



NEWS BRIEF
MEPC 80





NEWS BRIEF: MEPC 80

The IMO Marine Environment Protection Committee (MEPC) held its 80th session from July 3 to 7, 2023. This Brief provides an overview of the more significant issues progressed at this session.

KEY DEVELOPMENTS

- 2023 IMO Strategy on GHG Reduction
- Approval of Marine Fuel Life Cycle Guidelines
- Guidance on Biofuels Under IMO DCS and CII
- 2023 IHM Guidelines
- Designation of North-West Mediterranean PSSA
- Revised Guidelines on Underwater Noise

ABS RESOURCES

- ABS Regulatory News [\(link\)](#)
- ABS Global Sustainability Center [\(link\)](#)
- ABS EEXI Services [\(link\)](#)
- ABS CII Services [\(link\)](#)
- ABS Greenhouse Gas Inventory and Carbon Accounting [\(link\)](#)
- ABS Rules and Guides [\(link\)](#)

WORLD HEADQUARTERS

1701 City Plaza Drive
Spring, TX 77389 USA
P 1-281-877-6000
F 1-281-877-5976
ABS-WorldHQ@eagle.org
www.eagle.org

© 2023 American Bureau of Shipping.
All rights reserved.

CONTENTS (CLICK TO FOLLOW)

IMO STRATEGY ON GHG EMISSIONS

- [2023 IMO Strategy on Reduction of GHG Emissions from Ships](#)
- [Review of the Short-Term GHG Reduction Measures](#)
- [Candidate mid-term GHG reduction measures](#)
- [Proposed Timeline for the Development of Candidate Mid-Term Measures and Associated Comprehensive Impact Assessment](#)
- [Considerations on How to Progress Work on the Reduction of GHG Emissions from Ships Intersessionally before MEPC 81](#)
- [Development of Marine Fuel Life Cycle Guidelines](#)
- [Discussion on Carbon Capture Technologies](#)

AIR POLLUTION AND ENERGY EFFICIENCY

- [Interim Guidance on the Use of Biofuels under Regulations 26, 27 and 28 of MARPOL Annex VI \(DCS and CII\)](#)
- [Engine Emission Testing and Certification for NO_x Tier III](#)
- [Draft Amendments to MARPOL Annex VI related to Low-Flashpoint Fuels and Other Fuel Oil Related Issues](#)
- [Amendments to the 2021 Guidelines for Exhaust Gas Cleaning Systems](#)
- [Amendments to the 2022 Guidelines on the Survey and Certification of the Energy Efficiency Design Index \(EEDI\)](#)
- [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 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 \(DCS\)](#)
- [Accessibility of IMO DCS Data](#)
- [Standards for Shipboard Gasification of Waste Systems and Associated Amendments to Regulation 16 of MARPOL Annex VI](#)
- [Revision of Regulation 13.2.2 of MARPOL Annex VI to Clarify that a Marine Diesel Engine Replacing a Boiler Shall Be Considered a Replacement Engine](#)
- [Unified Interpretations of MARPOL Annex VI](#)
- [Discussion on Risks of EGCS Discharge Water](#)
- [Discussion on Impact of Black Carbon Emissions on the Arctic](#)



CONTENTS (CONTINUED)

BALLAST WATER MANAGEMENT AND MARINE BIOSAFETY

- **Convention Review Plan Under the Experience-Building Phase Associated with the BWM Convention**
- **Temporary Storage of Grey Water or Treated Sewage in Ballast Tanks**
- **Application of the BWM Convention to Ships Operating at Ports with Challenging Water Quality**
- **Ballast water record-keeping and reporting**
- **Modifications to ballast water management systems with existing type approval**
- **Port State Control inspections during the Experience-Building Phase (EBP)**
- **Re-establishment of the Ballast Water Review Group**
- **2023 Guidelines for the Control and Management of Ship's Biofouling**
- **2023 Guidelines for the Development of the Inventory Hazardous Materials**
- **Amendments to the BWM Convention – Form of the Ballast Water Record Book**
- **Protocol for Verification of Ballast Water Compliance Monitoring Devices**
- **Unified Interpretations of the BWM Convention**
- **BWM System Approvals**

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

- **Designation of the North-Western Mediterranean Sea as a Particularly Sensitive Sea Area**
- **Designation of Special Areas in the Red Sea and Gulf of Aiden – Discharge Requirements**
- **Proposal for the Canadian Arctic ECA**
- **Proposal for North-East Atlantic Ocean ECA**
- **Proposal for Mauritius PSSA**

OTHER DEVELOPMENTS

- **Entry-into-force conditions of the Hong Kong Convention**
- **Revised Guidelines for the Reduction of Underwater Noise**
- **Draft Assembly Resolution Promoting Actions to Prevent Illicit Operations of "Dark Shipping"**
- **Operational Guide on the Response to Spills of Hazardous and Noxious Substances (HNS)**
- **Amendments to PPR.1/Circ.7 – Decisions with Regard to the Categorization and Classification of Products**



IMO STRATEGY ON GHG EMISSIONS

2023 IMO Strategy on Reduction of GHG Emissions from Ships

Levels of Ambition

The Committee, on the basis of the progress made in the Intersessional Working Group on Reduction of GHG Emissions from Ships 15 (ISWG-GHG 15) and after extensive discussions in which all delegations demonstrated their willingness to reach consensus on the revision of Initial IMO Strategy on Reduction of GHG Emissions from Ships, approved the *2023 IMO Strategy on Reduction of GHG Emissions from Ships* (Resolution MEPC.377(80)).

The objectives of 2023 IMO GHG Reduction Strategy are:

- Enhancing IMO's contribution to global efforts (Paris Agreement and United Nations 2030 Agenda for Sustainable Development) to reduce GHG emissions in international shipping;
- To identify actions the international shipping sector should implement, while addressing impacts on States and supporting the consistent development of global trade and maritime transport services;
- To specify actions and measures that will contribute to achieving those objectives along with incentives for research and development and monitoring of GHG emissions from international shipping.

The 2023 IMO GHG Strategy increases the levels of ambition compared to the *Initial IMO Strategy on Reduction of GHG Emissions from Ships*. The **levels of ambition and indicative checkpoints shall consider the Well-to-Wake (WtW) GHG emissions of marine fuels**, as addressed in the *Guidelines on lifecycle GHG intensity of marine fuels (LCA Guidelines)* with the overall objective of reducing GHG emissions of international shipping without a shift to other sectors.

Levels of ambition directing the 2023 IMO GHG Strategy are as follows:

1. carbon intensity of the ship to decline through further improvement of the energy efficiency for new ships

To review with the aim of strengthening the energy efficiency design requirements for ships;

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**, compared to 2008;

.3 uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources to increase

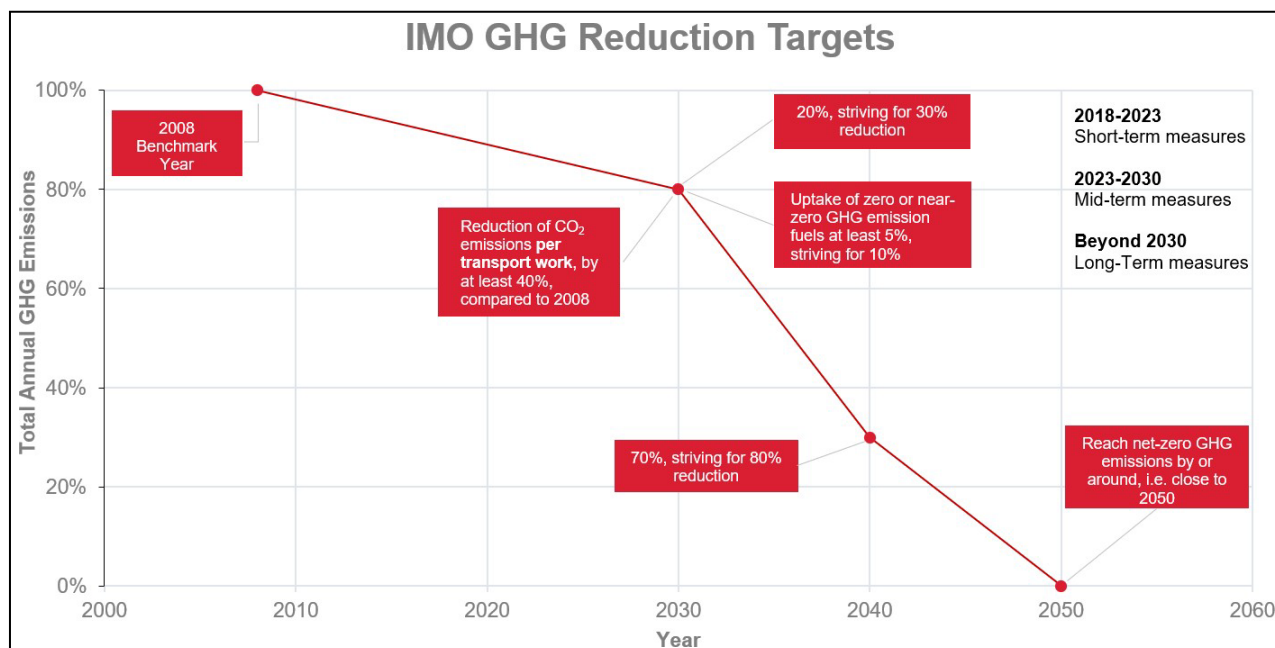
uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources to represent **at least 5%, striving for 10%, of the energy used by international shipping by 2030**; and

4. GHG emissions from international shipping to reach net zero

to peak GHG emissions from international shipping as soon as possible and **to reach net-zero GHG emissions by or around, i.e., close to, 2050**, considering different national circumstances whilst pursuing efforts towards phasing them out as called for in the Vision consistent with the long-term temperature goal set out in Article 2 of the Paris Agreement.

In addition, the Committee established two indicative checkpoints to reach net-zero GHG emissions from international shipping:

- .1 to reduce the total annual GHG emissions from international shipping **by at least 20%, striving for 30% in 2030**, compared to 2008; and
- .2 to reduce the total annual GHG emissions from international shipping **by at least 70%, striving for 80% by 2040**, compared to 2008.



Timeline of candidate Short-, Mid- and Long-Term GHG Reduction Measures

The Committee agreed on the following timelines for the candidate measures set out in the 2023 IMO GHG Strategy:

- The review of the **short-term** mandatory goal-based technical and operational measures shall be completed **by 1 January 2026**.
- The basket of **mid-term** GHG reduction measures shall be finalized and agreed by the Committee **by 2025**. Other candidate mid-term GHG reduction measures could be finalized and agreed between 2023 and 2030.
- **Long-term** measures could be finalized and agreed by the Committee **beyond 2030**, to be developed as part of the 2028 review of the IMO GHG Strategy.

The IMO GHG Strategy is subject to a five-yearly review, with the next review to happen in 2028.

Review of the Short-Term GHG Reduction Measures

Regulations 25.3 and 28.11 of MARPOL Annex VI state that a review of the short-term GHG reduction measures (EEXI, SEEMP and CII) shall be conducted by 1 January 2026. In that order, the Committee endorsed the *Draft Review Plan of the Short-term GHG reduction measure*. The review plan is focused on three main sections: scope, timeline and data sources.

Scope: The short term measures shall be evaluated on:

- Their **effectiveness** in reducing the carbon intensity of international shipping;

- Experiences with **enforcement** of the short-term measure by flag and port States;
- Need for **enhancement** of the ship fuel oil consumption data (IMO DCS);
- **Impacts** on States;
- **Revision of the Z factor** and CII_R values as set out in CII Guidelines G2 and G3;
- Further **amendment to the CII metrics**,
- Further **amendments to the correction factors and voyage adjustments** (CII Guidelines G5);
- Application of the **LCA Guidelines**, and;
- Any amendments to existing instruments.

Timeline: The above review shall be carried out:

- From MEPC 80 to MEPC 82 (Autumn 2024), data gathering;
- At MEPC 82, a Working Group will analyze the data continued by a Correspondence Group, and;
- An Intersessional Working Group between MEPC 82 and MEPC 83 along with a Working Group at MEPC 83 will review the Convention and Guidelines.

Data: The effectiveness of the short-term measures must be justified by relevant IMO DCS data.

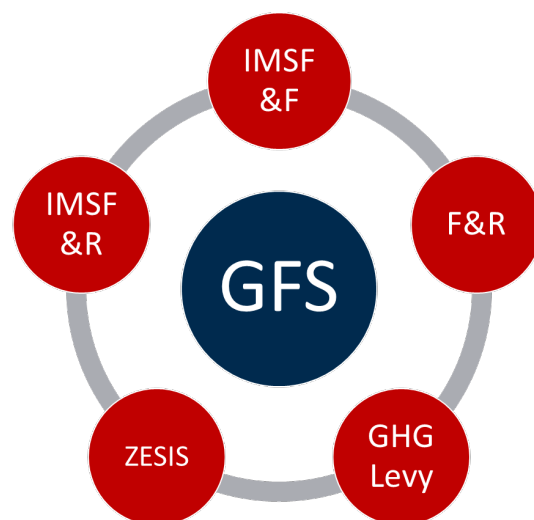
Beginning from the second half of 2023, the Secretariat is assigned to monitor the improvement of carbon intensity based on both demand-based and supply-based measurements. In addition, member States and international organizations, are invited to collect data and submit proposals to relevant MEPC meetings along with other stakeholders such as shipowners, charterers, and port authorities.

Candidate mid-term GHG reduction measures

The basket of candidate mid-term GHG reduction measures shall be developed and finalized of both:

- A **technical measure**, a goal-based marine fuel standard regulating the reduction of the marine fuel's GHG intensity. There is broad support for the Greenhouse Gas Fuel Standard (GFS) as proposed initially by Austria et al.
- An **economic measure**, on the basis of a maritime GHG emissions pricing mechanism. On the contrary to universal support of GFS, there are divergent views on the economic elements, where the following seem to stand out:
 1. IMO Maritime Sustainability Fund and Reward (**F&R**) by International Chamber of Shipping (ICS);
 2. Zero-Emission Shipping Incentive Scheme (**ZESIS**) by Japan;
 3. International Maritime Sustainability Funding and Reward (**IMSF&R**) by Argentina et al;
 4. International Maritime Sustainable Fuels and Fund (**IMSF&F**) by China;
 5. GHG Levy (**GHGL**) by Marshall and Solomon Islands.

Both technical and economic measures should consider the WtW GHG emissions of marine fuels as addressed in the *Guidelines on lifecycle GHG intensity of marine fuels* (LCA Guidelines). Furthermore, the Committee will consider any possible synergies of mid-term measures with existing measures such as the Carbon Intensity Indicator (CII), regarding incentives for energy efficiency.





Impact on States

The Committee prior to the adoption of any measure or combination of measures shall assess their impact on States and especially in Small Island Developing States (SIDS) and Least Developed Countries (LDCs). Any impact assessment shall at least consider the following:

- Geographic remoteness of and connectivity to main markets;
- Cargo value and type;
- Transport dependency and costs;
- Food security;
- Disaster response;
- Cost-effectiveness and socio-economic progress and development.

Proposed Timeline for the Development of Candidate Mid-Term Measures and Associated Comprehensive Impact Assessment

The Committee agreed on the following timeline for the conduct of CIA and development of mid-term measures, which is also incorporated in the 2023 IMO GHG Strategy.

Target dates	Milestones		
	Comprehensive Impact Assessment (CIA) of the basket of candidate mid-term measures	Development of candidate mid-term measures	Other milestones
MEPC 80 (Summer 2023)	Initiation of CIA	Initiate Phase III of the Work Plan on the development of mid-term measures	
MEPC 81 (Spring 2024)	Interim report	Finalization of basket of measures	
MEPC 82 (Autumn 2024)	Finalized report		
MEPC 83 (Spring 2025)		Approval of mid-term measures	Review of the short-term measure to be completed by 1 January 2026
Extraordinary 1 or 2-day MEPC (six months after MEPC 83)		Adoption of mid-term measures	
MEPC 84 (Spring 2026)			
MEPC 85 (Autumn 2026)			
16 months after adoption (2027)		Entry into force of mid-term measures	
MEPC 86 (Summer 2027)			Initiate the review of the 2023 IMO GHG Strategy
MEPC 87 (Spring 2028)			
MEPC 88 (Autumn 2028)			Finalization of the review of the 2023 IMO GHG Strategy with a view to adoption of the 2028 IMO GHG Strategy



Considerations on How to Progress Work on the Reduction of GHG Emissions from Ships Intersessionally before MEPC 81

Comprehensive Impact Assessment of the basket of mid-term measures

The Committee agreed on the establishment of the Steering Committee that will carry out the Comprehensive Impact Assessment (CIA) of the basket of candidate mid-term measures in accordance with the provisions of MEPC.1/Circ.885/Rev.1.

In addition, the Committee invited the member States and international organizations to financially support the CIA of the basket of candidate mid-term measures by means of a donation to the GHG TC Trust-Fund.

Terms of Reference (ToR) for ISWG-GHG 16

The Committee instructed the ISWG-GHG 16, considering documents submitted to:

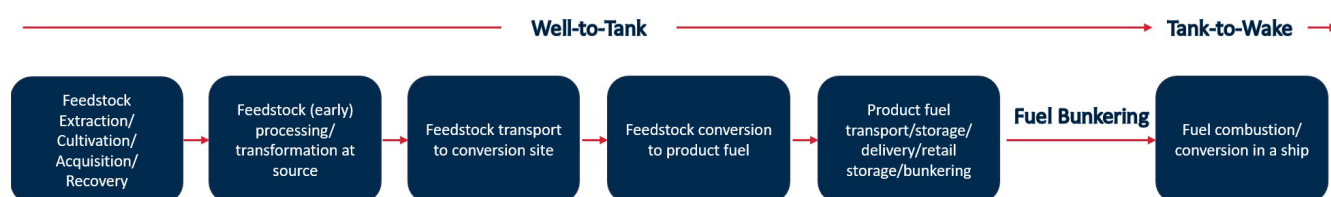
- Further consider the development of candidate mid-term measure(s) in the context of Phase III.
- Further develop the Life Cycle GHG Analysis (LCA) framework.
- If time permits, consider proposals related to onboard CO₂ capture.
- Submit a written report to MEPC 81.

Development of Marine Fuel Life Cycle Guidelines

The Committee adopted Resolution MEPC.376(80) containing the Marine Fuel life Cycle GHG Guidelines (LCA Guidelines) and agreed on a work program for further enhancement of the guidelines on specific areas. The scope of these guidelines is to address Well-to-Tank (WtT), Tank-to-Wake (TtW), and Well-to-Wake (WtW) GHG intensity and sustainability themes/aspects related to marine fuels/energy carriers (e.g., electricity for shore power) used for ship propulsion and power generation onboard. The relevant Greenhouse Gases (GHG) included are:

- **carbon dioxide (CO₂),**
- **methane (CH₄) and**
- **nitrous oxide (N₂O).**

The guidelines aim at covering the whole fuel life cycle (with specific boundaries), from feedstock, extraction/cultivation/ recovery, feedstock conversion to a fuel product, transportation as well as distribution/bunkering, and fuel utilization on board a ship.



In addition, the guidelines will also specify sustainability themes/aspects for marine fuels and define a Fuel Lifecycle Label (FLL), which carries information about fuel type, feedstock (feedstock type and feedstock nature/carbon source), conversion/production process (process type and energy used in the process), GHG emission factors, information on fuel blends and sustainability themes/aspects. The guidelines will specify the elements of FLL subject to verification/certification and include a general procedure on how the certification scheme/standards could be identified.



Terms of Reference (ToR) for Correspondence Group on the further development of the LCA framework
The Committee instructed the Correspondence Group on the further development of the LCA framework to:

- Review the template to the Well-to-Tank data collection;
- Develop a template for Tank-to-Wake default emission factors for the fuel pathways;
- Collect and compile the default emission factor data received;
- Advance the consideration of the methodological elements listed below and advise the Committee accordingly:
 - annualized emissions (over 20 years) from carbon stock changes caused by direct land-use change;
 - annualized emission savings (over 20 years) from soil carbon accumulation via improved agricultural management;
 - factor accounting for the fuel which escapes between the tanks up to the energy converter which is leaked, vented or otherwise lost in the system;
 - emission credits from the used captured CO₂ as carbon stock to produce synthetic fuels in the fuel production process);
 - emission credit from carbon capture and storage, where capture of CO₂ occurs onboard;
 - CO₂ emission factor for fuels other than those contained in resolution MEPC.364(79)
 - CH₄ and N₂O emission factors, for fuels other than those contained in resolution MEPC.364(79)
- Advance the consideration of the methodological elements on evaluating carbon GHG intensity of the electricity (including Onshore Power Supply – OPS) and the Tank-to-Wake methodologies for actual/onboard emission factors;
- Submit a written report to MEPC 81.

Discussion on Carbon Capture Technologies

The Committee received in the last meeting (MEPC79) several submissions related to recognition of Onboard Carbon Capture and Storage (OCCS) and Onboard Carbon Capture, Use and Storage (OCCUS) in relation to the EEDI / EEXI and CII frameworks. Member states recognized the importance of supporting this technological approach to reducing GHG emissions, as well as the importance of considering the accounting, verification and certification of such systems to enable their use and to ensure responsible handling and storage of the captured carbon dioxide.

The Committee noted that those delegations which submitted separate proposals to MEPC 79 related to the incorporation of onboard CO₂ capture in the IMO framework had joined their efforts in preparing document MEPC 80/7/7 which provided concrete proposals on how to structure and organize the work on this matter, including a dedicated work stream on onboard CO₂ capture with draft terms of reference to review the status of technological development of onboard CO₂ capture; and to consider issues related to different parts of the value chain.

Following consideration, the Committee agreed to instruct ISWG-GHG 16, if time permits, to consider the proposals related to onboard CO₂ capture, using document MEPC 80/7/7 as a basis advise the Committee on a way forward.



AIR POLLUTION AND ENERGY EFFICIENCY

Interim Guidance on the Use of Biofuels under Regulations 26, 27, and 28 of MARPOL Annex VI (DCS and CII)

Resolution MEPC.352(78) CII Guidelines, G1) provide the possibility for the CO₂ emission conversion factor (C_F) to be provided from the fuel oil supplier, supported by documentary evidence.

MEPC 80 approved circular MEPC.1/Circ.905 suggesting that in the interim, pending development of policy instruments for the use of the Marine Fuel Life Cycle Assessment (LCA) guidelines, biofuels that have been certified by international certification scheme¹, meeting its sustainability criteria, and that provide a well-to-wake GHG emissions reduction of at least 65% compared to the well-to-wake emissions of fossil MGO of 94 gCO_{2e}/MJ (i.e., achieving an emissions intensity **not exceeding 33 gCO_{2e}/MJ**) according to that certification, may be assigned a C_F equal to the value of the well-to-wake GHG emissions of the fuel according to the certificate (expressed in gCO_{2eq}/MJ) multiplied by its Lower Calorific Value (LCV, expressed in MJ/g) for the purpose of regulations 26, 27, and 28 of MARPOL Annex VI for the corresponding amount of fuels consumed by the ship. In any case, the C_F value of a biofuel cannot be less than 0.

For fuel blends, the C_F shall be calculated as the weighted average of the C_F for the respective amount of fuels by energy. In addition, the verification of the reported biofuel consumption shall be backed up with a Proof of Sustainability or similar documentation from a recognized scheme along with the Bunker Delivery Note (BDN). Biofuels not certified as “sustainable” or not providing at least 65% WtW GHG emissions reduction with respect to fossil MGO, shall be assigned a C_F equal to the C_F of the equivalent fossil fuel.

Member Governments shall bring the Interim Guidance to the attention of all relevant stakeholders concerned for application **as of 1 October 2023**.

Engine Emission Testing and Certification for NO_x Tier III

The Committee took into consideration a study indicating that in order to better reflect real world ship operations within ECAs, especially for ships sailing at low speeds near coastal regions and ports, potential additional test cycle for NO_x Tier III might be necessary. In addition, recent observations in the North Sea NO_x emission control area showed high NO_x emissions from Tier II and Tier III compliant ships, sailing at low speeds. In that order, several delegations expressed the intention to investigate possible establishment of new test cycles, for instance at 10 percent engine load, whereas several other delegations expressed concerns evaluating the NO_x emissions in terms of g/kWh for low engine loads, as the denominator might take very low value in operation at low loads. Noting the above, the Committee decided to invite interested Member States and International Organizations to provide additional information on engine emission testing and certification for NO_x Tier III, to future sessions.

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

The Committee approved amendments to Regulations 2, 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*”, whereas an additional paragraph is added, paragraph 1.33, for the definition of gas fuel, aligned with the definition of ‘gas’ in IGF Code.
- 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.

¹ Refer to ICAOs Approved Sustainability Certification Schemes and the CORSIA Sustainability Criteria (Chapter 2) for CORSIA Eligible 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 with 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 being 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 to the public.
- In addition, Paragraph 2.3.5, in Appendix I, *Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)* is also modified to refer to both low-flashpoint and gas fuels.

Amendments to the 2021 Guidelines for Exhaust Gas Cleaning Systems

2021 *Guidelines for Exhaust Gas Cleaning Systems, MEPC.340(77)* were amended to include also a footnote referring to *Guidelines for the use of electronic record books under MARPOL (MEPC.312(74))*. In that order, Paragraphs 4.4.9 and 5.7.1 were revised and a footnote was added to the Electronic Record Book that refers to resolution MEPC.312(74).

Amendments to the 2022 Guidelines on the Survey and Certification of the Energy Efficiency Design Index (EEDI)

The Committee approved Resolution MEPC.374(80) with amendments to the *2022 Guidelines on the survey and certification of the Energy Efficiency Design Index (EEDI) (MEPC.365(79))*. Table in paragraph 4.2.3.2 is modified, and the footnote referring to the verification of Liquefied Natural Gas (LNG) tanks filling rate is replaced by the verification of tank loading limit in the IGF and/or IGC Codes, corresponding to the normal density used in the calculation of f_{DFgas} ².

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 approved MEPC.375(80), amendments to the *2021 Guidelines on the shaft/engine power limitation system to comply with the EEXI requirements and use of power reserve (MEPC.337(76))*. Paragraph 3.2 is modified to clarify that evidence and records that justify the use of power reserve shall be submitted to the Administration or RO for verification and do not need to be submitted to the Organization as part of annual submission of use of a power reserve. In addition, Paragraph 3.4 was amended, stating that the Administration shall report to the IMO Secretariat by 30 June every year, uses of a power reserve over a 12-month period, from 1 January to 31 December of the preceding year, using a standardized template, while the IMO Secretariat shall provide an annual anonymized summary report of data received to the Committee. Disclosure of non-anonymized data may be considered at a future session, pursuant to proposals by interested parties.

The Committee at MEPC 79 agreed in general to insert the ShaPoLi/EPL concept in the EEDI framework and had noted several points that needed further consideration such as the definition of P_{ME} ³, implications on NO_x Technical

² f_{DFgas} is the fuel availability ratio of gas fuel corrected for the power ratio of gas engines to total engines, shall not be greater than 1

³ P_{ME} is the power of main engines



Code and referred MCR in NO_x certification. Several delegations supported using 83 percent of the MCR_{lim}⁴ or 75 percent of MCR whichever is lower for determining P_{ME} for use of ShaPoLi/EPL in the EEDI framework, whereas others preferred using 75 percent of the MCR_{lim}, in consistency with the EEDI calculation guidelines stating that using 83% of the MCR_{lim} could penalize ship types such as tankers and bulk carriers. For the case of the NO_x certification framework, several views supported using MCR_{lim} values, whilst some others using the original unlimited MCR. In addition, the use of MCR_{lim} in the NO_x certification would require amendments to the NO_x Technical Code. Due to the varying views, the Committee noted the thorough discussion and invited delegations to work intersessionally on matters such as assigning the appropriate MCR value along with potential draft amendments to the NO_x Technical Code.

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 approved draft 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 when the ship is not under way,
- total amount of onshore power supplied expressed in kWh
- the fuel oil consumption per combustion system (Main engine(s), Auxiliary engine(s), Oil-fired boilers, and Others).

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.

It shall be also noted that, the effective and consistent implementation of the agreed amendments to Appendix IX of MARPOL Annex VI, require the update of the SEEMP Guidelines, the DCS administration verification guidelines and the DCS database guidelines and in that order the Committee invited member States and international organizations to submit concrete proposals to MEPC 81.

Accessibility of IMO DCS Data

The Committee considered a proposal to widen the accessibility of the IMO DCS data on the advantage that it would benefit future decision-making, better targeting of policies in the field of GHG emission reduction supported by the increased data granularity, and increased credibility of the shipping industry in achieving its ambitions to reduce GHG emissions. Several delegations expressed concerns for the additional administrative burden, and the ability of Member States to preserve confidentiality of commercially sensitive data. The Committee decided to invite Member States and International Organizations to work together intersessionally and submit to a future session a proposal on how to preserve data confidentiality.

Standards for Shipboard Gasification of Waste Systems and Associated Amendments to Regulation 16 of MARPOL Annex VI

The Committee adopted Resolution MEPC.373(80) containing the *2023 Guidelines for Thermal Waste Treatment Devices (TWTG)*, which are developed based on a technology-neutral, goal-based approach that can be applied to any TWTG, such as gasification, hydrothermal carbonization, pyrolysis, or other thermal means for the disposal of permitted garbage during a ship's normal service. These guidelines follow a goal-based approach that requires the

⁴ MCR_{lim} is the limited installed power



in-service monitoring and record keeping of specified emissions, the identification of Functional Objectives for such devices and development of a TWTD Technical Report that demonstrates resolution of each Functional Objective. The guidelines also set maximum emission limits, with respect to air discharges – Performance Level 1 and tighter Performance Level 2, water discharge to sea and treatment of TWTD residues. The TWTD Technical Report shall cover at least the specified Functional Objectives in order to achieve the in-service Performance Level 1 emission limit requirements and, if applicable, those of Performance Level 2. Certification of TWTD is divided into two parts, approval of the proposed TWTD under Regulation 4 of MARPOL Annex VI and secondly approval of individual units of TWTD.

Revision of Regulation 13.2.2 of MARPOL Annex VI to Clarify that a Marine Diesel Engine Replacing a Boiler Shall Be Considered a Replacement Engine

Under Regulation 13.2.2 of MARPOL Annex VI, the replacement of a marine diesel engine by a non-identical marine diesel engine or the installation of an additional marine diesel engine is considered a major conversion, and the NO_x Technical Standards at the time of the replacement or addition of the engine shall apply. Furthermore, Regulation 13.2.2 contains an exemption clause for the replacement of a marine diesel engine with a non-identical one which states that when it is not possible for such replacement engine to meet the Tier III standard, it shall meet the Tier II standard.

The Committee approved an amendment to Regulation 13.2.2 to clarify that that the replacement of “steam system” by a marine diesel engine shall be considered a “replacement engine” (relying on the fact that a marine diesel engine is more efficient compared to old auxiliary boilers) and the Party shall notify the Organization accordingly when clause 13.2.2 is applied to a replacement of a “steam system” with a marine diesel engine. This amendment is scheduled to be adopted at MEPC 81 (April 2024).

The Committee also approved in principle the draft *2023 Guidelines as Required by Regulation 13.2.2 in Respect of Non-Identical Replacement Engines Not Required to Meet the Tier III Limit*, to include the case where a marine diesel engine is to be installed to replace a steam system that engine to be considered a replacement engine. This is expected to be adopted at MEPC 81 along with the previously mentioned MARPOL Annex VI amendment.

Unified Interpretations of MARPOL Annex VI

The Committee approved several new or revised Unified Interpretations related to the MARPOL Annex VI:

- 1) *Regulation 13 of MARPOL Annex VI – Nitrogen Oxides (NO_x)*
The approval of revision of Regulation 13.2.2 which recognizes that the installation of a marine diesel engine in place of a “steam system” is considered as a replacement engine allowing also for the applicability of clause 13.2.2, requires the consequential amendments of sections 6 and 7 of circular MEPC.1/Circ.795/Rev.7 accordingly. This interpretation will be added to MEPC.1/Circ.795 at a future date once the related MARPOL amendments has been adopted.
- 2) *Regulation 18 of MARPOL Annex VI – Fuel oil availability and quality*
A proposal was made for a Unified Interpretation to clarify that bunker delivery notes are acceptable in either hard copy or digital form providing they meet the relevant requirements of MARPOL Annex VI. The interpretation makes acceptable the use of e-BDNs provided they contain at least the required information specified in MARPOL Annex VI. Furthermore, they shall be protected from edits and authentication shall be possible by a verification method such as date and time stamp, tracking number, QR code, GPS coordinates, watermark, or other verification methods. This interpretation will be included in MEPC.1/Circ.795/Rev.8.



Discussion on Risks of EGCS Discharge Water

The Committee noted recent developments from the PPR 10 sub-committee meeting (April 2023) regarding potential environmental risks associated with discharges from exhaust gas cleaning systems and received several submissions proposing regulatory measures to limit such discharges. In discussion, some member States expressed views for limiting such discharges by means of amendments to MARPOL Annex VI, while others suggested that MARPOL Annex VI amendments would be premature at this stage and providing guidance on controls for these discharges would be sufficient. Related submissions to MEPC 80 will be sent to the PPR 11 sub-committee meeting (Feb. 2024) for further assessment and advice.

Discussion on Impact of Black Carbon Emissions on the Arctic

The Committee noted recent developments from the PPR 10 sub-committee meeting (April 2023) inviting member States and international organizations to submit proposals on potential Black Carbon control measures. The Committee noted that whilst voluntary measures may be developed for ships sailing in or near the Arctic, in line with the language used in resolution MEPC.342(77) on Protecting the Arctic from shipping Black Carbon emissions, consideration by the Committee of any potential mandatory measures to expand the geographical scope of application or the definition of the Arctic should only be given when such a proposal is co-sponsored by a Party to MARPOL Annex VI. Interested parties were urged to submit concrete proposals to PPR 11 (Feb. 2024) for mandating reductions in Black Carbon emissions from international shipping in the Arctic.



BALLAST WATER MANAGEMENT AND MARINE BIOSAFETY

Convention Review Plan Under the Experience-Building Phase Associated with the BWM Convention

The Committee approved circular BWM.2/Circ.79 containing the Convention Review Plan under the experience-building phase associated with the BWM Convention, which will guide member States and international organizations on the holistic review of the BWM Convention as part of the Experience Building Phase (EBP).

In addition, the Committee decided to re-establish the Correspondence Group on Review of the BWM Convention which is instructed to define objectives for changes to specific Convention provisions and/or instruments, to address the issues in the annex of the Convention Review Plan. The Correspondence Group is also instructed to use a specific table format in which the identified issue will be reported along with suggested actions focused on possible equipment control points, survey control points, operation control points and Port State control points. The Correspondence Group shall submit a relevant report to MEPC 81.

Temporary Storage of Grey Water or Treated Sewage in Ballast Tanks

The Committee continued the development of the *Guidance on the temporary storage of treated sewage and grey water in ballast tanks* with a view to finalization at the current session. However, due to the complexities of the discussion and the time constraints, the Committee agreed that further intersessional work would be needed. In that order, the Committee invited member States and international organizations to submit further proposals to MEPC 81.

Application of the BWM Convention to Ships Operating at Ports with Challenging Water Quality

Continuing the development of the Guidance on the application of BWM Convention to ships operating in challenging water quality from MEPC 79, the Committee decided to prioritize discussions focusing on the possible temporary nature of the guidance, pre-emptive bypassing of Ballast Water Management System (BWMS), crew familiarization with equipment and operations, roles of stakeholders and return to D-2 compliance following BWMS bypass. Due to the lack of consensus and time constraints, the Committee was not able to finalize the Guidance whereas there were several concerns on whether it will be possible in the end for the organization to agree on a relevant Guidance. The delegations expressed their consent to work further with a view to finalizing the Guidance at MEPC 81, stating that any further delay might force them to take relevant action at the national level.

Ballast water record-keeping and reporting

Guidance on matters relating to ballast water record-keeping and reporting

The Committee approved circular BWM.2/Circ.80 containing the *Guidance On Matters Relating to Ballast Water Record-Keeping and Reporting*, to offer clarity to the record keeping and reporting progress under the BWM Convention, including guidance on completing the Ballast Water Record Book, an updated example ballast water reporting form and an example form for voluntary tank-by-tank logging of ballast water operations.

Amendments to the guidelines for ballast water management and development of ballast water management plans (G4) and to the guidelines for ballast water exchange (G6)

In addition, the Committee adopted MEPC.370(80), *Amendments to the Guidelines for ballast water management and development of Ballast Water Management Plans (G4)* and MEPC.370(81), *Amendments to the Guidelines for ballast water exchange (G6)*. The G4 and G6 amendments refer to the Ballast Water Reporting Form (BWRF) as set out in *Guidance on ballast water record-keeping and reporting* (BWM.2/Circ.80) that can be submitted to a port State that requires specific information regarding the management of ballast water.



Guidance for the use of electronic record books under the BWM Convention

The Committee adopted Resolution MEPC.372(80) containing the *Guidance for the use of electronic record books under the BWM Convention*, aiming to provide standardized information on approving an electronic book to ensure the obligations of the BWM Convention are met while ensuring a consistent approach to approving electronic record systems and assisting in reducing the administrative burden.

Furthermore, the Committee finalized the necessary amendments to Regulations A-1 and B-2 of the BWM Convention concerning the use of electronic record books under the Convention, with a view to adoption by MEPC 81.

Modifications to ballast water management systems with existing type approval

The Committee had to consider how approvals of modifications to an already type-approved Ballast Water Management System (BWMS) will be treated. Several delegations supported that this was already covered by the BWMS Code, whereas others expressed that this shall be dealt by the Administrations and suggested, in anticipation of any outcome of the convention review, to develop a Guidance or a Unified Interpretation. The Committee invited member States and international organizations to submit concrete proposals to the next session on Guidance or Unified Interpretation to address this matter.

Port State Control inspections during the Experience-Building Phase (EBP)

The Committee encouraged member States to conduct more sampling and analysis as part of the Port State Control inspections, while maintaining the non-penalization elements of the Experience-Building Phase of the BWM Convention.

Re-establishment of the Ballast Water Review Group

The Committee decided to re-establish the Ballast Water Review Group at MEPC 81, in accordance with the provisions of Regulation D-5 of the BWM Convention, to continue the new topics and existing ones that require further consideration, while also expecting the report of the Correspondence Group on Review of the BWM Convention.

2023 Guidelines for the Control and Management of Ship's Biofouling

The Committee adopted Resolution MEPC.378(80) containing the *2023 Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species*, which will revoke the former 2011 Biofouling Guidelines in Resolution MEPC.207(62). The updated guidelines provide revisions to the 2011 edition, removing Chapter 7 (Biofouling Risk Profile and Monitoring of Risk Parameters) and including a new chapter of Contingency-Action Plans (Chapter 7) that will be followed if the monitoring of biofouling risk parameters during ship operation identify an increased risk of biofouling accumulation. Such plans can include proactive actions to lower the risk of biofouling accumulation, corrective actions to operating profile and maintenance, or inspection to determine biofouling accumulation by the ship's crew (provided it is qualified to use relevant inspection equipment) or an independent inspection organization. Additionally, the updated guidelines include example forms for the Biofouling Management Plan (BFMP) and Biofouling Record Book (BRFB). For Chapter 9 (Cleaning and Maintenance), guidance on in-water cleaning is to be addressed separately at a future session, with a target year of completion in 2025, and member States and international organizations have been invited to provide concrete proposals.



2023 Guidelines for the Development of the Inventory Hazardous Materials

The Committee adopted Resolution MEPC.379(80) containing the *2023 Guidelines for the Development of the Inventory of Hazardous Materials* to cover the controls on cybutryne governed by the AFS Convention. In Table A of Appendix I (Items to be listed in the Inventory of Hazardous Materials) and Table A of Appendix 6 (Form of Material Declaration), an additional row was included for anti-fouling systems containing cybutryne as a biocide, Appendix 5 was amended accordingly to account also for cybutryne as a material that shall be listed under Table A and in Appendix 8, Section 4 was modified to include specific test methods for determining the concentration of cybutryne.

Amendments to the BWM Convention – Form of the Ballast Water Record Book

The Committee adopted Resolution MEPC.369(80) containing amendments to Appendix II of the Annex to the BWM Convention which introduce changes to the form of the Ballast Water Record Book (BWRB). These changes are intended to make the form of this record book comparable to that of the Oil Record Book discussed in MARPOL Annex I and require a more detailed and standardized reporting of ballast water operations. The reformatted BWRB provides a more detailed list of codes (by letter) and items (by number) which should be used to codify entries made in the BWRB. The codes by which ballast activities are categorized are:

- (A) When ballast water is taken on board from the aquatic environment (ballasting operation)
- (B) When ballast water is discharged into the aquatic environment (deballasting operation)
- (C) Whenever ballast water is exchanged, circulated or treated for ballast water management purposes
- (D) Uptake or discharge of ballast water from/to a port-based or reception facility
- (E) Accidental discharge/ingress or other exceptional uptake or discharge of ballast water
- (F) Failures and inoperability of the ballast water management system
- (G) Ballast tank cleaning/flushing, removal and disposal of sediments
- (H) Additional operational procedures and general remarks

These amendments will enter into force on 1 February 2025.

Protocol for Verification of Ballast Water Compliance Monitoring Devices

The Committee approved circular BWM.2/Circ.78 containing a finalized *Protocol for Verification of Ballast Water Compliance Monitoring Devices*. In particular, the goal of the protocol is to provide a framework under which it is possible to verify the ability of a Compliance Monitoring Device (CMD) to assess non-compliance with the D-2 standard, supporting the effective implementation of the BWM Convention. Section 8.4 of the Protocol defines a list of verification success criteria that the CMD shall be able at minimum to meet:

- Precision (Repeatability): A coefficient of variance (CV) less than 25% is considered as acceptable, whereas less than 10% demonstrates excellent repeatability;
- Reliability: Expressed as the percentage of the data recovered versus the data that the CDM was intended to collect over a certain period. Acceptable values are more than 90%;

Agreement between CDM and detailed analysis results: At minimum, 80 percent of the CDM results shall agree with the relevant detailed analysis results.



Unified Interpretations of the BWM Convention

The Committee approved a new Unified Interpretation related to the BWM Convention:

Form of the IBWM Certificate – “Date of construction” on the IBWMC and application of D-2 standard after a ship has undergone a major conversion

The Committee approved a unified interpretation to the Form of the International Ballast Water Management Certificate (IBWMC), regarding the “Date of construction” for a ship that has undergone a major conversion, and the date until which a ship that has undergone a major conversion on or after 8 September 2017 shall comply with D-2 Standard as per Regulation B-3.5.

- For the former, the Sub-Committee agreed on an interpretation stating that for a ship which has undergone a major conversion, the date of the commencement of the major conversion should be filled in the “Date of construction” in the Form of the IBWMC.
- For the latter, it was agreed that for a ship constructed before 8 September 2017, which has undergone a major conversion on or after that date, it shall be considered as constructed on or after 8 September 2017 and comply with Regulation B-3.5 Furthermore, if the major conversion has happened before the IOPP renewal survey, the ship shall meet the D-2 standard from the date of major conversion completion and if that major conversion occurred after the IOPP renewal survey, ship shall meet the D-2 standard from the date of completion of the renewal survey.

This interpretation will be included in BWM.2/Circ.66/Rev.5.

BWM System Approvals

Final Approval was extended by the Committee for ERMA FIRST BWTS model FIT 75-3000, submitted by Greece, for freshwater applications. This system treats ballast water by filtration and full flow electrolysis.

Final Approval was granted by the Committee for BalClor® Smart BWMS, submitted by Denmark. This system treats ballast water by electro-chlorination during ballasting, followed by neutralization during de-ballasting using sodium thiosulfate prior to discharge.

Final Approval was granted by the Committee for EcoGuardian NF™ Ballast Water Management System, submitted by the Republic of Liberia. This system treats ballast water by electro-chlorination during ballasting, followed by neutralization during de-ballasting using sodium thiosulfate prior to discharge.

Basic Approval was granted by the Committee for HiBallast 2.0™ BWMS, submitted by the Republic of Korea. This system treats ballast water with sodium hypochlorite solution, followed by neutralization during de-ballasting using sodium thiosulfate prior to discharge.

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

Designation of the North-Western Mediterranean Sea as a Particularly Sensitive Sea Area

The Committee adopted Resolution MEPC.380(80) establishing the North-West Mediterranean Sea as a Particularly Sensitive Sea Area (PSSA). This area is proposed to be established to protect cetaceans from the risk of ship collisions, ship-generated pollution and to increase awareness of a critically important area for the fin whale and the sperm whale. The proposed PSSA is limited by the coastline of France, Italy, Monaco and Spain and includes areas under the jurisdiction of coastal States.

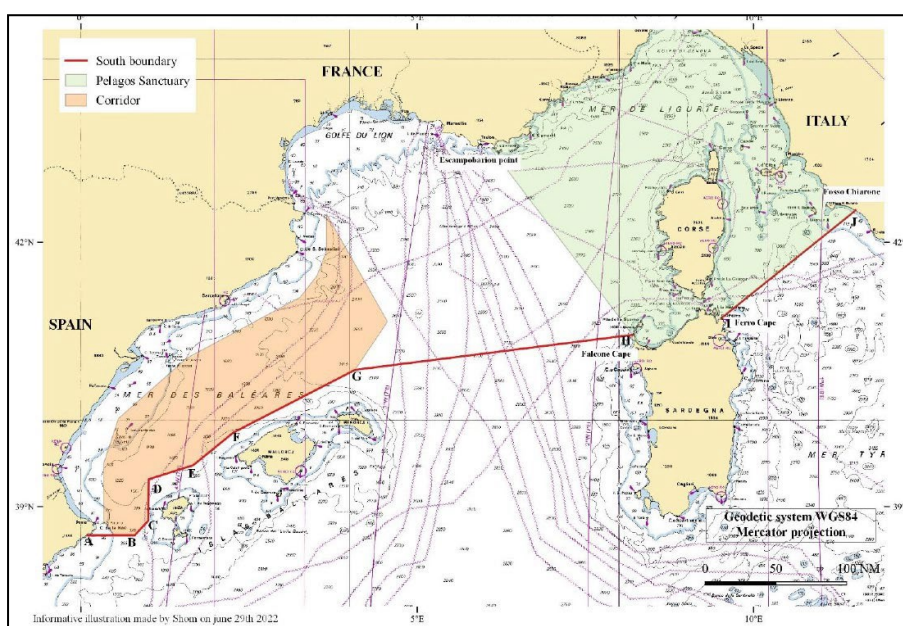


Figure 1. Proposed North-West Mediterranean Sea PSSA [Source: SHOM; MEPC 79/10]

The large size and high shipping traffic of this PSSA was acknowledged, but it was also noted that due to the significance of the ecological, socio-economic and scientific values of the area, several existing national and international protective measures are already implemented in this area. The designation of a PSSA and the additional associated measures will contribute to protecting cetaceans, minimizing the risk of ship strikes and support scientific research on the matter.

The Committee approved the following recommendatory associated protective measures (APMs) for the NW Mediterranean PSSA, to be applied to any commercial ships and pleasure yachts from 300 gross tonnage and upwards:

- 1) Mariners should navigate with caution within the NW Med PSSA, in areas where large and medium cetaceans are detected or reported and reduce their speed to between 10 and 13 knots as voluntary speed reduction (VSR). However, a safe speed should be kept, so that proper and effective action could be taken to avoid collision and any possible negative impacts on ship's maneuverability.
- 2) Mariners should keep an appropriate safety distance or speed reduction measure from any large and medium cetaceans observed or detected in close quarter situation. The safety distance or speed reduction measure should be adapted to the actual navigation circumstances and conditions of the ship.
- 3) Mariners should broadcast on VHF or other available means on scene, the position of medium and large cetaceans observed or detected within the designated PSSA and transmit the information and the position to designated coastal Authorities; and

- 4) Mariners should report any collision with cetaceans to designated coastal Authorities, which should forward this information to the International Whaling Commission (IWC) global cetacean ship strikes database.

Designation of Special Areas in the Red Sea and Gulf of Aiden – Discharge Requirements

The Committee adopted Resolution MEPC.381(80) establishing that the discharge controls related to oil or oily mixtures (MARPOL Annex I, regulations 15.3, 15.5 and 34.3 to 34.5) will take effect on 1 January 2025 for the Red Sea and Gulf of Aiden special areas. This is due to the confirmation that adequate port reception facilities for such wastes have been provided in this area in accordance with the requirements set out in regulation 38.8.1 of MARPOL Annex I.

Similarly, the Committee adopted Resolution MEPC.382(80) establishing that the discharge controls related to garbage (MARPOL Annex V, regulation 6) will take effect on 1 January 2025 for the Red Sea and Gulf of Aiden special areas. This is due to the confirmation that adequate port reception facilities for such wastes have been provided in this area in accordance with the requirements set out in regulation 8.2 of MARPOL Annex V.

Proposal for the Canadian Arctic ECA

Canada has proposed to the IMO to establish a Canadian Arctic Emission Control Area (ECA) in accordance with MARPOL Annex VI regulations. The ECA would require ships operating in Canadian Arctic waters to comply with stricter emission standards for nitrogen oxides (NO_x), sulfur oxides (SO_x), and particulate matter (PM). 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 is being proposed in part to also address long-standing concerns of Black Carbon emissions in the arctic region.

The full proposal for designation of a Canadian Arctic ECA is under development and aiming for potential submission to MEPC 81 (April 2024). If approved, adoption of the Canadian Arctic ECA under MARPOL Annex VI could take place as soon as Spring of 2025, with entry into force as soon as Winter of 2027. As with other ECA's, this would impose a fuel oil sulphur content limit of 0.10 percent by mass and would also impose a requirement for ships constructed after the adoption of the ECA to comply with NO_x Tier III limits.



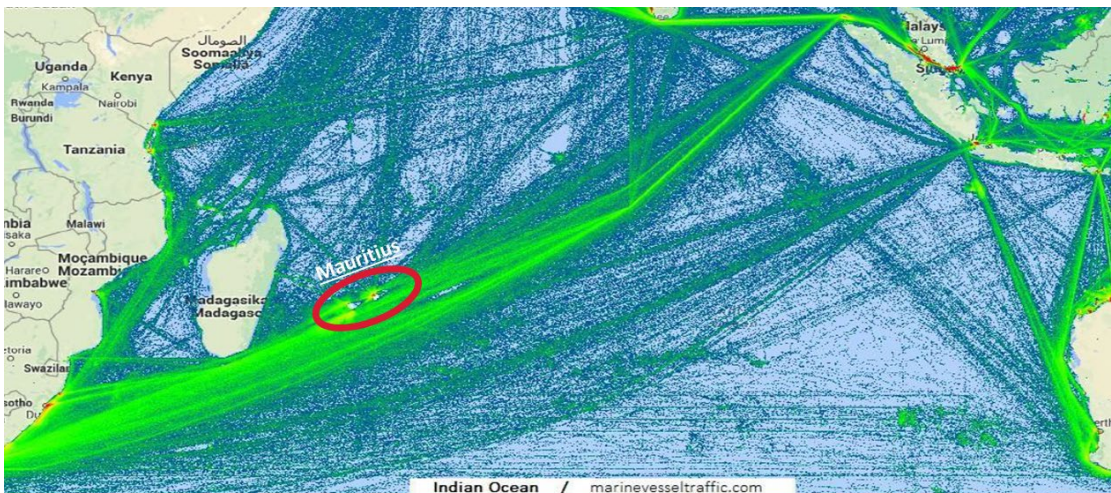
Figure 2. Proposed Canadian Arctic ECA [Source: MEPC 80/16/2]

Proposal for North-East Atlantic Ocean ECA

The Committee received an update from the maritime Administrations from North-East Atlantic Ocean littoral States regarding their discussions on designating an ECA in their waters. This possible future ECA in the North-East Atlantic Ocean for SO_x and PM emissions (under regulation 14 of MARPOL Annex VI) and NO_x emissions (under regulation 13) would potentially link the existing ECAs in the Baltic Sea, North Sea and English Channel with the recently adopted Mediterranean Sea SO_x ECA. This would also align with the designation of additional ECAs in the area by Norway, bringing consistent and uniform regulation across these sea areas of high traffic density. A technical and feasibility study is underway to address requirements and criteria set out in Appendix III of MARPOL Annex VI. Depending on the outcome of this process, a joint proposal for the designation of an ECA in the North-East Atlantic Ocean could be submitted to MEPC 81 (April 2024).

Proposal for Mauritius PSSA

Citing recent vessel groundings and other maritime incidents, the Government of Mauritius is preparing a proposal for the establishment of a PSSA and areas to be avoided (ATBA) for transiting ships, around the coasts of Mauritius and Rodrigues Islands as a measure to reduce the risk of further marine casualties, improve the safety of navigation and protect the marine environment. The proposed PSSAs/ATBAs would apply to ships of 150 gross tonnage and above solely in transit. Although the precise boundaries have yet to be defined, the proposed PSSA and ATBA for Mauritius and Rodrigues are to reduce the risks of incidents by increasing the safety of navigation and additionally to protect the vulnerable marine ecosystems (coral reefs, mangroves, seagrasses, estuaries) around the Islands of Mauritius and Rodrigues. The Government of Mauritius is currently in the process of finalizing the full PSSA proposal, including Appropriate Protective Measures, for submission to MEPC in 2024.



Maritime Traffic in the Indian Ocean. (Source: Marine Traffic)



OTHER DEVELOPMENTS

Entry-into-force conditions of the Hong Kong Convention

The Committee noted that the entry-into-force conditions of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (Hong Kong Convention) had been met on 26 June 2023 with the accession of Bangladesh and Liberia, and that the Convention would therefore **enter into force on 26 June 2025**.

Revised Guidelines for the Reduction of Underwater Noise

Underwater noise pollution from ships is a growing environmental concern. At its sixty-sixth session, the Marine Environment Protection Committee (MEPC) acknowledged the concerns that a significant portion of the underwater noise generated may be related to commercial shipping and approved the *Guidelines for Reducing Underwater Noise from Commercial Shipping to Address Adverse Impacts on Marine Life* (MEPC.1/Circ.833). In June 2021, MEPC 76 decided to review the Guidelines and identify next steps to further prevent and reduce underwater radiated noise (URN) and to encourage action.

At this session, the Committee approved circular MEPC.1/Circ.906 containing the *Revised Guidelines for the Reduction of Underwater Radiated Noise from Shipping to Address Adverse Impacts on Marine Life*. The revised guidelines have been further developed to improve their structure, effectiveness and clarity. The Revised Guidelines will take effect on 1 August 2023, revoking the previous circular MEPC.1/Circ.833, and may be applied to any ship, considering their design, construction and modifications, as well as their operation.

Highlights of the Revised Guidelines include the following:

- 1) A new Section added to the guidelines, addressing Underwater Radiated Noise Management Planning
- 2) A dedicated section about the relationship between the Energy Efficiency Compliance Measures and Underwater Radiated Noise. Many of the energy efficiency improvement options to meet energy efficiency regulations (EEDI, EEXI and CII) may result in an improvement in URN performance and could provide positive synergies with climate policies.
- 3) A section for the maritime authorities, financial and insurance institutions and others to promote establishing incentive schemes to support the implementation of underwater radiated noise monitoring programs and noise reduction efforts by suppliers, designers, builders, shipowners and operators, where considered appropriate.
- 4) Information on noise reduction approaches based on design, technical, operational and maintenance aspects.

The initial ship design and build stages are critical for reducing underwater noise by considering the hull and propeller design, wake flow improvement, propulsion system and onboard machinery, etc. It is unlikely to be practical for existing ships to match the underwater noise performance achievable by new designs, except for retrofitting propellers. For all vessels, the operational and maintenance approaches like optimizing voyage planning, especially in sensitive areas, reducing ship speed, reducing hull roughness by utilizing proper coatings, maintaining the hull and propeller clean, proper maintenance of the moving parts and machinery, help to keep the noise levels low. The following table summarizes the design, technical, operational and maintenance noise reduction approaches that are applicable to new and/or existing ships.



Table 1. Summary of design, technical, operational and maintenance URN reduction approaches applicable to new and/or existing ships as far as practicable.

URN Reduction Approaches	New ship	Existing ship
Optimize ship hull form (and appendages) design for hydrodynamic performance and homogenous wake field to reduce cavitation	x	
Optimizing propeller design to reduce cavitation, optimizing load, ensuring a uniform water flow and hull- propeller interaction and careful selection of the propeller characteristics such as: diameter, blade number, blade area, pitch, skew, rake and sections and innovation material	x	x
Emerging technologies like wind-assist technologies to reduce propeller loading and cavitation noise	x	x
Air injection to propeller	x	x
Wake flow improvement	x	x
Careful selection of onboard machinery and installation with appropriate structure-borne noise levels control measures, proper location of equipment in the hull and optimization of foundation structures	x	
Machinery installation and isolation for instance resilient mount and flexible coupling in four-stroke engines with a reduction gear, vibration isolation mounts and improved dynamic balancing for reciprocating machinery	x	
Optimizing the ship's trim to reduce the required power and therefore propeller cavitation noise	x	x
Improving voyage planning (optimum route, coordinated across fleets, sensitive marine areas/sea-ice covered region)	x	x
Reducing speed for ships equipped with fixed pitch propellers	x	x
Ship routing to avoid sensitive marine areas including well-known habitats or migratory pathways	x	x
Propeller maintenance (and cleaning/coating)	x	x
Hull maintenance (coating and grooming)	x	x

Draft Assembly Resolution Promoting Actions to Prevent Illicit Operations of "Dark Shipping"

The Committee considered a new draft Assembly urging member states and all relevant stakeholders to promote actions to prevent illicit operations of "dark shipping" in the maritime sector. According to the draft Resolution:

- Flag States should consider requiring that vessels update their ship-to-ship operations manuals required under MARPOL Annex I regulation 41, and to include notifying their flag State when they are engaged in a mid-ocean transfer operations.
- Port States should ensure enforcement of the safety and compensation and liability convention requirements on these vessels, including by subjecting such vessels to enhanced inspections as authorized through relevant port State control mechanisms and notifying the respective vessel's flag administration as appropriate.
- Coastal States should monitor ship-to-ship operations in their territorial sea or EEZ, as notified in accordance with regulation 42 of MARPOL Annex I and take appropriate action in cases identified as not complying with the maritime safety and the prevention of marine pollution regulations. Furthermore, coastal States are encouraged to collaborate to improve monitoring of these practices and operations.



Operational Guide on the Response to Spills of Hazardous and Noxious Substances (HNS)

The Committee approved a revised edition of the *Operational Guide on the Response to Spills of Hazardous and Noxious Substances (HNS)*, after several modifications that ensure international applicability and scope. The guide was divided into two volumes – *Volume 1 (Preparedness)* and *Volume 2 (Response)*.

Amendments to PPR.1/Circ.7 – Decisions with Regard to the Categorization and Classification of Products

The Committee approved updates to the PPR.1 circular which describes all relevant decisions in relation to the assignment of carriage requirements under the IBC Code. Among several changes was added guidance on categorization of mixtures containing MARPOL Annex I components, as well as a cross-reference to the recently approved PPR.1/Circ.9, *Revised Carriage Requirements for Methyl Acrylate and Methyl Methacrylate*. This will be released as circular PPR.1/Circ.7/Rev.1.

CONTACT INFORMATION

NORTH AMERICA REGION

1701 City Plaza Dr.
Spring, Texas 77389, USA
Tel: +1-281-877-6000
Email: ABS-Amer@eagle.org

SOUTH AMERICA REGION

Rua Acre, n° 15 - 11° floor, Centro
Rio de Janeiro 20081-000, Brazil
Tel: +55 21 2276-3535
Email: ABSRio@eagle.org

EUROPE REGION

111 Old Broad Street
London EC2N 1AP, UK
Tel: +44-20-7247-3255
Email: ABS-Eur@eagle.org

AFRICA AND MIDDLE EAST REGION

Al Joud Center, 1st floor, Suite # 111
Sheikh Zayed Road
P.O. Box 24860, Dubai, UAE
Tel: +971 4 330 6000
Email: ABSDubai@eagle.org

GREATER CHINA REGION

World Trade Tower, 29F Room 2906,
500 Guangdong Road, Huangpu District,
Shanghai, China 200000
Tel: +86 21 23270888
Email: ABSGreaterChina@eagle.org

NORTH PACIFIC REGION

11th Floor, Kyobo Life Insurance Bldg.
7, Chungjang-daero, Jung-Gu
Busan 48939, Republic of Korea
Tel: +82 51 460 4197
Email: ABSNorthPacific@eagle.org

SOUTH PACIFIC REGION

438 Alexandra Road
#08-00 Alexandra Point, Singapore 119958
Tel: +65 6276 8700
Email: ABS-Pac@eagle.org

@2023 American Bureau of Shipping
All rights reserved.

