New IMO and EU Regulations for Shipping

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Finnish Transport Safety Agency: Organisation
Environmental Regulations for Shipping

Helsinki Convention, 1974/1992
HELCOM Recommendations

IMO
UN Law of the Seas, UNCLOS
MARPOL 73/78 Convention
AFS Convention
BWM Convention etc.

EU Directives
e.g. 2005/33/EC "Sulphur directive"

EU Regulations:
Strategy for the Baltic Sea Region

National Legislation
The Baltic Sea has a Special area status under annexes I (oil discharges), V (garbage) and VI (air pollution) to the MARPOL Convention.

The whole Baltic Sea except for the Russian territorial waters is designated as a Particularly Sensitive Sea Area (PSSA) (2005).
Revised MARPOL Annex VI

• The revised (2008) Annex VI entered into force on 1 July 2010, under the tacit acceptance procedure.

• Annex VI, regulation 14, SOx and PM
  
  **Global requirements**
  
  • The sulphur content of any fuel oil used onboard ships shall not exceed the following limits:
    • 4.5% m/m prior to 1 January 2012;
    • 3.5% m/m on and after 1 January 2012; and
    • 0.5% m/m on and after 1 January 2020.

  **Review provision**
  
  • A review of the final 0.5% regulation shall be completed by 2018 to determine the availability of fuel oil to comply with this standard.
  • If a decision is taken by the Parties that it is not possible for ships to comply, then the 0.5% standard shall become effective on **1 January 2025**.
Annex VI, regulation 14, SOx and PM

**Requirements within Emission Control Areas (SECA)**
- While ships are operating within Emission Control Areas, the sulphur content of fuel oil used onboard ships shall not exceed the following limits:
  - 1.5% m/m prior to 1 July 2010;
  - 1.0% m/m on and after 1 July 2010; and
  - 0.1% m/m on and after 1 January 2015.

**Emission Control Areas are (in 2010):**
- The Baltic Sea area (SOx, adopted: 1997 / entered into force: 2005)
- The North Sea (SOx, 2005/2006)
- The North American area (NOx & SOx, 2010/2012)
- The United States Caribbean sea area (NOx and SOx, approved in principle by MEPC 61)
The Baltic Sea and North Sea Emission Control Areas for SOx

- The Baltic Sea
- North Sea (latitude 62° north and longitude 4° west) and the English Channel
The North American ECA

- The North American Emission Control applies generally approximately 200 nm from the Atlantic, Gulf and Pacific coasts and some Hawaiian islands.
- Ship compliance will be in accordance with MARPOL Annex VI Reg. 14.7 for ECA-SOx aspects from August 1, 2012.
The United States Caribbean Sea area

- The United States Caribbean Sea area was approved in principle as an Emission Control Area by MEPC 61.
Alternatives for use of low sulphur fuel oil

- The **use of exhaust gas scrubbers** may turn out to be a cost efficient alternative to the use of high quality fuel oil with low sulphur content.
- Or the use of other types of fuel oils, for example **natural gas or bio-fuels**, may also turn out to be an attractive alternative.
EU Sulphur Directive (2005/33/EC)

- Since 1 January 2010 EU’s Sulphur Directive requires all ships to use maximum 0.1% while in port longer than two hours. This is also a requirement by the Finnish National law.

- The revision of the EU’s Sulphur Directive is in the pipeline...starting by the end of the year 2010 or during the spring of 2011.
When the Annex VI was revised 3 tiers of NOx reduction were adopted:

- Tier I represents the current NOx limit.
- Tier II applies to engines installed after 1 January 2011 and targets a ~20% reduction from the Tier I level. Possible to achieve through minor technical adjustments of engine.
- Tier III applies to engines installed after 1 January 2016 and targets a ~80% reduction from the Tier I level. Tier III applies only in Emission Control Areas and requires Selective Catalytic Reaction (SCR) or other advanced technology.

- Tier I also applies to ships built 1990-1999 (5000kW and 90dm³)
- Nitrogen Emission Control Areas: North- American (USA-Canada) + some Caribian islands.

Baltic Sea NECA? North Sea NECA?
A New Climate Convention 2013

How to reduce CO$_2$ emissions from Shipping:
* Measures to be adopted at IMO?
Negotiations ongoing – decision by 2011?
How to decrease CO$_2$ emissions from shipping

- A global solution is needed to this global problem.
- The goal is a global Convention – How do we get the developing countries onboard?
- 75 % of the world tonnage is under the flag of developing countries (e.g. Panama, Liberia, Bahamas, Marshall Islands)
- A large proportion is controlled by companies owned by developed countries; about 40 % by EU companies
- Developing countries insist on applying the Principle of Common but Differentiated Responsibilities (CBDR) at the IMO
IMO Measures

- **Mandatory measures**
  - EEDI (Energy Efficiency Design Index) for designing new ships
  - SEEMP (Ship’s Energy Efficiency Management Plan)

- **Voluntary measures**
  - EEOI (Energy Efficiency Operational Index) an operative index for all ships

- **Economic Incentives**
  - Emissions Trading Scheme; “cap and trade” or
  - International GHG-fund (GHG-levy)
GHG emissions conclusion

- The global GHG negotiations at the IMO are challenging.
- Shipping must, however, participate in reducing emissions.
- If no agreement is reached at the IMO, the EU may require emissions reductions for shipping:
  - **CO2 emission reductions planned on EU level**
    - Air traffic -10% from 2005 level (in 2020) GHG-emissions trading scheme in place
    - Ships -20% from 2005 level (in 2020)
  - Any non-global requirements would distort competition and lead to carbon-leakage.
Thank you for your attention!