IMERS

A hybrid scheme for international shipping to address climate change mitigation, adaptation, and technology

Emerging discussion on financing mitigation & adaptation

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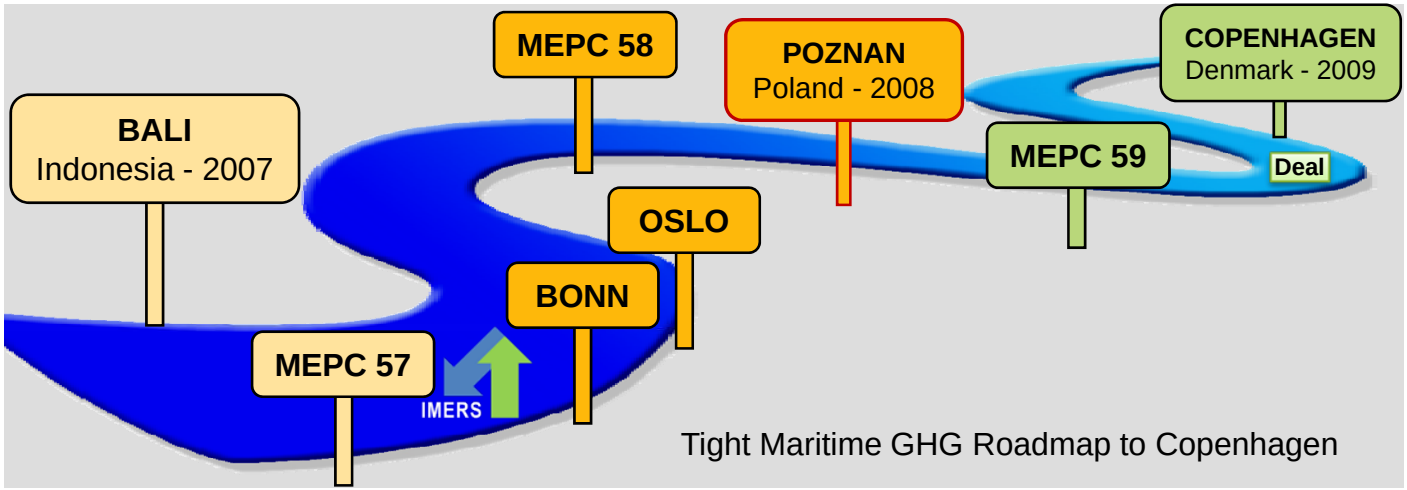


Tight Maritime GHG Roadmap to Copenhagen

Agenda

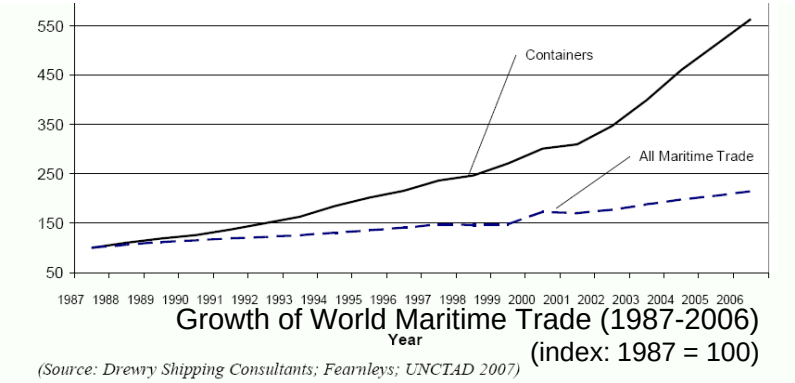
- Key Issue
  - Financing Mitigation, Adaptation, and Technology Transformation
- Hybrid approach for shipping (aka IMERS)
  - What
  - How
  - Why
- Financing Mitigation and Adaptation at a scale of $10bn annually
  - Achievable from 2012 onwards

Key issues & 4 pillars of Bali Roadmap …

International transport and climate change are truly global

1. Mitigation

Intern'l maritime emissions at 1GtCO_2, **4% of total**; exempt from taxes, growing, unaffected by Kyoto P; more than double the emissions from aviation, greater than the 6th highest polluting country; complex!



Growth of World Maritime Trade (1987-2006) (index: 1987 = 100)

(Source: Drewry Shipping Consultants; Fearnleys; UNCTAD 2007)

2. Adaptation to climate change

Crucial to developing states - the poorest countries are most vulnerable & will be hit hardest by CC.

Current financial mechanisms are inadequate →

- **50:1 gap** ($billions/pa needed, $0.4bn available)
- New innovative means are urgently needed

50 : 1

3. Technology

Essential to developing states – technology, better infrastructure and faster processes could reduce the high freight costs, and lead to increased growth.

Technology transformation, including hydrogen transport, could dramatically reduce cost & emissions, but R&D spend goes down rather than up.

Freight cost as % of import (c.i.f., 2005):
Developed countries: **5%**
Developing countries: **8%** (source: UNCTAD, IMF)

4. Financing

How to finance mitigation, adaptation & technology for a global industry such as maritime transport?

How to:
- square the different priorities and needs?
- achieve **adequate and predictable** financing?
- be affordable?

Some argue that a "differentiated approach" is not appropriate for global shipping, as most ships are registered in developing countries (77%), but owned by companies in industrialized countries .

Ambition for a maritime scheme*

- Address **differentiated** priorities in one cohesive supra-national scheme
  - **Halve** maritime GHG **emissions** (in long-term)
  - **Reduce the gap** in financing for adaptation (in $bn annually)
  - Contribute to sustainable economic growth

<u>At an affordable cost, equivalent to:</u>

Adding $1 to price of **$1,000** of imported cargo (=0.1%)

<u>While delivering on the UNFCCC principles, including:</u>

Common but differentiated responsibilities and respective capabilities

*IMERS initiative was started 1.5 years ago; public good funded privately

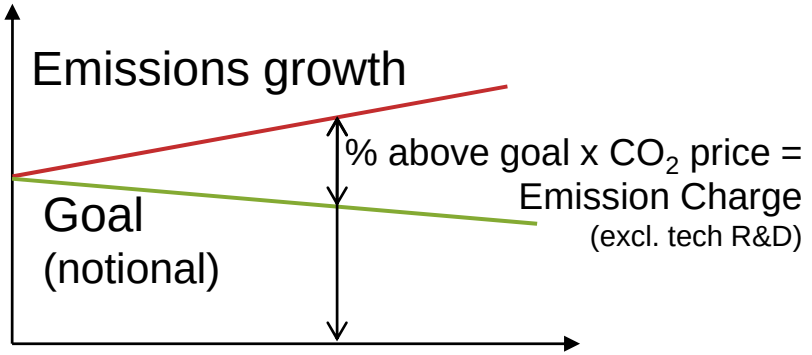
Unlocking the solution deadlock

IMERS outline (discussed as the "**hybrid**" in the IMO and UNFCCC)

- **No allocation** of emissions to countries, **one aggregated emission goal**
- **A fund** established to invest in:
  - Mitigation of shipping GHG emissions (purchase of CDM/JI credits)
  - Adaptation to climate change in developing countries (→ Adaptation Fund)
  - Near-term and long-term transformations (technology R&D, and transfer)

- **A novel hybrid economic instrument** (cap-and-charge)
  - Delivering a quantity target through fair emission charges (set 1 year in advance)

- **Differentiated charge* & differentiated use of revenue**
  - Link the base charge to:
    - Emissions growth above a goal
    - Carbon market price (it exists!)

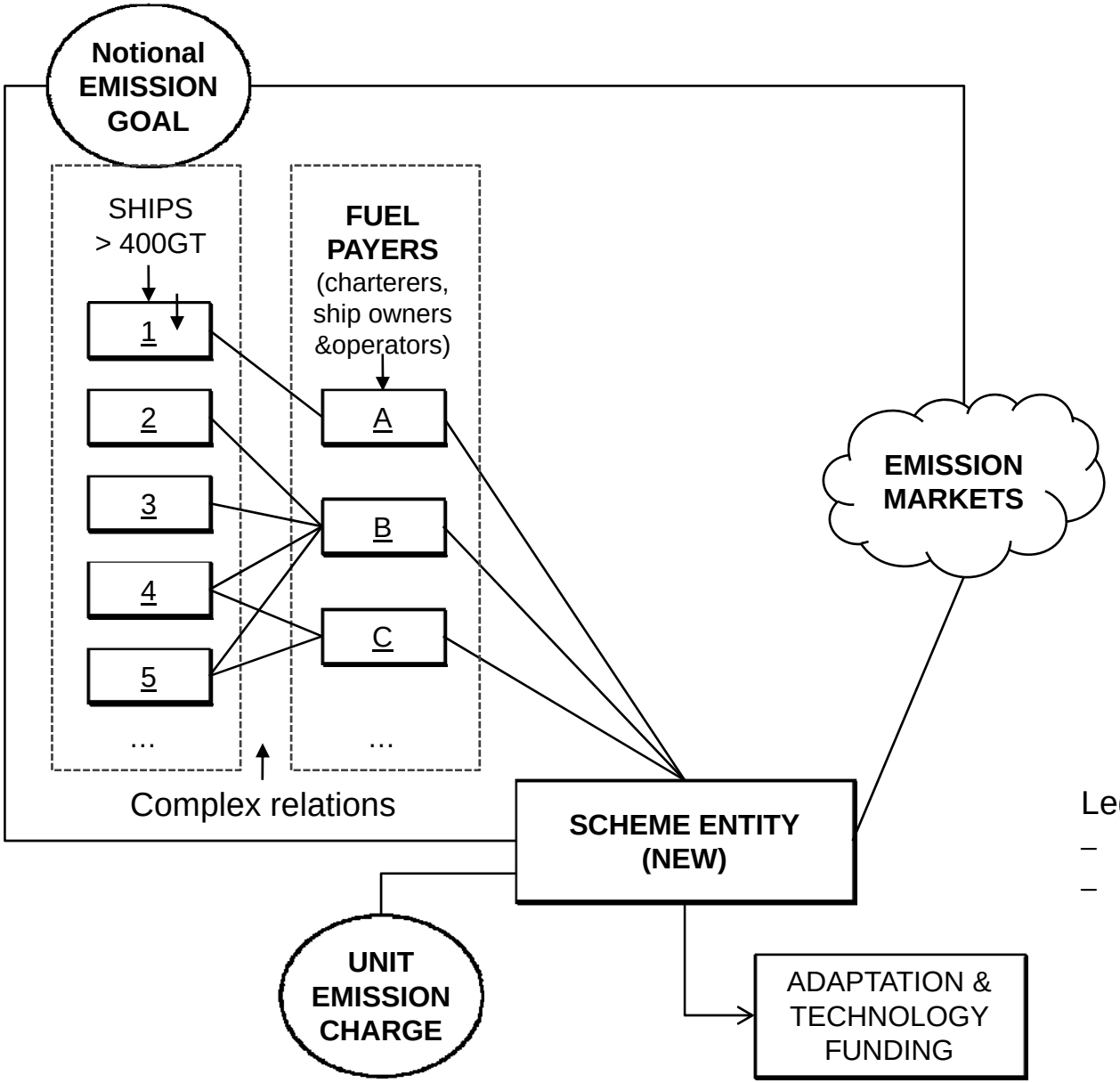


- **Proposed fund proportions:**
  - Mitigation and Adaptation (50:50)
    - 30% of adaptation financing to LDCs (Least Developed Countries)
  - Mark-up for technology development and transfer, and operational cost

* Charges can be differentiated by type of ship (even 0 for food import)

Carbon markets are essential for the hybrid to work

Scheme diagram



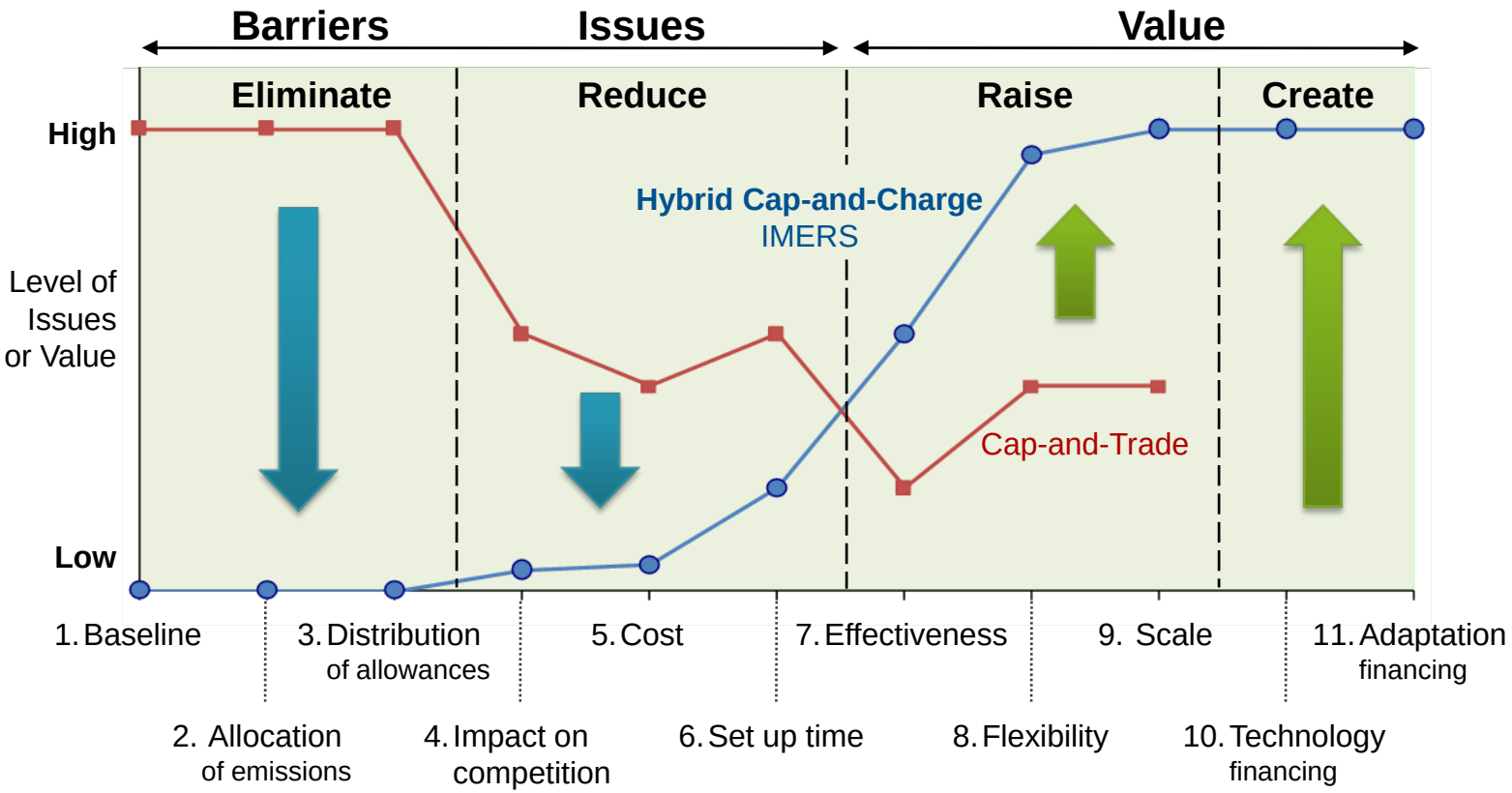
Now available and mature enough for cost-efficient emission mitigation

Legal & efficient

- Enforcement through Port State control
- Efficient charge collection scheme

Why go for a hybrid cap-and-charge?
Strategic comparison

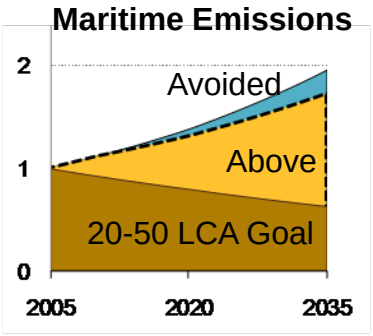
- Primary questions after 10 years. Which instrument is:
  - Likely to be better designed?
  - More flexible?
    - Including innovative financing for technology transfer, and adaptation to climate change



Financing mitigation and adaptation, & technology

For the ambitious '20-50 LCA goal'

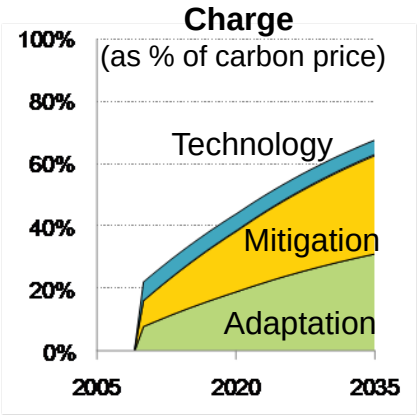
- Shipping contributing fairly to the Long-term Cooperative Action (LCA) goal
  - Notional emission reductions of 20% in 2020, and 50% in 2050 from the 2005 level



- End user cost impact will be **Very Low**:
  - **Adding $1 to** price of **$1,000** of imported goods (0.1%)
  - Details: Charges as % of carbon market price, impact on fuel price, shipping costs and on end customer:

Year	% of C$	$/ t fuel*	Shipping $	Customer
2012	30%	**$27**	2%	**<0.1%**
2020	46%	**$42**	3%	**<0.1%**
2035	70%	**$64**	5%	**<0.2%**

*For market data: $30/tCO2, $500/t HFO fuel

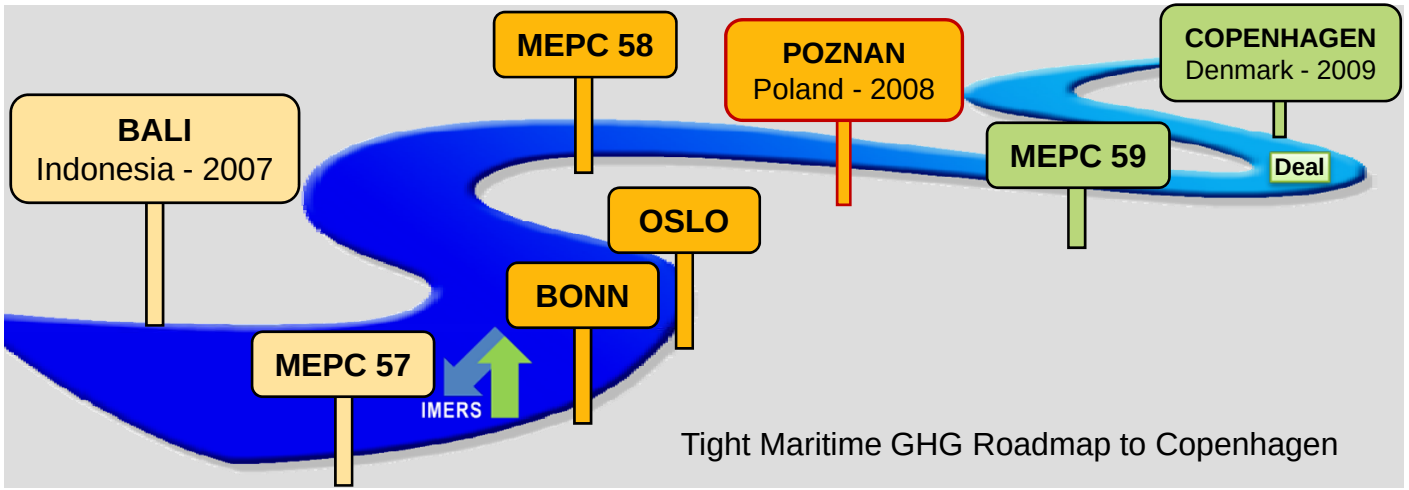


- **The hybrid scheme can be ambitious** (+$4bn for adaptation), **affordable and achievable**
  - **Cost is very low as shipping is the most carbon efficient transport**
  - Significant emission reductions will be achieved through transformational changes such as hydrogen transport brought forward by a decade or so
  - Maritime complexity requires however a global, centralized scheme to keep the costs down; $billions can be wasted with an indirect approach

FUNDS pa	2012	2020
Technology	**$2bn**	$2bn
Mitigation	**$4bn**	$8bn
Adaptation	**$4bn**	$8bn
Ops Costs	**0.5bn**	0.6bn

Conclusion

- Multilateral progress is key
  - Norway embraced the idea in May 2007, submitted as MEPC 56/4/9 to the IMO process
  - Positive multi-party discussions followed both in the IMO and the UNFCCC
    - Significant progress and achievements: www.imers.org/buyin/achieve



Tight Maritime GHG Roadmap to Copenhagen

- International transport and climate change are truly global
  - The deal can be global, ambitious and affordable
    - Financing Mitigation, Adaptation, and Technology Transformation
    - “4 Bali pillars in 1 maritime scheme”