How to make the sea green

Seminar – Brussels 17 October 2007

EU strategy to reduce emissions from ships

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Outline

- Air emissions from ships are significant and growing fast
- The air pollutants contribute to health and environmental problems
- The CO_2 emissions contribute to global warming
- Need for absolute reductions.

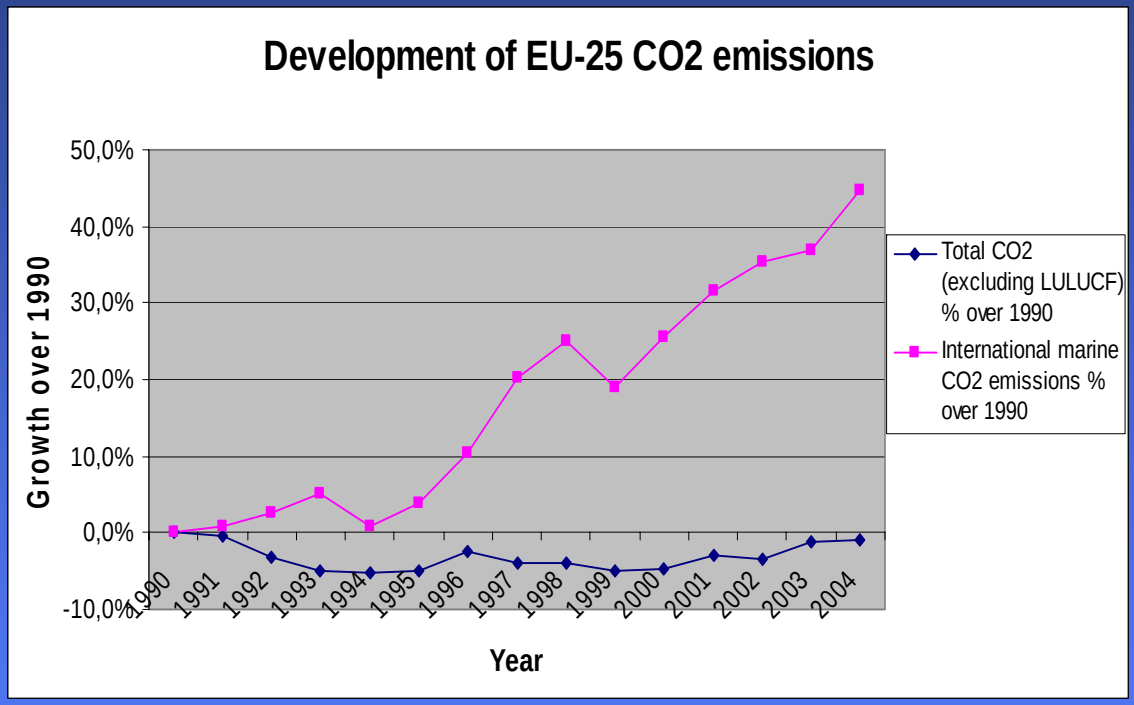
How to make shipping green again?

Air pollution and ships

Past policy documents

- **Maritime emissions strategy (2002) and Thematic Strategy on Air Pollution (2005) calls for reduction of SOx, NOx and CO_2**
- **Council endorsed the objectives**
- **Parliament endorsed, asking to reduce NOx by 2004 *and not to wait for IMO to take action***
- **Still, global solution has preference**

Past and future trend



- Air pollution grows at similar rate
- Ships NOx and SOx emission will be as large as land based sources by 2020

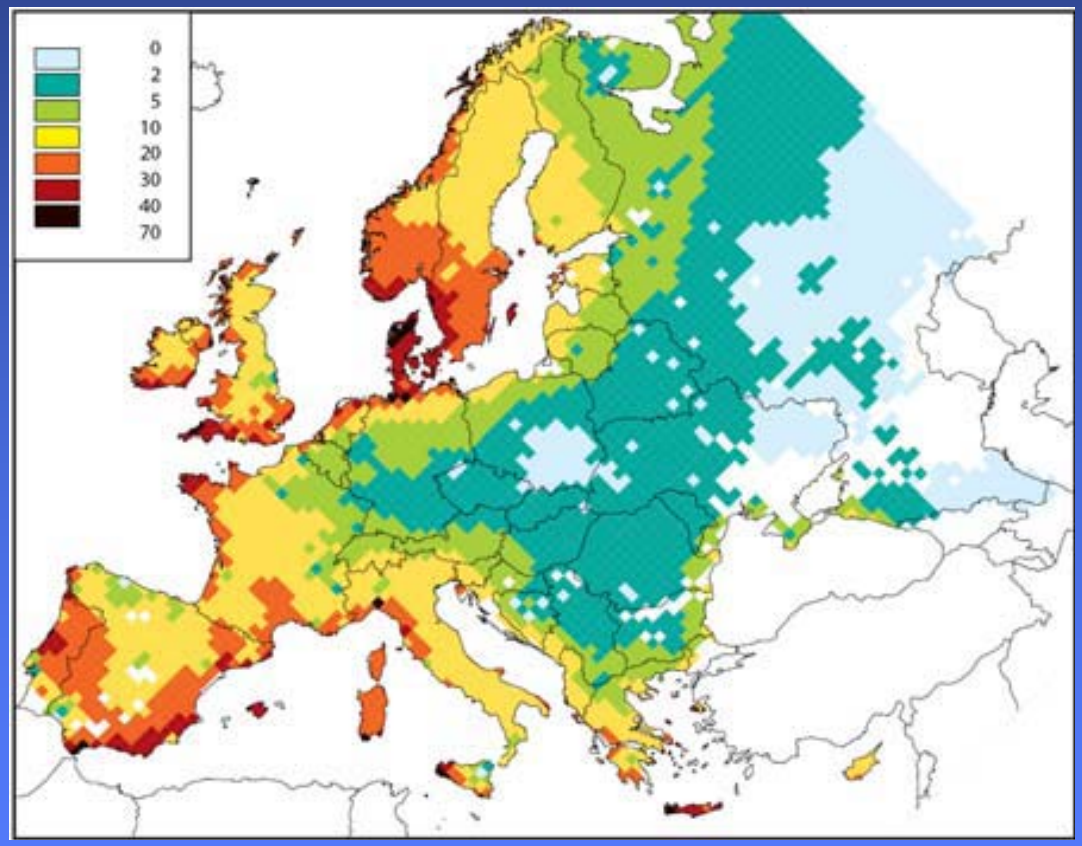
Shipping compared

- SOx emissions far higher than new trucks
- NOx emissions similar or higher new trucks
- PM emissions higher than new trucks
- CO_2 emissions lower (bulk, tanker, container)

Air pollutants/reduction potential

- **Sulphur/fuel quality**
  Ships: 45.000 ppm sulphur (27.000)
  15.000 ppm sulphur control areas
  1.000 ppm ships at berth (EU, 2010)
  Trucks: 50 ppm, going down to 10 ppm
  Ships (IWW): 10 ppm (as of 2011 proposed)
  Scrubbers can remove up to 90%!
- **NOx: catalyst converter can reduce 95%**
  in-engine technology can reduce up to 60%
- **PM: partly linked to fuel quality, some reduction by scrubbing (percentage unknown!)**

Percentage contribution of shipping to sulphur emissions in 2020



Ships in EU waters

- **Based upon reports for Commission:**
  - **Ship emissions jeopardise attainment of EU objectives for 2020 (Thematic Strategy on Air Pollution, 2005)**
  - **Most examined measures on ships are substantially more cost-effective than measures tackling land-based emissions (IIASA, 2007)**

Some observations

- The options to reduce air pollution have as disadvantage they will increase shipping emission of CO_2 1 - 5%
- This equals the regular increase of CO_2 from shipping of 4 - 20 months
- There is an overlap of people that argue against reduction of air pollution because it increases CO_2 emissions and people that argue against measures to reduce CO_2
- Industry tends to follow legislation rather than to take the initiative

Planning reduction air pollution

- **IMO MEPC 57, March 2008: scheduled to decide on amend Marpol Annex VI (to reduce air pollution, especially SO_2, NO_x, PM);**

- **European Commission**
  - **Contribute to IMO-process**
  - **Review and amend Directive sulphur in fuel in 2008**
  - ***If no IMO decision*, include regional measures to reduce air pollution from ships in this directive**

Ships and Climate Change

EU Climate Change Policy

- **January 2007: EC integrated policy package covering both climate change and energy policies**
  Limit Global Climate Change to 2°C

- **March 2007: EU Heads of State endorsed the policy, called for inclusion Shipping in post 2012 agreement**

- **July 2007: EP requests for inclusion of shipping in ETS**

Transport reductions

“There is no doubt that the transport sector will also have to contribute to reducing green house gas emissions, just as all other sectors of economy “

Jaques Barrot, Vice-President of the European Commission

September 2007

Key Question

- What contribution should the maritime sector make to the 20% target (2020)?
  - More than other sectors?
  - Less than other sectors?
- and what about 2050?

Some considerations

- The costs of inaction are far greater than the costs of taking action
- Shipping can benefit if transport as a whole has to reduce its greenhouse gas emissions
- With current increase of global transport, either the growth of transport will be limited, ships need to become far more efficient, or but reductions on the market.

EU Policy Option (1)

- **Include Shipping in EU ETS**
  - **similar to aviation BUT different**
- **Issues**
  - **Changing – destinations, owners, operators..**
  - **Avoidance**
  - **Scale**
  - **Data**
  - **Diversity**

EU Policy Option (2)

- Variable harbour dues based on GHG emissions

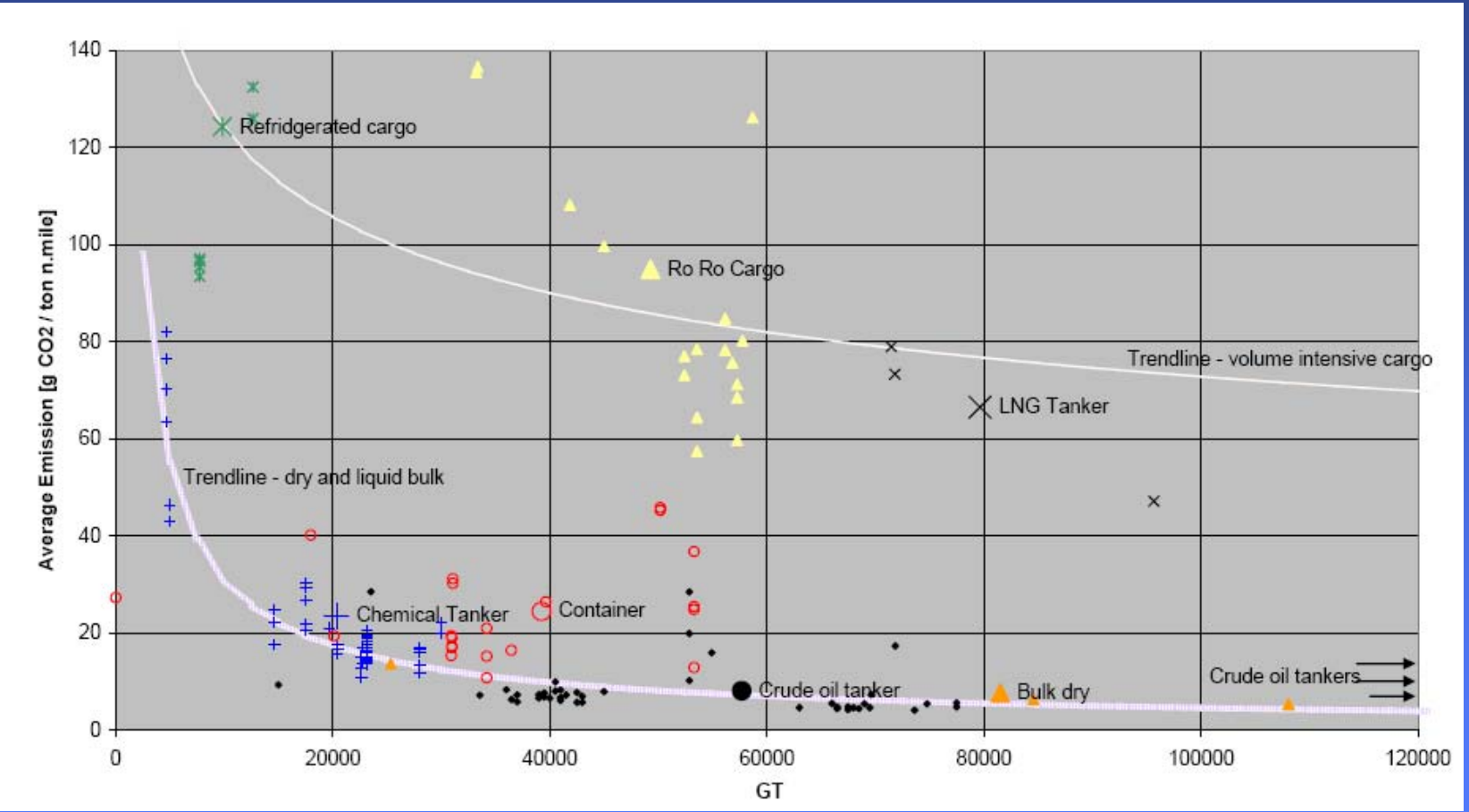
- Issues
  - Does not guarantee reductions
  - Limit values difficult to agree
  - Route related circumstances
  - Port competition
  - Complex

EU Policy Option (3)

- Binding CO_2 index limits for ships visiting EU ports

- Issues
  - Limit values difficult to agree
  - Diversity of vessels
  - Variation in operating environments and buisness models
  - ‘Occasional visitor’ problem

IMO CO_2 Index



Planning reduction GHG emissions

- **IMO Track**
  - GHG Correspondence Group (ongoing)
  - 'Norway' proposal
  - MEPC 57 April 2008
  - MEPC 58 October 2008
- **MEPC 59, mid 2009, to decide on CO_2 measures**
- **Issues**
  - Mandatory or voluntary?
  - When enter into force?
  - New instrument? Diplomatic conference Ratification?
  - MARPOL revision – faster 2013/2014?

Planning reduction GHG emissions

- UNFCCC
- Post 2012 agreement on CO_2 reduction:
  - International Maritime Transport
- Bali December 2007
- For agreement in 2009 – next year is key!

Planning reduction GHG emissions

- **European Commission**
  - Contribute to IMO and UNFCCC processes
- **EU legislation**
  - Study options
  - Public consultation
  - Present proposal (2009 if necessary)

Message to maritime industry

- Things are moving now on this topic
- Consider problem / collect data
- Discuss with industry colleagues
- Prepare position / views / preferences
- Urge politicians to support a global agreement (IMO and /or UNFCCC)
- In the absence of global agreement the EC will propose legislation
- Input to consultation process

EU Research - QUANTIFY

Objective: To quantify the climate impact of the global and European transport systems for the present situation and for different scenarios of future development.

http://ip-quantify.eu/

Co-ordinator:	Robert Sausen, DLR-IPA, DE
Participants:	41 from 19 countries
Duration:	March 2005 to February 2010
Funds:	8.4 M€
Total costs	12.8 M€

EU Research - ATTICA

European Assessment of Transport Impacts on Climate Change and Ozone Depletion

http://www.ssa-attica.eu

LIFE+ Funding Instrument

Three elements:

- LIFE+ Nature and Biodiversity
- LIFE+ Environment Policy and Governance (50% funding)
- LIFE+ Information and Communication

Duration: 1.1.2007 to 31.12.2013 , € 2.143 billion

At least 78% of LIFE+ for the co-financing of project action grants

LIFE+ Environment Policy and Governance:

- Development of innovative policy approaches, technologies, methods and instruments
- The knowledge base as regards environment policy and legislation
- Monitoring of environmental pressures – including forests and environmental interactions
- The implementation of Community environmental policy

LIFE+ How to participate?

Commission: organises annual call for proposals, selects, revises and monitors projects, makes payments

Member States: Forward all project proposals to the Commission, set national priorities and objectives (from 2008 onwards), prepare comments on proposals.

Deadline: 30/11/2007 (provisional)

Strategic Priorities: (Annex II): Climate Change, Noise, Urban Areas, Air Quality.

More info: http://ec.europa.eu/environment/life/funding/lifeplus.htm

Prepare Proposals !!!!

Thank you for your attention!

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http://ec.europa.eu/environment/air/transport.htm