PRE-BRIEF

for the

First meeting of the

Intersessional Working Group on Air Pollution and Energy Efficiency (ISWG-APEE 1)

Wednesday to Friday 2-4 April 2025

1. Introduction

The *Intersessional Working Group on Air Pollution and Energy Efficiency* (ISWG-APEE) reports to the IMO's Maritime Environment Protection Committee (MEPC) and is tasked to consider matters related to the short-term GHG reduction measure and more specifically to the CII Review.
ISWG-APEE 1 will produce a report on their deliberations which will be considered by MEPC 83 (7-11 April 2024).

Key Topics

The key topics that will be discussed at ISWG-APEE 1 and may be of interest to Members include[1]:

- identified challenges/gaps in the short-term GHG reduction measure
- Development of draft amendments to existing instruments and/or development of new instruments, as appropriate, with a view to finalization

2. Further Consideration of Possible options to Address the Identified Challenges/Gaps in the Short-Term GHG Reduction Measure

The following papers submitted are to be considered under this agenda item:

ISWG-APEE 1/2 — **Appropriate CII Z reduction factors through to 2030 - Submitted by ICS**

The ICS paper emphasizes that the CII rating system has significant anomalies and is not functioning as intended. ICS believes that setting Z factors for future years should only occur after the CII review is satisfactorily completed to ensure the 40% carbon intensity reduction target is met by 2030. The paper proposes Z factors based on different completion timelines for the review process. It also cites the IMO's latest assessment, which indicates that by 2023, a 31% reduction in carbon intensity has already been achieved compared to 2008.

ISWG-APEE 1/2/1 — **A work plan for the second phase of the review of the short-term GHG reduction measure (STM)- Submitted by Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania,**

[1] The full provisional agenda can be found in Appendix 1

Luxembourg, Malta, Netherlands (Kingdom of the), Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the EC

The co-sponsors note that Phase 2 will commence after MEPC 83, and delegations will require clarity to prepare for the next steps. They propose that a work plan be approved at MEPC 83 to provide this guidance. Accordingly, they suggest that ISWG-APEE 1 develops a work plan and defines the objectives for Phase 2. The paper also highlights the importance that once the mid-term measures are adopted, the role of the short-term measure should be assessed, as well as for the period after 2030 and are of the view that it is unlikely that major modifications to the short-term GHG reduction measure will be implemented before 2029.

ISWG-APEE 1/2/2 **Definition of the concept of port waiting time and the proposed CII reduction factors for 2027 to 2030- Submitted by Brazil, the Republic of Korea and the United Arab Emirates**

The co-sponsors define port waiting time as the period during which a ship's main engine remains idle at anchorage within the port due to unavoidable port conditions, irrespective of the shipowner's intentions. They emphasize that any correction for additional fuel consumption during this period must be supported by documentary evidence demonstrating that the delay was caused by port-related factors such as congestion, berthing delays, or cargo operation delays. The paper introduces a correction factor for port waiting time but maintains that fuel consumption while berthed should not be subject to this correction. Additionally, it suggests excluding fuel consumption incurred during anchorage for more than [72] hours.

ISWG-APEE 1/2/3 **Revision of the SEEMP - Submitted by India**

India proposes a study on the annual fluctuations of the Carbon Intensity Indicator (CII) using IMO DCS data to enable a more accurate assessment of variations over time. This analysis aims to develop measures that recognize genuine annual improvements while ensuring that normal variations in CII do not automatically trigger corrective action plans in cases of non-compliance.

ISWG-APEE 1/2/4 **Proposed work plan for the review of the short-term GHG reduction measure -Submitted by the United Kingdom**

The authors propose that:

- Z factors for 2027, 2028, 2029, and 2030 should be set at MEPC 83.
- Correction factors and updates to reference lines can serve as short-term adjustments while more substantial changes to short-term measures are developed.
- The work plan should include scope for assessing and further developing the EEDI into a Phase 4.
- Strengthening the SEEMP framework can progress in parallel with the refinement of the CII metric and should be pursued immediately.

Last but not least the paper presents a suggested Work plan for the review of short-term GHG reduction measure

ISWG-APEE 1/2/5 **Update on the study on the revised CII reference lines excluding ships' emissions at idle times- Submitted by Bahamas, Liberia, ICS, BIMCO and INTERCARGO**

The authors propose revised reference lines excluding idle emissions and present an analysis carried out using the ABS' and DNV's 2019 IMO DCS data, for the ship types of tankers, bulk carriers, containerships, LNG carriers, general cargo ships and gas carriers. Data from a total of 2,250 bulk carriers' data were included in the analysis.

ISWG-APEE 1/2/6 Reference lines and rating boundary changes- Submitted by RINA

RINA is presenting on the derivation of CII reference lines and rating boundaries, highlighting the need for revisions due to correction factors and metric changes and proposing a methodology for how the changes should be carried out.

ISWG-APEE 1/2/7 A SEEMP based approach to energy efficiency - Submitted by the United Kingdom, RINA and WSC

The authors identify two key challenges:

1. CII does not allow for a robust, ship-specific assessment of operational energy efficiency performance.
2. CII calculations may penalize idle time and port waiting time.

To address these issues, the paper proposes a two-part solution:

- A strengthened SEEMP approach focused on continuous improvement, incorporating an Energy Efficiency Implementation Log (EEIL), periodic verification, annual company audits, and additional audits if required.
- A revised CII metric that considers only propulsion fuel consumption during sea passage.

The co-sponsors outline the proposed SEEMP amendments in the Annex and, in principle, suggest reconsidering the requirement for D- and E-rated ships to meet the required CII and prepare corrective action plans. Instead, they propose a system where all ships (including A-, B-, and C-rated vessels) improve based on their own baselines, ensuring that energy efficiency improvements are applied proportionally across the fleet. The proposed implementation date for the strengthened SEEMP is suggest being January 2028.

ISWG-APEE 1/2/8 Revised CII metric - Submitted by RINA

The authors, based on an analysis of approximately 100,000 voyages across bulk carriers, container ships, and tankers, propose replacing the current AER metric with a sea voyage-propulsion-based metric. RINA supports this approach, arguing that the most consistent and accurate way to use distance traveled in the CII denominator is to focus solely on propulsion emissions during sea passage, excluding:

- In-port emissions
- Emissions from auxiliary engines and boilers at sea

Instead, emissions from auxiliary engines and boilers—both in port and at sea—should be addressed separately through the SEEMP framework. The paper also analyzes the impact of port stay duration and short voyages on AER for bulk carriers.

ISWG-APEE 1/2/9 Addressing the identified challenges/gaps of the short-term GHG reduction measure relevant to ships trading in the Caribbean region- Submitted by Jamaica, Saint Vincent and the Grenadines and Trinidad and Tobago

The cosponsors believe that reconsidering the reduction of the Z-factor is possible if correction factors or metric adjustments address key challenges faced by ships operating in the Caribbean region. Specifically, they highlight concerns regarding idle time and port waiting, short voyages and cruise passenger ships spending extended periods in port. They also confirm that a concrete proposal on this matter will be submitted to MEPC 84.

ISWG-APEE 1/2/10 Illustrating the overlap of the CII with the mid-term measures, and proposing Z-factors in alignment with the 2023 IMO GHG Strategy targets- Submitted by CSC

The authors present evidence demonstrating the significant role of energy efficiency in achieving the 2023 IMO GHG Strategy. The authors are of the view based on their new calculations that a supply-based carbon intensity reduction factor for the CII for 2030 of 55% compared to 2008, or 41% compared to 2019 is needed. Additionally, their analysis suggests that shipping could exceed the 2023 IMO GHG Strategy targets and align emission reductions with a true 1.5°C Paris Agreement trajectory.

ISWG-APEE 1/2/11 **Maximizing emission reductions, minimizing costs, meeting IMO goals- Submitted by Pacific Environment and CSC**

The co-sponsors propose that the CII review process adheres to the original timeline, starting Phase 2 immediately after MEPC 83 and concluding by January 1, 2026, retain its full scope, including all non-underway emissions, without correction factors. The paper advocates that CII scores and the data used to calculate them should be made public and strengthened enforcement is necessary to guarantee real and reliable emission reductions. The paper supports that the CII metric should transition to GJ/tnm, and revenue from any IMO funds should support developing countries in achieving cost-effective emission reductions.

ISWG-APEE 1/2/12 **Comments on the report of the Correspondence Group on the review of the short-term GHG reduction measure- Submitted by Palau**

The author are of the view that was little progress in carbon intensity to date highlighting that based on the evidence of the potential for further carbon intensity reduction, and the cost-effectiveness, more stringency and enforcement of energy efficiency would reduce the overall cost of emissions abatement by an average of 15%. The paper provides a set of specific proposals and recommendations in response to the reports of the Correspondence Group. The authors believe that the essential large Z-factor improvements in 2027 to 2030, will not happen as long as enforcement action is weak and/or uncertain until 2028.

The Group will be invited to consider the following relevant documents submitted to MEPC 83 at this session:

MEPC 83/6 **Report on annual carbon intensity and efficiency of the fleet (Reporting year: 2023) - Note by the Secretariat**

The Secretaiart reports on demand-based (EEOI similar) and supply-based carbon intensity (AER) for the year 2023, in accordance with the 2022 Guidelines for the development and management of the IMO Ship fuel oil consumption database . The carbon intensity of shipping has shown a greater decrease in 2023, compared to the period from 2019 to 2022. There are likely a number of possible reasons for this; for example, the short-term measures (EEXI and CII) entered into force in 2023, and the change in efficiency may also have been caused by changes in shipping routes driven by geopolitical events leading to longer voyages.

Table 1: Average annual carbon intensity and percentage change compared to 2019

	Annual average carbon intensity and percentage change in carbon intensity compared to 2019						IMO DCS Fuel Consumption Report to Committee	
Year	AER		cgDIST		Estimated EEOI		Report to Committee	Total fuel consumption (tonnes)
2019	5.90	0.0%	8.44	0.0%	10.94	0.0%	MEPC 76/6/1	213 million
2020	5.83	-1.2%	8.24	-2.3%	10.92	-0.2%	MEPC 77/6/1	203 million
2021	5.89	-0.1%	8.34	-1.2%	10.90	-0.4%	MEPC 79/6/1	212 million
2022	5.66	-4.1%	8.05	-4.6%	10.89	-0.5%	MEPC 81/6	213 million
2023	5.32	-9.7%	7.60	-9.9%	10.42	-4.8%	MEPC 82/6/38	211 million

More specificacally for Bulk carriersOperational carbon intensity for 2023 using Fourth IMO GHG Study ship types and sizes and ships of 5,000 GT and above is as folows:

Fourth IMO GHG Study Ship Types and Sizes		Non-Filtered DCS Fleet		Filtered AIS Fleet			Non-Filtered DCS Fleet				Filtered AIS Fleet	
		Number of DCS and AIS Matched ships	Mean Deadweight Tonnage	Mean Deadweight Tonnage	Payload Utilization (%)	Allocative Utilization (%)	Median AER	AER change to 2019 (%)	Median cgDIST	cgDIST change to 2019 (%)	Median EEOI	EEOI change to 2019 (%)
Bulk carrier (DWT)	0-9,999	55	8,073	7,914	91.8	59.7	14.87	-9.9	21.45	-8.2	25.95	-1.7
	10,000-34,999	1,245	28,035	29,307	86.0	59.4	8.01	-6.9	12.74	-6.2	14.58	6.6
	35,000-59,999	2,840	49,365	48,485	82.5	61.6	5.70	-6.8	9.69	-6.7	10.87	1.8
	60,000-99,999	4,036	75,655	74,694	81.6	55.8	4.02	-4.9	7.32	-5.4	8.56	-2.9
	100,000-199,999	1,229	169,784	172,364	82.1	48.7	2.56	-7.6	4.95	-7.7	6.23	-6.9

MEPC 83/6/4 **Report on the analysis of the offshore marine contracting sector using the two possible proxies proposed instead of the transport work proxy - Submitted by IMCA**

N/A for INTERCARGO refers to offshore sector

MEPC 83/6/8 **Overview of the Correspondence Group on the Review of the Short-term GHG Reduction Measure Submitted by Brazil, Japan and EC**

MEPC 83/6/9 **Report of the Correspondence Group on the review of the short-term GHG reduction measure (challenges/gaps #1 and #3 to #21)- Submitted by Brazil, Japan and European Commission**

MEPC 83/6/10 **Report of the Correspondence Group on the review of the short-term GHG reduction measure (challenges/gap #2)- Submitted by Brazil, Japan and European Commission**

MEPC 83/6/11 **Report of the Correspondence Group on the Review of the Short-term GHG Reduction Measure (draft amendment to MARPOL Annex VI)- Submitted by Brazil, Japan and EC**

The papers from the Coordinators of the CG on the CII review provide the summary of the discussions Of the CG on the review of the short terms measures and the CII. More specifically for the Idle time the Group agreed not to continue consideration of the correction factor and suggests that the metric change (G5) should be further considered in Phase 2. With regards to short voyages and geared bulk carriers the Group agreed to consider this matter as a part of the work on the challenge/gap #3 (idle time and port waiting time). The below summarises the group deliberations:

#1: CII does not allow for robust individual ship-based assessment of operational energy efficiency performance	Stakeholders invited to submit proposals for Phase 2.
#2: CII reduction (Z) factor is not defined for 2027-2030	Work plan and MARPOL amendments to set reduction rates; review planned for 2027.
#3: CII calculation might penalize idle time and port waiting time	No correction factor; metric change (G5) to be considered in Phase 2.
#4: CII calculation might penalize short voyages	Addressed under idle time and port waiting time discussions.
#6: CII enforcement mechanism lacks incentives for behavior change	On hold until revised IMO DCS data is analyzed.

#7: CII does not sufficiently incentivize port call efficiency and just-in-time (JIT) arrival	Kept in abeyance.
#8: CII ratings and IMO DCS data are not accessible beyond MARPOL Annex VI Parties	Draft amendments introduce anonymized public access and full access for MARPOL Parties.
#9: CII calculation might penalize self-unloading bulk carriers	Consideration deferred.
#10: CII calculation might penalize geared bulk carriers	Addressed under idle time and port waiting time discussions.
#11: CII calculation might penalize ships navigating in adverse weather	Kept in abeyance.
#13: CII calculation might impact ballast voyages	Kept in abeyance.
#19: CII might overlap with mid-term measures	Further consideration in Phase 2.
#20: CII does not address full lifecycle fuel emissions	To be discussed under mid-term measures considerations.
#21: CII does not allow for pooling	Further discussion planned for Phase 2.

MEPC 83/6/13 Comments on the Report of the Correspondence Group on the Review of the Short-term GHG Reduction Measure established at MEPC 82 (MEPC 83/6/10)- Submitted by INTERTANKO

INTERTANKO argues that international shipping reduced carbon intensity by 31.3% and net CO_2 emissions by 28.8% from 2008 to 2023. Based on this trend, they support a 2% annual reduction in carbon intensity from 2027 to 2030, aligning with the IMO's 2023 GHG Strategy while allowing a margin of uncertainty.They propose the following Z factor reduction rates (from 2019 levels):

- 2027: -13%
- 2028: -15%
- 2029: -17%
- 2030: -20%

Their approach suggests that maintaining past reduction trends is sufficient to meet future IMO targets.

MEPC 83/6/14 Comments on document MEPC 83/6/9- Submitted by INTERTANKO

INTERTANKO comments on the Correspondence Group's suggestion to incorporate Challenge/Gap #4 into Challenge/Gap #3, arguing that the available data is sufficient to consider Challenge/Gap #4 as a separate correction factor (G5) in Phase 2. The organization suggests that further development can be supported by additional data reported by ships from 2023 to 2025.Furthermore, INTERTANKO highlights significant differences between the two challenges, emphasizing that the issues associated with short voyages differ from those related to idle time and should be addressed separately.

MEPC 83/6/16 Comments on the report of the Correspondence Group on the Review of the Short-term GHG Reduction Measure- Submitted by Bangladesh, China and United Arab Emirates

The authors are not in favor of compensations for the Z-factor for existing correction factors and voyage adjustments and with regarsd to the IMO DCS data accessibility the co-sponsors believe that it is not yet mature to fully open the database to the public, and the necessity and potential data security risks of doing so should be further considered.

MEPC 83/INF.24 **Summary of inputs provided to the Correspondence Group on the Review of the short-term GHG reduction measure (inputs at Round 1)- Submitted by Brazil, Japan and European Commission**

This document summarizes inputs submitted to the Correspondence Group on the Review of the Short-Term GHG Reduction Measure, established at MEPC 82, during Round 1 of its discussions

MEPC 83/INF.25 **Coordinators' remark on Round 1 of the Correspondence Group on the review of the short-term GHG reduction measure - Submitted by Brazil, Japan and European Commission**

This document provides the Coordinators' remark on Round 1 of the Correspondence Group on the Review of the Short-term GHG Reduction Measure, established at MEPC 82, followed by the questionnaire for Round 2.

MEPC 83/INF.26 **Summary of inputs provided to the Correspondence Group on the review of the short-term GHG reduction measure (inputs at Round 2)- Submitted by Brazil, Japan and European Commission**

This document provides a summary of inputs provided to Correspondence Group on the Review of the Short-term GHG Reduction Measure, established at MEPC 82, at its Round 2.

MEPC 83/INF.27 **Coordinators' remarks on round 2 of the Correspondence Group on the Review of the Short-term GHG Reduction Measure- Submitted by Brazil, Japan and European Commission**

This document provides the Coordinators' remarks on round 2 of the Correspondence Group on the Review of the Short-term GHG Reduction Measure, established at MEPC 82.

3. Development of draft amendments to existing instruments and/or development of new instruments, as appropriate, with a view to finalization

The Group will be invited to consider the development of draft amendments to existing instruments and/or development of new instruments, as appropriate, in conjunction with the further consideration of possible options to address the identified challenges/gaps in the short-term GHG reduction measure (agenda item 2).

APPENDIX 1

1. Adoption of the agenda
2. Further consideration of possible options to address the identified challenges/gaps in the short-term GHG reduction measure
3. Development of draft amendments to existing instruments and/or development of new instruments, as appropriate, with a view to finalization
4. Any other business
5. Consideration of the report to MEPC 83