's Office*. If substantial changes are detected, the *Harbour Master's Office* shall issue a decision ordering the body managing the port to harmonize the *Plan*.

The *Ordinance* provides for the possibility of exempting ports open to public transport and of local importance as well as special purpose ports for nautical tourism from the obligation to prepare the plan [25]. Exemption is possible if their waste reception facilities are integrated into a waste management system operated by the competent local or regional self-government unit or a legal entity on its behalf. The authority managing the port under whose jurisdiction these ports are located shall ensure that information on the waste management system is made available to the users of these ports. Exemption information is provided to the SafetySeaNet system [25].

The mandatory content of the *Plan* is prescribed in Article 62 paragraph 3 of the *Ordinance* and varies from port to port, depending on the size of the port, the needs of the ships that normally call at particular ports, and the type and amount of waste delivered to port reception facilities [25].

### 5.3.3. Cost recovery system / *Sustav naknada*

The European legislator has not prescribed any duty to establish and apply a uniform cost recovery system that should be applied in all European ports, but has allowed Member States to create different cost recovery systems. Charges may vary depending on: a) the category, type and size of the ship, b) the provision of services to ships outside the port's regular business hours, or c) the risk of waste [26].

The *Ordinance* prescribes two types of fees: a) an indirect fee paid by all ships regardless of whether they deliver waste to the port reception facility and b) a direct fee charged if the amount of ship waste delivered from Annex V of the MARPOL Convention exceeds the maximum storage capacity of the ship, as well as for the reception and treatment of waste from the ship's exhaust gas purification system [25, 26]. The reduction of the fee may be due to the fact that the ships perform a certain type of traffic (liner traffic) or that the ship generates lower quantities of waste due to its design, equipment and work processes, produces reduced amounts of waste or manages its waste in an environmentally friendly way [25].

### 5.4. The role of individual stakeholders in the process of ship waste reception and handling / *Uloga pojedinih dionika u postupku prihvata i rukovanja brodskim otpadom*

In order to make the ship waste reception and handling system efficient and sustainable, additional efforts are required from all stakeholders involved. Port Authorities, i.e. concession holders in special purpose ports, ship representatives and authorized port reception facilities operators play the leading role.

The **entity managing the port** must ensure that the operators of approved reception facilities carry out the activities of receiving and handling ship-generated waste in accordance with the agreed conditions and take all necessary actions and measures to ensure proper reception and handling of ship-generated waste. In order to monitor changes in the required capacity and types of reception facilities, it is necessary to consult regularly with port users, authorized port reception facilities operators, operators who maintain a regular liner traffic and other operators who normally use the port, as well as other interested persons and entities.

In order to monitor the quantities and types of ship-generated waste delivered to port reception facilities, and to adjust the need for appropriate capacity and types of reception facilities based on the data obtained, it is important that the port management body monitors the submission of annual reports on ship types and quantities of waste received from ships by authorized port reception facilities operators, and if operators fail to submit the required reports or if they are not complete, it is important to require their submission. In any case, the concession contracts concluded by the port management body with the authorized operator should certainly contain a provision regulating the obligation to submit these reports.

**Ship representatives**, i.e. the ship master and agent, each in their part should provide complete and accurate information on the amount and type of ship-generated waste which the ship intends to deliver to port reception facilities. Thus, the basic obligation

of the master is to ensure that ship-generated waste is sorted in accordance with the requirements of the MARPOL Convention, as this is a prerequisite for the organization of appropriate reception facilities and ensures continuity in the classification of received waste for further processing and recycling.

The ship master receives a waste delivery receipt from the authorized port reception facility operator containing detailed information on the type and quantity of ship-generated waste received and is required to keep it for at least two years.

The data on the type and quantity of ship waste should be entered into appropriate information systems, in the Republic of Croatia this is the Croatian Integrated Maritime Information System (CIMIS). The agent, as the contractual ship representative, is responsible for the timely entry of data into the CIMIS system and for the acceptance and payment of invoices on behalf of the master issued by the authorized port reception facility operator.

In order to be familiar with the content of national rules and to harmonize their activities with the prescribed procedures, the ship's agent is obliged to familiarize the master and crew with the content of the national regulations that apply in a particular port area. This will ensure that the ship is ready to comply with the prescribed procedures for the delivery of ship waste and avoid unnecessary retention of the ship in port.

Those involved in the process of planning, delivery and receiving ship-generated waste certainly include the **port reception facilities operators** who are authorized to receive related ship-generated waste under a concession agreement with the Port Authority or in special purpose ports. One or more operators may operate in a specific port area. The responsibility of authorized operators is reflected in the fact that they are authorized to receive certain types of ship-generated waste, that they have sufficient capacity and that their services are provided in a timely manner and the fees set are fair, transparent and stimulating.

## 6. CONCLUSION / *Zaključak*

By adopting the *Ordinance* in 2021, the Republic of Croatia implemented the *Directive (EU) 2019/883* into the Croatian legal system, thereby creating an appropriate legal framework for the reception and handling of ship-generated waste in Croatian ports. However, in addition to the adoption of the *Ordinance*, there has been no revision of other regulations that contain provisions on the reception and further treatment of ship-generated waste. The coexistence of several laws and regulations may lead to some difficulties in implementation. It would be advisable to revise the *Decree on the conditions to be met by ports* (in part related to the *Ship Waste Reception and Handling Plan*) or to keep the general provision on the adoption and implementation of a plan for the reception and handling of ship waste without explaining its content, expiration date and other important elements. The complexity of the problem of the parallel existence of several legal regulations regulating the same legal issue is also evident in comparing the title of the basic document on the ship-generated waste reception. Thus, the *Decree* provides for the adoption of a *Plan for the reception and handling of waste from vessels and cargo residues from vessels*, the *Maritime Code* uses the wording *Plan for the reception and handling of waste and cargo residues*, and the *Ordinance* requires the adoption of the *Ship waste reception and handling plan* as defined in the *Directive (EU) 2019/883*.

The *Ordinance* introduces a number of innovations to help reduce the release of ship-generated waste into the marine



environment and ensure the effective use of port reception facilities. The cost recovery system is based on the collection of an indirect fee for the delivery of ship-generated waste, without distinguishing between the different types of ships, and all ships (except those to which the *Ordinance* does not apply) are required to pay a fee for receiving and processing ship-generated waste, whether or not they deliver ship-generated waste. To encourage ships to manage their waste in an environmentally friendly way, criteria for reducing compensation and incentive subsidies are prescribed.

The new regulations are intended to reduce the administrative burden on the system, particularly by exempting certain types of vessels from the requirement to provide prior information on ship-generated waste.

The importance of training the port system staff on ship waste management is emphasized to raise awareness of the importance of environmental protection and proper waste management. The inadequate solution in the *Ordinance* is the lack of detailed provisions on the persons to be trained, the body authorized to conduct the training, and the knowledge and skills to be acquired.

The *Directive (EU) 2019/883* and the *Ordinance* require prior consultation with relevant stakeholders before the adoption of the *Plan*, which will expand the range of persons who must or may be involved in the adoption process of the *Plan*. It will strengthen cooperation between stakeholders and identify their needs, including the shortcomings of the existing system.

The *Directive (EU) 2019/883* ensures the right of all parties involved in the delivery or reception of ship-generated waste to compensation for damages caused by undue delay. Since the *Directive (EU) 2019/883* did not define the term *undue delay*, the author considers it necessary to fill the relevant legal gap in such a way that the Commission explains the meaning of this term in its future interpretation guidelines.

The *Ordinance* does not contain any provision on the right to compensation for damage caused to the ship by an undue delay in leaving the port. It is, therefore, suggested that future amendments to the *Ordinance* address the issue of compensation for damages. In order to harmonize national legislation with the provision from Article 16 of *Directive (EU) 2019/883*, a provision should be included in the *Maritime Code*, in the part containing misdemeanour provisions, prescribing misdemeanour measures in case of non-compliance with the provisions on the delivery of ship waste in accordance with the new legal standards.

The effectiveness of the new regulations on the reception and handling of ship-generated waste will largely depend on their application in daily practice and the efforts of the control bodies to monitor their implementation.

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