

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
10th session
Agenda item 7

ISWG-GHG 10/WP.1
22 October 2021
ENGLISH ONLY

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Consideration of the report to MEPC 77

**Draft report of the tenth meeting of the Intersessional Working Group on
Reduction of GHG Emissions from Ships (ISWG-GHG 10)**

Introduction

1 The tenth meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG 10) was held remotely from 18 to 22 October 2021 and was chaired by Mr. S. Oftedal (Norway).

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

ANGOLA	INDIA
ARGENTINA	INDONESIA
AUSTRALIA	IRAN (ISLAMIC REPUBLIC OF)
BAHAMAS	IRELAND
BELGIUM	ITALY
BRAZIL	JAPAN
CANADA	LATVIA
CHILE	LIBERIA
CHINA	LUXEMBOURG
COMOROS	MALAYSIA
COOK ISLANDS	MALTA
CROATIA	MARSHALL ISLANDS
CYPRUS	MEXICO
DEMOCRATIC PEOPLE'S	MOROCCO
REPUBLIC OF KOREA	NETHERLANDS
DENMARK	NEW ZEALAND
ECUADOR	NICARAGUA
ESTONIA	NIGERIA
FIJI	NORWAY
FINLAND	PAKISTAN
FRANCE	PALAU
GERMANY	PANAMA
GREECE	PAPUA NEW GUINEA

PERU
PHILIPPINES
POLAND
PORTUGAL
REPUBLIC OF KOREA
RUSSIAN FEDERATION
SAUDI ARABIA
SINGAPORE
SLOVENIA
SOLOMON ISLANDS
SOUTH AFRICA
SPAIN
SWEDEN

SWITZERLAND
THAILAND
TONGA
TURKEY
TUVALU
UNITED ARAB EMIRATES
UNITED KINGDOM
UNITED STATES
VANUATU
VENEZUELA (BOLIVARIAN
REPUBLIC OF)
VIET NAM

by representatives from the following Associate Member of IMO:

HONG KONG, CHINA

by representatives from the following United Nations and Specialized Agency

WORLD BANK GROUP (WB)

by observers from the following intergovernmental organization:

EUROPEAN COMMISSION (EC)

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

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)
BIMCO
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
(INTERTANKO)
CESA
SOCIETY OF INTERNATIONAL GAS TANKER AND TERMINAL OPERATORS
LIMITED (SIGTTO)
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS
(INTERCARGO)
WORLD WIDE FUND FOR NATURE (WWF)
THE EUROPEAN ASSOCIATION OF INTERNAL COMBUSTION ENGINE
MANUFACTURERS (EUROMOT)
IPIECA
THE INSTITUTE OF MARINE ENGINEERING, SCIENCE AND TECHNOLOGY
(IMAREST)
INTERNATIONAL PARCEL TANKERS ASSOCIATION (IPTA)
INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS (RINA)
INTERFERRY
INTERNATIONAL BUNKER INDUSTRY ASSOCIATION (IBIA)
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)

WORLD SHIPPING COUNCIL (WSC)
PACIFIC ENVIRONMENT
CLEAN SHIPPING COALITION (CSC)
SUPERYACHT BUILDERS ASSOCIATION (SYBASS)
ACTIVE SHIPBUILDING EXPERTS FEDERATION (ASEF)
SOCIETY FOR GAS AS A MARINE FUEL LIMITED (SGMF)

Terms of reference

3 The terms of reference for ISWG-GHG 10, as approved by MEPC 76 (MEPC 76/15, paragraph 12.23), were as follows:

“The Intersessional Working Group on Reduction of GHG Emissions from Ships is instructed, taking into account documents submitted to ISWG-GHG 10 and relevant documents deferred from previous ISWG-GHG sessions, the interim report of the Correspondence Group on Carbon Intensity Reduction and any commenting documents submitted to MEPC 77, to:

- .1 consider any issue arising from the interim report of the Correspondence Group on Carbon Intensity Reduction;
- .2 further consider the scope of and timeline for development of a mandatory carbon intensity code;
- .3 consider concrete proposals on how to keep the impacts of the short-term measure under review and how to undertake a lessons-learned exercise of the comprehensive impact assessment of the short-term measure;¹
- .4 consider mid-term GHG reduction measures in the context of Phase I of the workplan for the development of mid- and long-term measures, also taking into account documents MEPC 76/7/2 (Norway), MEPC 76/7/9 (Australia et al.), MEPC 76/7/11 (Belgium et al.), MEPC 76/7/12 (Marshall Islands and Solomon Islands), MEPC 76/7/15 (Denmark et al.), MEPC 76/7/39 (ICS et al.), MEPC 76/7/40 (Belgium), MEPC 76/7/42 (Netherlands and OECD), MEPC 76/7/60 (Pacific Environment) and MEPC 76/INF.22 (Belgium et al.); and
- .5 submit a written report to MEPC 77.”

Adoption of the agenda

4 The Group adopted the agenda for the meeting based on the provisional agenda set out in document ISWG-GHG 10/1 as follows:

- .1 Adoption of the agenda
- .2 Consideration of any issue arising from the interim report of the Correspondence Group on Carbon Intensity Reduction

¹ Reference is made to operative paragraph 7 of resolution MEPC.328(76) on the adoption of amendments to MARPOL Annex VI.

- .3 Further consideration of the scope of and timeline for development of a mandatory carbon intensity code
- .4 Consideration of concrete proposals on how to keep the impacts of the short-term measure under review and how to undertake a lessons-learned exercise of the comprehensive impact assessment of the short-term measure
- .5 Consideration of mid-term GHG reduction measures in the context of Phase I of the workplan for the development of mid- and long-term measures
- .6 Any other business
- .7 Consideration of the report to MEPC 77

5 The Group agreed to be guided in its work by document ISWG-GHG 10/1/1 (Secretariat), containing annotations to the agenda, the provisional list of documents submitted to this session and the provisional timetable, on the understanding that the provisional timetable may be subject to adjustments depending on the progress made each day.

6 The summaries of documents considered by the Group are collated in a tabular format in annex 4.

Consideration of any issue arising from the interim report of the Correspondence Group on Carbon Intensity Reduction

7 In considering issues arising from the interim report of the Correspondence Group on Carbon Intensity Reduction, the Group noted the discussion within the Correspondence Group up to its first round, as set out in document MEPC 77/7/10 (China et al.).

8 In considering the interim report, the Group considered in particular the issues identified in paragraph 52.2 of document MEPC 77/7/10, as listed in the sections below, where the Correspondence Group requests further clarifications and instructions from the Committee.

Update of the 2017 Guidelines for administration verification of ship fuel oil consumption data (resolution MEPC.292(71))

9 Further to paragraph 52.2.1 of document MEPC 77/7/10, the Group recommended that in the update of the *2017 Guidelines for administration verification of ship fuel oil consumption data* ("Verification guidelines"), the voluntary collected data to calculate trial CIIs should be verified following the same procedure as for the mandatory data.

10 Further to paragraph 52.2.2 of document MEPC 77/7/10, the Group recommended that at this stage, in cases where a ship holds multiple load line certificates or permanently changes its type, deadweight and/or gross tonnage during the year, the determination of its deadweight and gross tonnage value should be specified in the Verification guidelines. The Group further noted that it may be more appropriate at a later stage to incorporate these issues in G1 (CII guidelines) and G2 (CII reference lines).

Update of the 2017 Guidelines for the development and management of the IMO Ship Fuel Oil Consumption Database (resolution MEPC.293(71))

11 Further to paragraph 52.2.3 of document MEPC 77/7/10, the Group recommend that in principle, the attained annual operational CIIs, the parameters to calculate the correction factors, voyage adjustments, if eventually adopted by the Committee, and other trial CIIs

should be referred to in the updated *2017 Guidelines for the development and management of the IMO Ship Fuel Oil Consumption Database* ("Database guidelines") as appropriate. The Group also noted that under the current provisions of MARPOL Annex VI, this data was not requested to be submitted by the Administration to the IMO DCS database.

Development of draft guidelines on correction factors for certain ship types, operational profiles and/or voyages for the CII calculations (G5), as appropriate

12 Further to paragraph 52.2.4 of document MEPC 77/7/10, the Group noted that several proposals for correction factors for certain ship types, operational profiles and/or voyages for the CII calculations related to the G2 guidelines (CII reference lines) and G4 guidelines (CII rating guidelines). However, the Group also noted that the revision of G2 and G4 guidelines was outside the scope of the Correspondence Group. The Group further noted that notwithstanding the above, the Correspondence Group would evaluate proposals suggesting to amend G2 and G4 guidelines against the selection criteria set in document MEPC 76/7/23 (France).

13 The Group noted an intervention by the delegation of Japan highlighting that any revision of G2 and G4 guidelines should be limited in scope to the specific technical issues raised in the Correspondence Group and not lead to modify the CII reference lines and CII rating.

14 The Group recommended that correction factors for certain ship types, operational profiles and/or voyages for the CII calculations, if supported by the Correspondence Group, should be addressed to the extent possible in a standalone set of new guidelines (CII guidelines, G5). In this connection, the Group noted that, provided the evaluation of proposals suggesting to amend the G2 and G4 guidelines was successful, the Correspondence Group might incorporate in its final report, draft amendments to G2 and/or G4 guidelines which would be strictly limited to these proposals considered by the Correspondence Group, as additional information/recommendations.

15 Further to paragraphs 52.2.5 and 52.2.6 of document MEPC 77/7/10, the Group also recommended that:

- .1 the CII value corrected as may be specified in G5, should be used for calculation of the attained operational CII and for CII rating of the ship (as defined in the G4 guidelines);
- .2 uncorrected values of the attained CII values should also be reported to the Administration together with the corrected values, in accordance with regulation 28.2 of MARPOL Annex VI; and
- .3 the potential correction factors and voyage adjustments which may be specified in G5 should be used to calculate the Attained CII (as defined in G1 guidelines), but should not be applied to the reference CII values (as defined in G2 guidelines).

16 The delegation of Japan expressed concerns about the inclusion of correction factors and voyage exclusions in CII calculations and stated that, in order to avoid weakening the effectiveness of CII regulations, it would require a careful consideration in the Correspondence Group. The observer from Pacific Environment, in supporting this intervention, highlighted the need to also consider the public accessibility of the CII information. In this regard, the delegation of UAE expressed the view that it was too early to discuss how to address the inclusion of correction factors and voyage exclusions before the Correspondence Group had concluded it work on this matter.

17 The Group encouraged the Correspondence Group to undertake an accurate assessment of the proposed correction factors and work upon a meaningful way forward which would ensure that the CII reduction rates agreed by MEPC 76 would not be affected.

Finalization of outstanding guidelines

18 The Group noted that in the Correspondence Group a large majority of participants opted for the SEEMP to be a ship specific management plan.

19 Following consideration, the Group noted the need to finalize guidelines accompanying the short-term measure as soon as possible and recommended that the Committee finalizes and adopts the outstanding guidelines at MEPC 78 to allow sufficient time for ships, Administrations and ROs for preparation and implementation of the short-term measure when it would enter into effect in November 2022.

Further consideration of the scope of and timeline for development of a mandatory carbon intensity code

20 The Group considered document ISWG-GHG 10/3 (United States) providing a proposal for the process to develop a mandatory Carbon Intensity Code (CIC).

21 In the ensuing discussion, all delegations who spoke supported the development of a code to ensure a uniform and consistent implementation of IMO regulations on carbon intensity.

22 Many delegations noted that at this stage it was premature to initiate the process of the development of such a code, highlighting the need to finalize the associated technical guidelines first. Several delegations suggested to initiate the process soon after adoption of the final set of guidelines or in 2023 in conjunction with the revision of the Initial Strategy. Several other delegations pointed towards adoption of a code around 2026 in conjunction with the review of the short-term measure by 2026, with the understanding that the period 2023 to 2026 was a trial period, and that this timeline would allow for the consideration of initial feedback on the implementation of the short-term measure.

23 With regard to the possible scope of the code, several delegations expressed the view that the code should only cover the CII guidelines, and not the EEXI guidelines as these were closely related to EEDI guidelines with all the reduction targets clearly defined in MARPOL Annex VI. Several other delegations expressed the view that it was too early to decide on the scope of the code.

24 Following consideration, the Group agreed that it was premature at this stage to conclude on the possible timing for initiating the work on the development of the code. The Group also agreed that it was premature to discuss the scope of the code and agreed to revisit this issue when initiating the process of development of the code.

25 In this regard, the Group requested the Secretariat, taking into account document ISWG-GHG 10/3, to identify a possible timeline for the development of a code and to review the content of guidelines from a technical/legal point of view with a view to identifying a possible scope, for the Group's consideration at a future session, and noted that document ISWG-GHG 10/3 may serve as a basis for the further consideration of this issue.

26 The observer of OCIMF pointed out that, should the scope of the code cover the whole chapter 4 of MARPOL Annex VI, the Group would have to coordinate the development of the code with the Committee's other work on "energy efficiency", notably EEDI matters.

Consideration of concrete proposals on how to keep the impacts of the short-term measure under review and how to undertake a lessons-learned exercise of the Comprehensive Impact Assessment of the short-term measure

27 More to come

[To insert contents of document ISWG-GHG 10/J/4/Rev.1]

Consideration of mid-term GHG reduction measures in the context of Phase I of the workplan for the development of mid- and long-term measures

28 Under this agenda item, the Group noted 10 documents which were referred to it by MEPC 76, as follows:

- .1 MEPC 76/7/2 (Norway) providing concepts for a regulatory mechanism for the effective uptake of alternative low-carbon and zero-carbon fuels;
- .2 MEPC 76/7/9 (Australia et al.) proposing future working arrangements to support the follow-up actions of the Initial Strategy;
- .3 MEPC 76/7/11 (Belgium et al.) on legal bases of candidate IMO measures to reduce GHG emissions from ships;
- .4 MEPC 76/7/12 (Marshall Islands and Solomon Islands) proposing to establish a universal mandatory GHG levy;
- .5 MEPC 76/7/15 (Denmark et al.) on the importance of starting work on mid-term GHG reduction measures that incentivize the use of sustainable low-carbon and zero-carbon fuels in international shipping;
- .6 MEPC 76/7/39 (ICS et al.) inviting the Committee to commence discussions on MBMs as soon as possible;
- .7 MEPC 76/7/40 (Belgium) on legal issues of regulatory mechanism in the MARPOL Convention;
- .8 MEPC 76/7/42 (Netherlands and OECD) on the importance of starting work on mid-term measures (carbon pricing, fuel standards);
- .9 MEPC 76/7/60 (Pacific Environment) providing information on GHG levies; and
- .10 MEPC 76/INF.22 (Belgium et al.) providing a study on the legal basis of candidate IMO measures to reduce GHG emissions from ships.

29 The Group further noted seven additional documents which had been submitted to this session under this agenda item, as follows:

- .1 ISWG-GHG 10/5 (World Bank) providing a high-level analysis of carbon revenue use, governance and management;
- .2 ISWG-GHG 10/5/1 (Finland) providing clarifications on document MEPC 76/7/9 concerning alternative working arrangements;
- .3 ISWG-GHG 10/5/2 (ICS and INTERCARGO) proposing a levy-based MBM, per tonne of CO₂ emissions;
- .4 ISWG-GHG 10/5/3 (Austria et al.) proposing a low GHG fuel standard;
- .5 ISWG-GHG 10/5/4 (Norway) discussing different principles behind carbon pricing models;
- .6 ISWG-GHG 10/5/5 (Norway and United States) presenting a road map for the uptake of alternative low- and zero-carbon fuels; and
- .7 ISWG-GHG 10/5/6 (Norway) proposing a combination of a fuel GHG intensity limit and a GHG cap and trade system.

Round one of discussions on relevant documents and proposals in the context of Phase I of the Work plan

30 The Group was invited to comment on the above-mentioned documents, and proposals contained therein on the development of mid- and long-term measures in accordance with Phase I of the Work plan, focusing on the elements listed in paragraph 7 of the Work plan, and using as reference, as appropriate, a list of overarching key issues to be considered to progress the development of mid- and long-term measures, as developed by the Chair and set out in annex 1.

31 Many delegations took the floor, providing general comments while several delegations also provided some specific comments on various proposals. Following the first round of discussion, the Chair in his summing up, stated:

- “.1 the purpose of Phase I of the Work plan was to table proposals for measures in order to be able to understand and compare their main features and implications, and all viewpoints expressed by delegations in that regard were valuable, contributing to a good foundation for further progress of the work;
- .2 many delegations stressed that the mid- and long-term measures should be designed to reach the 2050 ambition of the Strategy;
- .3 the impact on States of proposed measures, or a combination thereof, would need to be assessed, as identified in the Initial Strategy and using the

Procedure for assessing impacts on States of candidate measures, as reviewed;

- .4 at this stage, all proposed measures were welcomed and would be kept on the table for further consideration under Phase I of the Work plan, without selecting nor excluding any proposal;
- .5 there could be a benefit for the Organization to follow a holistic approach, and to develop a basket of measures to fulfil its ambitions;
- .6 several approaches for measures have been proposed: technical and operational measures, market-based measures, and a combination of both; but the Group was not in a position to recommend any preferred option of these approaches at this stage;
- .7 the Organization should be mindful of the existing legal framework, i.e. Annex VI to the MARPOL Convention, in order to build further measures and to ensure that the overall mechanism is both effective and logic;
- .8 the next set of GHG reduction measures should be goal-based;
- .9 the feasibility of proposed measures achieving the emission reduction potential should be assessed during their development; and
- .10 when developing the short-term measure, after consideration of initial separate proposals, the Group invited proponents of measures to work together with a view to bridging gaps, combining their proposals and developing a more broadly supported concept; and this approach could also be helpful for the consideration of mid- and long-term measures.”

32 In order to facilitate the further consideration of mid- and long-term measures, the Group requested the Secretariat to provide to a future session a summary of previous discussions on market-based measures which took place in the Organization.

Round two of discussions on relevant documents and proposals in the context of Phase I of the Work plan

33 During round one of the discussions, several delegations had indicated that they had additional comments, clarifications and questions on the documents considered under this agenda item, including on the proposed concrete measures contained therein. To that purpose, the Chair invited the Group for a second round of discussions in accordance with Phase I of the Work Plan, during which many delegations provided additional comments.

34 Following the second round of discussion, the Chair in his summing up, stated:

- “.1 appreciation to all delegations that took the floor for their willingness to examine the various documents and proposals therein, thereby constructively supporting the process foreseen under Phase I of the Work plan;
- .2 delegations raised various issues and questions in relation to the concrete proposals of measures, of both a political and technical nature; identified strengths and weaknesses in those proposals; and that these observations served to facilitate further progress in assessing the various proposals in the context of Phase I of the Work plan;

- .3 many delegations raised again that the mid-term measures could be developed as a basket of measures to ensure achieving the 2050 level of ambition;
- .4 the two rounds of discussions provided a solid foundation for further work to better understand and compare the main features and implications of the various proposals for measures, as foreseen under Phase I of the Work plan.
- .5 proponents of measures should further consider the questions and issues raised with regard to their proposals, and engage in an active dialogue with each other to address those matters.”

35 A non-exhaustive collation of views expressed during the two rounds of discussion is set out in annex 2.

36 Following the second round of discussion the Group agreed to:

- .1 request the Secretariat to prepare an information document for the next session summarizing the collation of views set out in annex 2 in accordance with the key issues and elements listed in paragraph 7 of the Work plan;
- .2 invite the proponents of concrete proposals for mid-term measures to prepare an initial assessment of impacts on States of their proposal in accordance with the *Procedure for assessing impacts on States of candidate measures* for consideration by the Group; and
- .3 encourage proponents of concrete proposals for mid-term measures, as well as any other delegation, to further consider the development/refining proposals for mid-term measures for consideration during Phase I of the Work plan, also taking into account the views expressed at this meeting.

Consideration of how to address increasing workload on reduction of GHG emissions from ships and proposal for alternative working arrangements

37 The Group recalled that document MEPC 76/7/9 (Australia et al.) contained a proposal for new working arrangements to accelerate discussions on various GHG-related work streams, in particular the establishment of a Standing Technical Group on Reduction of GHG Emissions from Ships (ST-GHG) to replace the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG) in the future.

38 The Group considered document ISWG-GHG 10/5/1 (Finland) intended to clarify some issues presented in document MEPC 76/7/9 in light of comments received and concerns expressed at MEPC 76, especially on possible budgetary implications and timing of the shift to new working arrangements, as well as the progress and meaning of working with multiple work streams.

39 In supporting the proposed alternative working arrangements, a majority of delegations that spoke highlighted that they would give Member States and international organizations more clarity and predictability regarding the Organization's work, as well as more time to consider all the GHG-related issues at hand. Several delegations welcomed in particular the clarifications provided on how to deal with multiple work streams following a chronological process.

40 Several other delegations, in recognizing the increasing workload and pressure for the Organization and delegations on GHG issues, supported to retain the current working arrangements, i.e. one or two sessions of the ISWG-GHG between two sessions of the Committee. Several delegations stated that the proposed ST-GHG was premature and not mature and expressed concerns regarding, inter alia: inclusiveness, budget implications, oversight by the Committee, administrative burden for delegations, in particular smaller delegations, multilingualism and quality of the outcome. One delegation, in referring to document MEPC 74/7/1 (Secretariat), expressed concerns regarding the appropriateness of a technical group to address policy issues.

41 Several other delegations, in supporting the proposal in principle, stated that the priority was to increase the number of working hours and that this could also be done by using current working arrangements. Several delegations also suggested to increase the use of Correspondence Groups, to better prioritize the work under current working arrangements or to allow for more flexibility in the frequency of meetings in order to be able to speed up the process when needed. One delegation also highlighted the need to separate, to the extent possible, technical and political issues.

42 One delegation supported the establishment of a dedicated sub-committee.

43 Following consideration, the Group thanked Finland for the submission of document ISWG-GHG 10/5/1 and all delegations who contributed to the discussion.

44 The Group acknowledged that its overall workload on the reduction of GHG emissions from ships, and the various work streams, had been increasing, and acknowledged further that the ongoing and expected work on the short-term measure, and consideration of mid- and long-term measures in accordance with the Work plan and their associated impact assessments, would likely entail a high degree of complexity and would require substantial intersessional activity. In this regard, the Group recognized that its remit covered both technical and policy issues.

45 The Group noted that several delegations raised concerns regarding, inter alia, inclusiveness, oversight by the Committee, administrative burden for delegations, budget, quality of the outcome and multilingualism.

46 The Group noted that the COVID-19 pandemic had posed a limitation to its work and proceedings.

47 The Group further noted that some important implications of the establishment of the ST-GHG, including budget implications and overall organizational issues, should be further investigated and clarified by the Committee and the Council, as appropriate.

48 Following consideration, the Group invited the Committee to note its discussion and the support from a majority of delegations that took the floor for the proposal for a Standing Technical Group on reduction of GHG emissions from ships (ST-GHG) to replace the ISWG-GHG in the future.

49 In this regard, the Group invited the Committee to provide instructions for the Group on how to further proceed on the matter of addressing increasing workload and consideration of possible alternative working arrangements, taking into account the Group's consideration of documents MEPC 76/7/9 and ISWG-GHG 10/5/1 as well as comments made at this session.

50 The delegation of China, supported by the delegation of UAE, in referring the complexity of matter, stated that there had been no consensus reached in the Group as only few Member States took the floor and that the matter had not been discussed thoroughly in

the Group, urging that the Committee should further consider the matter in a holistic way to ensure that all concerns expressed are adequately addressed.

Any other business

51 The Group considered draft terms of reference for ISWG-GHG 11 and 12, as well as for the ad-hoc Expert Workshop on Impact Assessments. In the discussion [more to come].

52 Following consideration, the Group [more to come].

53 Further to the consideration of the terms of reference for ISWG-GHG 12, and in particular with regard to the final report of the Correspondence Group on Carbon intensity reduction, the Group agreed to invite the Committee to authorize ISWG-GHG 12 to consider first the final report of the Correspondence Group on Carbon intensity reduction and associated commenting documents prior to MEPC 78 and to report its recommendations to MEPC 78, and to invite the Committee to relax the deadline for submission of the final report of the Correspondence Group on Carbon Intensity by the 9-week document deadline of MEPC 78 (Friday, 1 April 2022).

Action requested of the Committee

54 The Committee is invited to approve the report of the Group in general, and in particular, to:

- .1 endorse the recommendations by the Group on issues arising from the interim report of the Correspondence Group on Carbon Intensity Reduction (paragraphs ... to ...);
- .2 note the urgency of adopting the outstanding guidelines associated with the implementation of the short-term measures at MEPC 78 to allow sufficient time for ships, Administrations and ROs for preparation and implementation of the short-term measure when it would enter into effect in November 2022 (paragraph ...);
- .3 note the discussion by the Group on the consideration of the scope of and timeline for the development of a mandatory carbon intensity code (paragraphs ... to);
- .4 note that the Group's view that it was premature to conclude on the possible timing for initiating the work on the development of the code and the scope of the code, and the group's intention to revisit this issue when initiating the process of development of the code (paragraph ...);
- .5 note that the Group has requested the Secretariat, taking into account document ISWG-GHG 10/3 (United States), to identify a possible timeline for the development of a code and to review the content of guidelines from a technical/legal point of view with a view to identifying a possible scope, for the Group's consideration at a future session (paragraph ...);
- .6 note the Group's discussion on how to keep the impacts of the short-term measure under review and how to undertake a lessons-learned exercise of the Comprehensive Impact Assessment of the short-term measure (paragraphs ... to ...);
- .7 invite interested Member States and international organizations to submit concrete proposals on how to keep the impacts of the short-term measure

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- under review to a future session of ISWG-GHG and to submit relevant information on the observed impacts, as appropriate, when the short-term measure enters into effect (paragraph ...);
- .8 invite interested Member States and international organizations to submit concrete proposal to a future session of ISWG-GHG on how to address data gaps in conducting impact assessments (paragraph ...);
- .9 with regard to the lessons-learned exercise of the short-term measure, invite the Technical Cooperation Committee to request Member States to provide resources and nominate experts for a roster in order to assist developing countries, in particular LDCs and SIDS, to conduct an initial impact assessment of proposals for a measure which they would put forward, as necessary (paragraph ...);
- .10 invite the Secretariat to liaise with UNCTAD, as well as other international organizations, as appropriate, to consider the possibility of making relevant data and models available (paragraph ...);
- .11 endorse the Group's recommendation that the outcome of this lessons-learned exercise also serves as the outcome of the review of MEPC.1/Circ.885, and that the lessons-learned exercise of the comprehensive impact assessment of the short-term measure should be completed by MEPC 79 in order to apply the improved procedure from Phase II of the Work plan for the development of mid- and long-term measures (paragraphs ...);
- .12 note the Group's consideration of mid-term GHG reduction measures in the context of Phase I of the workplan for the development of mid- and long-term measures (paragraphs ... to ... and annex 2);
- .13 request the Secretariat to prepare an information document for the next session of ISWG-GHG summarizing previous discussions on market-based measures which took place in the Organization and the collation of views expressed at ISWG-GHG 10 on proposed mid-term measures in accordance with the key issues and elements listed in paragraph 7 of the Work plan; (paragraph ... and annex [...]);
- .14 invite the proponents of concrete proposals for mid-term measures to prepare an initial impact assessment of their proposal in accordance with the *Procedure for assessing impacts on States of candidate measures* for consideration by ISWG-GHG (paragraph ...);
- .15 encourage proponents of candidate mid-term measures, as well as any other delegations, to further consider the development/refining proposals for mid-term measures for consideration during Phase I of the Work plan, also taking into account the views expressed at this session (paragraph ...);
- .16 note the Group's discussion on document ISWG-GHG 10/5/1 (Finland) on alternative GHG working arrangements (paragraphs ... to ...);
- .17 note the Group's discussion and the support from a majority of delegations that took the floor for the proposal for a Standing Technical Group on reduction of GHG emissions from ships (ST-GHG) to replace the ISWG-GHG in the future (paragraph)
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- .18 provide instructions for the Group on how to further proceed on matter of addressing the increasing workload and consideration of possible alternative working arrangements, taking into account the Group's consideration of documents MEPC 76/7/9 and ISWG-GHG 10/5/1 as well as comments made at this session (paragraph) ;
- .19 subject to endorsement by the Council, approve the holding of the eleventh and twelfth intersessional meeting of the Working Group on Reduction of GHG Emissions from Ships, as well as an Ad-Hoc Expert Workshop on impact assessments before MEPC 78, with the terms of reference set out in annex 3 as may be amended as appropriate (paragraph ...);
- .20 authorize ISWG-GHG 12 to consider first the final report of the Correspondence Group on Carbon intensity reduction and associated commenting documents prior to MEPC 78 and to report its recommendations to the Committee (paragraph ...); and
- .21 agree to relax the deadline for submission of the final report of the Correspondence Group on Carbon Intensity by the 9-week document deadline of MEPC 78) (paragraph...)

ANNEX 1

OVERARCHING KEY ISSUES TO BE CONSIDERED TO PROGRESS THE DEVELOPMENT OF MID- AND LONG-TERM MEASURES

Introduction

The **purpose** of Phase I of the Work plan for development of mid- and long-term measures approved by MEPC 76, is to table the various proposals for measures in order to be able to understand and compare their main features and implications.

In order to compare the proposals, the workplan foresees to identify **key issues** to consider in relation to each proposed measure, along with consideration of their potential impacts on States.

A number of concrete **proposals for mid-term measures** as well as **general considerations** in relation to the development of mid-term measures have been submitted for consideration under Phase I of the Work Plan. In order to **facilitate their understanding**, a grouping and summary of those documents was submitted to the Group before the meeting.

In order to **structure** the complex task of comparing those proposals as well as any associated general considerations, **the discussions during ISWG-GHG 10** were supported by the Chair's **outlining of the main issues and key questions** put forward to the Group.

Overarching key issues

In order to build common ground among Member States and international organizations to **progress the development of mid-term measures** whilst ensuring transparent and evidence-based decision-making, the Group's deliberations benefited from consideration of overarching key issues underlying the development of any proposed mechanism.

Accordingly, in line with the **elements listed under Phase I** of the Work Plan, the Chair addressed, inter alia, the following **nine (9) overarching key issues and questions** as a basis to identify the exact **purpose** of mid-term measures and to **further structure the initial consideration** of proposals for mid-term measures:

- .1 how could it be ensured that **total GHG emissions** from international shipping will **effectively be reduced** in line with the levels of ambition and timeline of the (Initial) IMO GHG Strategy, especially the 2050 ambition?
- .2 how could possible **disproportionately negative impacts on States**, in particular developing States, especially SIDS and LDCs, of any measure be kept limited, and be effectively mitigated and addressed to **ensure fairness and equity of any measure**?
- .3 how could **technological innovation and the global introduction of alternative fuels and/or energy sources for international shipping** be effectively promoted, and **first movers** be incentivized to develop and take up new technologies whilst **ensuring a global level-playing-field**?
- .4 how could the **cost-effectiveness in reducing GHG emissions** of international shipping in line with the ambitions in the (Initial) Strategy, be combined with certainty for investments in fuels/energy sources, fuels infrastructure and ships' technology and solutions for low- and zero emissions?

- .5 how could the **implementation and enforcement** of any measure be most effective and transparent, while the **administrative burden** for **Member State Administrations** be kept limited, and possible fraud be prevented?
- .6 how could the **implementation and administrative burden** of any measure be kept limited for the wider **shipping industry (owners, operators, charterers, etc.)**?
- .7 how could any measure ensure alignment with other GHG reduction efforts and ensure **involvement of other stakeholders in the wider maritime value chain**, notably fuel/energy producers, ports, cargo owners and financial sector, in the implementation of any measure?
- .8 what could be the **role of the Organization** under any measure, inter alia, in terms of data collection, financial involvement, support to developing States and promotion of effective uptake of alternative low-carbon and zero-carbon fuels?
- .9 how could a **legal framework in IMO instruments**, including description of Party obligations and Party rights, be most effective and clear?

Discussion

Delegations were invited to reflect the above mentioned 9 key issues in their interventions during ISWG-GHG 10, whilst also referring to the relevant documents considered by the Group.

ANNEX 2

AGENDA ITEM 5: CONSIDERATION OF MID-TERM GHG REDUCTION MEASURES IN THE CONTEXT OF PHASE I OF THE WORKPLAN FOR THE DEVELOPMENT OF MID- AND LONG-TERM MEASURE

NON-EXHAUSTIVE COLLATION OF VIEWS EXPRESSED

1 GENERAL COMMENTS WITH REGARD TO CONSIDERATION OF MID-TERM REDUCTION MEASURES

General comments in relation to Phase 1 of the Work plan

.1 With regard to Phase 1 of the Work plan in general, the following general comments, inter alia, were made:

- .1 We are now at a critical crossroad towards decarbonization of international shipping. A rational and far-sighted decision on where we go would be the key to success.
- .2 Achieving the level of ambition by 2050, implies that our primary approach should start with making an overall plan to induce necessary policy measures, then consider each candidate measures and how these measures work effectively. We should not focus on the detail of single individual measure in the beginning.
- .3 Phase 1 our Workplan, scheduled up to Spring next year, provides us the opportunity to fully understand the features and implications of candidate measures and to ensure transparent and evidence-based decision-making by exchanging views. We need to assess first advantages and disadvantages, and all must remain on the table for now.
- .4 We support a basket of innovative measures. Such basket should in our view combine a market-based measure, and a technical measure in complement, such as the low-carbon fuel standard proposed in document ISWG-GHG 10/5/3.
- .5 We believe that a combination of measures should be assessed in a holistic approach to ensure:
 - .1 achievement of our goals fixed by the Initial IMO Strategy;
 - .2 avoidance of distortions to trade; and
 - .3 impacts on States, as mid- and long-term measures have a bigger potential of negative impacts on developing states.
- .6 The overarching key issues from document ISWG-GHG 10/J/3 should be used for addressing the proposals submitted to this session as well as proposals on MTM (mid-term measures) to MEPC 77. Based on a first assessment we think that most proposals do not address all the questions, however combination of measures will allow us to create a basket of measures, which can effectively reduce the GHG emissions.

- .7 No selection of measures should be made at this session or at MEPC 77 since sufficient time for thorough exchange of views should be ensured.
- .8 This is just the start of an analytical exercise that we have engaged in: understanding what the revenue-raising potential of market-based measures in shipping could be and thinking through how it could help bring to life and implement the spirit of the Initial IMO GHG Strategy.
- .9 We are open to considering all the mid-term measures on the table, so that we can make an informed decision on which mid-term measure or basket of measures would be best placed to allow us to meet our ambitions. It will be important that any mid-term measure or measures be high enough to incentivize change, with increasing stringency over time to allow for a sustainable and inclusive transition. This works needs to start now, be informed by broader climate discussion, to send all the right signals and achieve climate goals.
- .10 We think with the levels of convergence apparent from interventions, we can propose to move on to phase 2 of the workplan sooner than originally scheduled and that this is crucial for us to deliver the IMO's initial strategy.
- .11 The MBM principles should be discussed prior to discussions on concrete proposals.
- .12 We suggest to carry out a study to consider how MBMs have been developed in other sectors which involve multiple jurisdictions.
- .13 We suggest to carry out availability study of alternative fuels before regulations, like it was done with sulphur cap.
- .14 The first phase of shipping's fuel transition should focus on assessing three interconnected questions: finding the right balance, finding the right price, and finding the right split of revenue use.

Main characteristics and features of the measure(s)

.2 With regard to "main characteristics and features of the measure(s)", the following general comments, inter alia, were made:

- .1 It is necessary to evaluate whether a sufficient supply of alternative fuels can be achieved before introducing strong mid-and long-term measures. If strong mid-and long-term measures are introduced despite the insufficient supply of alternative fuels, the price of alternative fuels will rise sharply due to relatively high demand, and this price increase may cause ship owners to avoid switching to alternative fuels.
- .2 There are some crucial questions to bear in mind when developing these measures: what kind of measure or combination of measures can help us reach the objectives of the Initial Strategy and stay aligned with the Paris Agreement? How do we ensure that a transition to zero emission shipping is truly global and leaves no State behind?
- .3 We do not support further discussions/elaborations of principles for MTM. We already have the Initial Strategy which will be reviewed. Need to focus on "what," not "why".

- .4 There is a necessity of considering the issue of distortions to trade that would disproportionately affect developing countries.
- .5 Mid- and long-term measures should be aligned from the technical standpoint with the existing regulatory framework and short-term measures. Duplication and excessive administrative burden should be avoided. The emphasis should be on the joint development of realistic, balanced, and achievable measures to ensure consistent and uniform implementation of measures by all parties.
- .6 Experimentation should be avoided, measures should be realistic and implementable, otherwise it could have an adverse effect.
- .7 Whilst evaluating and considering these proposals, we should be clear that we consider options that are logical, practical to achieve, cost effective with least administrative burdens and are not overly ambitious. What must be avoided is any divergence from the Initial Strategy, by national or regional actions.
- .8 We have long argued you can't both address disproportionately negative impacts and have equitable transition if using exemptions which are the only tools available to fuel standards, that is why we need a revenue-generating measure.
- .9 When introducing mid-and long-term measures, according to the guiding principles mentioned in the initial strategy, we think that the CBDR+RC principle of the UNFCCC and the non-discrimination principle of the IMO should be considered appropriately. International shipping should be sustainable through balanced development with developing countries, especially SIDS and LDCs.
- .10 To ensure equitable transition, we would need to consider some principles, as did the ICAO, including CBDR and avoiding distortions to trade, that would disproportionately affect developing countries.
- .11 In order to consider NMFT and CBDR+RC together, it is possible to consider implementing ITCP such as infrastructure support projects for developing countries, the development of innovative technology, technology transfer, etc., through funds (or budgets) secured by the introduction of market-based mid-and long-term measures.
- .12 We expect to reach agreement on the main characteristics of a mid-term measure, before agreeing on specific details. Therefore, we should first reach agreement on the fundamental effects we need to achieve: This is in our view:
 - .1 A sufficient price on fossil greenhouse gas emissions to achieve a 1.5-aligned transition;
 - .2 A level of ambition that can include the revised Strategy target when we revise it;
 - .3 Sufficient revenue to ensure an equitable transition; and
 - .4 A system of governance and management that involves all states.
- .13 Every measure must be designed in the most effective, efficient and proportionate manner, minimizing unintended consequences.

- .14 The medium-term measures adopted by the IMO should not undermine the ability and the ambition of member states to, individually or collectively, implement complementary measures to speed up the deployment of green vessels and the energy to power them. The solution to the shipping climate crisis lies in action at all levels and cannot be left to any single organisation or process. Stating otherwise suggests a lack of understanding of the seriousness of the problem.
- .15 To minimise administrative burden, mid-term measures should be based on existing monitoring, verification and reporting requirements, improved as necessary, as well as existing global certification schemes. Regular review and evaluation of the measure's effectiveness should allow for any necessary adjustments and limitation of possible unintended consequences.
- .16 Shipping decarbonisation is part of global energy transition. Investment in the land-based energy infrastructure that is required to decarbonize shipping holds the key and shall include alternative fuel feedstocks, renewable sources of energy and processing plants among others. This process cannot be achieved by shipping industry in isolation. This process implies a global energy transition where shipping will be one of multiple industries vying for scalable and cost-competitive zero-carbon fuel solutions.
- .17 We have to be cognisant that some fuels constitute incremental solutions which may only lower GHG emissions, while others are longer-run solutions to reach zero GHG emissions and can be produced at the scale needed to meet the total energy demands of the shipping industry. Moreover, the production, supplies, infrastructure and fleet's technical specifications (machinery, fuel storage) are not necessarily easily compatible between those fuels categories. Therefore, a careful balance is needed between supporting incremental solutions this decade and bringing support in as early as possible for the longer-run zero emission solutions.
- .18 We cannot support offsets as part of a mid-term measure as they could compromise our ability to meet the goal that the IPCC reports make clear, that is to reduce emissions globally by 45% by 2030 and reach zero CO₂ in 2050. Offsets would delay the transition to zero emission fuels which are needed to prevent us reaching a tipping point this decade. Offsets also ignore the potential of this sector to reach zero. If we incorporate offsetting into any measure, the shipping industry will quickly lose any interest in investing in the solutions that are needed for shipping's decarbonisation.
- .19 The energy transition from fossil fuel to zero carbon fuel is going to be complex because of the range of adverse impacts it may have on our economy, environment and society unless it is managed in a planned way taking all risks into account and taking appropriate risk mitigation measures.
- .20 Oil is a finite resource which production peaked in 2006. As its price is controlled it still appears to be cheap. Thus, the end of affordability of oil for non-producing States should be a sufficient criteria to engage in developing other solutions.

Appropriate IMO legal framework envisaged

.3 With regard to the “appropriate IMO legal framework envisaged (new or existing)” of possible measures, the following general comments, inter alia, were made:

- .1 The short-, mid- and long-term measures should be considered as a package through a holistic approach to avoid a patchwork of incongruous policies, as the measures should be orchestrated to work together to decarbonize international shipping. The mid-term measures should be based on and compatible to existing short-term measures and should be possible to evolve further as long-term measures at a later stage. This is quite critical for the stability and robustness of IMO regulatory framework.
- .2 Like the short-term measures, the mid-term measures should also be goal-based. The goal is to reduce carbon intensity and GHG emissions. The uptake of alternative fuels and the introduction of MBMs are pathways and tools to achieve the goal rather than the goal per se.
- .3 Shipping is recognized as a hard-to-abate sector. Therefore, flexible and innovative mechanisms may be necessary to enable the shipping industry to decarbonize through most cost-effective approaches. However, any measure should not put the responsibilities of individual countries or of other easy-to-abate sectors on international shipping.
- .4 Proposals should be inclusive, have clarity and predictability and maintain goal-based standards.
- .5 To ensure the cost-effectiveness of any measure (or combination thereof), the measures should be goal-based with the aim to encouraging fuels and technologies that provide for effective emissions reduction (from a life cycle perspective).
- .6 Implementing such measures through the existing convention will be easier and faster than developing a new convention. However, as a treaty for technical instruments, the MARPOL Convention should continue to be the primary treaty for operational ships in the marine environment, rather than the regulatory framework of the GHG fund contribution.
- .7 Nothing in the IMO Convention of 1948 prevents member states from adopting an MBM. Amending MARPOL Annex VI is thereby the easiest & fastest way to achieve results, as was also indicated as preference in submission MEPC76/7/2 from Norway. With regard to the proposed low-GHG fuel standard, this can be regulated through MARPOL Annex VI in a similar way as the Sox and NOx limits have been regulated.

Carbon pricing

.4 With regard to carbon pricing, the following general comments, inter alia, were made:

- .1 Carbon pricing alone may not provide enough incentive to reach the agreed levels of ambition, in particular if a levy-based system is chosen, while a technical measure alone will not provide a strong enough economic signal to shipping stakeholders. So, these two approaches are necessary and complementary.

- .2 We have no illusions about the challenge of developing a global carbon levy for shipping. But we recognise that carbon pricing is inevitable and must therefore be done via IMO rather than on a piecemeal regional or national basis which would lead to chaos and market distortion with impacts on trade over which IMO Member States would lack control.
- .3 In our document have considered principles for carbon pricing on a general level. We looked at different possible purposes behind a carbon price and the main pillars of a carbon pricing model.
- .4 There seems to be very strong support for putting a carbon pricing on bunker fuels in international shipping. This is something we welcome as we have been an advocate of carbon pricing as a cost-effective mechanism to fight climate change for decades.
- .5 Possible carbon pricing measures, which many delegations yesterday alluded to, can take various forms and may imply complex legal considerations and discussions (as was the case in the previous experience at IMO).
- .6 The quantum (of a carbon price) should be agreed upon based on a cost-benefit analysis along with an initial impact assessment. It needs to start at a modest value but to include a ratchet mechanism with a regular review.
- .7 Regarding the comparison with ETS, the fluctuation of carbon price is an important issue that needs to be addressed when considering ETS-based MBM. As this document mentions, with a levy-based system the quantum of the levy would be stable and fixed, thus minimizing uncertainty with respect to long term investment decisions by industries for zero-carbon technologies.

Market- Based Measures

- .5 With regard to market-based measures, the following general comments, inter alia, were made:
 - .1 Regarding MBM specifically, we recognize that a global cap-and-trade system would be an ideal mechanism to ensure the achievement of the levels of ambition. At the same time, we also note that levy-based systems, although potentially less efficient, have relative technical advantages for a rapid implementation at the global level: simplicity, transparency and revisability.
 - .2 Any measure(s) we adopt should ensure the availability of significant quantities of zero-GHG fuels in the middle of this decade. This may imply revenues. The principle of “no country is left behind” implies revenues. The WtW (well-to-wake) emissions of all GHGs should be considered by the measure(s) in order to ensure that shipping emissions are reduced without making it harder for land-based sectors to decarbonize.
 - .3 In establishing an MBM in the IMO, we should recognize that the international shipping is a significant transport system which carries essential goods and commodities for our economic activities and daily lives of people, while the industry is regularly exposed to severe competition.
 - .4 Market-based measures for shipping are being discussed quite much in the public domain. In our view – a key aspect of the discussions of MBM at the IMO

would need to be whether the design of such a mechanism will guarantee that the emission reduction target will be met.

- .5 We have looked at two decarbonization pathways, one describing what it takes to reach the ambition level of the Initial IMO Strategy, and one showing what it takes to reach full decarbonization by 2040. The analysis shows the necessary pace n reduction of carbon intensity, the necessary reduction in CO2 emissions and the necessary share of carbon neutral fuels in the fuel mix in the two decarbonization pathways. This is then used as a basis for an assessment of cost implications of the fuel transition.
- .6 Economic instruments can play an important part in providing an incentive to reduce emissions, and there are a range that could be appropriate for shipping. I won't get into detail on those on the table at present, other than to say that each has their advantages and disadvantages, and all are worthy of full consideration during this phase.
- .7 We would like to share our view that some of the documents bring to the table concrete proposals that we feel are premature for discussion at this moment. Some of the proposals try to simplify issues that are indeed very complex such as the ones that deal with MBMs.
- .8 There is a lot of ground to cover in defining principles before we can discuss concrete proposals. ICAO has defined a series of principles that must be observed by MBMs, so that they can act as viable options to achieving that organization's goals.
- .9 We agree the MBM will probably need to be used in conjunction to other policy to maximise the signal sent to markets and certainty of outcome. We remain open to considering whether that is achieved through the existing Carbon Intensity Indicator policy, or through other command and control measures like fuel standards. However, we do not wish to see development of MBMs to be delayed by debate over the choice of command measures.
- .10 There are multiple work streams underway. These need to be harnessed, ensuring avoidance of duplication with a clear, well-defined and a chronological way forward towards the adoption of an achievable MBM.
- .11 There are several proposals for market-based measures put forward to this session. In our view it is necessary to consider a full range of alternative MBMs, and we support further consideration of both levy and emission trading systems as well as elements related to carbon revenue use, governance as well as management. However, in our view there is first a need to consider guiding principles for MBMs which we hope to discuss further at the next session of MEPC.
- .12 At this stage of the initial discussions, we would plead to first consider a set of criteria against which such measures can be assessed and compared.
- .13 Effective implementation planning should be considered to guarantee that the impact benefits all members states, particularly emerging ones. This delegation believes the specific measures proposed by the co-sponsor of the related papers, such as a GHG levy, a GHG fuel standard, and a GHG cap-and-trade system are premature because the primary focus should be on improving and widely utilising the current technology.

- .14 We believe that it is early to discuss MBM now. We need to complete short-term measures before discussing the MBM. We are of the opinion that we should focus on technical requirements and IMRB as a first priority.
- .15 In the case of document ISWG GHG 10/5 we feel that the proposal therein prejudices the adoption of market-based measures for the mitigation of greenhouse gas emissions. The proposal, even though it recognizes the principle of CBDR-RC and raises important questions (paragraphs 4.1, 4.2 and 4.3), seems to privilege only one of the dimensions of the discussion, that is the use of resources generated by market schemes. It does not, however, touch on an important element of the debate, which refers to potential market distortions and additional costs to be introduced to international trade.

Use of revenue

- .6 With regard to use of revenue, the following general comments, inter alia, were made:
 - .1 In our view, revenues generated by a global MBM should be used primarily to support developing States, in particular SIDS and LDCs, to accelerate the development of alternative fuels production capacity and bunkering infrastructures, the renewal of their fleets, as well as to prevent or reduce potential disproportionately negative impacts of the global measure. At the same time these revenues should support the Research & development and climate adaptation projects related to maritime and ocean ecosystems.
 - .2 We believe that our proposal is a measure that is both ambitious and equitable. We think that measures that don't include revenues and revenue use can only be ambitious, but not equitable, and therefore can only be supporting measures.
 - .3 I would like to make a comment on ISWG-GHG 10/5. It contains some interesting elements for considering possible revenues, but we would like to share our concern about some aspects:
 - .1 it does not address the question of who bears the cost of a measure, for example, in increased freight;
 - .2 it is unclear if there will be enough revenues to compensate all developing countries that are negatively impacted,
 - .3 what kind of Research and Development would the revenues support? and the more key aspect of equitable transition: access to technology developments and new fuels. This goes to transfer of technology and intellectual property.
 - .4 We believe that a targeted use of the revenues from carbon pricing should address potential disproportionate impacts on States.
 - .5 The revenue raised through the MBM, such as levy and emission trade system, to be developed in IMO, should be utilized for achieving zero GHG emission from international shipping in effective manner. If the revenue of the MBM leaks from the sector, we should recognize that we may face a serious delay in achieving GHG zero emission in the international shipping sector.

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- .6 the subject of revenue generation and disbursement is an important part of this discussion. There could be avenues worth exploring when it comes to whether revenue is generated, and where revenue could go. For example, benefiting R&D in the maritime sector, as set out in many of the proposals on the table, or in deployment, to help the uptake of zero emission fuels and ships, or in supporting developing countries in the transition to clean shipping.
 - .7 Regulation and setting standards, as well as raising revenues are both needed in order to provide the reduction of GHG emissions and raise revenues such as for R&D, and assisting LDC's and SIDS.
 - .8 We see the merits in a Market Based Measure which generates funds and addresses market failures. This, however, should be combined with a regulating measure like a fuel or GHG standard (such as submission 10/5/3) in order to build a measure which actively reduces emissions of ships in line with the goals in the Initial Strategy.
 - .9 ISWG-GHG 10-5 well scopes the breadth of debate needed about how we operationalise the levy. I did want to make a point in regard the WB's definition of CBRD-RC at para 11. which implies CBDR is about providing less stringent burdens on smaller states. I just wanted to clarify, as one of the smallest States, that we don't want to be excluded/exempted, we want to share the burden of the transition, and be empowered to do so, not left behind. CBDR is not about us doing less, it's about those that can doing much more. Legally it is a differential treatment justified by equity in international public law, so this part of the WB paper could be improved. We also note the valid objection of that paper to in-sector only MBM, which are less likely to achieve the emission reduction needed. This is a critical point and one that is missing in other levy proposals.
 - .10 We assessed the potential use of revenues against the guiding principles of the Initial IMO GHG Strategy. These include, for instance, the need to be cognizant of CDRRC, the need to consider, assess, and address the disproportionately negative impacts on states as well as other principles put forward in further submissions like the principle of highest possible ambition or the polluter pays principle. The revenue uses analysed align differently with these principles and some of them can address the principles better and some of them address them to a lesser extent. When we put all guiding principles together, and also include the idea of cost effectiveness that you, Mr. Chair, have also outlined in your J paper, and the important question of the political economy and political acceptability, we come to the conclusion that splitting these revenues both for in-sector use—support R&D, drive the deployment of zero-carbon bunker fuels and zero-carbon technologies in the shipping sector—together with out-of-sector use can most likely yield the widest benefits for all IMO member states, especially developing countries and in particular SIDS in LDCs.
 - .11 On disproportionately negative impacts, we will need to ensure the needed funds to address the impacts are generated, and equitably and fairly distributed. The MBM could be a good starting point to generate such funds.
 - .12 Equitable transition must be achieved at the same time as a rapid transition away from fossil fuel use. This means addressing disproportionately negative impacts but also leaving no country behind. This is why we set aside the majority of the revenues raised for managing the achievement of an equitable

- transition. We note the World Bank's confirmation of the economic efficiency of this.
- .13 We are ready support the principle that significant funds should be used to support maritime climate mitigation and adaptation activities, in particular in developing countries, in order to ensure a globally effective and fair transition. The revenues could be used to:
 - .1 support actions, which would lower the cost of climate change for the industry, e.g. R&D, fuel infrastructure, fuel production, etc.;
 - .2 assist and support, as appropriate, vulnerable developing countries, especially SIDS and LDCs; and
 - .3 mitigate the environmental impacts from maritime emissions, e.g. support for maritime environmental and/or climate projects.
 - .14 We believe that allocating a significant share of the revenue generated by an MBM to port-related investments, in developing countries in particular, would facilitate the global deployment and use of low- and zero-carbon fuels in a fair and equitable manner, and would strengthen the support of developing countries for MBMs.
 - .15 We see there is a good potential for the levy proposals to be designed in a way that uses the generated revenue to stimulate the early adoption of long-run solutions.

Management of revenues

.7 With regard to management of revenues, the following general comments, inter alia, were made:

- .1 Management of any revenues will have to comply with international standards for transparency and could be assigned to the existing UN entities most appropriate regarding the expected use, for example the Green Climate Fund to support developing States to accelerate the development of alternative fuels production capacity and bunkering infrastructures as well as a prevent or reduce potential disproportionately negative impacts of the global measure. And an IMO dedicated structure for the renewal of their fleets.
- .2 Once Technology Readiness Levels have been sufficiently increased – assisted we hope by the IMRF – the really big challenge over the next 30 years will be the global rollout of the bunkering infrastructure required. And this is how our proposed IMO Climate Fund could help. We believe that the majority of the funds collected should be used in-sector to help shipping decarbonize, and not just be treated as a new source of general revenue for governments.
- .3 This in-sector help includes support for the provision of bunkering systems in developing nations – although we are also open to some of the money being used for other purposes, such as support to make the cost of new fuels less expensive and mitigation/adaptation measures, in particular for LDCs and SIDS.
- .4 We feel that it is imperative that we now agree on issues such as:
 - .1 Who is eligible for compensation from a possible fund?;

.2 Which activities / areas eligible for compensation?; and

.3 What types of compensation can be used?

After which we can more easily decide which mechanism should be used, what level of ambition/reduction is needed and how a price for GHG can be set.

.5 The subject of revenue generation and disbursement should be explored fully in terms of feasibility and efficacy, as well as governance and transparency. A carbon price on shipping has the potential to generate significant sums. The measure would need to be carefully designed to ensure appropriate management of these funds.

.5 We wanted to make sure that we start thinking now already about the crucial practical aspects of governance and management. This means, if we decided a market-based measure and if we opted for a revenue-raising option, what governance and management implications would this have and how can we prepare for that? We think that there is no need to reinvent the wheel. Instead, we can rather benefit from the wealth of existing institutional and financial experience that is out there.

.6 The policy is more cost-effective than an ETS because it is simpler, and more cost-effective than other proposals because it has been designed to integrate both mitigation of GHG and addressing disproportionate negative impacts, including equitable transition.

.7 Regarding the organization and administrative framework guiding an MBM, we believe that irrespective of other international agencies that may be involved, decisions about allocating funds under an MBM and the identification of priorities should remain under the control of MEPC.

Identification of emissions reduction potential

.8 With regard to the “identification of emissions reduction potential” of possible mid-term measures, the following comments, inter alia, were made:

.1 We believe that the next GHG measure that IMO develops should reduce emissions in line with the 2050 absolute reduction target and a Paris agreement aligned pathway.

.2 The only real means of ensuring that emissions will be reduced in line with the agreed level of ambition will be to ensure that zero-carbon technologies and fuels are widely available as soon as possible. This is the reason why we urgently need approval of the IMRF at MEPC 77. But to expedite transition, we also need to close the price gap between zero-carbon fuels and conventional fuels, which is why we also need a carbon price via an IMO MBM.

.3 The next package of measures can take various forms within the frame of meeting the 2050 target. It can be done through a new technical standard, enforcement of an existing technical standard, and market-based measures. It can also be done through the combination of technical requirements and market-based measures.

- .4 The UN SG's address at the Second United Nations Global Sustainable Transport Conference last week stated that we are on target for 3 degrees and we must greatly increase our targets if we are to stay within 1.5C. In keeping with UN Secretary General Guterres directive, we note MEPC 77 is asked to adopt an immediate resolution for 100% by no later than 2050.
- .5 We have recently seen an increasing awareness that the level of ambition of the IMO mid-term measures must be strengthened. Therefore "zero emission ships must be the default choice, and commercially available for all by 2030" and "decarbonization must go hand in hand with a just and inclusive transition to reduce inequalities and supports the poorest communities".
- .6 The phase-out of GHG emissions should be completed by 2050 without relying on other sectors. This can only be realistically achieved if the measures are adopted as amendments to MARPOL Annex VI. Effectiveness of the measure also requires that all ships, or all ships >400GT are included.
- .7 The main aim of mid-term measures is to set shipping on a pathway to phasing out GHG emissions. This implies that the measure or combination of measures should ensure that the organization fulfils its 2050 level of ambition and for that to happen ensure that the first zero-GHG ships enter the fleet around the middle of this decade. This can only be achieved if the measures ensure adequate uptake and deployment of low- and zero-carbon fuels.
- .8 We propose that the GHG levy is, from the start, set not on CO₂, but on all GHG, both operational and upstream (well-to-tank) emissions. This is the only way we avoid pushing emissions from ships to land and reducing total emissions. The carbon levy needs to ratchet up over time and in combination with revenue use, provides the clear incentive for measured transition – as the market has clearly called for.
- .9 From the interventions so far, we have distilled 2 different sets of problems with 2 different solutions.
 - .1 First is the lack of an economic incentive, a price signal that fossil fuels come at additional costs to the entire society. To address this problem, carbon pricing (be it a levy or cap-and-trade scheme) is an instrument of choice to make the polluters pay and to generate revenues that can be used to ensure a fair and equitable transition.
 - .2 Second is the high dependency between the demand and supply of alternative fuels, the so-called chicken-and-egg problem – without demand, there is no supply and vice versa. To address this problem, a technical standard setting requirements on the GHG content of fuels is necessary to ensure a gradual transition and predictable demand from the shipping sector on the use and deployment of alternative fuels.

In other words, a basket of measures is needed.

- .10 We should consider the short-, mid- & long- term measures as an inclusive package, collectively making the ambition possible.
- .11 In our view, it is crucial that mid and long-term measures are technology neutral and based on a Well-to-Wake approach in order to achieve the levels of ambition of IMOs initial GHG Strategy. Against this background, we are

concerned with the approach proposed in ISWG-GHG 10/5/6 by Norway; namely to start with a Tank-to-Wake approach and then consider phasing in a well-to-wake approach at a later stage.

- .12 It would be quite confusing to the industry and the markets and can therefore hinder the availability of fuels if we do not have full lifecycle emissions in scope (in the policy and with default values defined in the guidelines) from the point of entry into force of a new measure.
- .13 We would like to stress the importance to assess the measures in combination - short-term and medium-term measures. CII needs to be complemented with a specific technical measure on alternative fuels and both such technical measures need to be complemented by a carbon-pricing mechanism to provide the right economic incentive and further re-enforce both energy efficiency and reduce the price gap between fossil and alternative fuels.

Potential implications on the shipping industry, in particular on technical and operations aspects, and on costs and investment needs for the maritime industry

.9 With regard to the “potential implications on the shipping industry” of possible mid-term measures, the following comments, inter alia, were made:

- .1 First movers should be rewarded by paying a lower carbon price. Under our proposal in 10/5/2, ships using low- or zero-carbon fuels would pay a lower carbon levy, while existing ships using conventional fuels that introduce new technologies which reduce emissions would also be rewarded with lower carbon costs. However, we see no need to complicate this further by combining a carbon price with carbon intensity standards, as set out in document 10/5/6, which could potentially lead to a system of “double rewards and penalties”, and make the necessary regulatory framework and enforcement mechanism much more complex.
- .2 On effective promotion of innovative technologies, we will need to reward/incentivise developers. A mix of MBM and subsidies from Member States would be required. The availability of the technologies, especially to low or lack of capacity states in a fair and transparent manner is critical. We remain mindful of patent rights though.
- .3 We note and welcome that many industry players are already developing, and making investments into, zero emission solutions for shipping. However, the transition to low- and zero-carbon fuels in international shipping is unlikely to be driven by market forces, voluntary action and unilateral or plurilateral initiatives alone. This is why, in our view, mid-term policy measures at the IMO level are needed, and they are needed swiftly. We must provide that clear signal to aid in planning and preparation, to increase demand for zero emission ships and fuels, and ensure zero emission ships begin to become the norm, and stimulate a transition away from fossil fuel use – a transition that does not leave any State behind. I would recall on this topic submission MEPC 76/7/15 which contained many useful reflections and observations.
- .4 We built revenue use in-sector for a large portion of revenues into the measure – This is for use in R&D and innovation but especially, for early deployment and development of supply chains for zero emission fuels. This revenue use is important because it can help developing economies with natural resources but lower access to capital than developed economies, to have the opportunity to

be major players in the market for future fuels, and not get left behind. This is also important to create innovation, but particularly in order to reduce the costs of the new fuels and technologies we need – which can then make sure that the negative impacts of the fuel transition are minimised for all.

- .5 We support the development of mid-term measures – including market-based measures - as key drivers for technical innovation and global introduction of low- and zero carbon fuels and technologies. In this context, we support that a part of the revenue of a market-based measure is allocated to incentivizing first movers. Long-term legal stability is crucial to create the necessary certainty of investments for the development and uptake of new fuels and technologies.
- .6 Substantial private sector progress already underway in 2021 towards making sure the global fleet is ready for new fuels, and that the production of those new fuels is ready as well. It is clear from these actions that investment is already possible, but also that we are still far short of the scale of investment that is needed to meet the targets' level of ambition. For that reason, the important 'learning by doing' phase that is well recognised as a key enabler of transitions needs to be integrated into and enabled flexibly by the mid-term measure. This can directly support deployment (e.g. use onboard) of the future zero emission fuels, build up supply and help to ensure the scaling up of supply and availability of future fuels.

Implementation and enforcement aspects

.10 With regard to the “implementation and enforcement aspects” of possible mid-term measures, the following comments, inter alia, were made:

- .1 MARPOL regulations apply to ships, and the challenge of passing the cost to the entity paying for the cost of fuel would be similar under a levy or a trading system. The main difference between a simple carbon levy and a cap-and-trade system is that passing on the cost of allowances under a cap-and-trade system is far more complicated due to volatile and variable prices of carbon allowances and the opportunities for speculation.
- .2 The enforcement system for the levy proposed in document 10/5/2 is intended to be as simple as possible using the existing IMO DCS, while minimizing the administrative burden on Member States. The proposed IMO Climate Fund would carry out all the functions necessary to calculate the IMO climate contributions to be made by ships, collecting these contributions and providing evidence that the required contributions have been made. All that would be required of Administrations would be to issue the ship with a Statement of Compliance, which would be used as the primary means of demonstrating compliance to port State control.
- .3 Certification and verification are needed. This implies that existing certification schemes are used such as DCS, however this should be improved and extended for this purpose using both Well-to-Tank and Tank-to-wake emissions and there is a need for establishing sustainability and eligibility criteria for fuels.

Indication of workload for the Organization

.11 With regard to the “indication of workload for the Organization” of possible mid-term measures, the following comments, inter alia, were made:

- .1 The levy system we propose would require the establishment of a regulatory framework, which we have set out in detail in document 10/5/2, in which we think the obligations of all concerned are set out as clearly as possible. We suggest this would be far simpler than IMO setting up its own carbon market, which would seem to be very complex undertaking, though we appreciate the proposal in document 10/5/6 does not yet go into the same level of detail as that contained in our own proposal.

2 COMMENTS MORE SPECIFIC TO SPECIFIC PROPOSALS FOR MEASURES

GHG Levy

- .12 With regard to a “GHG Levy”, the following general comments, inter alia, were made:
 - .1 We are grateful to the sponsors of all the submissions under this item but are especially grateful the Marshall and Solomon Islands for document MEPC 76/7/12 and their proposal for a levy based MBM which has a lot in common with the current thinking of the world’s national shipowners’ associations.
 - .2 Document 76/7/12 has helped to move the debate forward and enabled us to submit document 10/5/2, which contains a comprehensive regulatory proposal to demonstrate how a carbon levy would work, in line with the principles for assessing MBMs which the Committee agreed at MEPC 57, as highlighted by all of the industry co-sponsors in document MEPC 76/7/39 and which we think continue to be relevant.
 - .3 The carbon levy we propose would be based on mandatory IMO climate contributions by ships, per tonne of CO₂ emitted, to an IMO Climate Fund which – using the architecture we have proposed – could be brought into effect quickly to expedite the uptake of zero-carbon technologies and fuels, via adoption of a new chapter to MARPOL Annex VI.
 - .4 The intention behind these proposals (MEPC 76-7-12 and MEPC 77/7/4) is to provide a framework for negotiation. We have provided MARPOL amendments make the details clear.
 - .5 We support further consideration of a carbon pricing mechanism as proposed in document MEPC 76/7/12 by Marshall Islands and Solomon Islands and ISWG-GHG 10/5/2 by ICS and INTERCARGO.
 - .6 We support fully 76/7/12 as the only measure that can meet ambition and equitable transition. We need stringent policy driving adoption of new fuels, but we know that this will increase transport costs and that for some states this will create disproportionately negative impacts.
 - .7 A levy-based system by providing a fixed price, though subject to 5-year ratchet, will provide far more certainty for investment in new zero-carbon ships than a price under a trading system set by a market in which the cost of carbon allowances could be extremely volatile, or even collapse completely, whilst also being subject to the risk of activity by speculators.
 - .8 The great advantage of the carbon levy is that the MEPC will be fully in control of what the quantum of the levy should be, both initially when first implemented, and at the five-year intervals which we have suggested, in line with the proposal of the Marshall and Solomon Islands that there should be a 5 year ‘ratchet’

when the carbon levy is increased. Under an emission trading system, however, where the price of allowances is set by the market and the costs can be variable and volatile, the conduct of an IMO impact assessment becomes far more difficult, especially for the longer term given that any MBM IMO adopts is likely to be in place for 20 to 30 years.

- .9 The easiest way to develop, adopt and implement an MBM quickly, in a manner that is relatively simple, which avoids market distortion and which, most importantly, is also likely to be acceptable to those Member States which have legitimate concerns about the impacts on trade, will be through the adoption of carbon levy.
- .10 At this stage we see the merit in a global carbon levy on international shipping. Our view is that this will send the right price signals to encourage the uptake of low and zero-carbon solutions. Importantly, a global carbon levy offers a level playing field as it will be applied evenly to all ships engaged international shipping rather than a patchwork of unilateral regulations that would increase the compliance cost and regulatory complexity for international shipping. In addition, it offers certainty in terms of the price of carbon, which translates into certainties for investments in green technologies and incentives for first movers. A levy may also be relatively easier to implement and enforce due to the ability to leverage on existing documentation and verification systems.
- .11 Document ISWG GHG 10/5/2 is a document that simplifies a complex problem and addresses only part of the elements necessary for a satisfactory discussion on the introduction of market-based measures in the IMO. The text briefly argues the justification for the adoption of its proposal, stating (paragraph 2) that no other proposal presented detail and regulatory robustness for a medium-term measure. This is a questionable justification, since, according to the Initial Strategy of the IMO, medium-term measures must be finalized and agreed between the members of the IMO between 2023 and 2030. Since the Parties are dedicated to the approval and implementation short-term measures, as well as the impact assessment and preparations for the revision of the Initial Strategy, it cannot be said that the lack of more detailed and robust proposals for market-based measures is due to the greater advantage of the recommendations of the document 10/ 5/2, but the lack of opportunity for a deeper debate on the requirements of a market instrument that complements the efforts to mitigate emissions from international shipping.
- .12 The main drawback to a GHG levy is it gives no guarantee that it will achieve the levels of ambition. Given no direct linkage with either carbon intensity or GHG emissions, implications of a levy on the levels of ambitions are hard to tell.
- .13 If the new fuels do not actually exist in a form and scale which can be deployed by international shipping, the levy will be merely a revenue raising exercise, which will in turn impede the sustainable development of international shipping.
- .14 A levy mechanism may not directly involve other stakeholders except for the charterers who may pay the levy instead of the owners, but the revenue raised may flow to the whole maritime value chain, including yards, manufactures, fuel/energy producers and ports.
- .15 The proposal to create the IMO Climate Fund lacks greater clarity about its governance, composition and ways of using the funds to be generated by collecting the proposed carbon tax. It is not clear who will receive the resources

for research activities, and the lack of differentiation in the application of the tax may, in practice, imply subversion of the principle of common but differentiated responsibilities

- .16 With regard to funding in document ISWG-GHG 10/5/2
- .1 Who will bear the costs of a measure, as we need to be cognizant of how much of the cost of a levy is transferred to the cost of freight, thus affecting developing countries who depend on foreign trade;
 - .2 How much revenue is expected, as it is presented that it could be enough for compensating developing countries that are negatively impacted and financing research and development; and
 - .3 With regard to financing of research and development, which R&D would it finance? How do we provide for freedom of access and transfer of technology for newly developed technologies or fuels?
- .17 The risk of a levy being only revenue generation is in our view preferable to the risk that a measure results in a rationing of shipping.

Cap-and-Trade System

- .13 With regard to a “Cap-and-Trade System” the following general comments, inter alia, were made:
- .1 An ETS as a global mechanism providing a long-term price signal on GHG emissions in line with a pathway to a 2050 reduction target, combined with a clear technical requirement and a robust compliance mechanism would give incentives to early movers.
 - .2 Early movers would get a lower emission price in a trading system when reducing emissions, while being in line with the technical requirement on fuel GHG limit.
 - .3 Those who do not reduce emissions will need to pay the emission price. And if also not in compliance with the technical requirement on fuel GHG limit, a fine or penalty should occur in addition to make sure that there is no competitive advantage in non-compliance.
 - .4 The combination of a technical requirement providing certainty for a gradual phase in of fuel with low GHG intensity and the price signal on GHG emissions through an ETS will provide for both certainty and incentives to achieve cost-effective emission reductions.
 - .5 It will be unknown, under a cap-and-trade scheme, how quickly the supply of carbon allowances may reduce over time.
 - .6 Under the cap-and-trade system proposed in document 10/5/6, if the number of available emission allowances is progressively withdrawn without knowing what the future demand for trade might be, there would seem to be a risk that trade by sea could in effect be rationed, with serious impacts on national economies and sustainable development. This is why we think a levy system would be preferable, as IMO Member States will remain in control of the carbon price.

- .7 We plan to develop the proposals (in in 10/5/6) further together with interested delegations and observer organisations in line with the timeline identified in the work plan, including undertaking the impact assessment in line with the procedure in Circular 885 and any improvements made thereto.
- .8 The alternative to a carbon levy of a global cap and trade system would seem to be hugely complex to establish, with a serious risk of market distortion and very negative impacts on trade, which in effect could become subject to rationing;
- .9 The expected increase in transport cost due to the reduced number of allowances would be important to trigger action. However, as the cost of allowances over time is quite uncertain, with a possibility to increase, decrease or even collapse, the decisions with regard to the deployment of low/zero-carbon technologies would be more like speculation than investment. Given the variable and volatile price of carbon allowances under a trading system, it is difficult to estimate how much revenue would be raised and how much could be utilized to fund the climate change adaption and to support R&D.
- .10 the establishment and operation of a cap-and-trade system would be a very complex undertaking of which both the Organization and the shipping industry have no experience. The most tough and time-consuming negotiations can be foreseeable on how to set a meaningful cap trajectory, how to set rules for auctioning, trading and surrendering of Ship Emission Units, as well as how the revenues from the auctioning would be administered and utilized.
- .11 With regards to document ISWG GHG 10/5/6, we cannot support the proposal in paragraph 54, that proposes that the Group should agree in principle to establish a fuel GHG intensity limit and an emissions cap and trading as a package of mid- and long-term measures to be considered further. As stated previously, in our view, it is a premature action.
- .12 On 10/5/6 specifically, we would like to understand further whether there is a need for differential treatment between existing ships and new builds. This kind of separation may risk creating a perverse incentive to continue to use existing ships.
- .13 We anticipate that the supply of alternative fuels will gradually increase, and as such a requirement for all ships to reduce the GHG intensity limit at the same time, may not be feasible as there is not enough alternative fuel available. This is why we want to explore possible ways to introduce the limit in stages. We have proposed by delivery year, but this could also be done for example by ship type.
- .14 Where a levy may provide certainty on the price signal to the industry, a cap-and-trade scheme can provide more certainty on the level of emissions reduction, while the price is then defined by the market. While the environmental clarity is a benefit, this can mean the price is volatile and unpredictable. There are, however, ways of addressing this, for example with an adjustment mechanism such as a carbon price floor or ceiling, to keep the price of a permit within acceptable bounds.
- .15 It should be noted that the revenues generated from MBMs should be utilized for GHG reductions in international shipping. When "IMO-ETS" is linked to

existing ETS markets such as EU-ETS, financial resource will flow out from the international shipping sector to other sectors.

GHG fuel standard

.14 With regard to a “GHG fuel standard”, the following general comments, inter alia, were made:

- .1 Consistently hear need for regulatory certainty from industry. LGFS does just that - ensures transition to zero-emission fuels/vessels. Levy does not.
- .2 We support that all the proposals put forward to this session are kept on the table and are taken forward for further consideration at MEPC, as there is a need to consider a full range of market-based measures and their possible combination with standard-based measures, for example the Low GHG Fuel Standard, as proposed in ISWG-GHG 10/5/3.
- .3 With a low GHG fuel standard what is regulated is the GHG intensity of the fuel directly, and as a result the total volume of emissions from the sector. It would provide predictability over time and complement the recently adopted energy efficiency measures. We note that there are similarities between 10/5/3 and the fuel GHG intensity limit described in 10/5/6 by Norway, which we also support in principle although a number of issues requires further discussion and development. There is a need to ensure a globally effective and fair transition. We recognize that the low GHG fuel standard as described in 10/5/3 may need complementary efforts such as carbon-pricing to ensure this.
- .4 The LGFS will reduce the GHG intensity of fuels and energy used by ships. Provided that the reduction rate of the GHG intensity is larger than the increase in energy demand from the sector resulting from increased demand, this will lower the GHG emissions.
- .5 GHG intensity targets can be even revised and aligned with possibly new reduction targets in the revised IMO Strategy. Hence the LGFS inherently ensures that any emissions target will be met, provided that the measure will be adequately enforced.
- .6 The LGFS and all other measures that aim to increase the use of low- and zero-carbon fuels will increase transport costs and have impacts on States. In first instance, the impacts of the LGFS will be lower because no costs are required to collect and manage revenues and there is no outflow of money from the sector. In addition, States that are able to produce low- and zero-carbon fuels are likely to benefit from increased demand for these fuels.
- .7 However, it is to be expected that on balance, several states might be negatively affected by a LGFS and some of them may be disproportionately affected. The question is then, how can these impacts be addressed? First of all, in line with ISWG-GHG 7/2/11 we see little merit in permanent exemptions because that would leave some States reliant on technology that will become obsolete.

It is therefore preferable to address the disproportionately negative impacts directly. This will require revenues. In principle, we see two options for that:

- .1 by combining a LGFS with a revenue-raising measure like a levy or an ETS; or

- .2 by applying penalties for non-compliance. It is essential for this delegation that there is an equitable transition and no country is left behind.
- .8 The LGFS will increase the demand for low- and zero-carbon fuels. Given the interest expressed in producing these fuels by many actors, and the emerging supply of these fuels, we are confident that an increase in demand will result in an increase in production and supply.
- .9 In general, a fuel standard carries a little risk that initially, the demand will only be for drop-in low-carbon fuels, which would not trigger innovation in engines or fuel cells, bunkering infrastructure, et cetera. To prevent that, it is necessary to allow ships to comply collectively.
- .10 In addition, there may be a need to initially require additional incentives to zero-carbon fuels.
- .11 Because the LGFS focuses on reducing the GHG intensity of fuels and energy sources, it ensures that this transition starts as soon as the LGFS is implemented.
- .12 Because the LGFS will reduce GHG intensity according to an agreed pathway, it provides long-term certainty to producers of fuels, bunker suppliers, yards, equipment manufacturers and shipping companies.
- .13 I wish to highlight that such a Low GHG Fuel Standard could be a stand-alone measure but could also coexist with other measures, including measures that raise revenues, as such measures may help to support complementary efforts that may be needed to address disproportionately negative impacts on States.
- .14 We submit that Fuel standards cannot address the need for a "fair and inclusive" transition unless combined with a measure that raises a predictable and material quantity of revenue. It is not clear how fuel standard would be additional to CII and therefore why the admin burden they create is justified.
- .15 The only measure to effectively promote a global introduction of alternative fuels is an IMO low-GHG fuel standard. Such a fuel standard based on a life-cycle methodology would ensure a gradual uptake of fuels with lower GHG emissions (with increasing level of stringency up to 2050).
- .16 With regard to the difference between a fuel and carbon intensity standard. It is true that both are technical measures, which IMO is well used to design, implement and enforce. But that is where the similarity between both measures ends.
- .17 In fact, the operational carbon intensity standard would have only a very limited impact on the uptake of alternative fuels in the short term as the market actors first favour energy efficiency solutions with lower marginal abatement costs and less complexities in terms of introduction.

On the contrary, a low-GHG fuel standard would provide an energy-specific, predictable standard, setting a limit value for the GHG emissions intensity of energy used onboard ships - without prescribing any limits in the use of such energy in absolute or relative terms per transport work.

- .18 A technical, low-GHG fuel standard:
 - .1 Enhances predictability through the setting of specific targets for decarbonising the energy mix used on-board, which provides certainty on future obligations, facilitates planning of investments, and counteracts a 'wait-and-see' attitude of operators.
 - .2 Sets a clear pathway for the evolution of such energy mix,
 - .3 Establishes minimum levels of demand for low- and zero-carbon fuels.
- .19 The GHG fuel standard is a prescriptive measure rather than a goal-based measure. Its major advantage is to promote the alternative fuels and its major disadvantage is to only promote the alternative fuels, which purpose has been fully captured by the existing CII mechanism. The CII mechanism, as a goal-based measure, can incentivize reductions in both fuel GHG intensity and fuel consumption. Under the CII mechanism, ships are allowed to use any means to reduce their operational carbon intensity over time, including the uptake of low/zero carbon fuels and energy. In this regard, the fuel standard is redundancy and duplication of the existing regulations already set up by the IMO.
- .20 The GHG or carbon intensity of fuel is not equivalent to actual carbon intensity of ships and shipping, it can neither be directly linked to total GHG emissions until the standard is set at zero. Therefore, it cannot guarantee a predictable effect on achieving the levels of ambition.
- .21 The GHG fuel standard will not incentivize efforts to improve energy efficiency of ships or reduce total fuel consumption and total GHG emissions, such as speed optimization, technical retrofit, as well as Carbon Capture Use and Storage.
- .22 The only way to comply with the fuel standard is the use of eligible fuels, by individual ships or by a group of ships as a pool. As ships are given no other choices for compliance, cost-effectiveness is a meaningless point here. Besides, if the standard is set on the WtW life-cycle value as specified in document ISWG-GHG 9/2, a part of the GHG reduction responsibilities would be shifted from upstream to shipping industry. However, ship operators have no control or influence over the entire fuel production-to-bunkering supply chain to ensure an adequate supply of low or net zero WTW GHG intensity fuels.
- .23 The implementation and enforcement of a fuel standard will be more transparent and less burdensome than an MBM. But the real challenge comes from the availability of the compliant and affordable fuel. This also relates to Point 7, since the availability of the eligible fuels are actually in the hands of other stakeholders.
- .24 In case eligible fuels are not available, ships will need alternative methods to comply with the standard, such as a fine or carbon-pricing. This means the fuel standard will not be applied as a standalone measure and thus should not be regarded as a simple technical measure. Rather, it would be a technical element of a complex regulatory package.

- .25 Impacts on states of a GHG Fuel Standard will be caused by three consequences: the increase in shipping cost, the reduction in transport supply, and the additional responsibilities from individual countries and upstream industry.
- .26 It is an unfortunate but well-known fact that unlike aviation and road transport, the global marine bunker supply industry remains heavily unregulated. With very few geographical exceptions, Shipowners and operators are at the mercy of suppliers operating in regions that allow the supply of fuel with differing standards of quality. As an example, we note that even after the encouragement from the Maritime Safety Committee at its 103rd session, many member States including a large majority of the co-sponsors of this paper do not have an established bunker licensing scheme for suppliers operating in their jurisdiction. It is therefore interesting and concerning to note that the submission proposes ambitious targets regarding the development of certification instruments on GHG impact for fuel producers and compliance for ships without the mention of a similar scheme for fuel quality and safety for suppliers.
- .27 We note that the concept presented by the co-sponsors is heavily dependent on the LCA methodology that is currently being progressed through a separate work stream on developing standalone guidelines on this issue. It is our view that unless the LCA work is completed and basic issues such as how well to tank emissions are to be accounted for when it comes to the responsibility assigned to ships are addressed, work on the development of an appropriate LGFS will be difficult.
- .28 It is clear that the LGFS, if and when implemented, will have major overlaps with many other provisions in MARPOL such as the CII reduction requirements. Going one step further the LGFS can be interpreted as Version 2.0 of the CII regulations. Careful consideration of this aspect is needed to avoid multiple counting of emission responsibilities.
- .29 Questions have been raised about the difference between the LGFS and the CII which we have recently adopted. The measures are different in nature and in effect. The difference in nature is that the CII is a metric with an associated ranking. It applies to specific ships, not all, and aims to lower emissions per tonne-mile. At best, the CII will encourage ships to take the most cost-effective measures that improve the energy efficiency. In contrast, the LGFS applies to all ships, will be mandatory and will require ships to take relatively expensive measure to reduce emissions, namely, to use low- and zero-carbon fuels. As such, the LGFS ensures that the fuel transition starts now.
- .30 Some delegations have voiced concerns that the fuels may not be available in time. The LGFS addresses this concern in several ways. By starting early, it allows the shipping sector to make a gradual transition and to gradually build up the fuel production and the bunkering infrastructure. As such, it gives a boost to the many small-scale projects undertaken as we speak. Such a smooth transition has a lower risk of supply shortages than a sudden transition. Moreover, by ensuring that there is demand for low- and zero-carbon fuels, it provides certainty to all actors involved in the production and supply of these fuels. The sulphur cap and many other measures have shown that if there is certainty of demand, the market will provide what is required. Finally, we propose to regularly review the targets in order to ensure that they are both achievable and ambitious.

- .31 Some parties have raised concern about the access to technologies. There are several aspects to that, but let us concentrate on the access to technologies that produce fuels. The largest input to the production process is sunlight, either to let plants grow that can be converted into biofuels or to produce renewable energy that can be used to produce zero-carbon fuels. This technology is currently already available worldwide, and the International Energy Agency has calculated that the best locations for fuel production are in developing countries.
- .32 The LGFS will rely mainly on BDN and DCS to verify compliance, by relying on existing and possibly enhanced monitoring and enforcement mechanisms. It keeps the administrative costs to a minimum while at the same time ensuring that the measure is enforced and thus has the intended effect.
- .33 We propose the well-to-propeller approach in the fuel GHG limit (in 10/5/6): a well-to-propeller approach is the basis for the proposal, however, if we do not have the necessary LCA framework in place for a robust assessment of well-to-tank emissions, we could start with a tank-to-propeller approach and include the well to tank part once the framework for this is in place.
- .34 The LGFS could represent the risk to stimulate incremental solutions rather than the long run scalable solutions that are needed.
- .35 LGFS can be put in place through an obligation on ships alone which do not constitute the necessary demand for suppliers to make the necessary investments. Stimulating the introduction of low and zero GHG fuels into the market will necessitate to consider broader and creative mechanisms to provide massive scale investments.
- .36 Any future fuel GHG intensity standard will need to align with the methodology contained in the IMO's prospective fuel lifecycle guidelines to estimate the emissions intensity of a fuel.
- .37 The low GHG fuel standard is a goal-based measure as it leaves the choice of fuel/energy mix to the shipping industry. Like others have said, it complements the short-term measure which has a focus on energy efficiency.
- .38 The low GHG fuel standard is suggested to be set in MARPOL annex VI.
- .39 We are of the view that any option for the path proposed by document 10/5/3 should have 2008 as a reference year for the international maritime sector.
- .40 The issue of the safety of ships using fuel blends should be considered as part of the discussion on LCFS.

ANNEX 3

**TERMS OF REFERENCE FOR THE ELEVENTH AND TWELFTH INTERSESSIONAL
MEETING OF THE WORKING GROUP ON REDUCTION OF GHG EMISSIONS FROM
SHIPS, AS WELL AS AN AD-HOC EXPERT WORKSHOP ON IMPACT ASSESSMENTS**

[Insert document ISWG-GHG 10/J/5]

ANNEX X

ANNEX 4

SUMMARIES OF DOCUMENTS TO BE CONSIDERED BY ISWG-GHG 10

AGENDA ITEM 2 CONSIDERATION OF ANY ISSUE ARISING FROM THE INTERIM REPORT OF THE CORRESPONDENCE GROUP ON CARBON INTENSITY REDUCTION

SYMBOL	BY	TITLE	SUMMARY
MEPC 77/7/10	China, Japan and the European Commission	Interim report of the Correspondence Group on Carbon Intensity Reduction	This document provides the interim report of the Correspondence Group on Carbon Intensity Reduction.
MEPC 77/7/2	Japan, BIMCO and RINA	Draft amendment to the EEXI guidelines and associated guidance	This document proposes draft amendments to the EEXI calculation guidelines and the EEXI survey and certification guidelines to incorporate an alternative method to determine a reference speed (V_{ref}) for EEXI, based on in-service ship performance measurements.
MEPC 77/7/9	India	Correction factor for sludge for CII calculations	This document proposes to include a correction factor for sludge which aims at a more accurate calculation of CO ₂ emissions in the CII framework.
MEPC 77/7/13	Norway	Adjustment of CII reference line for combination carriers	The document proposes to review and update the reference line parameters for combination carriers. In the <i>2021 Guidelines on the reference lines for use with operational carbon intensity indicators</i> combination carriers have a steeper CII reference line than tankers and bulk carriers, and large combination carriers will be subject to stricter CII requirements than similarly sized bulk carriers. The document suggests that the reference line for combination carriers should be recalculated so that the slope or rate of reduction is equal to that of bulk carriers, due to their fundamentally similar design.

SYMBOL	BY	TITLE	SUMMARY
MEPC 77/7/14	Norway	CII correction factor for higher cargo utilisation	This document proposes a cargo utilization correction factor for standard tankers, bulk carriers and combination carriers above 70,000 DWT. The document suggests that using the AER as CII with deadweight as proxy for cargo penalizes ships which manage to optimize their trade patterns to have a higher utilization. The document suggests that the correction factor should apply to those ships which have a share of laden distance sailed above the average for the industry, correcting for the estimated additional fuel consumption in laden condition and related cargo operations.
MEPC 77/7/24	India	Comments on document MEPC 77/7/2 (Japan et al.)	This document provides comments on document MEPC 77/7/2 (Japan et al.) and supports the proposed in-service measurement method for calculation of EEXI. The document also suggests to highlight an inconsistency in the EEXI Guidelines with respect to calculation of $P_{ME(i)}$ for ships fitted with shaft generators and EPL and proposes an amendment which aims to resolve it.
MEPC 77/7/25	Republic of Korea	Comments on document MEPC 77/7/2 (Japan et al.)	This document provides comments on document MEPC 77/7/2 (Japan et al.), supporting the proposed environment conditions for in-service performance measurement with double runs for calculation of EEXI in principle. This document also provides a case study of in-service performance measurement for a large-sized container ship and a further recommendation regarding the on-board witness issue.
MEPC 77/7/26	IACS	Comments on document MEPC 77/7/2 (Japan et al.)	This document comments on document MEPC 77/7/2 (Japan et al.) containing the draft amendments to the EEXI calculation guidelines and associated guidance to incorporate the in-service measurement method.
MEPC 77/7/29	Pacific Environment and CSC	Transparency for CII issues	This document comments on the issue of public accessibility for a ship's attained Carbon Intensity Indicator (CII) and associated rating. The document proposes the creation of a public database which is suggested would resolve this issue.

AGENDA ITEM 3 FURTHER CONSIDERATION OF THE SCOPE OF AND TIMELINE FOR DEVELOPMENT OF A MANDATORY CARBON INTENSITY CODE

SYMBOL	BY	TITLE	SUMMARY
ISWG-GHG 10/3	United States	Proposal on the process to develop a Mandatory Carbon Intensity Code	This document provides a proposal for the process to develop a mandatory Carbon Intensity Code (CIC). It suggests the establishment of a correspondence group at MEPC 77 for approval of a draft CIC by MEPC 78. The author invokes that the consolidation of the Carbon Intensity guidelines in the Code could help to reduce possible inconsistent definitions and application of the mandatory design and calculation methodologies and would help to ensure harmonized implementation and a level playing field for all ships subject to the carbon intensity programmes when made mandatory through amendments to MARPOL Annex VI.

AGENDA ITEM 4 CONSIDERATION OF CONCRETE PROPOSALS ON HOW TO KEEP THE IMPACTS OF THE SHORT-TERM MEASURE UNDER REVIEW AND HOW TO UNDERTAKE A LESSONS-LEARNED EXERCISE OF THE COMPREHENSIVE IMPACT ASSESSMENT OF THE SHORT-TERM MEASURE

SYMBOL	BY	TITLE	SUMMARY
ISWG-GHG 10/4	Denmark, France, Germany, Netherlands, Spain and the United States	Proposal for structuring the lessons-learned exercise	This document submits a structure and a calendar for the lessons-learned exercise. It suggests to establish an expert workshop and provides brief draft terms of reference for it. In terms of the schedule, it suggests that the workshop could be held in the first half of 2022 and report to MEPC 79 (autumn 2022) so that MEPC 80 (spring 2023) can agree on a new procedure, as appropriate.
ISWG-GHG 10/4/1	Argentina, Brazil, Chile, Saudi Arabia, United Arab Emirates	Lessons learned from the impact assessment of the short-term measure on States	This document presents some lessons-learned from the assessment of the impacts of the short-term measure on States with particular focus on developing countries. It proposes to take them into account for the review of MEPC.1/Circ.885 and be fully incorporated in the procedure for future impact assessment. The document also suggests to start working on the follow-up of the impacts on States of the short-term measure and to integrate considerations for improving the impact assessment into the implementation of the work plan for mid- and long-term measures approved at MEPC 76.

AGENDA ITEM 5 CONSIDERATION OF MID-TERM GHG REDUCTION MEASURES IN THE CONTEXT OF PHASE I OF THE WORKPLAN FOR THE DEVELOPMENT OF MID-AND LONG-TERM MEASURES

SYMBOL	BY	TITLE	SUMMARY
ISWG-GHG 10/5	World Bank	Market-Based Measures to decarbonize international maritime transport: carbon revenue use, governance, and management	The document provides a high-level analysis of selected topics related to the use of these carbon revenues. In particular, it focuses on the following questions: (1) what could carbon revenues from international shipping be used for?; (2) who could be the beneficiaries of carbon revenues from international shipping?; and (3) how could adequate governance and management of carbon revenues from international shipping be imagined?
ISWG-GHG 10/5/1	Finland	Clarifications on MEPC 76/7/9 concerning working arrangements	The document clarifies some issues presented in document MEPC 76/7/9 in light of comments received and concerns expressed at MEPC 76, especially on possible budgetary implications and timing of the shift to new working arrangements, as well as the progress and meaning of working with multiple work stream
ISWG-GHG 10/5/2	ICS and INTERCARGO	A levy-based MBM, per tonne of CO2 emissions, to expedite the uptake and deployment of zero-carbon fuels	This document comments on document MEPC 76/7/12 (Marshall Islands and Solomon Islands). It sets out a regulatory package suggesting to demonstrate how a levy-based MBM, based on mandatory IMO climate contributions by ships, per tonne of CO2 emitted, to an IMO Climate Fund, could be brought into effect quickly via adoption of a new chapter to Annex VI of the MARPOL Convention. The document suggests that a levy-based system will be the easiest to establish quickly while meeting those principles already agreed by the Committee to use as reference for assessing proposals for MBMs

SYMBOL	BY	TITLE	SUMMARY
ISWG-GHG 10/5/3	Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the European Commission	Comments on MEPC 76/7/15 by Denmark et al and proposing a Low GHG Fuel Standard for international shipping	This document comments on document MEPC 76/7/15 by providing more details on the Low GHG Fuel Standard (LGFS). It suggests the LGFS would prescribe a decreasing limit value for the average GHG emissions intensity of fuels used by ships and would allow ships a high degree of flexibility in choosing how to comply: (1) by proving that they have exclusively used fuels with a GHG emissions intensity at or below the limit value during the compliance period; (2) by proving that they have used both traditional and renewable fuels in such a way that the average GHG emissions intensity of the fuels used during a compliance period is at or below the limit value; and (3) by participating in a flexible mechanism, equally accessible to all ships, that provides incentives to produce and use low- and zero-carbon fuels
ISWG-GHG 10/5/4	Norway	A discussion of different principles behind carbon pricing models	This document presents a discussion of different principles behind carbon pricing models. It suggests that carbon pricing can be established through various models with different implications for ships and Member States. The document discusses possible carbon pricing models, identifies their characteristics, and assesses pros and cons of different models. The document identifies three purposes of the carbon price: (1) reduce GHG emissions by making emission reduction solutions financially attractive; (2) alternative method of compliance or as a part of a sanction regime connected to a technical requirement; and (3) as a part of a climate liability scheme where revenues could be used for climate adaptation or compensation.

SYMBOL	BY	TITLE	SUMMARY
ISWG-GHG 10/5/5	Norway and United States	Roadmap for uptake of sustainable low- and zero-carbon fuels	This document provides further analysis from DNV's Maritime Forecast to 2050 (2020-edition) with scenarios for the volume of carbon-neutral fuels suggested to be needed to reach the Organization's 2050 ambitions including investment needs and cost impact. The document presents a road map characterizing three phases for the uptake of fuels (exploration, preparation, upscaling) which is used as background for the measures proposed in document ISWG-GHG 10/5/6 (Norway)
ISWG-GHG 10/5/6	Norway	Proposal for regulatory mechanisms for the effective uptake of sustainable low-carbon and zero-carbon fuels	This document concretely elaborates on two measures contained in document MEPC 76/7/2: a fuel GHG intensity limit and GHG emissions cap and trading, working in combination for the effective uptake of sustainable low-carbon and zero-carbon fuels to meet the 2050 ambitions in the Initial Strategy. Either one of the measures can also be implemented individually, with some adjustments.
MEPC 76/7/2	Norway	Concepts for a regulatory mechanism for the effective uptake of alternative low-carbon and zero-carbon fuels	This document sets out the three following concepts for a possible regulatory mechanism for the effective uptake of alternative low-carbon and zero-carbon fuels: a fuel CO ₂ /GHG limit; emission cap and trading; and carbon intensity indicators and credit trading/fleet averaging. It proposes that further development of these concepts should take place in a structured process established by the Committee in order to identify the desired regulatory mechanism.
MEPC 76/7/9	Australia, Bahamas, Denmark, Finland, Liberia, Mexico, Netherlands, Nigeria and United Kingdom	Proposal for future working arrangements to support the follow-up actions of the Initial IMO strategy on reduction of GHG emissions from ships	This document contains a proposal for new working arrangements to accelerate discussions on various GHG-related work streams, in particular the establishment of a Standing Technical Group on Reduction of GHG Emissions from Ships (ST-GHG) to replace the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG) in the future.

SYMBOL	BY	TITLE	SUMMARY
MEPC 76/7/11	Belgium, Marshall Islands and Solomon Islands	Legal bases of candidate IMO measures to reduce GHG emissions from ships	This document aims to answer the questions raised at MEPC 75 regarding legal possibilities of IMO measures, in particular mid-term (economic) measures. It suggests that the IMO Convention gave the IMO very broad objectives and powers to achieve them and contends that as long as IMO Member States agreed to a measure and it complied with IMO procedures, it would be valid. The document also suggests that the IMO Convention places no restriction on IMO agreeing to measures that would raise money or set up an independent body to administer those funds. It proposes to reopen the debate on increasing the level of ambition in the IMO Strategy and that all further negotiations on measures would be conducted in the light of the suggested need for such revision of the Initial Strategy.
MEPC 76/7/12	Marshall Islands and Solomon Islands	Proposal for IMO to establish a universal mandatory greenhouse gas levy	This document contains a proposal for a mandatory levy on GHG emissions from international shipping as an immediate priority measure with a view to incentivizing a rapid shift away from fossil fuel with the highest priority. It proposes an entry level by 2025 of \$100 per tonne carbon dioxide equivalent on heavy fuel oil with upward ratchets in a five-yearly review cycle. The document suggests a formula for disbursement of monies raised and to reopen the debate on increasing the level of ambition required in the Revised Strategy.

SYMBOL	BY	TITLE	SUMMARY
MEPC 76/7/15	Denmark, France, Germany and Sweden	The importance of starting work on mid-term GHG reduction measures that incentivize the use of sustainable low-carbon and zero-carbon fuels in international shipping	This document outlines the importance of starting work on mid-term GHG reduction measures that would incentivize the use of sustainable low-carbon and zero-carbon fuels in international shipping. It argues that the transition to sustainable low-carbon and zero-carbon fuels should start well before 2030 and that there was an imminent need for mid-term measures to incentivize the use of these fuels. The document proposes criteria which the mid-term measures should meet and suggests measures to incentivize the use of low-carbon and zero-carbon fuels. It also proposes a dedicated agenda item at ISWG-GHG on "the consideration of mid-term measures aimed at incentivizing the use of sustainable low- and zero-carbon fuels" and a dedicated work stream on how to measure GHG emissions from alternative fuels and associated sustainability criteria.
MEPC 76/7/39	ICS, BIMCO, CLIA, INTERCARGO, IPTA, IMCA, INTERFERRY and WSC	Consideration of market-based measures	This document proposes that the Committee should decide in principle to commence deliberations on mandatory MBMs. It suggests that the Committee should commence discussions before 2023 with a view to considering key issues such as the development of principles as to how monies generated from MBMs should be used and that the Committee should agree to allow consideration of different candidate measures, including short-term measures such as the IMRB/IMRF proposal and mid-term measures such as MBMs, in parallel.

SYMBOL	BY	TITLE	SUMMARY
MEPC 76/7/40	Belgium	Comments on legal issues of regulatory mechanism in MARPOL	This document comments on documents MEPC 76/7/2 (Norway), MEPC 76/7/11 and MEPC 76/INF.22 (Belgium et al.) and suggests that the two proposed levies in documents MEPC 76/7/7 (Denmark et al.) and document MEPC 76/7/12 (Marshall Islands and Solomon Islands) are similar in the respect that no payments would be collected by States and no disbursements would be made by any State; that they are conceptually similar to the requirement of the International Convention on Civil Liability for Oil Pollution Damage (CLC) for certain ships to maintain insurance and that both of the levy proposals would create a separate entity that received and transmitted the fund. The document concludes that the proposed levies could be adopted through the same legal pathways as suggested in document MEPC 76/7/11, such as, for example, a modification of MARPOL Annex VI.
MEPC 76/7/42	Netherlands and OECD	Importance of starting work on mid-term measures (carbon pricing, fuel standards)	This document comments on document MEPC 76/7/15 (Denmark et al.) underlining the importance of starting work on mid-term measures, in particular carbon pricing and/or fuel standards, by building on discussions held during two workshops on medium-term measures to decarbonize shipping, organized by the International Transport Forum at OECD and the Netherlands Ministry of Infrastructure and Water Management in the beginning of 2021. It introduces three conceptual elements to help answer which mid-term measures and in which sequence they should be implemented: market failures, interdependencies and transition pathways. The document suggests commencing the consideration of mid-term measures, with a priority on measures that could create a market for zero-carbon shipping namely carbon pricing and/or fuel standards at a significant stringency and with revenue to support deployment.

SYMBOL	BY	TITLE	SUMMARY
MEPC 76/7/60	Pacific Environment	Explanatory document concerning GHG levies	This document comments on documents MEPC 76/7/7 (Denmark et al.) and MEPC 76/7/12 (Marshall Islands and Solomon Islands). It describes the general effects of a possible GHG levy and compares these effects to those of alternative measures for the purpose of demonstrating that an ambitious GHG levy on ships would be a more effective stand-alone measure to raise revenue for shipping's low and zero-emission transition than a small fuel tax and a Research and Development Fund. The document suggests that there were economic opportunities created by a levy for the producers of low-carbon fuels and those involved in the retrofitting of ships. It concludes that the IMRB proposal would not achieve similar results to that of a significant GHG levy despite the marginally increased research, as no revenue would be available to support implementation and the slight cost increase would not create a market for new energy sources.
MEPC 76/INF.22	Belgium, Marshall Islands and Solomon Islands	Study on the legal basis of candidate IMO measures to reduce GHG emissions from ships	This document presents a study on the legal basis of candidate IMO measures to reduce GHG emissions from ships which suggested that IMO would have the power to regulate the climate impacts of international shipping through the powers conferred on it by the IMO Convention, that IMO would have the authority to address climate issues, that none of IMO's powers would be limited to non-economic measures nor would the establishment of an independent body be prohibited and that there would be no legal limits placed upon the use of the tacit procedure to amend existing Annexes to MARPOL.