

Regional Roundtable on Improving the Availability of Maritime Transport
Costs Data in the Pacific – Suva, 16 February 2023

Latest IMO action on the reduction of GHG emissions from ships

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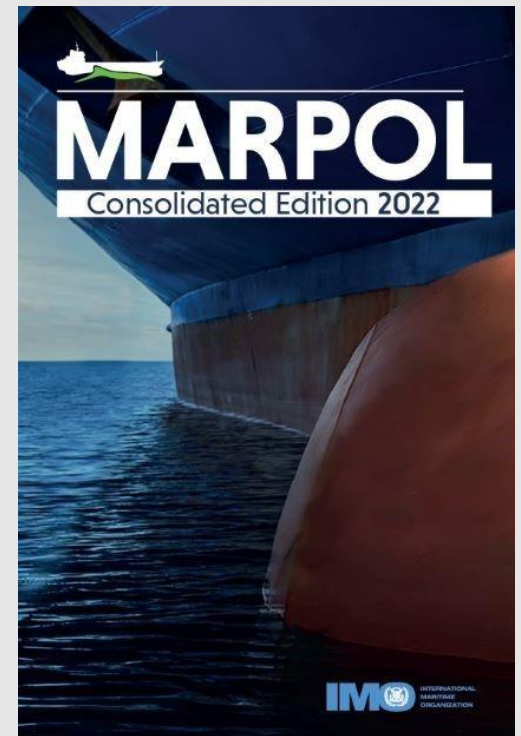
Safe, secure and efficient shipping on cleaner oceans

MARPOL Annex VI: Defining binding regulations aimed at reducing air pollution from ships

MARPOL is the International Convention for the Prevention of Pollution from Ships, adopted in 1973

MARPOL Annex VI on Air Pollution from Ships:

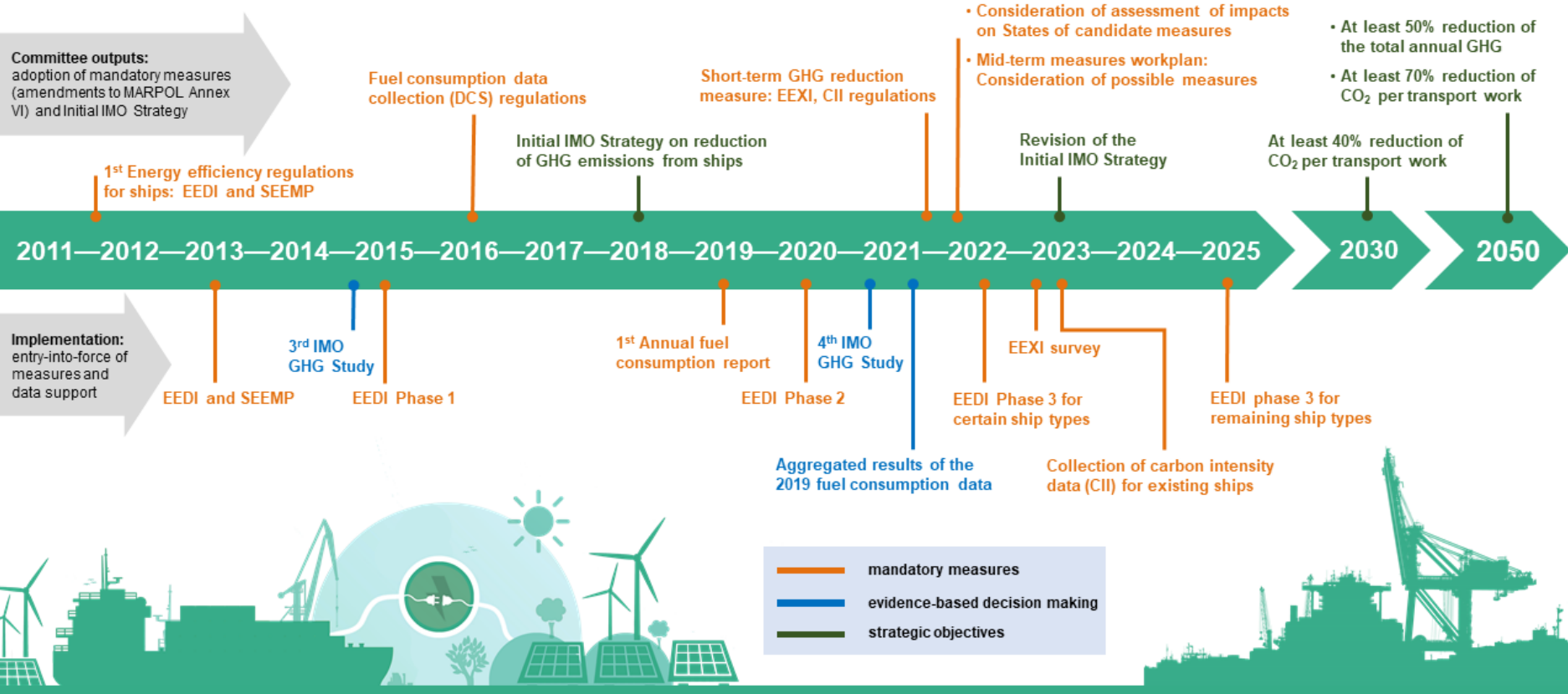
- additional protocol to the Convention adopted in 1997
- ratified by **105 States - 97% of world tonnage**
- contains **binding requirements** which are **enforced globally** by flag States and port States
- **Chapter 3** regulates **air pollution**: sulphur content of bunker fuels (“IMO2020”) – emission control areas (ECAs), NOx emissions from engines, etc.
- **Chapter 4** regulates **carbon intensity of ships** (GHG emissions)



Overview of IMO action on reduction of GHG emissions from ships

Addressing climate change

A decade of regulatory action to cut GHG emissions from shipping:
towards phasing out GHG emissions from shipping as soon as possible in this century



2018 Initial IMO GHG Strategy

MEPC 72/17/Add.1
Annex 11, page 1

ANNEX 11

RESOLUTION MEPC.304(72)
(adopted on 13 April 2018)

INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS

THE MARINE ENVIRONMENT PROTECTION COMMITTEE

RECALLING Article 38(e) of the Convention on the International Maritime Organization (the Organization) concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

ACKNOWLEDGING that work to address greenhouse gas (GHG) emissions from ships has been undertaken by the Organization continuously since 1997, in particular, through adopting global mandatory technical and operational energy efficiency measures for ships under MARPOL Annex VI,

ACKNOWLEDGING ALSO the decision of the thirtieth session of the Assembly in December 2017 that adopted for the Organization a strategic direction entitled "Respond to Climate Change",

RECALLING the United Nations 2030 Agenda for Sustainable Development,

1. ADOPTS the Initial IMO Strategy on Reduction of GHG Emissions from Ships (hereinafter the Initial Strategy) as set out in the annex to the present resolution;
2. INVITES the Secretary-General of the Organization to make adequate provisions in the Integrated Technical Cooperation Programme (ITCP) to support relevant follow-up actions of the Initial Strategy that may be further decided by the Committee and undertaken by developing countries, particularly least developed countries (LDCs) and small island developing States (SIDS);
3. AGREES to keep the Initial Strategy under review, with a view to adoption of a Revised IMO Strategy on reduction of GHG emissions from ships in 2023.

adopted

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NEWS

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Science & Environment

Global shipping in 'historic' climate deal



The shipping sector is finally on board in the fight against climate change

April 18, 2018 6.46am BST

U.N. shipping agency reaches deal to cut CO2 emissions

Shipping Regulators Reach Deal to Cut Carbon Emissions

Carbon dioxide from ships at sea to be regulated for first time

For The First Time, Maritime Shipping Has A Climate Target

Carbon emissions from global shipping to be halved by 2050, says IMO

Energy and Environment

The shipping industry is finally going to cut its climate change emissions. That's a big deal.

The Washington Post
Democracy Dies in Darkness

Nations Strike Historic Deal to Curb Shipping Emissions



Implementing the Initial IMO GHG Strategy: Promoting global action across the maritime value chain

Cooperation between ports and the shipping sector to reduce GHG emissions (Resolution MEPC.366(79))

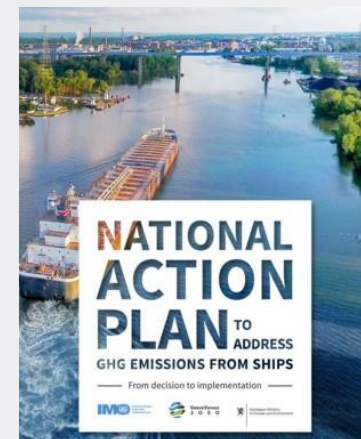
- **Ports** are key partners in decarbonizing international shipping: bunkering alternative fuels, onshore power supply, Just-in-Time arrival, port incentive schemes, etc.
- IMO promotes **global cooperation** between ports and shipping, incl. on shipping routes and maritime hubs

National Action Plans to address GHG emissions from ships (Resolution MEPC.367(79))

- Develop **cross-sectoral national policies and strategies** to address GHG emissions from international shipping

IMO multi-donor GHG Trust Fund

- Established in 2019 to support development/consideration of **IMO GHG instruments and their implementation**



MARCH 17, 2022

Supporting National Action Plans for emissions reduction



GREEN VOYAGE
2050

The IMO-Norway Green Voyage 2050 Project has published a new guide on the development of National Action Plans (NAPs) to address GHG emissions from ships. The guide responds to...

Implementing the Initial IMO GHG Strategy: IMO's short-term measure to reduce the carbon intensity of the global fleet

New mandatory carbon intensity requirements

- **MEPC 76** (June 2021): following a '**comprehensive impact assessment**', of possible impacts on States, adopted binding requirements to reduce carbon intensity of the world fleet: **EEXI, CII rating and enhanced SEEMP**
- Implementation guidelines were adopted thereafter
- **Entry-into-force November 2022 – review/strengthening by 2026**

Enhanced involvement of the maritime value chain in the energy efficiency performance of a ship

- IMO's CII is a **valuable tool** for Administrations, ports, and other stakeholders, incl. financial sector, cargo owners, to **enhance their involvement** and **provide incentives** to most energy efficient ships

Outcomes of MEPC 79

Regarding air pollution and GHG emissions from ships

- **Adoption of amendments to MARPOL Annex VI**
 - Designation of the Mediterranean Sea as an Emission Control Area for SO_x (effective 1 May 2025)
 - Attained EEXI, CII rating and related information to be submitted to the IMO Data Collection System (DCS) (2024 onwards)
- **Tackling climate change - cutting GHG emissions from ships**
 - Continuation of the revision of the Initial IMO GHG Strategy
 - Development of mid-term GHG reduction measures
 - Adoption of a revised *Procedure for assessing possible impact on States of candidate measures*
 - Development of guidelines on the lifecycle GHG intensity of marine fuels (LCA Guidelines)
 - Consideration of proposals related to onboard CO₂ capture
 - Implementation of the short-term GHG reduction measure and its review
 - Further revision of the IMO DCS
 - Terms of reference for ISWG-GHG 14 (March) and ISWG-GHG 15 (June 2023)
- **Energy efficiency of ships**
 - Report of fuel oil consumption data submitted to the IMO DCS (reporting year: 2021)
 - Proposed amendment to EEDI Guidelines, consideration of EEDI phase 4
- **Air pollution prevention**
 - Licensing schemes for bunker fuel suppliers; NO_x emissions of biofuels and synthetic fuels; exhaust gas cleaning systems (EGCS), Black Carbon.

Revision of the Initial IMO GHG Strategy

- MEPC 79 considered the report of ISWG-GHG 13 (5-9 December 2022)
- A working group on Reduction of GHG emissions from ships was established

The Committee reaffirmed its commitment to:

- adopt a revised IMO GHG Strategy by MEPC 80 (3-7 July 2023)
- revise the IMO GHG Strategy in all its elements
- including a strengthened level of ambition

Revised resolutions adopted on voluntary measures

- MEPC 79 adopted revised resolutions on voluntary cooperation with ports and on national action plans to include references to cooperation through the whole value chain, to create favourable conditions to reduce GHG emissions from ships through **shipping routes** and **maritime hubs**


Assessment of the possible impacts on States of candidate measures

Revised procedure for assessing impacts on States of candidate measures (MEPC.1/Circ.885/Rev.1)

- The revised procedure builds on the experience from the comprehensive impact assessment of the IMO short-term GHG measure
- It includes a new appendix providing guidance on process and methodological elements for the conduct of **comprehensive impacts assessments** under the oversight of a Steering Committee of Member States with 5 tasks:
 - Task 1 Literature review
 - Task 2 Assessment of impacts of the measure on the fleet
 - Task 3 Assessment of the impact of the measure on States
 - Task 4 Complementary qualitative/quantitative stakeholders' analysis, including relevant illustrative case studies; and
 - Task 5 Identification of areas of missing data, quality assurance and quality control (QA/QC), uncertainty and sensitivity analyses and integration between various tasks.
- The revised procedure will be applied to the **basket of mid-term measures**

Development of mid-term IMO GHG reduction measures

Workplan adopted at MEPC 76

- 
- Phase I – Collation and initial consideration of proposed measures
 - Phase II – Assessment and selection of measure(s) to further develop
 - Phase III – Development of (a) measure(s) to be finalized within (an) agreed target date(s)

The Committee noted progress on this issue:

- **Increased convergence** on the development of a basket of measures consisting of **both technical (e.g. GHG fuel standard) and economic elements (e.g. levy)**
- Promote the energy transition of shipping and provide the world fleet the needed **incentive** while contributing and **ensuring a level playing field** and a **just and equitable transition**
- MEPC 80 to **identify which mid-term measure(s) to develop further in priority**

Life Cycle GHG assessment guidelines (LCA Guidelines)

- MEPC 79 considered the interim report of the Correspondence Group on LCA guidelines which will allow for a Well-to-Wake calculation of total GHG emissions related to the production and use of marine fuels

Possible technical element: Global Fuel Standard

Energy source	Fossil (without CCS)					Bio	Renewable ⁽³⁾		
	Fuel	HFO + scrubber	Low sulphur fuels	LNG	Methanol	LPG	HVO (Advanced biodiesel)	Ammonia	Hydrogen
High priority parameters									
• Energy density		●	●	●	●	●	●	●	●
• Technological maturity		●	●	●	●	●	●	●	●
• Local emissions		●	●	●	●	●	●	●	●
• GHG emissions		●	●	● ⁽²⁾	●	●	●	●	●
• Energy cost		●	●	●	●	●	●	●	● ⁽⁴⁾
• Capital cost	Converter	●	●	●	●	●	●	●	●
	Storage	●	●	●	●	●	●	●	●
• Bunkering availability		●	●	●	●	●	●	●	●
<i>Commercial readiness⁽¹⁾</i>		●	●	●	●	●	●	●	● ⁽⁵⁾
Other key parameters									
• Flammability		●	●	●	●	●	●	●	●
• Toxicity		●	●	●	●	●	●	●	●
• Regulations and guidelines		●	●	●	●	●	●	●	●
• Global production capacity and locations		●	●	●	●	●	●	●	●

Source: DNV-GL. (2019). Comparison of alternative fuels

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Possible economic element: “levy”, “reward”, “feebate”, “cap & trade”, etc.

Which measure?

What rate?

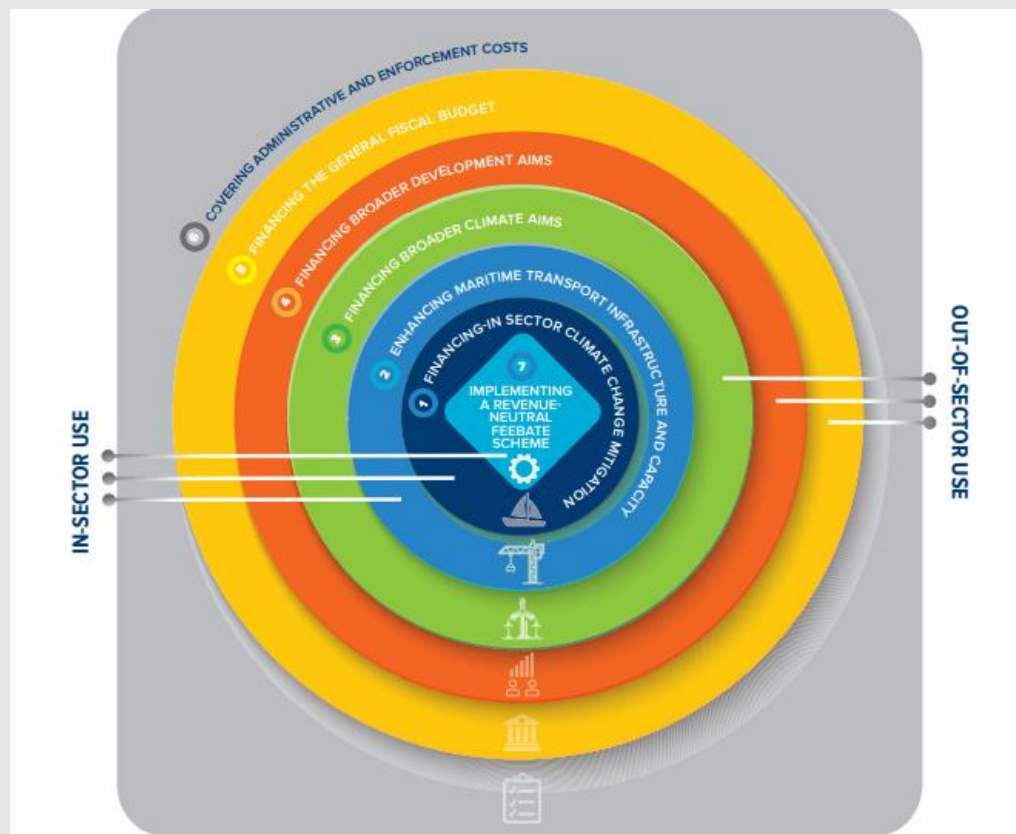
What revenue use?

Who would be the recipient(s)?

Who would be the managing entity?



Revenue disbursement from the economic element of the basket of mid-term IMO GHG reduction measures



Source: Dominioni, G.; Englert, D.. (2022). Carbon Revenues from International Shipping: Enabling an Effective and Equitable Energy Transition – Technical Paper. World Bank

For illustrative purpose only, not approved by MEPC

Developing the global regulatory framework aimed at phasing out GHG emissions from international shipping

Ongoing work on 4 key-pillars that will support the decarbonization of international shipping

Lifecycle GHG emission guidelines

Safety regulations for low-carbon marine fuels

Further enhancement of the IMO Mandatory Fuel Consumption Reporting and review of the short-term measure

Development of mid-term measures – including assessments of impacts on States

Revision
of the
Initial IMO
GHG
Strategy
(2023)

Thank you for your attention



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