

Initial IMO Strategy on reduction of GHG emissions from ships

Innovative climate technologies and sustainable maritime transport
for a climate resilient industry

UN system side-event

COP 24, Katowice, 5 December 2018

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International Maritime Organization (IMO)

- A specialized agency of the UN
- The IMO Convention adopted in 1948 and entered into force 1958
- 174 Member States, 3 Associate Members
- 81 consultative organizations; 64 IGOs
- Develop and maintain a comprehensive regulatory framework for international shipping on safety, environment, legal matters, technical co-operation, security and the efficiency of shipping
- Marine Environment Protection Committee (MEPC) – IMO body responsible for MARPOL, BWMC, etc.



**Safe, secure and efficient
shipping on cleaner oceans**

The role of international maritime transport in sustainable development

- Over 80% of global trade by volume and more than 70% of its value carried on board ships
- World seaborne trade volumes expanded by 4% in 2017 to reach 10.7 billion tons of cargo
- Volumes across all segments are set to grow, with containerized and dry bulk commodities expected to record the fastest growth at the expense of tanker volumes.

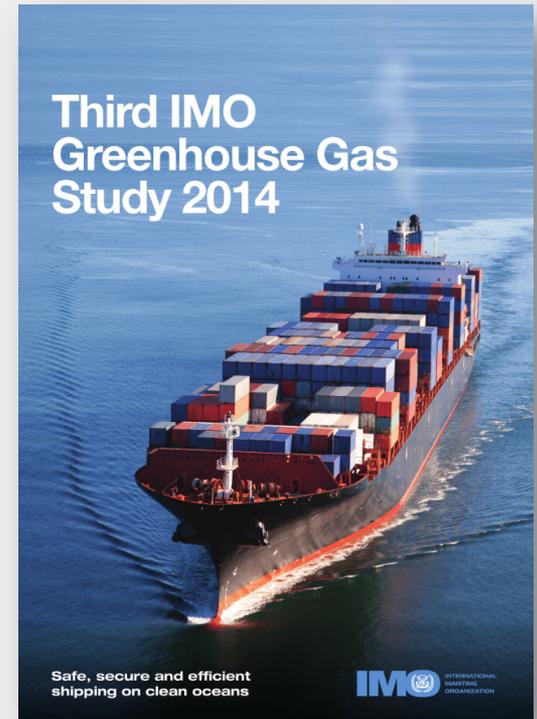


(Review of Maritime Transport 2018, UNCTAD)

GHG emissions from international shipping

- In 2012, international shipping CO₂ emissions were estimated to be 796 million tonnes accounting for 2.2% of global CO₂ emissions
- By 2050, CO₂ emissions from international shipping could grow by between 50% and 250%, depending on future economic growth and energy developments
- Demand is the key driver for growth in emissions

(Third IMO Greenhouse Gas Study 2014)



MEPC.304(72) Initial IMO Strategy on Reduction of GHG emissions from ships

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.

Initial IMO Strategy on Reduction of GHG emissions from ships – Contents

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- 6 FOLLOW-UP ACTIONS TOWARDS THE DEVELOPMENT OF THE REVISED STRATEGY
- 7 PERIODIC REVIEW OF THE STRATEGY

Initial IMO Strategy on Reduction of GHG emissions from ships

2 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 IMO Strategy on Reduction of GHG emissions from ships

- Levels of ambition

Levels of ambition

3.1 Subject to amendment depending on reviews to be conducted by the Organization, the Initial Strategy identifies levels of ambition for the international shipping sector noting that technological innovation and the global introduction of alternative fuels and/or energy sources for international shipping will be integral to achieve the overall ambition. The reviews should take into account updated emission estimates, emissions reduction options for international shipping, and the reports of the Intergovernmental Panel on Climate Change (IPCC), as relevant. Levels of ambition directing the Initial Strategy are as follows:

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Initial IMO Strategy on Reduction of GHG emissions from ships

- Levels of ambition

.1 *carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships*

to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate;

.2 *carbon intensity of international shipping to decline*

to reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and

.3 *GHG emissions from international shipping to peak and decline*

to peak GHG emissions from international shipping as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals.



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

Shipping Regulators Reach Deal to Cut Carbon Emissions For The First Time, Maritime Shipping Has A Climate Target

Global shipping in 'historic' climate deal



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

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

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

Nations Strike Historic Deal to Curb Shipping Emissions

Initial IMO Strategy on Reduction of GHG emissions from ships

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

5.1 The Committee recognizes that developing countries, in particular LDCs and SIDS, have special needs with regard to capacity-building and technical cooperation.

5.2 The Committee acknowledges that development and making globally available new energy sources that are safe for ships could be a specific barrier to the implementation of possible measures.

5.3 The Committee could assist the efforts to promote low-carbon technologies by facilitating public-private partnerships and information exchange.

5.4 The Committee should continue to provide mechanisms for facilitating information sharing, technology transfer, capacity-building and technical cooperation, taking into account resolution MEPC.229(65) on *Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships*.

5.5 The Organization is requested to assess periodically the provision of financial and technological resources and capacity-building to implement the Strategy through the ITCP and other initiatives including the GloMEEP project and the MTCC network.

IMO technical cooperation and capacity building activities

UNDP-GEF-IMO Global Maritime Energy Efficiency Partnerships (GloMEEP)



The purpose of GloMEEP is to build capacity in developing countries for implementing technical and operational measures for energy efficient shipping.

- 10 Lead Pilot Countries:
Argentina, China, Georgia, India, Jamaica, Malaysia, Morocco, Panama, Philippines and South Africa.
- Over 40 regional/national workshops held
- Established Global Industry Alliance (GIA) as a public-private partnership under the framework of GloMEEP
- Development of guidance to support countries to implement international regulations to control ship emissions
 - policy, strategy and legal instruments
 - ports



GloMEEP – guidance free to download



SHIP EMISSIONS TOOLKIT GUIDE NO.1: RAPID ASSESSMENT OF SHIP EMISSIONS IN THE NATIONAL CONTEXT

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SHIP EMISSIONS TOOLKIT GUIDE NO.2: INCORPORATION OF MARPOL ANNEX VI INTO NATIONAL LAW

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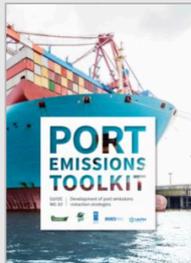
SHIP EMISSIONS TOOLKIT GUIDE NO.3: DEVELOPMENT OF A NATIONAL SHIP EMISSIONS REDUCTION STRATEGY

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PORT EMISSIONS TOOLKIT GUIDE NO.1: ASSESSMENT OF PORT EMISSIONS

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PORT EMISSIONS TOOLKIT GUIDE NO.2: DEVELOPMENT OF PORT EMISSIONS REDUCTION STRATEGIES

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GloMEEP has prepared guides for National action plans. National action plans can implement broad international requirements in a national context and to support the achievement of international goals.

<https://glomeep.imo.org/resources/publications/>

IMO technical cooperation and capacity building activities

EU funded
Global Maritime Technology
Cooperation Centres Network (GMN)



- MTCCs established in five regions: Africa (Kenya), Asia (China); Caribbean (Trinidad and Tobago); Latin America (Panama); Pacific (Fiji)
- MTCCs act as regional focal points for a wide range of activities to:
 - improve compliance with existing and future international energy-efficiency regulations
 - help participating countries develop national energy-efficiency policies and measures for their maritime sectors
 - promote uptake of low-carbon technologies and operations in maritime transport
 - establish voluntary pilot data-collection and reporting systems to feed back into the global regulatory process.

Programme of follow-up actions of the initial IMO strategy to 2023

The programme of follow-up actions includes streams of activity as follows:

1. candidate short-term measures (Group A) that can be considered and addressed under existing IMO instruments;
2. candidate short-term measures (Group B) that are not work in progress and are subject to data analysis;
3. candidate short-term measures (Group C) that are not work in progress and are not subject to data analysis;
4. candidate mid-/long-term measures and action to address the identified barriers;
5. impacts on States;
6. Fourth IMO GHG Study;
7. capacity-building, technical cooperation, research and development; and
8. follow-up actions towards the development of the revised Strategy.

Programme of follow-up actions of the initial IMO strategy to 2023 (detailed timelines)

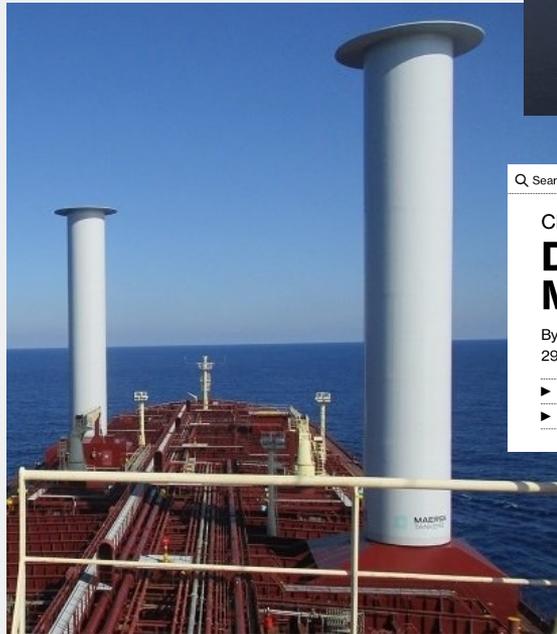
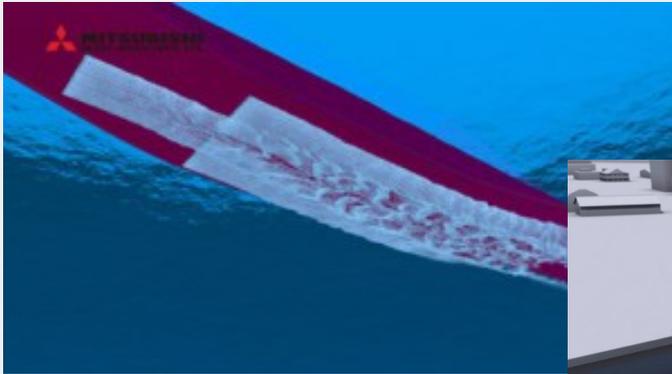
Streams of activity	2018	2019	2020		2021	2022		2023
	MEPC 73	MEPC 74	MEPC 75	MEPC 76	MEPC 77	MEPC 78	MEPC 79	MEPC 80
Candidate short-term measures (Group A) that can be considered and addressed under existing IMO instruments²	Invite concrete proposals	Consideration of proposals	Consideration and decisions on candidate short-term measures that can be considered and addressed under existing IMO instruments e.g. further improvement of the existing energy efficiency framework with a focus on EEDI and SEEMP, ITCP ³					
Candidate short-term measures (Group B) that are not work in progress and are subject to data analysis	Invite concrete proposals	Consideration of proposals	Consideration and decisions on candidate short-term measures that are not work in progress and are subject to data analysis, consistent with the Roadmap ³					
			Data analysis, in particular from IMO Fuel Oil Consumption DCS					
Candidate short-term measures (Group C) that are not work in progress and are not subject to data analysis	Invite concrete proposals	Consideration of proposals	Consideration and decisions on candidate short-term measures that are not work in progress and are not subject to data analysis e.g. National Action Plans guidelines, lifecycle GHG/carbon intensity guidelines for fuels, research and development ³					
Candidate mid-/long-term measures and action to address the identified barriers	Invite concrete proposals	Consideration of proposals including identification of barriers and action to address	Progress made and timelines agreed on the development of mid- and long-term measures					
Impacts on States⁴	Invite concrete proposals	Finalization of procedure	Measure-specific impact assessment, as appropriate, consistent with the Initial Strategy, in particular paragraphs 4.10 to 4.13					
Fourth IMO GHG Study	Scope	Initiation of the Study	Progress report	Final report				
Capacity-building, technical cooperation, research and development	Development and implementation of actions including support for assessment of impacts and support for implementation of measures							
Follow-up actions towards the development of the revised Strategy		Ship fuel oil consumption data collection pursuant to regulation 22A of MARPOL Annex VI (DCS)	Initiation of revision of the Initial Strategy taking into account IMO DCS data and other relevant information			Adoption of revised Strategy		

² Includes ongoing work pursuant to regulation 21.6 of MARPOL Annex VI.

³ "In aiming for early action, the timeline for short-term measures should prioritize potential early measures that the Organization could develop, while recognizing those already adopted, including MARPOL Annex VI requirements relevant for climate change, with a view to achieve further reduction of GHG emissions from international shipping before 2023" (paragraph 4.2 of the Initial Strategy).

⁴ Assessment of impacts on States to be undertaken in accordance with the procedure to be developed by the Organization.

How to decarbonize shipping? – innovative technology and alternative fuels



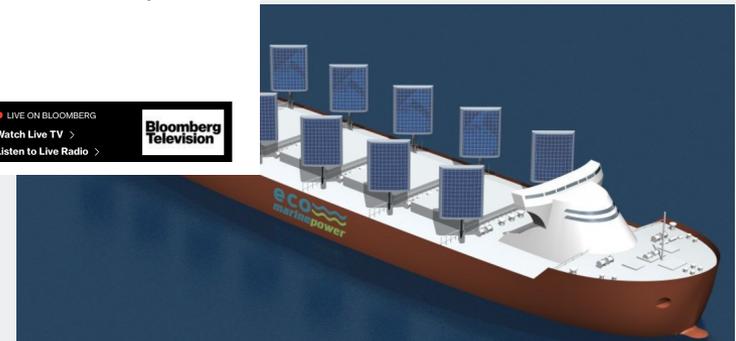
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Climate Changed
Don't Throw Out the Used Vegetable Oil, It May Power World Trade
By Alex Longley
29 November 2018, 14:42 GMT

- ▶ Norden says the option effectively means zero carbon emissions
- ▶ Roll out will involve selected number of carbon-aware clients

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