



Technical Information

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To : All BKI Customers

Subject : Summary Report on 76th Session of the IMO Meeting of Marine Environment Protection Committee (MEPC 76)

Summary

This Technical Information summarizes the result of 76th Session of the IMO Marine Environment Protection Committee (MEPC 76) that was held remotely from the 10 to 17 June 2021.

Information

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The following agenda are among those discussed during the meeting:

Agenda Number	Topic
3	Consideration and adoption of amendments to mandatory instruments
4	Harmful aquatic organisms in ballast water
5	Air pollution prevention
6	Energy efficiency of ships
7	Reduction of GHG emissions from ships
8	Follow-up work emanating from the Action Plan to address marine plastic litter from ships
9	Pollution prevention and response
10	Reports of other sub-committees
11	Technical cooperation activities for the protection of the marine environment
12	Work programme of the Committee and subsidiary bodies
13	Any other business

The Agenda above are several technical issues discussed during the meeting. A brief coverage among the issues are expressed in the attached document.

More info

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A. CONSIDERATION AND ADOPTION OF AMENDMENTS TO MANDATORY INSTRUMENTS (AGENDA ITEM 3)

Taking into account the approval made at MEPC 75, the Committee agreed to adopt the following draft amendments to mandatory instruments during the virtual meeting:

- MARPOL Annex I concerning the prohibition on the use and carriage for use as fuel of heavy fuel oil by ships in Arctic waters;
- MARPOL Annexes I and IV concerning the exemption of unmanned non-self-propelled (UNSP) barges from survey and certification requirements;
- MARPOL Annex VI concerning mandatory goal-based technical and operational measures to reduce carbon intensity of international shipping and exemption of UNSP barges from survey and certification requirements; and
- AFS Convention concerning controls on cybutryne and the form of the International Anti-Fouling System Certificate (IAFSC).

MEPC 76 also agreed to approve consequently draft MEPC.1 Circular on Guidelines for exemption of UNSP barges from the survey and certification requirements under the MARPOL Convention.

MARPOL Annex I

The amendments to MARPOL Annex I cover, among others:

- The Committee agreed that the adopted amendments to MARPOL Annex I shall be deemed to have been accepted on 1 May 2022 and shall enter into force on 1 November 2022.
- During the virtual Drafting Group on Amendments to Mandatory Instruments, the Committee agree to adopt the draft amendments to MARPOL Annex I, concerning the prohibition on the use and carriage for use as fuel of heavy fuel oil by ships in Arctic waters (regulation 43A) and the exemption of unmanned non-self-propelled (UNSP) barges from survey and certification requirements (regulations 1, 3, 9 & Appendix VI).

MARPOL Annex VI

- The Committee agreed that the adopted amendments to MARPOL Annex VI shall be deemed to have been accepted on [1 May 2022] and shall enter into force on [1 November 2022].

- The Committee also agreed to add a paragraph in the draft requisite MEPC resolution, as follows:
- "INVITES ALSO the Parties to consider and initiate as soon as possible the development of a carbon intensity code."
- During the virtual Drafting Group on Amendments to Mandatory Instruments, the Committee agree adopt the draft amendments to MARPOL Annex VI, concerning mandatory goal-based technical and operational measures to reduce carbon intensity of international shipping and exemption of UNSP barges from survey and certification requirements (regulations 25.3 and 28.11) and the exemption of unmanned non-self-propelled (UNSP) barges from survey and certification requirements (regulations 1, 3, 7 & Appendix II).

AFS Convention

- The Committee agreed that the adopted amendments to AFS Convention shall be deemed to have been accepted on 1 July 2022 and shall enter into force on 1 January 2023.
- During the virtual Drafting Group on Amendments to Mandatory Instruments, the Committee agree adopt the draft amendments to AFS Convention, concerning controls on cybutryne and the form of the International Anti-Fouling System Certificate (IAFSC) (Annex 1, 4, & Appendix II).

B. HARMFUL AQUATIC ORGANISMS IN BALLAST WATER (AGENDA ITEM 4)

During the virtual meeting, the following matters are considered by MEPC 76:

Verification of compliance monitoring devices (CMDs)

The Committee instructed the PPR Sub-Committee to consider the drafting of ISO 3725 Ships and marine technology – Ballast water sampling – Verification testing protocol for compliance monitoring devices began in January 2020 during the meeting of TC8 Working Group 12 (Aquatic nuisance species).

Form of the International Ballast Water Management Certificate

The Committee instructed the PPR Sub-Committee to consider the draft amendments to the BWM Convention regarding the form of the International Ballast Water Management Certificate (IBWMC).

Type approval of ballast water management systems

The Committee noted the information of a variety of type-approved ballast water management systems.

MEPC 76 also agreed to defer the following to MEPC 77:

- Application of the BWM Convention to specific ship types
- Application of the BWM Convention to ships operating at ports with challenging water quality
- Review of the ballast water record book

C. AIR POLLUTION PREVENTION (AGENDA ITEM 5)

IMO monitoring programme of the worldwide average sulphur content of fuel oils supplied

The Committee noted the relevant information related to the implementation of IMO 2020 as well as the outcome of the monitoring of the worldwide average sulphur content of residual and distillate fuel oils supplied for use on board ships through 2020, as follows:

- 137,306 samples were taken from a total of 113,307,010 tonnes of residual fuel oil supplied for use on board ships. In terms of the sulphur contents of the tested residual fuel oils, by quantity, 1.71% were not exceeding 0.10%, 77.94 % were not exceeding 0.50%, but above 0.10%, and 20.35% were exceeding 0.50%. As shown, the bulk of the residual fuel oils that were tested were in the range of 0.40% to 0.50% sulphur content.
- 84,373 samples were taken from a total of 16,339,873 tonnes of distillate fuel oil supplied for use on board ships. In terms of the sulphur contents of the tested distillate fuel oils, by quantity, 93.99% were not exceeding 0.10%, 5.93 % were not exceeding 0.50%, but above 0.10%, and 0.08% were exceeding 0.50%. As shown the bulk of the distillate fuel oils were in the range not exceeding 0.10% sulphur content

The Committee noted the information related to the summary of information on port State control (PSC) of the 2020 sulphur limit (IMO 2020) requirements conducted by Tokyo MOU member Authorities, as follows :

- Tokyo MOU conducted a total of 12,481 inspections, of which 13 ships were detained due to non-compliance with the sulphur limit requirements. 11 out of 13 detentions, representing 85%, were made to ships carrying or using noncompliant fuel oil. The other two detentions were relating to defective Exhaust Gas Cleaning System (EGCS) and fuel

oil change-over procedure, respectively. Among the detentions, 7 (54%) were for bulk carriers and 3 (23%) were for refrigerated cargo carriers.

- A total of 110 sulphur limit requirements related deficiencies were recorded, involving 103 ships. The notable deficiencies found were related to: IAPP certificate, bunker delivery notes, fuel oil change-over procedure, alternative arrangements/EGCS, sulphur content of fuel/non-compliant fuel, and ISM related deficiency: 11 (10%).

Implementation of Tier III NOx emissions regulations for large yachts of 24m load line length or over and less than 500 gross tonnage

The Committee noted an update on the availability of Tier III NOX compliant engines for large yachts greater than 24 m load-line length and less than 500 gross tonnage.

Terms of reference for the Correspondence Group on Air Pollution and Energy Efficiency

1. License for fuel oil supply

The Committee approved the proposed amendments to the Guidance for best practice for member State/coastal State (MEPC.1/Circ.884)

2. Proxy for offshore and marine contracting vessels and cruise passenger ships

The Committee considered both pros and cons of proxy A or B for offshore and marine contracting vessels, as follows:

- Proxy A: a proxy based on yearly energy consumption

$$P_A = \frac{\text{Total kg CO}_2 \text{ emitted/year}}{\frac{\text{Total gross output power generated/year}}{\text{Total kg CO}_2 \text{ emitted/year}}} = \frac{\text{Total kg CO}_2 \text{ emitted/year}}{\sum(\text{installed rated power}_i \times \text{yearly engine running hours}_i)} \quad [\text{kg CO}_2/\text{kWh}]$$

- Proxy B: a proxy based on effective (operational) utilization

$$P_B = \frac{\text{Total kg CO}_2 \text{ emitted/year}}{\text{Total hours underway/year}} \quad [\text{kg CO}_2/\text{hour}]$$

It was noted that proxy A would require the data on yearly engine running hours and installed power, for each engine, which was currently not covered by the IMO DCS.

The Committee considered the use of "Available Lower Berth (ALB)" as the capacity of each cruise passenger, as follows:

$$P_{ALB} = \frac{\text{Total kg CO}_2 \text{ emitted/year}}{\text{ALB} \times \text{distance travelled/year}} \quad [\text{kg CO}_2/\text{ALB - mile}]$$

It was noted that ALB data was currently not covered by the IMO DCS.

This issues will be reviewed further by an Intersessional Correspondence Group on Carbon Intensity Reduction.

3. Performance indicators (PIs)

MEPC 76 noted all potential performance indicators (PIs), are kept for further consideration, while specifically noting that some of the proposed PIs could not be obtained from the data currently collected pursuant to regulation 22A of MARPOL Annex VI

Revision of the interim minimum power guidelines

The Committee considered the draft amendments to the 2013 Interim guidelines for determining minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions (MEPC.1/Circ.850/Rev.2), as prepared by the Correspondence Group.

Amendments to the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships

The Committee adopted the proposed changes to the 2018 guidelines (Resolution MEPC.308(73) as amended by Resolution MEPC.322(74)) to acknowledge the amendments to MARPOL Annex VI as adopted by MEPC 75, for the mandatory reporting of the attained EEDI values and related information.

Amendment to unified interpretation on the dates related to EEDI Phase 2 and 3 for new ships

The Committee approved the updated unified interpretation clarifying the dates related to EEDI Phase 2 and 3 for “new ships” following the entry into force of the amendments on the early application of EEDI Phase 3 for certain ship types as set out in table 1 of regulation 21 of MARPOL Annex VI (resolution MEPC.324 (75)).

MEPC 76 also agreed to defer the following to MEPC 77:

- Overview of data on fuel oil quality and availability currently in the MARPOL Annex VI module in GISIS.
- Proposal regarding the amendment to MEPC.1/Circ.883 regarding recommended actions to take when the Exhaust Gas Cleaning System (EGCS) system malfunctions.
- Report on the environmental impact assessment of discharge water from EGCS.
- Evaluation and harmonisation of rules and guidance on the discharge of liquid effluents from EGCS into waters, including conditions and areas.

D. ENERGY EFFICIENCY OF SHIPS (AGENDA ITEM 6)

Under this agenda, the Committee noted the 2020 industry guidelines on calculation and verification of Energy Efficiency Design Index (EEDI) as well as the Status of technological development of the EEDI database.

Report of fuel oil consumption data submitted to the IMO Ship Fuel Oil Consumption Database in GISIS

The Committee noted the following findings in relation to the reported fuel consumption data for 2019:

- data for reporting year 2019 were submitted by 107 Administrations, consisting of 72 Parties to MARPOL Annex VI and 35 non-Parties, for 27,221 ships in total out of a potential 32,511 (83.7%) and that, on the basis of gross tonnage, the reported data represented 93.0% of the ships that were estimated to fall under the scope of regulation 27 of MARPOL Annex VI
- just over 213 million tonnes of fuel were used in 2019 in total on a quantity basis: 80.5% of the fuel oil used during 2019 was heavy fuel oil (HFO), and 11.3% was diesel/gas oil (MDO/MGO) and 3.3% was light fuel oil (LFO), meaning that more than 95% of the fuel oil used during 2019 was conventional fuel oil;
- the majority of fuel oil was consumed by three ship types: bulk carriers, tankers, containerships; in addition, 10 million tonnes (4.9%) of liquefied natural gas (LNG), mainly used by gas carriers and LNG carriers, was reported; and the remaining minority fuel oil types reported were ethanol, methanol, LPG and biofuel.

MEPC 76 also agreed to defer the following to MEPC 77

- Possible Introduction of EEDI Phase 4.
- Technical consequences of ship machinery design in relation to the EEDI which considers issues including engine de-rating, passing through the barred speed range, shaft alignment, propulsion improving devices and model tests, manoeuvrability in heavy seas, and alternative fuels.
- EEDI Reduction beyond Phase 2 - Consideration of technical issues affecting future evolution of the EEDI regulation and decarbonising shipping.
- Proposal regarding to the amendments to the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships
- Update to model course 4.05 on the Energy Efficient Operation of Ships.

- Draft amendments to MEPC.1/Circ.815 for verification of the wind propulsion system.

E. REDUCTION OF GHG EMISSIONS FROM SHIPS (AGENDA ITEM 7)

During the 76th session, amendments to Chapter 4 of MARPOL Annex VI were adopted which were covered the inclusion the new regulations 23 and 25 (attained and required Energy Efficiency Existing Ship Index (EEXI)), respectively and regulation 28 (operational carbon intensity). This amendments will be entered into force on 1 November 2022. The compliance of the EEXI must be demonstrated by their next scheduled annual, intermediate or renewal survey for the International Air Pollution Prevention (IAPP) Certificate to be issued or endorsed, or the initial survey before the ship enters service for the International Energy Efficiency Certificate (IEEC) to be issued, whichever is the first on or after 1 January 2023.

In line with above amendments MARPOL Annex VI, regarding to the finalization of the draft technical guidelines supporting the EEXI framework, the Committee adopted the following resolution:

- Resolution MEPC.332 (76) on the 2021 Guidelines on the method of calculation of the attained energy efficiency existing ship index (EEXI).
- Resolution MEPC. 333 (76) on the 2021 Guidelines on survey and certification of the energy efficiency existing ship index (EEXI).
- Resolution MEPC. 334 (76) on the 2021 Guidelines on the shaft/engine power limitation system to comply with the EEXI requirements and use of a power reserve.

In addition, Regarding to Finalization of the draft technical guidelines supporting the CII framework, the Committee adopted Resolution related to:

- Carbon intensity indicators and calculation method
Resolution MEPC. 335 (76) on the 2021 Guidelines on operational carbon intensity indicators and the calculation methods (CII Guidelines, G1).
- CII reference lines
Resolution MEPC. 336 (76) on the 2021 Guidelines on the reference lines for use with operational Carbon Intensity Indicators (CII reference lines guidelines, G2).
- CII reduction factors
Resolution MEPC. 337 (76) on the 2021 Guidelines on the operational carbon intensity reduction factors relative to reference lines (CII Reduction factor Guidelines, G3).

- CII rating

Resolution MEPC 338 (76) on the 2021 Guidelines on the operational Carbon Intensity rating of ships (CII rating guidelines, G4).

Update of the Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP)

The Committee noted the Group's discussion on the update of the Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP).

MEPC 76 also agreed to defer the following to MEPC 77:

- Proposal to reflect the onboard CO₂ captured / CO₂ removal in EEDI and EEXI.
- The need to consider matters related to the use of biofuels, in particular the need to address the issue of NO_x certification when using biofuels is highlighted.
- Prediction and Verification of CO₂ Emission Savings with Wind Propulsion Systems.
- Proposal to consider the impact of all greenhouse gases emitted from ships, including methane.

F. FOLLOW-UP WORK EMANATING FROM THE ACTION PLAN TO ADDRESS MARINE PLASTIC LITTER FROM SHIPS (AGENDA ITEM 8)

Due to time constraints, the Committee agreed to defer this agenda to MEPC 77.

G. POLLUTION PREVENTION AND RESPONSE (AGENDA ITEM 9)

Actions to address marine plastic litter from ships

The Committee approved MEPC.1/Circ.893 Circular on Provision of adequate facilities at ports and terminals for the reception of plastic waste from ships and MEPC.1/Circ.894 Circular on Sharing of results from research on marine litter and encouraging studies to better understand micro plastics from ships.

Procedures for PSC on the use of electronic record books

In this session, the Committee endorsed the development of interim guidance for surveyors, including a sample form, to facilitate the endorsement of a cargo operation in an electronic Cargo Record Book. The Committee also noted that PPR 7 had invited III 7 to develop the interim guidance and to consider whether there was a need to incorporate the guidance in the next revision of the Procedures for Port State Control.

Unified interpretations to the NOX Technical Code 2008

The Committee approved MEPC Circular MEPC.1/Circ.895 on Unified interpretations to the NOx Technical Code 2008, as amended and revokes MEPC.1/Circ.865.

Guidelines for port State control under MARPOL Annex VI

MEPC 76 endorsed a review of supporting information with a view to developing amendments to the 2019 Guidelines for port State control under MARPOL Annex VI Chapter 3 (resolution MEPC.321(74)) to include provisions relating to Chapter 4 of MARPOL Annex VI.

MEPC 76 approved a draft UI to the NOx Technical Code presented as MEPC Circular MEPC.1/Circ.895 which revokes MEPC.1/Circ.865.

H. REPORTS OF OTHER SUB-COMMITTEES (AGENDA ITEM 10)

The main discussion on this agenda are the outcome of SDC 7 and III 6.

The Committee endorsed the proposal and agreed to defer to MEPC 77 regarding the consideration of the approval of amendments to MARPOL Annex I and, concurrently with the MSC, to the IBC Code, regarding watertight doors on cargo ships.

I. TECHNICAL COOPERATION ACTIVITIES FOR THE PROTECTION OF THE MARINE ENVIRONMENT (AGENDA ITEM 11)

The Committee noted the following technical cooperation activities for the protection of the marine environment:

- Update on activities under the IMO Integrated Technical Cooperation Programme (ITCP) from 1 January to 31 December 2020;
- Update on activities under implemented by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) in 2020;

The Committee also approved the revised thematic priorities related to the marine environment under the IMO Integrated Technical Cooperation Programme (ITCP) for the 2022-2023 biennium. The Committee endorsed the reinstatement of a dedicated global programme on reducing atmospheric emissions from ships and in ports, and effective implementation of IMO's Initial GHG Strategy, for inclusion under the ITCP for the 2022-2023 biennium.

J. WORK PROGRAMME OF THE COMMITTEE AND SUBSIDIARY BODIES (AGENDA ITEM 12)

The Committee had for its consideration some documents in relation to the reduction of underwater noise from commercial shipping, as follows:

- 2014 Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life (MEPC.1/Circ.833) (2014 Guidelines) and identify next steps. It is expected that the SDC sub-committee will consider these guidelines in the biennial agenda
- Proposed new output regarding underwater noise from commercial shipping, ;

Scheduling of upcoming sessions and items to be included in the agenda of MEPC 77

The Committee noted that the preliminary programme of meetings for 2022 was not yet available. Meeting dates for 2022 were expected to be published shortly after C 125 in July 2021.

K. ANY OTHER BUSINESS (AGENDA ITEM 13)

During the virtual meeting, the following matters are considered by MEPC 76:

- Risk assessment of anti-fouling systems

The Committee noted the information on particular risk assessment criteria that can be used to determine whether an anti-fouling system should be included in Annex 1 of the AFS Convention. The Committee invited proposal for a new output would need to be submitted to a future session of the Committee.

- Industry standard on in-water cleaning with capture

The Committee instructed the PPR Sub-Committee to consider the proposal industry standard on in-water cleaning with capture that was published in 2021.

- The Committee noted the status report on FSO SAFER, information on the adoption and implementation of a roadmap for the possible designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides pursuant to MARPOL Annex VI, within the framework of the Barcelona Convention and information on a report describing IMO food waste regulation and possible reforms and amendments (food waste regulation).

MEPC 76 also agreed to defer the consideration of survey and certification under the AFS Convention submitted by World Coatings Council to MEPC 77.