

Preliminary Report of IMO MEPC 83

The 83rd session of the International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC 83) was held from 7 to 11 April 2025. A summary of the outcome is given hereunder for your information.

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

Draft regulations on the mid-term measures for reduction of greenhouse gas (GHG) have been approved.

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 “Mid-term measures for reduction of GHG emissions” for achieving the levels of ambition set out in the 2023 IMO GHG Strategy. At this session, MEPC 83 approved draft regulations on the mid-term measures and also held discussions on the review of short-term measures etc.

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

1.1 Mid-term measures for reduction of GHG emissions

At this session, 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. Assuming the adoption of the draft amendments at the extraordinary session of MEPC in October 2025, the amendments will enter into force at the earliest in March 2027.

The summary of the mid-term measures approved at this session is as follows.

1.1.1 Regulating GHG fuel intensity of the fuel used by a ship (GFI regulations)

For ships of 5,000 GT and above engaged in international voyages, the GHG fuel intensity (GFI) of the fuel used, i.e. the GHG emissions per unit of energy from the fuel used, will be regulated. By progressively decreasing the GFI and accelerating decarbonization of ship fuels, the consequential reduction in GHG emissions from ships is expected.

Two tiers of GHG fuel intensity targets are stipulated in the GFI regulations, namely the “base target” aimed for achieving the level of ambition for 2050 and the “direct compliance target” that every ship should further strive to meet.

If a ship is in direct compliance by utilizing fuels

such as zero-emission fuels, the ship will be eligible to receive surplus units equal to its positive compliance balance, which can be transferred to another ship to balance that ship's "base target" compliance deficit or banked for use in the following reporting periods*.

*up to two calendar years after the calendar year of its issuance

If the ship is not in direct compliance but meets the "base target", a deficit corresponding to the GHG emission exceeding the "direct compliance target" (i.e. Payment ①) shall be paid to the IMO Net-Zero Fund.

If the ship does not meet the "base target", the deficit corresponding to the GHG emission exceeding the "base target" (i.e. Payment ②) shall be paid in addition to Payment ① to the IMO Net-Zero Fund or otherwise receive surplus units from other ships to balance the compliance.

The unit price of Payment ①, to be collected and utilized for disbursements such as rewarding "accelerating the uptake of Zero or Near-Zero GHG emission technologies, fuels and/or energy sources (ZNZs)" (refer to 1.1.2) etc., is set relatively less expensive. On the other hand, the unit price of Payment ②, to be taken in a sense of penalty, is set relatively more expensive.

Further work to be pursued by MEPC includes development of guidelines related to calculation of GHG fuel intensity and verification scheme of fuels etc. so as to set out detailed procedures prior to the entry into force of the GFI regulations.

1.1.2 Accelerating decarbonization through the IMO Net-Zero Fund

The aforementioned payments from the GFI regulations will be collected by the IMO Net-Zero Fund to be established. The fund will disburse collected revenue for the purposes such as rewards for the use of ZNZs or supporting the energy transition of developing countries, in particular least developed countries (LDCs) and small islands developing States (SIDS), etc.

Accelerating the uptake of ZNZs

Ships of 5,000 GT and above engaged in international voyages and using ZNZs may receive

rewards for partial reimbursement of the costs associated with the use of such fuels. This is expected to accelerate the early transition to ZNZs. A threshold for the GHG intensity of the fuel is set out in the regulations. The specific scale of this reward will continue to be discussed at MEPC.

1.2 Review of short-term measures for reduction of GHG

MARPOL Annex VI prescribes that a review of the EEXI (Energy Efficiency Existing Ship Index) and CII (Carbon Intensity Indicator) rating regulations, introduced by IMO as short-term measures, shall be completed by 1 January 2026 to assess their effectiveness.

At the previous session, a consolidated list of challenges and gaps in the short-term measures was developed, which is used as the base document for ensuing discussions. The tasks were then categorized into two phases by the relevant Correspondence Group: priority tasks to be completed by 2026; and tasks to be pursued continuously beyond 2026. At this session, discussions focused on the priority tasks aimed for completion by 2026.

1.2.1 Amendments to the CII reduction factors Guidelines (G3)

Under the CII rating scheme, the annual CII reduction factor used to determine the required annual operational CII has been set to increase by 2% each year until 2026. However, the reduction factors beyond 2027 were to be decided in the review of the short-term measures.

At this session, discussions were held on the reduction factors for the period after 2027. As a result, it was agreed that the reduction factor would increase by 2.625% annually, reaching 21.5% by 2030. Accordingly, amendments to the "Guidelines on the CII reduction factors (G3)" was adopted. The annual CII reduction factors through 2030 are shown in the table below.

Year	CII reduction factor (relative to 2019)
2023	5 %
2024	7 %
2025	9 %
2026	11 %
2027	13.625 %
2028	16.250 %
2029	18.875 %
2030	21.500 %

These reduction factors are aligned with the level of ambition of the 2023 IMO GHG Strategy to reduce CO₂ emissions per transport work by at least 40% by 2030, compared to 2008.

1.2.2 Amendments to the Guidelines for development of SEEMP

IMO Ship Fuel Consumption Database (IMO DCS), from 1 January 2026, introduces additional reporting items such as the total fuel oil consumption by each fuel-consuming equipment and the total fuel consumption during non-operational (non-voyage) periods.

At this session, the amendments to the “Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP)” were adopted, providing clear definitions for the terms “under way” and “not under way.”

1.2.3 Accessibility to the IMO DCS database

The IMO DCS data reported annually to the IMO is utilized by the IMO Secretariat to analyze the effectiveness of GHG emission reduction efforts by the maritime industry. By anonymizing and publicly disclosing this data, more diverse and in-depth analyses are expected to become possible.

At this session, draft amendments to Regulation 27 of MARPOL Annex VI were approved, enabling the following with respect to the access to the IMO DCS data.

- Access by Parties to non-anonymized data for all ships
- Public user access to anonymized data for all ships

Consideration of revisions to the relevant guidelines will follow in order to enhance the data

anonymization measures.

1.3 Practical application of the Guidelines on Life Cycle GHG Intensity of Marine Fuels (LCA Guidelines)

Low and zero carbon fuels such as hydrogen, ammonia and biomass-based fuels are expected to become widely used in the future to decarbonize ships, and there is a growing interest in GHG emissions from the whole life cycle of these fuels, from their production to distribution stages in addition to the combustion of the fuel.

At MEPC 80, the IMO adopted Guidelines (LCA Guidelines) that specify the methodology for calculating the GHG fuel intensity of fuels used on ships over their whole life cycle from feedstock extraction to processing, fuel production, transport, bunkering and onboard use, as well as default values for the GHG fuel intensity for various fuels. While the IMO at MEPC 81 adopted the amendments to the Guidelines, the default values of GHG fuel intensity for only five types of marine fuel, e.g. fossil based heavy fuel oil and biofuels, were set out, needing for further work in order to put the Guidelines into practical applications.

At this session, based on the scientific review and advice provided by GESAMP working group on life cycle GHG intensity of marine fuels (GESAMP-LCA WG), the IMO agreed to the procedures for proposing and reviewing default values of GHG fuel intensity. It was also agreed to continue discussions on improving the emission calculation methodology, sustainability criteria and certification of GHG intensity in the LCA Guidelines.

1.4 Measurement of methane and nitrous oxide emissions from ships and onboard carbon capture and storage

In addition to CO₂ emitted upon fuel combustion, emissions of methane (CH₄) and nitrous oxide (N₂O) are also gaining increased attention as they are considered as greenhouse gases (GHG) with global warming effects. At MEPC 81, a Correspondence Group was established and began discussing relevant topics: methods for measuring methane and nitrous oxide emissions from ships;

and a regulatory framework for the use of onboard carbon capture and storage (OCCS), which reduces GHG emissions from ships through the separation, capture, and storage of CO₂.

At this session, the “Guidelines for Test-Bed and Onboard Measurements of Methane and/or Nitrous Oxide Emissions from Marine Diesel Engines” was adopted. Moreover, the IMO developed a work plan on the development of a regulatory framework for the use of the OCCS, including consideration of legal barriers and the development of guidelines on testing, survey, and certification of the OCCS. It was agreed that these agenda items require further study and that the Correspondence Group is re-established to continue discussions on these issues.

1.5 Amendments to the Guidelines on survey and certification of EEDI

The calculation of the EEDI (Energy Efficiency Design Index) requires determination of the ship’s speed based on speed trial results, assuming calm weather conditions with no wind or waves. The current “Guidelines on Survey and Certification of the EEDI” refers to the ITTC Recommended Procedure 7.5-04-01-01.1 Speed and Power Trials 2017, 2021 or 2022 (hereafter referred to as the ITTC Procedure) or ISO 15016:2015 for determining ship speed taking into account the external effects (wind, current, waves, shallow water, displacement, water temperature and water density).

Given the amendments to the ITTC Procedure and ISO 15016 in 2024 and 2025 respectively, MEPC 83 adopted the amendments to the “Guidelines on Survey and Certification of the EEDI” to refer to the amended 2024 ITTC Procedure and ISO 15016:2025.

In addition, ISO 15016:2025 will be applied to sea trials conducted on or after 1 May 2026, in recognition of the need to allow adequate time for preparation in accordance with the updated standard.

ClassNK is currently in the process of updating the progressive speed trial analysis software

“PrimeShip-GREEN/ProSTA” to ensure compliance with ISO 15016:2025.

2. Air pollution

2.1 Addition of North-East Atlantic Ocean as Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x) and Particulate Matter (PM) Emission Control Area (ECA)

Regulation 13 of MARPOL Annex VI specifies the NO_x emission regulations for marine diesel engines installed on board ships. Regulation 13.6 designates NO_x Emission Control Areas (ECA), in which the NO_x Tier III emission limit is applied.

Regulation 14 of MARPOL Annex VI sets out control measures to reduce emissions of SO_x and PM from ships, where the sulphur content in fuel oil used has been limited to 0.50% in open sea area since 2020. Regulation 14.3 designates SO_x and PM ECAs, in which the sulphur content in fuel oil used is further limited to 0.10%.

The following sea areas have been designated as ECAs so far:

Sea area	Type of ECA	
	NO _x	SO _x and PM
North America	✓	✓
US Caribbean Sea	✓	✓
Baltic Sea	✓	✓
North Sea	✓	✓
Mediterranean Sea		✓
Canadian Arctic Waters*	✓	✓
Norwegian Sea*	✓	✓

* Amendments adopted at MEPC 82, designating Canadian Arctic Waters and Norwegian Sea area as ECAs

At this session, draft amendments to MARPOL Annex VI were approved, newly designating the North-East Atlantic Ocean (refer to Attachment 2) as ECA.

Assuming the adoption of the draft amendments at the extraordinary session of MEPC in October 2025 with the application date of March 2027, it is expected that the sulphur content in fuel oil used for ships operating in North-East Atlantic ECA will be

limited to 0.10% at the earliest from March 2028. Furthermore, the NOx Tier III emission limit will be applied to the following ships operating in 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
- Ships delivered on or after 1 January 2031

2.2 Revision of SCR Verification Guidelines

Selective Catalytic Reduction (SCR) systems for NOx emission reduction need to be certified in accordance with the “2017 Guidelines for SCR Systems”.

At this session, the revised “2025 Guidelines for SCR Systems” was adopted, which clarifies the methods for monitoring catalyst condition and degradation. The amended guidelines is applicable to the following SCR systems:

- SCR systems installed on ships the keels of which are laid or which are at a similar stage of construction on or after 1 November 2025
- SCR systems installed on ships the keels of which are laid or which are at a similar stage of construction before 1 November 2025, which have a contractual delivery date of SCR systems to the ship on or after 1 May 2026 or, in the absence of a contractual delivery date, the actual delivery of the SCR system to the ship on or after 1 May 2026

3. Others

3.1 Carriage of blends of biofuels by conventional bunker ships

The “Interim Guidance on the Carriage of Blends of Biofuels and MARPOL Annex I Cargoes by Conventional Bunker Ships” was approved, which allows transportation of blends of not more than 30% by volume of biofuel by conventional bunker ships (i.e. oil tankers as defined in Regulation 1.5 of MARPOL Annex I that are engaged in the transport and delivery of fuel oil for use by ships).

3.2 In-water cleaning of ships’ biofouling

The “Guidance on In-water Cleaning of Ships’ Biofouling” was approved, which sets out guidance for operationalizing in-water cleaning operations for minimizing transfer of invasive aquatic species attached to ships’ hull, including specifications and performance standards for in-water cleaning systems and guidance for planning and conducting in-water cleaning operations.

3.3 Amendments to the Guidelines for the Development of the Inventory of Hazardous Materials

With respect to the restriction of the use of cybutryne as anti-fouling system since January 2023, the use or non-use of cybutryne is required to be recorded in the Inventory of Hazardous Materials (IHM) in accordance with the “2023 Guidelines for the Development of the Inventory of Hazardous Materials” adopted at MEPC 80.

At this session, the amendments to the “2023 Guidelines for the Development of the Inventory of Hazardous Materials” were adopted, clarifying the threshold values of cybutryne samples.

3.4 Review of BWM Convention

When BWM Convention entered into force in 2017, it was agreed to monitor the application and to review the effectiveness of the Convention through the experience building phase (EBP), and the review work has been conducted based on the Convention Review Plan (CRP) approved at MEPC 80, which comprises the list of issues that need to be finalized.

At this session, with the aim to finalize the draft amendments to the BWM Convention and BWM Code by MEPC 84 in spring 2026 in line with the work plan, it was agreed to continue the work at the Correspondence Group. Assuming the adoption of the draft amendments at MEPC 85 in autumn 2026, the amendments are expected to enter into force in summer 2028 at the earliest.

4. Amendments to mandatory instruments

MEPC 83 adopted amendments to mandatory instruments as follows:

4.1 Amendments to NOx Technical Code on certification of marine diesel engines subject to substantial modification, etc.

The amendments to the NOx Technical Code 2008 were adopted, which includes the onboard NOx certification procedures for marine diesel engines subject to substantial modifications or being certified to a Tier to which the engine was not certified at the time of its installation. These amendments clarify the onboard NOx certification process for marine diesel engines, which went under a modification for reasons such as environmental measures for GHG emission reduction.

Entry into force: 1 September 2026

The Parties were further invited to consider early application of these amendments.

4.2 Amendments to NOx Technical Code on NOx regulations for marine diesel engines

The amendments to the NOx Technical Code 2008 were adopted, which includes the procedures for demonstrating compliance of “off-cycle” NOx emissions (specific area within the power or torque

and speed area of a marine engine to which NOx emission measurement is not required under the current Convention, but still within the limit area of the not to exceed zone that the engine is certified to operate within under steady-state conditions) and NOx regulations applicable to marine diesel engines with multiple engine operational profiles. These amendments may lead to an increased number of load points for NOx emission tests and additional submission of technical documents related to NOx emission characteristics by engine manufacturers, etc.

Entry into force: 1 March 2027

The new requirements apply to a new parent engine to which EIAPP Certificates are issued on or after 1 January 2028. In the case of an engine family or engine group for which the parent engine was certified prior to 1 January 2028, the new requirements apply when an EIAPP Certificate is issued for the relevant member engine on or after 1 January 2030.

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For any questions about the above, please contact:

NIPPON KAIJI KYOKAI (ClassNK)
External Affairs Department, Administration Center Annex, Head Office
Address: 3-3 Kioi-cho, Chiyoda-ku, Tokyo 102-0094, Japan
Tel.: +81-3-5226-2038
Fax: +81-3-5226-2734
E-mail: xad@classnk.or.jp

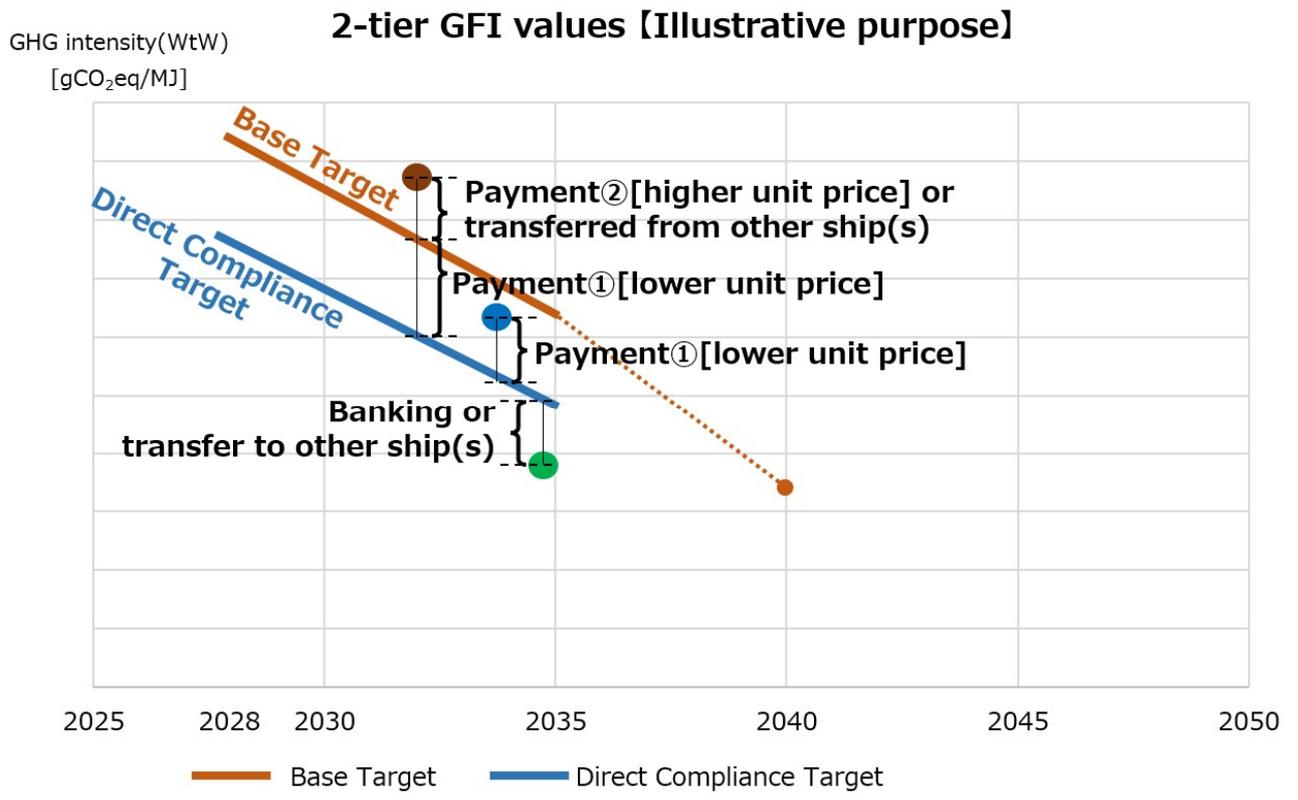
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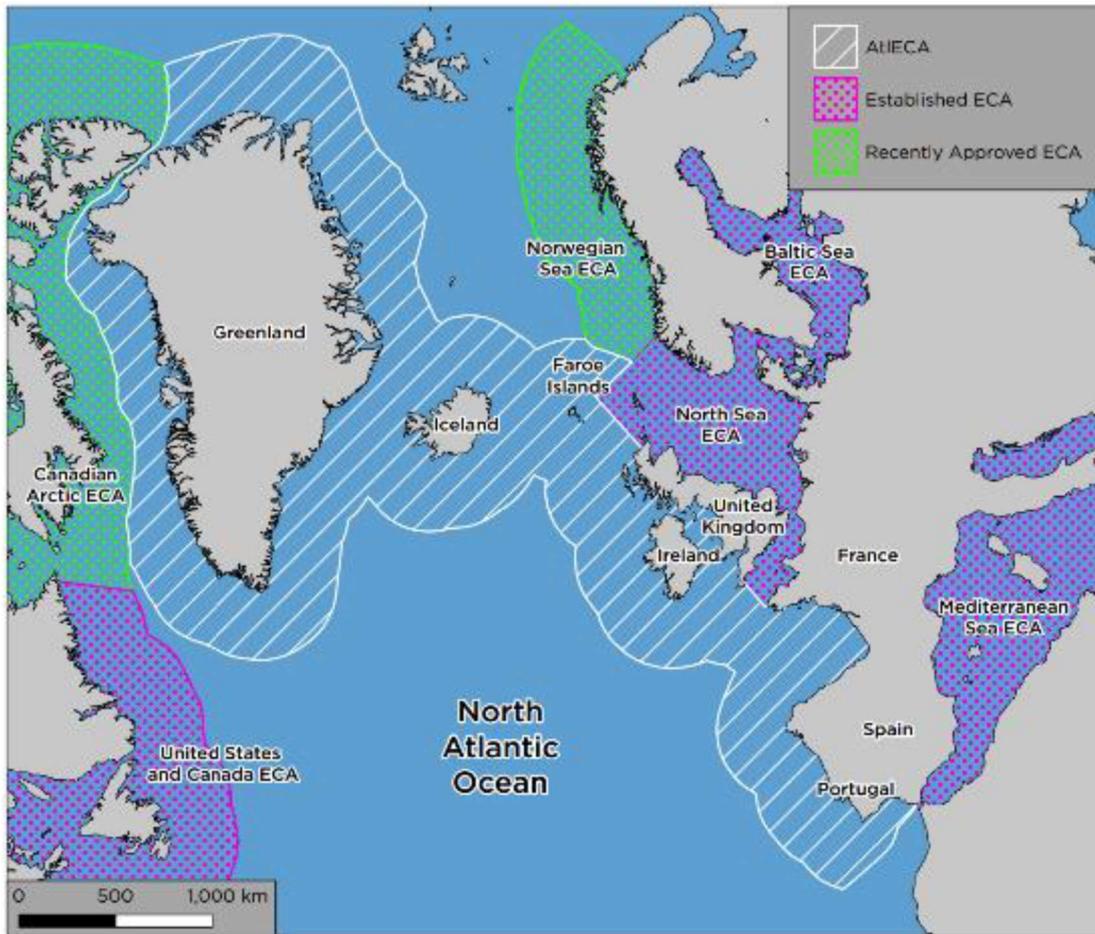


Illustration of North-East Atlantic ECA