Shipping after #COP21... Will we miss the boat?

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OECD Green Talks

Maritime transport was not included in the Paris Climate Agreement, yet its CO₂ emissions could reach 17% of total global emissions by 2050.

Join ITF expert OLAF MERK for the latest on what would be needed to help us prevent breaking the <2°C deal.
COP21: a reminder

- Paris Climate Agreement, succeeds the Kyoto Agreement expiring in 2020
- “hold increase of global average temperature to well below 2°C above pre-industrial levels”
- “pursue efforts to limit to 1.5°C increase”
- National Determined Contributions (NDCs)
- Differentiated responsibilities and competences
- United Nations Framework Convention on Climate Change (UNFCCC)
Shipping emissions: what kind of animal?
A large gap between projections and reductions needed for 2°C pathway
Shipping is not included in NDCs and not mentioned in Paris agreement
Some caveats

Long term trade growth might decline. Shipping was not regulated in the Kyoto agreement either.
“Specific measures aimed at reducing shipping’s overall contribution of CO₂ emissions, such as an overall cap, would artificially limit the ability of shipping to meet the demand created by the world economy (…) and therefore must be avoided.”

“Contributing to the fight against climate change is a top priority for IMO”

“The establishment of absolute reduction targets for shipping would be wholly inappropriate”

“International shipping must play its full part in contributing to this objective <of complete decarbonisation>”
The proof: the Energy Efficiency Design Index (EEDI)
“Global rules for a global industry”
- No regional schemes

“Shipping essential to global trade”

“Three-step approach”
- Data collection
- Analysis
- Decision

“Non-discrimination principle”
- Differentiated responsibilities

“Leave it to the IMO”
Will we miss the boat?

Which boat? How to reach it? All in the same boat?
What is the goal?

MEPC 69

“Shipping’s fair share”

“IMO Determined Contribution”

MEPC 70-72

Working group

Main concerns?

Global trade costs

Developing countries

Three step approach
Measures to get there

Maritime transport demand

Shipping emissions

Speed

Ship utilisation and size

Ship design

Carbon intensity

Energy sources

Alternative fuels

Renewable energy

Operational
Weather routing 1-4%
Auctioning, tendering 1-3%
Speed reduction 10-30%

Auxiliary power
Efficient pumps, fans 0-1%
High efficiency lighting 0-1%
Solar panels 0-3%

Aerodynamics
Air lubrication 6-15%
Wind engines 3-15%
Hull 2-10%

Engine efficiency
Waste heat recovery 6-8%
Engine controls 0-1%
Onboard humidity control 0-1%
Engine speed reduction 10-30%

Hydrodynamics
Hull polishing 4-10%
Hull coating 1-5%
Water flow optimization 1-4%

Source: | Wang & Lussey 2013
Barriers to get there

- Hidden costs
- Information problems
- Low oil price
- Uncertainty
- Split incentives
- Overcapacity
Incentives to get there?

- A price on carbon, via market based mechanism
- IMO discussion on MBMs suspended in 2013.
- Three step approach, so MBMs not before 2020.
- ICAO: MBMs with offsets by 2020
- Criteria: effectiveness, incentive to technological change, implementation, legal compatibility, financial & technological transfer
- EU Monitoring Reporting and Verification (MRV) adopted in 2015. Alignment with IMO Global fuel consumption data collection?
Global sulphur cap as carbon tax

Price increases in container shipping due to sulphur regulation

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<td>ECA 2015 requirements</td>
<td>1-3%</td>
<td>2-3%</td>
<td>2-4%</td>
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<tr>
<td>Global sulphur cap in 2020</td>
<td>20-65%</td>
<td>30-75%</td>
<td>35-85%</td>
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Shanghai-Hamburg roundtrip, speed 16-24 knots, size 8,500 – 19,000 TEU ships
For ECA 2015 a price premium of 50% is assumed for 1.0% -> 0.1% sulphur fuel
For global sulphur cap 2020 a premium of 100-120% is assumed for 3.5% -> 0.5% sulphur fuel
All in the same boat?

How to square differentiated responsibilities and level playing field?

Maritime transport costs as share of import value:
- 24% for raw materials
- 11% for agriculture
- 25% in Africa
- 43% for Christmas Islands
All in the same boat?

- EU Emission Trading Scheme (EU-ETS)
- On-going Review of EU-ETS directive
- What will the Parliament propose?
- Inclusion of shipping + Maritime Climate Fund?
- Fund to be used for shipping and ports
- Avoid carbon leakage (ships): flag neutrality
- Avoid carbon leakage (ports): adequate definition of a port call.
Shipping nations that do not wait

CO2 emissions, possible scenario for the maritime industry
based on the Climate Roadmap for the Swedish Maritime Industry

Sweden’s Zero Carbon Vision
Note: the potential of emission reductions via new logistics models
# Regulation and incentives by ports

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<th>Regulation and incentives</th>
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<td><strong>Speed</strong></td>
<td>Speed limit Port tariff discount</td>
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<td><strong>Energy</strong></td>
<td>Shore power Fuel switch LNG bunkering</td>
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What is needed?

• A “target”, urgently!
• A comprehensive package of measures: technological, operational, incentives
• Incentives to drive changes in the way ships will be powered and other innovations
• Smart regional schemes could put pressure
• Prepare for discussion on compensation MBMs
• Look beyond shipping to whole transport chain
Decarbonising transport-project

- Multi-year, multi-stakeholder project
- Modeling policy options
- All transport modes
- Platform for dialogue
Shipping emissions: what kind of animal?
Shipping emissions: what kind of animal?

- Elephant
- Emu
- Tortoise
- Parrot
Thank you

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