SHIP-GENERATED WASTE MANAGEMENT

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Ship-generated waste management

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SUBSIDIARIES

PORT OF TALLINN
The Port of Good News

TS LAEVAD
Ferries

energia
Power
Water
Heating

TS Shipping
Shipowner

Green Marine
Waste Management
Environmental
Management
WASTE HANDLING
INFORMATION SERVICE

Simple Notification Service: **Estonian Maritime Document Exchange**

- **EMDE**
  - Ship and voyage information
  - Cargo, crew and passenger information
  - Waste, security, pilot etc. information

**EMDE**

- Ships
- Local law authorities
- Port operators
- Port agents
- Port
TOTAL RECEIVED
SHIP-GENERATED WASTE (m³)
**Waste Handling Issues**

- "No-special-fee" system purpose is to encourage ships to deliver waste ashore rather than at sea.

- Ships calling at Port of Tallinn harbours have an obligation to pay waste fee and this does not directly depend on quantity of ship-generated waste delivered.

**Rate of Waste Fee Depends On:**

- ship type;
- ship gross tonnage (GT);
- average calculated ship-generated waste quantity;
- price fixed in the contract concluded with the company organizing waste handling.
For the NO-SPECIAL fee, the following ship-generated waste can be discharged from the vessel:

• Bilge water;
• Oily sludge;
• Sewage (up to certain limit);
• Garbage;
• Hazardous waste;
• Cargo-associated waste (Annex V of MARPOL)
• Other ship-generated waste, which are generated during the operation of a ship and fall under the scope of MARPOL 73/78 annexes I, IV, V and VI. (excl. cargo residues)

*The ship operator pays directly to the waste handling company for the reception of cargo residues
Waste fee is levied based on vessel gross tonnage (GT) for each vessel call separately in accordance with the following rates:

- Passenger ships 0.016 EUR/GT
- Cruise ships 0.032 EUR/GT
- Cruise ships (lowered rate*) 0.029 EUR/GT
- Other vessels 0.017 EUR/GT

* Lowered rate applies since 2014 for cruise ships collecting garbage separately by types. Lowered rate does not apply if a ship does not collect garbage listed in MARPOL Annex V separately by types or does not discharge any garbage at a port.
WASTE MANAGEMENT
RECEPTION AND HANDLING

Reception of ship-generated waste is organized by the Green Marine Ldt

- **SHIP-GENERATED WASTE**
  - **SOLID WASTE**
    - MIXED DOMESTIC WASTE
      - PLASTIC
      - TIN
      - OTHER WASTE
    - HAZARDOUS WASTE
      - PAPER
      - GLASS
      - FOOD WASTE
  - LIQUID WASTE
    - BILGE WATER
    - SLUDGE
      - SEWAGE

- The aim – to increase the ship-generated waste recycling rate
- Non-recyclable waste is also transported to power plant, which uses it in addition to natural gas, also mixed municipal waste to generate heat and electricity
RECYCLING OF SOLID WASTE

• **Goal is to maximize recycling:** 2015 - 92% of solid waste from ship was recycled

• **All sorted and recyclable wastes is delivered to the special sorting facility**
Adequate and simple-to-use waste handling facilities:

- Domestic waste collection system is exclusively based around multilift containers
- Large number of multilift and press containers sail aboard ferries
Type of residues from **EGCS**

Classification of residues from EGCS has been considered, taking into account the composition of these residues and possible environmental impact.

**Port of Tallinn has classified residues from EGCS as follows:**

- Exhaust gas cleaning discharge water
- Scrubber sludge
- Washing acids
RECEPTION OF SCRUBBER’S WASTE

• As substantial part of ships have already installed or will install scrubbers, particular attention should be paid to emerging issues and challenges related to scrubber’s waste.

• **Lack of rules** for operation of scrubbers and for waste management from scrubbers

• There is still uncertainty and lack of clarity regarding the operation of open loop systems in ports

• **MARPOL Annex VI wastes** are not yet covered by the Directive 2000/59/EC, while the Estonian Government has included these wastes into the scope of Port Act. Therefore Port of Tallinn is obliged to receive MARPOL Annex VI waste on account of waste fee.

• Wastes generated by exhaust gas cleaning systems are harmful to the marine environment and therefore should be delivered to port reception facilities, like other MARPOL Annex I-V wastes.
PRF INVESTMENTS
IN OLD CITY HARBOUR

Construction of fixed sewage reception facilities connected to municipal sewer system:

• 2016 (completed) – construction of fixed reception facilities connected to public sewage system at quays no 24-25 (EUR 0,15 M)
The establishment of PRF in Port of Tallinn Old City Harbour is dedicated to the fulfillment of the HELCOM BSAP goals, IMO and MARPOL Annex IV regulations for Baltic Sea “special area”.

**PRF DEVELOPMENT PLANS IN OLD CITY HARBOUR**

- **2016** – construction of micro-tunnel (EUR 1,8 M – co-financed by EU project TWIN-PORT2)

- Connects the sewage pipeline with the deep sewer system of the city

- Total reception capacity of sewage will increase from 100 m³ to 1,000 m³ per hour.
TWIN-PORT 2
Port of Tallinn, Old City Harbour

5. Construction of microtunnel in Sadama street

6. Extension of terminal D
   6.1 Extension of terminal D building
   6.2 Construction of parking house

7. Reconstruction of access to terminal A

8. Building a connection of terminals A and D
Mobile Technological Handling Station
handling of oil-containing waste

Innovative solutions:
unique mobile liquid/pumpable oily waste processing facility
• Capable of processing water with hard pollution of oil and chemicals
• Processing capacity 15m³/h
Port of Tallinn’s 4 Examples of Best Practice on Top Priorities in ESPO Green Guide

Periodically ESPO undertake a survey of European Ports to evaluate the progress made in environmental management, and to identify the Top Ten sustainable management issues.

- Air quality
- Noise management
- Waste management

(incl. Mobile Technological Handling Station of liquid oil-containing waste)
CRUISE SHIP GENERATED WASTE IN THE BALTIC SEA*

Distribution of oily wastes in the ports (2010-2014)

*Master’s thesis: A STUDY FROM THE PORTS’ POINT OF VIEW ON A POSSIBLE UPDATED WASTE MANAGEMENT SYSTEM
Irina Svaetichin, 2016
Cruise ship generated waste fractions are unevenly distributed among the ports in the Baltic Sea.

- Port of Helsinki and the Ports of Stockholm - the amount of received wastewater is remarkably higher than the number of passengers (ports received wastewater without extra charges and restrictions).
- Copenhagen Malmö Port and Port of Tallinn - the numbers are the contrary.
- The decline in Copenhagen Malmö Port can most likely be explained by the restriction put on the amount of discharged wastewater.
The distribution of total amount of garbage and total amount of passengers in Baltic Ports 2010–2014*

- Port of Tallinn is the port which receives the highest quantity of garbage
- Port of Helsinki, Ports of Stockholm and Copenhagen Malmö Port receive fairly less garbage compared to the amount of passengers
Amount of ship-generated waste delivered to the Baltic Sea ports from cruise ships

We have compared waste volumes from 10 cruise ships which delivered extremely large amount of ship-generated wastes (compared to the amount of wastes usually delivered by the analogous ships) to the port reception facilities in the Port of Tallinn.
CHALLENGES & CURRENT ISSUES

• **Interpretations** in different ports are very different

• Definition of **adequacy of PRF** (incl. small ports):
  - fully meet the needs of ships regularly using them
  - must meet the needs of ships normally using the port
  - must comply with national, local and other legislation on waste collection and processing

• Need to improve the **information flow** between port authorities and shipping companies to prevent “waste tourism”
Thank You!

Please visit our website:
www.portoftallinn.com
WASTE FEE
COMPARISON OF THE RATES

Port of Tallinn