CURRENT STATE OF PLAY OF THE IMO GHG STRATEGY

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ROADMAP FOR DEVELOPING A COMPREHENSIVE IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS (MEPC 70)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>October 2016</td>
<td>Approval of Roadmap Data Collection System (DCS); voluntary collection starts</td>
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<tr>
<td>May 2017</td>
<td>Development of IMO strategy</td>
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<td>Spring 2018</td>
<td>Adoption of initial strategy</td>
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<tr>
<td>January 2019</td>
<td>Start of Phase 1: Mandatory data collection (5kGT ships to collect data)</td>
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<tr>
<td>Spring 2019</td>
<td>Initiation of Fourth IMO GHG Study using data from 2012-2018</td>
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<td>Summer 2020</td>
<td>Data for 2019 to be reported to IMO</td>
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<tr>
<td>Autumn 2020</td>
<td>Start of Phase 2: data analysis Fourth IMO GHG Study</td>
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<tr>
<td>Spring 2021</td>
<td>Adjustments to Initial IMO Strategy based on DCS data</td>
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<tr>
<td>Spring 2022</td>
<td>Phase 3: Decision step</td>
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<tr>
<td>Spring 2023</td>
<td>Adoption of Revised IMO Strategy</td>
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THE INITIAL STRATEGY (MEPC 72)

1. INTRODUCTION

2. VISION

3. LEVELS OF AMBITION AND GUIDING PRINCIPLES

4. LIST OF CANDIDATE SHORT-, MID- AND LONG-TERM FURTHER MEASURES WITH POSSIBLE TIMELINES AND THEIR IMPACTS ON STATES

5. BARRIERS AND SUPPORTIVE MEASURES; CAPACITY BUILDING AND TECHNICAL COOPERATION; R&D

6. FOLLOW-UP ACTIONS TOWARDS THE DEVELOPMENT OF THE REVISED STRATEGY

7. PERIODIC REVIEW OF THE STRATEGY

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PRELIMINARIES

• Context:
  • LOS & climate regimes
  • IMO as the competent international organization
  • Assembly Strategic Direction for climate
  • UN Agenda for Sustainable Development

• Emission scenarios:
  • Based on IMO 3rd GHG Study (2014) (2.2% in 2012, but could grow by 50-250% by 2050)

• Objectives:
  • Enhancing IMO’s contribution
  • Identify actions, measures and impacts

• Vision:
  • ‘IMO remains committed to reducing GHG emissions from international shipping and, as a matter of urgency, aims to phase them out as soon as possible in this century.’
INITIAL AMBITIONS AND PRINCIPLES

**Ambitions (subject to reviews, new estimates, options, IPCC reports):**
- Carbon intensity of per ship type to decline through implementation of phases of the EEDI
- Carbon intensity of international shipping to decline, per transport work across the industry, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008
- GHG emissions from shipping to peak ASAP and decline by at least 50% by 2050 while pursuing continuing efforts

**Principles:**
- Non-discrimination
- No more favourable treatment
- CBDR and respective capabilities, in the light of different national circumstances
- Full and complete effect by all ships regardless of flag
- Consideration of impacts on states, including developing countries, in particular, LDCs/SIDS
- Evidence-based decision-making balanced with the precautionary approach
TIMELINE AND MEASURES (1)

Short-term: 2018-2023

- Further improvement of EEDI and SEEMP
- Technical/operational energy efficiency measures/indicators for new/existing ships
- Existing Fleet Improvement Programme
- Speed optimization and speed reduction
- Measures to address emissions of methane and VOCs
- National action plans/policies/strategies
- Technical cooperation/capacity-building
- Encourage port development/activities
- R&D and establishment of International Maritime Research Board
- Incentives for first movers
- Lifecycle GHG/carbon intensity guidelines for all fuels
- Additional GHG emission studies

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TIMELINE AND MEASURES (2)

**Medium-term: 2023-2030**

- Programme for uptake of alternative low and zero-carbon fuels
- Update national actions plans
- Operational energy efficiency measures for new/existing ships
- New mechanism(s), e.g., MBMs
- Enhance tech cooperation/capacity-building
- Mechanism for best practices

**Long-term: 2023-2030**

- Development and provision of zero-carbon or fossil-free fuels to enable/assess decarbonization in 2050-2100
- Encourage and facilitate the general adoption of other possible new/innovative emission reduction mechanism(s)
‘The impacts … should be assessed and taken into account as appropriate before adoption of the measure. Particular attention should be paid to the needs of developing countries, especially small island developing States (SIDS) and least developed countries (LDCs).’
BARRIERS & SUPPORTIVE MEASURES

- Developing countries (especially LDCs and SIDS) have special capacity building and technical cooperation needs.
- New energy sources safe for ships could be a barrier to the implementation of possible measures.
- Facilitating public-private partnerships and information exchange on low-carbon technologies.
- Facilitating information sharing, technology transfer, capacity-building and technical cooperation.
- IMO to assess financial/technological resources and capacity-building to implement the Strategy.
3. STRUCTURES FOR STRATEGY DELIVERY

Instruments: MARPOL ANNEX VI + codes, guidelines, recommendations

### MEASURES

**Technical**
- EEDI for new ships + retrofits
- Ship type specific

**Operational**
- SEEMP for existing ships
- Course/speed management
- Fuel reporting by ships of 5,000 GRT+

**Technology cooperation and transfer on energy efficiency**
- TCP
- GloMEEP
- Global MTCC Network

**Market-based measures**
- In sector?
  - Instruments: MARPOL?
  - New IMO instrument?
  - Use Paris Agreement structure?

**Other measures**
- National Action Plans
- Port infrastructure
- Etc.

### ACTORS

- IMO (MEPC, MSC, LEG, FAL, TCC)
- IACS/Recognized Organizations?
- ISO TC 8
- Others?
- PSC MoUs
REVIEW, MONITORING & COMPLIANCE

Paris COP, SBSTA

IMO

Flag state
Port state
Coastal state

Paris Agreement
Global Stocktake, Talanoa

Regional?

IMO strategy reviews
PSC inspections
III Code audits
ISM Code
TCC
Private law

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4. FOLLOW UP ACTIONS
(ISWG-GHG 4 TO 5, MEPC 73 TO 74 AND BEYOND)

Actions:

• Candidate short-term measures
• Candidate mid-/long-term measures/action to address identified barriers
• Impacts on States (ISWG to consider proposals to assess impacts; need for a procedure)
• Fourth IMO GHG Study (TOR developed by ISWG-GHG; steering committee; expert workshop; final by 2020)
• Capacity-building, technical cooperation, R&D
• Follow-up actions to develop revised Strategy for adoption at MEPC 80

Classification of candidate short-term measures?

Group A: considered/addressed under existing IMO instruments

Group B: not work in progress/subject to data analysis

Group C: not work in progress/not subject to data analysis
## POSSIBLE SHORT-TERM MEASURES?

**Defined as actually helping to reduce emissions by 2023**

- Early implementation of Phase III of EEDI
- Extend EEDI to more ships
- Strengthen SEEMP to mandatory audit (place in the Ship Safety Management System)
- VOC controls

**Mandatory and voluntary (best practices) measures**

- Route, speed optimization/reduction
- Alternative fuels

### Who will assess the impact of each measure?

- Proponent?
- IMO?
- Affected state?
- Or an independent expert panel?

### Criteria?

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In theory, speed reduction can significantly reduce emissions (e.g., by one-third for container, bulkers and tankers).

In practice, issues arise:

- Slow speed is not necessarily optimum speed
- Safety and maintenance
- Possible modal shifts (to road, etc.)
- Prolongation of voyage for perishable products
- Energy efficient ships may be penalized
- Spread of exotic species fouling hull/sea chest
- Difficult to enforce?
THE PORT-SHIP INTERFACE

- Ports can assist ships reduce emissions; IMO conventions are about ships
- Technically, ports are captured by the NDCs rather than the IMO strategy
- Optimizing the port visit (speed, berthing/deberthing, etc.)
- Shore-sourced power, as long as it is from renewables or low-carbon
- Bunkering: diverse low and zero carbon fuels; need to avoid methane slips
- Role of ports in providing environmental incentives (e.g., green ships)
- Technical support and capacity-building for ports (e.g., GloMEEP toolkit)
5. CONCLUDING OBSERVATIONS

• Should there be greater urgency to decarbonize after the IPCC’s report on 1.5°C and recent science re ocean thermal storage?
• Tension between the evidence-based approach and precaution?
• Weighing prescriptive and goal-based approaches to GHG regulation, given the urgency
• Impact of the sulphur rule on the IMO Strategy
• Need to start planning for an MBM early?
• Weighing impacts, costs and the cost of not acting urgently and effectively
• Compensatory mechanism/offsets for SIDS and need for a substantial Trust Fund?