

## Preliminary Report of IMO MEPC 84

The 84th session of the International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC 84) was held from 27 April to 1 May 2026. A summary of the outcome is given hereunder for your information.

### 1. Reduction of Greenhouse Gas (GHG) emissions from ships

At MEPC 80 in 2023, the IMO adopted the 2023 IMO Strategy on Reduction of GHG Emissions from Ships (2023 IMO GHG Strategy), which sets out the IMO’s levels of ambition (see the table below) including the aim to reach net-zero GHG emissions from international shipping by or around 2050. Further discussions continued in developing a framework of “Mid-term measures for reduction of GHG emissions” for achieving the levels of ambition set out in the 2023 IMO GHG Strategy.

Target year	Levels of ambition and indicative checkpoints (as of 2023)
2030	<ul style="list-style-type: none"> <li>• To reduce CO2 emissions per transport work by at least 40% (compared to 2008)</li> <li>• To reduce total annual GHG emissions by at least 20% (striving for 30%) (compared to 2008)</li> <li>• Uptake of zero GHG emission fuels etc. to represent at least 5% of the energy used (striving for 10%)</li> </ul>
2040	<ul style="list-style-type: none"> <li>• To reduce total annual GHG emissions by at least 70% (striving for 80%) (compared to 2008)</li> </ul>
2050	<ul style="list-style-type: none"> <li>• To reach net-zero GHG emissions by or around 2050 at the latest</li> </ul>

#### 1.1 Mid-term measures for reduction of GHG emissions

At MEPC 83 in April 2025, the draft amendments to MARPOL Annex VI on the mid-term measures was approved (\*), comprising the concepts of “regulating GHG fuel intensity of the fuel used by a ship (GFI

regulations)” and “accelerating decarbonization through the IMO Net-Zero Fund” as the two pillars. The draft amendments were subsequently considered at the extraordinary MEPC session (MEPC ES.2) in October 2025 with a view to adoption. However, differing views among IMO Member States resulted in a decision to postpone consideration for one year.

\* For details of the approved mid-term measures, please refer to the [“What is the IMO’s Mid-term measures and how it works”](#) published by ClassNK.

#### 1.1.1 Consideration of the framework of the mid-term measures

Prior to MEPC 84, various comments and proposals for amendments to the approved draft amendments (hereinafter “current draft amendments”) were submitted, including:

- The current draft amendments should be adopted without modification;
- Opposition to the current draft amendments, proposing an approach without carbon pricing and an international fund and without excluding specific fuels;
- Proposals to set more pragmatic GHG intensity standards, taking into account the commercial availability of alternative fuels; and
- Proposals to relax GHG intensity requirements, expand flexibility mechanisms such as the transfer of compliance between ships, and not establish a fund.

At this session, discussions focused on how to

proceed with future deliberations on the framework for mid-term measures, including whether to resume the extraordinary MEPC session.

In the discussions during the session, many delegations expressed views both in support of and in opposition to the aforementioned comments and proposals. At the same time, a number of Member States indicated that adjustments to the current draft amendments would be possible. As a result, it was agreed to hold intersessional working group meetings on GHG reduction in September 2026 and November 2026 (the week prior to MEPC 85), with the aim to address remaining concerns and issues with the current draft amendments.

Furthermore, regarding the extraordinary MEPC session that has been suspended since October 2025, it was agreed that it could be resumed immediately after MEPC 85 (on 4 December 2026), subject to the final decisions to be made at MEPC 85.

### **1.1.2 Development of relevant guidelines necessary for the implementation of the mid-term measures (current draft amendments)**

In the week preceding MEPC 84 (from 20 to 24 April), the 21st session of the IMO Intersessional Meeting of the Working Group on Reduction of GHG Emission from Ships (ISWG-GHG 21) was held.

At ISWG-GHG 21, work was undertaken to develop guidelines necessary for the implementation of the current draft mid-term measures, as follows:

- Draft guidelines for calculation of attained annual GHG fuel intensity (GFI) (including draft guidance on how to monitor, report and verify the energy derived from wind propulsion systems)
- Draft guidelines for rewards for ships used zero or near-zero fuels/technologies
- Draft governance provisions of the IMO Net-Zero Fund
- Draft guidelines on fuel certification scheme

The development of these draft guidelines will continue, taking into account ongoing discussions

on the mid-term measures.

### **1.2 Practical application of the Guidelines on Life Cycle GHG Intensity of Marine Fuels (LCA Guidelines)**

In the context of the decarbonization of shipping, increasing attention is being paid not only to greenhouse gas (GHG) emissions generated during the combustion of fuels, but also to GHG emissions arising over the entire life cycle of fuels, including their production and distribution processes, particularly with respect to low- and zero-carbon fuels such as hydrogen, ammonia and biomass based fuels, which are expected to be increasingly deployed in the future.

At MEPC 80, the Guidelines on the life cycle GHG intensity of marine fuels (LCA Guidelines, MEPC.376(80)) were adopted, establishing the methodology for calculating the life cycle GHG intensity of fuels used on board ships, covering the entire fuel life cycle from feedstock extraction through production, distribution and onboard use, as well as default GHG intensity values for different fuel types.

Subsequently, at MEPC 81, amendments to the LCA Guidelines (MEPC.391(81)) were adopted; however, since default GHG intensity values have so far been specified for only five types of marine fuels, including fossil derived heavy fuel oils and certain biofuels, work toward practical implementation has continued, including the further development of default values, refinement of calculation methodologies, as well as the development of sustainability criteria and certification schemes.

At this session, it was reconfirmed that the LCA Guidelines constitute a common technical foundation underpinning the GHG Fuel Intensity (GFI) regulation, the assessment of zero and near zero emission fuels (ZNZ), and the fuel certification scheme (SFCS). The following ways forward were agreed during the session:

- Avoided emissions would not be included in LCA calculations at this stage;
- Embodied emissions (i.e. emissions associated

with fuel production facilities and infrastructure) would likewise not be included in LCA calculations;

- The fuel certification scheme (SFCS) would cover the certification of GHG emissions at the well to tank (WtT) stage as well as compliance with sustainability requirements, and the full application of the LCA Guidelines, third party certification, the assurance of traceability, and the prevention of double counting would constitute its fundamental principles; and
- With respect to chain of custody, the mass balance approach would be adopted as the basic model, and the book and claim approach would not be adopted.

Furthermore, the following technical matters requiring further expert consideration will continue to be considered by relevant expert bodies, such as the GESAMP LCA Working Group:

- The technical validity of avoided emissions (such as consistency with attributional LCA, reliance on counterfactual assumptions, and the risk of double counting);
- The treatment of upstream emissions in cases where cargo is used as fuel;
- Technical aspects related to onboard carbon capture systems (OCCS) (including tank to wake calculation methodologies, requirements for permanent storage, and the allocation of verification responsibilities between onboard and onshore components);
- The detailed numerical design and statistical treatment of default values; and
- The detailed design of the chain of custody.

### **1.3 Measurement of methane and nitrous oxide emissions from ships**

In addition to CO<sub>2</sub> emitted upon fuel combustion, emissions of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) are also gaining increased attention as they are considered as greenhouse gases (GHG) with global warming effects. At MEPC 83, the “Guidelines for Test-Bed and Onboard Measurements of Methane and/or Nitrous Oxide Emissions from Marine Diesel Engines” (MEPC.402(83)) were adopted, and it was also

agreed to keep them under review.

At this session, the revised “2026 Guidelines for Test-Bed and Onboard Measurements of Methane and/or Nitrous Oxide Emissions from Marine Diesel Engines” were adopted to incorporate the following amendments:

- Addition of a calculation formula to correct the measurement results of the methane slip from LNG-fuelled engines to an agreed reference gas composition;
- Addition of the reference CH<sub>4</sub> content of LNG fuel (84.6 wt% / 92.2 mol%) as the basis for the aforementioned correction;
- Clarification on the treatment of crankcase emissions of CH<sub>4</sub>;
- Addition of a provision allowing the use of total hydrocarbon emissions recorded in the NO<sub>x</sub> Technical File as a proxy for CH<sub>4</sub> emissions in cases where CH<sub>4</sub> measurements have not been conducted; and
- Alignment of measurement and calculation methods with ISO 8178.

Additionally, in order to calculate the annual CH<sub>4</sub> and/or N<sub>2</sub>O emissions using the values measured and calculated in accordance with the aforementioned guidelines, the use of engine load data during operation is considered as one of the options. Therefore, the “Guidelines for Engine Load Monitoring (ELM) and Calculation of Emission Values” were also adopted.

Furthermore, regarding the direct measurement of CH<sub>4</sub> and/or N<sub>2</sub>O emissions on board, the “Guidelines for Continuous Emission Monitoring Systems (CEMS) used to Quantify Methane (CH<sub>4</sub>) and/or Nitrous Oxide (N<sub>2</sub>O) Emissions from Marine Diesel Engines” were adopted for analyzing and monitoring exhaust gases.

It was then agreed to establish a correspondence group to continue discussions for the further improvement of the framework for measurement and verification of CH<sub>4</sub> and N<sub>2</sub>O emissions.

### **1.4 Onboard carbon capture and storage**

The development and demonstration of Onboard Carbon Capture and Storage (OCCS) systems,

which reduce GHG emissions from ships by separating and capturing CO<sub>2</sub> from exhaust gases, are progressing. At MEPC 83, the work plan for developing a regulatory framework for the use of OCCS (e.g. consideration of how GHG emission reductions achieved through OCCS could be reflected in the IMO regulatory framework, and criteria for the disposal and use of captured carbon) was agreed with the target completion year of 2028.

At this session, it was agreed to add the development of specific methodological guidance on OCCS accounting, verification, and certification to the aforementioned work plan. Furthermore, it was also agreed in general that the OCCS value chain includes technologies that involve permanent mineralization of CO<sub>2</sub>. Discussions on the treatment of OCCS, including the calculation of the attained annual GHG fuel intensity, will continue taking into account the work plan revised at this session.

## **2. Air pollution**

### **2.1 Revision of the NO<sub>x</sub> Technical Code for Certification of Non-Carbon-Based Fuel Engines**

Regulation 13 of MARPOL Annex VI regulates NO<sub>x</sub> (Nitrogen Oxides) emissions from marine diesel engines, with detailed requirements set out in the NO<sub>x</sub> Technical Code (NTC).

At this session, discussions were held on methods for calculating NO<sub>x</sub> emissions for engines using non-carbon-based fuels such as hydrogen and ammonia, which are expected to increase in use so as to reduce GHG emissions

As a result of the discussions, amendments to the NTC were approved, introducing the calculation methods using “hydrogen balance method” and “oxygen balance method” to determine exhaust gas flow rates for calculating NO<sub>x</sub> emissions from non-carbon-based fuel engines.

If the amendments are adopted at MEPC 85, they are expected to enter into force at the earliest in the summer of 2028.

### **2.2 Regulation of Volatile Organic Compound (VOC) Emissions from Ships**

As one of the measures to reduce GHG emissions, discussions have been held with the aim of strengthening measures for reducing emissions of volatile organic compounds (VOCs).

At this session, the draft amendments to MARPOL Annex VI were approved requiring newly constructed crude oil tankers to be equipped with pressure/vacuum (P/V) valves with a minimum set pressure of 0.20 bar.

If the amendments are adopted at MEPC 85, they are expected to enter into force at the earliest in the summer of 2028 and will apply to tankers carrying crude oil constructed on or after the date of entry into force of the amendments.

### **2.3 Unified Interpretation on Shipboard Incinerators**

Regulation 16 of MARPOL Annex VI specifies requirements for shipboard incinerators, requiring incinerators of batch-loaded type to be designed so that the combustion chamber gas outlet temperature to reach 600°C within five minutes after start-up and will thereafter stabilize at a temperature not less than 850°C.

At this session, a unified interpretation was approved clarifying that the abovementioned requirement applies only for type approvals and should be distinguished from requirements during onboard inspections in actual operations.

## **3. Others**

### **3.1 Review of the BWM Convention**

Since the entry into force of the Ballast Water Management (BWM) Convention in 2017, an Experience-Building Phase (EBP) has been implemented to assess its effectiveness and to consider potential amendments. Based on the Convention Review Plan (CRP) adopted at MEPC 80, review work has been ongoing.

At this session, draft amendments to the BWM Convention incorporating, inter alia, the following elements were approved:

- Addition of items that should be included in the Ballast Water Management Plan (BWMP), such as type approval identification, maintenance procedures and schedules, procedures for safe ballast water exchange, plans for contingency measures, and (if applicable) procedures for the temporary storage of treated sewage and/or grey water in ballast water tanks;
- Explicit requirements, as obligations under the Convention, established for the maintenance and record-keeping of ballast water management systems, maintaining onboard evidence of familiarization of the crew on the system and compliance with the Maximum Allowable Discharge Concentration (MADC) of active substances; and
- Addition of exceptions from the application of the Convention, namely discharges due to operating in challenging water quality (CWQ) conditions or applying contingency measures.

If the amendments are adopted at MEPC 85, they are expected to enter into force at the earliest in the summer of 2028.

In addition, the “2026 Guidelines for Ballast Water Management Plans (G4 Guidelines)” have been adopted, enhancing provisions taking into account the amendments to the Convention above, thereby making the Guidelines more practical for implementation. The existing G4 Guidelines (MEPC.127(53) and its amendments) will be revoked at the time of entry into force of the amendments to BWM Convention above.

Discussions on amendments to the BWMS Code continued, but as they were not finalized, further consideration will take place toward MEPC 85 through correspondence group discussions. The aforementioned EBP will conclude at the time of the entry into force of the amendments to BWM Convention above and BWMS Code.

### **3.2 Forced Evaporation of Oily Bilge Water**

Oily bilge water generated in the engine room is treated using oil separators as specified in Regulation 14 of Annex I to the MARPOL Convention. As alternative measures, it was

principally agreed during the deliberations of MEPC 78 and 82 that the treatment utilizing forced evaporation by heating oily bilge water is also permissible.

At this session, draft amendments to MARPOL Annex I were approved to:

- Introduce the new Regulation 12B related to oily bilge water holding tanks and service tanks;
- Add relevant entries to the supplement to the IOPP Certificate; and
- Amend machinery space operations code (D) to be recorded in the Oil Record Book

If the amendments are adopted at MEPC 85, they are expected to enter into force at the earliest in the summer of 2028. With these amendments, forced evaporation treatment of oily bilge water will be explicitly permitted under MARPOL Annex I.

In addition, draft amendments to the IBTS Guidelines (setting out that maximum temperature of the oily bilge water service tanks should not exceed 105°C, etc.) and the Oil Record Book Guidelines (adding record examples) were approved in principle with a view to final approval by MEPC 85 in conjunction with the adoption of the aforementioned amendments to MARPOL Annex I.

### **3.3 Prevention of Transboundary Transfer of Aquatic Invasive Species via Biofouling**

To address concerns regarding the transfer of invasive aquatic species via biofouling, MEPC 80 previously adopted “2023 Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species” (MEPC.378(80)) amending the 2011 guidelines, and MEPC 83 approved “Guidance on In-Water Cleaning of Ships' Biofouling”. MEPC has further been discussing the development of an international regulatory framework in this regard.

At this session, it was agreed that the relevant legally binding framework should take the form of a standalone instrument. A correspondence group was also established to consider the structure, table of contents, list of related guidelines and a draft work plan, with a view to reporting to the 14<sup>th</sup>

session of the Sub-Committee on Pollution Prevention and Response (PPR 14).

#### **4. Amendments to mandatory instruments**

MEPC 84 adopted amendments to mandatory instruments as follows:

##### **4.1 Addition of NOx / SOx / PM Emission Control Area (North-East Atlantic ECA)**

Amendments to MARPOL Annex VI were adopted to newly designate the North-East Atlantic Ocean area (see Attachment 1) as an emission control area (ECA) for nitrogen oxides (NOx) under regulation 13, and for sulphur oxides (SOx) and particulate matter (PM) under regulation 14 of MARPOL Annex VI.

Entry into force: 1 September 2027

After the entry into force of the amendments, the NOx Tier III emission limit will apply to the following ships operating in the North-East Atlantic ECA:

- Ships for which the building contract is placed on or after 1 January 2027;
- In the absence of a building contract, ships the keels of which are laid or which are at a similar stage of construction on or after 1 July 2027; or
- Ships delivered on or after 1 January 2031.

Furthermore, from 1 September 2028, which is 12 months after the date of entry into force, SOx emission requirements will apply to ships operating in the North-East Atlantic ECA, limiting the sulphur

content of fuel oil used onboard ships to 0.10%.

##### **4.2 NOx Regulations for Marine Diesel Engines**

Following the amendments to the NOx Technical Code adopted at MEPC 83 (MEPC.397(83)), consequential amendments to Regulation 2, Appendices I and II of Annex VI to the MARPOL Convention were adopted.

Entry into force: 1 September 2027

##### **4.3 Accessibility to the IMO DCS Database**

Amendments to regulation 27 of MARPOL Annex VI were adopted to improve access to data collected under the IMO Data Collection System (IMO DCS), enabling the following:

- Access by Parties to MARPOL Annex VI to non-anonymized data for ships (the Administration of a Party to the present Convention may notify that its express approval will be necessary before the data of ships entitled to fly its flag are included in the non-anonymized database); and
- Access by public users to anonymized data for all ships.

Entry into force: 1 September 2027

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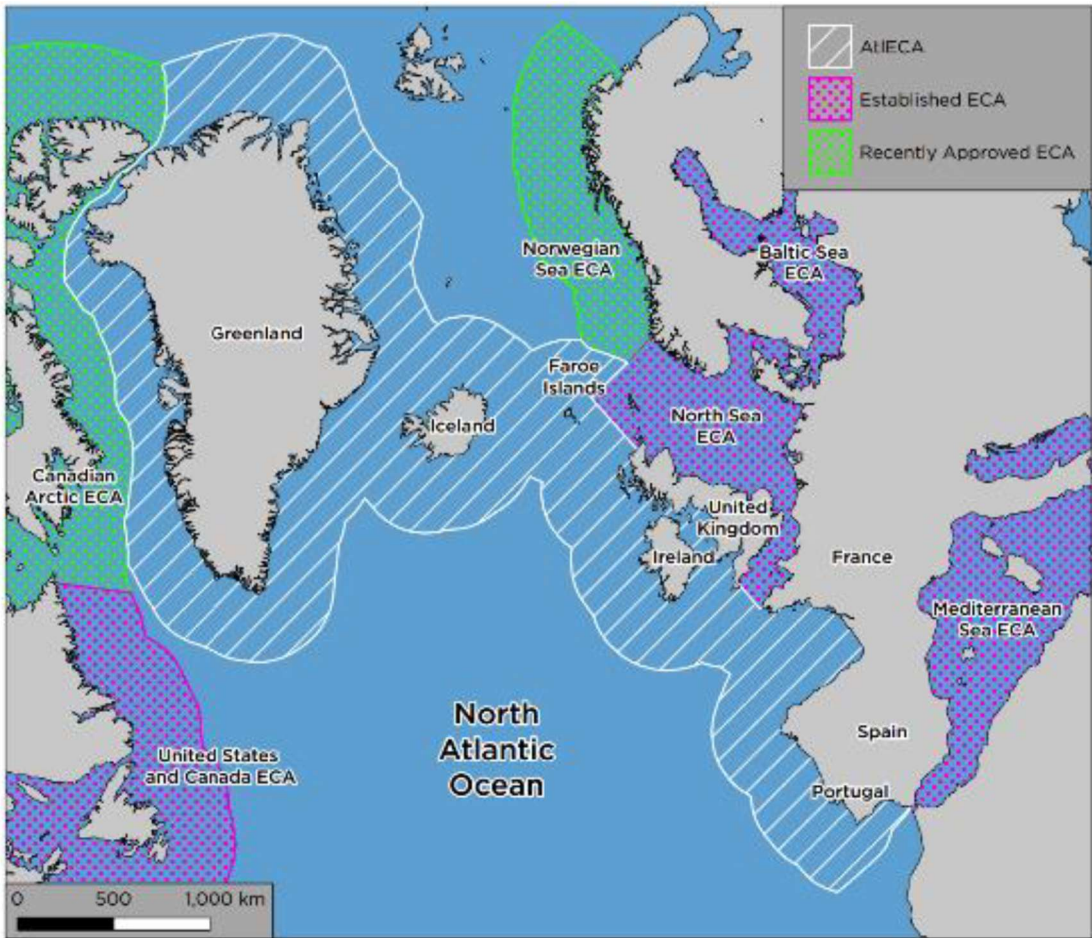


Illustration of North-East Atlantic ECA