

**PORT OF**  **TALLINN**

The Port of Good News

# Ship-generated waste management

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# HARBOURS

FROM CARGO TO CRUISE

SAAREMAA HARBOUR

PALDISKI SOUTH HARBOUR

PALJASSAARE HARBOUR

OLD CITY HARBOUR

MUUGA HARBOUR

## MUUGA HARBOUR

Containers, solid bulk goods  
(coal, fertilisers, cereal grains, scrap iron, gravel etc),  
liquid bulk goods, general cargo (break bulk cargo), Ro-Ro



## OLD CITY HARBOUR

Ro-Ro and passengers  
(liners, recreational and pleasure crafts, cruises, yachts)



## PALJASSAARE HARBOUR

General cargo/break bulk cargo,  
solid bulk goods, liquid bulk goods



## PALDISKI SOUTH HARBOUR

General cargo/break bulk cargo,  
solid bulk goods, liquid bulk goods, Ro-Ro



## SAAREMAA HARBOUR

Passengers (recreational and  
pleasure crafts, cruises)



PORT OF  
TALLINN



# ORGANIZATION

## COMPANY IN A NUTSHELL



**PORT OF  TALLINN**  
The Port of Good News

- State-owned **limited liability** company
- Port of Tallinn is a **landlord port**
- **Port provide infrastructure** – land, quays and sea approaches
- **Private operators provide superstructure:**  
handling equipment and warehousing



# RESULTS IN 2013

## OF THE PORT OF TALLINN

- 28,3 mln tons of **cargo**
- 254.000 TEU **containers**
- 9,2 mln **passengers**
- 1932 **cargo ship** calls
- 4933 **passenger ship** calls
- 344 **cruise ship** calls



# CLIENTS

## OF THE PORT OF TALLINN



- **Major shipping-lines, including** Seago Line (Maersk), MSC, CMA CGM, APL, Tschudi Lines, Unifeeder, Team Lines, Tallink, Viking Line, Eckerö Line, Transfennica, KESS, Mann Lines, Baltic Line
- **Major terminal operators, including** Vopak E.O.S, Oiltanking, ArcelorMittal, Vesta Terminal Tallinn (Mercuria Energy), Neste, Alexela (Trafigura), Nynas, DBT (Akron), Katoen Natie, Coal Terminal (KruTrade), TK, Esteve Terminal, Assistor, Autolink, Tridens, MGT Muuga Grain Terminal, Stivis



# RECEPTION AND HANDLING OF SHIP-GENERATED WASTE

Reception of ship-generated waste is organized by the **Green Marine Ltd** – the waste handling company having a contract with the Port of Tallinn.



# LEGAL BACKGROUND

- International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)
  - defines which wastes can be discharged into sea
  - requires States to ensure adequate PRF
- Convention on the Protection of the Marine Environment of the Baltic Sea Area (HELCOM);
- EU Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues
  - requires Member States to ensure adequate PRF
  - ports: Waste Reception and Handling plans
  - mandatory delivery for ship-generated waste
  - advance waste notification
  - fee system  
(incentive not to discharge into sea)
  - inspections
- Port Act of the Republic of Estonia
- Ministry of Economic Affairs and Communications of the Republic of Estonia regulation no. 78  
«Procedure of receiving of bilge water, sewage, garbage and other pollutants from ships»;
- Port of Tallinn “Ship-generated waste reception and handling plan”





# WASTE HANDLING

## ISSUES

- **"No-special-fee"** system with the dual purpose of encouraging ships to deliver waste ashore and to avoid undesirable waste streams between ports, thereby encouraging a sound sharing of the waste burden.
- Ships calling at Port of Tallinn harbours shall have the 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





# WASTE HANDLING ISSUES

**For waste fee the following ship-generated waste shall be received from the vessel:**

- bilge water;
- oily sludge;
- sewage (up to 7 m<sup>3</sup>);
- garbage;
- other ship-generated waste (excl. cargo residues)



# NO-SPECIAL FEE

**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 0.028 EUR/GT
- Cruise ships (**lowered rate\***) 0.025 EUR/GT
- Other vessels 0.017 EUR/GT

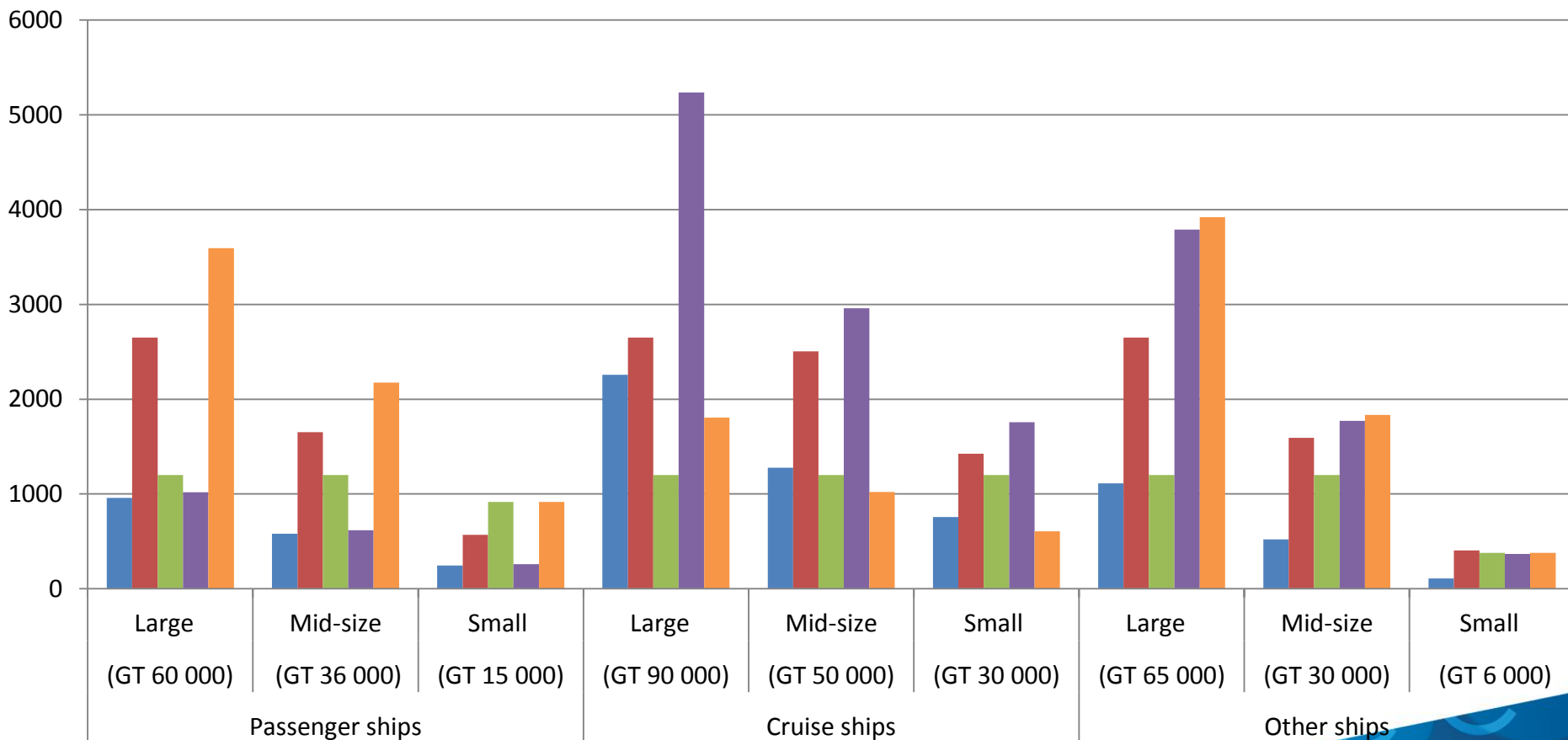
**\* Lowered rate** applies since 2014 for cruise ships **collecting garbage separately** by types. Lowered rate does not apply if a ship does not collect garbage listed in MARPOL Annex V separately by types or does not discharge any garbage at a port.



# WASTE FEE

## COMPARISON OF THE RATES

Tallinn Helsinki Stockholm Klaipeda Riga

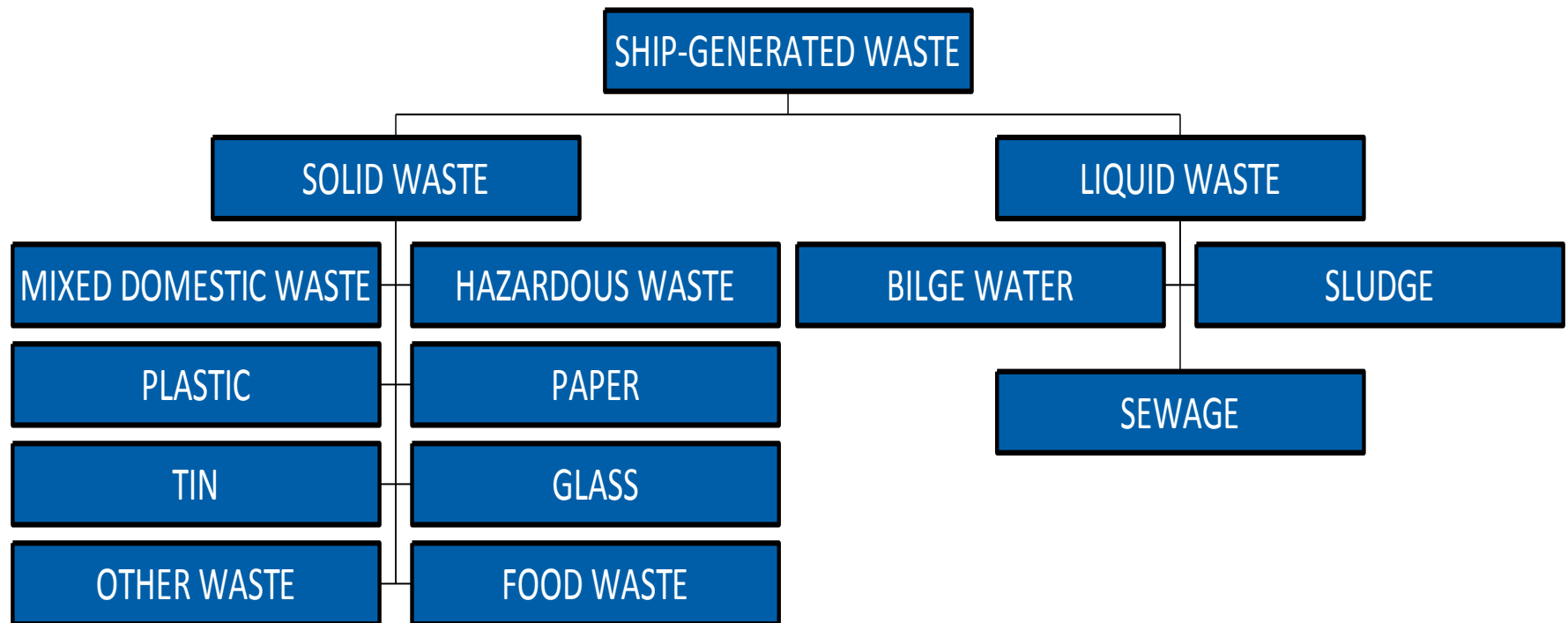




# WASTE MANAGEMENT

## RECEPTION AND HANDLING

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



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

# RECYCLING OF WASTE

## CARDBOARD AND WASTE PAPER



All sorted and recyclable wastes will be transported to the special sorting facility, where they are further sorted based on the type and quality of the material.

Some examples of companies using ship-generated waste for recycling:

- Rāpina Paper Mill Ltd (Estonia)
- Klaipėdos Kartonas SC , Kauno Popierius JSC (Lithuania)
- PSC Kyiv Cardboard and Paper Mill (Ukraine)
- ACN (Europe) Dong Guang Nine Dragon Paper Industries CO.Ltd (China)



# RECYCLING OF WASTE



## Wrappers, different plastic materials

- Gektor Grupp - production of flower-pots, sewage pipes joints
- Fourstar LLC – production of plastic products
- Flexoplast Ltd (Latvia) - production of plastic bags

## Glass

- Järvakandi Klaas Ltd - production of glass containers
- Super Montes JSC (Lithuania) - production of glass containers
- Estonian Pottery Ltd – production of ceramics





# RECYCLING OF WASTE



## Wood

- Teesalu Auto Ltd - production of fuel for boiler houses
- Repo Vabrikud Ltd – production of chipboard
- Veolia Ltd - production of fuel for boiler houses
- Tallinn Landfill Ltd – biodegradation of waste

## Pallets

- Toom Tekstiil Ltd - reusable as pallets



# RECYCLING OF WASTE



## Cooking oil

- Smarteks Biodiesel LLC - production of biodiesel

## Metal

- Vakaru Refonda LLC - scrap metal processing

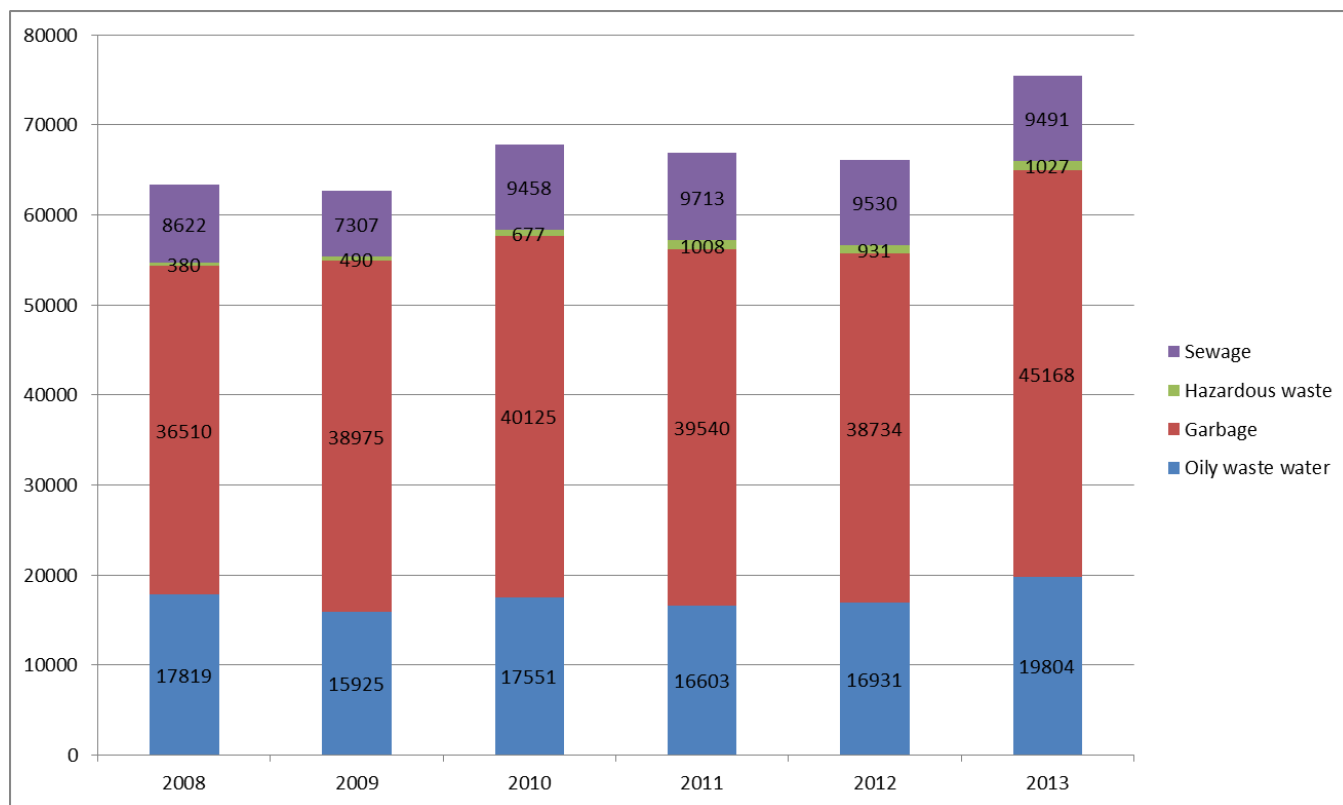
## Dirty / soiled packaging

- Kunda Nordic Tsement Ltd (Estonia) - waste fuel
- Procene Tsement Factory (Latvia) - waste fuel



# TOTAL RECEIVED

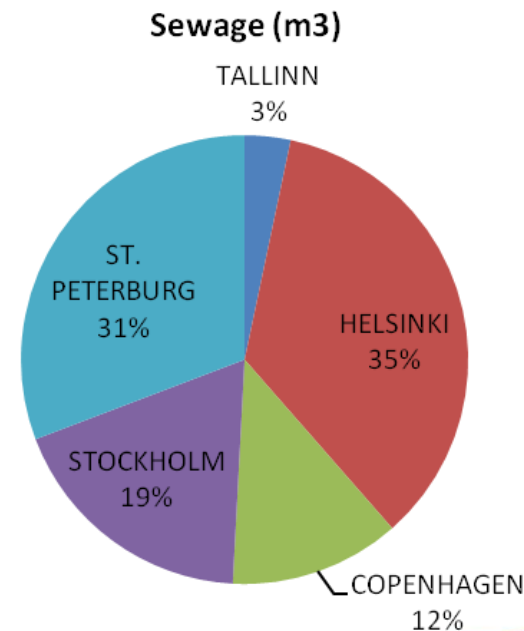
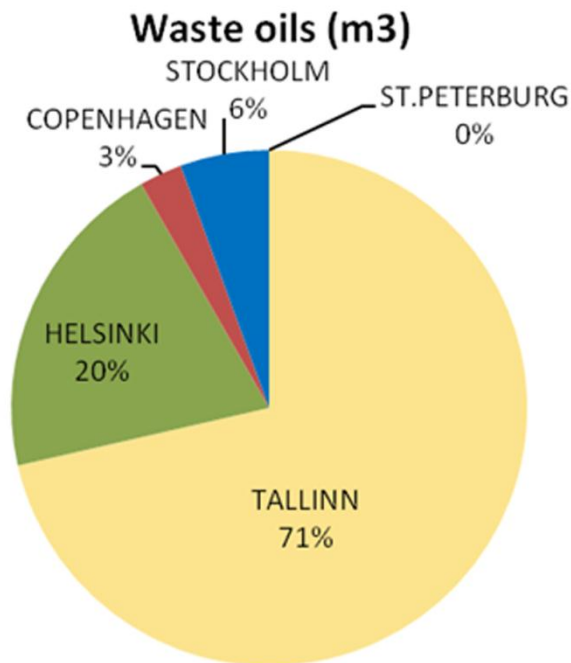
## SHIP-GENERATED WASTE (m<sup>3</sup>)





# AMOUNT OF SHIP-GENERATED WASTE DELIVERED TO THE BALTIC SEA HARBOURS FROM CRUISE SHIPS IN 2010

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.



# TYPE AND CAPACITY OF PORT RECEPTION FACILITIES

## FOR SHIP'S SEWAGE

- Tank vehicles (7-17m<sup>3</sup>)  
managed to receive over a 500m<sup>3</sup> of wastewater from one ship
  - Floating equipment / barge , capacity 300m<sup>3</sup>
- Public sewage system (30m<sup>3</sup>/h) only in Old City Harbour quays no. 1 and 3



# PRF DEVELOPMENT PLANS

## IN OLD CITY HARBOUR

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

- **2012** (completed) – design of PRF (financed by NIB from BSAF fond)
- **2013 –2014** construction of fixed reception facilities connected to public sewage system at quays no 13-16, 24-25 and new cruise quay

The establishment of PRF in Port of Tallinn Old City Harbour is dedicated to the fulfillment of the HELCOM BSAP goals.



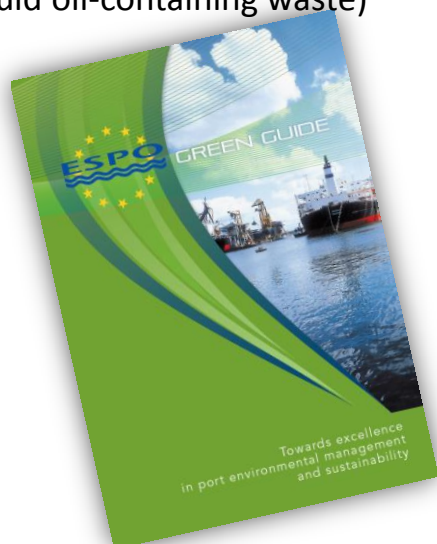


# Port of Tallinn's 4 examples of Best practice on top priorities in ESPO Green Guide

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)



	1996	2004	2009	2013
1	Port Development (water)	Garbage / Port waste	Noise	Air quality
2	Water quality	Dredging: operations	Air quality	Garbage/ Port waste
3	Dredging disposal	Dredging disposal	Garbage / Port waste	Energy Consumption
4	Dredging: operations	Dust	Dredging: operations	Noise
5	Dust	Noise	Dredging: disposal	Ship waste
6	Port Development (land)	Air quality	Relationship with local community	Relationship with local community
7	Contaminated land	Hazardous cargo	Energy consumption	Dredging: operations
8	Habitat loss / degradation	Bunkering	Dust	Dust
9	Traffic volume	Port Development (land)	Port Development (water)	Port development (land)
10	Industrial effluent	Ship discharge (bilge)	Port Development (land)	Water quality



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Thank  
 You!



ISO 9001  
ISO 14001  
BUREAU VERITAS  
Certification



Please visit our website:

[www.portoftallinn.com](http://www.portoftallinn.com)