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**INTERPRETATIONS OF, AND AMENDMENTS TO, MARPOL AND
RELATED INSTRUMENTS**

**Proposal to amend MARPOL Annex IV to include the possibility to establish
Special Areas for the prevention of pollution by sewage and to designate
the Baltic Sea as a Special Area under Annex IV – Supplementary
information requested by MEPC 60**

**Submitted by Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland,
the Russian Federation and Sweden**

SUMMARY

Executive summary: This document contains supplementary information requested by MEPC 60 concerning the proposal of the Baltic Sea States to amend MARPOL Annex IV to include the possibility to establish "Special Areas" for the prevention of pollution from sewage of passenger ships and a proposal to designate the Baltic Sea as such a Special Area

Strategic direction: 7.1

High-level action: 7.1.2

Planned output: 7.1.2.2

Action to be taken: Paragraph 13

Related documents: MEPC 59/14; MEPC.1/Circ.685; MEPC 60/6/2, MEPC 60/6/3,
MEPC 60/22, MEPC 60/INF.4; resolutions MEPC.2(VI),
MEPC.159(55), A.927(22) and MEPC.83(44)

Introduction

1 MEPC 60 discussed the proposal of the Baltic Sea States to amend regulations 1, 9 and 11 of MARPOL Annex IV as well as the Form for International Sewage Pollution Prevention Certificate, with the aim of incorporating the concept of Special Areas, now absent in Annex IV, and establishing a ban for the discharge of sewage from passenger ships within those areas except when complying with new strict standards for nutrient concentration in the effluent. The Baltic Sea was proposed for designation as a Special Area under MARPOL Annex IV.

2 In concluding the debate at MEPC 60, the Chairman stated that the majority of the Committee had agreed to the proposal to amend MARPOL Annex IV to include the concept of Special Areas; to designate the Baltic Sea as a Special Area; and to impose a strict standard for the discharge of nutrients in sewage from passenger ships within the proposed Baltic Sea Special Area.

- 3 However, the following concerns should be addressed:
- .1 adequacy of port reception facilities for large quantities of sewage from passenger ships in all relevant ports in the area;
 - .2 availability of sewage treatment plants capable of dealing with the strict standards proposed for nutrient content in the effluent;
 - .3 proposed application to passenger ships only; and
 - .4 inclusion of appropriate provisions in the proposed amendments that the taking effect of the discharge requirements within the new Special Area would not occur until the Baltic States had communicated to the Organization the existence of adequate reception facilities.

4 The Chairman concluded by indicating that the best way forward at this stage was for the submitters to take into account the above concerns and refine their proposal by submitting a supplementary document which should set out all proposed amendments to MARPOL Annex IV, including text using regulation 5(4)(b) of MARPOL Annex V as a basis on the provision of port reception facilities, to MEPC 61 for approval and subsequent circulation with a view to adoption at MEPC 62.

Proposed amendments to MARPOL Annex IV

5 As requested by the Committee, the proposed amendments to MARPOL Annex IV and IMO instruments related to it presented in MEPC 60/6/2 are given in annexes 1 to 3.

Nutrient removal standards

6 Related to the proposed nutrient standards (see annex 3), it is proposed that the term "influent" should be defined as follows: "Influent means the total flow into the sewage treatment process". This definition has been added to footnote 5 in annex 3. The reason for this addition is that, although influent containing grey water mixed with sewage is not considered dilution, the discharge criteria should apply to the total flow of sewage and grey water into the process.

7 It is further proposed that the square brackets around the proposed nutrient removal standards in annex 3 could be deleted. At least five manufacturers of sewage treatment plants consider these standards to be reasonable and achievable, see paragraph 10.

Amendments to regulation 12, Reception facilities

8 As requested by the Committee, a conditional entry into force of the new regulations for passenger ships should be adopted like in MARPOL Annex V, regulation 5(4)(b). It is proposed that a new regulation 12*bis*, "Reception facilities in Special Areas", should be added to regulation 12 of Annex IV, see annex 1.

Adequacy of port reception facilities

9 Information on the number of international passengers and information on available port reception facilities for sewage in relevant passenger ports, including major cruise ports of the Baltic Sea area is presented in annex 4. At the HELCOM Ministerial Meeting¹, held on 20 May 2010 in Moscow, the HELCOM Contracting Parties agreed that all the necessary

¹ See http://www.helcom.fi/MinisterialMeeting2010/en_GB/documents/.

measures should be taken to ensure availability of adequate port reception facilities for sewage in accordance with the new proposed regulations of Annex IV to the MARPOL Convention in their passenger ports as soon as possible, preferably by 2013, and the latest by 2015. For this purpose the HELCOM Road Map for upgrading port reception facilities for sewage in passenger ports in the Baltic Sea area was agreed on, see annex 5. It was also agreed that reporting to IMO on the availability of port reception facilities will take place according to the IMO "Guidelines for ensuring the adequacy of port waste reception facilities (resolution MEPC.83(44))".

Availability of sewage treatment plants

10 As an alternative to discharge of sewage ashore, sewage can be treated to remove phosphorus and nitrogen. Current onboard sewage treatment plants on the market are not specifically designed for this purpose. However, at least five companies (located in Finland, Germany, Norway and the United States) have indicated that the proposed discharge limits for nutrients are achievable and such equipment can be designed for marine use according to the proposed new guidelines. One company has informed that their equipment is already now able to meet the proposed reduction requirement for phosphorus and according to one company even a more stringent reduction requirement would be possible for total nitrogen. These companies design, manufacture and market environmentally friendly waste and wastewater collection and treatment solutions for the marine industry worldwide.

Application of the new regulations to passenger ships only

11 The Baltic Sea is one of the most intensively trafficked sea areas in the world. Both the number and the size of the ships have been growing during recent years, and this trend is expected to continue. Passenger and cruise traffic is also increasing rapidly in the Baltic Sea, significantly adding to the amount of sewage created on board. Passenger ships are like small floating communities, since the number of passengers and crew may be as high as 2,000-5,000 people on passenger ships sailing in the Baltic Sea area. The number of international passengers in major passenger ports in the Baltic Sea area is about 90 million. This number includes all passengers who pass through the ports including both arriving and departing passengers.

12 In case all the passenger ships operating in the Baltic Sea area would collect their sewage waters on board and utilize port reception facilities, about 63% of the theoretical nutrient input from the sewage of ships into the Baltic Sea would be eliminated by addressing a relatively small number of ships. The average number of passenger ships sailing monthly in the Baltic Sea area is 284 while the total number of ships sailing monthly in the area is on average 4,830, i.e. the proportion of passenger ships is about 6% of the total number of ships. The same reduction rate of nutrients could also be achieved by using an effective onboard sewage treatment system that removes nutrients from sewage water. The short term impacts of this would be reduced blooms of blue-green algae along the shipping lanes. In the long term, this nutrient cut would be an important step in combating the problem of eutrophication in the Baltic Sea. Therefore the submitters consider that it is appropriate to address passenger ships only at this stage.

Action requested of the Committee

13 The Committee is invited to consider the additional information contained in this document and decide as appropriate.

ANNEX 1

PROPOSED AMENDMENTS TO MARPOL ANNEX IV

This annex proposes amendments to MARPOL Annex IV providing for the possibility to establish Special Areas where more stringent sewage discharge requirements would apply for passenger vessels, and also designating the Baltic Sea as a Special Area under Annex IV. The proposed amendments are shown in the following paragraphs where new text is underlined and deleted text is crossed out.

Add new paragraphs 5bis, 7bis, and 7ter to regulation 1, Definitions:

5bis Special area means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by sewage is required.

For the purposes of this Annex, the special areas shall include:

- .1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I; and
- .2 any other sea area designated by the Organization in accordance with criteria and procedures for designation of special areas with respect to prevention of pollution from sewage from ships¹.

7bis A passenger is every person other than:

- .1 the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and
- .2 a child under one year of age.

7ter A passenger ship is a ship which carries more than twelve passengers.

For the application of regulation 11.3, a new passenger ship is a passenger ship:

- .1 for which the building contract is placed, or in the absence of a building contract, the keel of which is laid, or which is in a similar stage of construction, on or after [1 January 2013]; or
- .2 the delivery of which is three years or more after [1 January 2013].

An existing passenger ship is a passenger ship which is not a new passenger ship.

¹ Refer to Assembly resolution A.927(22), Guidelines for the designation of special areas under MARPOL 73/78 and guidelines for the identification and designation of particularly sensitive sea areas.

Add new paragraph 2 to regulation 9, Sewage systems:

2 Every passenger ship which, in accordance with regulation 2, is required to comply with the provisions of this Annex, and for which regulation 11.3 applies while in a special area, shall be equipped with one of the following sewage systems:

- .1 a sewage treatment plant which shall be of a type approved by the Administration, taking into account the standards and test methods developed by the Organization,² or
- .2 a holding tank of the capacity to the satisfaction of the Administration for the retention of all sewage, having regard to the operation of the ship, the number of persons on board and other relevant factors. The holding tank shall be constructed to the satisfaction of the Administration and shall have a means to indicate visually the amount of its contents.

Divide regulation 11 into three sub-sections: A for the discharge of sewage from ships other than passenger ships in all areas and for the discharge of sewage from passenger ships outside special areas; B for the discharge of sewage from passenger ships within a special area; and C for general requirements:

Regulation 11

Discharge of sewage

A Discharge of sewage from ships other than passenger ships in all areas and discharge of sewage from passenger ships outside special areas

1 Subject to the provisions of regulation 3 of this Annex, the discharge of sewage into the sea is prohibited, except when:

- .1 the ship is discharging comminuted and disinfected sewage using a system approved by the Administration in accordance with regulation 9.1.2 of this Annex at a distance of more than 3 nautical miles from the nearest land, or sewage which is not comminuted or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that, in any case, the sewage that has been stored in holding tanks, or sewage originating from spaces containing living animals, shall not be discharged instantaneously but at a moderate rate when the ship is *en route* and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration based upon standards developed by the Organization³; or

² Reference is made to draft MEPC resolution, Revised Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants for Passenger Ships, see annex 3 to this document.

³ Refer to the Recommendation on standards for the rate of discharge of untreated sewage from ships adopted by the Marine Environmental Protection Committee of the Organization by resolution MEPC.157(55).

- .2 the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.1.1 of this Annex, and
 - .2.1 the test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate; and
 - .2.2 additionally, the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

2 The provisions of paragraph 1 shall not apply to ships operating in the waters under the jurisdiction of a State and visiting ships from other States while they are in these waters and are discharging sewage in accordance with such less stringent requirements as may be imposed by such State.

~~3 When the sewage is mixed with wastes or waste water covered by other Annexes of MARPOL, the requirements of those Annexes shall be complied with in addition to the requirements of this Annex.~~

B Discharge of sewage from passenger ships within a special area

3 Any discharge into the sea of sewage from a passenger ship shall be prohibited:

- a) for new passenger ships on, or after [1 January 2013],
- b) for existing passenger ships on, or after [1 January 2018],

except when the following conditions are satisfied:

the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.2 of this Annex, and

- .1 the test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate; and
- .2 additionally, the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

C General requirements

4 When the sewage is mixed with wastes or waste water covered by other Annexes of MARPOL ~~73/78~~, the requirements of those Annexes shall be complied with in addition to the requirements of this Annex.

Add new regulation 12bis Reception facilities in Special Areas to regulation 12. As requested by the Committee, a conditional entry into force of the new regulations for passenger ships is presented here, using as a basis regulation 5(4)(b) of MARPOL Annex V.

12bis Reception facilities for passenger ships in Special Areas

- .1 The Government of each Party to the Convention, the coastline of which borders a special area, undertakes to ensure that within a special area reception facilities in all relevant ports and terminals are provided for the reception of sewage, without causing delay to ships, adequate to meet the needs of the passenger ships using them.
- .2 The Government of each Party concerned shall notify the Organization of the measures taken pursuant to subparagraph (.1) of this regulation. Upon receipt of sufficient notifications the Organization shall establish a date from which the requirements of this regulation in respect of the area in question shall take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date.

ANNEX 2

**PROPOSED AMENDMENTS TO THE
FORM OF INTERNATIONAL SEWAGE POLLUTION PREVENTION CERTIFICATE**

- 1 Add the following text (new text is shown underlined) under the heading "Particulars of ship":

Type of ship for the application of regulation 11.3.*

New/Existing passenger ship

Ship other than a passenger ship

- 2 Amend paragraph *1.1. to read as follows (new text is shown underlined):

*1.1. Description of the sewage treatment plant:

Type of sewage treatment plant

Name of manufacturer

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.2(VI).

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.159(55).

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in [new MEPC resolution, see annex 3].

* Delete as appropriate.

ANNEX 3

PROPOSED NEW MEPC RESOLUTION "GUIDELINES ON IMPLEMENTATION OF EFFLUENT STANDARDS AND PERFORMANCE TESTS FOR SEWAGE TREATMENT PLANTS FOR PASSENGER SHIPS OPERATING IN SPECIAL AREAS UNDER MARPOL ANNEX IV"

1 This annex proposes a new MEPC resolution, "Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants for Passenger Ships Operating in Special Areas under MARPOL Annex IV".

2 The new guidelines would only apply to passenger ships and would have the same text as resolution MEPC.159(55), "Revised Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants", except for the inclusion of the additional requirement of nutrient removal, as an effluent standard in section 4 of the guidelines (new text is shown underlined), as follows:

.6 Nutrient removal

The nutrient concentrations of the samples of effluent without dilution¹ should be:

.1 total nitrogen² [< 20 mg// or at least 70% reduction³];

.2 total phosphorus [< 1.0 mg// or at least 80% reduction⁴].

3 It is also proposed that the following text would be added to Certificate of Type Approval for Sewage Treatment Plants after the text "(v) pH of the effluent is between 6 and 8.5.":

(vi) nutrient concentration of the effluent is less than [20 mg/l or at least 70%] for total nitrogen and less than [1.0 mg// or at least 80%] for total phosphorus.

4 Finally, it is proposed that the new guidelines should enter into force at the same point of time as the new discharge regulations for new passenger ships, i.e. [1 January 2013].

1 Influent containing grey water mixed with sewage is not considered dilution. Influent means the total flow into the sewage treatment process.

2 Total nitrogen means the sum of total Kjeldahl nitrogen (organic and ammoniacal nitrogen) nitrate-nitrogen and nitrite-nitrogen.

3 Reduction in relation to the load of the influent.

4 Reduction in relation to the load of the influent.

ANNEX 4

**INFORMATION ON AVAILABLE PORT RECEPTION FACILITIES FOR SEWAGE
IN PORTS OF THE BALTIC SEA (11 JUNE 2010)**

Table 4-1. The number of international passengers and the information on port reception facilities for sewage in major passenger ports in the Baltic Sea area (major cruise ports are underlined). The number of passengers represents the number of passengers who pass through the port including both arriving and departing passengers. The German figures do not include cruise passengers unless the cruise has either started or ended in Germany. (J. Särkijärvi, Centre for Maritime Studies, University of Turku. pers. comm. 18.9.2009). The Danish figures include cruise passengers only for the largest ports (J. Särkijärvi pers. comm. 2009). Figures on the number of passengers in Gdynia are based on a personal communication with the Maritime Office in Gdynia.

Port name	No. of passengers¹	Available PRF for sewage – Please fill in for each port the following points:
		<ol style="list-style-type: none"> 1. Port own treatment plant is available or sewage is delivered and treated in municipal WWTP. 2. Is a fixed connection to sewage system available? If yes, please provide maximum capacity per hour. 3. Indicate number of tank trucks and/or barges available and their capacities, and for each of them indicate maximum discharge rate, and maximum quantity of sewage that can be delivered by a ship. 4. Inform if PRFs are available at each passenger quay.
Denmark		
<u>Copenhagen</u>	1,397,000	<p>Current/existing available PRF for sewage</p> <ol style="list-style-type: none"> 1. No direct discharge to municipal system. 2. No fix system. 3. Tank trucks (20 m³) capacities abt. 80 m³/h <p>Copenhagen Port's reception facilities for sewage (and grey water) utilize the tank truck of a haulage company (possibility to utilize three trucks per delivery). After collection, the sewage is pumped via a pump station and sewer system to the municipal sewage treatment plant.</p> <p><u>Additional information:</u> The port committed to establish PRF for sewage at the new 1,100 m cruise quay. The financing is in place. Expected start and completion: 2011 and March 2013, respectively.</p>
Fredrikshavn	1,979,000	Direct discharge to sewer system.
Gedser	1,643,000	Direct discharge to sewer system.
Helsingør	10,912,000	Possibility for direct discharge to sewer system. However the companies mostly deliver sewage to Helsingborg.
Rodby Faergehavn	6,756,000	Direct discharge to sewer system.

¹ Baltic Port List 2008. Annual cargo statistics of ports in the Baltic Sea. The Centre for Maritime Studies, University of Turku, 2009.

Port name	No. of passengers ¹	Available PRF for sewage – Please fill in for each port the following points: <ol style="list-style-type: none"> 1. Port own treatment plant is available or sewage is delivered and treated in municipal WWTP. 2. Is a fixed connection to sewage system available? If yes, please provide maximum capacity per hour. 3. Indicate number of tank trucks and/or barges available and their capacities, and for each of them indicate maximum discharge rate, and maximum quantity of sewage that can be delivered by a ship. 4. Inform if PRFs are available at each passenger quay.
Estonia		
<u>Tallinn</u>	7,247,366	Tankers; fixed reception points connected to public sewage system (30 m ³ /h) available at Old City Harbour quays No. 1 and 3. Port of Tallinn is planning a construction of fixed reception points connected to public sewage system at Old City Harbour quays No. 24 and 25. Expected start of the investment: 2011.
Finland		
<u>Helsinki</u>	9,579,488	Sewage is delivered to and treated in Municipal WWTP. Helsinki can receive sewage directly to the municipal wastewater system (fixed PRF available at all quays), without any charge for the ships; max. discharge rate 100 m ³ /h.
Mariehamn	2,859,067	Sewage is delivered to and treated in Municipal WWTP. Fixed PRF to municipal sewer available at all quays; max. discharge rate: 30-40 m ³ /h.
Turku	3,008,546	Sewage is delivered to and treated in Municipal WWTP. Fixed PRF directly to municipal sewer in two quays, one of the quays has maximum discharge rate 250 m ³ /ha. Tank trucks, operated by independent waste companies, available at all other quays (no limit on their number, capacity varies depending on company used). In quays in the vicinity of fixed PRF the sewage can be led directly to the sewer via the tank truck. Sewage can be discharged free of charge from cruise ships at least during the summer of 2010.
Germany		
<u>Kiel</u>	1,754,326	At the seaport Kiel, sewage can be transferred directly into the municipal sewage treatment plant. The seaport has separate suction devices and takes only a transit function. Practical experience shows that in the Port of Kiel, the disposal of the sewage capacity is currently unproblematic.
<u>Rostock</u>	2,689,551	Tankers, no direct discharge to sewer system. The sewage at the ferry- and cruise ship berth of seaport Rostock, at the cruise port Rostock-Warnemünde and at the ferry port Sassnitz is collected by tankers. A direct connection to the municipal sewer system does not exist. The cruise port of Rostock-Warnemünde is planning a connection of the berths to the municipal sewer system.

Port name	No. of passengers ¹	Available PRF for sewage – Please fill in for each port the following points: <ol style="list-style-type: none"> 1. Port own treatment plant is available or sewage is delivered and treated in municipal WWTP. 2. Is a fixed connection to sewage system available? If yes, please provide maximum capacity per hour. 3. Indicate number of tank trucks and/or barges available and their capacities, and for each of them indicate maximum discharge rate, and maximum quantity of sewage that can be delivered by a ship. 4. Inform if PRFs are available at each passenger quay.
Germany (cont'd)		
<u>Rostock (cont'd)</u>		The allowable limited flow of the municipal treatment plant and the tolerable chemical parameters forming the framework for the system design, require the installation of a tank for buffering. For the planned project, funding from the joint task of the state of Mecklenburg-Western Pomerania has been applied for.
Latvia		
<u>Riga</u>	503,174	Sewage from ships is delivered and treated in Riga municipality wastewater treatment plant. No direct sewage discharge connection available; 2 tank trucks 30 m ³ each. As PRF's are movable, they are available at each passenger quay.
Lithuania		
<u>Klaipeda</u>	276,625	Maximum discharge rate 100 m ³ /h.
Poland		
<u>Gdynia</u>	375,000	No direct discharge to sewer system; 3 tank trucks (4.5 m ³ , 5.2 m ³ , 10 m ³), 1 vat (30 m ³); max. quantity – 40 m ³ . In 2009 there were 8 cases when passenger ships delivered 80 m ³ of sewage. The upgrade of reception of sewage from passenger ships would require reconstruction of the whole sewerage system in the port, which could be done by 1 January 2015.
Świnoujście Szczecin	868,623 32,497	Świnoujście: mechanical-biological sewage treatment plant on the ferry terminal, 3 trucks of capacity 3 x 6 m ³ . Port is equipped with sewage system connected directly to the treatment plant in the port area but the installation has very limited technical capacities and is not ready to accept sewage from passenger ships so uptake of sewage is currently carried by the tank cars which transport sewage to municipal WWTP.
Russia		
<u>St. Petersburg</u>	411,920	PRF is available at the passenger port "Marine Façade", at which cruise and ferry vessels call, as well as at other passenger quays. Sewage is delivered and treated in municipal WWTP. The passenger port "Marine Façade" (Marine Passenger Terminal on Vasiljevskiy Island, St. Petersburg) has fixed standard connection to the municipal wastewater system.

Port name	No. of passengers ¹	Available PRF for sewage – Please fill in for each port the following points: <ol style="list-style-type: none"> 1. Port own treatment plant is available or sewage is delivered and treated in municipal WWTP. 2. Is a fixed connection to sewage system available? If yes, please provide maximum capacity per hour. 3. Indicate number of tank trucks and/or barges available and their capacities, and for each of them indicate maximum discharge rate, and maximum quantity of sewage that can be delivered by a ship. 4. Inform if PRFs are available at each passenger quay.
Russia (cont'd)		
<u>St. Petersburg (cont'd)</u>		<p>Other quays of Sea Port St. Petersburg have not direct discharge to municipal wastewater system. The sewage at these quays is collected by tankers operated by three different companies:</p> <ul style="list-style-type: none"> - tanker/barge, max. quantity: 1,266 m³ - tanker/barge, and fixed connection, max. quantity: 7,000 m³ per month - tanker/barge, max. quantity: 53 m³, average discharge rate: 4 m³/h <p>There is a special purpose program "Implementation of Investment project of development of Marine Passenger Terminal on Vasiljevskiy Island, St. Petersburg".</p> <p>In 2009, the capacity of the sewage collection was up to 1,000 m³ per day. The investment for port reception facilities was around 1 million USD.</p> <p>In 2010, when three new quays are put into operation, the capacities of sewage collection will be 2,700 m³ per day. During second stage of construction the planning of investments will be around 2 million USD.</p> <p>In 2011, after the completion of terminal construction and putting into operation of two new quays, the capacities of sewage collection will be 4,745 m³ per day.</p>
Sweden		
Gothenburg	1,856,088	Some quays have a direct connection to the municipal sewage system. In other cases, tank trucks are used with a maximum capacity of ca. 12 m ³ in 15 minutes.
Helsingborg	10,914,193	Tank trucks are available. The quay visited by ferries between Helsingborg-Helsingör has its own direct connection to the municipal sewage system.
<u>Stockholm</u>	9,006,387	Direct discharge to municipal sewage system available at all quays; max. discharge rate: 100 m ³ /h.
Trelleborg	1,820,810	Direct discharge to municipal sewage system available at 2 quays.
Ystad	1,856,865	Tank trucks are available; ca. 9 m ³ per truck. Currently investigating installation of a direct connection to the municipal sewage system.

ANNEX 5

HELCOM ROAD MAP FOR UPGRADING PORT RECEPTION FACILITIES FOR SEWAGE IN PASSENGER PORTS IN THE BALTIC SEA AREA

**Agreed by the Baltic Sea States and the EU at the HELCOM Ministerial Meeting
on 20 May 2010 in Moscow**

In the HELCOM Baltic Sea Action Plan the Contracting States agreed to have in 2009 a joint submission by HELCOM countries to IMO in order to elaborate relevant new regulations for ships covered by the existing Annex IV to MARPOL Convention, including further consideration of designation of the Baltic Sea as a Special Area, with the aim to eliminate the discharge of sewage from ships, especially from passenger ships and ferries.

The Contracting States also agreed to encourage voluntary activities in ports and shipping companies to dispose of sewage to the port reception facilities and to undertake all the necessary improvements in the availability of these port reception facilities.

As agreed, in December 2009 HELCOM Contracting States have submitted a joint proposal to the sixtieth session of the IMO's Marine Environment Protection Committee (MEPC 60) to designate the Baltic Sea as a Special Area for prevention of pollution by sewage under Annex IV of MARPOL Convention, whereby any discharge of sewage into the sea from a passenger ship will be prohibited unless the ship uses an approved sewage treatment plant capable to reduce nutrients (nitrogen and phosphorus) according to the established concentrations (or parameters) in addition to the current effluent standards. Alternatively, the passenger ship may discharge all sewage into port reception facilities.

1. The precondition for entering into force of any stricter regulations for discharges of sewage by passenger ships is the availability of adequate port reception facilities. Therefore, the HELCOM Contracting States should take all the necessary measures to ensure availability of adequate port reception facilities for sewage in their passenger ports as soon as possible, preferably by 2013, and the latest by 2015¹ according to the IMO "Guidelines for ensuring the adequacy of port waste reception facilities (resolution MEPC.83(44))" and the requirements of the new regulations of Annex IV to MARPOL Convention.
2. Adequacy of port reception facilities for sewage in a given port mostly depends on the passenger traffic volume and the size of the passenger ships visiting the port. Adequate port reception facilities in large cruise ports should mean the direct discharge of sewage from a ship to municipal sewage systems at quays where passenger ships berth without causing undue delay. Average duration of a ferry voyage is much shorter than duration of a cruise voyage, and smaller amounts of sewage are produced, which can be effectively handled by tank barges. Therefore, in case of passenger ports with ferry traffic, discharge of sewage to tank barges of sufficient capacity can also be considered adequate.
3. Copenhagen, Tallinn, Stockholm, Helsinki, St. Petersburg, Rostock, Gdynia and Riga are the biggest cruise ports in the Baltic Sea, receiving 95% of sewage from cruise ships. Some of these ports, like Riga, Gdynia and St. Petersburg, while smaller than many other passenger ports in the Baltic Sea, however, are important

¹ Implementation date for the new IMO regulations will be decided at IMO MEPC 61 (27 September to 1 October 2010).

to address as they are visited by large cruise liners requiring port reception facilities to be able to receive large quantities of sewage at one time. St. Petersburg had less than 0.5 million passengers in 2009, however an increase in cruise ship calls to this port is expected in future. Adequate port reception facilities are available in Helsinki, St Petersburg, and Stockholm, and also in Klaipeda and Visby. The Baltic Sea countries should take all appropriate measures to upgrade port reception facilities to a standard sufficient for large passenger ships in the first priority ports listed in the table below.

4. The HELCOM Contracting States should evaluate how to undertake that the "no-special-fee" system for sewage delivery in the first priority ports and other big passenger ports like St. Petersburg can be applied according to HELCOM Recommendation 29E/19 at the date of entry into force of new IMO regulations at the latest.
5. The HELCOM Contracting States should investigate if also the second priority passenger ports listed in the table below need upgrading of their port reception facilities to meet the new IMO requirements. Also ports currently assessed as having available adequate port reception facilities should be re-visited.
6. It is essential that municipal sewer systems and waste water treatment plants are in place.
7. Ports and municipalities are encouraged to co-operate in handling ships' sewage and improving, if needed, the municipal sewer systems and waste water treatment plants in order to receive sewage effluent from ships and treat it according to the HELCOM municipal waste water treatment requirements.
8. Ports are encouraged to standardize connection systems to municipal sewer systems if these are available in their sewage port reception facilities.
9. The HELCOM Contracting States should report the progress in implementing these recommendations on a regular basis to the HELCOM Maritime Group.

Port	No. of international passengers ²	No. of cruise passengers ³	Baltic Sea market share 2008	Arrangement of port reception facilities for sewage (2010)	Application of the "no-special-fee" system for sewage delivery (2010)	Additional information
First priority passenger ports (cruise ports are underlined)						
<u>Tallinn (EE)</u>	2007: 6,514,294 2008: 7,247,366 2009: 7,257,646	2007: 294,738 2008: 377,522 2009: 416,605	8%	Tankers and tank trucks, no direct discharge to sewer system	Yes Waste fee charged on every ship with some exceptions. Sewage exceeding 7m ³ subject to extra payment.	Fixed reception points connected to public sewage system* (30m ³ /h) only available at Old City Harbour quays No. 1 and 3. Port of Tallinn is planning a construction of fixed reception points connected to public sewage system at Old City Harbour quays No.24 and 25. Expected start: 2011
<u>Rostock (DE)</u>	2007: 2,583,043 2008: 2,689,551	2008: 172,000 2009: 160,000	3%	Tankers, no direct discharge to sewer system	Yes	The cruise port of Rostock-Warnemünde is planning a connection of the berths to the municipal sewer system.
<u>Copenhagen (DK)</u>	2007: 871,000 2008: 1,397,000	2008: 560,000 2009: 620,000	2%	Tankers, no direct discharge to sewer system	Yes	The port committed to establish PRF at the new 1,100 m cruise quay for sewage (not covering all cruise ship traffic). The local authorities' approval process is ongoing. The financing is in place. Expected start and completion: 2011 and March 2013, respectively.
<u>Riga (LV)</u>	2007: 441,914 2008: 503,174 2009: 691,508	2008: 100,253 2009: 138,703	0.6%	Tank trucks, no direct discharge to sewer system	Not applied to sewage from passenger ships, which are charged at fixed rates per m ³	A feasibility study and a construction design have been undertaken for a new RoPax and cruise terminal to be placed on Eksportosta. Timeline for the project – until 2017.
<u>Gdynia (PL)</u>	2007: 432,158 2008: 375,000 2009: 350,585	2008: 124,000 2009: 134,895	0.6%	Tank trucks, no direct discharge to sewer system	1/3 of all delivered amount of sewage from ferries and cruise ships without additional fee.	The upgrade of reception of sewage from passenger ships would require reconstruction of the whole sewage system in the port, which could be done by 1 January 2015.
<u>Helsingør (DK)</u>	2007: 10,966,000 2008: 10,912,000		12%	No	Yes	
<u>Rodby Faergehavn (DK)</u>	2007: 7,058,000 2008: 6,756,000		7%	No	Yes	
<u>Świnoujście (PL)</u>	2007: 930,864 2008: 868,623			No	Yes	Port is equipped with sewage system connected directly to the treatment plant in the port area but the installation has very limited technical capacities and is not ready to accept sewage from passenger ships so uptake of sewage is currently carried by the tank cars which transport sewage to municipal WWTP.

² Baltic Port List, 2007 and 2008; Information source for 2009: national administrations.

³ Source: Cruise Baltic; Bain analysis for 2008; national administrations for 2009.

Port	No. of international passengers ⁴	Baltic Sea market share 2008	Arrangement of port reception facilities for sewage/ Application of the "no-special-fee" system for sewage delivery (2010)
Second priority passenger ports			
Helsingborg (SE)	2007: 10,973,554 2008: 10,914,193	12%	Yes/yes
Fredrikshavn (DK)	2007: 2,624,000 2008: 1,979,000	2%	No/yes
Gedser (DK)	2007: 1,612,000 2008: 1,643,000	2%	No/yes
Turku (FI)	2007: 3,022,447 2008: 3,008,546	3%	Yes/Yes
Mariehamn (FI)	2007: 2,707,864 2008: 2,859,067	3%	Yes/Yes
Kiel (DE)	2007: 1,543,703 2008: 1,754,326	2%	Yes/yes At the seaport Kiel, sewage can be transferred directly into the municipal sewage treatment plant. The seaport has separate suction devices and takes only a transit function. Practical experience shows that in the Port of Kiel, the disposal of the sewage capacity is currently unproblematic. In case of an increasing volume, a detailed analysis would have to be carried out on any arising restrictions or consequences.
Ystad (SE)	2007: 1,878,383 2008: 1,856,865	2%	Yes/yes
Gothenburg (SE)	2007: 2,102,663 2008: 1,856,088	2%	Yes/yes
Trelleborg (SE)	2007: 1,816,301 2008: 1,820,810	2%	Yes/yes

⁴ Baltic Port List, 2007 and 2008.