

AUTHORITY OF PACIFIC ISLAND STATES TO REGULATE GREENHOUSE GASES FROM THE INTERNATIONAL SHIPPING SECTOR

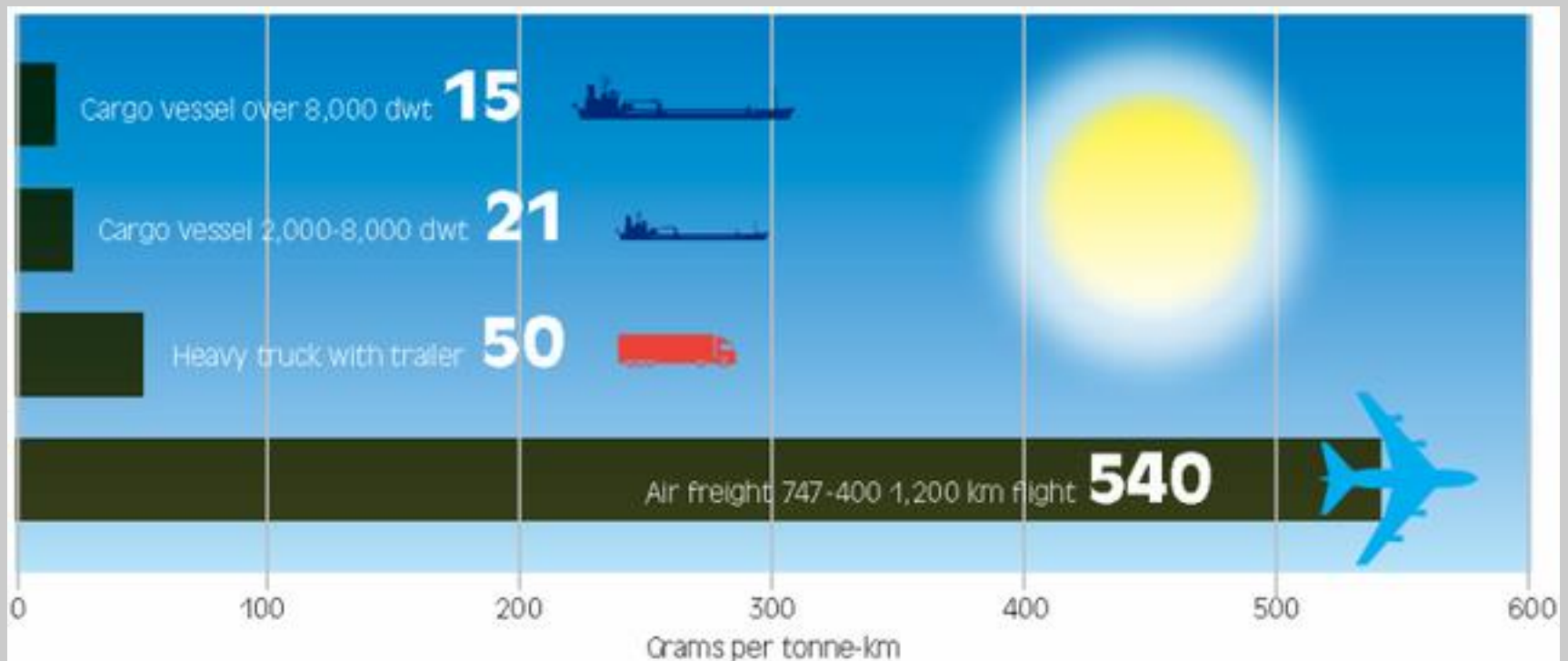
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Greenhouse Gas Emissions from the International Shipping Sector

Comparison of CO2 Emissions between Different Modes of Transport



Source: NTM, Sweden

Greenhouse Gas Emissions from the International Shipping Sector

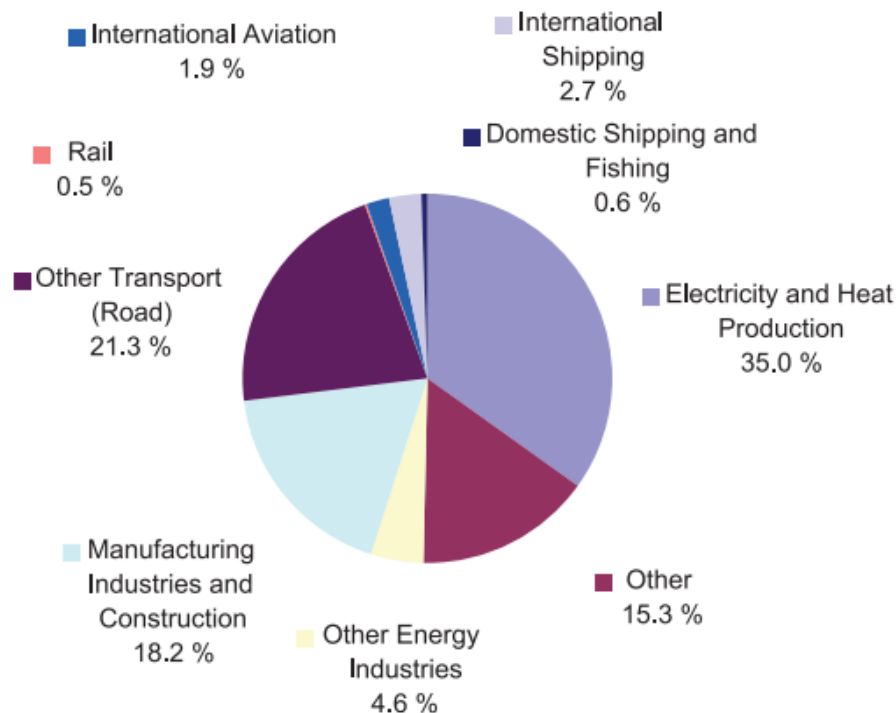


Figure 1.1 Emissions of CO₂ from shipping compared with global total emissions

Potential for Emissions Reductions

Table 1.2 *Assessment of potential reductions of CO₂ emissions from shipping by using known technology and practices*

	Saving of CO ₂ /tonne-mile	Combined	Combined
DESIGN (New ships)			
Concept, speed and capability	2% to 50% [†]		
Hull and superstructure	2% to 20%		
Power and propulsion systems	5% to 15%	10% to 50% ⁺	
Low-carbon fuels	5% to 15%*		
Renewable energy	1% to 10%		25% to 75% ⁺
Exhaust gas CO ₂ reduction	0%		
OPERATION (All ships)			
Fleet management, logistics & incentives	5% to 50% ⁺		
Voyage optimization	1% to 10%	10% to 50% ⁺	
Energy management	1% to 10%		

* CO₂ equivalent, based on the use of LNG.

† Reductions at this level would require reductions of operational speed.

International Regulation of GHGs from International Shipping

- The IMO developed two efficiency measures:
 - The Energy Efficiency Design Index (EEDI)
 - The Ship Energy Efficiency Management Plan (SEEMP).
- Adopted under Annex VI of the Marpol Convention 73/78
- The IMO has admitted that *“the technical and operational measures will not be sufficient to satisfactorily reduce the amount of GHG emissions from international shipping.”*



How can regulations reduce emissions from international shipping?

▣ Means of improving efficiency:

1. Structural adjustments

- ▣ Optimized engines and rudders
- ▣ Low resistance hull coating

2. Fuel/ renewable energy requirements

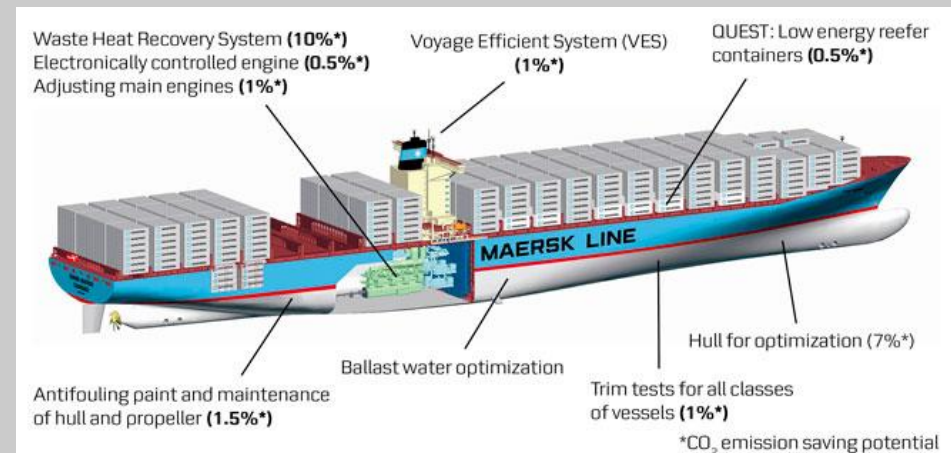
- ▣ More efficient fuels (LNG)
- ▣ Sails

3. Operational changes

- ▣ Slow steaming

▣ Structure of regulations:

1. Operational/technological requirements
2. Emissions standard
3. Market-Based Mechanism



Constraints of International Law

- There are four instruments under international law that pertain to nation's authority to regulation GHG emissions from international law:
 1. The Kyoto Protocol
 2. The International Convention for the Prevention of Pollution from Ships (MARPOL)
 3. The General Agreement on Tariffs and Trade (GATT)
 - 4. The United Nations Law of the Sea (UNCLOS)**

(1) The Kyoto Protocol

- Article 2(2):
 - *The Parties included in Annex I shall pursue limitation or reduction of emissions of GHGs not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively*

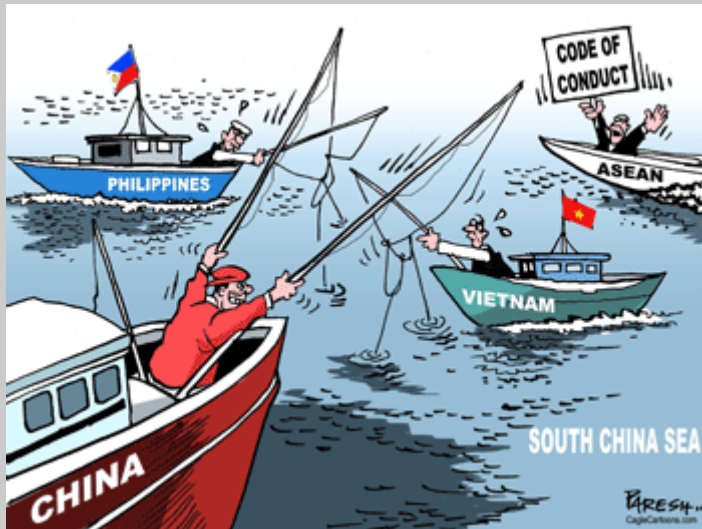
(2) MARPOL CONVENTION

- Article 6 subparagraph 6 :
 - The international law concerning the prevention, reduction, and control of pollution of the marine environment from ships, including that law relating to enforcement and safeguards, in force at the time of application or interpretation of this Annex, applies, *mutatis mutandis*, to the rules and standards set forth in this Annex

(3) GATT

- The GATT is primarily concerned with preventing protectionist policies and discrimination
- To prevent a GATT violation, Pacific island states should:
 - Ensure that any differential treatment is for the purpose of achieving emissions reductions.
 - Impose all requirements on both domestic and foreign ships.
 - Potentially discriminatory regulations should be:
 - flexible,
 - transparent, and
 - take into account the differing situations of different countries.

(4) UNCLOS



- “Constitution for the Oceans”
- Three types of Authority
 - Flag State
 - Port State
 - Coastal State



UNCLOS: Port State Jurisdiction

- ▣ Ports are subject to the state's territorial sovereignty
- ▣ A state may condition entry to its ports on certain requirements
- ▣ Limitations:
 - ▣ Publicity requirements
 - ▣ General fairness provisions



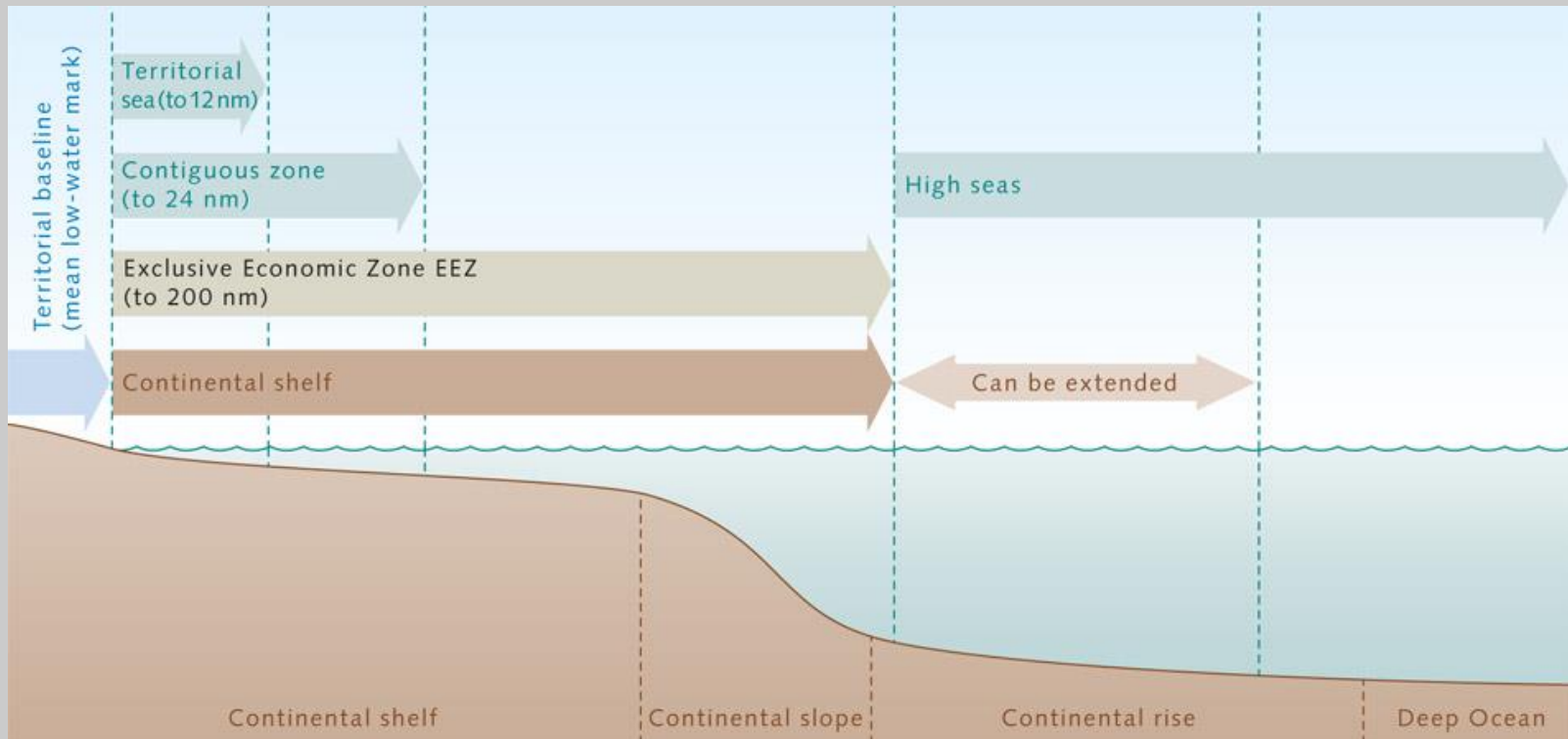
Photo Credit: NOAA

UNCLOS: Flag State Jurisdiction

- **Broad authority**
 - UNCLOS requires states “to adopt laws and regulations for the prevention, reduction, and control of pollution of the marine environment from vessels flying their flag or of their registry.”
- **The Marshall Islands Registry**
 - One of the world’s largest
 - Opportunity for regulation
 - BUT ships may leave registry



UNCLOS: Coastal State



Source: World Ocean Review, <http://worldoceanreview.com/en/wor-1/law-of-the-sea/a-constitution-for-the-seas/>

UNCLOS: Territorial Waters

- Restrictions:
 - Innocent passage
 - May not apply to CDEM
 - No fees for passage
 - Due publicity required

- Probably acceptable:
 - An emissions standard, (if alternatives means of compliance)
 - Operational requirements (e.g. speed limit)

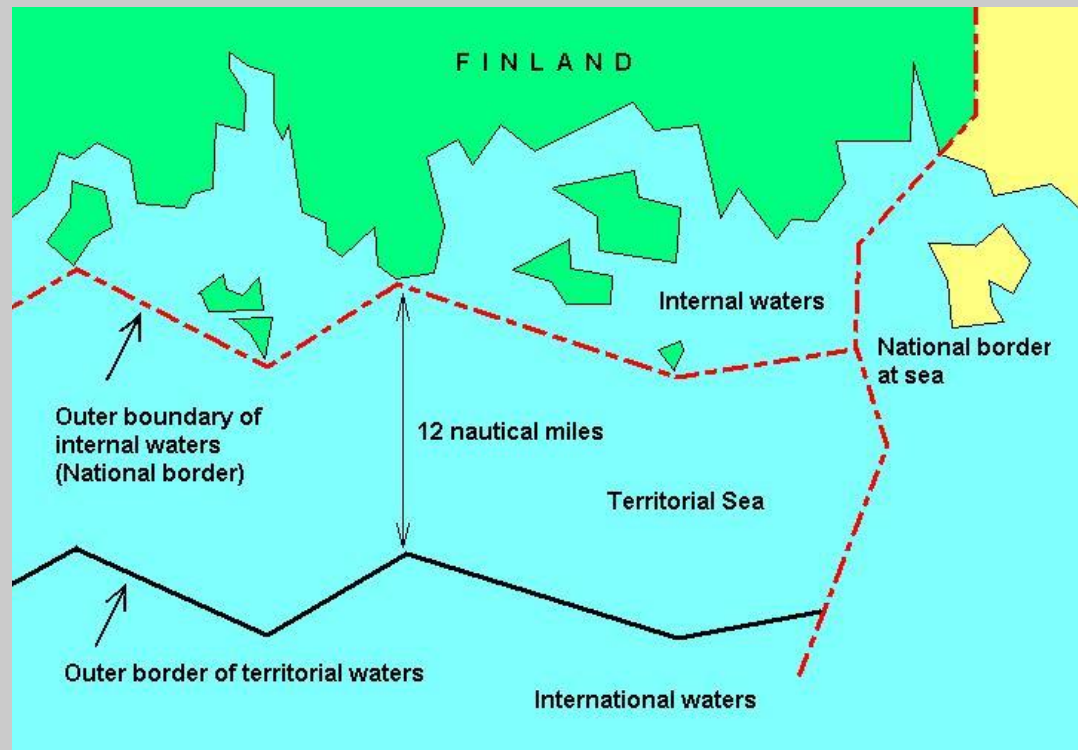


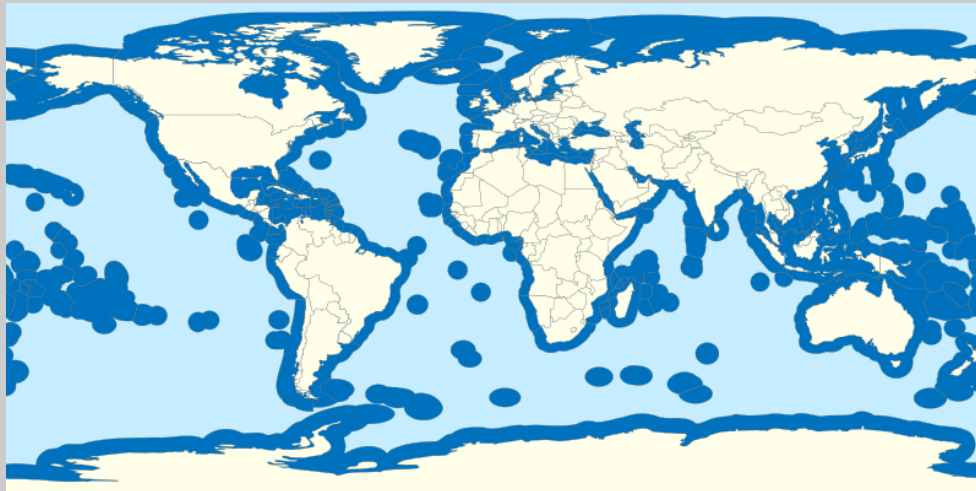
Photo Credit: Pekka Snellman

UNCLOS: Contiguous Waters

- Article 33:
 - *“In a zone contiguous to its territorial sea, described as the contiguous zone, the coastal State may exercise the **control necessary to:***
 - *“(a) **prevent infringement** of its customs, fiscal, immigration or **sanitary laws** and regulations **within its territory or territorial sea;***
 - *“(b) **punish infringement** of the above laws and regulations committed within its territory or territorial sea.”*

UNCLOS: Exclusive Economic Zone (EEZ)

- Constrained to GAIRAS
- Ecologically sensitive regions exception likely does not apply.



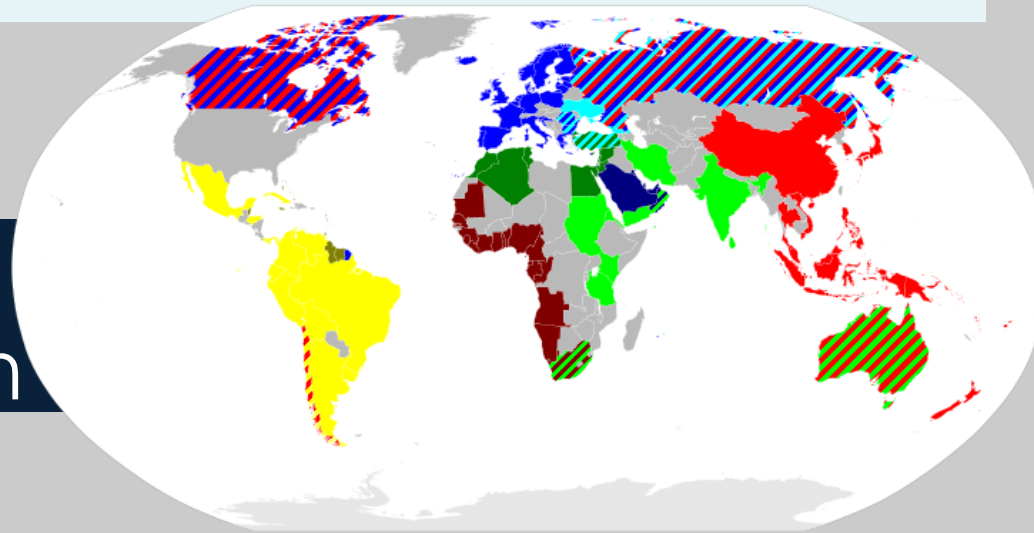
Source: Wikimedia

Authority under UNCLOS

Permissible forms of national regulation under the UN Convention on the Law of the Sea according to the type of jurisdiction:

	Authority over Ships Entering a State's Port	Authority over Ships in Territorial Sea	Authority over Ships in the EEZ or Contiguous Zone	State Authority over Ships in its Registry
Operational Efficiency	✓	?	X	✓
Structural Adjustments	✓	X	X	✓
Fuel Type Specifications	✓	X	X	✓
Emissions Standard	✓	?	X	✓
Emissions Tax or Market-Based Mechanism	✓	X	X	✓

UNCLOS: Regional Action



- States may work together outside of the IMO to establish regional or multilateral agreements.
 - Provisions of a regional agreement may apply to non-parties
 - BUT Parties may not infringe on the rights of non-party states

- Advantages to regional action:
 - Reduce competitiveness concerns
 - Improved enforcement
 - Reach larger percentage of fleet

Conclusions

- In developing regulations:
 - Consider best application of port, flag, and coastal State authority
 - Maximize reach and effectiveness through regional action
 - Consider unintended consequences
 - Anticipate potential political backlash
- Limitations of national or regional action
 - Consider voluntary approach