

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

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OECD Green Talks



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

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.



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COP21: a reminder

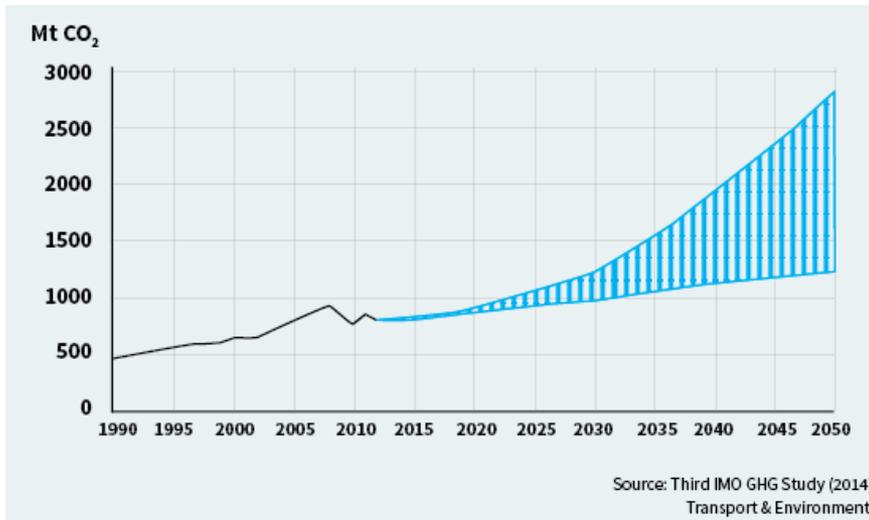
- Paris Climate Agreement, succeeds the Kyoto Agreement expiring in 2020
 - “hold increase of global average temperature to well below 2° C above pre-industrial levels”
 - “pursue efforts to limit to 1.5° C increase”
 - National Determined Contributions (NDCs)
 - Differentiated responsibilities and competences
 - United Nations Framework Convention on Climate Change (UNFCCC)
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Shipping emissions: what kind of animal?

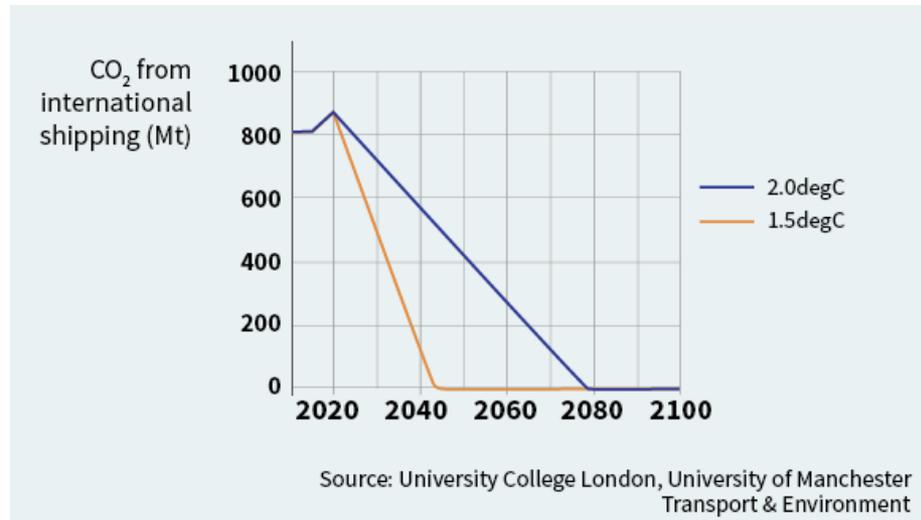




What is projected



What would be needed

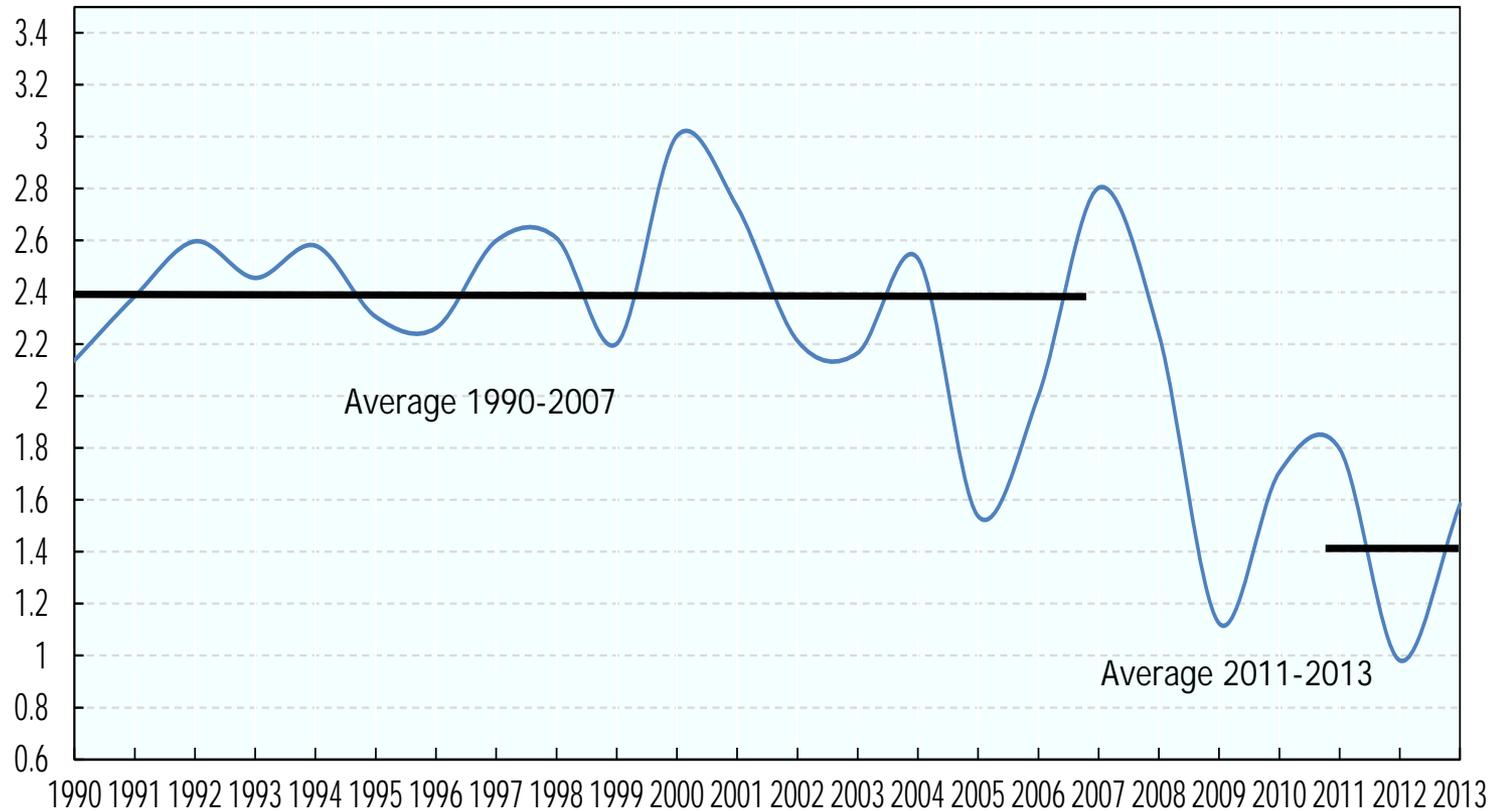


A large gap between projections and reductions needed for 2° C pathway
Shipping is not included in NDCs and not mentioned in Paris agreement





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”

IMO

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

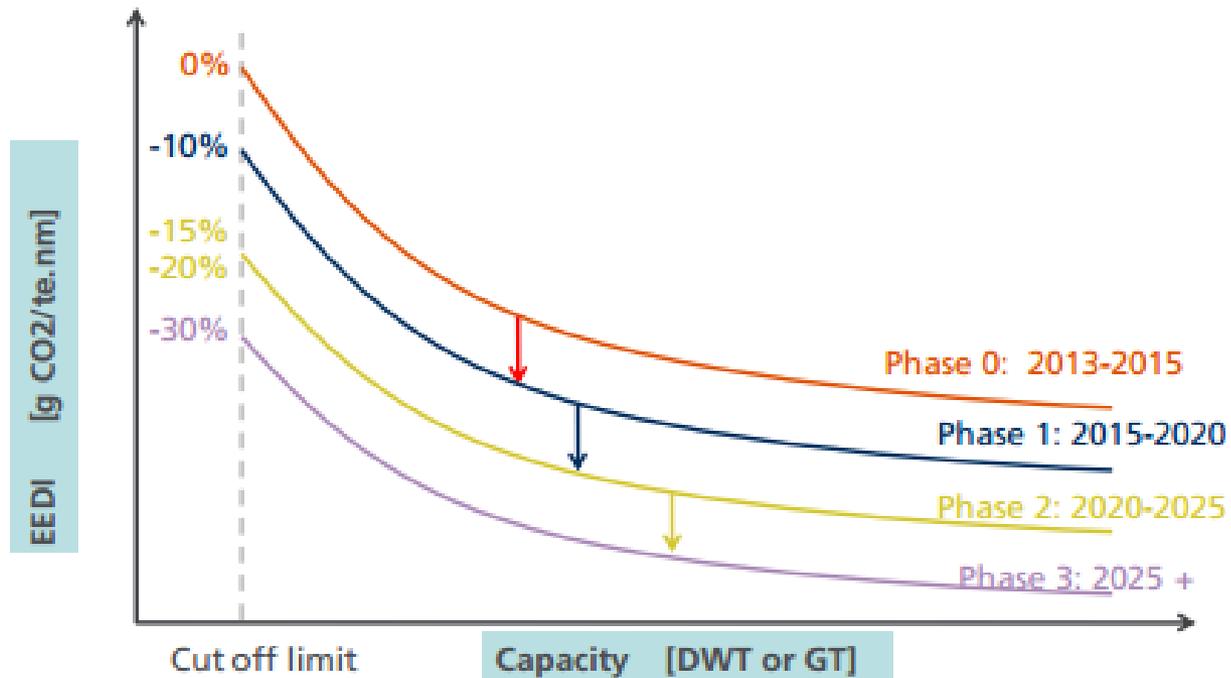
“International shipping must play its full part in contributing to this objective <of complete decarbonisation>”

Before COP21

ICS

After COP21





The proof: the Energy Efficiency Design Index (EEDI)





“Global rules for a global industry”

No regional schemes

“Non-discrimination principle”

Differentiated responsibilities

“Shipping essential to global trade”

“Leave it to the IMO”

“Three-step approach”

Data collection

Analysis

Decision

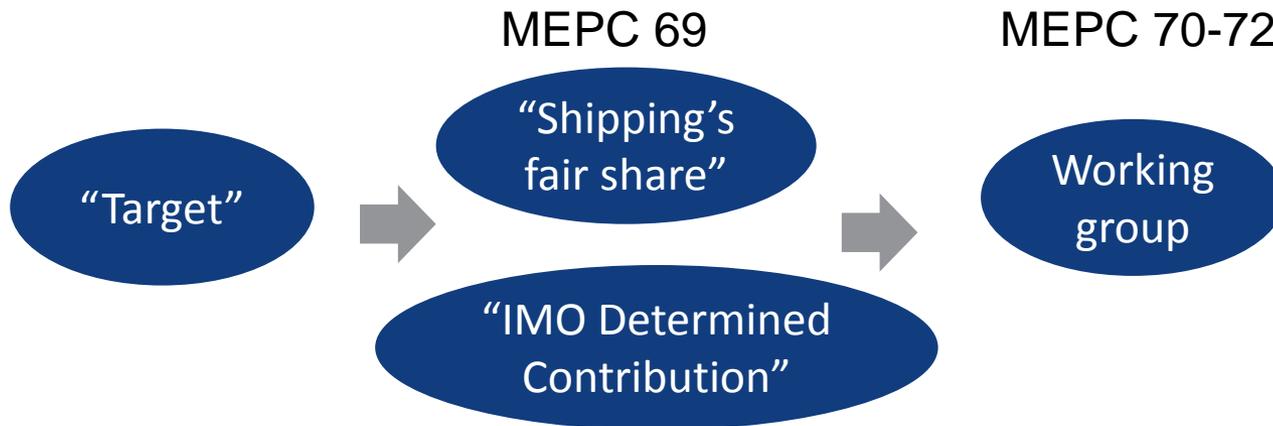
Will we miss the boat?



Which boat? How to reach it? All in the same boat?



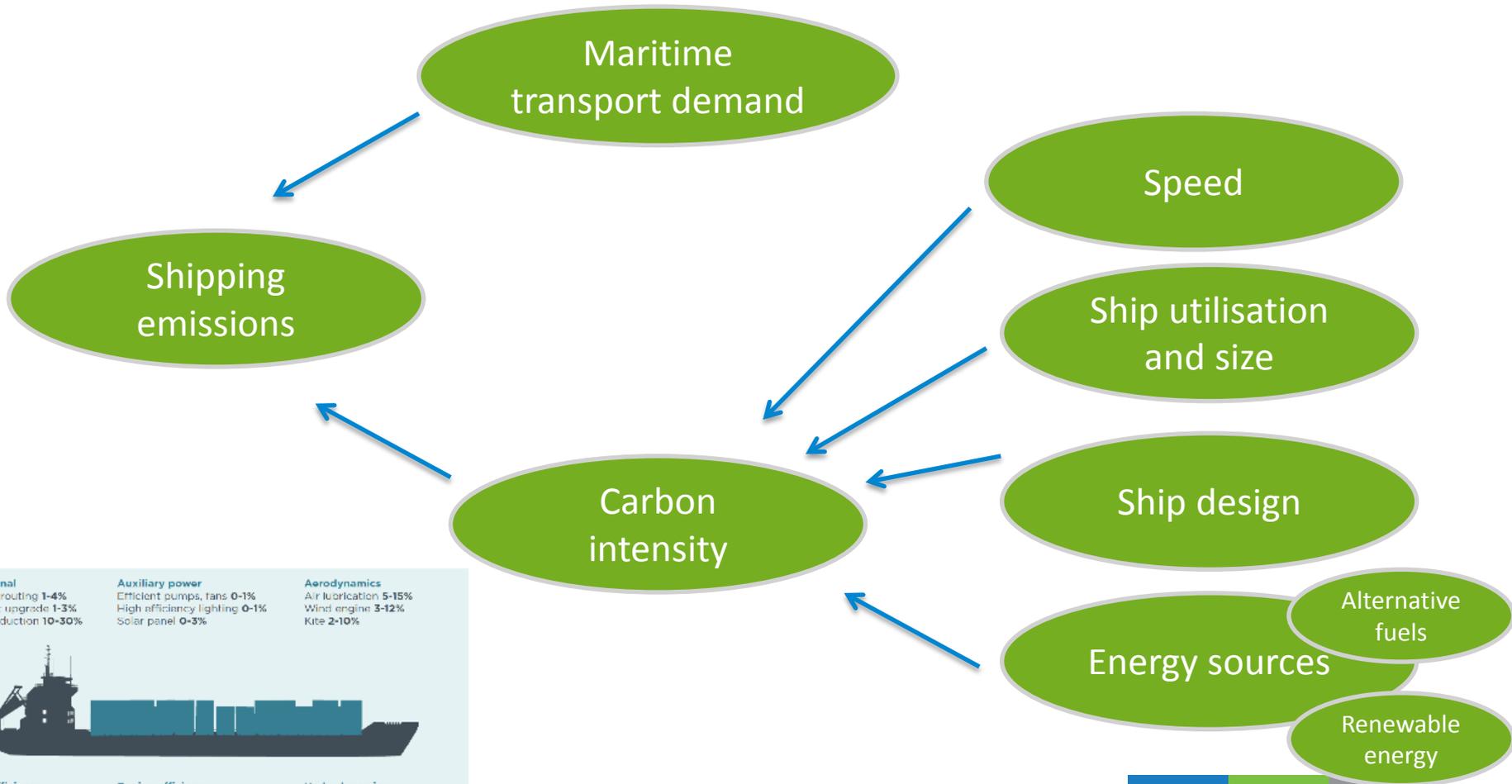
What is the goal?



Main concerns?



Measures to get there



Operational Weather routing 1-4% Autopilot upgrade 1-3% Speed reduction 10-30%	Auxiliary power Efficient pumps, fans 0-1% High efficiency lighting 0-1% Solar panel 0-3%	Aerodynamics Air lubrication 5-15% Wind engine 3-12% Kite 2-10%
Thrust efficiency Propeller polishing 3-8% Propeller upgrade 1-3% Prop/rudder retrofit 2-6%	Engine efficiency Waste heat recovery 6-8% Engine controls 0-1% Engine common rail 0-1% Engine speed de-rating 10-30%	Hydrodynamics Hull cleaning 1-10% Hull coating 1-5% Water flow optimization 1-4%

Source: Wang & Lutsey 2013

Barriers to get there

Hidden costs

Information
problems

Low oil price

Uncertainty

Split incentives

Overcapacity

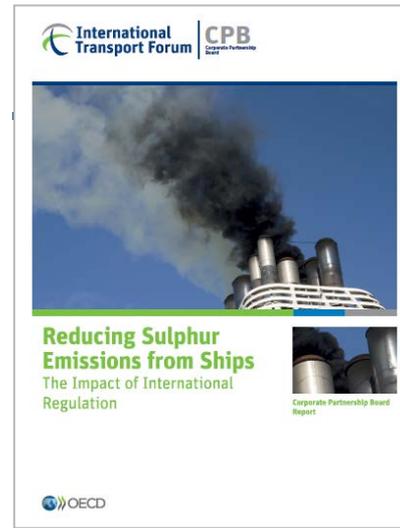




Incentives to get there?

- 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

	Fuel price of US\$ 300/ton	Fuel price of US\$ 450/ton	Fuel price of US\$ 600/ton
ECA 2015 requirements	1-3%	2-3%	2-4%
Global sulphur cap in 2020	20-65%	30-75%	35-85%

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

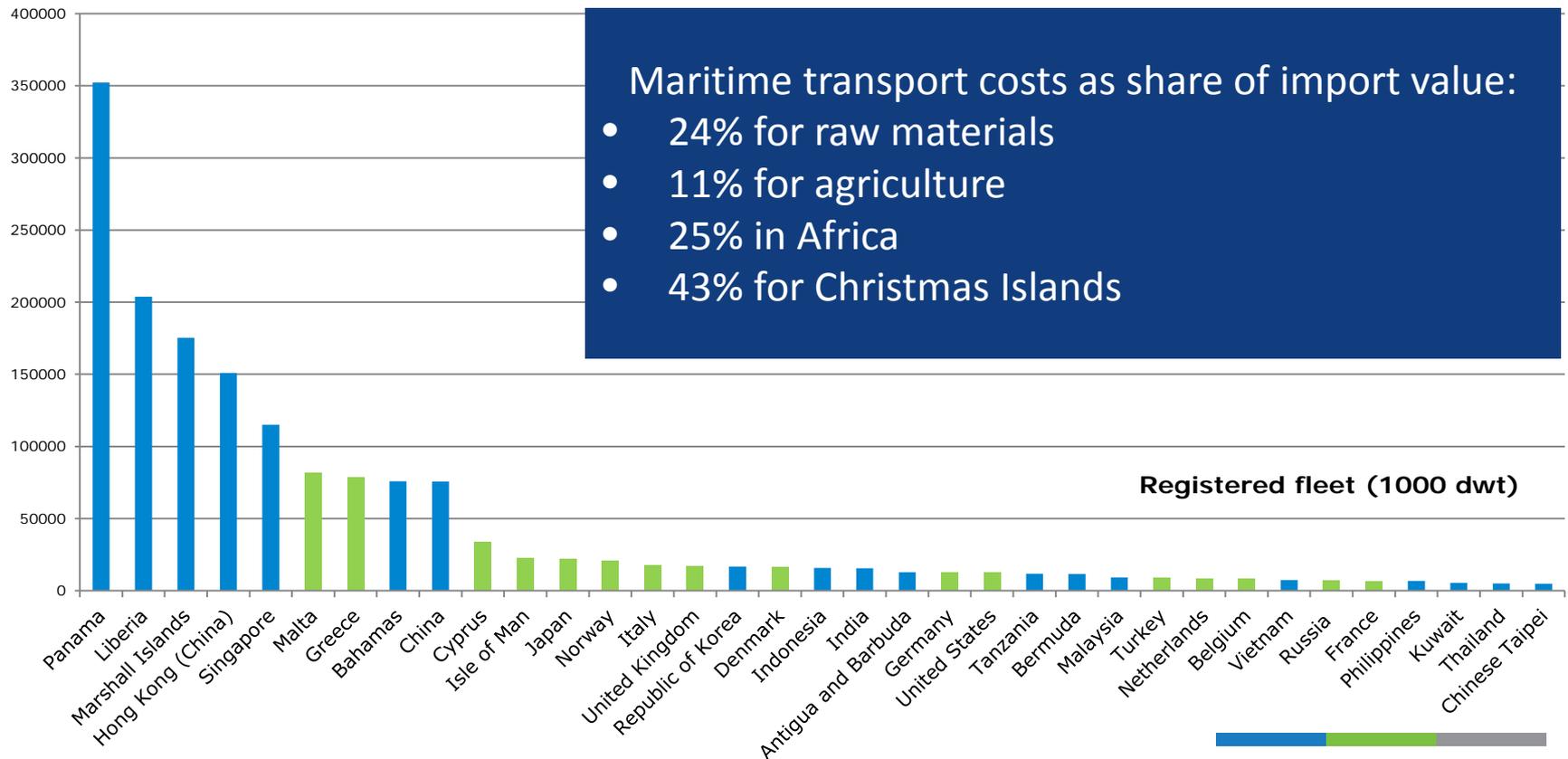
For global sulphur cap 2020 a premium of 100-120% is assumed for 3.5% -> 0.5% sulphur fuel





All in the same boat?

How to square differentiated responsibilities and level playing field?



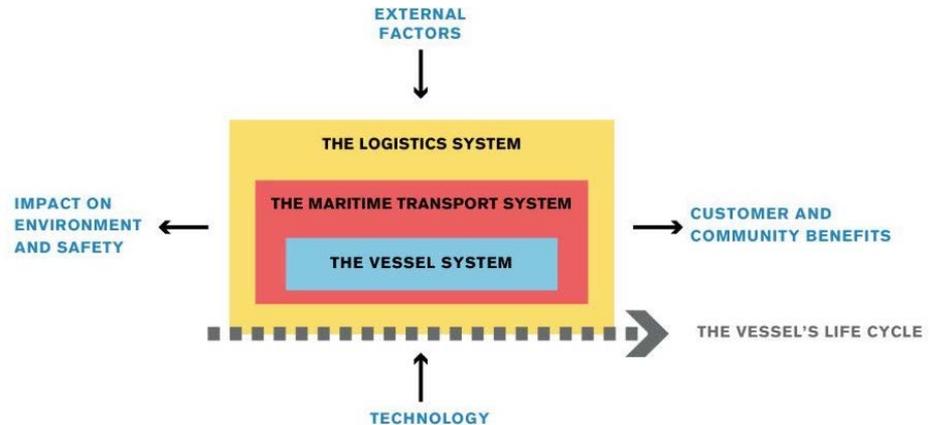
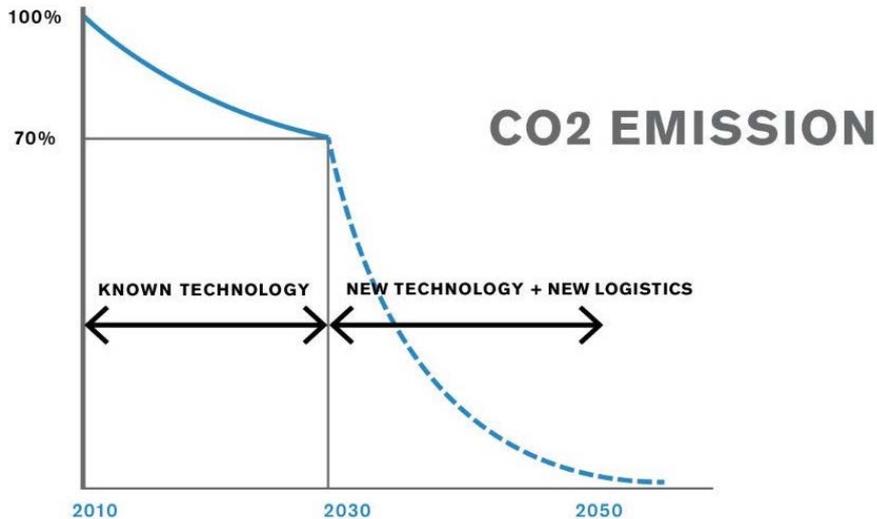


All in the same boat?

- 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

	Regulation and incentives
Speed	Speed limit Port tariff discount
Design	Green port tariffs
Energy	Shore power Fuel switch LNG bunkering

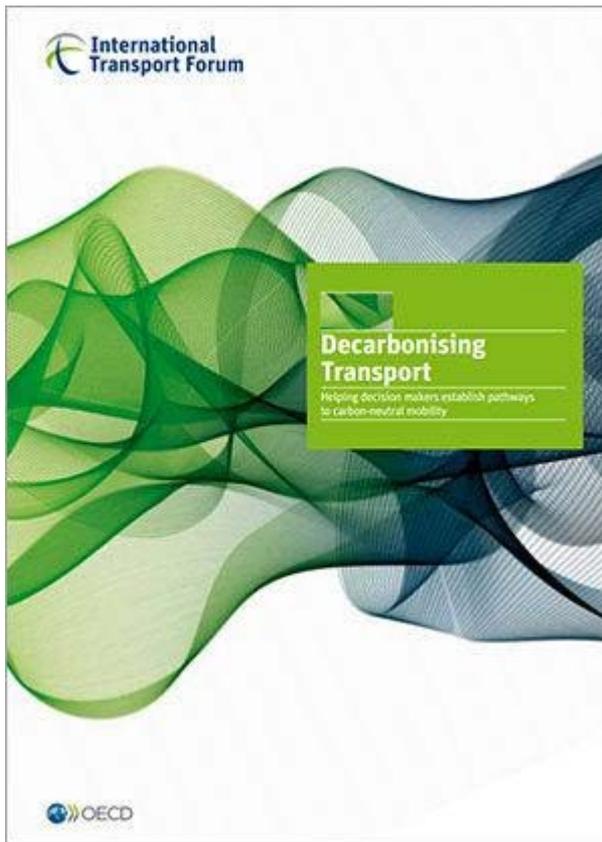


What is needed?



- 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

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Thank you

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