Briefings of IMO Meeting
MEPC 72 (09 - 13 April 2018)

BRIEFING STATUS

☐ *Flash*

☑ *Final*

Briefings of IMO Meeting are sequentially released by 2 steps as *Flash* - *Final*

Ref.: IMO-0008-2018

Subject: News Final of MEPC 72

The Marine Environment Protection Committee, its 72nd session was held at IMO HQ from 9 to 13 April 2018. With respect to the decisions made by MEPC 72, we already published the MEPC 72 – News Flash containing information of the main and summarized outputs from the Committee. We now release MEPC 72 – News Final as 2nd step containing overall outcomes of the session and applicable measures of those. Herewith, we would like to inform detailed results on the Committee, please make use of reference data for relevant subject. In particular, it is noted that the amendments to MARPOL Convention and related mandatory instruments will be effective as of 1 Jan. 2019, 13 Oct. 2019 or 1 Jan. 2020, and also any guidelines adopted as a 'Resolution' will be effective immediately.

1. Ballast Water Management Convention

- The entry into force conditions of the Ballast Water Management Convention had been met on 8 September 2016 by the accession of Finland, and this Convention was therefore entered into force on 8 September 2017. The ships to which this Convention applies constructed on or after the date of entry into force of the Convention shall be required to install a BWMS with a view to complying D-2 performance standard, and the ships constructed before the date shall be required to comply with D-2 performance standard by the first or second IOPP renewal survey according to the completion date of each ship's pervious IOPP renewal survey.

1.1 1 Final approval was not granted

- Enviroclean inTank™ (Norway)

1.2 Type approved BWMSs reported to MEPC 72

- New type approvals (2): Semb-Eco LUV 250, 500, 750, 1000 and 1500 ballast water management system(Singapore), Alfa Laval PureBallast 3.2 ballast water management system(Norway)

1.3 The application and exemption of the Convention for the specific ship types

- For the proposal that the rescue tug boats which were normally operated for rescue purposes only should be excluded from the application of the Convention, there was debate that the provisions of the Convention allowing discharge of ballast water for

emergency situation exemptions already exist, and it should be subject to the Convention as the ship type may discharge ballast water in normal services not emergency situations. Furthermore, there was an opinion that this type of consideration may be dealt with in the experience building phase accordingly.

- For the proposal specifying technical and operational challenges for implementing ballast water exchange and retrofitting a BWMS onboard faced by unmanned and non-self-propelled barges, there were following considerations:

.1 given regulation B-4.4 of the Convention stipulating that ballast water exchange is allowed in the event that the ballast water exchange in considered to threaten the safety or stability of the ship, its crew, or its passengers due to adverse weather, ship design or stress, equipment failure, or any other extraordinary conditions, the discharge of ballast water for UNSP barge may also be subject to this regulation as an exception; and

.2 the technical and operational challenges and safety risks faced by such barges; these risks include ballasting/de-ballasting through using onboard portable pumps; the transfer of personnel during open sea tows to manage the portable arrangement onboard; and the lack of machinery and ballast systems were identified.

- For above two proposals, the Committee requested interested Parties to submit a New Output to next MEPC 73 for further consideration.

1.4 Ballast Water Management Plan updates in accordance with Contingency Measures

- MEPC 71 approved BWM.2/Circ.62 which is practically allowing for the discharge of non-compliant ballast water under the consultation with the port Authorities. At that time, the question was raised as to when the BWMP should be revised and approved to address the contingency measure.

- There was debate whether contingency measures should be deemed as mandatory and what elements are and are not relevant to include in onboard BWMP, and the Committee invited further proposals to clarify when elements introduced by the Guidance on contingency measures under the BWM Convention should be included in the BWMP.

1.5 Revised Guidance on Ballast Water Management System

- Guidance on Scaling of BWMS (BWM.2/Circ.33): These amendments are to change all the references to the G8 Guidelines to references to the 'BWMS Code' and for extrapolating test results for increased or reduced treatment capacities validated by mathematical model or calculations. And most vulnerable models of a series are to be

tested using land based or shipboard testing, numerical validation can be used to expect that the key performance parameters (dosage concentration, UV intensity, filter flux density, etc) required to achieve the system's efficacy in the scaled unit design.

- Guidance on the BWM System type approval process under G8 Guidelines (BWM.2/Circ.43): These amendments are to change all the references to the G8 Guidelines to references to the 'BWMS Code'. This revision includes direction for the Administration on determining the acceptability of system manufacturers, using third party's quality assurance program during the approval process and verifying that a manufacturer is fully prepared to carry out the testing needed for type approval

1.6 Commissioning Test for BWMS at initial survey

- The Committee considered two new provisions in the 2017 Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), adopted in December 2017 as Res.A.1120(30), these provisions recommend that 'Sampling and Analysis' of treated water after installation of BWMS onboard are carried out to confirm the compliance with D-2 performance standard at initial survey of the Convention for new and existing ships.

- After consideration, MEPC 72 developed a draft guidance on sampling and analysis of treated ballast water at initial survey and invited interested Parties to submit proposals on New Output for an amendment to regulation E-1.1.1 of the BWM Convention with a view to providing legal basis to carry out validation of D-2 standard at initial survey in the Convention.

1.7 In accordance with the basic principle that ship owners who have already installed BWMS type approved in accordance with previous G8 guidelines onboard should not be required to replace BWMS fitted onboard, for the life of the ship or the system, whichever comes first, due to occasional lack of efficacy for reasons that beyond the control of the ship owner and ship's crew, MEPC 71 adopted Res.MEPC.291(71) which provides the basic structure of the Experience Building Phase. In addition, MEPC 72 further approved BWM.2/Circ.67 on data gathering and analysis plan for implementing Experience Building Phase as follows:

MEPC session	Timing	Milestone	EBP / MEPC action
73	Autumn 2018	Convention has been in force 1 year	
74	Spring 2019		1st year of data available.
75	Autumn 2020	Convention has been in force 2 years	2nd year of data available, stocktaking of EBP timeline.
76	Autumn 2020	Convention has been in force 3 years	Partial 3rd year of data available, enough to agree to data analysis report terms of reference.
77	Spring 2021		Full 3rd year of data available, Draft analysis report received.
78	Spring 2022	Convention has been in force 4 years	Final analysis report received. Convention issues agreed.
79	Autumn 2022	Convention has been in force 5 years	Package of amendments submitted to the Parties.

1.8 Recording of the operation of ballast water pump

- The Committee considered a proposal to monitor ballast water exchange or treatment operations onboard ships through recording the operation of ballast water pumps and the position using the Global Positioning System (GPS). But, given the concerns on the need for such a measure and potentially fitting more equipment, MEPC 72 invited the proposer to submit a proposal for a new output to develop guidance on recording the operation of ballast water pumps at a future session.

1.9 Model Course

- The Committee considered a proposal to develop a model course under the BWM Convention, to standardize the training, certification and watch keeping for seafarers related to ballast water management. But, given the concerns that more information should be identified first regarding the specific needs for seafarer training on ballast water management and a training module on the BWM Convention had been developed under the Globallast project, MEPC 72 invited the proposer to submit a proposal for a new output at a future session, taking into account the comments expressed at this session.

1.10 With respect to the decisions as regard the amendments to BWM Convention and adoption of BWMS Code, please refer to below paragraph 4.1 to 4.4 on adoption of mandatory instruments.

1.11 Considerations for ship owners and builders

- As referred in paragraph 4.1 below, all ships to which this Convention applies are required to install a BWMS onboard ships by first or second IOPP renewal survey after entry into force of the Convention. In this particular respect, it should be noted that:

.1 For the ships that had completed previous IOPP renewal survey between 8 Sep. 2014 and 7 Sep. 2017, if IOPP renewal survey is completed between 8 Sep. 2017 and 7 Sep. 2019, that renewal survey will be due date for the installation of BWMS onboard. But, for the ships having IOPP certification which was issued for a period less than 5 years in accordance with HSSC (Harmonized System of Survey and Certification), first IOPP renewal survey on or after the date of entry into force of the Convention may be designated between 8 Sep. 2017 and 7 Sep. 2019 although previous IOPP initial or renewal survey was completed between 8 Sep. 2014 and 7 Sep. 2017. In this case, it is noted that re-issuing IOPP certificate with validity for a maximum period of 5 years from the date of original issue date is possible after completion of applicable surveys in accordance with regulation 10.3 of MARPOL Annex I.

.2 For the ships that had completed previous IOPP renewal survey between 8 Sep. 2012 and 7 Sep. 2014, due date for the installation of BWMS onboard will be second IOPP renewal survey after entry into force of the Convention on the understanding that first IOPP renewal survey after entry into force of the Convention is completed before 8 Sep. 2019.

.3 A case where the ships constructed before the date of entry into force of BWM Convention are delivered on or after 8 September 2019 due to the delay in new building construction, an initial survey carried out around ship's delivery shall be regarded as the first IOPP renewal survey after entry into force of BWM Convention. It should be noted that such initial survey should be deemed to the due date for installing a BWMS onboard.

- USCG BWM extension requests may be granted based on when is the compliance date for the installation of Coast Guard type approved BWMS. For more detailed information on this, please refer to the previous Technical Information (2017-ETC-03). In particular, it should be noted that extension requests should be submitted to USCG 12 – 16 months

prior to the vessel's compliance date will be denied.

- For more detailed information on USCG type approved BWMSs, please refer to the link: http://cgmix.uscg.mil/Equipment/EquipmentSearch.aspx

2. Air Pollution and Energy Efficiency Regulation

2.1 Prohibition of Carriage of non-compliant fuel oil in relation to the sulphur requirements of MARPOL Annex VI

- MEPC 72 approved draft amendments to regulation 14 of MARPOL Annex VI and the form of the supplement to the IAPP Certificate concerning prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship, with a view to adoption at MEPC 73.
- These amendments include an exemption requirement for ships equipped with an equivalent arrangement (Exhaust Gas Cleaning System) approved in accordance with regulation 4.1 of MARPOL Annex VI.

2.2 Approval of a Guidance on Best Practice for Oil Purchasers/Users

- MEPC 72 approved a guidance on best practice for oil purchasers/users for assuring the quality of fuel oil used onboard ships by implementing various measures to confirm that the fuel oil delivered onboard is compliant with the specification for sulphur content and other quality parameters.

2.3 Proposal to add a definition of 'sulphur content'

- MEPC 72 considered a proposal to add a definition of 'sulphur content' in regulation 2 of MARPOL Annex VI that makes ISO 8754:2003 or ISO 14596:2007 mandatory under MARPOL Annex VI as the test method of shlphur content of fuel oil. After consideration, the Committee decided to refer this proposal to the Intersessional Working Group on the Consistent Implementation of regulation 14.1.3 of MARPOL Annex VI for further consideration, which is scheduled for 9 to 13 July 2018.

2.4 ISO 8217 as regard international standard for fuel oil

- MEPC 71 had requested ISO to consider the framework of ISO 8217 with a view to

ensuring consistency between the relevant ISO standards on marine fuel oil and the implementation of 0.5 sulphur requirements of MARPOL Annex VI.

- In this regard, MEPC 72 noted, as an interim solution to the development of a newly revised standard, the initiation of the process to develop an ISO Publicly Available Specification (PAS) to provide detailed guidance to fuel suppliers and users; forwarded this document to the Intersessional Meeting for information.

- In this connection, MEPC 72 noted updated information provided by ISO on PAS 23263 on Guidelines for fuel suppliers and users regarding marine fuel quality considering the implementation of 0.5 Sulphur content in 2020.

2.5 EEDI 2nd review process beyond phase 2

- MEPC 72 reviewed a progress report of the Correspondence Group on EEDI review beyond phase 2, in particular, considered a specific amendment to regulation 19.3 of MARPOL Annex VI on the exemption requirement for ships which have ice breaking capability, considering technical limitations of energy saving devices available to ice-class ships, as follows:

"Regulation 20 and 21 of this Annex shall not apply to ships which have non-conventional propulsion, except that regulations 20 and 21 shall apply to cruise passenger ships having non-conventional propulsion and LNG Carriers having conventional or non-conventional propulsion, delivered on or after 1 September 2019, as defined in paragraph 43 of regulation 2. Regulations 20 and 21 shall not apply to ~~cargo ships having ice breaking capability an ice class higher than IA Super~~ category A ships as defined in the Polar Code."

- MEPC 72 agreed with above amendments in principle, but decided to refer these items to correspondence group for further consideration taking into account that MARPOL Annex VI does not include the definition on Polar Code and comparison among the ice class ships along with IACS PC 5 could be developed as a unified interpretation.

2.6 Proposal on revising EEDI reference line values for Bulk Carrier and Tankers

- MEPC 72 considered a proposal to revise the reference line values (horizontal reference line) for large bulk carriers (86,000 DWT or above) and oil tankers (84,000 DWT or above) taking into account the industrial difficulties in achieving EEDI requirements for those ship types, however the Committee, noting that previous EEDI review process concluded that phase 2 requirements should not be changed, agreed that the possible revision is only applicable for phase 3, and the proposal should be further considered by the

correspondence group on phase 3 review.

2.7 Guidelines for minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions

- MEPC 72 considered a proposal for a new numerical method for the wave resistance calculation, but the Committee decided that additional data and experience on the matter is necessary to verify the proposal. MEPC 72 requested the interested Parties to submit further proposal or information for further consideration at future session.

2.8 For the adopted of MARPOL Annex VI on reference line values for Ro-Ro Cargo and Passenger ships, please refer to paragraph 4.5 below.

3. Further technical and operational measures for enhancing energy efficiency of international shipping (Data Collection System)

3.1 General of the requirements

- The amendments to MARPOL Annex VI which provides a mandatory requirements for all ships of 5,000 GT and above engaged on international voyages to collect data relating to the fuel consumption together with additional data on proxies for the transport work as of 1 January 2019 were entered into force on 1 March 2018. The Administrations will have to certify by the end of 2018 that the ship's SEEMP on board reflects the data collection system that applies to the ship. The Company will be required to collect requisite data, and report to the ship's flag Administration. Upon verification by the Administration, or RO duly authorized by it, the ship will be issued a Statement of Compliance. And then, the Administration shall report to the central database managed by the Organization.

3.2 Confirmation of compliance to be issued after approval of SEEMP part II

- MEPC 72 approved an MEPC Circular providing a sample form of the confirmation of compliance for part II of the Ship Energy Efficiency Management Plan (SEEMP) pursuant 5.4.5 of MARPOL Annex VI. After approval of SEEMP part II for data collection system of fuel oil consumption provided by ship owners, this sample form of the confirmation of compliance will be issued to the ships.

3.3 Early submission of the part II of SEEMP for the approval

- MEPC 72 considered a proposal expressing a concern that submission of part II of the SEEMP on the ship fuel oil consumption data collection plan and corresponding verification might not be completed in time, and suggesting early submission of SEEMP part II and its timely verification.
- Noting that IACS member societies has received less than 100 sets of the SEEMP part II, out of 31,000 ships that would be expected to receive by 31 December 2018, for approval in accordance with regulation 22.2 of MARPOL Annex VI, the Committee agreed to insert an operating paragraph encouraging to submit SEEMP part II by 1 September 2018 in the MEPC Circular on sample format for the confirmation of compliance.

3.4 Transport Work Proxy for ships not carrying cargoes

- MEPC 72 considered a proposal providing practical difficulties of defining proxies for transport work for dynamically positioned ships in the offshore industry and suggesting that the transport work proxy approach should not be applied to DP ships at the second stage of data analysis.
- The Committee concurred with the proposal in principle, and invited interested member States of relevant stakeholders to submit relevant concrete proposal to a future session of the Committee, with a view to developing a comprehensive approach for identifying ships not engaged in transport work.

4. Adoption and Amendments to MARPOL Convention

4.1 Adoption of the amendments to regulation B-3 of BWM Convention in relation to the implementation schedules for D-2 performance standard

- Taking into account the insufficient availability of dry-docking facilities which are capable of installing BWMS onboard existing ships and the BWMS which will be type approved in accordance with revised G8 guidelines and USCG type approval protocol, MEPC 71 approved and MEPC 72 subsequently adopted the draft amendments to regulation B-3 extending due date for the installation of BWMS onboard ships as follows:

.1 the ships constructed on or after 8 September 2017 shall comply with D-2 standard as of ships delivery;

.2 for the ships constructed before 8 September 2017:

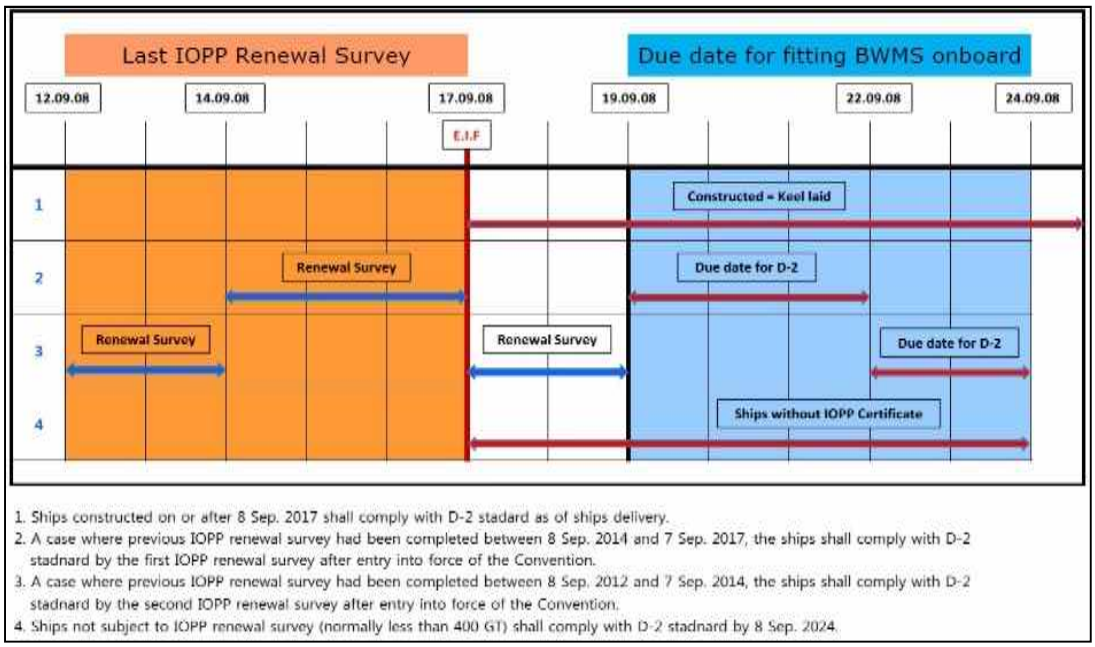
- If the completion date of the ship's last IOPP renewal survey was between 8 September 2014 and 7 September 2017, compliance with D-2 standard by installing BWMS onboard is required **at the first IOPP renewal survey** on or after 8 September 2017;

- If the completion date of the ship's last IOPP renewal survey was between 8 September 2012 and 7 September 2014, provided that first IOPP renewal survey on or after the date of entry into force of the Convention was completed before 8 September 2019, compliance with D-2 standard by installing BWMS onboard is required **at the second IOPP renewal survey** on or after 8 September 2017.

.3 The ships constructed before 8 September 2017 to which the IOPP renewal survey does not apply shall comply with D-2 standard by 8 September 2024.

- Notwithstanding those amendments will be legally effective as of 13 Oct. 2019, the Committee further adopted a resolution stipulating the 'early implementation' of those amendments to regulation B-3 on or after the date of entry into force of the Convention.

- For summarized time schedules for installing BWMS onboard, please refer to the below:



4.2 Adoption of regulation E-1 and E-5 of BWM Convention

- While other IMO Conventions such as SOLAS and MARPOL, etc do not require endorsement after additional survey, regulation E-1.1.5 of the BWM Convention requires that endorsement should be given in an IBWM certificate after completion of an additional survey. In this regard, in order to align with the practices of other IMO

Conventions for issuing convention certificates, the amendments to the relevant regulation of the BWM Convention which delete relevant regulation requiring endorsement on the certificate after completion of additional survey were approved at MEPC 71 and subsequently adopted at MEPC 72.

- In addition, noting that the terminology 'intermediate survey' was inadvertently omitted in regulation E-5 of the Convention, the amendments which include 'intermediate survey in regulation E-5 were approved at MEPC 71 and subsequently adopted at MEPC 72.

4.3 Adoption of regulation A-1 and D-3 of BWM Convention in relation to the adoption of BWMS Code

- MEPC 71 approved the amendments set to the regulation A-1 and D-3 of the BWM Convention to make the 2016 Guidelines for approval of ballast water management system (G8) (Res.MEPC.279(70)) mandatory, MEPC 72 subsequently adopted their amendments set along with following further clarifications as regard the application of each version of G8 Guidelines:

.1 Ballast Water Management systems installed on or after 28 Oct. 2020 shall be approved in accordance with the BWMS Code; and

.2 ballast water management system installed on or after 28 Oct. 2020 shall be approved taking into account the guidelines (Res.MEPC.125(53), Res.MEPC.174(58) or Res.MEPC.279(90)) developed by the Organization or the BWMS Code, as amended.

- Furthermore, with respect to the 'installed date' of BWMS in a relevant section of IBWM certificate, taking also into account that new G8 guidelines will apply on 28 October 2020 based on the contractual date of delivery of the system, the Committee further approved a unified interpretation which stipulates that two dates, i.e. the contractual date of delivery and the date following commissioning and operation in relation to installing a BWMS may exist.

4.4 Adoption of BWMS Code

- MEPC 70 adopted 2016 guidelines for type approval of Ballast Water Management System to Res.MEPC.279(70), and agreed that it should be mandatory instrument to 'BWMS Code'. In this regard, draft BWMS Code and consequential amendments to BWM Convention to make the Code mandatory were presented from the Secretariat, and MEPC 72 subsequently adopted the Code along with amendments set of BWM Convention as

referred in paragraph 4.3 above.

4.5 Adoption of amendments to MARPOL Annex VI in relation to the adjustment of reference line values for Ro-Ro Cargo and Ro-Ro passenger ships

- MEPC 70 agreed that Ro-Ro ships are having difficulties in meeting even phase 1 requirements, and MEPC 71 approved draft amendments to the reference line values for Ro-Ro cargo and passenger ships, which reflecting the physical characteristics of that ship types as appropriate. These amendments set provides increase of the reference line values by 20% for these ship type and introduces a new concept which sets constant threshold values (horizontal reference line) for Ro-Ro Cargo ships 17,000 DWT and above, and for Ro-Ro Passenger ships 10,000 DWT.
- Furthermore, taking into account that those amendments will enter into force on 1 September 2019, but also considering the industrial difficulties in complying with EEDI requirements for that ship types, MEPC 72 agreed to include an operating paragraph in cover resolution encouraging the early implementation of the amendments from the date of adoption.

4.6 Adoption of amendments to IBC and BCH Code

- Stability Instrument shall be provided onboard tankers by the first renewal survey on or after 2016, and related statutory certificates shall be re-issued with a view to reflecting the adapted stability instrument onboard. In this regard, MEPC 72 adopted amendments to the Model Form of the Certificate of Fitness for the Carriage of Dangerous Chemical in Bulk. These amendments indicate a means of confirming that any specific loading condition complies with damage stability requirements and further modification to make clear that an approved stability manual is still required in the Certificate.

5. Reduction of GHG emission from ships

5.1 MEPC 70 approved a road map for developing a comprehensive IMO strategy on the reduction of GHG emission from international shipping, and the road map takes into account the agreed 3-step approach on GHG emissions as follows:

.1 Phase 1 – collection of Fuel Oil Consumption data (2019 - 2021);

.2 Phase 2 – analysis of reported data;

.3 Phase 3 – decision making on what further measures are needed.

5.2 MEPC 72 adopted a resolution on an Initial IMO Strategy on reduction of GHG emissions from ships after extensive debate and long negotiations with a view to reaching consensus. This strategy will be further adopted in 2023 as a revised IMO strategy including short, mid and long term further measures with implementation schedule.

5.3 The initial IMO strategy is provided as follows:

1. Introduction including context and objectives;
2. Vision;
3. Levels of ambition and guiding principles;
4. List of candidate short-, mid- and long term further measures with possible timelines and their impacts on states;
5. Barriers and supportive measures; capacity building and technical cooperation; R&D
6. Follow-up actions towards the development of the revised strategy.

5.4 Details on Levels of Ambition and Guiding Principles

- Levels of Ambition

.1 Carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships: to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate;

.2 Carbon intensity of international shipping to decline: to reduce CO_2 emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and

.3 GHG emissions from international shipping to peak and decline: to peak GHG emissions from international shipping as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO_2 emissions reduction consistent with the Paris Agreement temperature goals.

- Guiding Principles

.1 The principle of non-discrimination and the principle of no more favorable treatment, enshrined in MARPOL and other IMO Conventions; and

.2 the principle of common but differentiated responsibilities and respective capabilities, in

the light of different national circumstances, enshrined in UNFCCC, its Kyoto Protocol and the Paris Agreement.

5.5 Details on Short-term measure for mitigating GHG emissions from ships

- Possible Short-term measures could be measures finalized and agreed by the Committee between 2018 and 2023. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measures individually:

.1 Energy Efficiency improvement focus on EEDI and SEEMP;

.2 Technical and operational energy efficiency measures for both new and existing ships (e.g Fuel Oil Reduction Strategy (FORS), Individual Ship Performance Indicator (ISPI), etc);

.3 Establishment of an Existing Fleet Improvement Program;

.4 Consider and analyze the use of speed optimization and speed reduction as a measure;

.5 Consider and analyze measures to address emissions of methane and further address VOCs;

.6 Encourage the development and update of national action plans to develop policies and strategies to address GHG emissions;

.7 Continue and enhance technical cooperation and capacity-building activities under the ITCP (Integrated Technical Cooperation Program);

.8 Consider and analyze measures to encourage port developments and activities globally to facilitate reduction of GHGs;

.9 Initiate R&D to address marine propulsion and innovative technologies;

.10 Incentives for first movers to develop and take up new technologies;

.11 Develop robust lifecycle GHG/carbon intensity guidelines for all types of fuels;

.12 Actively promote the work of the organization to the international community;

.13 Undertake additional GHG emissions studies and consider other studies to inform policy decisions

5.6 Details on Mid-term measure for mitigating GHG emissions from ships

- Possible Mid-term measures could be measures finalized and agreed by the Committee between 2023 and 2030. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually:

.1 Implementation program for the effective update of alternative low-carbon and zero-carbon fuels, including update of national actions plans;

.2 Operational energy efficiency measures including indicators in line with three-step

approach to indicate and enhance the energy efficiency performance of ships;

.3 New/innovative emission reduction mechanisms, possibly including Market-based Measures (MBMs), to incentivize GHG emission reduction;

.4 Further continue and enhance technical cooperation and capacity-building activities such as under the ITCP; and

.5 Development of a feedback mechanism to enable lessons learned on implementation of measures to be collated and shared through a possible information exchange on best practice.

5.7 Details on Long-term measure for mitigating GHG emissions from ships

- Possible Long-term measures could be measures finalized and agreed by the Committee beyond 2030. Dates of entry into force and when the measure can effectively start to reduce GHG emission would be defined for each measure individually:

.1 Pursue the development of zero-carbon or fossil-free fuels to enable the shipping sector to assess and consider de-carbonization in the second half of the century;

.2 Consider other possible new/innovative emission reduction mechanisms

5.8 MEPC 72 agreed to hold a fourth intersessional working group with a view to developing a program of follow-up actions of the Initial IMO Strategy on reduction of GHG emissions from ships. The date of the meeting will be in the near future, taking into account document deadline, as well as other scheduled IMO meetings, meetings of UNFCCC.

6. Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters

6.1 MEPC 71 had agreed to include a new output on "Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters", assigning the PPR Sub-Committee.

6.2 MEPC 71 further invited concrete proposal on what types of measures should be developed, including the scope of the work on the new output, to MEPC 72 for consideration, with a view to giving clear instructions to PPR 6 and agreed that a decision would be made by the Committee in the future on the mandatory or recommendatory

nature of the measures after detailed consideration of such proposed measures.

6.3 At MEPC 72, after extensive discussion, approved the following scope of work for PPR Sub-Committee:

.1 develop a definition of HFO taking into account regulation 43 of MARPOL Annex I;

.2 prepare a set of Guidelines on mitigation measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters; and

.3 on the basis of an assessment of the impacts, develop a ban on HFO for use and carriage as fuel by ships in Arctic waters, on an appropriate timescale.

6.4 There was one proposal to expand the scope of work for the PPR Sub-Committee to develop a ban which would also cover the carriage of HFO as cargo in Arctic waters. But, this was not taken forward as it was deemed to be outside the scope of the output.

6.5 Taking into account a proposal that it would be important to agree to an appropriate impact assessment methodology to enable the PPR Sub-Committee to undertake its work, MEPC 72 agreed to retain this agenda item for further consideration of MEPC 73.

7. Work programme of the Committee and subsidiary bodies

7.1 Sustainable Development Goal 14 and marine plastic litter

- There was extensive discussion and overwhelming support for IMO to take action on marine plastic litter along with microplastics. A new output "Development of an action plan to address marine plastic litter from ships" was agreed to start work in the 2018-2019 biennial agenda of MEPC, assigning the PPR Sub-Committee as the associated organ, with a target completion year of 2020.

7.2 Bio-Fouling management

- MEPC 72 considered and agreed a proposal to review the 2011 Guidelines for the control and management of ships' bio-fouling to minimize the transfer of invasive aquatic species (Res.MEPC.207(62)). A new output will be assigned in the post-biennial agenda of the Committee, assigning the PPR Sub-Committee as the associated organ, with two sessions needed to complete the work.

8. Any other business

8.1 Early entry into force of the HONG KONG Convention

- MEPC 72 noted that the number of Contracting Governments to the Hong Kong Convention was sic, representing 21.23% of the world's merchant fleet tonnage, and a combined maximum annual ship recycling volume of 112,161 gross tonnage, which remained significantly below the entry-into-force requirements of the Convention.
- MEPC 72 further noted substantial information on the history of the Indian ship recycling industry and its recent efforts towards the ratification of the Convention in collaboration with Japan

8.2 The Ocean Cleanup's deployment in the North Pacific

- MEPC 72 noted information on the work of the Ocean Cleanup which aimed to develop technological solutions to remove plastics from the ocean gyres. Taking into account that a new output on marine plastic litter was agreed to be discussed in the 2018-2019 biennial agenda of MEPC, this information was supported and the Committee invited interested delegations to submit any documents on this issue to future session. .

8.3 Reducing underwater noise from marine shipping

- MEPC 72 considered information provided on the underwater noise from ships and its effect on the environment including marine animals. In this regard, the need for further research to better understand the impact of underwater noise from shipping as opposed to underwater noise from other sources was raised by a number of delegations.
- It was also stated that further consideration of this issue should take into consideration technological advancements being made to promote the energy efficiency of ships which also worked to reduce noise emissions. The Committee invited interested Parties to submit a proposal for MEPC 73.

8.4 Grey water from ships

- MEPC 72 considered the proposal on the characteristics, environmental impacts and possible quantities of ship grey water produced, in addition to grey water regulation in specific area. In this regard, the Committee further noted a number of measures in place

on cruise ships to deal with grey water including the use of advance wastewater treatment systems.

- Following discussion, the Committee invited member States to share their experiences with, or knowledge acquired on, the impact of ship grey water with MEPC 73.

- The end –

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