Rebate Mechanism (RM)

Ensuring no net incidence on developing countries from carbon pricing of international transport

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Panel:

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Agenda

- Rationale for the proposal
- Rebate Mechanism options:
  - Add-on
  - Integrated
- Convention compliance, and ‘no net incidence’:
  - Rebates for developing countries
  - Credits for developed countries
- Summary and Conclusions

- Panel Views, and Debate

Rationale for the proposal

- **Not whether, but how to reconcile**
  - Differentiated climate principles (CBDR), with
  - Uniform policies of shipping (IMO)
    - A global approach is needed, as regional or national approaches will not work

- RM is the only differentiation option being currently considered to compensate less developed countries the costs/impacts of a global MBM scheme

  - An alternative option based on exempting the less developed countries, by covering only goods carried to developed countries, is too complex, especially for container ships

Under consideration at the IMO

- Two RM options are defined:
  - **RM add-on** (applicable to any revenue-raising MBM)
  - **RM integrated** (IMERS), a standalone MBM

- "A number of delegations expressed interest in the RM proposal and supported its further development and consideration either as an integral or add-on element to a future MBM for international shipping under IMO"

Selected Documents

- MEPC 60/4/54, and MEPC 61/5/33 (IUCN) - RM proposal, including the two options
- MEPC 61/INF.2 (MBM-EG Report) – RM assessment in Chapter 18, 19.83-85, Annex 11
- GHG WG 3/3/3 (CSC & WWF) – systematic analysis of CBDR in shipping, including RM
- GHG WG 3/3/11 (WWF) – details on 'optimal' attribution key for RM; values for 190 countries
- MEPC 62/INF.3 (Secretariat) – The AGF Report: 'no net incidence' concept to ensure equity
  - The AGF's analysis on International Transport highlights the RM
- MEPC 62/INF.6 (Republic of Korea) – RM at the fourth Seoul International Maritime Forum
- MEPC 62/5/14 (WWF) – outlines how to ensure no net incidence through the RM

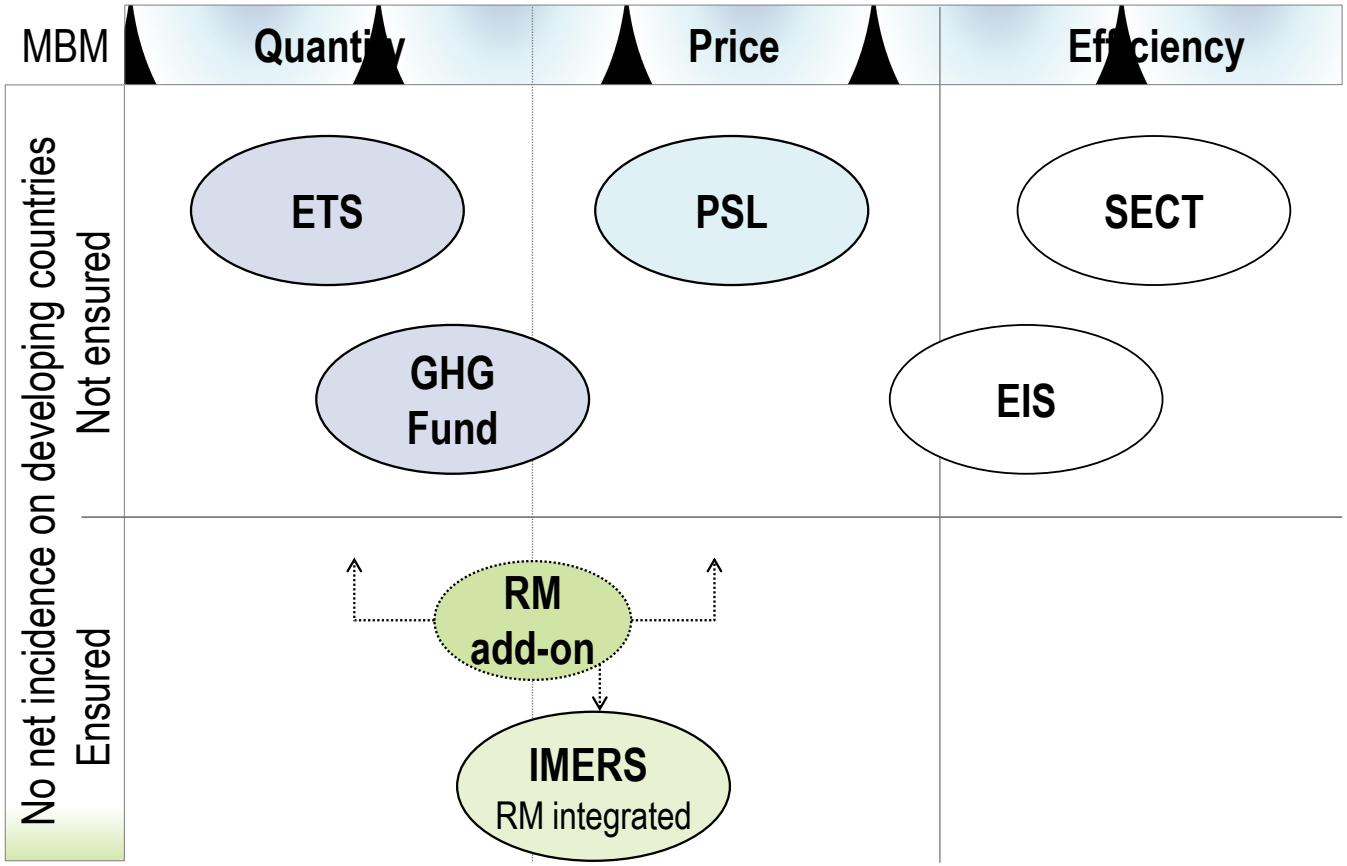
Add-on option (in 30 words)

All ships pay for their emissions. A developing country obtains an annual rebate in relation to its share of global seaborne imports. Remaining revenue – from developed countries – goes to climate change action.

1. Ensures **no net incidence** on developing countries
2. **Reconciles a global approach**, which is required for international shipping, **with** the principles of equity and **CBDR**
3. **Can apply to any revenue raising MBM**
    1. Such as a levy/contribution and ETS
    2. Already integrated with the IMERS proposal
4. Highlighted **in the AGF report/analysis**
5. Rebates to developing countries may amount to 1/3 of revenue raised, the remaining 2/3 will be a **predictable and affordable source** of climate change financing and R&D for clean shipping

RM versions and applicability

1. **RM add-on** can apply to any revenue raising MBM, in principle



More details see the Study issued

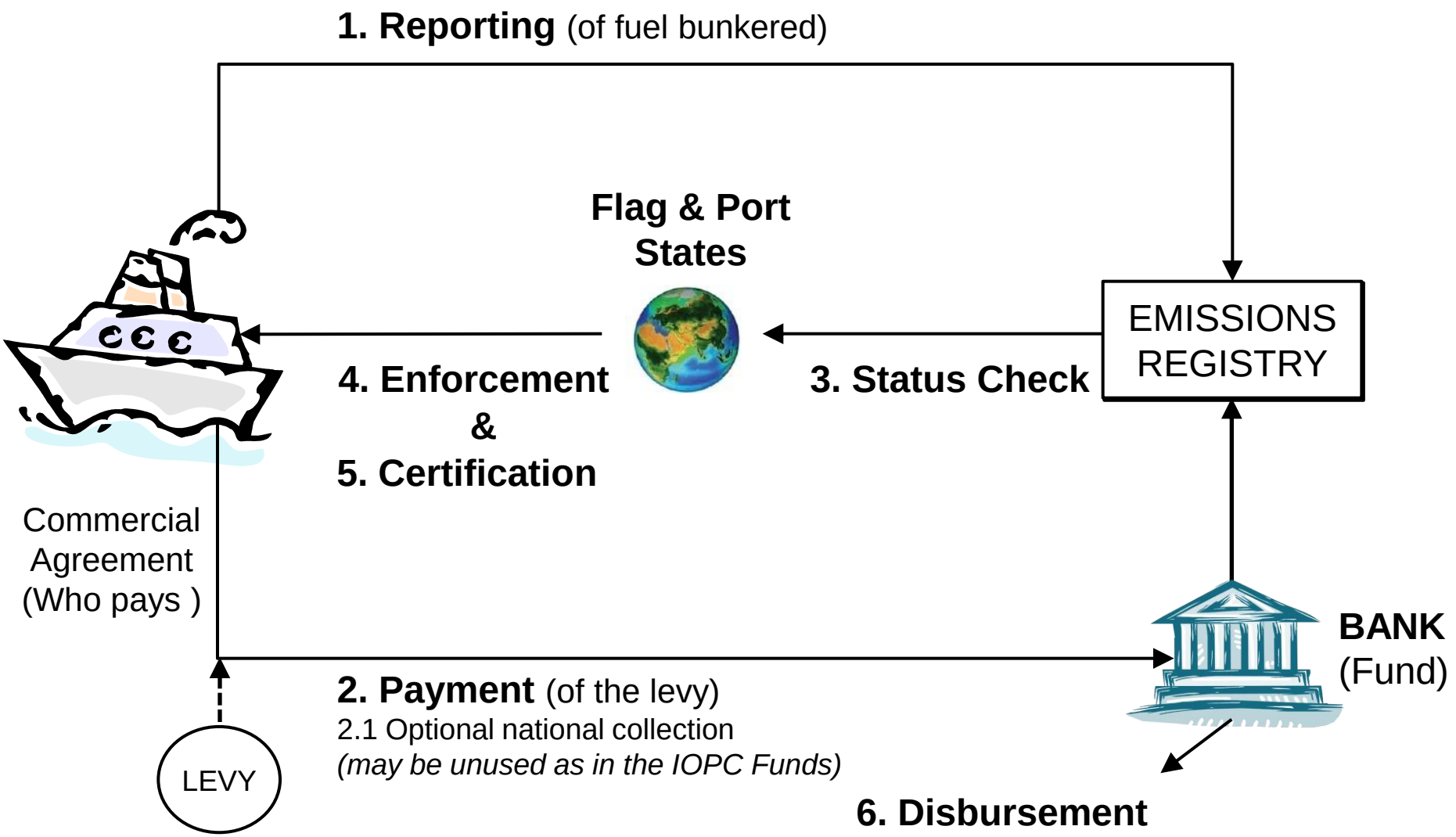
2. **RM integrated** (aka IMERS) is a complete proposal with the RM built-in

Integrated option (IMERS)

A levy on fuel for international shipping with a rebate mechanism for developing countries. Applied worldwide, collected centrally – bypassing national coffers* – raising $10bn+ annually for climate change action.

1. The levy is **market-based** with shipping facing the same carbon price as other modes of transport
   - The levy is however **set constant for at least a quarter**, and bounded within a price floor and ceiling set for 20+ years
   - There is no cap on emissions
2. The proposed scheme is based on a central **emissions registry**, holding an emission account for each ship, and **a global bank providing a payment account for each ship**.
3. As per RM, a developing country is entitled to an **annual rebate** in relation to its **share of global seaborne imports**, and will further benefit from financing for climate change action

How would it work?



Compliance with UNFCCC Convention

- Disbursement of MBM revenue is to comprise two steps:
  - Cost burden (incidence) incurred by a developing country Party participating in the MBM is rebated (paid) to it, unconditionally
  - The remaining revenue (net revenue), is disbursed through the operating entity of an agreed financial mechanism (UNFCCC/IMO)
- Consequently, the net revenue for climate change action would come from consumers in developed countries only, complying with the UNFCCC principles
- Developing countries would be beneficiaries of the MBM, with the most vulnerable countries to benefit most through the relevant rules and provisions applied at the 2nd step (SIDS, LDCs, African countries)
- The shipping sector would also benefit at the 2nd step, potentially through a new global Maritime Technology Fund, or similar

MBM Incidence on Developing Countries

Developing Country/region	Optimal* Rebate Key Study: Share of global imports, by sea and air, %	Initial Approach (MEPC 60/4/55): Share of global imports, by all transport modes, %
China	8.35	6.84
Korea, Republic of	3.68	2.55
Africa (all)	3.48	2.56
Singapore	2.36	1.88
India	1.98	1.56
Ethiopia	0.06	0.04
Guyana	0.01	0.01
…	…	…
All developing countries:	**40.19**	**33.16**

Thus total incidence on developing countries from a global maritime MBM is circa 40% of its global costs (rather than circa 30% used before).

* 'Optimal': striking the best balance between accuracy, simplicity of calculation and data availability. The key is based on share of global trade with non-adjacent partners, in 2007. The Study is available at: imers.org/docs/optimal_rebate_key.pdf (a previous version is in the document GHG-WG 3/3/11).

Attribution Key's Usage

(1) **Rebates** for developing countries[1]

Developing Country/region	R Key, %
China	8.35
Korea, Republic of	3.68
Singapore	2.36
Taiwan Province of China	2.27
Hong Kong SAR, China	2.06
India	1.98
Next 30	15.31
Remaining 120+ countries	4.19
TOTAL non-Annex I	**40.19**

Côte d'Ivoire	0.0682	Mauritius	0.0402	Trinidad and Tobago	0.0790
Cuba	0.1123	Mexico	1.4594	Tunisia	0.1872
Cyprus	0.0902	Micronesia (Federated State	0.0004	Turkmenistan	0.0213
Djibouti	0.0044	Moldova, Rep. of	0.0263	Tuvalu	0.0002
Dominica	0.0020	Mongolia	0.0075	Uganda	0.0308
Dominican Republic	0.1415	Montenegro	0.0298	United Arab Emirates	1.2684
Ecuador	0.1196	Morocco	0.3182	Uruguay	0.0354
Egypt	0.2499	Mozambique	0.0210	Uzbekistan	0.0450
El Salvador	0.0790	Myanmar	0.0304	Vanuatu	0.0021
Equatorial Guinea	0.0288	Namibia	0.0089	Venezuela (Bolivarian Rep. o	0.3620
Eritrea	0.0066	Nauru	0.0008	Viet Nam	0.5119
Ethiopia	0.0592	Nepal	0.0274	Yemen	0.0827
Fiji	0.0184	Nicaragua	0.0325	Zambia	0.0388
Gabon	0.0204	Niger	0.0090	Zimbabwe	0.0130

(2) **Credits** for developed countries (for climate financing raised)

Developed Country/region	Attr Key %
European Union*	28.53
United States of America	15.98
Japan	6.42
Canada	1.98
Turkey	1.64
Australia	1.60
Russian Federation	1.40
Remaining 7 countries	2.28
TOTAL Annex-I Parties	**59.81**

UK:4.0%

Germany	4.6015	Spain	3.0122
Greece	0.7362	Sweden	0.9112
Hungary	0.4480	Switzerland	0.5129
Iceland	0.0690	Turkey	1.6386
Ireland	0.5932	Ukraine	0.5624
Italy	2.9651	United Kingdom	3.9644
Japan	6.4161	United States of America	15.9771

[1]**Developing country may forego rebate or a part of it, and be recognized for such action**; Thus the rebates may amount to 30% or less. See the Study or GHG-WG 3/3/11 for details.

Add-on's Summary

- Reconciles CBDR with a global IMO regime, as the only proposal, through 'no net incidence' on developing countries
- Flexible to accommodate different national circumstances
  - A developing country/region may forego a rebate or part of it
  - Any country could account for its share of international shipping emissions through the attribution key, if needed
- Credits developed countries for financing raised in relation to the attribution key

- It is simple, and based on reliable data
  - It does require though political agreement, but the Cancun Agreements and the recent G20 Communiqué points that this could be reached

IMERS' Summary

- The only proposal that integrates RM so far
- No global emission target/cap needed
- Proportionality of effort guaranteed – shipping would pay the same price as others, by linking to (transport) carbon price
- Simple constant levy (automatically adjusted quarterly or less often; thus no need for UN/governments to agree the level)
- Predictability of investment over 20+ years horizon through the predetermined levy price floor and ceiling
- Centralized, direct processes to minimize bureaucracy; but optional national collection possible ("pre-payment")
- Mature (3rd generation; developed since 2007/MEPC 56)
- Proposed to be a part of the UNFCCC deal, and thus not requiring a separate IMO convention (implementation: yes)
- At least 20% of funding proposed for clean shipping R&D

Conclusions

- The RM is practical and potentially transformative
  - It creatively reconciles the shipping and climate principles
    - All ships pay for CO_2
    - Developing countries receive rebates annually
    - Remaining funds go to climate change, and shipping
  - It may generate $10bn+ annually, from developed c.

- Can be implemented as:
  - **RM add-on**, by integrating with any revenue raising MBM
  - **RM integrated** (IMERS), with the unique additions proposed (such as price floor/ceiling, direct processes, …)

- Optimal attribution keys are calculated for all countries

Backup slides

For Q&A

How Will the RM/MBM Reduce Emissions?

1. It will **stimulate energy efficiency** and bring additional **certainty** to invest in efficient engines, ships, and practices

2. It may collect data on ship efficiency, thereby giving charterers a **mechanism to choose more efficient ships** (working as part of the IMO toolbox)

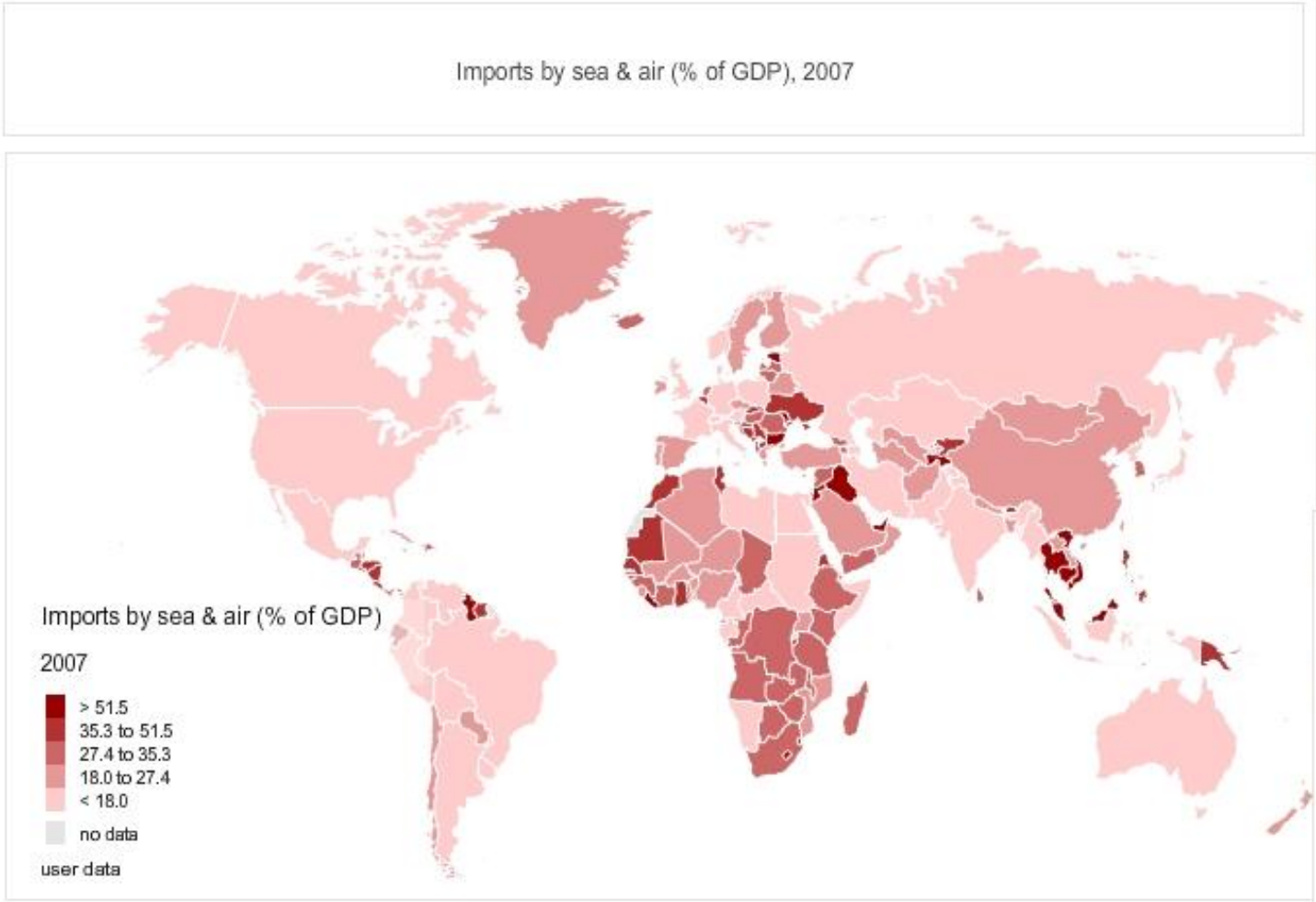
3. Seed financing provided for R&D will **bring forward adoption of low-carbon technologies** (hydrogen ships) by a decade or so

4. Financing provided for **capacity building** of developing countries will increase their openness to globally applicable **efficiency measures** (through the IMO)

5. **Supplemental emission reductions** will be achieved through carbon markets, and forestry (REDD+)

Case for Compensation/Rebates

Dynamic demonstration



World aggregate
17.2 % of GDP

Lesotho
103.7 % of GDP

China
23.4 % of GDP

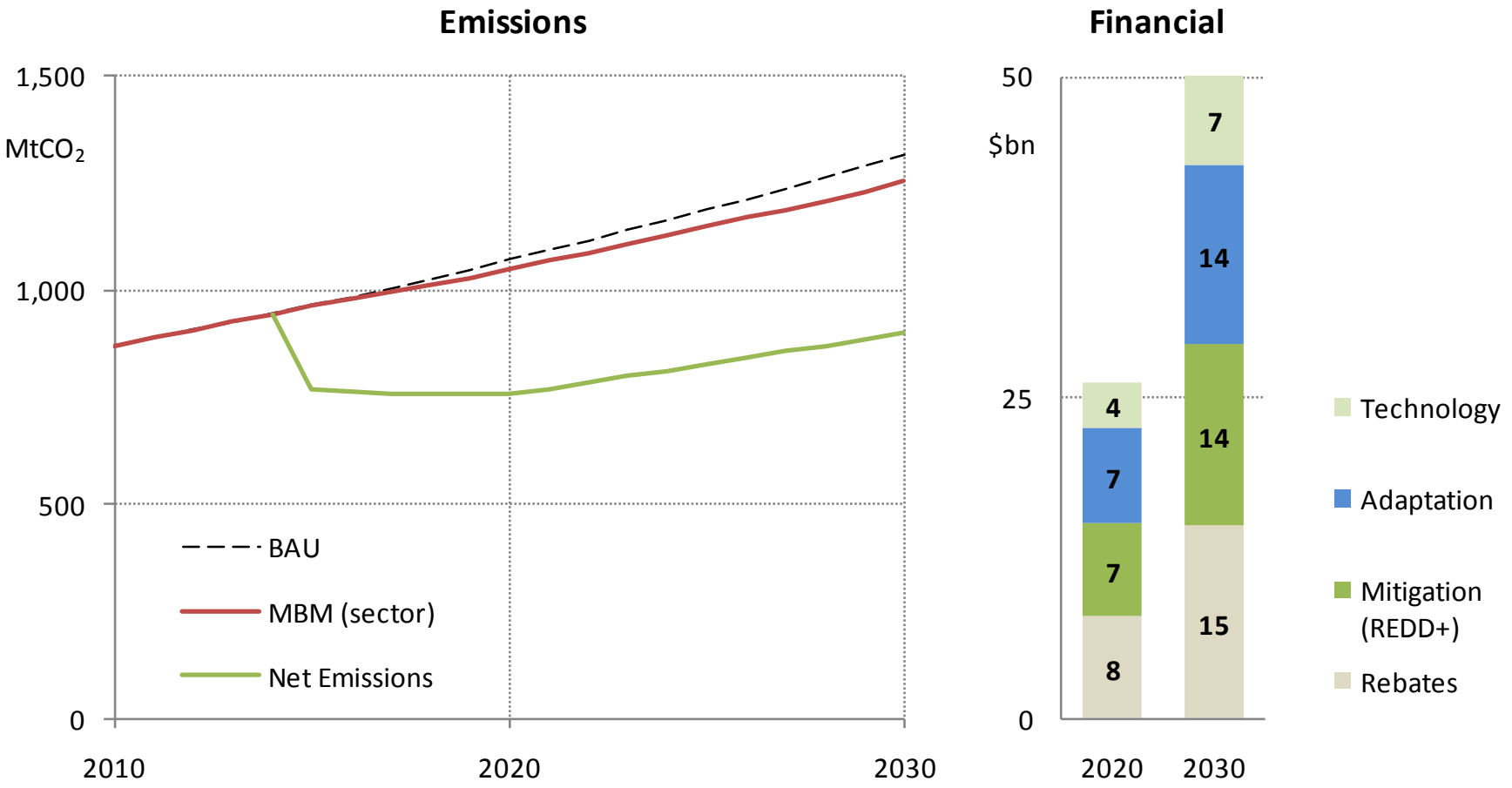
United States
11.2 % of GDP

Brazil
8.2 % of GDP

Rank	Country	Data
1	Singapore	137.0
2	Maldives	103.9
3	Lesotho	103.7
4	Palau	101.9
5	Kiribati	99.6
6	Tajikistan	97.6
7	Hong Kong SAR, (	96.3
8	Timor-Leste	93.0
9	Guyana	90.8
10	Iraq	88.9
11	Seychelles	83.7
12	Montenegro	78.6
13	Turks and Caicos	70.1
14	Vietnam	69.9
15	Liberia	69.1
16	Malta	66.3

Developing countries, generally, are more dependent on imports by sea and air than developed countries (as % of GDP). Many of the most vulnerable countries, such as Maldives and Lesotho, top the ranking and import several times more than the global average (see the ranking table).
Thus, rebates should be provided to the less developed countries in order to ensure no net incidence on them arising from a global maritime market-based mechanism (as proposed in the Rebate Mechanism).

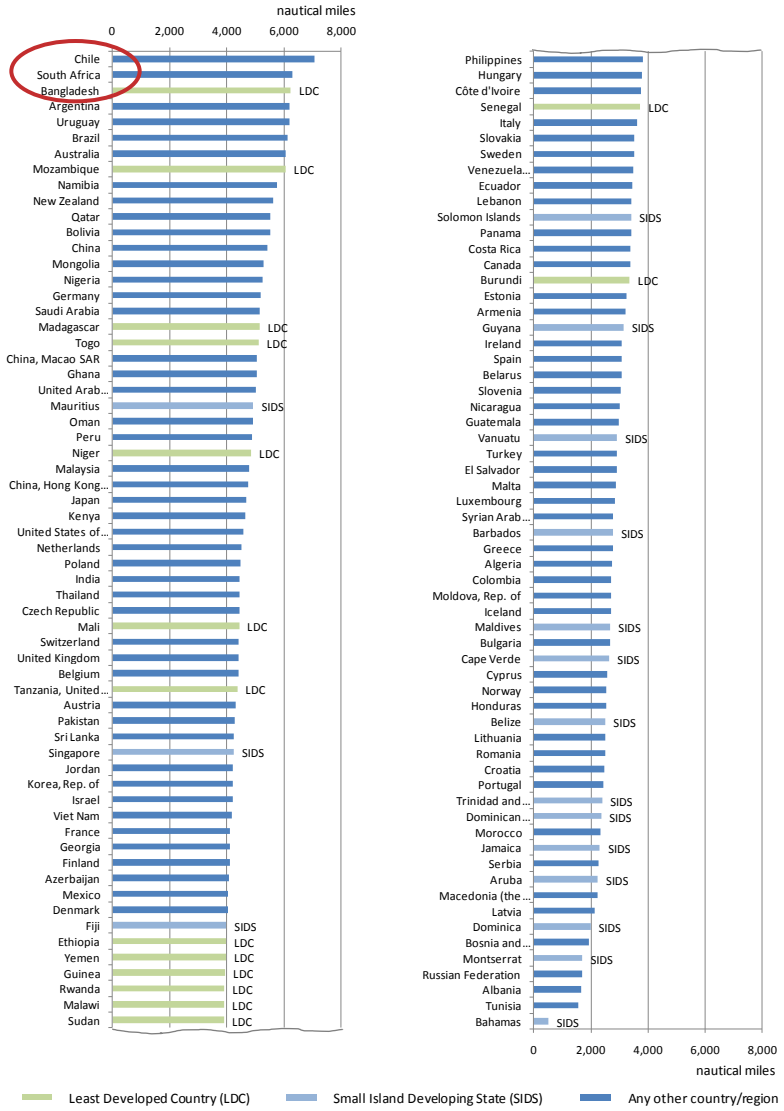
Average Scenario and Potential Financials (IMERS)



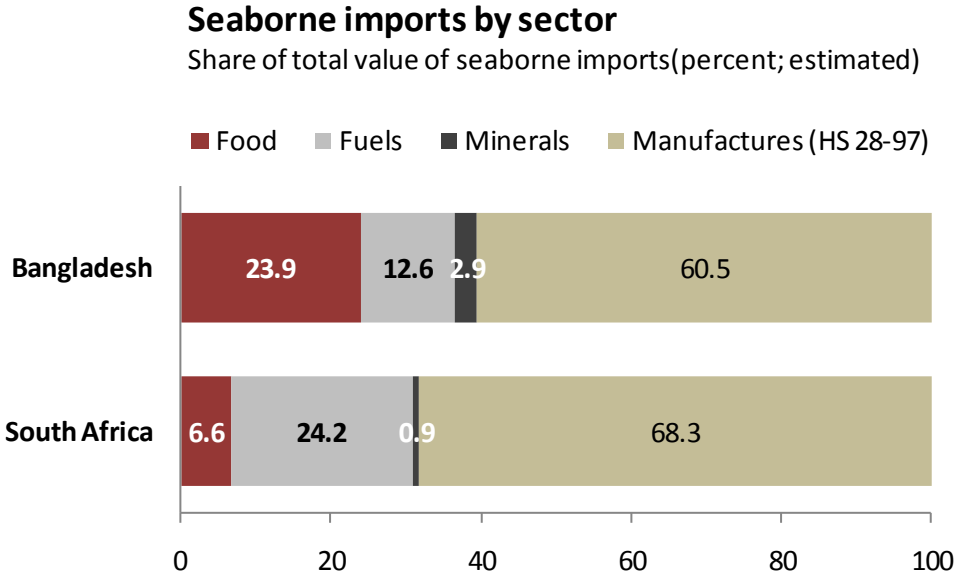
Easily affordable with cost impost estimated as **0.16% only** in 2020 (based on cost of $26bn and seaborne trade of $16.6 trillion)

Detailed Analysis Supports Global Action with RM

1. Country Trade-Weighted Distance



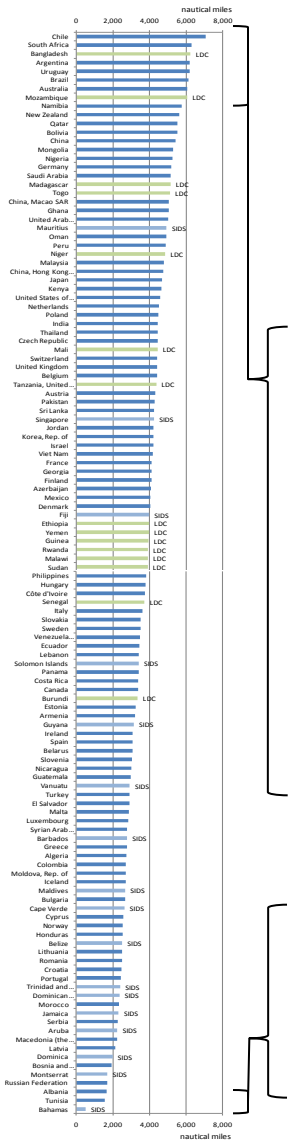
2. Impact analysis by country & regions



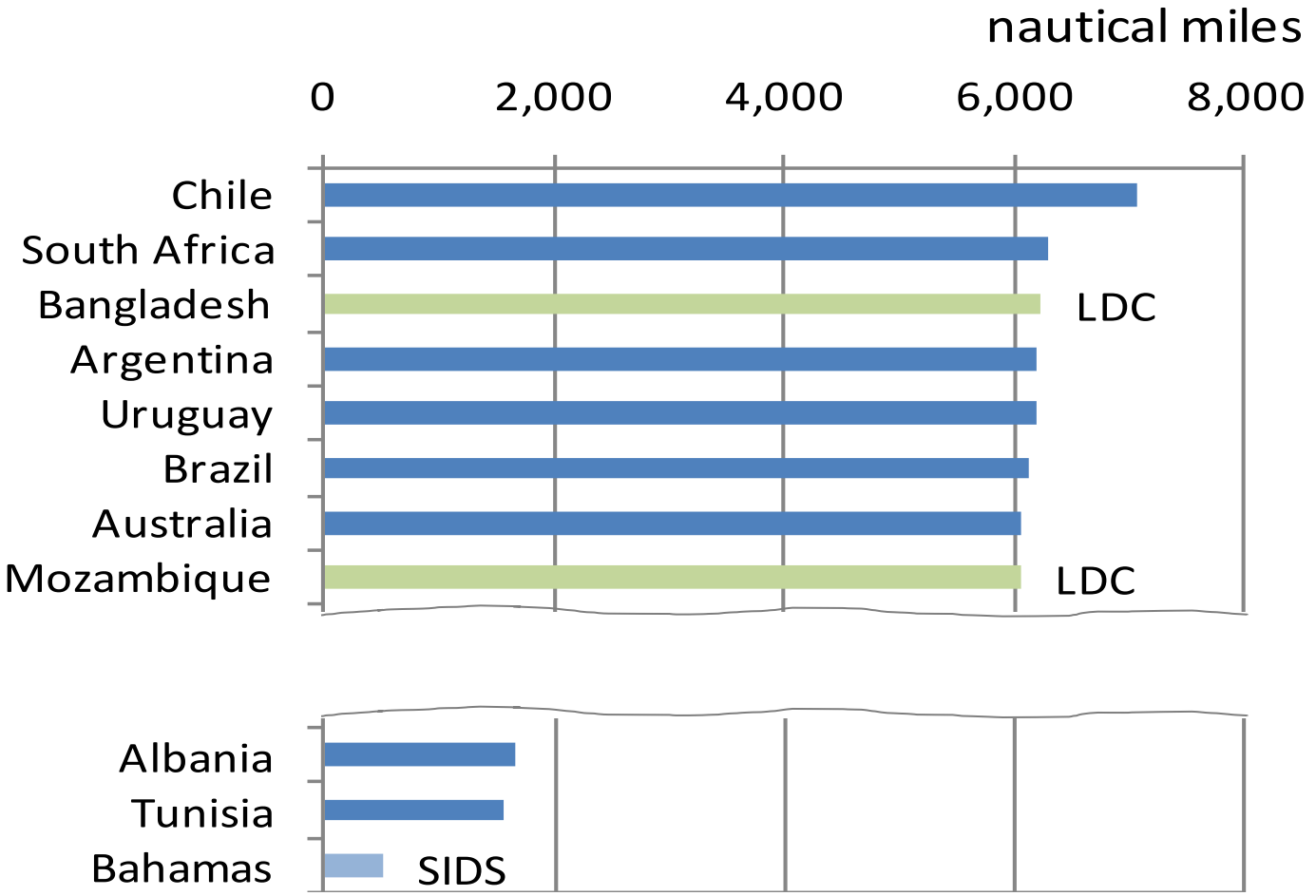
Maximum cost impact on import prices
(example; excluding rebates & any benefits)

Bangladesh	South Africa
0.19%	0.14%

Trade-Weighted Distance Analysis

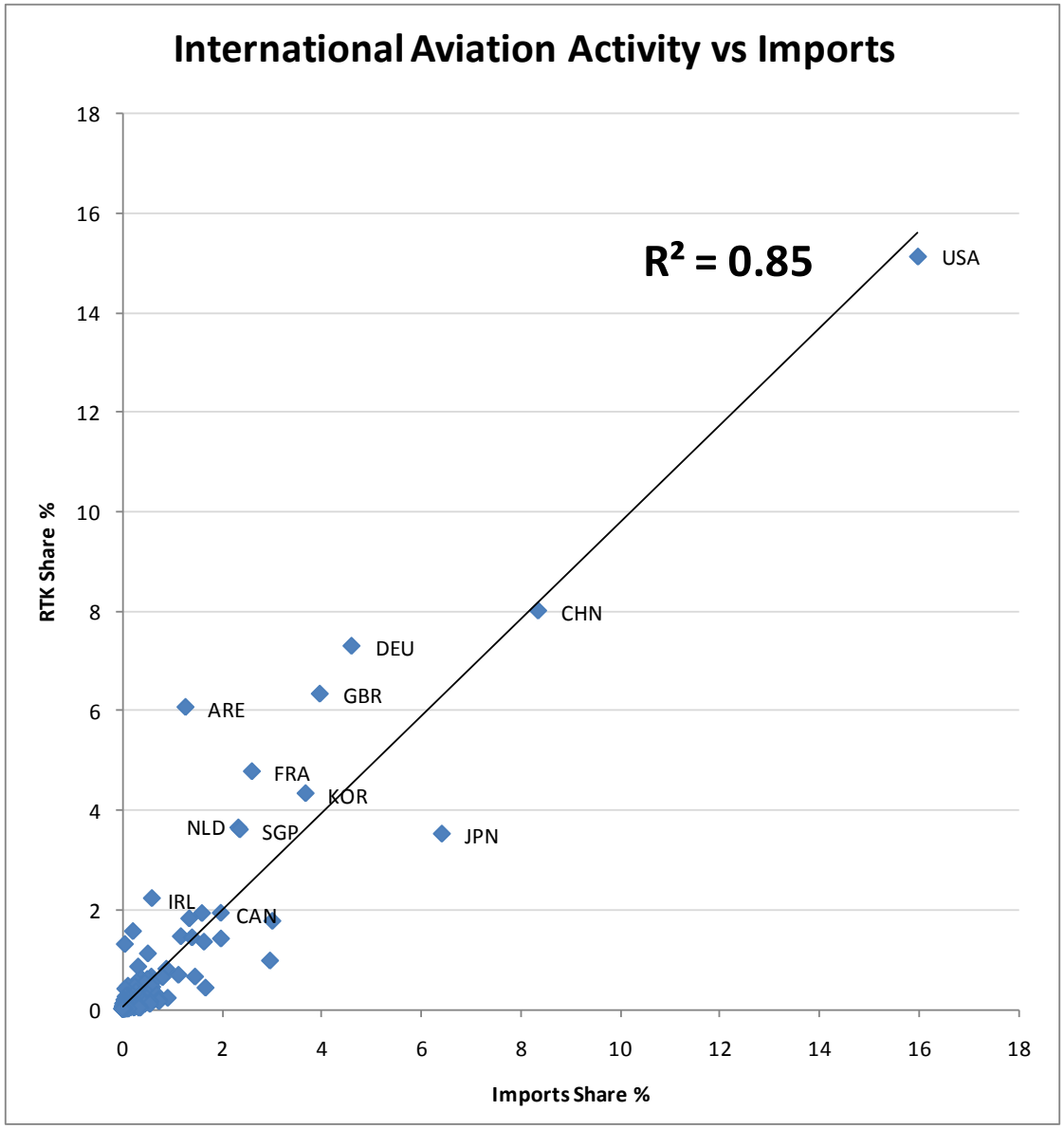


Trade-weighted distance (TWD) vary but much less than many expect; grouping of countries is not helpful; **TWD can be excluded from incidence calculations,** as justified in the Study.



LEGEND: Least Developed Country (LDC) | Small Island Developing State (SIDS) | Any other country/region

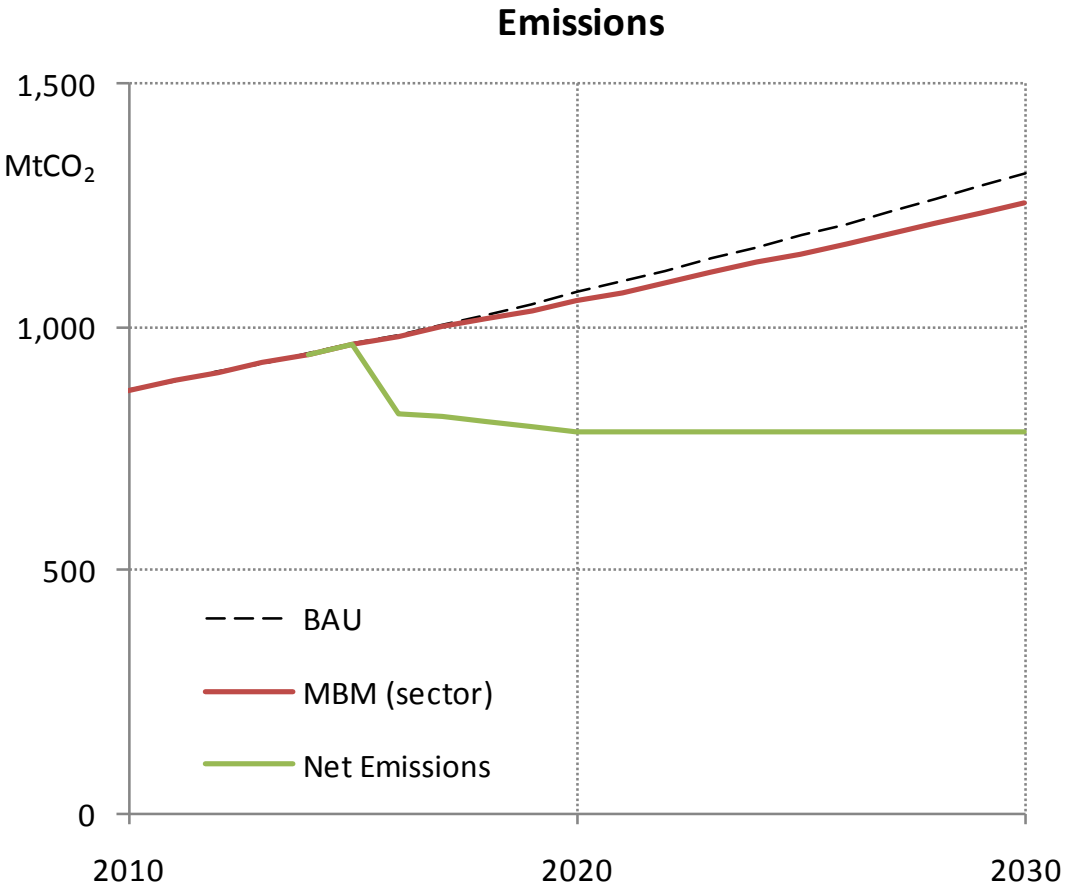
RM could also apply to aviation, including the keys

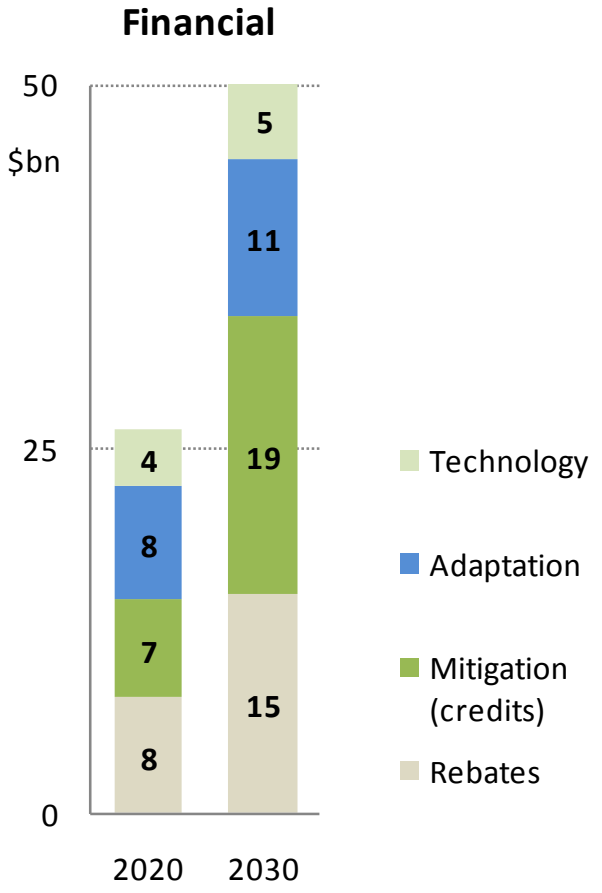


Imports by sea & air is well correlated to the international aviation activity, for great majority of countries (measured in revenue-ton kilometers, RTK)

ETS with RM

Average scenario and potential financials



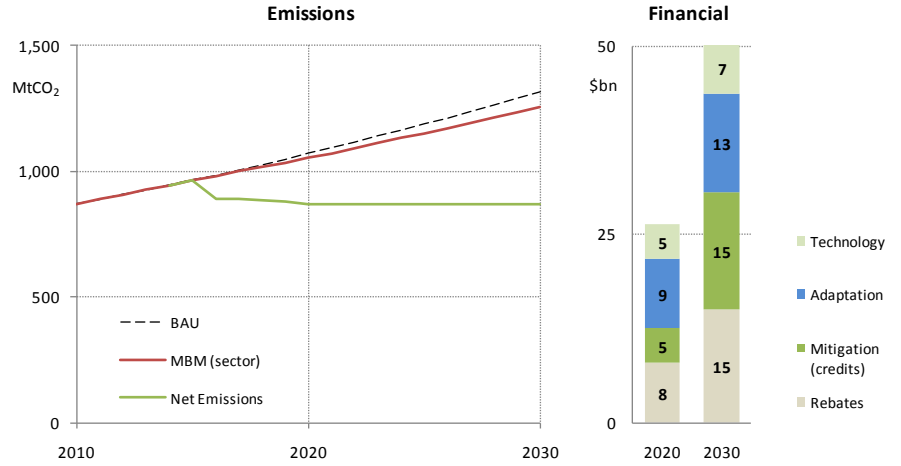


Assumptions: ETS **cap 10%** below 2007 level; 100% auctioning from 2020;
Financial: rebates to developing countries equals 30% of the total cost; mitigation credits as per the cap; remaining proceeds split between adaptation (2/3) and technology (1/3).

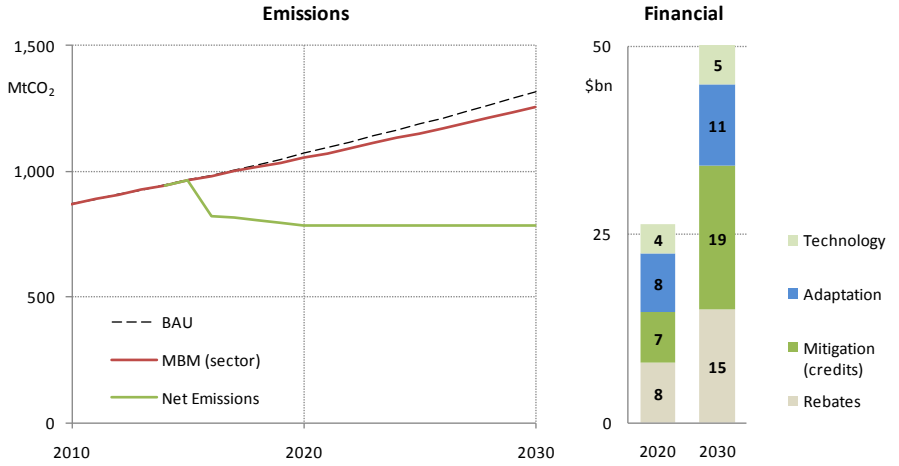
ETS with RM

Finance dynamics vs different emission caps/goals

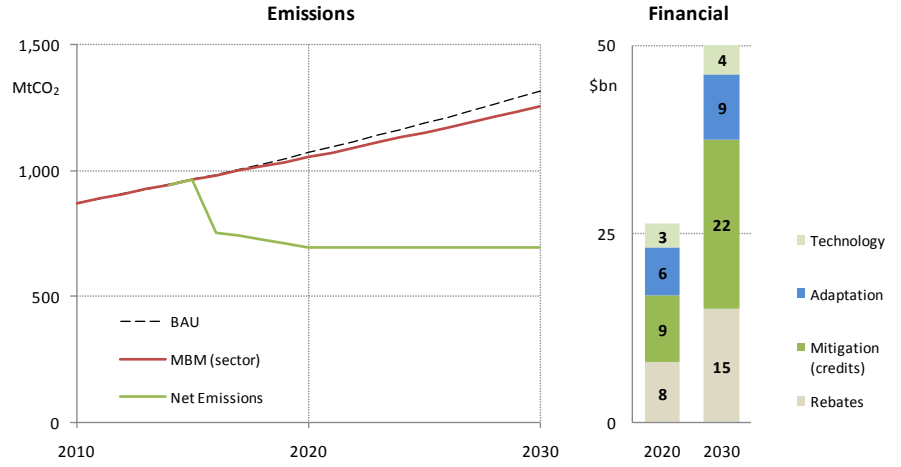
Cap = 2007 emissions



Cap = 10% below 2007



Cap = 20% below 2007



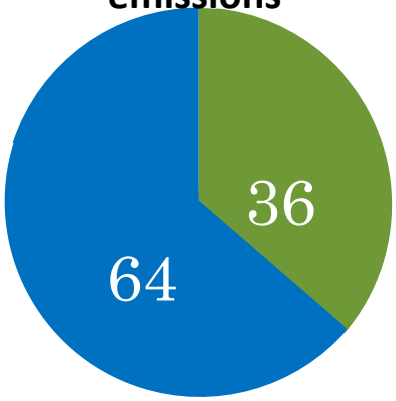
Assumptions: ETS **cap X%** below 2007 level; 100% auctioning from 2020;
Financial: rebates to developing countries equals 30% of the total cost; mitigation credits as per the cap; remaining proceeds split between adaptation (2/3) and technology (1/3).

The Core Issue: Various Perspectives

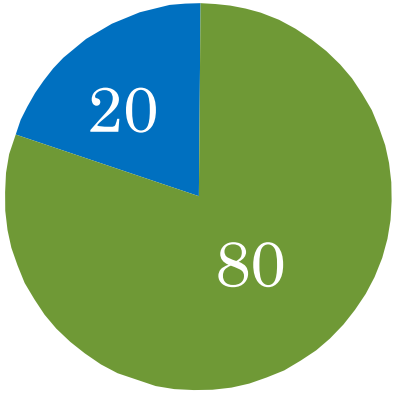
- Not whether, **but how** to reconcile:
  - Differentiated climate principles (CBDR), with
  - Uniform policies of shipping (IMO)
- The traditional by flag, country of registration, etc cannot work

Differentiated

Historical cumulative emissions



Impact damage costs



High-income countries
1.1 billion people

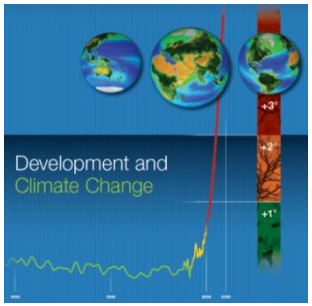
Developing countries
5.6 billion people

Uniform

Costs passed on to end-customers

Differentiated Priorities

- Developed countries:
  - Come out of downturn, and reduce budget deficit; reduce/mitigate emissions
- Less developed countries:
  - Develop, and reduce poverty; adapt to climate change
    - 1.4 billion people in poverty;
    - 1.6 billion people without modern energy
    - 25% of children malnourished
    - 1/6 people without clean water



World Development Report 2010

  - Yet, most recognize the need to act on climate change:
    - Now, Together, and Differently