

**EU Strategy for the Baltic Sea Region –  
To become a model region for clean shipping**

## **HELCOM's contribution**

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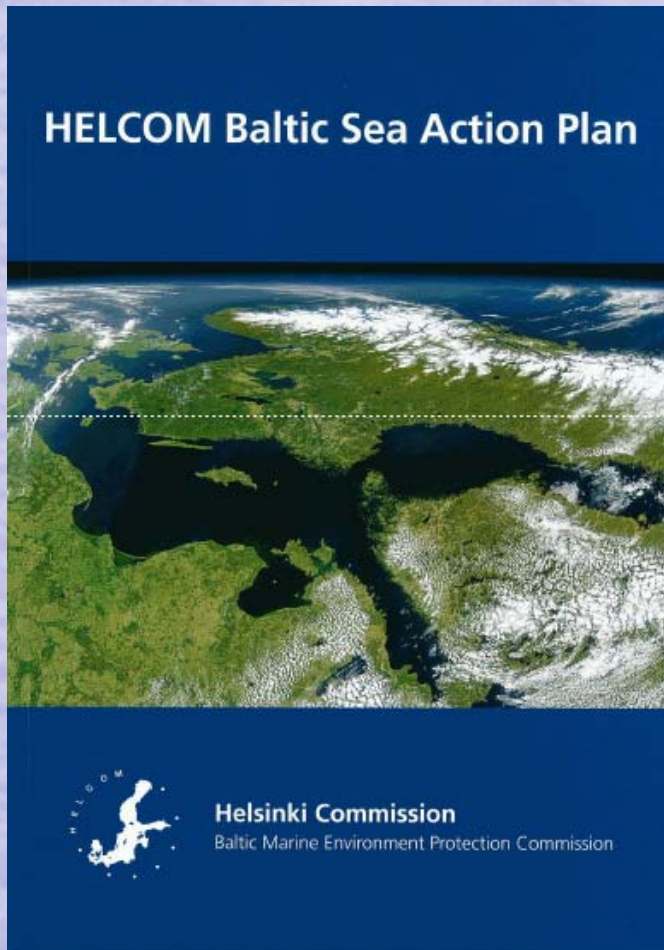


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- HELCOM Baltic Sea Action Plan – a major commitment to ensure environmentally friendly shipping
- HELCOM's work to implement:
  - *Strategic action* – "Implement actions to reduce ship pollution" – SECA and NECA
  - *Cooperative actions*: Encourage voluntary measures to reduce sewage discharges and emissions from ships



# HELCOM Baltic Sea Action Plan



- Adopted on 15 November 2007 in Krakow, Poland
- Regional application of the **Ecosystem Approach**
- Regional programme of measures aimed at obtaining a healthy Baltic Sea
- Supported the development of many actions of the environmental and safety and security pillars of the EU Strategy for the Baltic Sea Region

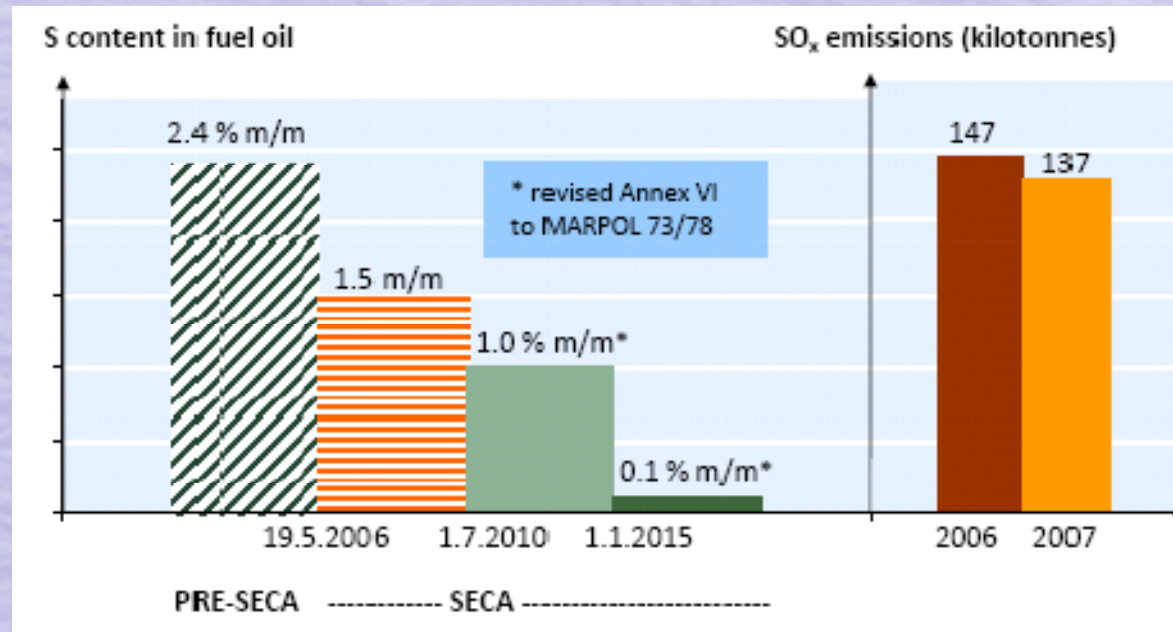
**EU Strategy – additional political support and strengthening of the commitments already made by the Baltic Sea countries in the BSAP**

## Baltic Sea – SO<sub>x</sub> emission control area

- the Baltic Sea designated SO<sub>x</sub> Emission Control Area (SECA) under Annex VI to MARPOL 73/78, following a joint proposal by the Baltic Sea countries to IMO.
- Baltic Sea SECA came into force on 16 May 2006, followed by the North Sea a year and half later.
- Sulphur content of fuel oil used on board ships in the Baltic must not exceed 1.5% or ships must fit an exhaust gas cleaning system to limit SO<sub>x</sub> emissions, while
- a global cap remains 4.5% of S content in fuel



# New SO<sub>x</sub> emission requirements



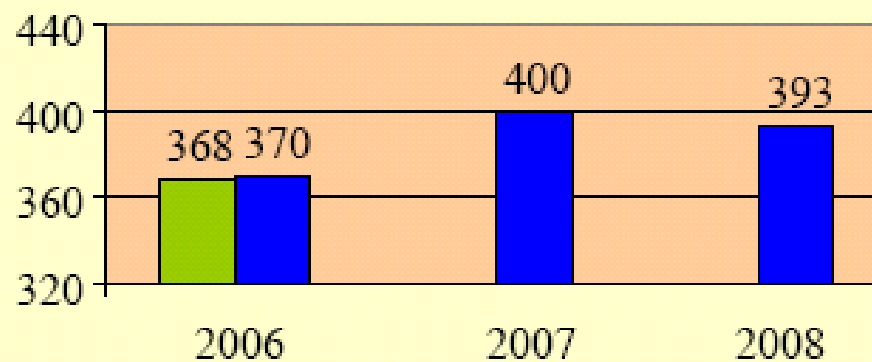
- Sulphur (S) content in fuel oil used on board ships in the Baltic Sea before and after establishing the Baltic as a SO<sub>x</sub> Emission Control Area (SECA) and total SO<sub>x</sub> emissions (kilotonnes) from shipping in the Baltic in 2006 and 2007



# NOx emissions from ships in the Baltic Sea:

- Higher than combined land-based NOx emissions from Finland and Sweden
- A substantial reduction of NOx emissions from ships is needed due to heavy eutrophication of the Baltic Sea

**NOx emissions from Baltic shipping**



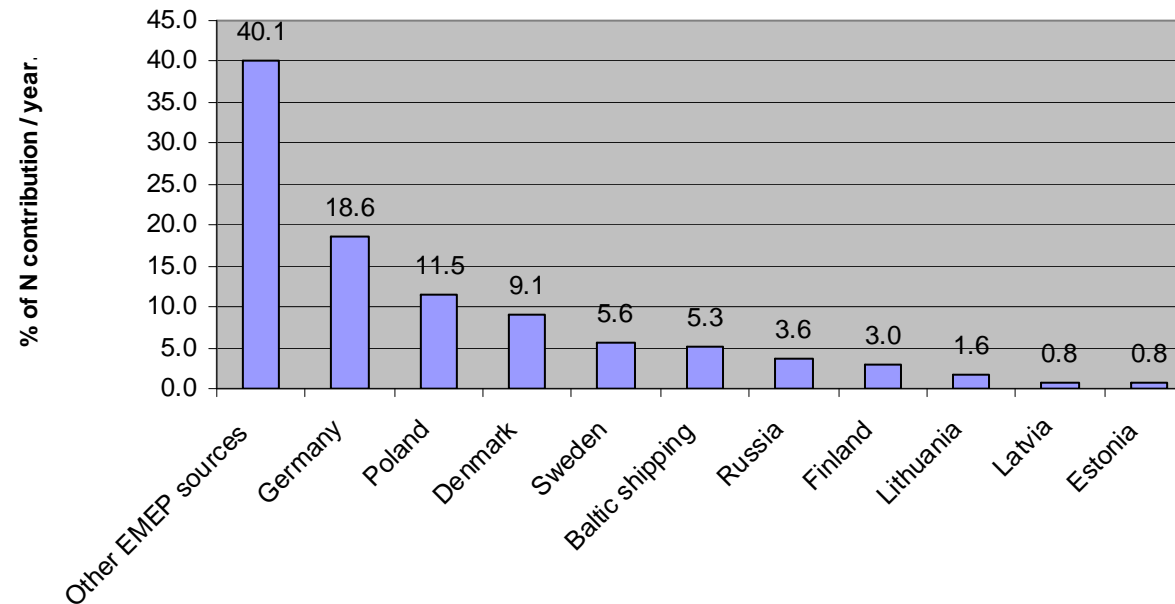
■ NOx land emissions of Finland and Sweden  
■ NOx emissions from ships in the Baltic Sea



# N deposition to the Baltic Sea

- Riverine load of nitrogen is the biggest source
- About half of nitrogen reaching the sea comes from the air:
  - ammonia, mainly from agriculture
  - NO<sub>x</sub>, mainly from road transportation, energy combustion and shipping
- Within 2000-2006, shipping in the Baltic was the **2nd** largest contributor to the **deposition of NO<sub>x</sub>**, and the **5th** greatest contributor (5%) to **total N deposition** to the Baltic Sea basin.

Percentage of contribution of selected emission sources to the deposition of total nitrogen to sub-basins of the Baltic Sea in the period 2000 - 2006.



# New IMO NOx emission requirements – adopted with support of HELCOM countries

## Revised Annex VI to MARPOL 73/78

### Tier I

- Tier I applies to marine diesel engine installed on a ship constructed **on or after 1 January 2000** and **prior to 1 January 2011**. The emission requirements are set **at the same level** as current requirements.

### Pre-2000 ships

- Marine diesel engines installed on a ship constructed **on or after 1 January 1990** and **prior to 1 January 2000**, subject to some specific limitations, will be required to meet the emission standard of Tier 1.

### Tier II

- Tier II applies to marine diesel engine installed on a ship constructed **on or after 1 January 2011**. Approximately a 15% reduction level will be achieved comparing to the current legislation and tier I.

### Tier III

- Tier III applies to marine diesel engine installed on a ship constructed **on or after 1 January 2016**, subject to some exemptions, **operating in an Emission Control Area**. An ECA is to be designated according to the approved criteria and procedures. 80% reduction will be achieved in ECAs comparing to the current legislation and tier I.



# Baltic Sea as NECA

- The results of available studies made for HELCOM by ShipNODeff indicate that only 80% reduction in NOx emission from shipping would lead to a decrease in the NOx emissions in the Baltic by 2030.
- Therefore, only if Baltic is established as NECA, a substantial reduction of NOx emissions from ships could be achieved in a long run. Such a reduction is needed due to heavy eutrophication of the Baltic Sea.
- HELCOM Correspondence Group under the lead of Finland is developing a joint proposal by the Baltic Sea countries to designate the Baltic Sea NOx Emission Control Area (IMO MEPC 62 in July 2011 is the target date)



Co-operative action: “Encourage ports, local and regional authorities, and shipping companies to adopt **voluntary measures** reducing **wastewater discharges** from shipping and boating and providing facilities in ports for **preventing or limiting air emissions** of vessels”

- Starting from sewage ...



# Sewage from ships – legislative actions

- Currently – sewage can be discharged without treatment outside 12 nautical miles zone (when comminuted and disinfected also within 3-12 nm)
- Nutrients discharges in ships' sewage small but not negligible due to sensitivity of the Baltic Sea (N 356 tons and P 119 tons annually)
- In December 2009 HELCOM countries have submitted a joint proposal to IMO (MEPC 60) to establish the Baltic Sea a control area for sewage under Annex IV of MARPOL 73/78 – ban on discharge of sewage in the Baltic unless it has been treated to remove P and N to a certain level (alternatively can be delivered to port reception facilities).



# Sewage from ships – need for improved PRF

- Legislation and policy framework re. ship-generated waste (handling on board, delivery to PRF) is in place (IMO and HELCOM)
- The new IMO regulations will trigger higher demands for PRF for sewage – what used to be “adequate” might not be sufficient anymore
- HELCOM Correspondence Group under the lead of Germany is developing a plan and recommendations for enhancing PRF for sewage in major cruise and passenger ports in the Baltic Sea
- Cruise industry: adequate means a direct discharge to sewage system and no extra charge for sewage delivery (the “no-special-fee” system)



## Voluntary measures – potential for reduction of sewage discharges and emissions from ships

- Substantial reduction potential exists, economic incentives should go hand in hand with more strict legislation
- Even when the Baltic is designated NECA, the 80% requirement will apply to new ships only – will take next 20-30 years to become effective for all ships
- 68% share in NO<sub>x</sub> emissions comes from ships under the HELCOM country or EU country flag!
- Economic incentives can stimulate technological improvements and innovation and cost-efficiency
- Sub-regional co-operation is of crucial importance – measures on a national level might have a limited effect on the overall emissions from ships
- Full implementation of HELCOM Recommendation 28E/13 "Introducing economic incentives as a complement to existing regulations to reduce emissions from ships" is needed (e.g. differentiated port and fairway dues, so far implemented in few countries)



## Summing-up ...

- Actions to strengthen legislation addressing emissions and discharges from ships have already been taken:
  - SOx emissions will be reduced by a third from mid-2010, and drastically reduced starting from 2015, all ships
  - NOx emissions – 15% reduction from 2011 (tier II)
  - Baltic Sea NECA – 80% reductions from 2016 for new ships
  - Untreated sewage discharges to be banned
- Room for improvement by using economic incentives and voluntary measures, e.g. environmental differentiation of dues to promote “green” ships:
  - Environmental effect can be achieved quicker than through legislative measures
  - A level playing field can be created (covering existing and new ships)



# Major upcoming events

- Baltic Sea Action Summit, 10 February 2010, Helsinki
- HELCOM Stakeholder Conference on 3 March 2010, Helsinki – stocktaking of ongoing projects (BSAP and the EU Strategy) and identification of new projects and follow-up actions
- Baltic Cities Summit, 18 May 2010, St. Petersburg – major topic: municipal sewage and from ships
- HELCOM Ministerial Meeting, 20 May 2010, St. Petersburg



# Thank you!

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Adopted HELCOM Baltic Sea Action  
Plan is available from [www.helcom.fi](http://www.helcom.fi)

