

MARINE ENVIRONMENT PROTECTION
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Agenda item 7

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REDUCTION OF GHG EMISSIONS FROM SHIPS

Report of the Working Group on Reduction of GHG emissions from ships

Introduction

1 The Working Group on Reduction of GHG emissions from ships met from 9 to 12 April 2018, and was chaired by Mr. S. Oftedal (Norway).

2 The Group was attended by delegates from the following Member Governments:

ARGENTINA	GREECE
AUSTRALIA	GUATEMALA
BAHAMAS	INDONESIA
BANGLADESH	IRAN (ISLAMIC REPUBLIC OF)
BELGIUM	IRELAND
BRAZIL	ITALY
CANADA	JAPAN
CHILE	KENYA
CHINA	KIRIBATI
COOK ISLANDS	LATVIA
CROATIA	LIBERIA
COLOMBIA	MALAYSIA
COSTA RICA	MALTA
CYPRUS	MARSHALL ISLANDS
CZECHIA	MEXICO
DENMARK	MOROCCO
ECUADOR	NETHERLANDS
ESTONIA	NEW ZEALAND
FIJI	NIGERIA
FINLAND	NORWAY
FRANCE	PANAMA
GERMANY	PERU
GHANA	POLAND

PHILIPPINES	THAILAND
REPUBLIC OF KOREA	TURKEY
RUSSIAN FEDERATION	TUVALU
SAUDI ARABIA	UNITED ARAB EMIRATES
SINGAPORE	UNITED KINGDOM
SOLOMON ISLANDS	UNITED STATES
SOUTH AFRICA	VANUATU
SPAIN	VIET NAM
SWEDEN	

by a representative from the following United Nations and Specialized Agency:

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE
(UNFCCC)

by observers from the following intergovernmental organizations:

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
(OECD)
EUROPEAN COMMISSION (EC)

and by observers from the following non-governmental organizations in consultative status:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)
BIMCO
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
COMMUNITY OF EUROPEAN SHIPYARDS' ASSOCIATIONS (CESA)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
(INTERTANKO)
GREENPEACE INTERNATIONAL
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)
WORLD WIDE FUND FOR NATURE (WWF)
THE INSTITUTE OF MARINE ENGINEERING, SCIENCE AND TECHNOLOGY
(IMarEST)
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS (RINA)
INTERNATIONAL TRANSPORT WORKER'S FEDERATION (ITF)
WORLD SHIPPING COUNCIL (WSC)
CLEAN SHIPPING COALITION (CSC)
PACIFIC ENVIRONMENT
ACTIVE SHIPBUILDING EXPERTS FEDERATION (ASEF)

Terms of reference

3 Taking into account the comments and decisions made in plenary, and on the basis of the work of ISWG-GHG 3 (MEPC 72/WP.5), the Group was instructed to:

- .1 finalize the draft MEPC resolution on initial IMO Strategy on reduction of GHG emissions from ships, with the view to adoption;
- .2 if time permits, consider documents MEPC 72/7/2, MEPC 72/7/6, MEPC 72/7/9 and ISWG-GHG 3/2/16 and advise the Committee accordingly;

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- .3 consider the need for a fourth meeting of the intersessional working group on reduction of GHG emissions from ships (ISWG-GHG 4) and, if required, prepare its draft terms of reference; and
- .4 submit a written report to plenary by Thursday, 12 April 2018.

4 Following a proposal by the Chair, the Group agreed to provide a "short" report to the Committee in accordance with the terms of reference, that is, by Thursday, 12 April 2018.

Finalization of the draft MEPC resolution on Initial IMO Strategy on reduction of GHG emissions from ships, with the view to adoption

5 The Group agreed to review initially the elements of the draft Initial Strategy set out in the annex to document MEPC 72/WP.5 other than "Vision", "Levels of ambition" and "Guiding principles", starting with "Introduction", and with consideration of the text of the draft MEPC resolution at the end.

6 The Group noted that for the section on "Context" some delegations wanted to include explicit references to the instruments of UNFCCC. Other delegations preferred a more general reference to legal instruments potentially affecting the implementation of the Initial Strategy. Following consideration, the Group agreed on a compromise draft text.

7 The Group also noted minor textual amendments to the draft text to make reference to current mandatory measures already adopted by the Organization to address emissions relevant to climate change.

8 The Group agreed to clarify that the list of further candidate measures was non-exhaustive and without prejudice to measures the Organization might consider and adopt, and that the categorization into those that were considered to directly reduce GHG emissions and those that support action, whilst relevant, should not identify specific measures at this point in time.

9 The Group noted there could be a need for the Initial Strategy to reflect "net emissions" as part of overall consideration including potentially making reference in the "Vision".

10 The Group noted that the draft text for "Impacts on States" was a carefully crafted compromise of the views of all delegations, and apart from minor editorial changes for consistency, should not, in principle, be amended. Several delegations expressed the view that inclusion in the list of determinants of "socio-economic progress and development" was inappropriate as it related to marine spaces, and that without further qualification by reference to international shipping should not be included. Other delegations considered it imperative that this determinant be included without qualification to ensure that the matter would be appropriately assessed. Following extensive deliberation, a compromise draft text was agreed by the Group by qualifying that the impacts of measures on States be related to international shipping.

11 The Group noted for the section on "Barriers and supportive measures; capacity-building and technical cooperation; R&D", that the development and making new energy sources globally available and that are safe for ships could be a specific barrier. It was stated that the lack of development of sustainable fuels could also be considered as a specific barrier.

12 The Group noted that a decision on the follow-up actions that need to be taken should be considered when addressing the second and third terms of reference given to the Group by the Committee.

13 The Group noted that several questions remained on the "Levels of ambition" and "Guiding principles" and that delegations needed informal consultations to seek to reconcile views. Furthermore, the Group noted that the Initial Strategy was a policy document pointing towards a direction without legally binding obligations for Member States.

14 In due course, the Group noted a bridging proposal made by the Chair for an alternative draft text on "Levels of ambition" and "Guiding principles".

15 In considering the proposal by the Chair, several delegations expressed the view that they were deeply concerned with the process, that there was a lack of transparency in the process, that the key words were "consensus" and "process" and that in their opinion the current process was not helping delegations find a compromise by consensus and so not a good start to further work. There is a need for confidence in the process and that this could be achieved, in part, through improved communication, both oral and in draft texts prepared for the Group. As a consequence, several delegations expressed the view that they would not comment on the substance.

16 Other delegations expressed concern with the draft text provided by the Chair but in the spirit of compromise were willing to accept it, noting that the Initial Strategy represented just a starting point in the Organization's work. In this regard, there was significant support in the Group for the use of the alternative draft text on "Levels of ambition" and "Guiding principles" and for that draft text to be consolidated with the other sections, as amended by the Group.

17 Following discussion, the Group agreed to forward the consolidated draft text set out in annex 1 to this report to the Committee for its consideration and to invite the Committee to adopt the *Initial IMO Strategy on reduction of GHG emissions from ships* together with the associated MEPC resolution.

18 The Group noted that the delegation of the United States reserved its position on the draft text forwarded to the Committee, noting in particular its concern with reference to 'common but differentiated responsibilities and respective capabilities' in the section on "Guiding Principles".

19 The Group noted a statement by the delegation of Saudi Arabia as follows: "This delegation reserves its position on the forwarding to the Committee of the draft text set out in annex 1 to this report. We fully support IMO's efforts but cannot join our voice to the adoption of this Strategy, and note that we have particular concerns with the 'Levels of ambition'. We object to the view that there is a consensus of the Group on adoption of the Strategy and we are ready to proceed accordingly on Friday".

20 The Group noted a statement by the delegation of Argentina and the request that the statement be appended to the report of the Group, as set out in annex 3.

Consideration of documents MEPC 72/7/2, MEPC 72/7/6, MEPC 72/7/9 and ISWG-GHG 3/2/16 and advise the Committee accordingly

21 Due to time constraints, the Group was unable to consider documents MEPC 72/7/2, MEPC 72/7/6, MEPC 72/7/9 and ISWG-GHG 3/2/16 and agreed that the relevant parts of the documents, along with relevant parts of other documents submitted to ISWG-GHG 3 and MEPC 72, should be considered by the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4), if established by the Committee.

Consideration of the need for a fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4) and, if required, preparation of its draft terms of reference

22 As instructed by the Committee, the Group considered the need for a fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4).

23 The Group agreed to recommend to the Committee that there was a need for a fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships, in order to develop a draft programme of follow-up actions of the adopted Initial Strategy.

24 The Group noted that the meeting should be scheduled as soon as appropriate to allow the report of the intersessional meeting to be published well in advance of MEPC 73 and to facilitate the preparations of the delegations. However, the Group noted that due to other official meetings there was a limited number of weeks available to hold ISWG-GHG meetings, that there would be building maintenance work taking place this summer, that there was a need to consider time frames for submission of documents to MEPC 73 and that some delegations expressed concern that there may be a clash with the meetings of UNFCCC.

25 The Group prepared draft terms of reference for the fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4), as set out in annex 2.

Action requested of the Committee

26 The Committee is invited to approve the report in general and, in particular, to:

- .1 adopt the Initial IMO Strategy on reduction of GHG emissions from ships, together with the associated MEPC resolution, as set out in annex 1 (paragraph 17);
- .2 note that, due to time constraints, the Group was unable to consider documents MEPC 72/7/2, MEPC 72/7/6, MEPC 72/7/9 and ISWG-GHG 3/2/16, and concur with the Group's view that the relevant parts of these documents, along with relevant parts of other documents submitted to ISWG-GHG 3 and MEPC 72, be considered by the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4), if established (paragraph 21);
- .3 note the Group's discussion and agree to hold a fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4), subject to endorsement by Council (paragraphs 23);

- .4 consider the Group's discussion on the timing of the fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4), and take action appropriate (paragraph 24); and
- .5 approve the draft terms of reference for the fourth meeting of the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG 4), as set out in annex 2 (paragraph 25).

ANNEX 1

**DRAFT RESOLUTION MEPC.XXX(XX)
(adopted on [XX 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.

ANNEX

INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS

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- 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

1 INTRODUCTION

1.1 The International Maritime Organization (IMO) is the United Nations specialized agency responsible for safe, secure and efficient shipping and the prevention of pollution from ships.

1.2 The Strategy represents the continuation of work of IMO as the appropriate international body to address greenhouse gas (GHG) emissions from international shipping. This work includes Assembly resolution A.963(23) on *IMO policies and practices related to the reduction of greenhouse gas emissions from ships*, adopted on 5 December 2003, urging the Marine Environment Protection Committee (MEPC) to identify and develop the mechanisms needed to achieve the limitation or reduction of GHG emissions from international shipping.

1.3 In response to the Assembly's request, work to address GHG emissions from ships has been undertaken, including inter alia:

- .1 MEPC 62 (July 2011) adopted resolution MEPC.203(62) on *Inclusion of regulations on energy efficiency for ships in MARPOL Annex VI* introducing mandatory technical (EEDI) and operational (SEEMP) measures for the energy efficiency of ships. To date more than 2,700 new ships have been certified to the energy efficiency design requirement;
- .2 MEPC 65 (May 2013) adopted resolution MEPC.229(65) on *Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships*, which, among other things, requests IMO, through its various programmes (ITCP,¹ GloMEEP project,² MTCC network,³ etc.), to provide technical assistance to Member States to enable cooperation in the transfer of energy efficient technologies, in particular to developing countries; and
- .3 MEPC 70 (October 2016) adopted, by resolution MEPC.278(70), amendments to MARPOL Annex VI to introduce the *data collection system for fuel oil consumption of ships*, containing mandatory requirements for ships to record and report their fuel oil consumption. Ships of 5,000 gross tonnage and above (representing approximately 85% of the total CO₂ emissions from international shipping) are required to collect consumption data for each type of fuel oil they use, as well as other, additional, specified data including proxies for "transport work".

1.4 This Initial Strategy is the first milestone set out in the *Roadmap for developing a comprehensive IMO Strategy on reduction of GHG emissions from ships* (the Roadmap) approved at MEPC 70. The Roadmap identifies that a revised Strategy is to be adopted in 2023.

¹ Integrated Technical Cooperation Programme <http://www.imo.org>

² Global Maritime Energy Efficiency Partnerships <http://glomeep.imo.org/>

³ Global Maritime Technology Cooperation Centres Network <http://gmn.imo.org/>

Context

- 1.5 The Initial Strategy falls within a broader context including:
- .1 other existing instruments related to the law of the sea, including UNCLOS, and to climate change, including the UNFCCC and its related legal instruments, including the Paris Agreement;
 - .2 the leading role of the Organization for the development, adoption and assistance in implementation of environmental regulations applicable to international shipping;
 - .3 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"; and
 - .4 the United Nations 2030 Agenda for Sustainable Development.

Emissions and emission scenarios

1.6 The *Third IMO GHG Study 2014* has estimated that GHG emissions from international shipping in 2012 accounted for some 2.2% of anthropogenic CO₂ emissions and that such emissions could grow by between 50% and 250% by 2050. Future IMO GHG studies would help reduce the uncertainties associated with these emission estimates and scenarios.

Objectives of the Initial Strategy

- 1.7 The Initial Strategy is aimed at:
- .1 enhancing IMO's contribution to global efforts by addressing GHG emissions from international shipping. International efforts in addressing GHG emissions include the Paris Agreement and its goals and the United Nations 2030 Agenda for Sustainable Development and its SDG 13: "*Take urgent action to combat climate change and its impacts*";
 - .2 identifying actions to be implemented by the international shipping sector, as appropriate, while addressing impacts on States and recognizing the critical role of international shipping in supporting the continued development of global trade and maritime transport services; and
 - .3 identifying actions and measures, as appropriate, to help achieve the above objectives, including incentives for research and development and monitoring of GHG emissions from international shipping.

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.

3 LEVELS OF AMBITION AND GUIDING PRINCIPLES

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:

.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.

Guiding principles

3.2 The principles guiding the Initial Strategy include:

.1 the need to be cognizant of the principles enshrined in instruments already developed, such as:

.1 the principle of non-discrimination and the principle of no more favourable treatment, enshrined in MARPOL and other IMO conventions; and

.2 the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, enshrined in UNFCCC, its Kyoto Protocol and the Paris Agreement;

.2 the requirement for all ships to give full and complete effect, regardless of flag, to implementing mandatory measures to ensure the effective implementation of this strategy;

- .3 the need to consider the impacts of measures on States, including developing countries, in particular, on LDCs and SIDS as noted by MEPC 68 (MEPC 68/21, paragraphs 4.18 to 4.19) and their specific emerging needs, as recognized in the Organization's Strategic Plan (resolution A.1110(30)); and
- .4 the need for evidence-based decision-making balanced with the precautionary approach as set out in resolution MEPC.67(37).

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

Timelines

4.1 Candidate measures set out in this Initial Strategy should be consistent with the following timelines:

- .1 possible short-term measures could be measures finalized and agreed by the Committee between 2018 and 2023. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually;
- .2 possible mid-term measures could be measures finalized and agreed by the Committee between 2023 and 2030. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually; and
- .3 possible long-term measures could be measures finalized and agreed by the Committee beyond 2030. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually.

4.2 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.

4.3 Certain mid- and long-term measures will require work to commence prior to 2023.

4.4 These timelines should be revised as appropriate as additional information becomes available.

4.5 Short-, mid- and long-term further measures to be included in the Revised IMO GHG Strategy should be accompanied by implementation schedules.

4.6 The list of candidate measures is non-exhaustive and is without prejudice to measures the Organization may further consider and adopt.

Candidate short-term measures

4.7 Measures can be categorized as those the effect of which is to directly reduce GHG emissions from ships and those which support action to reduce GHG emissions from ships. All the following candidate measures⁴ represent possible short-term further action of the Organization on matters related to the reduction of GHG emissions from ships:

- .1 further improvement of the existing energy efficiency framework with a focus on EEDI and SEEMP, taking into account the outcome of the review of EEDI regulations;
- .2 develop technical and operational energy efficiency measures for both new and existing ships, including consideration of indicators in line with the three-step approach that can be utilized to indicate and enhance the energy efficiency performance of shipping, e.g. Annual Efficiency Ratio (AER), Energy Efficiency per Service Hour (EESH), Individual Ship Performance Indicator (ISPI) and Fuel Oil Reduction Strategy (FORS);
- .3 establishment of an Existing Fleet Improvement Programme;
- .4 consider and analyse the use of speed optimization and speed reduction as a measure, taking into account safety issues, distance travelled, distortion of the market or trade and that such measure does not impact on shipping's capability to serve remote geographic areas;
- .5 consider and analyse measures to address emissions of methane and further enhance measures to address emissions of Volatile Organic Compounds;
- .6 encourage the development and update of national action plans to develop policies and strategies to address GHG emissions from international shipping in accordance with guidelines to be developed by the Organization, taking into account the need to avoid regional or unilateral measures;
- .7 continue and enhance technical cooperation and capacity-building activities under the ITCP;
- .8 consider and analyse measures to encourage port developments and activities globally to facilitate reduction of GHG emissions from shipping, including provision of ship and shoreside/onshore power supply from renewable sources, infrastructure to support supply of alternative low-carbon and zero-carbon fuels, and to further optimize the logistic chain and its planning, including ports;
- .9 initiate research and development activities addressing marine propulsion, alternative low-carbon and zero-carbon fuels, and innovative technologies to further enhance the energy efficiency of ships and establish an International Maritime Research Board to coordinate and oversee these R&D efforts;
- .10 incentives for first movers to develop and take up new technologies;

⁴ The Initial Strategy is subject to revision based on fuel oil consumption data collected during 2019-2021 and does not prejudice any specific further measures that may be implemented in Phase 3 of the three-step approach.

- .11 develop robust lifecycle GHG/carbon intensity guidelines for all types of fuels, in order to prepare for an implementation programme for effective uptake of alternative low-carbon and zero-carbon fuels;
- .12 actively promote the work of the Organization to the international community, in particular, to highlight that the Organization, since the 1990s, has developed and adopted technical and operational measures that have consistently provided a reduction of air emissions from ships, and that measures could support the Sustainable Development Goals, including SDG 13 on Climate Change; and
- .13 undertake additional GHG emission studies and consider other studies to inform policy decisions, including the updating of Marginal Abatement Cost Curves and alternative low-carbon and zero-carbon fuels.

Candidate mid-term measures

4.8 Measures can be categorized as those the effect of which is to directly reduce GHG emissions from ships and those which support action to reduce GHG emissions from ships. All the following candidate measures represent possible mid-term further action of the Organization on matters related to the reduction of GHG emissions from ships:

- .1 implementation programme for the effective uptake of alternative low-carbon and zero-carbon fuels, including update of national actions plans to specifically consider such fuels;
- .2 operational energy efficiency measures for both new and existing ships including indicators in line with three-step approach that can be utilized to indicate and enhance the energy efficiency performance of ships;
- .3 new/innovative emission reduction mechanism(s), possibly including Market-based Measures (MBMs), to incentivize GHG emission reduction;
- .4 further continue and enhance technical cooperation and capacity-building activities such as under the ITCP; and
- .5 development of a feedback mechanism to enable lessons learned on implementation of measures to be collated and shared through a possible information exchange on best practice.

Candidate long-term measures

4.9 All the following candidate measures represent possible long-term further action of the Organization on matters related to the reduction of GHG emissions from ships:

- .1 pursue the development and provision of zero-carbon or fossil-free fuels to enable the shipping sector to assess and consider decarbonization in the second half of the century; and
- .2 encourage and facilitate the general adoption of other possible new/innovative emission reduction mechanism(s).

Impacts on States

4.10 The impacts on States of a measure 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).

4.11 When assessing impacts on States the impact of a measure should be considered, as appropriate, inter alia, in the following terms:

- .1 geographic remoteness of and connectivity to main markets;
- .2 cargo value and type;
- .3 transport dependency;
- .4 transport costs;
- .5 food security;
- .6 disaster response;
- .7 cost-effectiveness; and
- .8 socio-economic progress and development.

4.12 The specification for and agreement on the procedure for assessing and taking into account the impacts of measures related to international shipping on States should be undertaken as a matter of urgency as part of the follow-up actions.

4.13 Disproportionately negative impacts should be assessed and addressed, as appropriate.

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.

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

6.1 A programme of follow-up actions of the Initial Strategy should be developed.

6.2 The key stages for the adoption of a Revised IMO GHG Strategy in 2023 as set out in the Roadmap, are as follows:

Spring 2018 (MEPC 72)	Adoption of the Initial Strategy ⁵ including, inter alia, a list of candidate short-, mid- and long-term further measures with possible timelines, to be revised as appropriate as additional information becomes available
January 2019	Start of Phase 1: Data collection (Ships to collect data)
Spring 2019 (MEPC 74)	Initiation of Fourth IMO GHG Study using data from 2012-2018
Summer 2020	Data from 2019 to be reported to IMO
Autumn 2020 (MEPC 76)	Start of Phase 2: data analysis (no later than autumn 2020) Publication of Fourth IMO GHG Study for consideration by MEPC 76
Spring 2021 (MEPC 77)	Secretariat report summarizing the 2019 data pursuant to regulation 22A.10 Initiation of work on adjustments on Initial IMO Strategy, based on Data Collection System (DCS) data
Summer 2021	Data for 2020 to be reported to IMO
Spring 2022 (MEPC 78)	Phase 3: Decision step Secretariat report summarizing the 2020 data pursuant to regulation 22A.10
Summer 2022	Data for 2021 to be reported to IMO
Spring 2023 (MEPC 80)	Secretariat report summarizing the 2021 data pursuant to regulation 22A.10 Adoption of Revised IMO Strategy, including short-, mid- and long-term further measure(s), as required, with implementation schedules

6.3 The Marginal Abatement Cost Curve (MACC) for each measure, as appropriate, should be ascertained and updated, and then evaluated on a regular basis.

⁵ Initial IMO Strategy is subject to revision based on DCS data during 2019-2021 and does not prejudice any specific further measures that may be implemented in Phase 3 of the three-step approach.

7 PERIODIC REVIEW OF THE STRATEGY

7.1 The Revised Strategy is to be adopted in Spring 2023.

7.2 The Revised Strategy should be subject to a review five years after its final adoption.

7.3 The Committee should undertake the review including defining the scope of the review and its terms of reference.

ANNEX 2

**DRAFT TERMS OF REFERENCE FOR THE FOURTH MEETING OF THE
INTERSESSIONAL WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS (ISWG-GHG 4)**

"The Working Group on Reduction of GHG emissions from ships is instructed, taking into account the comments and decisions made in plenary, the relevant parts of documents submitted to ISWG-GHG 3 and MEPC 72, and the documents submitted to the meeting, to:

- .1 develop a programme of follow-up actions of the Initial IMO Strategy on reduction of GHG emissions from ships;
- .2 further consider how to progress the matter of reduction of GHG emissions from ships and advise the Committee as appropriate; and
- .3 submit a written report to MEPC 73."

ANNEX 3

STATEMENTS BY DELEGATIONS

Statement by the delegation of Argentina*

"Argentina would like to express:

1 That it reiterates its full commitment to the Paris Agreement, as well as the commitment assumed by our country in relation to the reduction of emissions and adaptation and environmental care.

2 That the objectives and levels of ambition mentioned in the project attached to the Group's report are estimates of non-binding nature expressed upon the knowledge available to date on the efforts that might be necessary to achieve the goals set in the Paris Agreement.

3 That consensus is a fundamental basis to reach lasting and meaningful agreements. Thus, an adequate consensual and evidence-based mechanism when adopting measures in this area will be the best way to ensure their achievement and effectiveness, as well as to avoid unilateral measures. This mechanism and the measures adopted accordingly must take into account the special circumstances of the countries geographically distant from their main export markets and their vulnerability to the possible impact on their economies due to the increase in the cost of shipping.

4 That the procedure followed in the negotiation of the Strategy should not serve as a precedent, and that in the future negotiations are expected to be carried out in a transparent manner.

5 That Argentina will continue to commit its best efforts to ensure that IMO maintains its leadership in adopting effective measures regarding greenhouse gas emissions from maritime transport, a process to which it is and will continue to be firmly committed.

6 Last but not least, Argentine expresses its recognition for the acceptance by most of the countries that participated in the Working Group, of the full applicability of the principle of common but differentiated responsibilities to the measures that are to be adopted regarding GHG emissions from international shipping."

* The statement has been included in this annex as provided by the delegation in the language of submission.