

**Note by the International Maritime Organization to the forty-ninth session of the  
Subsidiary Body for Scientific and Technological Advice (SBSTA 49)  
Katowice, Poland, 2 to 8 December 2018**

**Agenda item 10**

**“Methodological issues under the Convention: emissions from fuel used for  
international aviation and maritime transport”**

**UPDATE ON IMO’S WORK TO ADDRESS GHG EMISSIONS FROM FUEL USED FOR  
INTERNATIONAL SHIPPING**

**SUMMARY**

IMO’s Marine Environment Protection Committee (MEPC) has for some time now been considering actions to address greenhouse gas (GHG) emissions from ships engaged in international trade. It met for its seventy-third session (MEPC 73) from 22 to 26 October 2018, at IMO Headquarters in London, with the participation of 102 Member States, two Associate Members, four United Nations bodies including UNFCCC, seven intergovernmental organizations and 52 non-governmental organizations.

After the adoption of the *Initial IMO Strategy on reduction of GHG emissions from ships* in April 2018, while two countries had reserved their position on the adoption, MEPC 73 approved its programme of follow-up actions up to 2023, which constitutes a planning tool for the implementation of the Initial Strategy over the next five years, leading up to the adoption of a Revised Strategy in 2023.

In this regard, MEPC 74, to be held in May 2019, is expected to consider concrete proposals of short-, mid- and long-term measures in order to achieve the levels of ambition identified in the Initial Strategy, finalize a procedure for assessing impacts on States of a candidate measure, and to initiate the Fourth IMO GHG Study in order to provide updated estimates of emissions and projections for the sector.

This submission also provides updated information on IMO’s technical cooperation activities and general information on amendments to MARPOL and rules of procedure of the MEPC.

**Context**

1 International shipping plays an essential role in the facilitation of global commerce as the most cost-effective and energy-efficient mode of mass cargo transport, making a vital contribution to international trade and being a key pillar of the development of a sustainable global economy. UNCTAD<sup>1</sup> has identified that in 2017 seaborne trade volumes grew by 4% to a total of 10.7 billion tonnes.

2 The International Maritime Organization (IMO) was established in 1948 by States Parties to the Convention on the International Maritime Organization as a specialized agency

<sup>1</sup> Review of maritime transport, 2018. UNCTAD

under the United Nations to provide the machinery for intergovernmental cooperation in the field of regulation of ships engaged in international trade. IMO is responsible for the global regulation of all aspects of international shipping and has a key role in ensuring that lives at sea are not put at risk, including security of shipping, and that the environment is not polluted by ships' operations – as summed up in IMO's mission statement: **Safe, secure and efficient shipping on clean oceans.**

3 This document provides an update of previous submissions by IMO to SBSTA.

### **Work on control of GHG emissions from international shipping**

4 In 2011, measures to improve energy efficiency of international shipping were adopted by Parties to Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL) that entered into force on 1 January 2013. The *Regulations for energy efficiency of ships* apply to internationally trading ships of 400 gross tonnage and above, and make **mandatory** the:

- .1 Energy Efficiency Design Index (EEDI) for new ships; and
- .2 Ship Energy Efficiency Management Plan (SEEMP) for new and existing ships.

5 The EEDI is a non-prescriptive, performance-based mechanism that leaves the choice of technologies to use in a specific ship design to the industry. So long as the required energy-efficiency level is attained, ship designers and builders are free to use the most cost-efficient solutions for the ship to comply with the regulations.

6 Each ship of 400 gross tonnage and above engaged in international trade is required to keep on board a ship-specific SEEMP which establishes a mechanism for operators to improve the energy efficiency of the ship. This should be achieved by monitoring the energy efficiency performance of a ship's transportation work and at regular intervals considering new technologies and practices to improve energy efficiency.

7 In April 2018, MEPC 72 adopted resolution MEPC.304(72) on the *Initial IMO Strategy on reduction of GHG emissions from ships* (the Initial Strategy) as previously reported to SBSTA 48. While two countries had reserved their position on the adoption, this important agreement represents the framework for further action of the Committee, setting out the future vision for international shipping. The Initial Strategy envisages for the first time a reduction in total GHG emissions from international shipping which, it says, should peak as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008, while, at the same time, pursuing efforts towards phasing them out entirely. The Initial Strategy identifies candidate short-, mid- and long-term measures representing possible further action of the Organization, noting that the impacts on States of a measure should be assessed and taken into account as appropriate before adoption of a measure. IMO Member States agreed to keep this Strategy under review, including adoption of a Revised Strategy in 2023.

### **Recent developments in the implementation of the Initial Strategy**

8 Building on the momentum of work on this issue, MEPC 73 in October 2018 approved a *Programme of follow-up actions of the Initial IMO Strategy on reduction of GHG emissions from ships up to 2023*, as set out in annex 1 to this submission. This document constitutes a planning tool on the work for IMO in meeting the timelines identified in the Initial Strategy, and includes expected timeframes.

9 The programme of follow-up actions identifies eight streams of activity and their detailed timelines up to 2023, 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.

### Future steps

10 The *Programme of follow-up actions of the Initial Strategy up to 2023* foresees the finalization of a procedure for assessing the impacts on States of a measure at MEPC 74.

11 The Fourth IMO GHG Study should be initiated by MEPC 74, for consideration of the final report by MEPC 76 in autumn 2020. Following the *Third IMO GHG Study 2014*, this additional study is expected to provide an update of GHG emissions estimates from international shipping from 2012 to 2018 and future scenarios for shipping emissions from 2018 to 2050. IMO will organize an Expert Workshop in March 2019 in order to discuss and advise the MEPC on the finalization of the terms of reference of the Study and on technical and methodological issues raised.

12 In parallel, following the entry into force on 1 March 2018 of amendments to MARPOL Annex VI, **mandatory** collection of ship fuel oil consumption data will begin. From 1 January 2019, ships of 5,000 gross tonnage and above (representing approximately 85% of the total CO<sub>2</sub> emissions from international shipping) will be required to collect consumption data for each type of fuel oil they use, as well as additional specified data including proxies for “transport work”. The data primarily collected by the flag States will subsequently be transferred to the IMO Ship Fuel Oil Consumption Database. The first IMO report analysing and summarizing the data collected in 2019 will be presented at MEPC 77, in spring 2021. This mechanism is expected to provide robust data on international shipping fuel consumption and GHG emissions and inform the Committee.

13 MEPC 73 invited concrete proposals on candidate short-term measures and on candidate mid-/long-term measures to MEPC 74. Candidate short-term measures are identified by the Initial Strategy as measures finalized and agreed between 2018 and 2023. Candidate short-term measures identified in the Initial Strategy are diverse in nature, and the Intersessional Working Group on Reduction of GHG emissions held in October 2018 noted that there was potential for early action especially focusing on existing IMO instruments.

14 With regards to the port development and activities facilitating the reduction of GHG emissions from ships, MEPC 73 encouraged ports intending to develop their air pollutant and/or GHG emissions assessments and emissions reduction strategy (ERS) to use the guides developed by the GloMEEP project (see paragraph 18). Moreover, MEPC 74 is expected to consider a draft MEPC resolution on encouragement of port developments and activities to facilitate the reduction of GHG emissions from ships.

15 MEPC 73 approved the holding of a fifth Intersessional Working Group on Reduction of GHG emissions from ships before MEPC 74 so that the meeting considers concrete proposals for candidate measures and the procedure for assessing impacts on States.

### **Capacity-building and technical cooperation activities**

16 To ensure effective implementation and enforcement of the energy efficiency regulations, IMO has maintained efforts on technical cooperation and capacity building. In 2018, under the Integrated Technical Co-operation Programme (ITCP) of IMO, 14 regional and national workshops on implementation of the measures to address emissions from international shipping have been organized, in every continent.

17 In addition to the usual ITCP activities, IMO has set up five Maritime Technology Cooperation Centres (MTCCs) in Latin America, the Caribbean, Pacific, Asia and Africa, with financial assistance from the European Union. These five MTCCs constitute the Global MTCC Network (GMN), which is implementing the IMO project titled “Capacity Building for Climate Mitigation in the Maritime Shipping Industry”<sup>2</sup>. This Network promotes the uptake of low-carbon technologies and operations in maritime transport in developing countries with a view to limiting GHG emissions from their shipping sectors through technical assistance and capacity building.

18 Furthermore, with financial support from the Global Environment Facility (GEF), UNDP and IMO are cooperating in a global effort to transform the shipping industry towards a lower carbon future, through the Global Maritime Energy Efficiency Partnerships Project (GloMEEP Project)<sup>3</sup>, launched in 2015. The overall goal of GloMEEP is to strengthen the national capabilities for countries to become Party to and effectively implement MARPOL Annex VI, through legal, policy and institutional reforms, awareness raising and capacity-building activities and establishment of public-private partnerships to support innovation and low carbon shipping. This project involves ten Lead Pilot Countries (Argentina, China, Georgia, India, Jamaica, Malaysia, Morocco, Panama, Philippines and South Africa) and several private sector stakeholders through the participation of the “Global Industry Alliance to support low-carbon shipping” (GIA), a partnership to develop innovative solutions to address common barriers to the uptake and implementation of energy efficiency technologies and operational measures. In 2018, the main achievements of GloMEEP have been as follows:

- .1 development of a workshop package on the “Prevention and control of shipping and port air emissions” to enhance participants' knowledge on how to quantify emissions in ports with a view to developing an emissions inventory. This workshop was delivered in the ten GloMEEP countries, training over 300 participants;
- .2 finalization of a new training package which aims at awareness-raising and knowledge enhancement on regulation 22A of MARPOL Annex VI for mainly maritime administration staff (both from flag and port States);
- .3 development of the Ships and Ports emissions Toolkits, composed of five guides as follows:

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<sup>2</sup> Project website: <http://gmn.imo.org/>

<sup>3</sup> Project website: <https://glomeep.imo.org/>

- .1 *Rapid assessment of ship emissions in the national context;*
  - .2 *Incorporation of MARPOL Annex VI into national law;*
  - .3 *Development of a national ship emissions reduction strategy;*
  - .4 *Assessment of port emissions; and*
  - .5 *Development of port emissions reduction strategies;*
4. within the GIA, several initiatives have been initiated, including the development of an E-Learning course on energy efficient ship operation and a study on the “Just-In-Time” operation of ships.

19 As these two projects GMN and GloMEEP have a limited lifetime, MEPC 73 agreed, in principle, on the need to establish a voluntary multi-donor trust fund to sustain the Organization’s technical cooperation and capacity-building activities to support the implementation of the Initial Strategy. The programme of follow-up actions also includes a stream of activity on capacity building, technical cooperation, research and development including support for assessment of impacts and support for implementation of measures.

#### **Amendments to MARPOL and rules of procedure of the MEPC**

20 The procedure ruling the adoption of amendments to the MARPOL Convention and its annexes, including MARPOL Annex VI, is set out in Article 16. This provides that the amendments “shall be adopted by a two-thirds majority of only the Parties to the Convention present and voting” (Article 16(2)(d)). Following the adoption of an amendment there is a minimum 10 month period of tacit acceptance, followed by a six month period prior to entry into force. On adoption, MEPC can decide when a new requirement will take effect which may or may not be the date of entry into force of the corresponding amendment. Currently, there are 91 Contracting Parties to MARPOL Annex VI, the combined fleets of which constitute approximately 96.62% of the gross tonnage of the world's merchant fleet.

21 Article 41 of the IMO Convention requires the MEPC to conform to the relevant provisions of the convention or instrument in question, particularly as regards the rules governing the procedures to be followed. For information, Rules 26 to 30 of the *Rules of procedure of the MEPC*, are attached in annex 2 to this submission. Rule 27 reads as follows: “.....decisions of the Committee shall be made and reports, resolutions and recommendations adopted by a majority of the Members or other Participants entitled to vote, present and voting.”

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## ANNEX 1

### PROGRAMME OF FOLLOW-UP ACTIONS OF THE INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS UP TO 2023

- 1 MEPC 72 adopted resolution MEPC.304(72) on *Initial IMO Strategy on reduction of GHG emissions from ships* (hereinafter the Initial Strategy).
- 2 The Initial Strategy identifies in paragraph 6.1 that "a programme of follow-up actions of the Initial Strategy should be developed".
- 3 The programme of follow-up actions is considered as a planning tool on the work for the Committee and its subsidiary bodies in meeting the timelines identified in the Initial Strategy, and includes expected time frames.
- 4 The programme of follow-up actions set out in the annex includes streams of activity<sup>1</sup> 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.
- 5 Detailed timelines for each stream of activity are provided in the following page.

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<sup>1</sup> This programme of follow-up actions does not prejudge whether any further measures will be adopted nor does it preclude any further activity deemed necessary to implement the Initial Strategy, including additional intersessional work and technical groups, as appropriate.

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
<b>Candidate short-term measures (Group A) that can be considered and addressed under existing IMO instruments<sup>2</sup></b>	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 <sup>3</sup>					
<b>Candidate short-term measures (Group B) that are not work in progress and are subject to data analysis</b>	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 <sup>3</sup>					
			Data analysis, in particular from IMO Fuel Oil Consumption DCS					
<b>Candidate short-term measures (Group C) that are not work in progress and are not subject to data analysis</b>	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 <sup>3</sup>					
<b>Candidate mid-/long-term measures and action to address the identified barriers</b>	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					
<b>Impacts on States<sup>4</sup></b>	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					
<b>Fourth IMO GHG Study</b>	Scope	Initiation of the Study	Progress report	Final report				
<b>Capacity-building, technical cooperation, research and development</b>	Development and implementation of actions including support for assessment of impacts and support for implementation of measures							
<b>Follow-up actions towards the development of the revised Strategy</b>		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		

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<sup>2</sup> Includes ongoing work pursuant to regulation 21.6 of MARPOL Annex VI.

<sup>3</sup> "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).

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

## ANNEX 2

### EXTRACT FROM THE *RULES OF PROCEDURES OF THE MEPC* (MEPC 70/18/ADD.1, ANNEX 14)

#### ***“Rule 26***

1 When considering matters not connected with functions performed by the Committee in respect of treaties or other international agreements, all Members and other Participants may participate, but only Members of the Organization shall be entitled to vote.

2 Each Member entitled to vote shall have one vote.

3 When the Committee performs functions as provided for in a treaty or other international agreement, all Members and other Participants shall be entitled to participate in the proceedings, but voting on amendments to the treaty or other agreement shall be in accordance with the provisions of that treaty or agreement.

#### ***Rule 27***

Subject to the provisions of any treaty or other international agreement which confers upon the Organization functions to be undertaken by the Committee, decisions of the Committee shall be made and reports, resolutions and recommendations adopted by a majority of the Members or other Participants entitled to vote, present and voting.

#### ***Rule 28***

1 For the purpose of these Rules, the phrase "Members or other Participants entitled to vote, present and voting" means such Members or other Participants entitled to vote, casting an affirmative or negative vote. Those abstaining from voting or casting an invalid vote shall be considered as not voting. The phrase "Members present" means Members at the meeting, whether they cast an affirmative or negative vote, whether they abstain, whether they cast an invalid vote or whether they take no part in the voting.

2 The provisions in Rule 28.1 above shall apply only if the quorum laid down in Rule 34 is obtained at the meeting at which the vote is taken.

3 Participants in the session who are not present at the meeting at which voting takes place shall be considered as not present.

#### ***Rule 29***

The Committee shall normally vote by show of hands. However, any Member or other Participant entitled to vote may request a roll-call which shall be taken in the alphabetical order of the names of the Members in English, beginning with the Member whose name is drawn by lot by the Chair. The vote of each Member or other Participant in any roll-call shall be inserted in the report of the session concerned.

#### ***Rule 30***

If a vote is equally divided, a second vote shall be taken at the next meeting. If this vote is equally divided, the proposal shall be regarded as rejected.”