The Regulation of Greenhouse Gas Emissions from International Shipping
A long-term challenge for international maritime law and the law of the sea

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Outline

1. Introduction
2. Complexity of the regulatory challenge
3. Maritime regulatory system
4. GHG regulation
5. Conclusion
1. Introduction

- **UNFCCC/Paris Agreement**
  - Mitigation goal: keeping global temperatures well below 2°C, aiming for 1.5°C
  - Nationally determined contributions (NDCs)

- **UNCLOS**
  - 192: ‘positive obligation to take active measures’ (*Philippines v China*, 2016)
  - 194: duty to minimize pollution from ships
  - 212:
    - duty to prevent, reduce & control pollution through the atmosphere
    - to establish global & regional rules, standards & recommended practices & procedures to prevent, reduce & control such pollution through the IMO or diplomatic conference
  - 222: duty to enforce
  - Numerous provisions: IMO = ‘the competent international organization’ for international shipping
Shipping emissions

• IMO 2
\textsuperscript{nd} GHG Study (2007):
  • Shipping emitted 3.3\% of global CO\textsubscript{2} emissions (\textit{international shipping: 2.7\%})
  • CO\textsubscript{2} = the most important contributor
  • Business as usual scenario: increase by 150\% to 250\% by 2050 commensurate with growth in world trade

• IMO 3
\textsuperscript{rd} GHG Study (2014):
  • Business as usual scenario: increase by 50\% to 250\% by 2050 even with enhanced energy efficiency
The IMO role in response to the Paris Agreement

• International shipping industry’s fair share to be developed through the IMO
  • IMO roadmap & initial strategy (2018-2023) and long-term strategy (2023)
  • Ideal long-term goal = decarbonisation

• Key question in this presentation:
  • How is the maritime regulatory system positioned to enable the IMO lead its membership and the industry towards the long-term goal?
2. Complexity of the regulatory challenge

- Mobility, globality, transnationality of international shipping
- Numerous and diverse actors (owners, charterers, managers, etc.)
- Very diverse ships, fuel and energy use patterns
- Speed, just in time, port arrival, floating warehouse
- Risk management, ship finance and amortization
- Ramifications for markets, trade and wealth distribution
- Unequal capabilities in national maritime administrations
- Already a heavily regulated industry (50 treaty instruments + 160 other)
Convergence of global international regimes

International environmental law
International maritime law
International law of the sea
International trade law

MITIGATION
2. Maritime regulatory system

Policy principles (systemic)
- Universality; uniformity; no more favourable treatment

Prescriptive principles (regulatory)
- Compelling need; consistency; proportionality; functionality; resilience; clarity; non-retroactivity

Issue specific principles (added for GHGs)
- Effectiveness; binding & equally applicable to all flag States; cost-effectiveness; avoid competitive distortion; balancing environment & trade; goal-based; promotes R&D and innovation; energy efficiency practicality; transparency, fraud free, ease of administration
Structure and process

IMO as the competent international organization for international shipping (UNCLOS)

- Marine Environment Protection Committee (MEPC)
- Working Groups (e.g., GHG-ISWG)

1. Data gathering
2. Data analysis
3. Decision-making
4. Review?
The instruments

International maritime convention

- Annexes/chapters
- Codes
- Guidelines

- Goal & performance based regulations
- Mandatory & non-mandatory
- Regulatory impact assessment
- Technical assistance

Industry standards
- ISO standards
- IACS unified rules
- Etc.
4. GHG regulation

MARPOL ANNEX VI
- Technical measures
  - Energy Efficiency Design Index (EEDI) for new ships and older ships that underwent conversions
  - Applies to different classes of ships
- Operational measures
  - Ship Energy Efficiency Management Plan (SEEMP) for existing ships
  - Speed restrictions? Pros/cons
- Mandatory reporting of fuel use by ships of 5,000 GRT+ by 2020
- Technology cooperation and transfer on energy efficiency

ISO TC 8: Ships and Marine Technology
- ISO 14000 series for quantifying, monitoring, reporting, validating or verifying GHG emissions
- ISO 15016:2015 guidelines for the assessment of speed and power performance (sea trials)

- Market-based measures?
  - Carbon levy in port
  - Cap and trade system
  - Rebate mechanism for an MBM
  - Ship efficiency incentives
  - International fund for GHG emissions
  - Etc.

- In sector or out of sector
- Appropriate instrument?
Emerging strategy

- **Preamble/introduction/context including emission scenarios**
- **Vision**: decarbonization? Carbon neutrality by 2100? Or best endeavours?
- **Levels of ambition**: using 2008 as peak year; aspirational
- **Guiding principles**: Alignment with SDGs? In sector or out of sector
- **List of candidate measures**: short (2018-23), mid (2023-30) & long-term (2030+); timelines & impacts on States; technical/operational/MBMs
- **Barriers and supportive measures**: capacity building and technical cooperation; R&D
- **Follow-up actions** towards the development of the revised strategy
- **Periodic review** of the Strategy
Review, monitoring and compliance

- Paris Agreement: Global Stocktake every 5 years, starting 2023
- International law of the sea
  - Flag State; coastal State; port State
- International maritime law
  - IMO Strategy (periodic reviews)
  - Port inspections (conventions; PSC MOU system)
  - Capacity-building
  - Other
    - Implementation of IMO Instruments (III) Code?
    - SOLAS International Safety Management (ISM) Code?
    - Private law: marine insurance; seaworthiness
5. Conclusion

Maritime regulatory system is largely well-positioned …

Facilitating factors?

• IMO = adaptive organization with broad support (172 Member States; 97.28% of global GRT)
• MARPOL Annex VI (88 State Parties; 96.16% of global GRT)
• System maintenance procedures
• Compliance system
• Industry self-regulation
• Role of private maritime law

Constraining factors?

• Politicization
• Aspirations v targets
• Evidenced compelling necessity constraining precaution?
• No more favourable treatment versus CBDR-RC?
• Grandfathering technology
• Lowest common denominator
• Regulatory capture?
Thank you for your attention. Questions?

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