ECOWAVES

Feasibility study for optimization of port waste capacities

<PP3 - Igoumenitsa Port Authority SA>

<January / 2022>

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1. Introduction

This deliverable is elaborated in the context of the Work Package T2 - *Enhancing the capacities*/Activity T2.3 - *Optimization of port waste reception.*

Pollution of the sea with litter to the extent that we are currently experiencing is an increasing ecological, social, and economic problem. In accordance with European requirements and regulations, ports are obliged to ensure sufficient availability of waste reception facilities. Therefore, it is of strategic importance to enhance the capacities of the ports to dispose separately the waste according to materials or garbage groups. Prior to the purchase of equipment, it will be carried out the feasibility study of the adequacy of reception facilities considering the technical challenges associated with the recovery, treatment, and disposal of ship-generated and port-generated-waste. Once equipment is purchased, the testing phase will follow which will conclude with monitoring report.

The deliverable *T2.3.1 - Feasibility study for optimization of port waste capacities* aims to determine the actual requirements in ports to ensure adequate waste reception facility, to detect the potential obstacles for the establishment of such facilities and to determine the effective ways to overcome these hindrances. It is a technical analysis of integration of the new equipment in the port waste management model. PP5 and PP9 will be in charge to develop feasibility study for the waste reception service optimization for their respective port authorities.

In this deliverable, PP3 presents an updated model of waste management (waste produced from ships) based on the existing ship waste management plan and the new EU Directive 2019/883. Furthermore, the study assesses whether a new investment for waste management facilities, allowing OLIG to monitor and manage the produced waste in-house, is more sustainable and efficient compared to the existing system (waste management and motoring by contractor / external experts).

Thus, this report consists of the following main sections:

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2. General

The Port of Igoumenitsa SA and its ship collection and management system comply with Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on "port reception facilities for the delivery of ship waste" published in No. 3122.3-15/71164/2021 JMC (Government Gazette 4790/18-10-2021). The purpose of the new Directive is to strengthen the protection of the marine environment to reduce discharges into the sea and in particular the illegal dumping of waste and cargo residues from ships using Community ports, by improving the disposal and use of port waste collection facilities. ship and cargo residues.

The above decision applies:

(a) to all ships, regardless of their flag, which arrive or operate in a Greek port, except for ships performing port services within the meaning of paragraph 2 of Article 1 of Regulation (EU) 2017/352 and except warships or auxiliary vessels or other vessels owned or operated by the State and currently used exclusively on a governmental non-commercial basis,

b) in all Greek ports, where ships normally falling within the scope of point (a) usually arrive.

To provide adequate waste reception services to ships approaching the Igoumenitsa Port Authority, (OLIG) cooperates with the licensed companies HELLENIC ENVIRONMENTAL CENTER SA and ANTIPOLLUTION A.N.E. Thus, the receipt and management of the liquid and solid waste of the ships that approach the ports of competence of OLIG is made exclusively by these two companies.

A) The management of ship liquid waste in the company:

HELLENIC ENVIRONMENTAL CENTER - SOCIETE ANONYME MANAGEMENT AND PROCESSING OF PETROLEUM RESIDENTS

Post _ Address: Akti Kondili 10, PC 185 45 PIRAEUS

Tel. : 210 42 90 280/5

Fax. : 210 42 90 286

B) The solid waste management of ships in the company:

ANTIPOLLUTION SHIPPING SOCIETE ANONYME

Post _ Address: Akti Miaouli 57, PC 185 36 PIRAEUS

Tel. : 210 42 92 426/7

Fax. : 210 42 92 710

2.1 Useful Definitions based on JM 3122.3-15 / 71164/2021

For the purposes of this Regulation:

(a) "**ship**" means a vessel of any type operating in the marine environment, including fishing vessels, pleasure craft, hydrofoils, air- craft vessels, submarines and floating vessels;

(b) "**MARPOL Convention**" means the International Convention for the Prevention of Pollution from Ships, in its updated version;

(c) "**ship-generated waste**" means all waste, including cargo residues, generated during the operation of the ship or during loading, unloading, and cleaning operations, falling within the scope of Annexes I, II, IV; V and VI of the MARPOL Convention, as well as wastes caught passively,

(d) "**passively caught waste**" means wastes collected in nets during fishing activities.

(e) "**cargo residues**" means the remnants of any cargo material remaining on board the deck or cargo hold or in tanks after loading and unloading, including overflows and leaks during loading, or unloading, in the wet or dry state or entrained in wash water, excluding cargo dust remaining on deck after scanning or dust on the outer surfaces of the ship,

(f) "**port pick-up facility**" means any fixed, floating or mobile facility capable of providing ship-receiving waste service;

(g) "**fishing vessel**" means any vessel equipped or used commercially to catch fish or other living resources from the sea;

(h) "**recreational craft**" means any type of ship, with a hull length of 2.5 meters or more, regardless of its means of propulsion, which is used for sporting or leisure purposes and is not used for commercial purposes;

(i) "**port**" means a location or geographical area formed by improvement projects and facilities designed to accommodate in particular ships, including the mooring area within the port's jurisdiction;

(j) "**adequate storage capacity**" means an adequate storage capacity of waste on board from the time of departure to the next port of arrival, including any waste likely to be generated during the voyage;

(k) " **regular line** " means a line based on a published or scheduled schedule of departures and arrivals between specific ports or recurring crossings which constitute a recognized timetable;

(l) "**regular berths**" means repeated itineraries of the same ship which constitute a fixed program between specific ports or a series of voyages to and from the same port without intermediate stops;

(m) "**frequent mooring**" means ship arrivals in the same port which take place at least once every fortnight;

(n) "**short sea shipping**" means the carriage of cargo and / or passengers by sea between ports located in the geographical borders of Europe or between these ports and ports located in non-European countries with Mediterranean coasts on the borders of Europe,

(o) "**GISIS**" (Global Integrated Ship Information System): the global integrated maritime information system set up by the International Maritime Organization (IMO),

(p) "**treatment**" means recovery or disposal operations, including preparation prior to recovery or disposal;

(q) "**direct charge**" means a fee paid for the provision of port reception facility services and wholly dependent on the type and quantity of waste;

(r) "**indirect charge**" means a charge paid for the provision of port reception facility services, irrespective of the actual delivery of waste from ships;

(s) "**port management body**": any body that manages the ports of its area of responsibility (such as Port Organizations SA, Port Funds, Municipal Port Funds, municipal port offices, Local Authorities, Hellenic Tourist Properties SA, Private Enterprises). This condition includes all undertakings having private offshore installations on board ships to which this Decision applies,

(k) "**ship waste collection and management service provider**" means any natural or legal person providing collection and management services waste and cargo residues of ships on which these services have been commissioned by the body port management for ships arriving in its area of responsibility,

(u) "**National Competent Authority for the SafeSeaNet Association System (ESA SSN)**": the Maritime Surveillance Department and Ship Traffic Management of the Directorate Maritime Safety of the Ministry of Shipping and Island Policy,

(v) "**competent Service**": the General Secretariat of Ports, Port Policy and Maritime Investments of the Ministry of Shipping and Island Policy,

(w) "**inspection database**" means the database developed, maintained, and updated by the Commission, to which all Member States are linked, and which contains all the information necessary for the implementation of the inspection system provided for in Directive (EU) 2019/883. The database of inspections is based on the database of inspections referred to in article 24 of presidential decree 16/2011 (AD 36), as in force, and has similar functions to this database,

(x) "**mooring**" means a designated sea area near a port, which is outside the area of responsibility of the port management body and within the competence of the relevant Port Authority, which allows short-term mooring of vessels and operations such as refueling, payload, etc.

2.2 Requirements for waste collection and management plans in ports

It is considered appropriate to present the requirements for ship reception and waste management plans, in accordance with Annex I of JM 3122.3-15/71164/2021 and which are met by this regulation.

Waste collection and management plans cover all types of waste from ships that normally arrive at the port and are drawn up according to the size of the port and the types of ships that arrive at it.

Waste collection and management plans include the following elements:

(a) an assessment of the need for port reception facilities, based on the needs of ships normally arriving at port;

(b) a description of the type and capacity of the port reception facilities;

(c) a description of the procedures for receiving and collecting waste from ships;

d) description of the cost recovery system;

(e) a description of the procedure for reporting reported deficiencies at port reception facilities;

(f) a description of the consultation process with port users, waste contractors, terminal operators, and other stakeholders; and

(g) an overview of the type and quantities of waste received from ships and transported to the facility.

Waste collection and management plans may include:

(a) a summary of the relevant national law and the procedure and formalities for the delivery of the waste to port reception facilities;

b) identification of a point of contact in the port;

(c) a description, where appropriate, of port equipment and pre-treatment procedures for specific waste streams;

(d) a description of the methods of recording the actual use of port reception facilities;

(e) a description of the methods for recording the quantities of waste delivered by ships;

(f) a description of the methods for managing the flow of different wastes in the port.

Receipt, collection, storage, treatment, and disposal procedures must comply in all respects with an environmental management system suitable for the gradual reduction of the impact of such activities on the environment. Such compliance shall be presumed if the procedures are in accordance with Regulation (EC) No. 1221/2009 of the European Parliament and of the Council. In any case, the proper operation of the facilities is ensured, and the current legislation is observed.

3. Information for the port of Igoumenitsa _

3.1 Infrastructures

The port of Igoumenitsa consists of the Old Port, the Inland Port (Corfu Ferry) and the New Port.

Figure 1. Port of Igoumenitsa

3.1.1 Old Port

In the Old Port is the natural port in the bay of Igoumenitsa bay where ships and tugs arrive.

Figure 3. Old port of Igoumenitsa

The characteristics of the Old Port are the following:

Pier Length	453 m
Land Area	22.5 acres _
Depth of water	10 m

Until 1996 the natural port at the mouth of Igoumenitsa bay was bordered by two piers, one to the north and one to the south. The northern pier was 100 m long and 30 m wide. Car ferries operating the Italy-Greece line were moored there.

The south pier was 100m. length and 125m. width and was the main pier of the port. It served both the car ferries that operated the Greece-Italy line as well as the tanker and cargo ships that arrived at the port. Between the two piers there was a 480 m long coastal zone. On the coastal platforms, moored ships and excursion ships were

moored, which operated the Corfu-Igoumenitsa line, as well as tourist and fishing boats (mainly in the northern coastal zone). The previously existing canal was about 9.0 meters long, which was satisfactory for the crossing of the car ferries, but had a limited range, which allowed the voyage in one direction at a time.

With the construction of the new port, which began in May 1996, things changed radically. The old port today is used to house part of the services of the Central Port Authority of Igoumenitsa. It corresponds to a land area of 330 meters long and 7 meters deep. South of the Old Port is the port of the ferries that run the inland lines. It has a length of 370 m and a useful depth of 5 m.

3.1.2 Inland Port (Corfu Ferry)

Passenger – car ferry ships arrive at the domestic port, which run itineraries to and from Corfu, Lefkimmi and Paxos.

Figure 4. Inland Port (Corfu Ferry)

The characteristics of the Inland Port are the following:

Pier Length	614 m
Land Area	32.1 acres _
Depth of water	10.5 m

3.1.3 New Port

In the New Port of Igoumenitsa arrive ships which operate mainly international routes (to and from Italy), domestic ships as well as cruise ships. The New Port has 12 stern mooring places with the ability to serve up to 7 ships simultaneously. Following the completion of the NW Phase of the construction project of the New Port, a Cruise Terminal has been additionally constructed which will host the Cruise Ships approaching the port of Igoumenitsa.

The itineraries that run from and to the New Port are the following:

Interior Lines

- Igoumenitsa - Corfu
- Igoumenitsa - Lefkimmi
- Igoumenitsa - Paxoi
- Igoumenitsa - Patras
- Igoumenitsa - Kefalonia

International Lines

- Igoumenitsa - Ancona
- Igoumenitsa - Venice
- Igoumenitsa - Bari
- Igoumenitsa - Brindisi
- Igoumenitsa - Ravenna

Within the area of the New Port is housed the Passenger Terminal Building, the new offices of OLIG SA, the Port Authority/Coast Guard and Customs. In addition to the New Port there are the following services:

- Facilities for receiving ship waste and wreckage
- Water supply and electricity of ships
- Firefighting station
- Sanitary and veterinary station

With the completion of the NW Phase of the construction project of the New Port, the characteristics of the port are the following:

Pier Length	1365.24 m
Land Area	274,425 acres.
Depth of water	10.5 m

The creation of the new port of Igoumenitsa is part of a broader Strategic Plan for the Development of Transport Infrastructure (2010), prepared by the Ministry of Education. From this plan it emerged that it is necessary to build a network of closed expressways, which includes:

a) the Egnatia Odos (Motorway)

b) the PATHE (Road Axis PATRAS - ATHENS - THESSALONIKI - EVZONON) and

c) the West Axis North-South (Ionian Road)

This network is the backbone of the country's road infrastructure and the other required transport projects (roads-ports-airports) must be based on it. Within the framework of the above basic principles and in combination with the effort to ensure the connection of the country with the other EU countries. without intermediate transit from non-EU countries, the new port of Igoumenitsa was also planned.

The Port of Igoumenitsa SA has to serve the ships that operate international routes, to and from Italian ports:

- ✓ Passenger terminal building with a total area of 6,326 m^2.
- ✓ Terminal building T2: 3,041.46 m^2.

The Central Passenger Station of the New Port has a modern lounge, restaurant and shops for passenger service, Info kiosks, wireless free access network. It offers a friendly environment and high-quality services to passengers.

- Land area of 210 acres, of which 130 acres land port zone and 80 acres of parking lots and other ancillary areas.
- 12 stern mooring places with the possibility of simultaneous service of up to 7 ships. In each position corresponds to approximately 20 acres of land.
- Provision of water supply and electricity services for ships.
- Length of quays: 781 m.
- Channel 1,500 m long and 100 m wide,

Figure 5. New Port of Igoumenitsa

Facilities at the Port Area include:

- ✓ Port Authority
- ✓ Customs
- ✓ Fire Department

Implementation phases of Igoumenitsa Port

FIRST PHASE

Summary

- Land area 210 acres (130 acres of land port area and 80 acres of parking lots and other ancillary areas)
- 12 stern mooring positions with the possibility of simultaneous service of up to 7 ships in each position belong to about 20 acres of land
- Length of quays of the new port: 781 m.
- The quay is 1,500 m long and 100 m wide, and its depth ranges around 10 m.
- Passenger terminal building with a total area of 6326 m^2.
- Fire station building, area 612 m^2.

PHASE B

Summary

Close to **90% of the works** are completed; **these are:**

Port works: Connected quay length 371.0m. with a useful depth of 10.20m. Building projects: Terminal T2 of total area 3,041.46 m^2, Shipping Gate, North Gate, port Electromechanical (E / M) installations. **(in use)**

- Land Port Works **(in use)**

- Dredging and widening of the navigation channel: width 170m., length 2,000m. and depth 10.5m. **(in use)**
- 5 additional stern mooring positions total length 371m. **(in use)**
- A 197.60m long side mooring pier capable of mooring 300000 DWT ships (227m long) **(in use)**

Phase II works still **under construction**:

- Terminal building 3: 2,324.80 m^2 / The Terminal building has joined Interreg for funding Greece - Italy.

PHASE C1 - Under construction

BUDGET: € 73,700,000

Summary Description

- Future Ra - Ra quay wall approximately 93.0m long and useful depth 10.20m
- South berths along the southern shoreline of Igoumenitsa bay with a total length of approximately 610.0 meters and a useful depth of 10.20m, for the creation of two new seafront mooring positions for passenger-car ships, according to the Port's approved Schedule Plan.
- Gravitational quay wall made of solid artificial boulders, approximately 21.0 m long.
- Configuration of the projected land areas.

3.2 Basic services & Port traffic data - Passenger traffic

Main operations and services offered to ships / vessels

Port of Igoumenitsa in Greece is one of the most important Ports in European Union and enjoys a privileged position being located at the starting point of Egnatia

Motorway. The new Port of Igoumenitsa was inaugurated on 19 September 2003 and it is the nearest port of Greece to Italy and the Balkan countries of the Adriatic Sea, thus being an important bridge of people and goods to and from Western Europe. The main connections of the port are the Italian ports of Bari, Brindisi, Ancona, Venice, Trieste and Ravenna, as well as the Greek destinations of Patras, Corfu, Kefallonia and Paxos.

Igoumenitsa's Port Authority primarily provides **ship docking** and **passenger and vehicle traffic services.** The port focuses on passenger traffic, through ferry connections to inland and foreign destinations, while goods are transported mainly by trucks. In the southern end of the old port there is the ferry for national routes. It is of about 370 m long and 5 m deep. The completed Phase B 'of the development projects greatly increases the port's capabilities, particularly regarding passenger shipping services. The Phase B 'included the above listed works:

- Port works: A 371.0m long connecting platform with a depth of 10.20m.
- Buildings (currently in use): Terminal T2 with a total area of 3,041.46 square meters, Entering Gate for Ferry Port, North Gate of Port, building of electromechanical port facilities.
- Terrestrial Port Zone Works (in use)
- Dredging and widening of the navigation entry channel: 170m wide, 2,000m long. and a depth of 10.5 m (in use)
- 5 extra mooring positions with a total length of 371 m (in use)
- A 197.60 m alongside berthing capable of mooring 300,000 DWT (227 m long) (in use)
- Terminal 3 building: 2,324.80 square meters / The Terminal Building is funded by Interreg Greece-Italy.

The available port services are presented briefly as follows:

- Tugs (1)

- Tugs Assist
- Bank services at pier
- Car parking

At the same time, the Central Passenger Terminal of the new Port of Igoumenitsa provides the following services:

- Tourist information desk (for passengers)
- Information desk (for crew)
- Lounge room
- Toilets
- Telephone, internet etc
- Post
- Shops - souvenirs
- Bar / Restaurant / Fast Food
- Baggage storage
- Visible signage
- Wheelchair
- Pedestrian paths
- Lifts
- Escalators
- Assistance upon request

Number of ships / vessels docking at the Port

The number of ships / vessels docked at the Port of Igoumenitsa in 2019 are presented in the following scheme (**Figure 2**). These ships regard cumulative passenger and cargo ships (international and inland lines), as well as cruise ships.

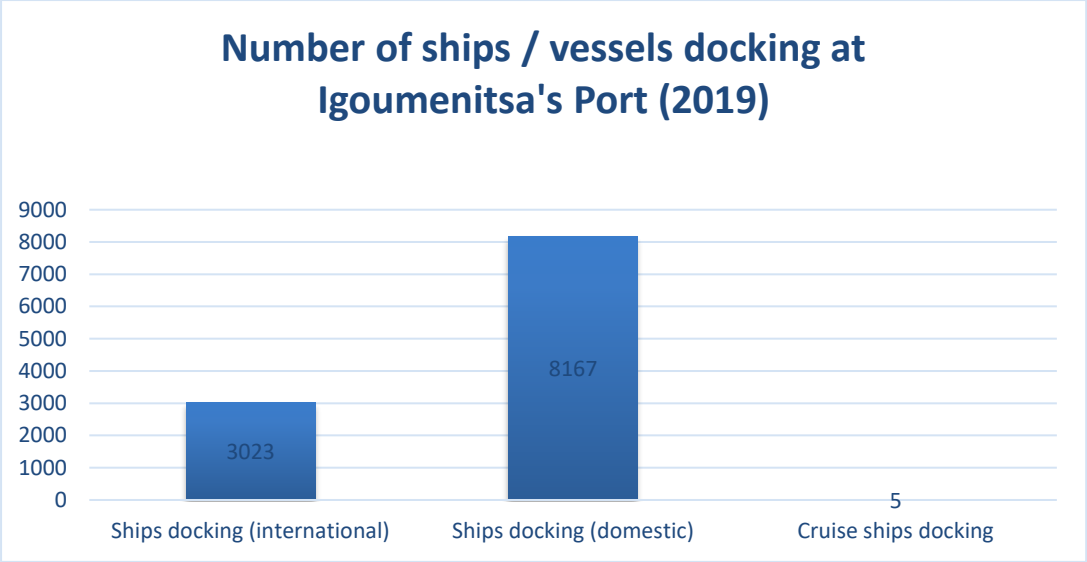


Figure 2Number of ships / vessels docked at Igoumenitsa's port in 2019 in international / inland lines and cruise ships.

Average docking time

There is no information about average docking time.

Number of passengers embarked / disembarked weekly / monthly / annually basis

The number of passengers embarked on / disembarked from ships of inland lines, on monthly basis , for 2018 and 2019, is presented in **Table 1** , while the same number on annually basis for the same reference years, is presented in **Table 2** .

Table 1: Number of Passengers on monthly basis (inland lines)

	2018	2019
January	41,599	35,953
February	39,689	35,126
March	49,505	55,405
April	96,572	94,345
May	75,462	72,248

June	80,102	76,430
July	125,094	108,890
August	167,361	174,258
September	95,987	92,351
October	65,263	67,698
November	51,898	46,491
December	52,563	52,585

Table 2: Number of Passengers on annually basis (inland lines)

Year	Number of passengers
2018	941,095
2019	911,780

The number of passengers embarked on / disembarked from ships of international lines, on monthly basis , for 2018 and 2019, is presented in **Table 3** , while the same number on annually basis for the same reference years, is presented in **Table 4** .

Table 3: Number of Passengers on monthly basis (international lines)

	2018	2019
January	16,420	14,567
February	15,735	16,640
March	26,396	25,011
April	33,430	35,762
May	33,755	32,376
June	45,565	45,729

July	116,978	116,508
August	104,643	107,892
September	36,595	35,908
October	25,594	25,763
November	18,703	18,130
December	25,810	25,424

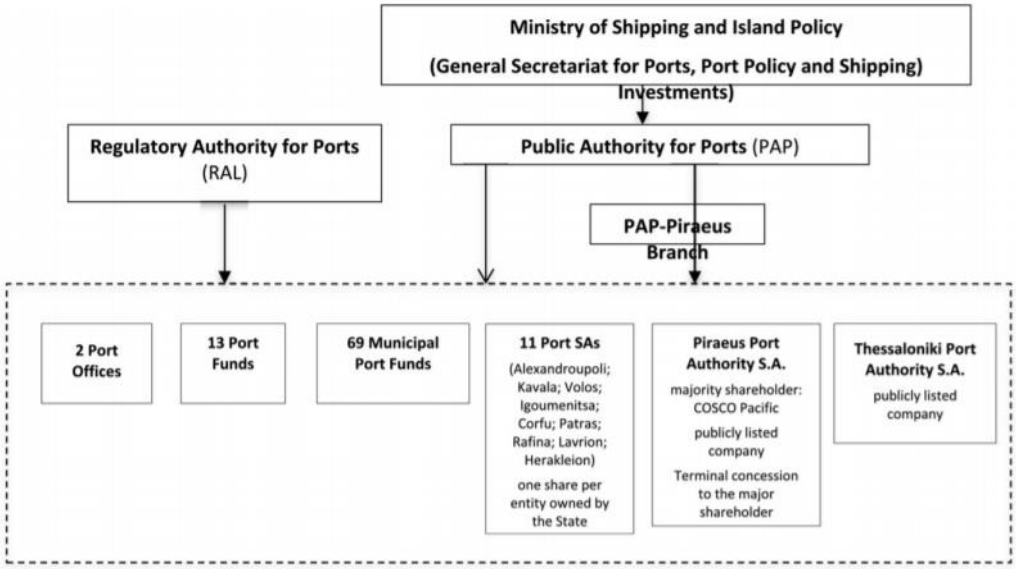
Table 4: Number of Passengers on annually basis (international lines)

Year	Number of passengers
2018	499,624
2019	499,710

Other useful & relevant information

Table 5: PORT GOVERNANCE MODEL

PORT GOVERNANCE MODEL		
☒ Landlord port	☐ Tool port	☐ Operating / Service port
Comments: Please feel free to include any comment regarding your port governance model		



Structures of port governance in Greece (2016). Available here .

The above figure summarizes the structures of the governance regime in place. Several PAP responsibilities overlap activities that are detailed in the respective law establishing RAL. The HRDAF also remains active as the holder of the shares owned by the Greek state and the institution responsible for the orchestration of further privatizations. Additional public authorities are also involved; for example, the Ministry of Tourism is responsible for the planning of tourist ports and marinas.

Regarding Igoumenitsa Port Authority, its basic organizational structure (Directorates and Independent Departments) is presented as follows:

- Administration Finance and Supply Directorate
- Administration Department
- Finance Department
- Supply Department
- Port Services Directorate
- Port Support Department
- Port Exploitation Department
- Development Directorate

- Marketing Department
- Works, Research and European Projects Department
- Civil Engineering Works Directorate
- Department of Construction Works and Environmental Protection
- Independent Departments
- Directorate's Secretariat
- Legal Office
- Press Office
- Telecommunications and IT Department
- Organizational and Quality Department
- Port Security Department

Source: https://olig.gr/en/organization-chart/

In the port of Igoumenitsa there are a significant number of passenger ferries as well as cargo ships. There are also ship tankers, trucks and occasional cruise ships entering the port. Ship arrival statistics in the port of Igoumenitsa for the years 2018 and 2019 as well as statistics on passenger and vehicle traffic are presented in the following Tables.

Table 6: Total data on dockings at Igoumenitsa Port Authority, 2018

TOTAL DATA ON DOCKINGS, 2018								
MONTH	INTERNATIONAL DOCKINGS	DOMESTIC DOCKINGS (passenger / vehicle ship)	DOMESTIC DOCKINGS (truck / vehicle ship)	DOCKINGS (truck vehicle)	DOCKINGS (tanker)	DOCKINGS (A/K)	TRANSIT DOCKINGS	CRUISE SHIPS
JANUARY	225	558	81	0	0	0	0	0
FEBRUARY	222	463	72	1	0	0	0	0
MARCH	257	611	51	0	0	0	0	0
APRIL	238	814	86	3	0	1	2	0
MAY	252	780	91	0	0	0	0	3
JUNE	232	771	95	4	0	0	0	1
JULY	303	982	106	3	0	0	0	3
AUGUST	308	1022	108	3	0	0	0	2
SEPTEMBER	271	768	96	1	0	0	0	3
OCTOBER	254	678	24	1	0	0	1	2
NOVEMBER	240	709	2	2	0	0	1	0
DECEMBER	223	722	23	0	0	0	1	0
TOTAL	3.025	8878	835	18	0	1	5	14
		TOTAL	12.776					

Source:(Igoumenitsa Port Authority, 2018)

Table 7: Total data on dockings at Igoumenitsa Port Authority, 2019

TOTAL DATA ON DOCKINGS, 2019								
MONTH	INTERNATIONAL DOCKINGS	DOMESTIC DOCKINGS (passenger / vehicle ship)	DOMESTIC DOCKINGS (truck / vehicle ship)	DOCKINGS (truck vehicle)	DOCKINGS (tanker)	DOCKINGS (A/K)	TRANSIT DOCKINGS	CRUISE SHIPS
JANUARY	224	724	29	2	0	0	0	0
FEBRUARY	229	506	47	1	0	0	0	0
MARCH	254	471	57	0	0	0	0	0
APRIL	242	658	40	3	0	1	2	0
MAY	256	646	56	3	0	0	4	0
JUNE	233	648	67	4	0	1	0	1
JULY	296	775	61	2	0	0	0	1
AUGUST	311	898	60	2	0	0	0	1
SEPTEMBER	261	676	54	2	0	0	0	1
OCTOBER	254	589	59	2	0	0	0	1
NOVEMBER	244	499	10	1	0	0	0	0
DECEMBER	219	534	3	2	0	0	0	0
TOTAL	3.023	7624	543	24	0	2	6	5
		TOTAL	11.227					

Source:(Igoumenitsa Port Authority, 2019)

The Port of Igoumenitsa's main activity is passenger, vehicle, and cargo service, supporting mercantile activities (via truck traffic) for Northern Greece, Southern Balkans (mostly Bulgaria and Turkey) as well as countries in the Middle East. The figures below, derived from the Environmental Sustainability Report of IPA SA, published in 2019, present data of passenger and vehicle traffic in Igoumenitsa Port, throughout the 12-year period between 2006 and 2018 (Igoumenits Port Authority S.A., 2019).

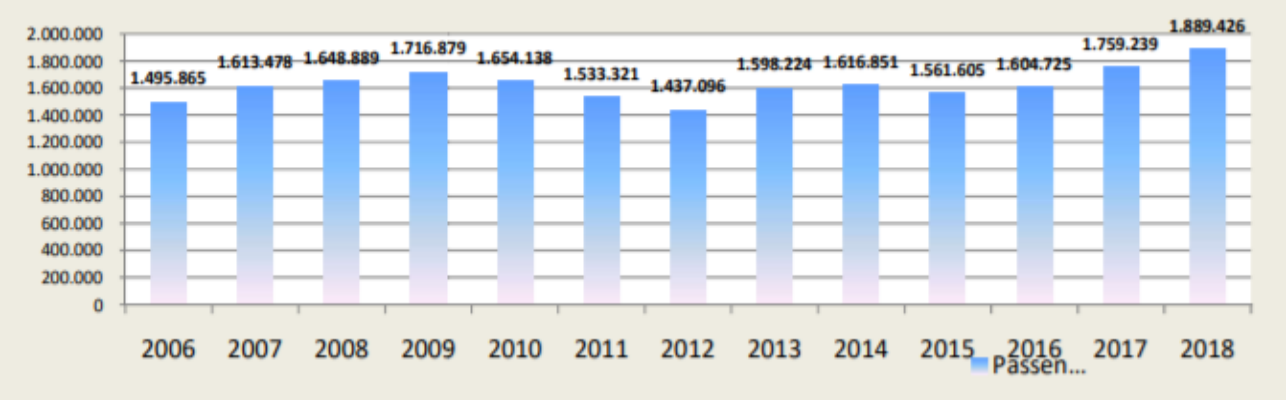


Figure 3- Total number of passengers from and to inland destinations

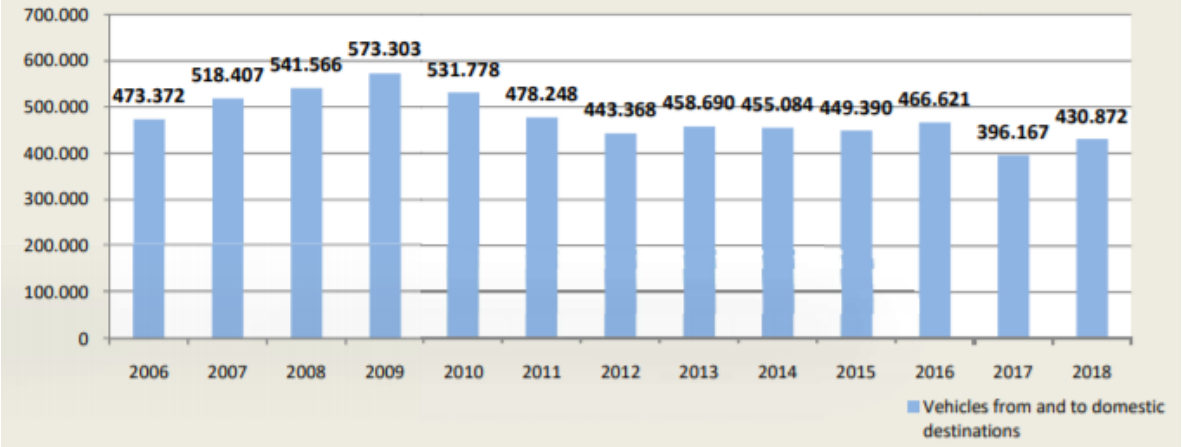


Figure 4- Total number of vehicles from and to inland destinations

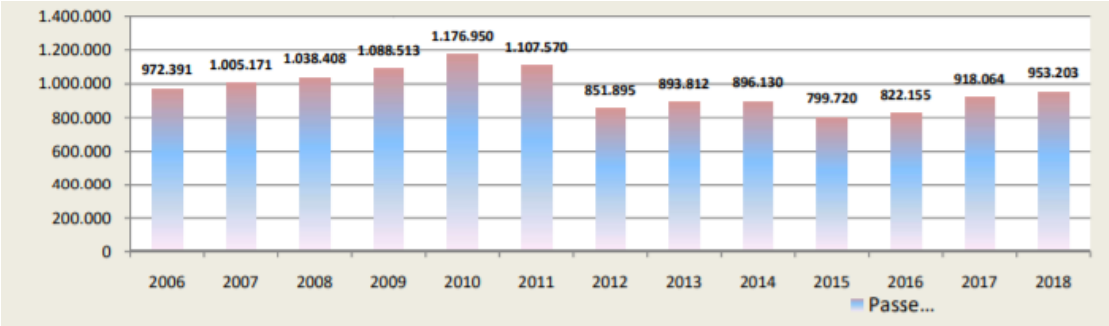


Figure 5- Total number of passengers from and to international destinations

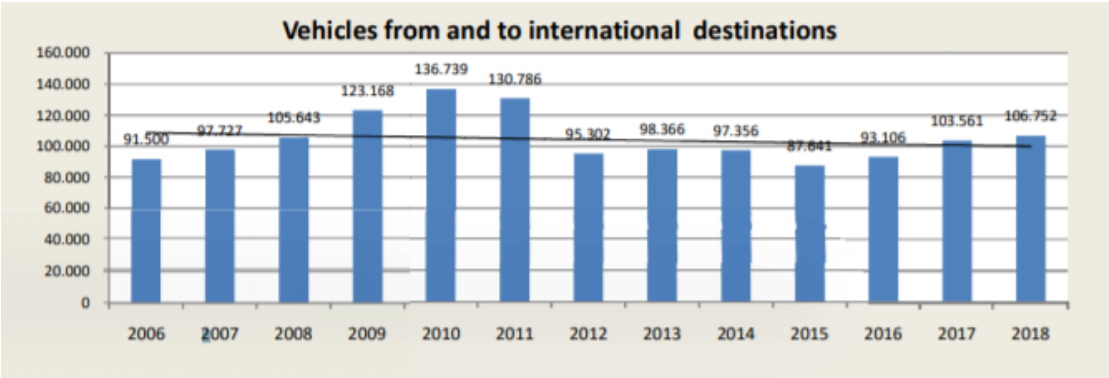


Figure 6- Total number of vehicles from and to international destinations

Total respective data for inland and international operation of Port for the years 2017, 2018 are presented in the following graphs:

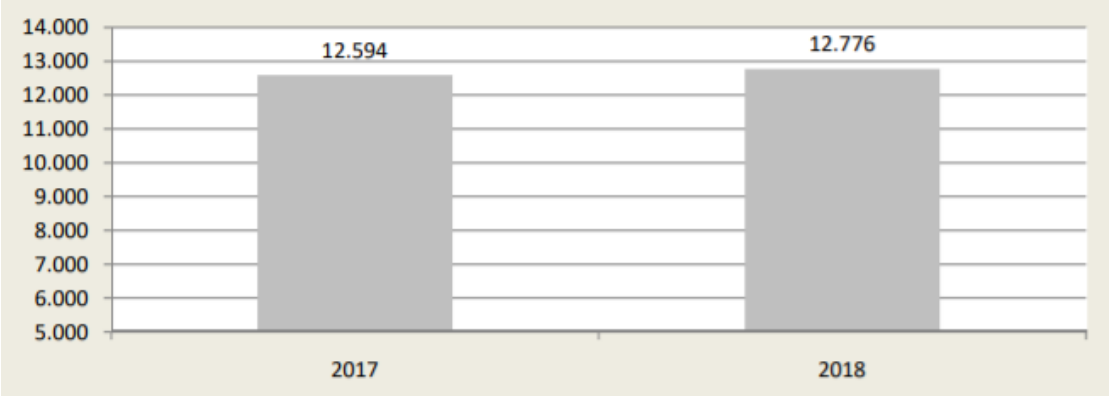


Figure 7- Total ship calls number for inland and international destinations

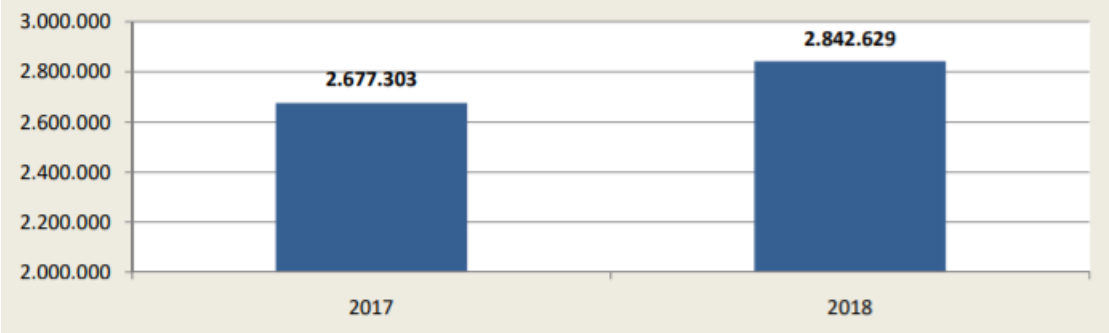


Figure 8- Total number of passengers incoming and outgoing for inland and international destinations

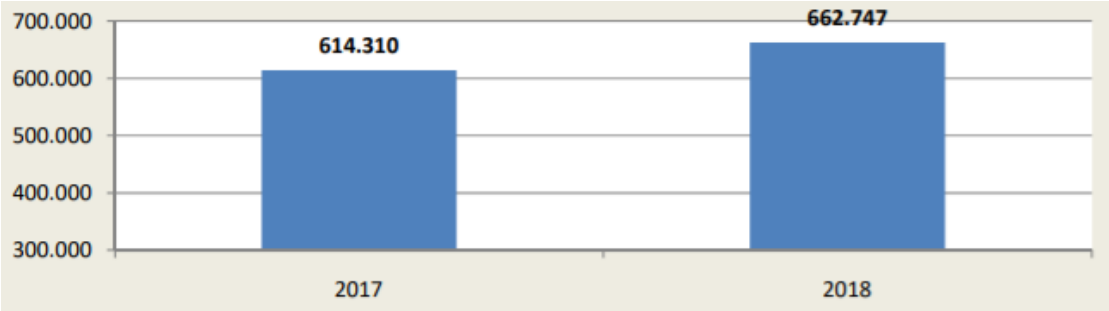


Figure 9- Total number of cars incoming and outgoing for inland and international destinations

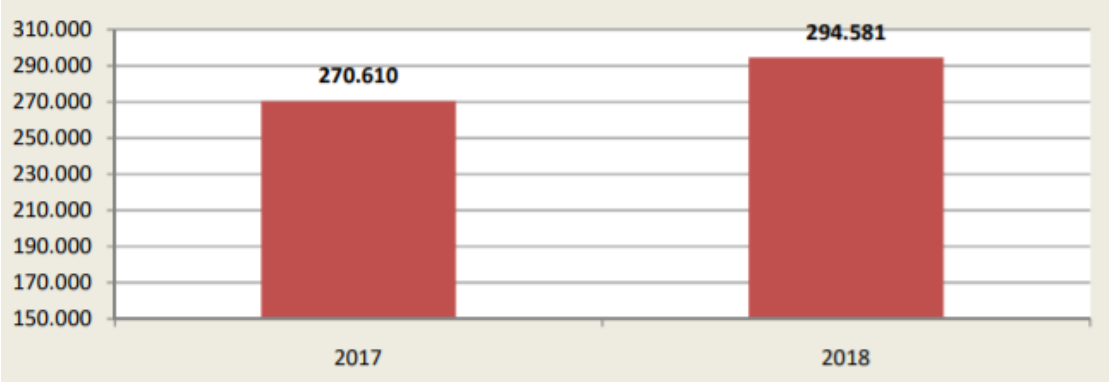


Figure 10- Total number of incoming and outgoing trucks for inland and international destinations

4. Legislative Framework

4.1 Introduction

This section summarizes the current legislation on the reception of ship-generated waste from ports. The purpose of the section is to give a brief overview of the essential requirements regarding receiving and managing them; not for giving a detailed presentation of the applicable legal framework.

4.2 International Legislative framework

International Convention for the Prevention of Pollution from Ships (MARPOL)

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. It was adopted on 2 November 1973 at IMO. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977 and has been updated by amendments through the years (International Maritime Organisation, n.d.).

The Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six (6) technical Annexes (International Maritime Organisation, n.d.).

Annexes have entered into force in the following manner:

MARPOL 73/78 Annex	Waste category	Date of entering into force
I	Oil (petroleum products)	2/10/1983
II	Noxious Liquid Substances in Bulk	2/10/1983
III	Harmful Substances Carried by Sea in Packaged Form	1/7/1992
IV	Sewage	27/9/2003

V	Waste / Garbage	31/12/1988
VI	Air pollution	19/5/2005
Source: (International Maritime Organisation, n.d.)		

For the proper implementation of MARPOL 73/78, the International Maritime Organization (IMO) has issued manuals and instructions on ship waste reception facilities (IMO Comprehensive Manual on Port Reception Facilities, IMO Consolidated Guidance for Port Reception Facilities Providers and Users) which are constantly reviewed by Marine Environment Protection Committees (MEPC). The Plan has been prepared based on the latest revisions of the manuals and directives:

- MEPC 67/11 11-7-2014: Revision of the IMO Comprehensive Manual of Port Reception Facilities
- MEPC.1 / Circ.834 15-2 4-2014: Consolidated Guidance for Port Reception Facilities Providers and Users

4.3 European Legislation

The European Union takes three types of legislative measures: Directives, Regulations and Decisions. The Regulations as soon as they are established by the Council of Ministers and published in the Official Journal, immediately bind Greece. In other words, they have "immediate effect" and no legislative measures are required by Greece to harmonise Greek law with them. Directives are addressed to the Member States and oblige them to take all necessary legislative measures to implement their obligations. When these necessary legislative measures are taken, we say that Greek law has been harmonised. Decisions bind Greece and the other Member States and usually refer to the ratification of international conventions, the exchange of information between the European Union and the Member States or the setting up of committees to deal with various problems.

The European Legislation relating to this document includes:

- **Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on port reception facilities for the delivery of waste**

from ships, amending Directive 2010/65/EU and repealing Directive 2000/59/EC (Text with EEA relevance)

- Directive 2009/16/EC of the European Parliament and of the Council of 23 April 2009 on port State control (Text with EEA relevance)
- Regulation (EU) No 952/2013 of the European Parliament and of the Council of 9 October 2013 laying down the Union Customs Code

Moreover, there are specific requirements regarding solid and hazardous waste. European Legislation on solid waste includes:

- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance)

Directive (EU) 2019/883: Port facilities for waste from ships, including cargo residues

The Directive aims to protect the marine environment from the negative effects of waste from ships using EU ports, by improving port reception facilities for waste from ships. Under the new rules, ships will pay an indirect fee to cover the cost of the scheme, giving them the right to deliver their waste to a port, whether or not they deliver any waste. This fee will also apply to fishing vessels and recreational craft, aiming to help prevent discarded fishing nets and waste accidentally caught in fishing nets going directly into the sea. The directive does not apply to naval vessels and contains rules on delivering waste, including advance notice of deliveries, with special arrangements applying to ships running to a schedule and making frequent and regular port calls (EUR-Lex, 2019).

EU countries ensure that port facilities can receive the types and quantities of waste from ships normally using that port; avoid delays; don't charge excessive fees which may discourage ships from using them; manage ships' waste in an environmentally appropriate way in accordance with Directive 2008/98/EC (EU waste management law) and other EU legislation on waste (EUR-Lex, 2019).

The directive aligns EU legislation with the amended International Convention for the Prevention of Pollution from Ships (MARPOL) which focuses on operations at sea, to which the EU is a party. Moreover, the directive repeals Directive 2000/59/EC and amends Directives 2009/16/EC on port State control and 2010/65/EU on reporting formalities for ships. Lastly, the directive is part of the Circular Economy policy and the plastics strategy of the European Commission (EUR-Lex, 2019).

Directive (EU) 2009/16/EC of the European Parliament and of the Council of 23 April 2009 on port State control

The purpose of this Directive is to help to drastically reduce substandard shipping in the waters under the jurisdiction of Member States by:

(a) increasing compliance with international and relevant Community legislation on maritime safety, maritime security, protection of the marine environment and on-board living and working conditions of ships of all flags;

(b) establishing common criteria for control of ships by the port State and harmonising procedures on inspection and detention, building upon the expertise and experience under the Paris MOU;

(c) implementing within the Community a port State control system based on the inspections performed within the Community and the Paris MOU region, aiming at the inspection of all ships with a frequency depending on their risk profile, with ships posing a higher risk being subject to a more detailed inspection carried out at more frequent intervals (EUR-Lex, 2009).

Regulation (EU) No 952/2013 of the European Parliament and of the Council of 9 October 2013 laying down the Union Customs Code

This Regulation establishes the Union Customs Code (the Code), laying down the general rules and procedures applicable to goods brought into or taken out of the customs territory of the Union.

Without prejudice to international law and conventions and Union legislation in other fields, the Code shall apply uniformly throughout the customs territory of the Union.

Certain provisions of the customs legislation may apply outside the customs territory of the Union within the framework of legislation governing specific fields or of international conventions.

Certain provisions of the customs legislation, including the simplifications for which it provides, shall apply to the trade in Union goods between parts of the customs territory of the Union to which the provisions of Directive 2006/112/EC or of Directive 2008/118/EC apply and parts of that territory where those provisions do not apply, or to trade between parts of that territory where those provisions do not apply (EUR-Lex, 2013).

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance)

This Directive lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use (EUR-Lex, 2008).

European Maritime Safety Agency (EMSA) Guidelines - EMSA/OP/02/2016: The Management of Ship-Generated Waste On-board Ships

This study provides an empirical overview of the management, drivers, technologies, and the quantities of different categories of ship-generated waste. The data presented in this report have been collected from ship audits, interviews, a literature review, an online survey among stakeholders and audits of waste notification forms.

For almost every type of ship-generated waste, there is a variety of waste flows and on-board treatment methods. The empirical evidence gathered in this study shows that ships use different treatment methods and often only treat part of a waste stream. This results in a difference between the amounts of waste generated and the amounts landed (European Maritime Safety Agency, 2017).

4.4 Greek Legislative framework

Greek Legislation includes in principle the entire above legislative framework, both the International Maritime Organisation (IMO) and the EU ratified by Laws, Presidential Decrees, Ministerial Decisions, etc.

Joint Ministerial Decision 8111.1/41/2009 - GG 412/B/6-3-2009

Measures and conditions for port facilities for the receipt of waste produced on board ships and cargo residues in compliance with the provisions of No. 2007/71/EC Directive. Replacement of No. 3418/07/02 (Government Gazette 712 B) Joint Ministerial Decision "Measures and conditions for port reception facilities for waste produced on ships and cargo residues".

A waste collection and management plan should be drawn up for the receipt and management of waste from port facilities, in accordance with No. 5 of Main Ministerial Decision 8111.1/41/2009, which will compulsorily describe all phases of receipt, collection, transport, temporary storage, possible treatment and permanent legal disposal of the waste generated in ports. The plan forms an integral part of the Rules of Operation of port facilities. Based on the reinforced authorisations for the export of hazardous waste, for the temporary storage of cargo in an area of export or transit ports, pending further transport, the competent authority of the port must be in agreed.

The plans shall be drawn up under the responsibility of the port management bodies (as defined in No 2 of the abovementioned Staff Regulations), submitted to the General Secretariat for Ports and Port Policy (Ministry of Shipping and the Aegean)

and, if complete, forwarded to the competent services, based on No. 5 of the abovementioned Ministerial decision, for their opinion. The approval of the plan is carried out by decision of the Minister of Shipping and the Aegean, following the opinion of the relevant Directorates of Environment and Spatial Planning of the Region (Regional Units) and the Decentralized Administration. The monitoring of the implementation of the projects is carried out by the General Secretariat of Ports and Port Policy, in cooperation with the relevant Regional Administration of the Hellenic Coastguard and the Port Authority, as well as the Directorate of the Decentralized Administration and the Directorate of the Region concerned.

Port management bodies shall ensure that the cost of port waste collection facilities produced onboard ships, including the treatment and final disposal of waste, is covered by the collection of a fee from ships (No. 8 Main Ministerial Decision 8111.1/41/2009). They are also required to carry out the necessary studies to obtain, in the name of the body, the Approval of Environmental Conditions and, if necessary, the necessary waste permits, in accordance with the relevant provisions (No. 12 Main Ministerial Decision 8111.1/41/2009). At the same time, they are responsible for the temporary storage of municipal waste in their area of responsibility (Main Ministerial Decision 50910/2727/2003). The master shall be obliged to inform, on the basis of No. 6 of Main Ministerial Decision 8111.1/41/2009, on the waste content of its ship (as referred to in Annex II to the Main Ministerial Decision 8111.1/41/2009), the port management body that will sail the ship, the receiving and waste management contractor if it is not the same as the port management body, and the competent Port Authority (No. 8 Main Ministerial Decision 8111.1/41/2009). Management bodies shall ensure that the information communicated to them by the masters is recorded in an electronic database (No.12 Main Ministerial Decision 8111.1/41/2009), that copies of the hazardous waste identification forms and those referred to in Main Ministerial Decision 13588/725/2006 are kept.

Law 4504/2017 - GG 184/A/29-11-2017

Lifelong training of personnel of the Ministry of Shipping and Island Policy, strengthening transparency and meritocracy in matters of competence of the Ministry, strengthening social participation in shipping, civil personnel issues, supplementation of provisions on port projects and others (e-Nomothesia, 2017).

1. The purpose of this law is to:

(a) Determine the minimum qualifications of the staff of the Ministry of Maritime and Island Policy who carry out inspections and audits on companies, port facilities and ports, Recognised Organisations and Recognised Security Organisations.

(b) Redefine the minimum qualifications of port State inspectors and inspectors of p.d. 314/2001 (A' 212).

(c) Define the general training and competence framework for inspectors and auditors of the Ministry of Maritime and Island Policy, as well as the qualifications of their trainers.

3122.3-15 / 71164/2021 JMC (Government Gazette 4790 / 18-10-2021)

The new JMC adapts the Greek Legislation in accordance with the Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on "port reception facilities for the delivery of waste from ships", the amendment of Directive 2010/65 / Repealing Directive 2000/59 / EC with a view to strengthening the protection of the marine environment to reduce discharges into the sea and in particular the illegal dumping of waste and cargo residues from vessels disposal and use of port facilities for the collection of ship waste and cargo residues.

The above decision applies:

(a) to all ships, regardless of their flag, which arrive or operate in a Greek port, except for ships performing port services within the meaning of paragraph 2 of Article 1 of Regulation (EU) 2017/352 and except warships or auxiliary vessels or other vessels

owned or operated by the State and currently used exclusively on a governmental non-commercial basis,

b) in all Greek ports, where ships normally falling within the scope of point (a) usually arrive.

According to the new JMC, waste collection and management plans cover all types of waste from ships that usually arrive at the port and are prepared according to the size of the port and the types of ships that arrive at it.

Waste collection and management plans include the following elements:

(a) an assessment of the need for port reception facilities, based on the needs of ships normally arriving at port;

(b) a description of the type and capacity of the port reception facilities;

(c) a description of the procedures for receiving and collecting waste from ships;

d) description of the cost recovery system;

(e) a description of the procedure for reporting reported deficiencies at port reception facilities;

(f) a description of the consultation process with port users, waste contractors, terminal operators, and other stakeholders; and

(g) an overview of the type and quantities of waste received from ships and transported to the facility.

Waste collection and management plans may include:

(a) a summary of the relevant national law and the procedure and formalities for the delivery of the waste to port reception facilities;

b) identification of a point of contact in the port;

(c) a description, where appropriate, of port equipment and pre-treatment procedures for specific waste streams;

(d) a description of the methods of recording the actual use of port reception facilities;

(e) a description of the methods for recording the quantities of waste delivered by ships;

(f) a description of the methods for managing the flow of different wastes in the port.

Receipt, collection, storage, treatment, and disposal procedures must comply in all respects with an environmental management system suitable for the gradual reduction of the impact of such activities on the environment. Such compliance shall be presumed if the procedures are in accordance with Regulation (EC) No. 1221/2009 of the European Parliament and of the Council. In any case, the proper operation of the facilities is ensured, and the current legislation is observed.

Law 1269/82 "Sanction of the MARPOL 73/78 Board of Directors-prevention of pollution of the sea by ships 1973 and protocol 1978" (Government Gazette 89 A/21-7-82)

Modified by:

- MINISTERIAL DECISION 2431.02/02/05/2005, (FEK 331/B/15.3.2005) "Acceptance of amendments to the Annex to the 1978 Protocol on the International Convention for the Prevention of Pollution from Ships, 1973 (Amendments to Regulation 13G, addition of a new Regulation 13H and resulting changes to the Supplement to the IOPP Certificate of Annex I to MARPOL, 73/78)"
- MINISTERIAL DECISION 2431.06.1/13/05/2005, (FEK 644/B/13.5.2005) "Acceptance of amendments to the Annex to the 1978 Protocol on the International Convention for the Prevention of Pollution from Ships, 1973 (Amendments to the Appendix to Annex V to MARPOL, 73/78)"

- LAW 3104/2003, (FEK 28/A/10.2.2003) "Cancelation of the 1997 Protocol amending the International Convention for the Prevention of Pollution from Ships of 1973, as amended by the 1978 Protocol relating to it"
- PRESIDENTIAL DECREE 86/1997, (FEK 72/A/14.5.1997) "Increase the ceilings of fines imposed against offenders of legislation on the protection of the marine environment"
- PRESIDENTIAL DECREE 46/1992, (FEK 17/A/17.2.1993) "Acceptance of amendments to the Annex to Protocol 1978 to the International Convention for the Prevention of Pollution from Ships 1973 (MARPOL 73/78-Annex I)"
- PRESIDENTIAL DECREE 205/1990, (FEK 79/A/5.6.1990) "Increase the ceilings of fines imposed against offenders of legislation on the protection of the marine environment"
- PRESIDENTIAL DECREE 417/1986, (FEK 195/A/5.12.1986) "Acceptance of amendments to the Annex to Protocol 1978 to the International Convention on the Prevention of Pollution of the Sea by Ships" (MARPOL 73/78) and codification of these texts"

Presidential Decree 55/1998, Government Gazette 58/A/58/20-3-1998 "Protection of the marine environment and the regulation of related issues."

- Article 1: Definitions
- Article 2: Scope of application
- Article 3: Prohibition provisions
- Article 4: Obligations of ships and tankers
- Article 5: Installation obligations
- Article 6: Oil transfusions
- Article 7: Obligations of tanker masters
- Article 8: Additional tanker obligations
- Article 9: Reception facilities
- Article 10: Existing and new installations

- Article 11: Obligations of those responsible for pollutions
- Article 12: Securing claims
- Article 13: Sanctions
- Article 14: Procedure for finding infringements for administrative sanctions and bringing legal proceedings
- Article 15: Establishment of Regional Anti-Pollution Stations
- Article 16: Staff positions
- Article 17: Obligations of Port and Fund Organisations
- Article 18: Collection and disposal of revenue from fines
- Article 19: Checking the suitability of decontamination substances
- Article 20: Repealed provisions

(Nomoskopio, 1998)

- Permanent Regulation of the General Secretariat of Ports, Port Policy & Maritime Investments (No.:8136.16/01/16) for port facilities for the collection of waste and cargo residues – 3rd (2013).
- Ministerial Decision 2331.5/96657/2016 – Government Gazette 3833/B/29-11-2016 - Amendment of Paragraph 2.5 of Article 2 of Regulation (EC) No 1782/2003 3231.2/1/28-07-1989 Decision of the Minister of Merchant Shipping "Terms and conditions for the granting of a license to ships and floating shipyards, used as floating oil reception facilities".
- FEK No. 3085 28/9/2016: amendment to Joint Ministerial Decision 8111.1/41/09 (FEK 412 B'') Measures and conditions for port reception facilities for waste produced on board ships and cargo residues in compliance with the provisions of Directive No 2007/71/EC.

- Regulation of the Ministry of Merchant Marine of the Hellenic Republic (No. 3122.5/44336/2016) for the handling/management of waste in Greek ports.
- Regulation of the Ministry of Merchant Marine of the Hellenic Republic (No. 3122.3-16/70956/2016) for the implementation of the provisions of Joint Ministerial Decision 8111.1/41/2009 (Government Gazette 412/B` 6.3.2009) on measures and conditions for port facilities for the collection of waste produced on ships and cargo residues.
- Ministerial Decision 181051/1090/82 (Government Gazette 266 B/17-5-82) "Terms and conditions for the identification of ships or barges or floating ships in general used as facilities for the reception of solid ship waste".
- The provisions of D.A. 3131.1/01/99 (Government Gazette 12B/99) apply to the receipt of chemical cargo residues. For the carriage of these by ships, the provisions of P.D. 146/98 (Government Gazette 109A/98) and P.D. 405/96 (Government Gazette 272A/96) apply.
- Ministerial Decision 3231.8/1/89 (Government Gazette 573 B/3-8-89) Laying down the conditions and requirements for granting authorisation to ships and floating shipyards used as facilities for the reception of oil residues of ships.
- The General Port Regulation No 1/2004 of the European Parliament and of the Council of 34 'Conditions and security measures for the receipt of petroleum residues from ships' (Government Gazette 700 B/04-06-2004).
- Presidential Decree 400/96 laying down regulations for the prevention of marine pollution from ship's sewage (Government Gazette 268 A/6-12-96).
- Presidential Decree 8/2013 – Government Gazette 27/A/31-1-2013, Acceptance of amendments to Annex V to the 1978 Protocol on the

International Convention for the Prevention of Pollution from Ships, 1973 (Revised Annex V to board MARPOL 73/78).

- Presidential Decree 405/1996 - "Regulation for the loading, unloading, handling and stay of dangerous goods in ports and their transport Marine safety measures, obligations, restrictions and the classification of dangerous goods.

5. Types & quantities of waste

5.1 General

The purpose of this chapter is to present the different types of waste generated on board ships that need to be delivered to port reception facilities, as well as a quantitative estimate of the quantities produced. It was considered appropriate to comply with the classification of waste according to the Board. MARPOL 73/78.

Quantitative estimation of ship-generated waste can be carried out in the following ways:

- Using quantitative data from the operation of existing reception facilities if any (e.g. number of bins, frequency of collection, etc.)
- Based on bibliographic data on waste generation in various types of ships and port statistics (number of arrivals, types of ships, number of crew - passengers, duration of voyage, etc.)

The standard of the table to be completed for the type and quantity of waste received from ships is:

Table 8: Type and Quantity of Waste Received

3. ΤΥΠΟΣ ΚΑΙ ΠΟΣΟΤΗΤΑ ΠΑΡΑΛΗΦΘΕΝΤΩΝ ΑΠΟΒΛΗΤΩΝ

Παράρτημα I της MARPOL - Πετρέλαιο	Ποσότητα (m^3)
Ελαιώδη ύδατα υδροσυλλεκτών	
Ελαιώδη κατάλοιπα (ιλύς)	
Ελαιώδη κατάλοιπα καθαρισμού της δεξαμενής	
Ακάθαρτο θαλάσσερμα	
Επικαθήσεις και ιλύς από τον καθαρισμό δεξαμενών	
Άλλο (να προσδιοριστεί)	
Παράρτημα II της MARPOL - Επιβλαβείς υγρές ουσίες (NLS)	Ποσότητα (m^3)/Ονομασία (1)
Ουσία της κατηγορίας X	

Παράρτημα V της MARPOL - Απορρίμματα	Ποσότητα (m^3)
Α. Πλαστικά	
Β. Απορρίμματα τροφίμων	
Γ. Οικιακά απορρίμματα (π.χ. χάρτινα προϊόντα, ράκη, γυαλί, μέταλλα, φιάλες, πιατικά κ.λπ.)	
Δ. Μαγειρικό λάδι	
Ε. Τέφρα αποτεφρωτήρα	
ΣΤ. Απόβλητα λειτουργίας	
Ζ. Κουφάρι/-α ζώου/-ων	
Η. Αλιευτικά εργαλεία	

Ουσία της κατηγορίας Y	
Ουσία της κατηγορίας Z	
ΑΟ - Άλλες ουσίες	
Παράρτημα IV της MARPOL - Λύματα	Ποσότητα (m^3)

Θ. Απόβλητα ηλεκτρικού και ηλεκτρονικού εξοπλισμού	
Ι. Κατάλοιπα φορτίου (2) (επιβλαβή για το θαλάσσιο περιβάλλον - HME)	
ΙΑ. Κατάλοιπα φορτίου (2) (μη επιβλαβή για το θαλάσσιο περιβάλλον - non-HME)	
Παράρτημα VI της MARPOL - Σχετικά με την ατμοσφαιρική ρύπανση	Ποσότητα (m^3)
Καταστροφικές για τη στιβάδα του όζοντος ουσίες και εξοπλισμός που περιέχει τέτοιου είδους ουσίες	
Κατάλοιπα από τον καθαρισμό των καυσαερίων	
Άλλα απόβλητα, που δεν καλύπτονται από την MARPOL	Ποσότητα (m^3)
Απόβλητα που αλιεύονται παθητικά	

(1) Αναγράφεται η ορθή ονομασία της αποστολής των σχετικών NLS.
(2) Αναγράφεται η ορθή ονομασία της αποστολής ξηρού φορτίου.

5.2 Petroleum waste (Annex I)

According to ANNEX I of the BoD MARPOL 73/78, "oil " means petroleum products in all forms, including crude oil, fuel oil, residues, and refining products other than petrochemical and vegetable and animal oils. As an oil mixture) is defined as a mixture of the above petroleum products of any content.

5.2.1 Categories of Petroleum Waste

Petroleum waste from ships can be divided into the following main categories:

- Used mineral oils
- Fuel waste
- Sludges
- Bilge water
- Dirty ballast
- Oil tank washings

To study and classify the oily waste of ships to provide adequate facilities for port reception, it is advised to classify into two categories:

- Petroleum engine room waste, produced on any type of ship, including ship bilge water, fuel residues/sludges, and waste lubricating oils.
- Oil tanker wastes, including cargo residues, cargo tank wash/rinse waters, crude seawater, etc.

Categorising in this way, reception facilities for the former category above, must be at each port, whereas for the latter category, only in case tankers approach.

5.2.2 Receiving petroleum waste and other hazardous waste from ships and petroleum cargo residues from tankers (tugboats), tankers and floating reception facilities.

1. The collection of petroleum waste and other hazardous waste and cargo residues of ships from tankers (sailboats) or other properly licensed vehicles and floating facilities is done, in accordance with the conditions and safety measures of the Port Regulations in force.

2. The terms and conditions for the receipt of petroleum waste from ships, are defined in no. 2122/30/2003 decision of the Minister of Mercantile Marine on the approval of the General Regulation of the Port with number 34 "Conditions and safety measures for the receipt of oil residues from ships" (BD 700), as applicable.

3. The terms and conditions of ships and floating shipyards, which are used as floating facilities for the reception of oil residues are defined in no. 3231.8 / 1/1989 decision of the Minister of Mercantile Marine “Terms and conditions for granting a license to ships and floating vessels, used in floating facilities for the reception of oil residues (BD 573), in combination with the common data 513.12 / 13 / 118b / 2013 decision of the Ministers of Finance, Administrative Reform and e-Government and Shipping and the Aegean
"Simplification and integration in the Citizens' Service Centers (KEP) that operate as Unified Service Centers (CSR) eleven (11) administrative procedures under the Ministry of Shipping and the Aegean / Hellenic Coast Guard Headquarters in application of its provisions (3844). AD 63) pursuant to Directive 2006/123 / EC and replacement of the decision under DIADP / FA.2.1 / 21866 "Simplification and integration in the Citizens' Service Centers (KEP) operating as Single Service Centers (CSC) five (05) administrative procedures under the responsibility of the Ministry of Citizen Protection in application of the provisions of Law 3844/2010 (AD 63) "(BD 35), as applicable.

4. The process of collection - receipt, transport, processing, and disposal of liquid fuel waste (slops) and waste lubricating oils produced by the movement and operation of

ships is determined by sub-items A. 1237/2019 / 27.6.2019 (BD 2927) the decision of AADE, as in effect with each case.

5.3 Dangerous and harmful substances (Annex II)

The requirements for liquid harmful substances are mentioned in Appendix II of the BoD. MARPOL 73/78 "Control of pollution by noxious liquid substances carried in bulk". Depending on their hazard, these substances are divided into the following four categories:

- **Category X:** Hazardous liquid substances which, if discharged into the sea during tank cleaning or ballast discharge, are considered to pose a major risk to either marine resources or human health, and therefore justify a ban on discharge into the marine environment
- **Category Y:** Hazardous liquid substances which, if discharged into the sea during tank cleaning or ballast dumping, are estimated to pose a risk to either marine resources or human health, or to damage property or other lawful uses of the sea, and therefore justify the limitation on the quality and quantity of discharges into the marine environment
- **Category Z:** Hazardous liquid substances which, if discharged into the sea during tank cleaning or ballast disposal, are considered to pose a small risk to either marine resources or human health, and therefore justify less severe restrictions on its quality and quantity. discharge into the marine environment, and
- **Other Substances:** substances that have been assessed as not falling into categories X, Y, or Z because they are not considered to pose a risk to marine resources, human health, property or other legal uses of the sea, when discharged into the sea during tank cleaning or ballast disposal operations. The discharge of ballast or water from collectors or other residues or mixtures containing these substances is not subject to the requirements of MARPOL Annex II.

5.4 Harmful substances in packaged form (Annex III)

The requirements of Appendix III for the prevention of marine pollution from harmful substances in packaged form do not include a requirement for reception facilities. However, in case the packaging is damaged and its contents leak, reception facilities are required based on the provisions of Appendix V (waste). It should be noted that these wastes and the damaged packaging where such residues are contained, require appropriate precautions, for human safety and to avoid environmental pollution.

5.5 Sewage (Annex I V)

For Greek ships, the PD has entered into force. 400/96 laying down regulations for the prevention of marine pollution from ship effluents.

"Sewage" or "black waters" refers to the waste generated on ships and includes sewage from toilets, urinals, the ship's clinic, as well as any other waste mixed with the above. Other waste generated on ships (e.g. showers, kitchens, washing machines, sinks, etc.) is called **"brown water" or "gray waters"**. There are usually separate pipeline networks for wastewater and brown water, and different ways can be used to manage this waste.

Under the current legal framework, although there are restrictions on wastewater disposal water) at sea, such restrictions do not apply to gray waters (gray water). This does not mean, however, that the latter, which are noted to include kitchen drains, are discarded at sea and even in port.

In Appendix IV of the BoD. MARPOL 73/78 provides for the provision of adequate reception facilities for ship sewage.

5.5.1 Collection of ship waste and sewage from other ships

1. The terms and conditions for the identification of ships and barges or floating yards in general that are used as facilities for the reception of solid waste of ships are defined in no. 181051/1090/1982 decision of the Minister of Mercantile Marine

"Terms and conditions for the recognition of ships or barges or vessels generally used as facilities for the reception of solid ship waste" (BD 266), in conjunction with the joint decision of the Ministers of Finance, Administration and Administration E-Government, Shipping and Island Policy 513.12 /13 /118b/ 2013, as applicable.

2. The terms and conditions of ships and floating yards used as floating facilities for the reception of ship sewage are defined in no. 3221.2 / 2/1989 decision of the Minister of Mercantile Marine "Terms and conditions for granting licenses to ships and floating vessels used as floating facilities for the reception of sewage" (BD 435), in conjunction with the joint decision of the Ministers of Finance, Administrative Reform and Digital Governance, Shipping and Island Policy under data 513.12 / 13 / 118b / 2013, as applicable.

5.6 Waste (Annex V)

As waste from Regulation 1 of Appendix V of the BoD. MARPOL 73/78 defines all types of household and operational waste as well as food scraps, except fresh fish produced during the normal operation of the ship and must be disposed of periodically or continuously, except for substances specified or referred to in other Appendices MARPOL Convention.

Waste does not include fresh fish and parts thereof created as a result of fishing activities carried out during the voyage, or as a result of aquaculture activities involving the transport of fish, including shellfish for aquaculture and aquaculture installations. , including shellfish from such onshore plants for processing.

5.6.1 Ship Waste Categories

The table below lists the different types of waste that are generated or can be generated on board ships. This waste can come from all types of ships and all types of activities. It is worth noting that Appendix V of the BoD. MARPOL 73/78 applies to all ships regardless of their size.

Waste is grouped into categories as follows:

CATEGORY A - Plastics

Plastics are defined as solid materials which contain a substantial component or more high molecular weight polymers and which are formed during either the preparation of the polymer or the manufacture of a final product by heating and/or pressure. Plastics have material properties ranging from hard and brittle to soft and elastic. For the purposes of this Regulation, "all plastics" means all wastes consisting of or containing plastics, in any form, including synthetic ropes, synthetic nets, plastic garbage bags and incinerator of plastic products.

CATEGORY B - Food Residues

Food residues are defined as spoiled or non-spoiled food substances as well as fruits, vegetables, dairy products, poultry, meat products (animal by-products) and food scraps produced on board.

CATEGORY C - Household Waste

Household waste means all waste that is not covered in the other appendices of MARPOL 73/78 and is generated in the accommodation and accommodation of ships. Household waste does not include those listed in other categories (e.g., food waste, plastics).

CATEGORY D - Edible Oils

Edible oils are defined as oils and fats used or to be used in the preparation or cooking of food, but do not include the food itself prepared using these oils.

CATEGORY E - Incinerator

Incinerator ash means the ash and clinker resulting from incinerators used by ships for the incineration of waste.

CATEGORY F - Operating waste

Operating waste is considered all solid waste (including sludge) that is not covered by other annexes of the Board. MARPOL 73/78 collected on board during the normal maintenance or operation of the ship, or resulting from the handling, packing and stowage of cargo such as rust, maintenance materials, tow, paint, packaging materials, etc.

Functional wastes are also considered to be detergents and their additives, which are used for the cleaning of cargo residues and external washing waters.

CATEGORY H - Cargo residues

Cargo residues are defined as the remnants of any cargo, damaged cargo and those that have suffered breakdowns, which are not covered by other annexes of the Board. MARPOL 73/78 and which remain on the deck or hull of ships, and which arise during loading or unloading, or from excess or leakage of cargo, as well as residues carried away by the wash water. Cargo residues do not include cargo dust left on deck after sweeping or dust on the ship's exterior surfaces.

CATEGORY I - Animal carcasses

Animal carcasses means the bodies of animals which are carried on board as cargo and die or are killed during the voyage.

CATEGORY I - Fishing Equipment

Fishery equipment means any natural device or part thereof or a combination of elements which may be placed on or in the water or on the surface of the sea for the purpose of recording, monitoring or subsequently catching or harvesting organisms living in the marine environment. and in a freshwater environment.

5.7 Ozone depleting substances etc. (Annex VI)

Since 2005, Appendix VI of the Board of Directors was instituted. MARPOL 73/78 for the prevention of gaseous pollution from ships.

According to Regulation 17 of the Appendix, reception facilities are provided for the following ship waste:

- Ozone depleting substances such as CFCs and HALON, as well as equipment containing such substances.
- Residues from ship exhaust systems.

6. Igoumenitsa port facility needs assessment

6.1 General

The needs assessment for the ports of Igoumenitsa, Plataria, Sagiada and Sivota, regarding the required facilities for receiving waste of the ships arriving, is carried out based on the traffic data of the ports given in Chapter 2, the relevant methodology analysed in Chapter 4. and ship waste statistics for the three years 2014-2016 analysed in this chapter. To provide adequate reception facilities, in addition to the ships and their type, which arrive in the specific ports, a number of parameters such as e.g. the location of the ports and the possible existence / use of anchorage, because this will require the use of vessels, etc.

Thus, based on the type of ships arriving in the ports of Igoumenitsa, Plataria , Sagiada, and Sivota , the needs for ship reception facilities are limited to:

- Petroleum waste according to Annex I of the BoD MARPOL 73/78,
- Waste according to Annex V of the BoD MARPOL 73/78
- Sewage according to Annex I V of the BoD. MARPOL 73/78

Types and volumes of waste collected by contractors are listed in the table below, under the MARPOL Annexes and National Waste Catalogue (EKA). The reception facilities are used by half of the coastal navigation ships and by ships traveling to Italy which have defined the port as their destination (Beza, Kitsantas, & Mitselos, 2014).

Table 9: Types and volumes of waste collected by contractors (IPA)

Category	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Quantity of Solid Waste in tonnes (non-hazardous) from boats, ships and the operation of the	305.1	252.99	441.83	374.47	476.0 2	613.52

Category	2014	2015	2016	2017	2018	2019
port National Waste Catalog (EKA) 200125 edible oils and fats, EKA 200301 mixed municipal waste, EKA 200199 other parts not otherwise specified, EKA 200108 biodegradable waste from kitchens and living spaces , EKA 200139 plastic						
Quantity of liquid waste (hazardous) from boats and ships EKA 130301 * insulation or heat transfer oils containing PCB, EKA 160708 * waste containing	369 .07 m3 Liquid Hazardous Waste	183.27 m3 Liquid Hazardous Waste	358.05 m3 Liquid Hazardous Waste	391.44 m3 Liquid Hazardous Waste	1,582.65 m3 Liquid Hazardous Waste	1,001.99 tn Liquid Hazardous Waste

Category	2014	2015	2016	2017	2018	2019
petroleum, EKA 130310 * other insulation and heat transfer oils , EKA 130508 * mixtures of waste from residue chambers and oil / water separators , EKA 130403 * oils of water-collecting vessels of another seagoing						
Quantity of solid waste (hazardous) from boats and ships EKA 200133 * batteries and accumulators, EKA 160305 * organic waste containing hazardous substances, EKA 150202 * absorbent materials, filter	6.38 tn	11.1 tn	8.98 tn	36 tn	47.03 tn	27.33 tn

Category	2014	2015	2016	2017	2018	2019
materials, EKA 080111 * waste from paints and varnishes containing organic solvents or other dangerous substances						
Quantity of recyclable batteries / Accumulators EKA 200133 * batteries and accumulators	92 kg	12 kg	28.50 kg	29 kg	1,580 kg	29 kg
Quantity of Lamps & other Waste from Electrical and Electronic Equipment that was delivered EKA 200136 discarded electrical and other electronic equipment	450 kg	260 kg	290kg	415kg	0	2,091 kg

Based on the Environmental Sustainability Report (2019), the recorded liquid hazardous waste (m^3) from ships, for the years 2016, 2017 and 2018 is presented in the following figure.

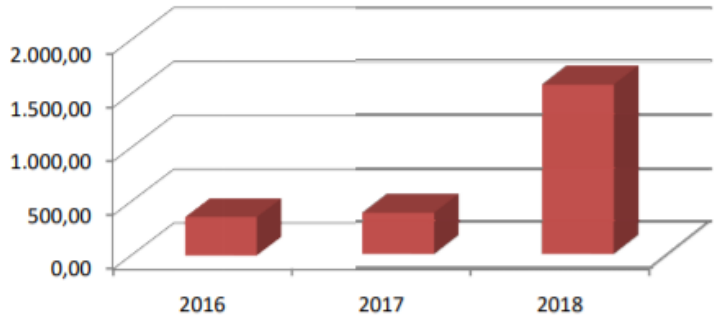


Figure 11- Ship liquid hazardous waste (m3)

Based on the Environmental Sustainability Report (2019), the recorded solid hazardous and non-hazardous waste (tn) from ships, for the years 2016, 2017 and 2018 are presented in Figure 12and Figure 13respectively.

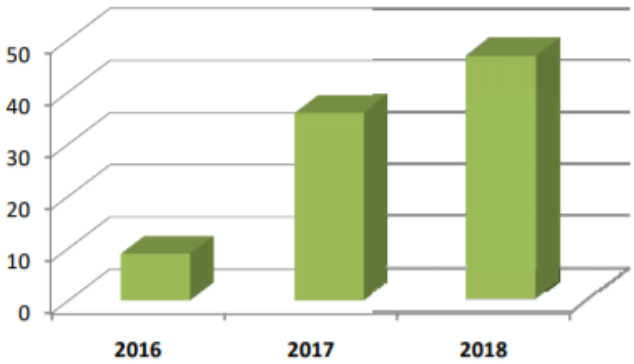


Figure 12- Ship solid hazardous waste (tn)

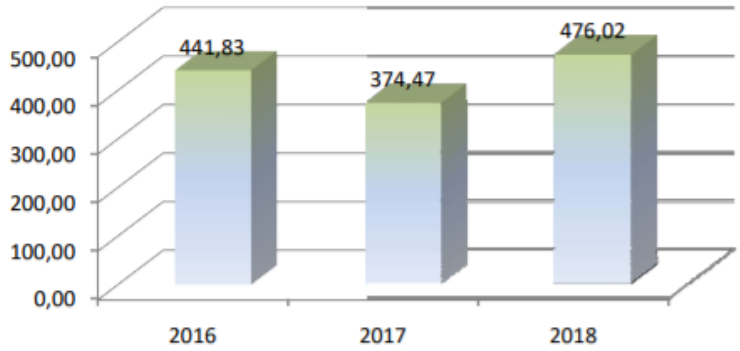


Figure 13- Ship solid non-hazardous waste (tn)

The Port of Igoumenitsa prioritises the separation, collection, and proper management of non-hazardous solid waste as well as hazardous solid waste, including paint, maintenance, and medical waste. Figure 14illustrates the number of kilos of hazardous waste produced in the years 2016-2018.

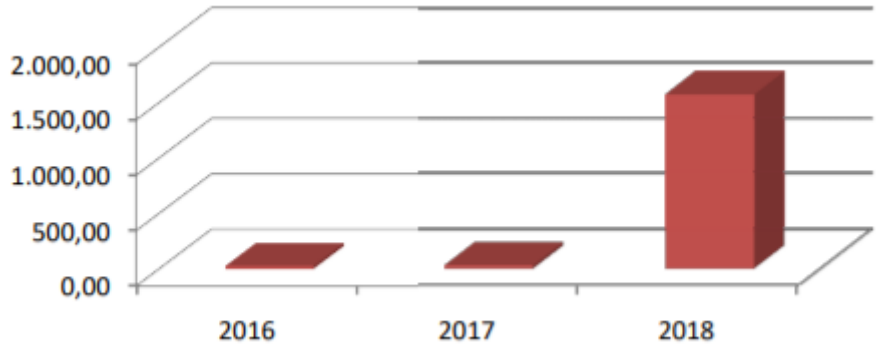


Figure 14- Solid hazardous waste (batteries) (kg)

6.2 Petroleum waste (Annex I)

Petroleum waste from ships for which there is a need for delivery at reception facilities is mainly limited to ship engine room waste. These wastes include:

- ✓ Waste lubricating oils
- ✓ Fuel waste
- ✓ Sludges
- ✓ Bilge water

Regarding the ships that approach the ports of Igoumenitsa, Plataria, Sagiada, and Sivota, the following apply:

- ✓ In the port of Igoumenitsa all ships are over 400 and so on, so according to the current and current provisions, they are not expected to deliver linseed water to the reception facilities, but, if the relevant conditions are met, they are processed by the separator in sea.

- ✓ The tankers approaching the Port of Igoumenitsa are not expected to deliver either petroleum engine ship waste or tank oil waste (cargo residues, cargo tank rinses, dirty seawater , etc.). refineries, are expected to deliver (without payment) the waste of this type to the refineries, which are obliged to receive them, in accordance with the existing and applicable provisions.

A similar procedure is expected for cargo ships, which will deliver to their facilities - headquarters, such as Volos, Piraeus, etc.

- ✓ From the above it results that petroleum waste is expected to be deliver only by Passenger/Car ships.
- ✓ Passenger/Car ships coming from abroad deliver only those that are based out of- start from the Port of Igoumenitsa, since the rest deliver at their base ports (Piraeus, Patras, etc.), due to "intermediate stop" in the port of Igoumenitsa which inductively implies insufficient time for waste delivery process.
- ✓ In the ports of Plataria, Sagiada, and Sivota , mostly fishing boats and leisure yachts, so there will be limited needs for the delivery of oil waste that can be covered by the existence of small tanks.

The quantities of solid waste from ships received during the period 2018-2020 are recorded in the following Table:

Table 10: Number of deliveries and quantities of solid waste received by ships

EKA code	2018	2019	2020
	m3	m3	m3
08 01 11 *	10.8	7.3	12.3
08 03 18	0.3	0	0.02
15 01 10 *	4.5	0	0
15 02 02 *	136.3	95.5	175.2
16 03 05 *	1.4	0.4	0.212
16 05 07 *	1.1	0	0
16 07 08 *	46.3	18.5	65.5
20 01 02	15	0	0
20 01 08	1003.3924	986,2317	1045,1793
20 01 21 *	1.3	0	0
20 01 25	0.905	1,166	1.28
20 01 36	14.5	16.2	16.4
20 01 39	1855,7138	2036,9759	222,9415
20 01 99	1423.5	1010.5	137
20 03 01	2301,533	2335,401	3031,2977
20 03 99	0	0	805.5

The above solid ship waste was collected and treated by the company Antipollution without the need for facilities for the treatment of petroleum waste at OLIG, as they can be transported for treatment to suitable facilities by the contractor.

Finally, in the case of the mineral oils used for small vessels (tourist, fishing, etc.) but also for high-speed vessels, where each time we will have the production of oil waste of 0.05 - 0.1 m3, it is estimated that the installation of small suitable tanks for their collection, both in the port of Igoumenitsa, as well as in the ports of Plataria, Sagiada, and Sivota

6.3 Hazardous and harmful substances in bulk II)

In the ports of Igoumenitsa, Plataria, Sagiada, and Sivota, tankers that transport dangerous and harmful substances in bulk do not approach, according to Appendix II of the Board. MARPOL 73/78.
So there is no need for facilities to receive this type of waste.

6.4 Sewage (Annex IV)

Annex IV of the BoD MARPOL 73/78 has entered into force since 27/9/2003 for ships over 400 etc. or for new ships carrying more than 15 passengers. In our country, the PD has entered into force. 400/96 which imposes restrictions on the discharge of ship sewage into the sea. Based on the upper PD, with which it is worth noting that now almost all ships have complied, among other things, storage / processing equipment is provided on the ships.
Sewage or “black waters” refers to the waste generated on ships and includes sewers from toilets, urinals, the ship's clinic, as well as other wastes mixed with the above. Other waste generated on ships (e.g., showers, kitchens, washing machines, sinks, etc.) is called brown water or "gray waters”. There are usually separate pipeline

networks for wastewater and brown water, and different ways can be used to manage this waste.

Under the current legal framework, although there are restrictions on the discharge of wastewater into the sea, such restrictions do not exist for brown waters. This does not mean, however, that the latter are dumped at sea and even in port.

Regarding the ships that approach the port of Igoumenitsa, the following applies:

- According to the existing provisions, (BoD MARPOL 73/78 & PD 400/96) the ships that perform sailing beyond 12 nm from the shore, they can discharge their wastewater, whether they have a treatment system or not, into the sea, of course observing the individual specifications, such as cruising speed at discharge, periodicity of discharges, etc. Therefore, all Passenger/Car ships abroad will discharge sewage into the sea at a point with a distance greater than 12 nm from the coast and are not expected to deliver sewage.

- The tankers that approach the Port of Igoumenitsa are not expected to deliver sewage, since since these ships very often approach the Port of Piraeus, but mainly refineries, it is expected to deliver this type of waste to their facilities - headquarters (Piraeus, refineries, etc.).

- A similar procedure is expected for cargo ships, which will deliver to their facilities - headquarters, such as. Volos, Piraeus etc.

- From the above it results that sewage is expected to deliver only Passenger/Car inland ships, which do not have a sewage treatment system.

6.5 Waste (Annex V)

As mentioned, most ships arriving in the port of Igoumenitsa are passengers. Also, the ships that dock, use the port only during their normal operation, while for any

repairs they go to the port of Piraeus, or to other organized shipbuilding and repair bases. Thus, the waste delivered by the ships to the port of Igoumenitsa, according to Appendix V of the Board. MARPOL 73/78 are mainly limited to household waste. Household waste will also be delivered to the ports of Plataria, Sagiada, and Sivota.

Regarding the ships that approach the Port of Igoumenitsa, the following applies:

→ The tankers that approach the Port of Igoumenitsa are not expected to deliver waste, since these ships often approach the Port of Piraeus, but mainly refineries, they are expected to deliver this type of waste to their facilities - headquarters (Piraeus, refineries etc.).

→A similar procedure is expected for the cargo ships of AGET, which will deliver to their facilities - headquarters, such as. Volos, Piraeus etc.

→It follows from the above that waste is expected to deliver only Passenger/Car ships.

→From the Passenger/Car abroad deliver only those that are based - starting from the Port of Igoumenitsa, since the rest deliver seats in the ports (Piraeus, Patras, etc.), due to "intermediate stop" in the port of Igoumenitsa which inductively implies insufficient time for waste delivery process.

It should be noted that, as for liquid waste, in the summer months most deliveries and larger volumes of solid waste are expected respectively.

7. Description of Type and Capacity of ship reception facilities

7.1 General

As can be seen in the previous section, to serve the waste needs of ships approaching the ports of responsibility of OLIG SA, permanent (tanks-bins) and mobile land-based waste reception facilities are required.

For this reason, following a tender, the Port of Igoumenitsa SA has project contracts with private companies for the collection of waste from ships approaching its ports of responsibility.

1. Hellenic Environmental Center (HEC) SA for the collection of liquid residues and
2. Antipollution SA for the collection of solid waste

The HEC SA operates from its establishment, with the main purpose of its operation, the receipt and treatment of liquid waste.

The company is headquartered in Piraeus.

The company has its own means of collecting liquid waste.

The company "Antipollution SA" deals with waste management and has special experience in ship waste since it is active in this sector in the port of Piraeus since 1983.

The company is headquartered in Piraeus.

The company has privately owned self-propelled barges and trailers for the collection of ship waste, as well as privately owned trucks of all types and other required equipment (bins, etc.).

As can be seen in the previous chapter, the needs for ship waste collection are limited to:

- Petroleum residues
- Waste lubricating oils
- Effluent

- Trash

7.2 Petroleum waste

The collection of oil residues from ships in the port of Igoumenitsa will be carried out directly by the serviced ship with a suitable tank vehicle of the above company. The petroleum waste will either be transported for treatment to a cooperating treatment plant or will be temporarily stored in the 100 $m^{3\ tank}$ that exists for this purpose in the port of Igoumenitsa to be then also taken for treatment. The availability by the contractor of the means described in detail in Section 9.

7.3 Waste lubricating oils

The collection of lubricating oil wastes from ships in the port of Igoumenitsa will be carried out directly by the serviced ship with a suitable tank vehicle of the above company. Then the lubricating oil wastes are either transferred to the facilities of the approved alternative waste management system of ENDIALE lubricating oils in Aspropyrgos or will be temporarily stored in a tank that will be placed for this purpose in the port. The availability by the contractor of a tanker vehicle covers the port's needs.

7.4 Effluent

For the collection of wastewater, the company HELLENIC ENVIRONMENTAL CENTER (HEC) SA has a suitable tank vehicle for their transport to the Municipal Wastewater Treatment Plant (Biological Treatment) of D.E.Y.A.IG. (Municipal Water Supply and Sewerage Company of Igoumenitsa). The availability by the contractor of one (01) tanker with a capacity of at least $15m^3$ covers the port's needs.

7.5 Trash

According to the previous chapter, the needs of ships approaching the port of Igoumenitsa are almost exclusively limited to household waste.

To meet the needs of the port, it is expected to be installed in total 5 underground bins of temporary storage with a capacity of $3m^3$ each (1 underground bin in the port of Sivota, 1 underground bin in the port of Plataria and 3 underground bins in the port of Igoumenitsa).

The collection of ship waste is carried out either through the above waste bins located in the port, or directly from the temporary storage facilities of the serviced ships, depending on the equipment they have and the waste management procedures they use.

According to the previous chapter, two (2) garbage trucks are sufficient to cover the needs of the port. In addition to closed garbage trucks, hook-up trucks (HOOK-LIFT) and SKIP-LOADERS are also available from the contractor.

It is noted that OLIG within 2022 is expected to procure and install 3 underground waste storage systems and sets of indoor-outdoor waste sorting bins within the ECOWAVES project of the ADRION Program 2014-2020. The underground bins (5 in total) will have a capacity of about $3m^3$ each and will be placed in the ports of Sivota, Plataria, and Igoumenitsa as indicated by the Contracting Authority and with all the necessary accessories as analysed below.

8. Organizational Structure of Ship Waste Reception Facilities

8.1 General

To successfully implement this regulation, a "Ship Waste Reception Facility Office" is set up in the port of Igoumenitsa. The staffing of the above "office" is carried out by the contractors of the facilities for the reception of solid and liquid waste of ships and operates under the supervision of the Port of Igoumenitsa SA.

For this purpose, both the contractors and the Igoumenitsa Port Authority SA appoint responsible persons, as required by Directive (EU) 2019/883, the details of which are given below.

The duties of the office include:

- ✓ Monitoring the implementation of this Regulation
- ✓ The faithful application of the procedures described in Chapter VII
- ✓ Receipt of notification forms
- ✓ Organising the reception, collection, transportation of ship waste
- ✓ Receiving and evaluating any complaint of inadequacy
- ✓ Recording and processing of data and the extraction of statistical data and conclusions
- ✓ Consultation with stakeholders and especially with port users
- ✓ Proposals for revising the current Regulation

8.2 Office of reception facilities

For the successful organization of the works and the service of the ships that approach the port of Igoumenitsa, the contractors of the ship reception facilities will be able to use an organized office space. In this area will operate:

- A desk
- A computer
- A telephone

- A fax
- A VHF (optional)
- An Email

In this way is given the possibility of modern organization of work with the possibility of electronic ordering via email (in addition to fax and telephone), as well as statistical processing of the quantities received. This space can also be used as a movement office for contractors.

The entire operation of the above office is carried out under the supervision of an authorized employee of OLIG SA.

9. Waste Disposal Reception Collection Transport Process Procedures

9.1 General

This chapter describes basic procedures related to the collection, collection, temporary storage, transport, treatment, and final disposal of ship waste approaching the ports of Igoumenitsa, Plataria, Sagiada, and Sivota. These procedures are provided for in the new Directive (EU) 2019/883/EC as well as in quality assurance and environmental management systems.

9.2 Notification

1. The ship operator, the agent or the master of a ship that falls within the scope of P.D. 49/2005 (A' 66) to a port of Greece, completes with honesty and accuracy the standard form "prior notification of waste" (presented below) and communicates the information contained therein to the port management body that arrives at the ship and through the National Unified Maritime Port (EENTH) to the competent Port Authority and to EAA SSN:

(a) at least twenty-four (24) hours prior to arrival, if the port of arrival is known,

(b) as soon as the port of arrival is known, if this information is available less than twenty-four (24) hours prior to arrival, or

c) at the latest on departure from the previous port if the duration of the voyage is less than twenty-four (24) hours.

2. The data of the prior notification of waste shall be submitted electronically to the part of the information, monitoring and enforcement system referred to in article 13 of this decision, in accordance with p.d. 49/2005 (A' 66) and the p.d. 125/2012 (AD 66), as they apply from time to time.

3. The advance notice of waste shall be made available on board, preferably in electronic form, at least until the next port of arrival and shall be made available to the competent authorities upon request.

4. The standard form (Table 12) is an integral part of waste collection and management plans.

The following document must be kept on board together with the appropriate oil book, cargo book, waste book or waste management plan as required by the MARPOL Convention.

Table 11: STANDARD FORMAT OF THE ADVANCE NOTIFICATION FORM FOR WASTE DELIVERY TO PORT RECEPTION FACILITIES

1. SHIP PARTICULARS

1.1 Name of ship:	1.5 Owner or operator:
1.2 IMO number:	1.6 Distinctive number or letters:
	MMSI (Maritime Mobile Service Identity) number:
1.3 Gross tonnage:	1.7 Flag State:
1.4 Type of ship: ☐ Oil tanker ☐ Chemical tanker ☐ Bulk carrier ☐ Container ☐ Other cargo ship ☐ Passenger ship ☐ Ro-ro ☐ Other (specify)	

2. PORT AND VOYAGE PARTICULARS

2.1 Location/terminal name:	2.6 Last port where waste was delivered:
2.2 Arrival date and time:	2.7 Date of last delivery:
2.3 Departure date and time:	2.8 Next port of delivery:
2.4 Last port and country:	2.9 Person submitting this form (if other than the master):
2.5 Next port and country (if known):	

3. TYPE AND AMOUNT OF WASTE AND STORAGE CAPACITY

Type	Waste to be delivered (m^3)	Maximum dedicated storage capacity (m^3)	Amount of waste retained on board (m^3)	Port at which remaining waste will be delivered	Estimated amount of waste to be generated between notification and next port of call (m^3)
MARPOL Annex I – Oil					
Oily bilge water					
Oily residues (sludge)					
Oily tank washings					
Dirty ballast water					

Type	Waste to be delivered (m^3)	Maximum dedicated storage capacity (m^3)	Amount of waste retained on board (m^3)	Port at which remaining waste will be delivered	Estimated amount of waste to be generated between notification and next port of call (m^3)
Scale and sludge from tank cleaning					
Other (please specify)					
MARPOL Annex II – NOXIOUS LIQUID SUBSTANCES (NLS) (1)					
Category X substance					
Category Y substance					
Category Z substance					
OS – other substances					
MARPOL Annex IV – Sewage					
MARPOL Annex V – Garbage					
A. Plastics					
B. Food Waste					
C. Domestic waste (e.g. paper products, rags, glass, metal, bottles, crockery, etc.)					
D. Cooking Oil					
E. Incinerator ashes					
F. Operational waste					
G. Animal carcass(es)					
H. Fishing gear					
I. E-waste					

(1) Indicate the proper shipping name of the NLS involved.

Type	Waste to be delivered (m^3)	Maximum dedicated storage capacity (m^3)	Amount of waste retained on board (m^3)	Port at which remaining waste will be delivered	Estimated amount of waste to be generated between notification and next port of call (m^3)
J. Cargo residues (1) (Harmful to the Marine Environment – HME)					
K. Cargo residues (2) (non-HME)					
MARPOL Annex VI – Air Pollution related					
Ozone depleting substances and equipment containing such substances (3)					
Exhaust gas cleaning residues					

Other waste, not covered by MARPOL					
Passively fished waste					

Notes

1. This information shall be used for port State control and other inspection purposes.
2. This form is to be completed unless the ship is covered by an exemption in accordance with Article 9 of Directive (EU) 2019/883

(1) May be estimates. Indicate the proper shipping name of the dry cargo.
(2) May be estimates. Indicate the proper shipping name of the dry cargo.
(3) Arising from normal maintenance activities on board.

9.3 Proof of waste delivery

The appointed representative of the body of the port reception facility shall provide the following form to the master of the ship that delivered waste in accordance with article 7 of the JMC no. 3122.3-15 / 71164/2021.

This form is kept on board together with the appropriate oil book, cargo book, waste book or waste management plan as required by the MARPOL Convention.

Table 12: Standard format for the waste delivery receipt

1. PORT RECEPTION FACILITY AND PORT PARTICULARS

1.1. Location/terminal name:
1.2. Port reception facility provider(s):
1.3. Treatment facility provider(s) – if different from above:
1.4. Waste delivery date and time from: to:

2. SHIP PARTICULARS

2.1. Name of the ship:	2.5. Owner or operator:
2.2. IMO number:	2.6. Distinctive number or letters: MMSI (Maritime Mobile Service Identity) number:
2.3. Gross tonnage:	2.7. Flag State:
2.4. Type of ship: ☐ Oil tanker ☐ Chemical tanker ☐ Bulk carrier ☐ Container ☐ Other cargo ship ☐ Passenger ship ☐ Ro-ro ☐ Other (specify)	

9.4 Liquid residue collection & management methodology

This section presents the methods of management (collection, collection, transport, processing, and disposal) of the liquid residues of ships approaching the ports of Igoumenitsa, Plataria, Sagiada, and Sivota.

Liquid residues that require reception facilities include, as developed in other chapters, liquid petroleum waste, lubricating oil waste and sewage.

For all the above categories of waste there is no provision for their treatment at the port, except for their collection, temporary storage, and transport to appropriate treatment facilities.

The collection of waste takes place at any time of the 24 hours, every day, Sundays and holidays, there is a relevant request, regardless of whether it is a large or small quantity and from any ship.

The execution of the works, both the receipt and treatment of the received waste and the final disposal will be in accordance with the applicable provisions of the Laws and Ministerial decisions provided for these works by the National, Community and International legislation, and will comply with possible new provisions of Laws and Ministerial Decisions National, Community and International, which will concern the execution of these tasks.

The means used, floating and land, cover all the requirements of the current legislation and are equipped with the necessary permits.

9.5 Collection and management of petroleum waste

The collection of oil waste will be done from the land either directly from the ships or from the tanks that will be placed with special type tank trucks of the company HELLENIC ENVIRONMENTAL CENTER (HEC) AE. Suitable tankers (land and floating) are used to collect the oil residues.

Hellenic for the treatment of petroleum waste Environmental Center SA has a cooperation agreement with the company OIL ONE SA, which has a plant for the treatment of liquid petroleum waste in Drapetsona, Attica.

After the end of the treatment, the oil waste will be transported to the ELPE facilities in Aspropyrgos for final disposal. During the receipt and management of the oil residues, under the responsibility of the contractor, all the customs procedures provided by the current Greek Legislation are followed, such as the issuance of a customs license. The collection of oil residues will be done through the means of the serviced ship and the delivery of the residues will be done through the standard

international link INTERNATIONAL STANDARD CONNECTION, except in the event of failure of the means of the ship, in which case it will be done with the means of the receiving means. At the end of the receipt, the representative of the contractor company issues a certificate, a copy of which is delivered to the master of the serviced ship, which states, among other things, the type and quantity of residues received, date, etc.

the necessary measures for safety and protection of the marine environment will be observed throughout the collection, treatment and final legal disposal of the petroleum waste.

10. Billing System Fees

10.1 General

The Port of Igoumenitsa Organization (OLIG) SA has an approved fee charging system for the receipt and management of liquid and solid waste and cargo residues of ships arriving in the sea area of its competence:

The system of charging fees for waste reception facilities of ships of the port of Igoumenitsa has been set up, considering:

- That according to the " polluter pays" principle the cost of ship reception facilities, including their treatment and disposal, should be covered by ships, for the sake of environmental protection
- That the charging system should encourage the delivery of waste to the reception facilities of the port of Igoumenitsa, instead of dumping it at sea
- That the fees charged should be fair, transparent, non-discriminatory, and commensurate with the cost of the facilities and services offered and, where appropriate, used.
- Directive 2019/883 / EC and JM 3122.3-15 / 71164/2021 which, among other things, provide.

10.2 A brief description of the port fee charging system

The described fee charging system covers all the services required to provide adequate ship reception facilities. In the company HELLENIC ENVIRONMENTAL CENTER S. A. corresponds to the part of the services that concerns the liquid residues, and to ANTIPOLLUTION S.A. the part of the services that concerns to the solid waste. Regarding the responsibility towards the O.L.IG. SA, each of the above parties is fully liable to O.L.IG. SA.

A mixed billing system was chosen, as this system is considered more correct, fairer, and clearly more efficient both in terms of environmental protection and in terms of proper and comprehensive provision of waste reception facilities.

1. Port operators shall ensure that the cost of operating port reception facilities for the collection and treatment of ship-generated waste, excluding cargo residues, is borne by the collection of charges by ships. These costs include the items listed in Annex 4 hereto.

2. Cost recovery schemes shall not provide incentives for ships to dispose of their waste at sea. To this end, management bodies apply all the following principles to the design and operation of cost recovery systems:

(a) ships arriving in a Greek port shall pay an indirect fee, irrespective of the delivery of waste to a port of collection facility;

b) the indirect fee covers:

(i) indirect administrative costs,

(ii) a significant proportion of direct operating costs, as set out in Annex 4, representing at least 30% of the total direct cost of actual waste delivery in the previous year, considering also the costs associated with the expected volume release for next year,

(c) to provide maximum incentive for the delivery of waste listed in Annex V to the MARPOL Convention other than cargo residues, no immediate charge shall be levied on such waste to ensure the right of delivery without additional charges based on the volume of waste delivered. The volume of waste delivered exceeds the maximum storage capacity of the waste referred to in the form in Annex 2 hereto. Waste caught passively is covered by this scheme, including the right of delivery,

(d) so that the costs of collecting and treating passively caught waste are not borne solely by port users, port operators shall, where appropriate, waste management and available EU, national or regional resources,

(e) for cleaning tank residues containing high viscosity persistent floating substances, no indirect charges are levied, and the cost of their delivery is negotiated between the ship operator and the port of receipt and is not required to be delivered to the port. to encourage the delivery of such residues, management bodies shall provide appropriate financial incentives for such delivery,

(f) the indirect charge does not include waste from exhaust gas treatment systems, the cost of which is covered based on the types and quantities of waste delivered.

3. The part of the costs which may not be covered by the indirect charge shall be borne by the direct charge based on the types and quantities of waste actually delivered by the ship.

4. Fees may be differentiated based on the following:

(a) the class, type and size of the ship;

(b) the provision of services to ships outside normal port opening hours; or

c) the hazard of the waste.

5. Fees are reduced based on the following:

(a) the type of commercial activity carried out by the ship, in particular when the ship is engaged in short sea shipping;

(b) the ship 's design, equipment and operation demonstrate that the ship generates reduced amounts of waste and manages its waste in a sustainable and environmentally sound manner.

To determine whether a ship meets the requirements set out in point (b) as regards waste management on board, bodies shall consider the implementing acts of the committee, which shall be adopted in accordance with the examination procedure referred to in paragraph 2 of Article 20 of Directive (EU) 2019/883.

6. The fees charged must be fair, transparent, easily identifiable, non-discriminatory, and commensurate with the cost of the facilities and services available and, where appropriate, used. The amount of the fees and the basis for their calculation must be

notified by the relevant port management bodies to the port users in Greek and English by including them in an appropriate section in the waste collection and management plan of article 5 of this decision and to the required clarifications are provided upon request by the user.

7. The indirect charges for the ports of the Trans-European Transport Network are approved by a joint decision of the Ministers of Finance and Shipping and Island Policy. The competent management body submits a relevant request to the competent Service accompanied by a decision of the Board of Directors or the Port Commission, in the body of which the said fee system is described in detail as well as a detailed techno-economic report, documenting the amount of fees. This decision is taken following a relevant recommendation of the competent Financial Service of the Ministry of Shipping and Island Policy and is of indefinite effect provided that the amount of fees remains constant. With the care of the competent management body, the relevant decision is posted on its website in both Greek and English. In case of adjustment of the above fees, with the care of the relevant management body, a relevant request for approval of the adjustment will be submitted to the competent Service, following the same procedure as described above in this paragraph.

8. For the other ports of the country, the fees of par. 6 are described in the waste collection and management plans, the approval of which is at the same time the acceptance of the said fee system.

9. The ships that do not fall within the scope of application of p.d. 49/2005 (AD 66), are obliged to deliver the waste produced in them and to pay a corresponding price.

10. The fees shall be paid to the managing body of each port, under the care of the master or the legal representative of the ship. In case of debt or delay in the payment of fees to the port management bodies, the provisions of par. 10 of article 20 of law 3622/2007 (AD 281), as applicable in each case, are applied.

11. Port management bodies are obliged to keep a database, in which to record the volume and quantities of waste caught passively and to send the relevant data by January 20 of each year to the competent Service, which by the end of February, send the relevant information to the European Commission.

12. To cover the management costs of any fishing gear waste within the meaning of par. 4 of article 3 of law 4736/2020 (AD 200), the provisions of par. 1 and par. B΄ of par. 4 of article 11 of law 4736/2020, as in each case.

Table 13: CATEGORIES OF EXPENDITURE AND NET INCOME RELATING TO THE OPERATION AND ADMINISTRATION OF PORT RECEPTION FACILITIES (LP)

Direct costs *Direct operating costs arising from the actual delivery of waste from ships, including expenditure items that listed below.*	**Indirect costs** *Indirect administrative costs arising from management of the port system, including the expenditure items that listed below.*	**Net income** *Net income from management systems waste and available national / regional financing, included of revenue items that listed below.*
- Provision of port facility infrastructure receipt, included containers, tanks, tools processing, barges, trucks, facilities waste collection, processing facilities,	Development and approval of the acceptance plan and waste management, including any checks on the project in question and its implementation,	- Net financially benefits provided by extended systems producer responsibility;
Concessions due leasing installation, against where appropriate, or the leasing of equipment necessary for the operation of port	- Update of the waste collection and management plan, including the labor costs and advice, as appropriate,	- Other net income from waste management, such as systems recycling;

reception facilities,		
Actual operation of port reception facilities: waste collection from ships, transfer of waste from port reception facilities for final treatment, maintenance and cleaning of port reception facilities, staff costs, including the overtime, electricity, waste analysis and insurance,	- Organization of consultation procedures for the (re) evaluation of the waste collection and management plan,	Funding in framework of the European Maritime Fund and Fisheries (EMFF);
- Preparing for reuse, recycling or disposal waste from ships, including the separate collection waste,	Management of notification and retrieval systems costs, including the application of reduced fees for ecological vessels, the provision of systems port computerization, statistical analysis and related labor costs,	Other funding or subsidies that available in ports for the management waste and fisheries.
- Administration: pricing, issuance of receipts delivery of waste for the ship, submission of reports.	Organization of public procurement procedures for the provision of ports receiving facilities, as well as the issuance of	

	the necessary permits for the construction of port reception facilities in ports,	
	Communication of information to port users with distributing leaflets, posting signs and posting on port or publication information on the port website and the electronic transmission of the information report, in accordance with Article 5	
	- Systems management waste management: Extended Producer (ADR) schemes, recycling and applications for national / regional funds and their implementation,	
	Other administrative expenditure: monitoring expenditure and electronic submission exceptions, in accordance	

	with Article 9.	

11. Exceptions - Inspections - Checks

11.1 Exceptions

When ships operate scheduled services with frequent and regular berths and provided that there is sufficient evidence of a settlement guaranteeing the delivery of the ship's waste and the payment of charges to a port on its route, port operators may exempt them from obligations arising from Article 6 (notification), Article 7 par. 1 (waste delivery) and Article 8 (fees for waste) of JM No. 8111.1 / 41/2009 (Government Gazette 412B / 06-03-09).

So, the three categories of exceptions that can be given to a ship are:

Exemption from Waste Notification obligations as described in Chapter VIII

- Exemption from the obligation to deliver waste
- Exemption from the obligation to pay a fee

The exceptions are given at the request of the interested ship, according to the procedure described in Articles 9 of the JMC No. 8111.1 / 41/2009 (Government Gazette 412B / 06-03-09).

OLIG. SA inform the General Secretariat of Ports and Port Policy of the Ministry of Mercantile Marine at least once a year of the exemptions granted in accordance with the above, in order to subsequently inform the competent Services of the European Commission.

11.2 Inspections

Pursuant to Article 10 of Directive (EU) 2019/883 / EC, the Port Authority shall ensure that all ships may be subject to inspections, including unannounced inspections, to verify their compliance with this Decision.

<u>Inspection obligations</u>

1. The Port Authorities shall carry out inspections on ships arriving at their ports, corresponding to at least 20% of the total number of individual ships arriving at their

ports each year. The total number of individual vessels arriving at the ports of the Port Authority shall be calculated as the average of the number of individual vessels of the previous three years, as notified through the part of the information, monitoring and enforcement system referred to in Article 13.

2. The Port Authorities shall comply with paragraph 1 of this Article by selecting vessels based on Commission implementing acts which set out the details of the Union risk-based targeting mechanism. These implementing acts shall be adopted in accordance with the examination procedure referred to in Article 20 (2) of Directive (EU) 2019/883.

3. The Port Authorities in the area of jurisdiction of which ships that do not fall within the scope of application of p.d. 49/2005 (A΄ 66), take measures, to the extent necessary, to ensure as much as possible the compliance of these vessels with the relevant requirements of this decision. The masters / captains of the specific vessels submit to the competent Port Authority in a timely manner and in each case before the departure of the vessel, a responsible declaration of compliance with this, with attached copies of receipts of the most recent delivery of waste. In each case of waste delivery, the relevant entry is made by the master / captain in the logbook. When adopting these measures, the Port Authorities may consider the implementing acts of par. 2.

4. Without prejudice to the penalties provided for in Article 21, if the competent Port Authority considers the results of the inspection to be unsatisfactory, it shall ensure that the ship does not leave port before delivering its waste to a port receiving facility in accordance with Article 7.

12. Receipt & Management System Feasibility

12.1 Overall - Existing management regime

The Organization of the Port of Igoumenitsa SA (OLIG), as mentioned in previous sections, cooperates with external partners to provide services for the reception of liquid and solid waste and ship residues. This section examines whether it is possible to provide the services required by own means and resources or whether it is more sustainable to continue outsourcing these services. Then there is a brief presentation of the current regime regarding the collection, transport, storage, and treatment / management of liquid and solid waste of ships in the area of responsibility of the OLIG.

Facilities for the collection of **liquid waste** and shipwreck

OLIG cooperates with **Hellenic Environmental Center S.A. (HEC),** which provides integrated services for the reception of liquid waste and ship residues that approach the maritime area of responsibility. In particular, HEC undertakes the exclusive execution of the necessary work of collection, transport and disposal of liquid waste from ships, while it also manages all liquid residues produced by ships during their operation. Liquid residues are defined and classified by MARPOL 73/78 in Annexes I, II and IV as follows:

Annex I:

- Dirty ballast water
- Oily tank washings
- Oily bilge waters
- Oily residues - sludge
- Scale & sludge from tank cleaning

Annex II:

- Contaminated liquid substances, bulk mixtures thereof and ballast containing such substances as those specified in Annex II of MARPOL 73/78

Annex IV:

- Sewage, as defined in Annex IV of MARPOL 73/78

Solid waste and shipwreck reception facilities

OLIG cooperates with the **ANTIPOLLUTION SHIPPING SOCIETY SA** exclusively to carry out the required work of receiving, transporting, and disposing of ship residues, to provide integrated services for the reception of solid waste facilities of the ships approaching the sea.

The solid residues received from the ships (according to the Board of Directors MARPOL 73/78) are:

- Category A - Plastics
- Category B - Food Waste
- Category C - Household Waste
- Category D - Edible oils and fats
- Category E - Ash
- Category F - Operating Waste
- Category G - Cargo Residues
- Category H - Animal carcasses
- Category I - Fishing Equipment

12.2 Equipment - Infrastructure, Quality Standards

For the services of collection, transport and management of liquid and solid waste, special equipment and appropriate means are required, as well as experienced - qualified certified personnel. Below are the main tools used on a case-by-case basis.

12.2.1 Facilities for the reception of liquid waste and shipwreck

Processing Plants, Separators

To carry out its tasks, land and floating waste reception facilities are required to receive the waste, to fully treat the restricted water and to further process the waste oil for recycling.

The collected liquid waste lubricants end up in the separator, where they are separated into oil and pure water, using a peak treatment process.

Every waste delivery must be accompanied by a proof of waste, as required by international law.



Means of collection and transport (Marine & Land)

Marine collection & transport

tanker fleet is required to carry out the waste collection and transport project. HEC has a total of 9 tankers from 500 to 4,000 tons.


Ground collection & transport

For the ground collection and transport of liquid waste, a fleet of special tankers is required for the collection of waste oil and tankers for the collection of sewage, while the following auxiliary equipment is also necessary:

- ✓ crane trucks,
- ✓ portable temporary storage tanks,
- ✓ heavy-duty hydraulic pumps capable of pumping high viscosity liquids
- ✓ and all accessories

It is noted that all means of collection and transport will operate with the relevant permits and certificates stipulated by the applicable laws.

Additional services required:

In addition to the collection, transport and treatment of liquid waste, additional services are required at the separators such as:

1. Cleaning services on floating separators for all types of tank vessels using hot water and / or steam and inert gas.

2. The high capacity of pumping, separating, and storing floating separators is an important advantage in large pollution cases, as one of the biggest challenges in such cases is the extraction, storage and treatment-separation of the oil to be recovered.

3. In addition to these operational advantages offered by floating separators, there are also fully equipped pollution prevention and control stations, which include:

- ✓ Approved port dams for liquid oils,
- ✓ Absorbent and oil absorbent materials in various forms, skimming systems
- ✓ Spreaders and spray systems approved by WSL and the Greek authorities.
- ✓ Fenders

As for the wastewater (gray and black water, etc.) produced by ships and land units, they are collected by special tankers and tankers and transported, according to all safety rules, to local Municipal Waste Biological Treatment Units.

Every waste delivery is accompanied by a receipt of waste, as required by international law.

Necessary certificates

- "**Document of Compliance**" (DOC): Compliance with the rules and regulations of the International Safety Management Code (ISM).
- **BS EN ISO 9001: 2015** : Port Reception Facilities (collection, transport and treatment) of Liquid Waste, in accordance with APPENDICES I, II & IV of IC MARPOL 73/78.
- **BS EN ISO 14001: 2015 :** Port Reception Facilities (collection, transport and treatment) of Liquid Waste, in accordance with APPENDICES I, II & IV of IC MARPOL 73/78.
- **EMAS :** Waste collection and disposal activities
- **ISO 45001: 2018:** Port Reception Facilities (collection, transport and treatment) of Liquid Waste, in accordance with APPENDICES I, II & IV of IC MARPOL 73/78

12.2.2 Solid waste and shipwreck reception facilities

The collection, transport, storage and treatment of solid waste and ship debris requires a fleet of specialized and licensed vehicles as well as special equipment for offshore and onshore operations. In addition, environmental permits and standards are required to carry out the work.

Indicative equipment required for the required work:

- Waste collection vehicles
- Lifting & Crane trucks
- Skip Loaders
- Loaders & Tankers
- Containers and Compressor Types
- Loaders, Sweepers etc.
- Pumping systems for harmful liquid substances
- Oil Pumping Systems
- UN Approved Packages of all types
- Beach Cleaning Machines
- Ships / Self-propelled Trucks

- Trailers barges
- Submersible Pumps
- Oil Pumping Systems
- Skimmers
- Absorbent Booms
- Absorbent Pads & Inflatable Bumps

Type of land and water collection means:

- Trailer barge
- Self-propelled barge
- Garbage truck
- Hook truck lift for loading containers with loading and unloading mechanism
- Skip truck loader for loading containers with loading and unloading mechanism
- Special truck, tipper, with self- loading system (grab) for bulky waste collection
- Truck refrigerator for receiving animal by-products
- Refrigerator truck for receiving medical waste

Spare equipment:

- Barrels and bins , certified according to UN standards
- Trash bins 1,100lt
- Buckets containers 10-35m3

Indicative Certificates

- System Management Quality ISO 9001: 2015 / **Quality Management System ISO 9001: 2015**
- Environmental Management System ISO 14001: 2015 / **Environmental Management System 14001: 2015**

- system for the Health & Safety in Work OHSAS 18001: 2007 and ISO 45001: 2018 / **Occupational Health and Safety Management System ISO 45001: 2018**
- System Management Waste from Ships ISO 16304: 2018 / **Ship Generated Waste Management System ISO 16304: 2018**
- International Certification Sustainability and Coal ISCC EU / **International Sustainability and Carbon Certification ISCC EU**
- EMAS Register
- Road Traffic Safety (RTS) Management System ISO 39001: 2012
- Social Accountability International Standard SA 8000: 2014

Contractor environmental permits

- Permit for collection and transport of hazardous waste, nationwide
- Insurance for the collection and transport of non-hazardous waste
- Certificate of registration in HMA

12.3 Evaluation - Conclusions

The Port of Igoumenitsa SA and its ship collection and management system comply with Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on "port reception facilities for the delivery of ship waste" published in No. 3122.3-15/71164/2021 JMC (Government Gazette 4790/18-10-2021). The purpose of the new Directive is to strengthen the protection of the marine environment to reduce discharges into the sea and in particular the illegal dumping of waste and cargo residues from ships using Community ports, by improving the disposal and use of port waste collection facilities. ship and cargo residues.

The above decision applies:

(a) to all ships, regardless of their flag, which arrive or operate in a Greek port, except for ships performing port services within the meaning of paragraph 2 of Article 1 of Regulation (EU) 2017/352 and except warships or auxiliary vessels or other vessels

owned or operated by the State and currently used exclusively on a governmental non-commercial basis,

b) in all Greek ports, where ships normally falling within the scope of point (a) usually arrive.

To provide adequate waste reception services to ships approaching the Igoumenitsa Port Authority, (OLIG) cooperates with the licensed companies HELLENIC ENVIRONMENTAL CENTER SA and ANTIPOLLUTION A.N.E. Thus, the receipt and the management of the liquid and solid waste of the ships that approach the ports of competence of OLIG is made exclusively by these two companies.

As presented in section 12.2, in order to undertake the required operations (collection, storage, separation and management) and, respecting the international and national law, the 2 contractors have to provide:

- ✓ Trained certified personnel
- ✓ Special equipment for the works and the operations
- ✓ Land and water collection means (vehicles & fleet)
  - Marine collection & transport
  - Ground collection & transport
- ✓ Certificates
- ✓ Permits (Environmental & operation)
- ✓ Special certified infrastructures: Processing Plants, Separators etc.

Thus, for all the above-mentioned reasons and considering the high cost (infrastructures, means, equipment and personnel) for undertaking that kind of operations, the collection and management of ship waste is not feasible to be undertaken in-house by the OLIG SA.

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