



Port and City Environment as a follow up of the New Hansa Sustainable Ports and Cities

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Summary: specific questions



Atmospheric emissions from ships

- over 70% of the respondents have made calculations concerning atmospheric emissions
- the most common trend: no change
- the trend of SO_x emissions makes an exception: decreasing due to lower sulphur content of the fuel and lower fuel consumption
- Baltic Sea SECA: the limit of sulphur content of bunker fuel (must not exceed 1,5% m/m) has lowered the emissions
- decreasing trend of other emissions is mostly due to less port calls and increasing trend due to more port calls

Summary: specific questions



Efforts to protect city from shipborne emissions

- air quality and noise are considered in city planning when building new residential areas
- ship-to-shore installations
- environmental reduced harbour fees
- an air quality monitoring is a requirement when applying environmental permits

Summary: specific questions



Speed limits are commonly used

- because of residence areas near shipping lanes
- because of narrow shipping lanes in port
- because of hydrodynamic, navigation and safety matters
- to decrease erosion at the areas close to shipping lanes

Summary: specific questions



Ship-to-shore installations

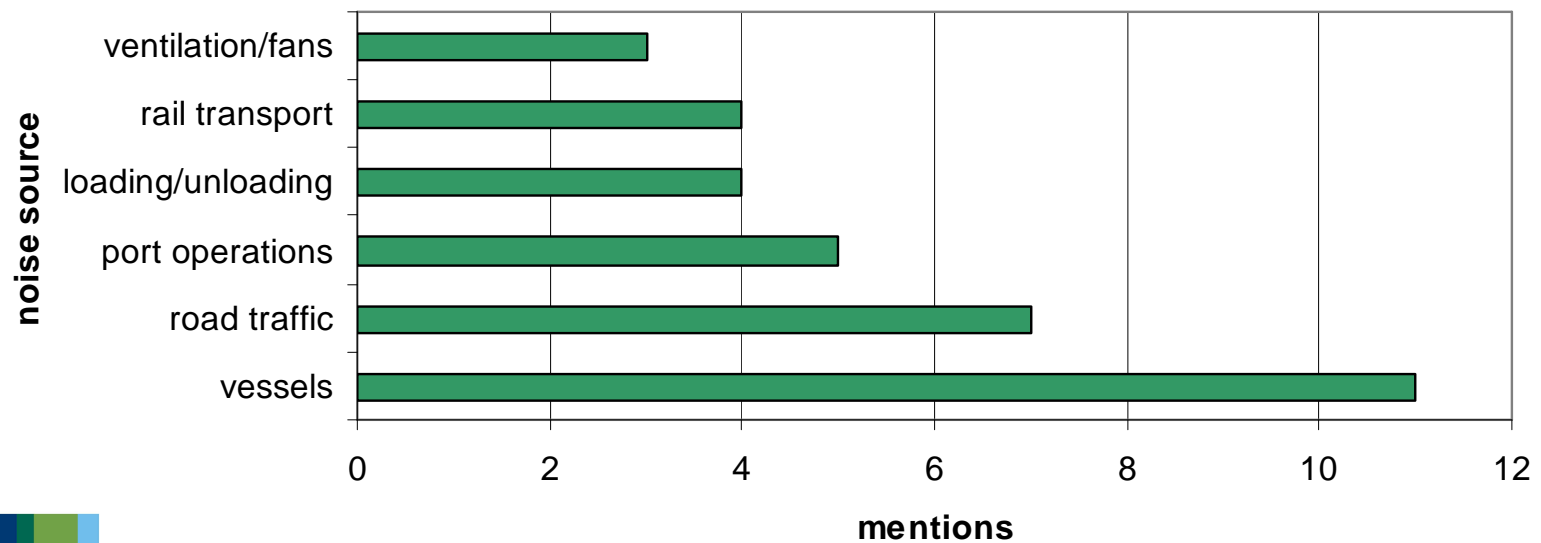
- yes(3), no(3), planning(1)
- ship types using it: ro-ro, high speed catamarans, and in general regular traffic
- influence of New Hansa in introducing ship-to-shore installation: yes(2), no(4), don't know(1)
- obstacles in introducing
 - high investment costs
 - no standardization
 - not a practical solution for ships that frequently change routes

Summary: specific questions



Noise I

Most significant noise sources



Summary: specific questions



Noise II

- exceeding the local noise level limits due to the port activities
 - very often 1
 - sometimes 7
 - no or rarely 2
- noise level limits are lowered because of
 - residential and office areas
 - preservation / conservation areas
- most of cities have noise maps and/or action plans to reduce noise pollution or at least they are planning

Summary: specific questions



Noise III

- practices to reduce noise at the port areas
 - planning of the infrastructure as a entity in advance
 - installation of silencers
 - change in work schedules
 - ship-to-shore connection
 - adjustment on ships and on quaysides to reduce noise when loading/unloading vehicles

Summary: specific questions



Waste I

percentage of recycled household waste in cities

paper	60-85%
glass	15-25%
metals	10-20%
plastic	0-10%

organic waste, hazardous waste

Summary: specific questions



Waste II

A draft of ISO standard for waste fractions on board

<u>Essential element</u>	<u>Code color</u>	<u>MARPOL V reference</u>
Plastic waste	Yellow (RAL 1023)	Category 1
Food waste	Grass green (RAL 6010)	Category 5
Paper Products	White (RAL 9010)	Category 4
Wood	Yellow ochre (RAL 1024)	Category 4
Glass	Ultramarine blue (RAL 5002)	Category 4
Metal	Grey (RAL 7000)	Category 4
Oily solid waste	Black (RAL 9017)	–
Hazardous Waste	Light pink (RAL 3015)	–
Ash & Slag	Orange (RAL 2004)	Category 6
Other Garbage	Brown (RAL 8002)	–

Summary: specific questions



Waste III

- ISO standard differs from the fractions used in most municipal waste management systems
- in theory separate treatment is possible, but in practice systems need modification
- lack of practices to handle for example plastic waste
- large amount of burnable waste is generated on board
- trend in the amount of received
solid waste: increasing (4), decreasing (1), no change (1)
black water: increasing (3), decreasing (1), no change (2)
grey water: increasing (2), decreasing (1), no change (3)

Summary: specific questions



Waste IV

- first steps in improving of management of ship-originated solid waste
 - standardization of waste fractions on board (6)
 - harmonizing of waste reception practices between different countries (4)
 - improvements of receiving the waste in ports (2)
- treatment of ship-generated waste water
 - black water: to (a municipal) sewage treatment plant
 - grey water: to (a municipal) sewage treatment plant
 - cargo washings: mostly not handled

Summary: specific questions



No-special-fee system

- ports differ tremendously from each other
 - percentage of individual ships under the system differs from 2% to 100%
 - solid waste allowed to leave at port: from 0,4m³ to no limit
 - waste water allowed to leave at port: from 2m³ to no limit
 - oily waste waters that can be left at port: from 2m³ to no limit
- satisfied 60% and unsatisfied 40% with the system
- not suitable for ships that call several ports during a sort time period

Summary: specific questions



Examples of economic incentive systems I

Air emissions

- reduced harbour fees for use of low sulfur fuels and techniques for NOx reducing
- the passenger vessels maintaining regular liner traffic using fuel with a maximum sulphur content of 1 % in port area are charged less than other vessels
- sulphur content of the fuel
 - under 0.5%: a 4% fee reduction
 - under 1%: a 2% fee reduction
 - while at harbour, under 0,1 %: a 2 % fee reduction
- total nitrogen emissions no more than
 - 5 grams per kWh: a 2% fee reduction
 - 10 grams per kWh: a 1% fee reduction

Summary: specific questions



Examples of economic incentive systems II

Solid waste

- on the international cruise vessels, waste sorting to fractions: a discount of 33% per passenger
- sorting waste on board in a approved manner: 10% reduction in the solid waste disposal fee

Waste water

- the content and amount of oil in the bilge/sludge water is examined and the fee is set out of that content
- equipment, methods or such high-quality fuel that the amount of oily waste water left ashore is less than normal
>reduction of the disposal fee for oily waste water