International Maritime Latest Issues October 2025

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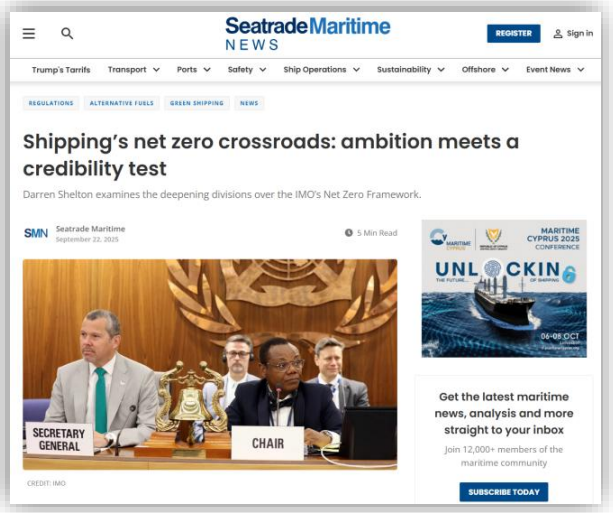
交通部航港局 Maritime and Port Bureau, MOTC

國立高雄科技大學 National Kaohsiung University of Science and Technology

Keywords: Decarbonization; Net Zero Framework

Shipping's net zero crossroads: ambition meets a credibility test (1/3)



Source: Seatrade-Maritime.

Darren Shelton, as a trusted advisor from Moran Shipping Agency, has reviewed the meeting outcome of the International Maritime Organization (IMO)'s Net Zero Framework (NZF), which is a technical debate about fuels and vessel design. Mr. Shelton believed it had turned into a public stress test of the IMO's NZF.

There are still many concerns in the shipping industry. Prominent shipowners such as Frontline, Angelicoussis Group, Capital, TMS, and Bahri have all stated that they cannot support the current net-zero framework, claiming that it may impose an excessive financial burden on the industry and consumers.

The outgoing CEO of the American Bureau of Shipping (ABS), Christopher Wiernicki, also called on the IMO to suspend the implementation of the NZF, noting that there are still many uncertainties regarding alternative fuel supply, scale expansion and infrastructure. At the same time, he warned that any framework should guarantee the status of transitional solutions such as liquefied natural gas (LNG) and bio/electronic liquefied natural gas (e-LNG), rather than marginalizing them.

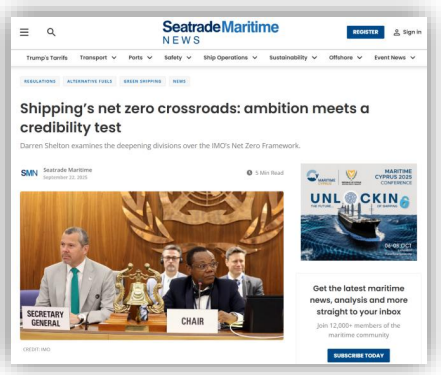
The International Association of Ports and Harbors (IAPH) represented the Port authorities, also gave a warning, arguing that if no framework emerges, the result would be just a chaotic mixture of rules that may raise costs and undermine planning for bunkering, port facilities, and onshore investments.

The second extraordinary MEPC session held in October mainly focused on several key points of concern, including the approach to transitional fuels, the design of the revenue mechanism, the specific contents of penalties and tax rebates, as well as the alignment for ports and bunkering networks. If no consensus is reached, the fallback provisions will also become a problem that limits policy fragmentation, which may potentially increase economic frictions and instability among countries at the international level.

(Refer to the article published by Darren Shelton, a senior trusted advisor of Moran Shipping Agency, in Seatrade Maritime.)

Keywords: Decarbonization; Net Zero Framework

Shipping's net zero crossroads: ambition meets a credibility test (2/3)



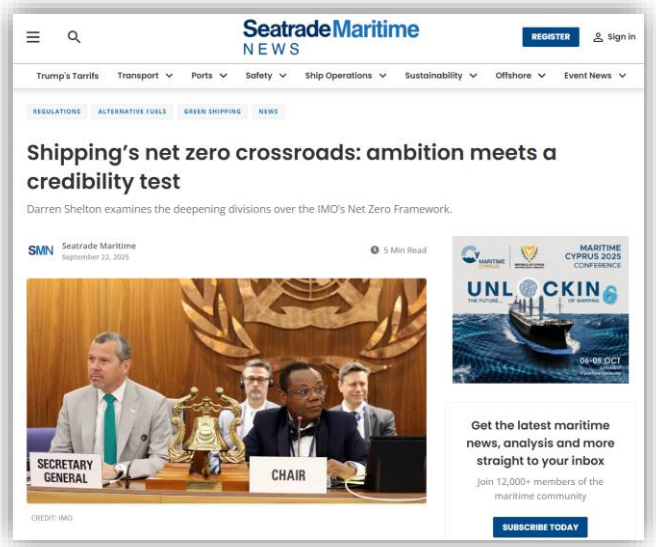
Source: Seatrade-Maritime.

Other industry voices

- **First, ambition collides with arithmetic.** The cost of the zero-emission fuel candidates, such as green methanol, ammonia, and hydrogen, which are several times higher than that of conventional fuel oil, and the supply chains are still weak. The gap led to hesitation for the shipowner and reasons for many dual-fuel new build ship still expected to operate mainly on Very Low Sulfur Fuel Oil (VLSFO).
- **Second, bridge fuels have moved from the margins to the center of debate.** LNG, biofuels, and hybrid power solutions are regarded as transitional fuel options that can achieve emission reduction in the short term when the infrastructure for zero-emission fuels has not yet been widely available. If those fuels are excluded or regarded as stopgap measures, it may reduce rather than expand the range of compliant options.
- **Third, safety concerns have surfaced.** If compliance pathways remain unclear and financing is restricted, operators may extend the service life of their old ships. It may likely complicate maintenance regimes and create new risks for crews and cargo. To be fair, extending the service life of ships is not a new practice; shipowners have long balanced commercial pressures with safety requirements. The current difference lies in the scale of uncertainty caused by the transition policy, which may intensify the tendency to delay the fleet renewal.
- **Fourth, fuel is only part of the emissions equation.** The overall design efficiency of the vessel, optimization of the voyage, upgrades to the hull equipment and propellers, digital route planning, and progressive engine modifications are still he key factors. Though these methods may not achieve net-zero emissions, but can significantly reduce the baseline of carbon emissions during the development of the fuel market.
- **Finally, cost pressure on consumers is unavoidable in this debate.** If the price of shipping fuel rises to three to four times that of VLSFO, the increase will eventually be passed on to the price of goods delivery.

Keywords: Decarbonization; Net Zero Framework

Shipping's net zero crossroads: ambition meets a credibility test (3/3)



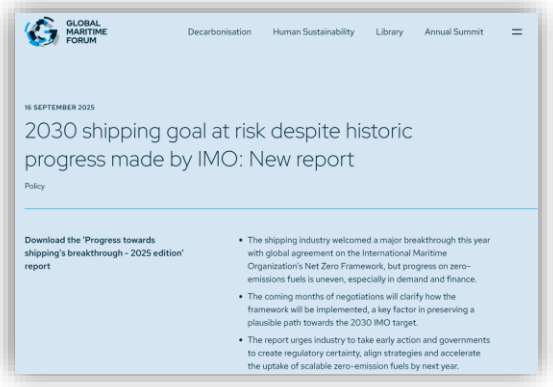
Source: Seatrade-Maritime.

➢ Professional takeaway (from Mr. Shelton)

- The maritime industry still generally accepts the need for decarbonization. The main point of dispute lies in whether the regulations in place are specific enough to address pricing risks, whether they have sufficient flexibility to accommodate technology readiness, and whether they are balanced enough to prevent consumers and trade from bearing non-sustainable costs.
- Port operators have warned that if the framework collapses, disorder could ensue. Shipowners are concerned that if the NZF proceeds without revision, implementation would lead to unaffordable costs. Both positions carry significant weight and are urgently in need of reconciliation.
- The industry is preparing to adapt, but ambition must be aligned with realistic assessments. A viable framework should consider some key factors, such as protecting transitional options, funding infrastructure build-out, and maintaining economic viability during the scaling adoption of zero-emission fuels. Only through such a combination can the most reliable path toward lasting progress be established.

Keywords: IMO Net-Zero Framework; shipping decarbonization

2030 shipping goal at risk despite historic progress made by IMO: New report (1/3)



Source: GMF.

Following the International Maritime Organization's (IMO) agreement on the Net Zero Framework at MEPC 83, the Global Maritime Forum (GMF) address it's fourth annual report, ***Progress towards shipping's 2030 breakthrough – 2025 edition*****.** Developed by the UCL Energy Institute, the GMF's Getting to Zero Coalition, and the Climate High-Level Champions, the research indicated that although shipping decarbonization technology is advancing, weak demand and financial stagnation may delay the transition, potentially affecting the supply of new fuels in the future.

Key details of the framework—including the incentive mechanisms that the IMO plans to adopt to encourage early users of scalable zero-emission fuels—remain subject to negotiation before the framework takes effect in 2027. The outcome of this negotiation, along with the time needed for the industry to understand and adapt to the new regulations, will determine whether there is a feasible path for achieving a 5% to 10% share of new fuels in shipping by 2030.

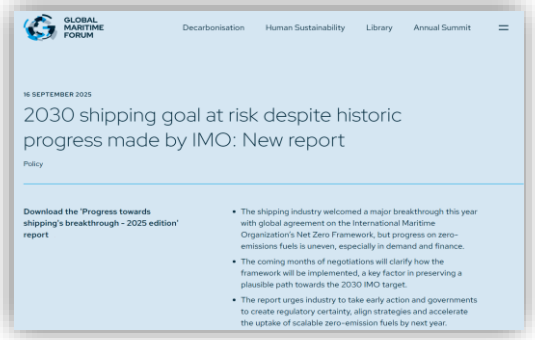
This report clearly states that to remain on the path of decarbonization, actions should be taken in three aspects:

1. **Support the establishment of a robust IMO incentive mechanism**, clearly prioritize the development of scalable zero-emission fuels (SZEF), ensure consistent definitions and the early adoption of guiding principles, and instill confidence in investors and operators through sound mechanism design.
2. **Enhance awareness of the increasing risks they may face for non-SZEF-standard vessels**—both for individual shipowners and the overall system—to encourage timely retrofitting and investment in fleets aligned with future needs.
3. **Helping some of the national actors and sub-global policies of the Global South to fill the gaps that the IMO net-zero framework may not provide sufficient support for.**

The progress report indicates that the technological advancements required for supporting the application of SZEF are progressing well, and the development of the supply or acquisition of these fuels has also made progress. The methanol engine has entered the commercialization stage, the ammonia fuel engine is entering the final testing stage, and the methanol propulsion system technology is also steadily advancing - this also indicates that there will be multiple fuels available for future shipping.

Keywords: IMO Net-Zero Framework; **shipping decarbonization**

2030 shipping goal at risk despite historic progress made by IMO: New report (2/3)



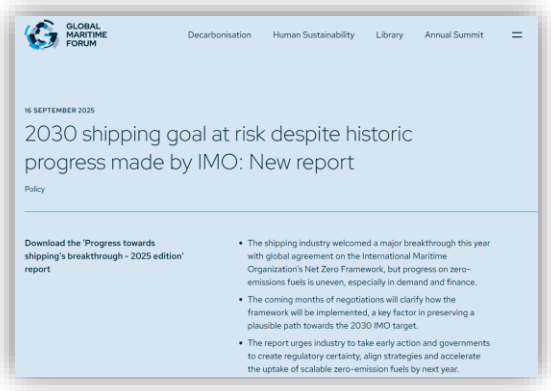
Source: GMF.

Since 2021, the progress report has annually examined the five key "system change levers" faced by the industry, and tracked the progress of several indicators towards achieving the 5% SZEF target by 2030. These include:

1. **Supply (partially on track):** Currently, the production capacity of SZEF can meet one-third (32%) to the full (134%) of the supply demand for SZEF in 2030 - the uncertainty lies in the continuous development of the current production capacity. However, the technological progress supporting SZEF is going smoothly, and the overall production capacity is also continuously expanding.
2. **Demand (off track):** Current estimates indicate that there will be a significant shortage of ships with SZEF capabilities. Unless there is a substantial increase in demand, the current order volume of these ships will only be able to meet approximately 37% of the SZEF requirements needed to achieve the 2030 targets.
3. **Finance (off track):** Despite early progress in SZEF investment, momentum has stalled. Funding continues to flow disproportionately toward conventional fossil-fuelled vessels, and stronger policy signals will be essential to unlocking more private capital.
4. **Policy (partially on track):** The IMO's Net Zero Framework marked a significant moment for shipping decarbonization policy. However, critical details are still to be confirmed and progress at the national level remains uneven.
5. **Civil society (partially on track)**: Awareness of equity issues is growing within the maritime sector, with greater visibility around seafarer training, workforce diversity and gender imbalance. Translating this awareness into tangible action remains the next step.

Keywords: IMO Net-Zero Framework; shipping decarbonization

2030 shipping goal at risk despite historic progress made by IMO: New report (3/3)



Source: GMF.

It is estimated that about 5-10% of all fuels used by the shipping industry will need to be zero-emission fuels (SZEF) in order to achieve the targets set out in the International Maritime Organization's 2023 greenhouse gas (GHG) strategy. The 5% target is considered a critical point that supports the maturity of infrastructure, supply chain, and technology for zero-emission fuels and enables exponential growth. If the 5% target is not achieved, it could jeopardize the industry's goal of achieving net-zero emissions by 2050. The global shipping industry accounts for approximately 3% of global greenhouse gas emissions, more than Germany. Therefore, the shipping industry is a key sector for decarbonization. It is projected that global trade will grow fourfold by 2050, and without taking urgent action, emissions will soar significantly.

Scalable zero-emissions fuel (SZEF)

The report set some key conditions for SZEF, the requirement that the fuel must meet the following conditions:

- It is designed to be scalable, so as to be able to match the current annual consumption of 200 to 300 million tons of oil equivalent in the foreseeable future.
- Compared with existing fossil fuels, the greenhouse gas intensity of this fuel throughout its life cycle (Well-to-Wake) can be reduced by 90-100%.
- Assuming that research and development continue to be carried out and feasible policy support mechanisms are adopted, the production costs will be competitive in the foreseeable future.

Therefore, this definition excludes biofuels, low-pollution fossil fuels (including liquefied natural gas (LNG)), blue fuels (i.e., fuels derived from fossil fuels, such as hydrogen produced from natural gas), or carbon capture applications. Also excluded are solutions with low technological maturity and significant application obstacles.

Keywords: alternative fuels ; Coalition partnership; GCMD

GCMD and International Association of Ports and Harbors (IAPH) forge Coalition partnership to drive decarbonisation across global ports(1/2)

Source: GCMD.

The Global Centre for Maritime Decarbonization (GCMD and IAPH have signed a two-year Coalition partnership agreement aiming to accelerate decarbonization of the maritime sector. This collaboration was announced at the IAPH 2025 World Ports Conference, which was held in Kobe, Japan.

GCMD, with its expertise, and the IAPH, as a global port network comprising more than 200 port authorities and operators in over 85 countries, this partnership may bring together the resources of the expert working group on clean marine fuels and port readiness levels, and close the operational, safety, and technical gaps across the shipping value chain.

➢ **Advancing the role of ports in shipping's fuel transition**

- Ports have a unique positioning that can accelerate the development of maritime decarbonization. They can provide crucial local expertise, including assessing navigation risks, coordinating regulatory agencies, collaborating with local communities to ensure the safe implementation of the pilot programs and trails, and furthermore achieving the safe and large-scale adoption of low-carbon fuels.
- At the same time, GCMD conducts pilots across the value chain, jointly formulating risk-mitigation strategies for deploying new fuels, and establishing the operating procedures for related activities, such as ammonia fuel bunkering and liquid CO_2 safe offloading operations. Tailoring to different port conditions and sharing the research findings with multiple ports. GCMD is committed to filling knowledge gaps and establishing global standard practices.

Keywords: alternative fuels ; Coalition partnership; GCMD

GCMD and International Association of Ports and Harbors (IAPH) forge Coalition partnership to drive decarbonisation across global ports (2/2)

Source: GCMD.

➢ **Building on existing collaboration**

This partnership is based on a strong foundation of existing collaboration. Since GCMD is a supporting partner in the Clean Energy Marine Hubs (CEM-HUBS) initiative, and IAPH, on the other side, is a founding member. CEM-HUBS is a cross-sectoral public-private platform jointly led by an industry task force of CEOs and energy ministers under the banner of the Clean Energy Ministerial (CEM).

Along with this Coalition partnership, GCMD and IAPH will jointly achieve their core objective: to establish the shipping industry as a key driver in the production, transport, and adoption of low-carbon fuels.

➢ **GCMD highlights pilot learnings at the IAPH 2025 World Ports Conference, Kobe**

This October in Kobe, Japan, at the IAPH 70th anniversary 2025 World Ports Conference, Professor Lynn Loo, CEO of GCMD, shared the team's field trial project as a real case experience. Citing the "Carbon Capture and Liquidation Cooperation Project" (Project CAPTURED), which involved working with several ports in China, to explain how it achieves the safe offloading and liquefied CO_2, and then transports it to the inland purchasers.

- Clean Energy Marine Hubs (CEM-HUBS) is formed by public-private group that bridges energy, maritime, shipping, and finance communities to de-risk investments in co-creating a global network of low-carbon energy-maritime value chains. The initiative is a first-of-a-kind partnership between the private sector and governments across the energy-maritime value chain. Gathered and ley by the International Chamber of Shipping (ICS), the International Association of Ports & Harbors (IAPH) and the Clean Energy Ministerial (CEM), with other participating members including Brazil, China, Canada, Greece, Malta, Norway, Panama, Uruguay, and the UAE. The International Renewable Energy Agency (IRENA), GCMD, along with the ABS, Lloyds Register, OCIMF, and the World Economic Forum., Oil Companies International Marine Forum (OCIMF) and World Economic Forum all support the initiative.

International Maritime Organization

Marine Environment Protection Committee
2nd extraordinary session (MEPC/ES.2)
14th-17th Oct, 2025

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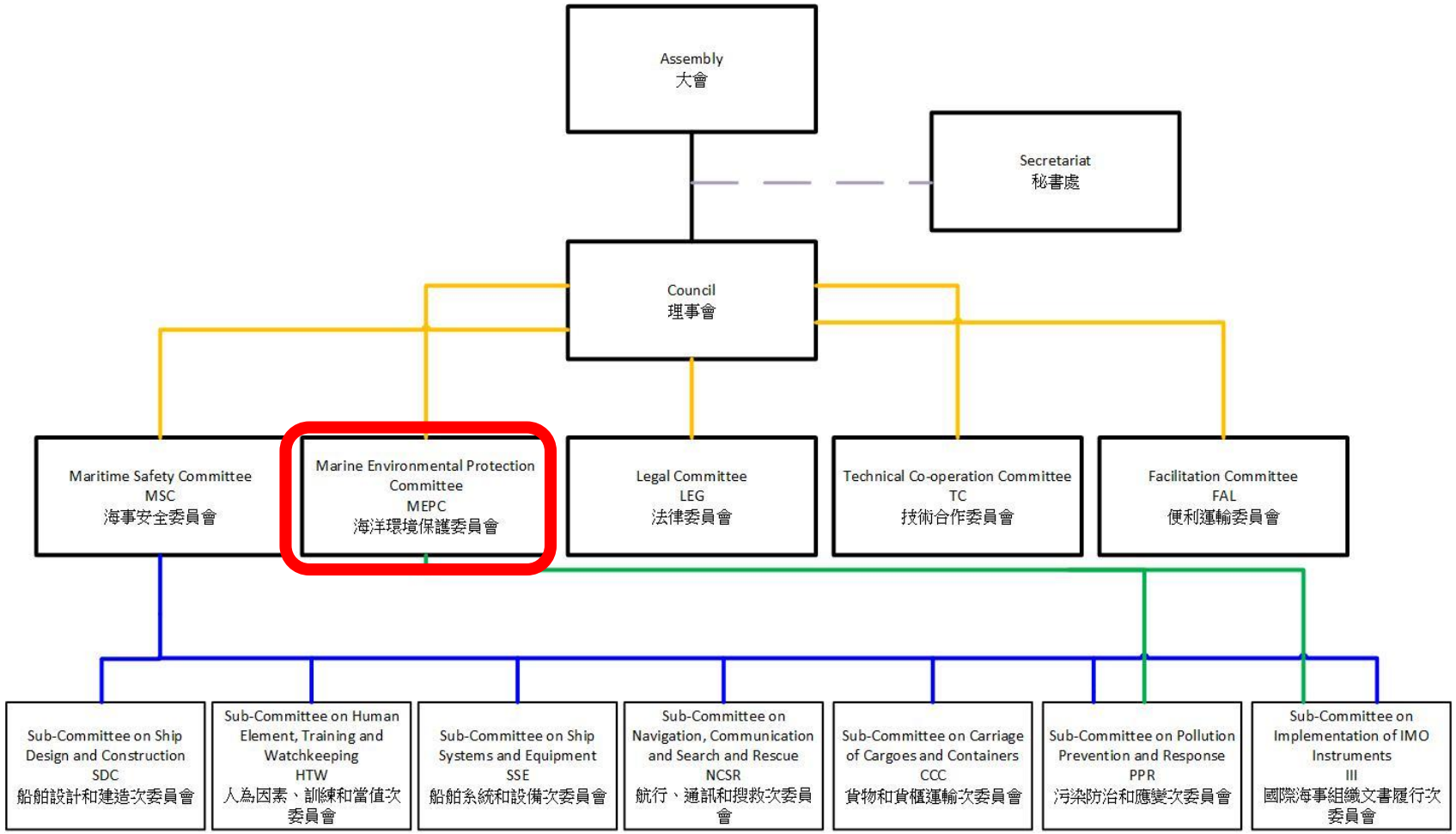
Organization Structure of IMO



Source: Made by NKUST-CIMCS.

Marine Environment Protection Committee (MEPC)

- The Marine Environment Protection Committee (MEPC) is one of the 5 Committees of the IMO.
- MEPC mainly deals with environmental issues within the purview of the IMO. Including the control and prevention of ship-source pollution covered by the International Convention for the Prevention of Pollution from Ship (MARPOL convention), including oil, chemicals carried in bulk, sewage, garbage, and emissions from ships, including air pollutants and greenhouse gas emissions. Other matters covered include ballast water management, anti-fouling systems, ship recycling, pollution preparedness and response, and identification of special areas and particularly sensitive sea areas (PSSA).
- According to Rule 3 of the Rules of Procedure of the MEPC: *"The Committee shall meet at least once a year in regular session and more frequently with the approval of the Council. The Committee may meet in an extraordinary session upon a request made in writing to the Secretary-General by at least 20 of its respective Members…."* The extraordinary mainly work towards consensus on the IMO Net Zero Framework (IMO NZF).

MEPC/ES.2 agenda

Item No.	Agenda Item
1	Adoption of the agenda
2	Consideration and adoption of amendments to mandatory instruments
3	Reduction of GHG emissions from ships
4	Any other business
5	Consideration of the report of the Committee

Consideration and adoption of Amendments to Mandatory Instruments

Agenda Item 2

- Reviewed the amendments of MARPOL Annex VI, which were approved by MEPC 82 and MEPC 83:
  1) the Mid-Term GHG Reduction Measures
  2) North-East Atlantic as an Emission Control Area (ECA) for SOx, particulate matter (PM), and NOx
  3) Revised regulations for Nitrogen Oxides (SOx) in Marine Diesel Engines.
  4) The accessibility of the database of the IMO Collection and reporting of ship fuel oil consumption data (DCS).
- During the meeting, the main topic of discussion was "Mid-term Measures for Reducing Greenhouse Gas Emissions". However, there were significant differences among the delegations of various countries regarding whether to adopt these amendments, and ultimately, no consensus was reached.
- The discussion reached a deadlock, and representatives proposed that the relevant issues be postponed for one year before being reviewed again. After a vote, the majority of member states agreed to the proposal. Therefore, the discussion on the adoption of all the amendments to the MARPOL Convention Appendix VI has been postponed for one year. (It will be held in October 2026)

The mid-term GHG reduction measures are formed in two elements:

1) Technical element: developing goal-based approaches and regulating the gradual reduction of the GHG intensity of marine fuels.
2) Economy element: based on the maritime GHG emissions pricing mechanism.

Reduction of GHG emissions from ships

Agenda Item 3

- Reach to consensus initially
  - Setting the working plan, developing the draft guidelines for mid-term emission measurements
  - Approved by the principal to establish a subsidiary body under MEPC, the 'Sub-Committee on Reduction of GHG Emissions from Ships' to deal with related technical and policy issues for the Net-Zero framework.
- The Intersessional Meeting of the Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG) 20th session is scheduled meeting on October 20th to 24th, 2025. The meeting will be considering the issues on:
  - To develop new documents or decide whether to revise the existing documents (guidelines, guidance, provisions, or other associated instruments), in order to support the IMO Net-Zero Framework (NZF) on uniform and effective implementation.
  - With further discussion on the development of IMO Life Cycle GHG Assessment (LCA)framework;
  - To complete the draft terms for Fifth IMO GHG Study.

To support IMO effective implementation of the IMO Net-Zero Framework, the ISWG-GHG 20 session will be considering:

a) Fuel certification;
b) definition and/or reward of the ZNZ (Zero or Net Zero);
c) IMO Net-Zero Fund
d) GHG Fuel Intensity (GFI), and GFI compliance approaches
e) IMO GFI Registry.

Recommendations for MEPC/ES.2

- It is suggested that the authority should review our domestic laws related to the newly added sections or provisions of the MARPOL Annex VI, including ship inspection regulations, port operation norms, inspection issuance procedures, and the management system for ships of our nationality, and make corresponding revisions for the assessment.
- Though the new regulations are not yet confirmed, it is still under discussion. But once if approved, it may require relevant materials, such as fuel certification, the GFI reports, and to fill in vessel information for the GFI Registry. It is recommended to assess whether the current system for recording, transmitting, and managing MARPOL ship inspection data can support lifecycle GHG assessment (LCA) data, fuel supply chain certificates, and real-time monitoring. The necessity of establishing information interfaces, data standards, and auditing mechanisms should be evaluated.

Recommendations for MEPC/ES.2

- If GFI's requirements lead to an increase in the demand for low-carbon/zero-carbon fuels, there may be an infrastructure shortage for fuel refueling and supply (such as biofuels, methanol, ammonia, hydrogen, etc.) at ports in the future. It is recommended that the construction plans and safety regulations for refueling equipment, supply, storage, transportation, etc., should be jointly discussed with authorities that managing the issue of energy and ports (such as the Ministry of Economic Affairs and the Taiwan International Ports Corp. Ltd.).
- MEPC/ES.2 had decided to establish a new sub-committee, **Sub-Committee on Reduction of GHG Emissions from Ships,** which will mainly be dealing with issues related to greenhouse gas emissions from ships and the Net-Zero framework. It is recommended to keep an eye on the further developments of the greenhouse gas fuel intensity (GFI) regulations in order to prepare for the revision of the MARPOL convention, and to find other solutions or design a better mechanism for our shipping industry from being undermined.

MEPC next session

MEPC 84

MEPC 84 is scheduled to be held from April 27th to May 1st in 2026.

Source: IMO

Next Meeting Schedule for IMO

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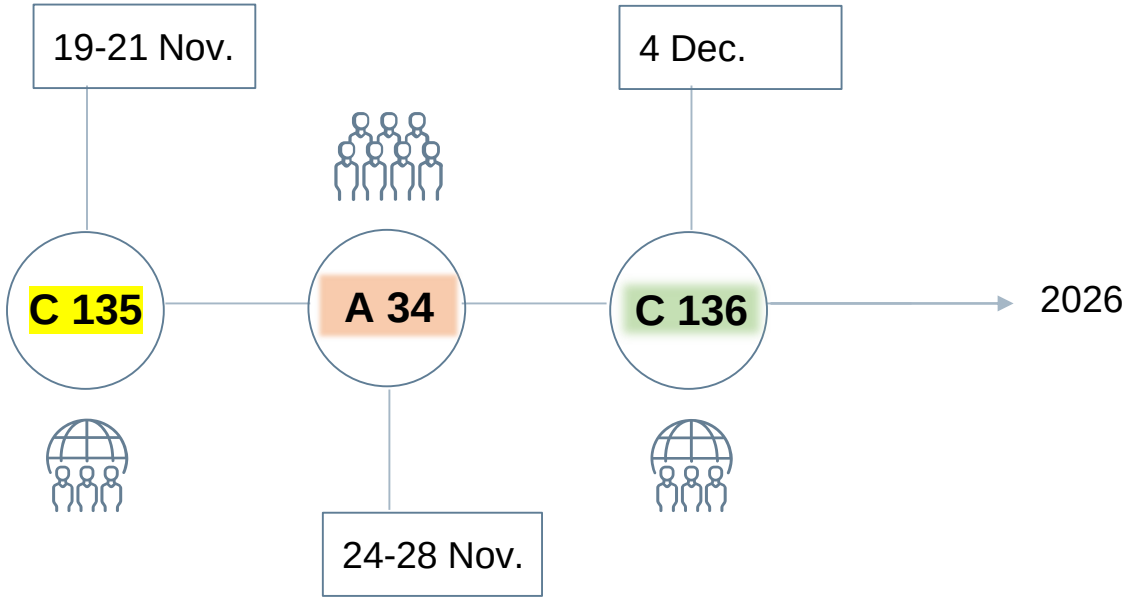
MEPC/ES.2 will be held from Oct. 13th to 17th, 2025.



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The End~

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