



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 2nd GHG Study (2007):
 - Shipping emitted 3.3% of global CO₂ emissions (international shipping: 2.7%)
 - CO₂ = the most important contributor
 - Business as usual scenario: increase by 150% to 250% by 2050 commensurate with growth in world trade
- IMO 3rd GHG Study (2014):
 - Business as usual scenario: increase by 50% to 250% by 2050 even with enhanced energy efficiency

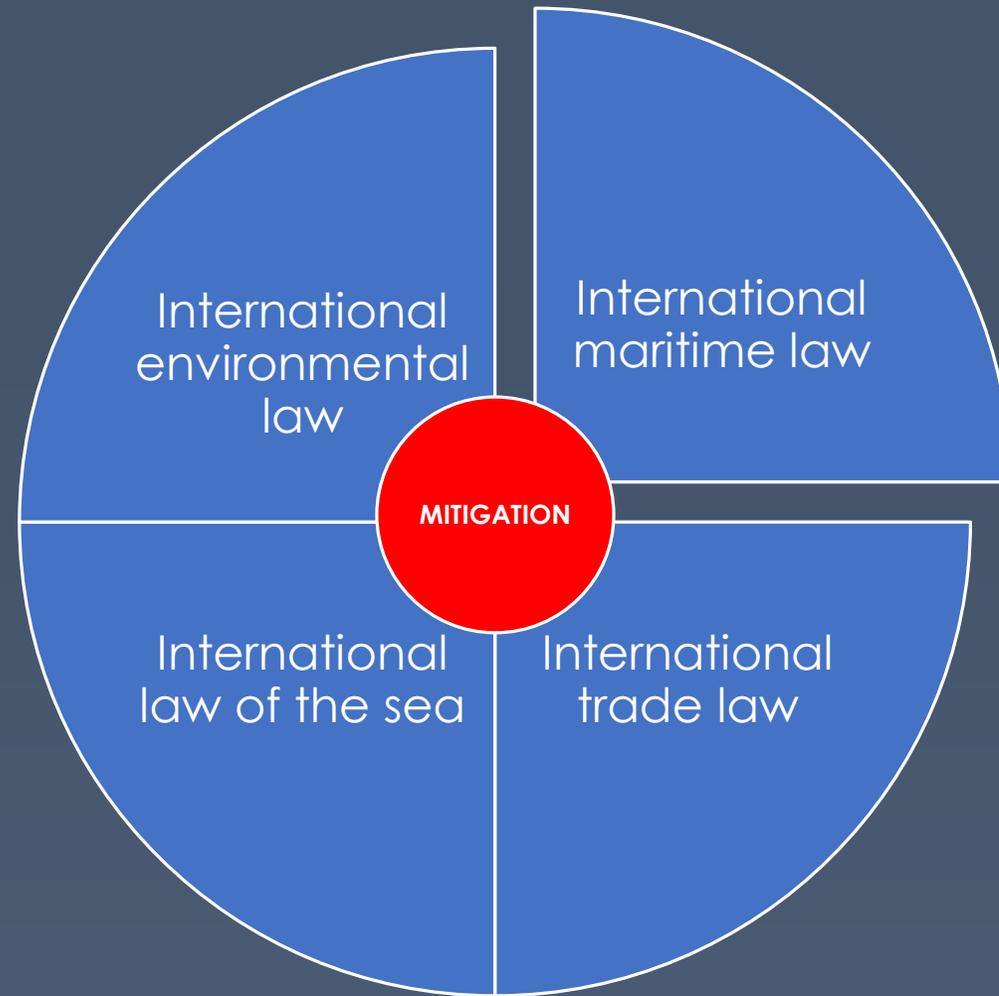
The IMO role in response to the Paris Agreement

- 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



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

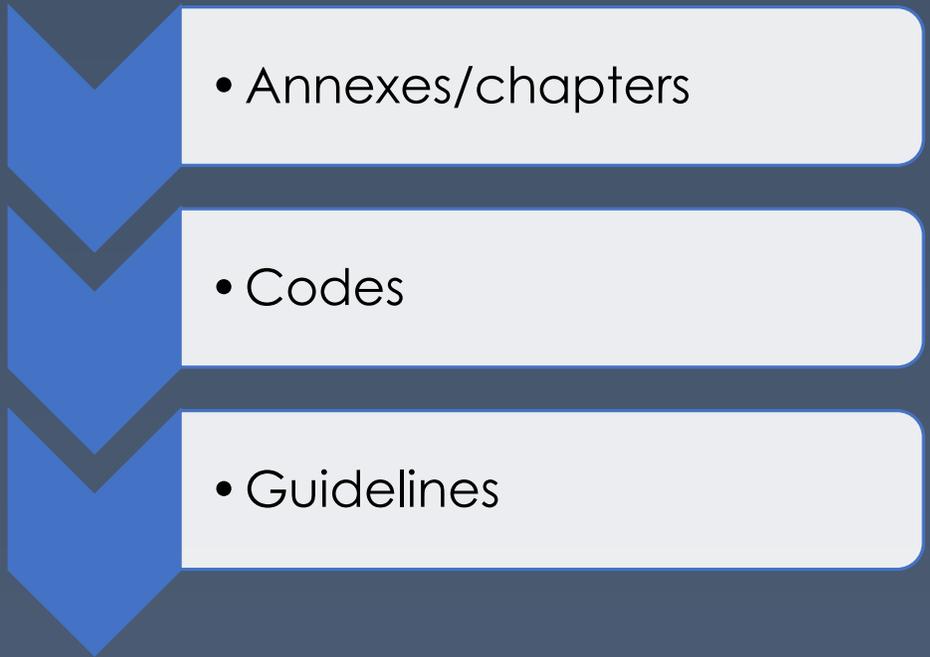
IMO as the competent international organization for international shipping (UNCLOS)

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



The instruments

International maritime convention



- 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?

Acknowledgements

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