

The IMO Marine Environment Protection Committee (MEPC) held its 72nd session from April 9 to 13, 2018. This Brief provides an overview of the more significant issues progressed at this session. A full report of the meeting will be included in the next ABS International Regulatory News Update.

Air Pollution and Energy Efficiency

Prohibition of Carriage of non-compliant Fuel Oil

The Committee, having noted that the majority of delegations that spoke supported the amendments to MARPOL Annex VI for a prohibition on the carriage of non-compliant fuel oil, approved the 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.

Provision is included for exemption for ships equipped with an equivalent arrangement approved in accordance with regulation 4.1 that is at least as effective in terms of SOX emission reductions as compared to using a fuel oil with the required sulphur content limit value.

Worldwide Average Sulphur Content

The Committee noted the annual and three-year rolling average of sulphur content of the tested residual fuels provided for 2017. The following table provides a summary of these values:

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual	2.60%	2.61%	2.65%	2.51%	2.43%	2.46%	2.45%	2.58%	2.60%
3-Year Rolling	-	-	2.62%	2.59%	2.53%	2.47%	2.45%	2.50%	2.54%

Fuel Oil Data Collection System

The Committee having recognized the need for smooth implementation of the Fuel Oil Data Collection System (DCS) agreed to encourage early submission of SEEMP part II to the Administration or any organization duly authorized by it for its timely verification, the latest by 1 September 2018. For uniform implementation of the DCS, the Committee approved a sample format for the Confirmation of compliance pursuant to regulation 5.4.5 of MARPOL Annex VI. A MEPC Circular related to these matters was issued.

Best Practice for Fuel Oil Purchasers/Users

The Committee adopted guidance on best practice for fuel oil purchasers/users for assuring the quality of fuel oil used onboard ships by implementing measures to confirm that the fuel delivered is compliant with the specification for sulphur content and other quality parameters. Quality management systems of entities delivering, transferring, sampling and treating fuel, in

particular low sulphur fuels, as well as the technical details to be included in the specification are also addressed.

EEDI - Ro-Ro Cargo & Ro-Ro Passenger Ships

The Committee adopted amendments to Regulation 21 of MARPOL Annex VI which revise the reference line parameters for the Ro-Ro Cargo and Ro-Ro Passenger Ship types by imposing a 20% offset to the EEDI baselines for these two ship types. Also, in light of the limited number of data sets and its distribution which lend statistical uncertainty on the extrapolation to larger capacity ships of these types, the amendment sets a constant threshold value for Ro-Ro Cargo Ships of 17,000 DWT, and above, and for Ro-Ro Passenger Ships of 10,000 DWT, and above.

This approach effectively results in an additional 20% margin to account for identified discrepancies in the currently calculated baselines that were developed using overly optimistic presumptions in relation to achievable physical properties for these specific ship types. The Required EEDI is effectively increased for the type and sizes of these ships under Phase 2 which, based MEPC.1/Circ.795/Rev.2, apply to ships:

for which the building contract date is placed:

- on/after 1 January 2020 but before 1 January 2025 and delivery is before 1 January 2029; or
- before 1 January 2020 and the delivery is on/after 1 January 2024 and before 1 January 2029,

or, in the absence of a building contract, the keel is laid or which is at a similar stage of construction

- on/after 1 July 2020 and before 1 July 2025, and delivery is before 1 January 2029; or
- before 1 July 2020, and delivery is on/after 1 January 2024 and before 1 January 2029.

IMO Strategy on GHG Emissions

MEPC adopted the initial *IMO Strategy on reduction of GHG emissions from ships* based on the Roadmap that was approved at MEPC 70 which takes into account the agreed 3-step approach on GHG Emissions:

- Phase 1 - collection of FO consumption data (2019-2021)
- Phase 2 - analysis of that data
- Phase 3 - decision making on what further measures, if any, are needed

The Committee agreed on the following timeline for key stages needed to be completed for the scheduled adoption of a revised *IMO GHG Strategy* in 2023:

- Spring 2018 Adoption of the Initial Strategy* including, inter alia, a list of candidate short-, mid- and long-term further measures with possible timelines, to be revised as appropriate as additional information becomes available (MEPC 72) * Initial IMO Strategy is subject to revision based on DCS data during 2019-2021 and does not prejudice any specific further measures that may be implemented in Phase 3 of the three-step approach.
- January 2019 Start of Phase 1: Data collection (Ships to collect data)
- Spring 2019 Initiation of Fourth IMO GHG Study using data from 2012-2018 (MEPC 74)
- Summer 2020 Data from 2019 to be reported to IMO

- Autumn 2020 Start of Phase 2: data analysis (no later than autumn 2020)
Publication of Fourth IMO GHG Study for consideration by MEPC 76 (MEPC 76)
- Spring 2021 Secretariat report summarizing the 2019 data pursuant to regulation 22A.10 Initiation of work on adjustments on Initial IMO Strategy, based on Data Collection System (DCS) data (MEPC 77)
- Summer 2021 Data for 2020 to be reported to IMO
- Spring 2022 Phase 3: Decision step Secretariat report summarizing the 2020 data pursuant to regulation 22A.10 (MEPC 78)
- Summer 2022 Data for 2021 to be reported to IMO
- Spring 2023 Secretariat report summarizing the 2021 data pursuant to regulation 22A.10 Adoption of Revised IMO Strategy, including short-, mid- and long-term further measure(s), as required, with implementation schedules (MEPC 80)

Levels of ambition directing the Initial Strategy agreed are as follows:

1. carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships
 - to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate
2. carbon intensity of international shipping to decline
 - to reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and
3. GHG emissions from international shipping to peak and decline
 - to peak GHG emissions from international shipping as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals.

The Committee also agreed on the following measures to be included in an initial *IMO GHG Strategy* which is subject to revision based on fuel oil consumption data collected during 2019-2021 under the new MARPOL Annex VI, regulation 22A, adopted by resolution MEPC.278(70):

Candidate short-term measures to be decided between 2018 and 2023 include:

- Energy efficiency improvement focus on EEDI and SEEMP
- 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.)
- Establishment of an Existing Fleet Improvement Programme
- Consider and analyse the use of speed optimization and speed reduction as a measure
- Consider and analyse measures to address emissions of methane and further address VOCs
- Encourage the development and update of national action plans to develop policies and strategies to address GHG emissions

- Continue and enhance technical cooperation and capacity-building activities under the ITCP (Integrated Technical Cooperation Programme)
- Consider and analyse measures to encourage port developments and activities globally to facilitate reduction of GHGs
- Initiate R&D to address marine propulsion and innovative technologies
- Incentives for first movers to develop and take up new technologies
- Develop robust lifecycle GHG/carbon intensity guidelines for all types of fuels
- Actively promote the work of the organization to the international community
- Undertake additional GHG emission studies and consider other studies to inform policy decisions

Candidate mid-term measures to be decided between 2023 and 2030 include:

- Implementation programme for the effective uptake of alternative low-carbon and zero-carbon fuels, including update of national actions plans;
- Operational energy efficiency measures including indicators in line with three-step approach to indicate and enhance the energy efficiency performance
- New/innovative emission reduction mechanism(s), possibly including Market-based Measures (MBMs), to incentivize GHG emission reduction
- Further continue and enhance technical cooperation and capacity-building activities such as under the ITCP; and
- Development of a feedback mechanism to enable lessons learned on implementation of measures to be collated and shared through a possible information exchange on best practice.

Candidate long-term measures to be decided beyond 2030 include:

- 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
- Consider other possible new/innovative emission reduction mechanisms

Ballast Water Management Convention Amendments

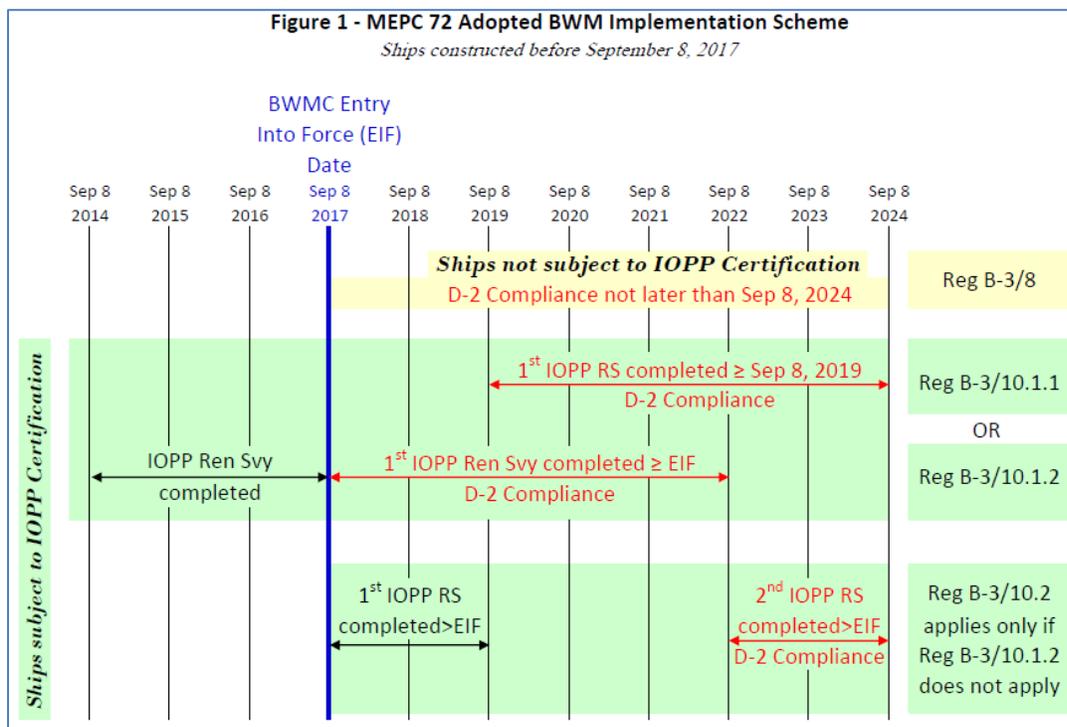
Adopted Implementation Scheme

The Committee adopted amendments to the BWM Convention which revise the implementation scheme approved at MEPC 71 for compliance with the D-2 biological standard. The amendments, which are set to enter into force on October 13, 2019, require ships constructed on or after September 8, 2017 to comply with the D-2 biological standard on their delivery. Referring to Figure 1, below, ships constructed before September 8, 2017, are to comply with the D-2 standard at the first MARPOL IOPP renewal survey completed on or after:

- September 8, 2019 (Reg B-3/10.1.1); or
- September 8, 2017, in the event a MARPOL IOPP renewal survey is completed during the period on or after September 8, 2014 and prior to September 8, 2017 (Reg B-3/10.1.2).

If the IOPP survey per Reg B-3/10.1.2 is not completed, then compliance with the D-2 standard is required at the second MARPOL IOPP renewal survey after September 8, 2017, only if the first MARPOL IOPP renewal survey after September 8, 2017 is completed prior to September 8, 2019 and a MARPOL IOPP renewal survey was not completed during the period on or after September 8, 2014 and prior to September 8, 2017 (Reg B-3/10.2).

For ships constructed before September 8, 2017 and which are not subject to the MARPOL IOPP renewal survey, compliance with the D-2 standard is required not later than September 8, 2024 (Reg B-3/8).



A separate resolution was adopted which revokes the earlier implementation scheme as per resolution A.1088(28) and recommends that all parties acknowledge the adopted implementation scheme until such time as it enters into force on October 13, 2019.

BWM System Testing at Commissioning

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 resolution A.1120(30). These provisions recommend that sampling and analysis of treated water are carried out to confirm compliance with the D-2 standard. Related guidelines were drafted.

The Committee invited interested Parties to submit proposals for an amendment to regulation E-1.1.1 of the BWM Convention.

Revised Guidance on Ballast Water Management (BWM) Systems

The Committee approved revisions to the:

- Guidance on Scaling of BWM Systems (BWM.2/Circ.33) – this revision provides guidance for extrapolating test results for increased or reduced treatment rated capacities validated by mathematical model and/or calculations. It was agreed that the most vulnerable models of a series are to be tested using land based and/or shipboard testing; however numerical validation can be used to predict that the key performance parameters (e.g. dosage concentration, UV intensity, filter flux density, etc.) required to achieve the system's efficacy will be achieved in the scaled unit design and that the fundamental mechanism of operation is not changed; and
- Guidance on the BWM system type approval process under G8 Guidelines (BWM.2/Circ.43) – this revision contains additional guidance directed to Administrations when: determining the acceptability of system manufacturers; using a third party's quality

assurance program during the approval process; and when verifying that a manufacturer is fully prepared to carry out the testing needed for type approval.

Code for Approval of Ballast Water Management Systems

The Committee adopted a new Code for approval of Ballast Water Management systems, BWMS Code, as well as amendments to the BWM Convention which mandate that systems be approved under the BWMS Code. The new Code, which is technically consistent with the 2016 G8 guidelines adopted by resolution MEPC.279(70), specifies that Ballast Water Treatment Systems, BWTS, approved in accordance with:

- the revised G8 Guidelines (as per MEPC.279(70)) are deemed to be in accordance with the Code; and
- the earlier versions of the G8 Guidelines (MEPC.125 (53) and MEPC.174(58)) as of 28 October 2018, may continue to be *installed* on board ships until 28 October 2020. Through a new Unified Interpretation, *installed* means the contractual date of delivery of the BWTS to the ship or, in the absence of such a date, the actual date of delivery of the BWTS to the ship.

Ballast Water Management (BWM) Plan Updates

The Committee considered the need to update and obtain approval of BWM Plans to reflect contingency measures in determining the most appropriate manner to allow for the discharge of non-compliant ballast water under the recommendations of BWM.2/Circ.62 while applying sound and practical measures under resolution MEPC.290 (71) to ensure the protection of the marine environment and ship, safety and minimizing any impacts on the continuity of port and ship operations. The Committee invited Member Governments and international organizations to submit proposals to clarify when elements introduced by the Guidance on contingency measures under the BWM Convention should be included into ballast water management plans.

Dispensation from BW Exchange for Unmanned Barges

The Committee discussed the application of the BWM Convention to unmanned non-self-propelled barges with respect to:

- Regulation B-4.4, where a dispensation from conducting BW Exchange is allowed in the event that the BW Exchange is 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; and
- the technical and operational challenges and safety risks faced by such barges; these risks include ballasting/deballasting through open manholes using onboard portable diesel engine driven pumps; the transfer of personnel during open sea tows to manage the portable arrangement onboard a barge that is certified for unmanned operation; and the lack of machinery and ballast systems requiring increased human intervention.

The Committee invited Member Governments and international organizations to submit proposals on this topic to the next MEPC.