GHG emissions targets for international shipping

How can international shipping contribute to climate protection?
Brussels, 12 September 2014

Martin Cames
Potential contributions to global GHG mitigation

- Reducing emissions globally is more cost-effective when all sectors contribute
- Shipping has technical and operational options to reduce emissions
- A target enables the adequate and fair contribution of international shipping to global GHG mitigation efforts
- A target will be required to evaluate the effectiveness of efficiency measures
Principles to determine targets or emissions budgets

- Cost efficient split between sectors / equal marginal abatement costs (EU ETS/non-ETS split)
- Equal reduction for all sectors compared to a historic base year or equal annual reduction steps
- Deduction approach: expected emissions for other sectors are deducted from target emissions, remaining allowable emissions are defined as sector target (Californian ETS)
- Technological reduction potential
- Equal intensities (e.g. per capita emissions, emissions per unit of GDP/value added)
- Economic capacity (e.g. GDP per capita) or ability to pass through costs (EU effort sharing)
- Hybrid approaches (e.g. Kyoto Protocol: historical responsibility, economic bargaining, political bargaining)
Types of Copenhagen pledges

Annex I

- Economy wide reduction targets compared to a historic base year (mostly 1990 or 2005)

Non-Annex I

- Reduction in greenhouse gas emissions per unit of GDP (China and India)
- Goals specified as reduction percentages in relation to business-as-usual emissions (Brazil, Indonesia, Mexico, South Africa, South Korea, Chile, Israel, Papua New Guinea, Singapore and Taiwan) or as absolute reductions below business-as-usual emission projections (Colombia and Peru)
- Goals specified as a reduction target below a certain historical base year (Moldova)
- Goals aiming at carbon neutrality (Costa Rica and the Maldives)
- Mitigation policies, projects, and/or sectoral actions
Targets suggested

- EU: Council Conclusions Copenhagen (21/10/2009)
- Norway: MEPC 60/4/23 (15/01/2010)
- IATA: AGM 69 (09/06/2009)
- ICAO: A37-19 (08/10/2010)
- UNFCCC: Copenhagen Accord (2010-2011)
- Tyndall: High Seas, High Stakes (2014)
Norway

Mt CO₂e

- International shipping
- International shipping: scenario 13 (BAU)
- International shipping: scenario 15 (BAU)
- Norway 2010, Scenario A1B
- Norway 2010, Scenario B2

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IATA

1. Improve fleet **fuel efficiency** by **1.5% per year** from now until 2020
2. **Stabilise net emissions** from **2020** through carbon neutral growth
3. By **2050**, net aviation carbon **emissions will be half** of what they were in **2005**

IATA applied to shipping

Mt CO₂e

- International shipping
- International shipping: scenario 13 (BAU)
- International shipping: scenario 15 (BAU)
- IATA (-50% compared to 2005 by 2050)

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ICAO: carbon neutral growth 2020

Mt CO$_2$e

- International shipping
- International shipping: scenario 13 (BAU)
- International shipping: scenario 15 (BAU)
- Carbon Neutral Growth 2020 - high
- Carbon Neutral Growth 2020 - low

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Copenhagen accord pledges

Mt CO$_2$e

- International shipping
- International shipping: scenario 13 (BAU)
- International shipping: scenario 15 (BAU)
- Cancun pledges, strict rules, unconditional
- Cancun pledges, strict rules, conditional
RCP & global budgets

2°: 2,900 Gt CO$_2$
1861-2011: 1,890 Gt CO$_2$
Remaining: 1,010 Gt CO$_2$
Budget approach

Mt CO$_2$e

- International shipping
- International shipping: scenario 13 (BAU)
- International shipping: scenario 15 (BAU)
- Budget approach, peaking 2015
- Budget approach, peaking 2020
Philosophies for determining targets

- **Budget approach (Tyndall)**
  - Keep the share in the remaining global emission budget
- **Similar emission reductions**
  - Same percentage reduction as the world at large
- **Similar economic effort (NOR)**
  - Shipping’s marginal abatement costs equal those in other sectors
- **Political decisions**
  - Carbon neutral growth 2020 (ICAO)
  - 50% below 2005 emission in 2050 (IATA)
Summary

- Philosophy for determining appropriate targets for international maritime transport are available

- Targets will be required for any measure, policy or instrument for calibrating its design and for determining its effectiveness
Thank you for your attention!

Dr. Martin Cames  
Head Energy & Climate (Berlin)  

Öko-Institut  
Schicklerstr. 5-7  
10179 Berlin  
Germany  

Telephone: +49 30 40 50 85-380  
e-mail: m.cames@oeko.de