NEWS BRIEF

MEPC 81

ABS

NEWS BRIEF: MEPC 81

The IMO Marine Environment Protection Committee (MEPC) held its 81st session from March 18 to 22, 2024. This Brief provides an overview of the more significant issues progressed at this session.

KEY DEVELOPMENTS

- Proposals on candidate mid-term measures
- Revision of Marine Fuel Life Cycle Guidelines
- Amendments to the IMO DCS and SEEMP Guidelines
- Interim guidance on the application of the BWM Convention to ships operating in challenging water quality conditions
- Proposal for Canadian Artic Waters and Norwegian Sea ECAs

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IMO STRATEGY ON GHG EMISSIONS

Outcome of Intersessional Working Group on Reduction of greenhouse gas (GHG) Emissions from Ships (ISWG-GHG 16)

The Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG 16) was held back-to-back with MEPC 81, from 11 to 15 March 2024. MEPC 80 had instructed the Working Group to consider the report of the Correspondence Group on Further Development of the LCA Framework, the report by the Steering Committee on the Comprehensive Impact Assessment (CIA) on the basket of candidate mid-term measures and to work on:

- Further development of candidate mid-term measures in the context of Phase III;
- Further development of the Life Cycle GHG Assessment (LCA) framework;
- Consider proposals related to onboard CO_2 capture.

Further consideration of the development of candidate mid-term measure(s) in the context of Phase III of the Work plan for the development of mid- and long-term measures

The Working Group noted the following eight summaries provided by measure proponents on the development of candidate mid-term measures:

1. '*GHG Fuel Standard (GFS) with its Flexibility Compliance Mechanism'* as the technical element, in combination with a 'GHG pricing mechanism' covering all GHG emissions as the economic element.
2. '*International Maritime Sustainable Fuels and Fund (IMSF&F) mechanism'*, with technical elements and economic elements integrated into a single measure.
3. '*Feebate mechanism'*, developed as an economic element separately from a technical element and comprising of a mandatory contribution on GHG emissions and reward for zero emission vessels by the Zero Emission Shipping Fund (ZESF), to be complemented by the 'GHG Fuel Standard' as technical element.
4. '*Universal mandatory GHG levy'* as economic measure, acting in combination with a 'simplified global GHG fuel standard', as technical measure.
5. '*Simplified Global (GHG) Fuel Standard with an energy pooling compliance mechanism'*, to be developed as a separate technical measure together with a separate maritime GHG emissions pricing mechanism.
6. *'Zero Emission Shipping Fund (ZESF)' and 'Fund and Reward (Feebate) Mechanism'* to be adopted as a separate maritime GHG emissions pricing mechanism as economic measure, in addition to a Global GHG Fuel Standard as technical measure.
7. '*Green Balance Mechanism'*, designed to work as part of an integrated measure or incorporated into complementary, but separate technical and economic measures.
8. '*Maritime GHG Pricing Mechanism'* as a direct per-tonne-of-CO2-equivalent regulatory charge on the tank-to-wake (TtW) GHG emissions reported by each ship, determined by adjusting a universal GHG price signal according to each fuel type and pathway's well-to-wake (WtW) emissions profile.

The Working Group agreed on progressing the development of the basket of measures using the following key five elements:

1. Goal-based marine fuel standard regulating the phased reduction of the marine fuel's GHG intensity
2. Flexible compliance strategies and relevant reporting and verification requirements
3. (Other) GHG emissions pricing mechanisms
4. Revenue collection and distribution, and
5. Assessment of the remaining work and indicative planning in accordance with the timelines set out in the 2023 IMO GHG Strategy

Goal-based marine fuel standard regulating the phase reduction of the marine fuel's GHG intensity

During extensive discussion, the Working Group agreed on the following two key points regarding the goal-based marine fuel standard:

1. To further develop the goal-based marine fuel standard regulating the phased reduction of marine fuel's GHG intensity as part of the basket of mid-term measures, taking into account the Well-to-Wake GHG emissions of marine fuels as addressed in the LCA Guidelines.
2. Further frame the GHG fuel intensity baseline and reduction trajectory in line with the levels of ambition and indicative checkpoints set out in the 2023 IMO GHG Strategy.

Flexible compliance strategies and relevant reporting and verification requirements

During an extensive discussion, the Working Group noted that there was considerable convergence to include flexible compliance strategies as an element in support of the implementation of the goal-based marine fuel standard as also increased convergence on the development of flexible compliance strategies, based on the transaction of over-compliance units, cancellation of remedial units and pooling. On the other hand, several delegations could not agree on the proposed flexibility mechanisms, noting that these would lead to possible unintended consequences to counties without the experience of operating in complex trading markets as also on how to set the price of remedial/surplus units and incentivizing the transition to zero- and near-zero emission fuels and technologies without over-penalizing non-compliance ships and maintaining a level playing field. The Working Group also noted the wide support for using the existing IMO instruments for reporting and verification requirements while also noting the necessity to develop additional tools, such as a central registry.

(Other) GHG emissions pricing mechanisms

The Working Group noted that while all delegations support the development of a global fuel standard alongside a GHG pricing mechanism, there were still divided views on the further development of a complementary maritime GHG pricing mechanism and especially whether this mechanism should be integrated into the goal-based marine fuel standard through flexibility compliance strategies or developing a standalone GHG pricing mechanism covering all emissions in addition to the goal-based marine fuel standard. The Working Group noted that the ongoing Comprehensive Impact Assessment, once finalized, will facilitate the finalization of the basket of mid-term measures.

Further development of the life cycle GHG assessment (LCA) framework

The Working Group structured the discussion on the further development of the life cycle GHG assessment (LCA) framework as follows:

1. Consideration of the draft amendments to the LCA Guidelines as prepared by the Correspondence Group
2. Consideration of possible ways to undertake the continuous scientific review of the LCA Guidelines
3. Sustainability aspects/certification and third-party verification issues
4. Establishment of default emission values
5. Consideration of Tank-to-Wake (TtW) methane (CH_4) and nitrous oxide (N_2O) emission factors and slip values
6. Consideration of system boundaries of the LCA Guidelines in relation to onboard carbon capture systems

The Working Group considered the amendments to sections 4 (Well-to-Tank), 5 (Tank-to-Wake), 9 (Default emission factors) and 10 (Actual emission factors), amendments to appendix 4 and addition of new appendix 5 of the LCA Guidelines for future submission template of both WtT and TtW default emission data and editorial amendments to appendix 2 on the WtT default emission factor. All delegations engaged in discussions expressed support for the proposed amendments and in this regard the Working Group recommended to the Committee the adoption of the draft MEPC resolution on the *2024 Guidelines on life cycle GHG intensity of marine fuels (LCA Guidelines).*

The Correspondence Group identified the need for continuous scientific review of the LCA Guidelines, and in this regard, the Working Group invited the Committee to establish a GESAMP Working Group on Life Cycle GHG Intensity of Marine Fuels (GESAMP-LCA WG) to review technical issues related to the implementation of the LCA Guidelines. In addition, the Working Group invited the Committee to instruct the Working Group on Reduction of GHG emissions from Ships to identify the remaining issues of the further development of the LCA framework and suggest a way forward to advance these issues intersessionally.

In relation to TtW methane (CH_4) and nitrous oxide (N_2O) emission factors and slip values, the Working Group considered a plethora of proposals focusing, inter alia, on the different methodologies and their accuracy in quantifying ship-level methane slip and providing an overview of potential options for certification of TtW CH_4 and N_2O emissions and C_{slip} from engines/energy converters. The Working Group invited the Committee to instruct the Working Group on Air Pollution and Energy Efficiency to consider the development of a framework for the measurement and verification of Tank-to-Wake emissions of methane (CH_4), nitrous oxide (N_2O) and other GHGs along with associated engine certification issues in the context of the further development of the LCA Guidelines.

Proposals related to onboard CO_2 capture

The Working Group considered proposals related to onboard CO_2 capture, focusing on the need for the Committee to initiate as soon as possible the study on onboard carbon capture systems (OCCS), and developing regulations covering the transportation, storage and disposal of residues and emissions these systems could produce.

Following consideration, the Group noted the broad support to further continue consideration of proposals related to onboard CO_2 capture and, in this regard, invited the Committee to instruct the Working Group of Air Pollution and Energy Efficiency to develop a work plan for the development of a regulatory framework for the use of onboard CO_2 capture with the exception of matters related to accounting of CO_2 captured and the consideration of system boundaries of the LCA Guidelines in relation to onboard CO_2 capture that should be considered in the context of further development of the LCA Guidelines.

Further consideration of the development of mid-term GHG reduction measures

Continuing the output from ISWG-GHG 16, the Committee considered how to advance the development of the basket of measures. The Committee agreed that the possible way forward would be to identify a common structure of the legal framework for the basket of candidate measures to advance further the work of the Organization. During discussions, several delegations supported that it would be premature to rule out any of the candidate proposals without having the outcome of the comprehensive impact assessment and that the common structure should not prejudge any future changes or possible outcomes of further negotiations.

IMO Net-Zero Framework

In this regard, the Committee approved the possible outline of the "IMO Net-Zero Framework" with **the following possible amendments to MARPOL Annex VI**, which can be used as a starting point for consolidating the different proposals into a possible common structure:

Chapter 1 - General

1. Definitions

Chapter 2 – Survey, certification and means of control

2. Surveys (regulation 5)
3. Certificates and Statements of Compliance (regulation 6)
4. Form of certificates and Statements of Compliance (regulation 8)
5. Duration and validity of Certificates and Statements of Compliance (regulation 9)
6. Port State Control (regulation 10)

Chapter 4 – Regulations on the carbon intensity of international shipping

7. SEEMP (regulation 26)
8. Data Collection System (regulation 27)

New Chapter 5 – Regulations on the IMO net-zero framework

9. **New Chapter 5.1: Goal-based marine fuel standard regulating the phased reduction of the marine fuel's GHG intensity**
    1. Application (regulation X)
    2. Goal (regulation X)
    3. Functional requirements (regulation X)
    4. Attained GHG fuel intensity (GFI) (regulation X)
    5. Target/Required GFI (regulation X)
    6. GFI data collection and reporting (regulation X)
    7. Alternative compliance approaches (regulation X)
    8. Central GFI Registry (regulation X)
10. **New Chapter 5.2: Economic mechanism(s) to incentivize the transition to net-zero**
    1. Application (regulation X)
    2. Calculation of economic distribution by ships (regulation X)
    3. Collection of economic contribution by ships (regulation X)
    4. Flexible compliance mechanism(s) (regulation X)
    5. Central management/oversight of collected revenue (regulation X)
    6. Distribution of revenue (regulation X)
11. **Review of the chapter**

Appendixes

1. Appendix V (BDN)
2. Appendix IX (DCS)
3. Appendix X (Statement of compliance)

Establishment of the Fifth GHG Expert Workshop on the further development of the basket of mid-term measures (GHG-EW 5)

The Committee agreed on establishing the Fifth GHG Expert Workshop on the further development of the basket of mid-term measures. During discussions, several discussions supported that the GHG-EW 5 should primarily focus on increasing understanding of the preliminary findings of the CIA for a broader group of delegates than those engaged in the Steering Committee, whereas others expressed that the GHG-EW 5 should not engage in any policy negotiations but provide relevant information to the Committee and/or Steering Committee.
Following consideration of all the views expressed, the Committee requested the Secretariat to organize a two-day Fifth GHG Expert Workshop (GHG-EW 5) to facilitate the understanding of the preliminary findings of the CIA, including the modelling of revenue disbursement used as part of the assessment of impacts on States, taking into account the progress made within the Steering Committee and submit its outcome to MEPC 82.

Terms of Reference for ISWG-GHG 17

The Committee agreed on the instruction of the ISWG-GHG 17, which will take into account the documents submitted to ISWG-GHG 17, the final report of the CIA of the basket of mid-term measures, the report of the GHG-EW 5 on the further development of the basket of mid-term measures and relevant documents submitted to MEPC 82 as also to previous sessions, to:

1. Further consider the development of the basket of candidate mid-term measure(s).
2. Further consider the development of the Life Cycle GHG Assessment (LCA) framework
3. Develop draft Terms of Reference for the Fifth IMO GHG Study, and
4. Submit a written report to MEPC 82

2024 Marine Fuel Life Cycle Guidelines

Building on the outcome of ISWG-GHG 16, the Committee adopted Resolution MEPC.391(81), *2024 Guidelines on life cycle GHG intensity of marine fuels (2024 LCA Guidelines)*, which incorporates:

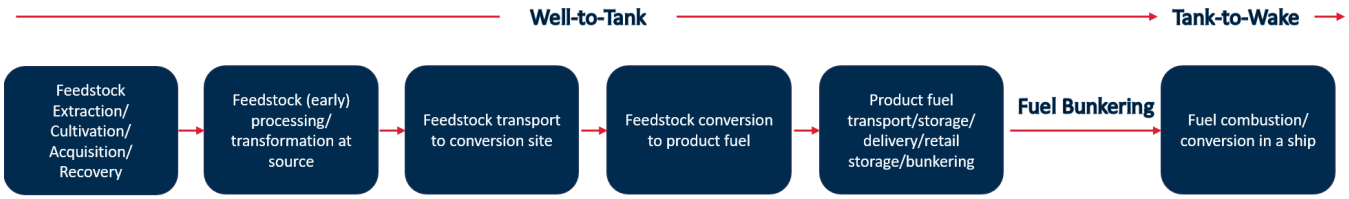
1. Amendments to sections 4, 5, 9 and 10, and appendix 3 of the LCA Guidelines in relation to:
   a. the quantification of parameters for biofuel production
   b. evaluation of carbon GHG intensity of electricity, and
   c. the tank-to-wake methodologies for actual/onboard emission factors
2. Amendments to appendix 4 and addition of new appendix 5 of the LCA Guidelines for future submission template of both well-to-tank and tank-to-wake default emission factor data
3. Editorial amendments to appendix 2 of the LCA Guidelines on the well-to-tank default emission factor

The Committee agreed on the establishment of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) Working Group on Life Cycle GHG Intensity of Marine Fuels (GESAMP-LCA WG) to review scientific and technical issues with the following Terms of Reference (ToR):

1. Methodological refinement of the emission quantification in the LCA Guidelines, with a view to ensuring the integrity of all information provided
   1. Scientific review of the LCA methodology
   2. Scientific review of the WtT GHG default emission factors of fuel production pathways and technologies
   3. Scientific review of the TtW GHG default emission factors of fuel usage and onboard technology (explicitly mentioning OCCS boundaries), and
   4. Sample calculations on LCA and reflecting the output into the existing Fuel Lifecycle Label (FLL)
2. Sustainability themes/aspects
   1. Refining and further exploring indicators and metrics under the sustainability themes/aspects in the LCA Guidelines, and
   2. Approaches to Indirect Land Use Change (ILUC) risk classification
3. Methodological requirements of the LCA Guidelines with regard to certification

1. Provide external experience, and further information for the development and/or identification of possible requirements for fuel pathway certification, including WtT and TtW actual values

The Committee also agreed on the establishment of the LCA Correspondence Group, to further consider 'Other social and economic sustainability themes/aspects of marine fuels' as referred to in paragraph 7.1 of the 2024 LCA Guidelines, for possible inclusion in the Guidelines and submit a written report to MEPC 83.



Carbon Capture and Storage

The ISWG-GHG 16 had invited the Committee to consider the development of a work plan on the development of a regulatory framework for the use of onboard CO_2 capture, with the exception of matters related to captured CO_2 accounting and system boundaries of the LCA Guidelines in relation to onboard CO_2 capture, which will be considered in the further development of the LCA Guidelines. During discussion, several elements were mentioned such as:

- Review of the existing IMO regulatory framework in a structured manner to identify existing instruments to be amended and potential additional guidelines.
- How to incorporate onboard carbon capture in the Organization's safety and environmental regulatory framework including possible options for testing, survey, and certification of onboard carbon capture systems.
- Review the status of technological development of onboard carbon capture applications.
- Consider the energy consumption of onboard carbon capture units, the overall net GHG balance and the transfer of captured material and its impact onshore.
- Reflection of carbon capture in existing IMO instruments such as EEDI, EEXI and CII.
- The need for a certificate to certify the captured carbon and possible development of a carbon delivery note.
- The effect of carbon capture on other pollutants.

The Committee agreed on establishing a Correspondence Group that will further consider issues related to onboard carbon capture and develop a work plan on the development of a regulatory framework for the use of onboard carbon capture systems with the exception of matters related to accounting of CO_2 captured onboard ships and submit a written report to MEPC 83.

AIR POLLUTION AND ENERGY EFFICIENCY

Measurement and verification of Tank-to-Wake emissions of methane (CH_4), nitrous oxide (N_2O) and other GHGs

The Committee considered the development of a framework for the measurement and verification of Tank-to-Wake emissions of methane (CH_4) and nitrous oxide (N_2O) and other GHGs. Discussion was focused inter alia on the framework to be developed, the instruments to be addressed and the expected timeline for completion of this framework. Regarding the framework to be implemented, several views expressed that all possible certification options, such as test cycle approach, continuous monitoring and engine load distribution, should be considered, that potential incorporation of CH_4 in the NO_x Technical Code 2008 (NTC 2008) would require significant changes and that it would be of value to incorporate the test procedures developed under ISO for CH_4 and N_2O. With respect to the instruments to be addressed, there were divergent views between further expanding the NTC 2008 to include CH_4 and N_2O or developing a similar design framework, which can initially be in the form of standalone and possibly interim guidelines on CH_4 and N_2O measurement to gain experience. Many delegations expressed the urgent need to develop the framework for measurement and verification of CH_4 and N_2O considering the upcoming development and adoption of mid-term measures and that it should be done in parallel with the development of the LCA Guidelines. In this regard, the Committee agreed on continuing work on this matter intersessionally, by a Correspondence Group with the following Terms of Reference (ToRs):

- Consider the development of a framework for the measurement and verification of actual Tank-to-Wake methane (CH_4) and nitrous oxide (N_2O) emission factors and C_{slip} value for energy converters taking into account inter alia, standardization required regarding a test cycle approach, onboard monitoring, engine load distribution and associated measurement equipment technology and procedures.
- In support of the LCA Guidelines, development of a methodological framework for associated certification issues.
- Identification of relevant gaps in existing instruments and proposed recommendations for the development of necessary regulatory or recommendatory instruments.

Amendments to the 2022 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP) and the 2022 Guidelines for Administration verification of ship fuel oil consumption data and operational carbon intensity

Amendments to the *2022 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP)*

The Committee adopted Resolution MEPC.388(81), *amendments to the 2022 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP) (Resolution MEPC.346(78))*, to ensure the smooth implementation of the draft amendments to MARPOL Annex VI on the IMO's Ship Fuel Oil Consumption Data Collection System (DCS) approved by MEPC 80. These amendments introduce provisions to Section 7 of the SEEMP guidelines to identify possible methods for the collection of fuel oil consumption per consumer type, qualitative clarification that the laden distance should be calculated as the distance sailed when the ship is loaded, definition on the transport work metric to be reported for each ship type, as also guidance on the calculation of the total amount of onshore power supplied, which shall be recorded based on relevant document by power supplier and stored onboard, as also based on the bill from the port or electricity provider that can be included in the electronic record.

Amendments to the *2022 Guidelines for Administration verification of ship fuel oil consumption data and operational carbon intensity*

The Committee adopted Resolution MEPC.389(81), *amendments to the 2022 Guidelines for Administration verification of ship fuel oil consumption data and operational carbon intensity (Resolution MEPC.348(78))*, focusing on the sample format of the collected data summaries that introduces additional columns for cargo carried, laden voyage reporting on voluntary basis, fuel consumption reporting per consumer type and a footnote clarifying that the hours underway column must be left blank in case that the segment reported is not underway.

Guidance for the use of biofuels and biofuel blends

The Committee considered a proposal suggesting the development of interim guidelines for the use of biofuels and blends of biofuels. These guidelines contained provisions on the procurement of biofuels, risk analysis and contingency measures, their proper storage and use, as also shipboard procedures, and crew familiarization. During discussions, several delegations expressed that most of the proposed elements were already covered in other instruments as also that some of them were too specific and prescriptive for guidance purposes. In addition, several delegations suggested forwarding the safety-related issues such as crew familiarization to MSC for consideration. In this regard, and due to insufficient support, the Committee decided to invite Member States and international organizations to submit proposals relevant to the safe use of biofuels and biofuel blends to a future session of MSC.

Carriage of biofuels and biofuels blends by bunker vessels

The Committee considered a proposal for the development of interim guidance on the carriage of biofuels and biofuel blends by bunker vessels, allowing for the conventional bunkering vessels certified for carriage of oil fuels under MARPOL Annex I to transport biofuel blends containing up to 30% of biofuel by volume while also encouraging Member States to establish their own national legislation for carriage requirement of biofuel blends containing more than 30% of biofuel by volume up to B100. During discussion, several delegations expressed the view that bunker vessels operate mostly in national waters, therefore the national legislation would apply. In addition, the subject matter was not directly related to air pollution but rather to carriage requirement, and in this regard, the Committee agreed on referring this proposal to Evaluation of Safety and Pollution Hazards of Chemicals 30 (ESPH 30) for further consideration.

Amendments to the 2021 Guidelines for exhaust gas cleaning systems (resolution MEPC.340(77)) regarding nitrate concentration data for EGCSs of similar design

The Committee considered proposed amendments to the 2021 Guidelines for Exhaust Gas Cleaning Systems to provide clarity regarding acceptance of data on discharge water nitrate concentrations gathered from exhaust gas cleaning systems of similar design. Paragraph 10.1.5.2 of the resolution MEPC.340(77), *2021 Guidelines for exhaust gas cleaning systems* (2021 EGCS Guidelines) requires that within the first three months of operation after installation/initial survey and three months prior to each renewal survey, a sample of the discharge water from each EGCS be drawn and analyzed for nitrate content. Paragraph 10.1.5.3 of the 2021 EGCS Guidelines provide an alternative option, using data on discharge water nitrate concentrations gathered from EGCSs of similar design as an alternative to the sampling requirements of 10.1.5.2. The proposed amendments provide that the alternative option shall only be restricted to installation/initial surveys as the performance of EGCS will be influenced by other factors such as age, state of maintenance or voyage patterns. Due to lack of consensus, the Committee did not approve of the proposed amendments and invited Member States and international organizations to submit proposals with appropriate justification to a future session.

Engine International Air Pollution Prevention (EIAPP) Certificate re-issuance at the time of change of flag of a ship

The Committee considered a proposed interpretation expressing that reissuance of EIAPP was not required at the time of change of flag, since it was related to an unchanged equipment (engine). During discussion, several

delegations supported that view, whereas others expressed that the receiving Administration is responsible for surveying and ensuring the validity of EIAPP certificates for the engines onboard the ship and this will be possible either by issuing new EIAPP certificates or by including a statement that recognizes and authorizes the EIAPP Certificates issued by the previous Administration. Due to insufficient support, the proposed interpretation did not move forward.

Consistent reporting of LNG carriers and gas carriers and fuel types to the IMO DCS

Consistent reporting of LNG carriers and gas carriers to the IMO DCS

The Committee took into consideration a proposal suggesting the consistent reporting of LNG carriers and gas carriers to the IMO DCS. During discussion, all views expressed supported the recategorization of LNG carriers – currently categorized as gas carriers – as LNG carriers for the purpose of DCS reporting and CII, and that such recategorization should not affect the ship type indication on a ship's International Energy Efficiency Certificate (IEEC). It was also expressed that the CII reference line, resulting from this recategorization of LNG carriers, should be carefully considered in the context of review of the short-term GHG reduction measure. The Committee agreed on the consistent reporting of LNG carriers as LNG carriers and not gas carriers for the purpose of DCS reporting and CII and requested the Secretariat to recalculate the AER of the LNG and gas carrier fleet for 2021 and 2022 once the recategorization is complete.

Consistent reporting of VLSFO, ULSFO, biofuels and e-fuels

The Committee considered a proposal for the uniform reporting of VLSFO, ULSFO to the IMO DCS as also granular reporting of sustainable biofuel consumption – meeting the requirements of MEPC.1/Circ.905, and e-fuels accordingly, meaning separate reporting of bio/e and fossil components. During discussion, all delegations expressed the need to ensure consistent reporting of VLSFO and ULSFO, biofuels and e-fuels. In this regard, the Committee invited Member States and international organizations to submit proposals for unified interpretation for the consistent reporting of VLSFO and ULSFO to a future session.

Amendments to the 2021 Guidelines on the shaft/engine power limitation system to comply with the EEXI requirements and use of a power reserve

Amendments to the *2021 Guidelines on the shaft/engine power limitation system to comply with the EEXI requirements and use of a power reserve*

The Committee adopted Resolution MEPC.390(81), *Amendments to the 2021 Guidelines on the Shaft/Engine Power Limitation system to comply with the EEXI requirements and use of a power reserve (Resolution MEPC.335(76)), as amended by Resolution MEPC.375(80))*. The agreed amendments introduce:

- Additional technical requirements for the SHaPoLi/EPL system, to enable its consistent use through the utilization of an alarm system.
- A new provision that in case of short-term unintentional exceedance of the power limit, the system may **inhibit the initiation of the exceedance alarm for up to a maximum of five minutes**.
- The use of the power reserve is being distinguished from the precautionary unlimiting of a shaft or engine power limitation system, where an EPL/ShaPoLi override is activated pre-emptively when hazards are anticipated.
- Amendments in paragraph 2.2.1 to clarify the condition in which the use of a power reserve would be allowed.
- A new paragraph 6 specifying the additional documents that need to be updated to include the manoeuvring characteristics of the ship in both scenarios of having all shaft and engine power available and limited, namely the Pilot card, the wheelhouse poster, and the manoeuvring booklet.

Procedure for reporting of uses of a power reserve to the Organization

The Committee approved circular MEPC.1/Circ.908 on procedure for reporting to the Organization of uses of a power reserve, containing a specific format for reporting to the Organization of uses of a power reserve. Administrations are invited to report uses of a power reserve by emailing ghg@imo.org using that specific format.

Unified Interpretations to regulations 2.2.15 and 2.2.18 of MARPOL Annex VI

The Committee approved Unified Interpretations to regulations 2.2.15 and 2.2.18 of MARPOL Annex VI. The agreed unified interpretations of 2.2.18 aim to ensure the consistent implementation of the required EEDI of each Phase for the five ship categories of LNG carrier, Cruise Passenger ship, Ro-Ro Passenger ship, Ro-Ro Cargo ship (vehicle carrier) and Ro-Ro Cargo ship delivered on or after 1 September 2019. In addition, the purpose of unified interpretation 2.2.15 is to clarify the term "heavy load carrier" used in MARPOL Annex VI, specifying specific vessel types that are considered as "heavy load carrier", namely:

- Heavy load deck carriers
- Semi-submersible project cargo carriers
- Semi-submersible heavy load deck carriers (including dock lift ships)
- Heavy lift multi-purpose ships
- Premium project carriers
- Project cargo carriers

Consideration of the outcome of MSC 107 in respect of fuel sampling

The Committee approved the draft MSC-MEPC Circular on *Guidelines for the sampling of fuel oil for determination of compliance with MARPOL Annex VI and SOLAS Chapter II-2*. The primary objective of these Guidelines is to establish an agreed method to obtain a representative sample of the fuel oil delivered to and intended for use on board a ship. These Guidelines contain provisions on the sampling methods, on the sample integrity and its location, on the minimum quantity of the retained sample, which shall not be less than 600 ml, as also on procedures and documentation following testing of the retained sample.

The draft MSC-MEPC Circular will be submitted to MSC 108 for approval and resolution MEPC.182(59) *2009 Guidelines for the Sampling of Fuel Oil for Determination of Compliance with the Revised MARPOL Annex VI* will be revoked once the joint MSC-MEPC Circular is issued.

Amendments to MARPOL Annex VI related to Low-Flashpoint Fuels and Other Fuel Oil Related Issues

The Committee adopted Resolution MEPC.385(81), *Amendments to MARPOL Annex VI concerning low-flashpoint fuels and other fuel oil related issues, marine diesel engine replacing steam system, accessibility of data and inclusion of data on transport work and enhanced granularity in the IMO Ship Fuel Consumption Database (IMO DCS)*, introducing amendments to Regulations 2, 13, 14, 18, 27 and Appendix I of MARPOL Annex VI.

- In Regulation 2, the definition of fuel oil is revised as *"any fuel delivered to and intended for use on board a ship"*. Additionally, an additional paragraph 1.33 is added for the definition of gas fuel, aligned with the definition of 'gas' in IGF Code, to read *"Gas fuel means a fuel oil with a vapor pressure exceeding 0.28 MPa absolute at a temperature of 37.8˚C"*.
- Paragraph 2.2 of Regulation 13 is revised to clarify that the installation of a marine diesel engine replacing a steam system shall be also considered a replacement engine while also introducing a footnote referring to the *2024 Guidelines as required by regulation 13.2.2 of MARPOL Annex VI in respect of non-identical replacement engines not required to meet the Tier III limit* (Resolution MEPC.386(81)).
- Revision of Paragraph 12 in Regulation 14, states that the in-use/onboard sampling points requirements in Paragraphs 10 and 11 shall not apply to gas/low-flashpoint fuels.
- Furthermore, Regulation 18 is amended, and a new paragraph 5.2 is added, to apply BDN requirements with minimum content to gas/low-flashpoint fuels. The BDN shall at least contain the information specified in items 1 to 6 of Appendix V of Annex VI, the density determined by a test method appropriate to the fuel type along with the associated temperature along and a signed and certified declaration that the fuel oil conforms with the fuel oil quality requirements of paragraph 3, Regulation 18. Low-flashpoint/gas fuels in principle have very low sulphur content, however the Committee agreed that this information shall still be documented in the BDN by the supplier either in terms of actual value determined by a suitable test method or with the

agreement of the appropriate authority at the port of supply that the sulphur content is less than 0.001 percent m/m.

- In Regulation 27, *Collection and Reporting of ship fuel oil consumption data*, two new paragraphs are added. These state that the Secretary-General of the Organization, under strict confidentiality, may share data with analytical consultancies and research entities and, on the request of a company, shall grant access to the fuel oil consumption reports of the company's owned ship(s) in a non-anonymized form.
- In addition, Paragraph 2.3.5, in Appendix I, *Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)* is modified to provide that the requirement for fitting or designating sampling point(s) is not applicable for a fuel oil service system used for a low-flashpoint fuel or a gas fuel.

Amendments to MARPOL Annex VI to include data on transport work and on enhanced level of granularity in the IMO Ship Fuel Oil Consumption Data Collection System (DCS)

The Committee with Resolution MEPC.385(81), adopted amendments to Appendix IX of MARPOL Annex VI, *Information to be submitted to the IMO Ship Fuel Oil Consumption Database (Regulation 27).* These amendments make mandatory the reporting of the:

- Fuel oil consumption per consumer type (Main engine(s), Auxiliary engine(s), Oil-fired boilers, and Others)
- Total amount of onshore power supplied expressed in kWh
- Fuel oil consumption per consumer type (Main engine(s), Auxiliary engine(s), Oil-fired boilers, and Others) when the ship is not underway

In addition, there is a new entry to report the laden distance travelled – on a voluntary basis - and the installation of any innovative technology according to the *2021 Guidance on treatment of innovative energy efficiency technologies for calculation and verification of the attained EEDI and EEXI (MEPC.1/Circ.896)*.
Ships to which Regulation 28 of MARPOL Annex VI applies to, shall also report the transport work using tonne-mile, TEU-Mile and/or passenger-mile data, whereas containerships especially must report both tonne-mile and TEU-mile data.
The amendments shall enter into force on 1 August 2025. Nevertheless, the Committee agreed to include language in the covering resolution inviting early application of the amendments **from 1 January 2025,** as this would be useful in providing a more complete set of data for purposes of the CII framework review.

2024 Guidelines as required by Regulation 13.2.2 of MARPOL Annex VI in respect of non-identical replacement engines not required to meet the Tier III limit

The Committee adopted Resolution MEPC.386(81), *2024 Guidelines as required by Regulation 13.2.2 of MARPOL Annex VI in respect of non-identical replacement engines not required to meet the Tier III limit*. These Guidelines shall be taken into account when considering whether the installation of a Tier III marine diesel engine is not feasible in the case of a non-identical marine diesel engine. In addition, these Guidelines contain a template that should be used to inform the Organization of decisions when the installation of a Tier III engine was not feasible and accordingly a Tier II engine was installed.

BALLAST WATER MANAGEMENT AND MARINE BIOSAFETY

List of provisions and instruments for revision under the Experience-Building Phase with the BWM Convention

The Committee endorsed the list of provisions and instruments for revision and/or development under the Convention Review Plan of the experience-building phase associated with the BWM Convention (EBP). The list identified the need for amendments to regulations within the Annex of the Convention, Appendices within the Annex of the Convention, the Code for Approval of Ballast Water Management Systems (BWMS Code) (resolution MEPC.300(72)), the Guidelines (G1) to (G14), additional Resolutions such as the Guidelines for port State control under the BWM Convention (resolution MEPC.252(67)), and a number of circulars. Additionally, the list identified the need to develop new stand-alone instruments, such as new guidance on the installation, operation and maintenance of BWMS, as well as the type approval of BWMS.

The Committee further acknowledged that amendments to regulations A-2 and B-2 of the BWM Convention concerning the discharge of grey water or treated sewage temporarily stored in ballast tanks are not necessary.

In addition, the Committee re-established the Correspondence Group on Review of the BWM Convention to prepare draft text for amendments to provisions of the BWM Convention and to associated instruments, and for new provisions and/or instruments with a view to submit a report to MEPC 83 and encouraged interested Member States and international organizations to contact the Coordinator of the Correspondence Group, with a view to participating and contributing to the work of that Group.

Temporary Storage of Grey Water or Treated Sewage in Ballast Tanks

The Committee approved circular BWM.2/Circ.82 on *Guidance on the temporary storage of grey water and/or treated sewage in ballast water tanks*. The purpose of this guidance is to provide a procedure for the temporary storage of treated sewage and/or grey water (TS/GW) in ballast water tanks in exceptional situations where, to comply with coastal State regulations or inadequate reception facilities at ports, dry-docks and terminals, it may become necessary to store treated sewage or grey water in ballast water tanks.

The guidelines provide general guidance for the use of a particular ballast water tanks for the temporary storage of TS/GW, to prevent contamination of the ballast system by TS/GW and accidental discharge of TS/GW within restricted waters, and a procedure for restoring a ballast water tank from TS/GW storage back to ballast water service.

Application of the BWM Convention to ships operating at ports with challenging water quality

The Committee adopted Resolution MEPC.387(81), *Interim guidance on the application of the BWM Convention to ships operating in challenging water quality conditions.* The purpose of the Interim Guidance is to assist ships in planning for compliance with the BWM Convention and the D-2 discharge standard when a type-approved ballast water management system (BWMS) encounters operational limitations or has difficulty meeting operational demand in challenging water quality (CWQ) conditions and may also serve as a practical operational guide for ships and voyage planners in this regard. It provides guidance for ships operating in CWQ with regards to pre-planning, assessment, troubleshooting and mitigation, CWQ triggers, alternatives to bypass, bypass procedure decontamination, communication, and record-keeping.

The document also includes sections intended to guide Administrations, port States and BWMS manufacturers in providing appropriate support and oversight to ships before, during, and after CWQ operations.

Modifications to ballast water management systems with existing type approval

While the topic of modifications to ballast water management systems with existing type approval would ultimately be addressed under the Convention review stage, the Ballast Water Review Group, recognized that it should be addressed in the interim with guidance to facilitate a consistent process for approval of modifications to BWMS by different Administrations in order to provide a temporary solution while the issue of modifications to type-approved BWMS would be subject to further review towards a permanent solution, which might be achieved within the BWMS Code.

The Group focused on the proposed table of actions for type approval of modifications to BMWS major components, and discussed detailed technical aspects, including, inter alia, various aspects of testing (such as numbers and types of tests). Furthermore, it was highlighted that there should be increased emphasis on additional approvals for major modifications to BWMS using active substances under the Procedure (G9).

Due to the limited progress of these discussions and the time constraints at this session, the Group agreed that it was not possible to substantially progress this draft guidance at this session and that further intersessional work would be needed to progress this work. Therefore, the Committee agreed to invite interested Member States and international organizations to work intersessionally and submit further concrete proposals to the next session with a view to finalization of guidance on modifications to ballast water management systems with existing type approval at MEPC 82.

Amendments to the BWM Convention – Use of electronic Ballast Water Record Book

The Committee adopted MEPC Resolution MEPC.383(81), *Amendments to the International Convention for the Control and Management of Ship's Ballast Water and Sediments, 2004 (Use of Electronic Record Books)*, amending the International Convention for the Control and management of Ship's Ballast Water and Sediments, 2004, Appendix II (Form of Ballast Water Record Book).
Regulation A-1 Definitions is amended to insert a new paragraph 9, which defines an Electronic Record book as "a device or system, approved by the Administration, used to electronically record the entries for each ballast water operation as required under this Convention in lieu of a hard copy record book."
Furthermore, Regulation B-2 Ballast Water Record Book is amended to allow the Ballast Water Record Book to be an electronic record book which shall at least contain the information specified in Appendix II and shall be approved by the Administration. It also provides that in case the record book entries are in electronic form, each group of electronic entries is to be verified by the master in a timely manner.

Ballast Water Management system approvals

Basic Approval was granted by the Committee for ERMA FIRST FLOW ballast water management system, submitted by the Kingdom of Denmark. It is a system that produces Active Substances, and the treatment process consists of two phases: Disinfection and Neutralization during uptake by in-situ production and injection of sodium hypochlorite into the ballast water stream, and during deballasting, the system injects an adequate quantity of neutralizing agent to ensure that discharged water TRO concentration is below the MADC (Maximum Allowable Discharge Concentration) of 0.1 mg/L.

DESIGNATION OF SPECIAL AREAS, EMISSIONS CONTROL AREAS (ECA) AND PARTICULARLY SENSITIVE SEA AREAS (PSSA)

Proposal for the Canadian Arctic ECA for nitrogen oxides (NO_X), sulfur oxides (SO_X), and particulate matter (PM)

The Committee approved Canada's proposal for the establishment of a Canadian Arctic Emission Control Area (ECA) for NO_X emissions under regulation 13, as well as sulfur oxides (SO_X) and particulate matter (PM) under regulation 14 of MARPOL Annex VI, with a view to adoption at MEPC 82. The designation of the ECA is deemed necessary to protect public health and ecologically sensitive Arctic ecosystems by reducing harmful air pollution and emissions. This new ECA also aims to address long-standing concerns of Black Carbon emissions in the arctic region.

If adopted by MEPC 82, the Canadian Arctic ECA earliest entry into force date in accordance with the MARPOL Convention would be after 16 months on 1 March 2026.

Sulphur oxides (SOX) and particulate matter:
The Canadian Arctic ECA will impose a fuel oil sulphur content limit of 0.10 percent by mass.

Nitrogen oxides (NOX):
The Canadian Arctic ECA will apply to ships constructed (keel laying date) on or after 1 January 2025, and will be operating in the Canadian Arctic ECA.

Figure 1. Proposed Canadian Arctic ECA [Source: MEPC 80/16/2]

Proposal for Norwegian Sea ECA for nitrogen oxides (NO_X), sulfur oxides (SO_X), and particulate matter (PM)

The Committee approved the proposal by Norway to designate the Norwegian Sea an ECA for NO_X emissions under regulation 13, as well as sulfur oxides (SO_X) and particulate matter (PM) under regulation 14 of MARPOL Annex VI, with a view to adoption at MEPC 82.

Provided the amendments would be adopted by MEPC 82, the earliest entry into force date of the Norwegian Sea ECA in accordance with the MARPOL Convention would be after 16 months on 1 March 2026.

Sulphur oxides (SOX) and particulate matter:
The Norwegian Sea ECA will impose a fuel oil sulphur content limit of 0.10 percent by mass.

Nitrogen oxides (NOX):
The Norwegian Sea ECA will apply to ships constructed on or after 1 March 2026 and operating in the Norwegian Sea Emission Control Area. Ships constructed on or after 1 March 2026 will mean a ship:

1. For which the building contract is placed on or after 1 March 2026; or
2. In the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 September 2026; or
3. The delivery of which is on or after 1 March 2030.

Figure 2. Proposed Norwegian Sea ECA [Source: MEPC 81/11/1]

OTHER DEVELOPMENTS

Amendments on revised reporting procedures for loss of containers

The Committee adopted MEPC Resolution.384(81), *amendments to Protocol I of MARPOL concerning reporting procedures for the loss of containers*, introducing amendments to Article V of Protocol I – Provisions concerning Reports on Incidents involving Harmful Substances to add a new paragraph 3 with reporting procedures "in case of the loss of freight container(s), the report required by article II(1)(b) shall be made in accordance with the requirements on danger messages as provided for in regulations V/31 and V/32 of the International Convention for the Safety of Life at Sea, 1974."

MEPC Circular on Recommendations for the carriage of plastic pellets by sea in freight containers

The Committee approved circular MEPC.1/Circ.909 on *Recommendations for the carriage of plastic pellets by sea in freight containers* as the first step in a two-stage approach aimed at reducing the environmental risks associated with the carriage of plastic pellets in packaged form by sea, pending consideration of future mandatory measures for the carriage of plastic pellets in freight containers. It outlines recommendations for the packaging in order to prevent any damage or loss of contents that may be caused under normal conditions of transport by vibration or acceleration forces. Additionally, the recommendations provide for cargo information which clearly identifies the cargo, as well as transport information for the special stowage of the freight containers containing plastic pellets as follows:

> Freight containers containing plastic pellets should be properly stowed and secured to minimize the hazards to the marine environment without impairing the safety of the ship and persons on board. Specifically, freight containers containing plastic pellets should be stowed under deck wherever reasonably practicable; or inboard in sheltered areas of exposed decks.

Draft Action Plan for the Reduction of Underwater Noise from Commercial Shipping

In 2023, MEPC 80 approved the *Revised guidelines for the reduction of underwater noise from shipping (URN)* (MEPC.1/Circ.906) and encouraged interested Member States and international organizations to submit to the Committee lessons learned/best practices in the implementation of the Revised guidelines, i.e. an Experience-Building Phase (EBP).

Subsequently, a Draft Action Plan for the Reduction of Underwater Noise from Commercial Shipping was prepared by the SDC sub-committee and submitted to MEPC as an urgent matter for endorsement. Additionally, in order to allow for the three-year period for the EBP, SDC requested to extend the target completion year to 2026.

The objective of the Action Plan to further prevent and reduce URN from ships is to guide the IMO's continued work on this issue and to provide a mechanism to identify specific outcomes and indicative actions in a meaningful and measurable way. The action items in this plan may be pursued in parallel with the EBP. The Action Plan contains the following tasks:

- Establish an experience-building phase (EBP) for the Revised guidelines
- Enhanced public awareness, education, and seafarer training
- Standardize Underwater Radiated Noise Management Planning process by establishing best practices
- Develop Underwater Radiated Noise Targets
- Further develop policy for URN reduction
- Create IMO processes/technical groups to share information and consider other IMO regulatory goals
- Develop tools to collect data and share information
- Encourage research on URN and GHG/URN and Biofouling
- Encourage research on impacts of URN on species and habitats

The Committee endorsed the Draft Action Plan in principle during this session, agreed to include an agenda item on URN on the provisional agenda for MEPC 82 to consider all relevant actions requested by SDC 10, with a view to final approval at MEPC 82. Further, interested Member States and international organizations were invited to

collect information on lessons learned and best practices concerning the application and uptake of the Revised URN Guidelines, using the draft guidance on the EBP as agreed at SDC 10, and to submit such information to the Committee.

Mandatory reporting under article 12 of the Hong Kong Convention

The Committee approved circular MEPC.1/Circ.910 on *Formats for mandatory reports under Article 12 of the Hong Kong Convention.* Under Article 12 of the Hong Kong Convention, each Party is required to report to the Organization inter alia, a list of ship recycling facilities authorized in accordance with the Hong Kong Convention, a list of recognized organizations and nominated surveyors which are authorized to act on behalf of that Party and an annual list of ships recycled within the jurisdiction of that Party.
To facilitate the communication of information required by the Hong Kong Convention, the Committee agreed on the proposal for a new GISIS module and in the meanwhile – until the new GISIS module is finalized – on standard formats that Parties will follow when reporting to the Organization. These formats will be kept under review and be updated as necessary in the light of experience gained from their use.

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