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**CENTRE FOR INTERNATIONAL LAW**  
National University of Singapore

**Session 3. Emission Reduction from Shipping  
and Net-Zero Shipping**

**Reduction of Emissions from Commercial Shipping:  
The Global Context and Singapore Initiatives**

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# Part 1

# Shipping Emissions: The Global Context

# International Climate Change Regime



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## 1. UN Framework Convention on Climate Change (UNFCCC) (1992)

## 2. The Kyoto Protocol (1997)

- a) Note Art 2(2) which states: “The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases 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.”

## 3. The Paris Agreement (2015)

- a) Note Art 2(1)(a) which states: “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”

# Emissions from International Commercial Shipping

- Experts predict that **international maritime shipping may be responsible for  $\geq 17\%$  of global GHG emissions by 2050** as global trade expands. Logically, shipping sector needs to make substantial cuts in emissions to meet the Paris Agreement temperature goals.
- IMO is in charge of regulating GHG emissions from international maritime transport. However, **critics have observed that IMO's work to date is incompatible with the Paris Agreement** (E.g. there is concern that it may actually lead to an increase in GHG emissions).
- While discussions are underway to improve IMO's future work towards emissions reduction, **reporting emissions from international transport remains at the discretion of each State** (calculated as part of the national GHG inventories of Parties, but excluded from national totals and reported separately).

## Part 2

# Singapore's Initiatives and Policies

# Singapore and International Initiatives



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- Generally, Singapore plays an active role at the IMO in the formulation of strategies and measures to reduce such emissions.
- Singapore is also an active participant in a number of initiatives aimed to reduce GHG emissions from maritime shipping that requires some form of international cooperation, including:
  1. NextGEN and NextGEN Connect
  2. Cyldebank Declaration on Green Shipping Corridors
  3. Zero-Emission Shipping Mission
  4. Blue Solutions Project
- Additionally, Singapore is an active supporter of the IMO's Integrated Technical Co-operation Programme to build up developing IMO Member States' capabilities to implement international maritime regulations and standards.

# Self-initiated Programmes of Singapore

## MPA's Maritime Singapore Green Initiative

- In 2011, MPA pledged to invest up to S\$100 million over 5 years in the Maritime Singapore Green Initiative which seeks to reduce the environmental impact of shipping and related activities and to promote clean and green shipping in Singapore.
- In 2019, the Initiative was further extended till 31 December 2024 and enhanced to promote decarbonisation of shipping.
- It is a comprehensive initiative comprising four programmes. These **voluntary** programmes are designed to **recognise and provide incentives to companies that adopt clean and green shipping practices** over and above the minimum required by IMO Conventions.

# Self-initiated Programmes of Singapore



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## Green Ship Programme (GSP)

- The key principle of GSP is to **reward ship owners** who **voluntarily** adopt solutions that enable ships to **exceed environmental regulatory standards mandated by IMO**.
- GSP is enhanced to encourage Singapore-flagged ships to reduce GHG emissions. Ships that qualify will enjoy a reduction of their Initial Registration Fees and a rebate on their Annual Tonnage Tax.
- MPA will also issue a Green Ship Certificate, each to the qualifying ship and company owning.



# Self-initiated Programmes of Singapore

## Green Ship Programme (GSP)

Criteria	Incentives	
	Initial Registration Fee	Annual Tonnage Tax
Adoption of energy efficient ship designs exceeding EEDI	50% reduction	20% rebate
Adoption of LNG as a fuel	75% reduction	50% rebate
Adoption of fuel with lower carbon content than LNG	50% reduction	20% rebate
Adoption of both energy efficient ship designs exceeding EEDI and fuel with lower carbon content than LNG	75% reduction	50% rebate

# Self-initiated Programmes of Singapore



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## Green Port Programme (GPP)

- GPP encourages ocean going vessels **calling in Port of Singapore** to adopt solutions to reduce the emission of pollutants.
- Vessels that qualify could enjoy 25% concession in port dues (throughout entire port stay or 5 days or less), if it
  - (a) uses LNG as a marine fuel in the Port of Singapore; or
  - (b) exceeds current IMO's Energy Efficiency Design Index (EEDI) requirements Additional 10% concessions by tapping on services provided by LNG-fuelled harbour craft during port stay.

# Self-initiated Programmes of Singapore

## Green Port Programme (GPP)

Criteria	Port Dues Concession
Use of LNG bunker during port stay	25% for that particular port stay
Exceeding IMO's EEDI Requirement	
Use services provided by LNG-fuelled harbour craft during port stay	Additional 10%

# Self-initiated Programmes of Singapore

## Green Energy and Technology Programme

- The Green Energy and Technology Programme aims to encourage **Singapore-based maritime companies to develop/conduct pilot trials for green technologies** that can help vessels meet IMO 2030 targets.
- Ocean going vessels registered under the SRS and harbour crafts licensed to operate within the Port of Singapore are eligible to apply.

# Self-initiated Programmes of Singapore



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## Green Awareness Programme

- The Green Awareness Programme encourages companies to **pursue advanced sustainability reporting in areas of carbon reporting and internal carbon pricing**; as a tool to facilitate the industry shift towards low carbon shipping in alignment with IMO initial strategy for reduction in CO2 emissions from ships.
- A series of workshops and training would be conducted to build up capabilities of local maritime companies in carbon accounting.

# Conclusions

1. The reduction of GHG emissions from shipping is a complex task that must be tackled by the IMO as well as by States and other stakeholders in the shipping industry.
2. As a party to the Paris Agreement and the Kyoto Protocol, and a major global maritime centre and bunkering port, Singapore takes its responsibilities to reduce GHG Emission from shipping seriously.
3. Singapore is actively participating in the discussions at the IMO and is actively participating with like-minded partners in other international initiatives to reduce GHG emissions from shipping.
4. In addition, it has initiated several voluntary programmes to provide incentives to companies in Singapore and Singapore-registered ships to adopt clean and green shipping practices.

# Thanks for your attention!

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