Environmental Regulatory Update Post MEPC 72

April 2018

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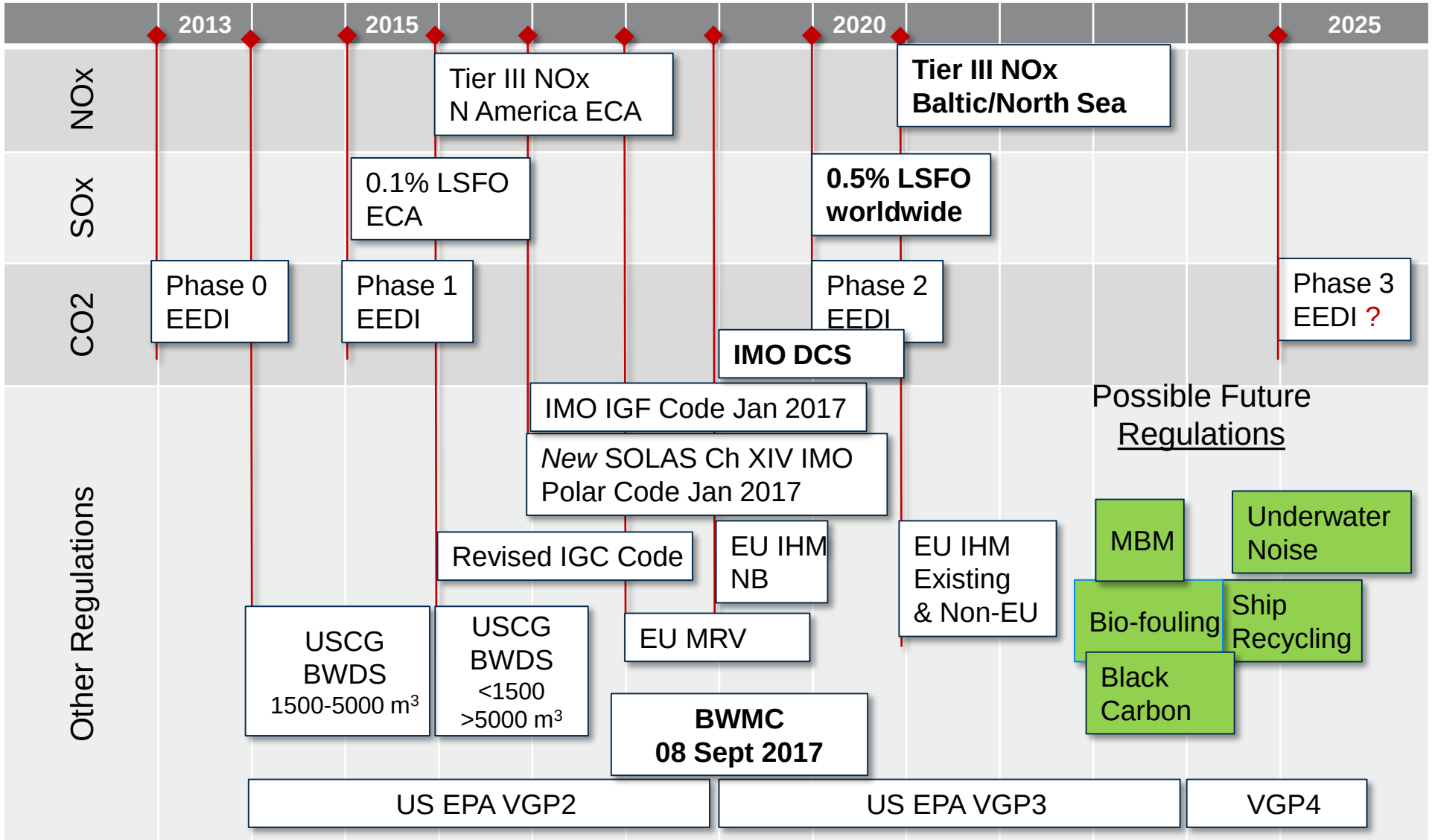
Regulations Timeline



MEPC 72 Agenda

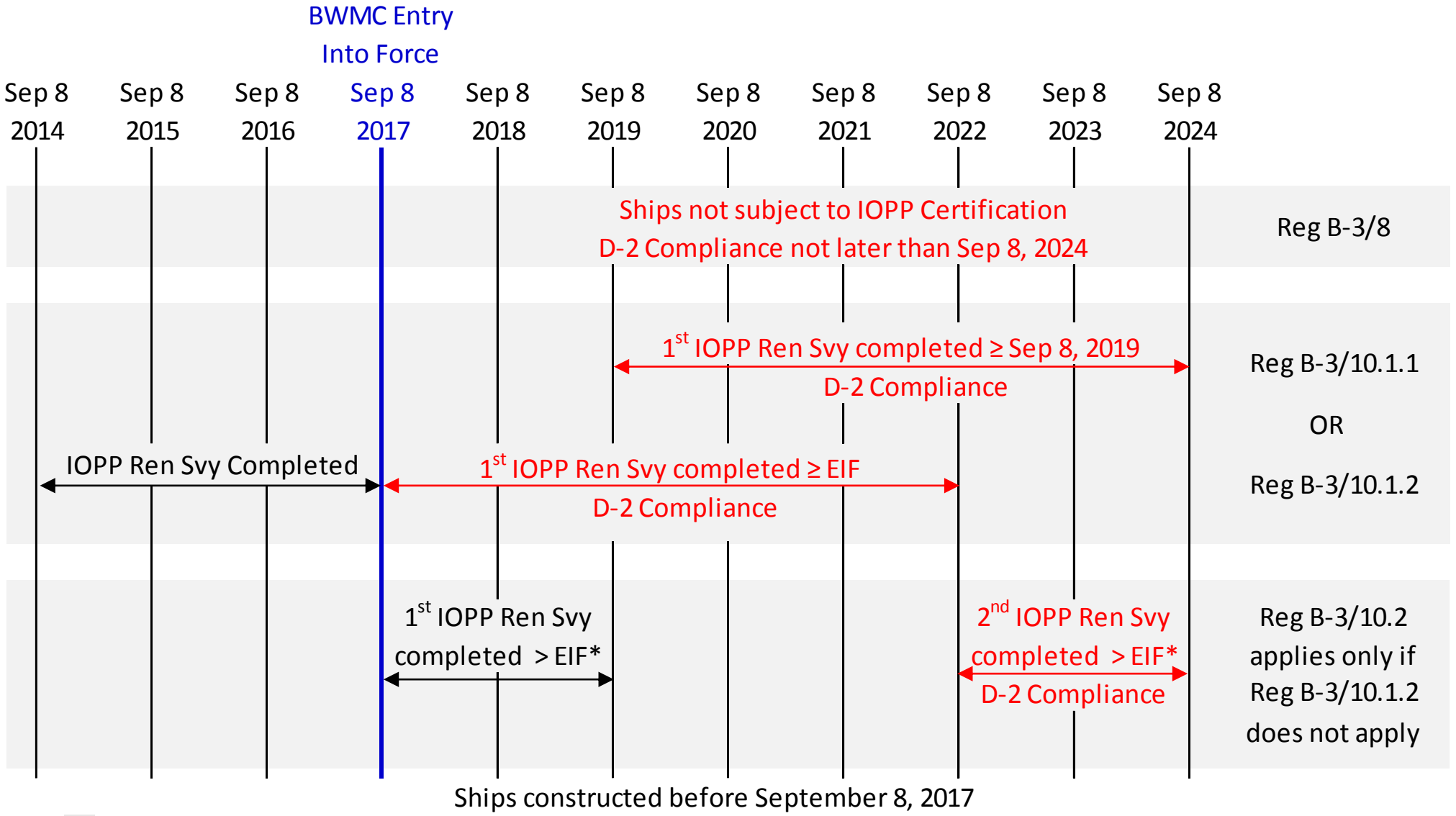
1. Adoption of the agenda
2. Decisions of other bodies
3. Consideration and adoption of amendments to mandatory instruments
4. Harmful aquatic organisms in ballast water
5. Air pollution and energy efficiency
6. Further technical and operational measures for enhancing the energy efficiency of international shipping
7. Reduction of GHG emissions from ships
8. Identification and protection of Special Areas and PSSAs
9. Pollution prevention and response (5th session)
10. Reports of other sub-committees
11. Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters
12. Technical cooperation activities for the protection of the marine environment
13. Capacity building for the implementation of new measures
14. Application of the Committees' method of work
15. Work programme of the Committee and subsidiary bodies
16. Any other business
17. Consideration of the report of the Committee

ABS

Agenda Item 4: Harmful aquatic organisms in ballast water

- Outcome of III 4 regarding the surveys under the BWMC in the HSSC Guidelines
- Final approval of the revised Guidance on scaling of BWMS (BWM.2/Circ.33)
- Final approval of the Guidance for Administrations on the type approval process for BWMS (BWM.2/Circ.43)
- Final approval of the unified interpretation of Appendix I (Form of the International Ballast Water Management Certificate)
- Consider whether Procedure (G9) should be revised and made mandatory
- Consider whether a broader review of Procedure (G9) should be initiated
- Further consider the draft data gathering and analysis plan for the experience-building phase.
- Consider whether detailed aspects of the validation of the compliance of individual BWMS with regulation D-2 of the Convention in conjunction with their commissioning need to be addressed

Adopted Implementation Scheme (Regulation B-3) - October 13, 2019



Mandatory Code for Approval of Ballast Water Management Systems

- Adopted amendments to regulations A-1 and D-3 of the BWM Convention to make the BWMS Code mandatory
- Technically equivalent to 2016 revised G8 (MEPC.279(70)
  - Systems approved in accordance with 2016 G8 deemed compliant with the code
- Systems approved in accordance with the earlier versions of G8 (MEPC.125(53) and MEPC.174(58) not later than **October 28, 2018** may be installed on board ships until **October 28, 2020**
- “Installed" means the contractual date of delivery of the ballast water management system to the ship
  - In the absence of such a date, the word "installed" means the actual date of delivery of the ballast water management system to the ship

BWM System Testing at Commissioning

- Proposal for validating BWMS compliance following installation:
  - A sample shall be collected during a ballast uptake to characterize the ambient water. A sample shall be collected during the corresponding ballast water discharge.
  - The representative samples shall be analysed, at a minimum, using indicative analysis.
  - The applicable self-monitoring parameters (e.g. flow rate, pressure, TRO, UV intensity, etc.) shall be assessed, taking into account the System Design Limitations,
  - The validation is successful if the discharge sample does not exceed the D-2 standard and the self-monitoring equipment indicates correct operation
  - A written report including detailed results of the commissioning testing should be provided to the surveyor, to the Administration and to the ship.
  - The IBWM Certificate should not be issued until commissioning testing has been successfully completed.
- MEPC72 invited interested Parties to submit proposals for the development of guidance on the validation of the compliance of BWMS with regulation D-2 during commissioning.

Revised Guidance on BWM Systems

- Guidance on Scaling of BWM Systems (BWM.2/Circ.33)
  - Provides guidance for extrapolating test results for increased or reduced treatment rated capacities validated by mathematical model and/or calculations.
  - The validation is used to predict that the key performance parameters (e.g. dosage concentration, UV intensity, etc.) required to achieve the system's efficacy will be achieved in the scaled unit design
- Guidance on the BWM system type approval process under G8 Guidelines (BWM.2/Circ.43)
  - contains additional guidance directed to Administrations when:
    - determining the acceptability of system manufacturers
    - using a third party's quality assurance program during the approval process
    - when verifying that a manufacturer is fully prepared to carry out the testing needed for type approval.

BWM Plans updates to reflect contingency measures

- MEPC 71 had approved BWM.2/Circ.62 on Guidance on contingency measures
- IACS proposed that the BWMP should not be amended to accommodate the elements introduced by BWM.2/Circ.62, until:
  - an amendment of the BWMP would be required due to a revision of the Guidelines (G4) or
  - the installation of a ballast water management system.
- MEPC72 invited interested parties to submit proposals to PPR6 in Feb 2019.

Experience Building Phase

- Experience building phase
  1. Data gathering
  2. Data analysis
  3. Convention review
- BWM.2/Circ.42/Rev.1 will be used as a basis for sampling and analysis..
- MEPC72 approved the draft BWM.2 circular on Data gathering and analysis plan for the experience-building phase (BWM.2/Circ.67)

MEPC session	Timing	Milestone	EBP / MEPC action
73	Autumn 2018	Convention has been in force 1 year	
74	Spring 2019		1st year of data available.
75	Autumn 2020	Convention has been in force 2 years	2nd year of data available, stocktaking of EBP timeline.
76	Autumn 2020	Convention has been in force 3 years	Partial 3rd year of data available, enough to agree to data analysis report terms of reference.
77	Spring 2021		Full 3rd year of data available, Draft analysis report received.
78	Spring 2022	Convention has been in force 4 years	Final analysis report received. Convention issues agreed.
79	Autumn 2022	Convention has been in force 5 years	Package of amendments submitted to the Parties.

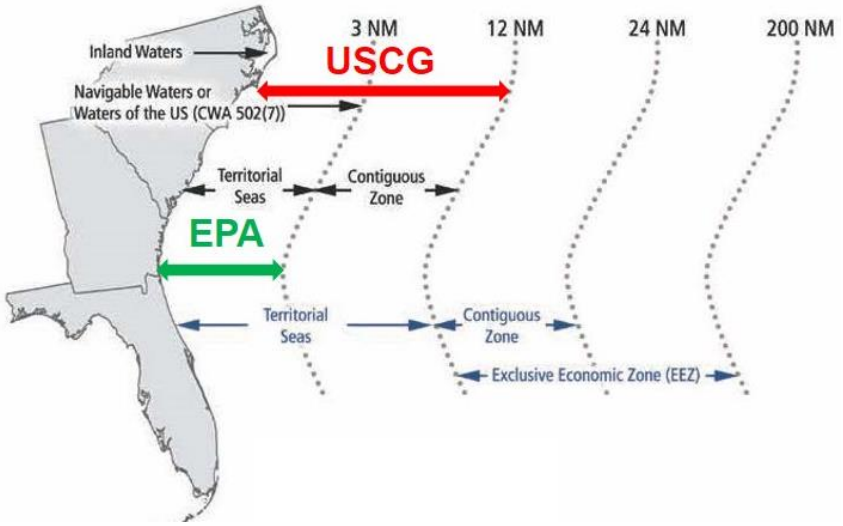
ABS

Application of the BWM Convention to specific ship types

- Rescue tug boats - MEPC 72/4/8 (Turkey)
  - Technical and operational challenges of retrofitting BWMS
  - Amendment of Article 3.2 of the BWM Convention to except rescue tug boats or development of guidance.
  - MEPC invited the delegation of Turkey to submit a proposal for a new output at a future session
- Unmanned non-self-propelled (UNSP) barges - MEPC 72/4/9 (Denmark and Singapore)
  - Technical and operational challenges and safety risks faced by such barges
  - Regulation B-4.4, a dispensation from conducting BW Exchange is allowed in the event that the BW Exchange is considered to threaten the safety or stability of the ship, its crew, or its passengers due to adverse weather, ship design or stress, equipment failure, or any other extraordinary conditions; and
  - MEPC72 invited the co-sponsors to submit a proposal for a new output to develop guidance on the application of the BWM Convention to unmanned non-self-propelled barges

United States BWM Requirements

- The United States has not ratified the BWM Convention and has established independent ballast water regulations
- In the U.S., ships must be in compliance with:
  - USCG Ballast Water Regulations;
  - US EPA VGP; and
  - Individual state requirements – 16 states have ballast water requirements (California is the most stringent)
- BWMS require new testing and type approval by the USCG
- Compliance dates are based on vessel drydocking



Current Compliance Timelines

IMO BWMC EIF September 8, 2017

- Ships constructed on/after September 8, 2017 – at delivery
- Ships constructed before September 8, 2017, are to comply with the D-2 standard at:
  - (B-3/10.1): the first MARPOL IOPP renewal survey after September 8, 2017 if:
    - (B-3/10.1.1): this survey is completed on or after September 8, 2019; or
    - (B-3/10.2);this survey is completed on or after September 8, 2014 but prior to September 8, 2017
  - (B-3/10.2): the second IOPP renewal survey after September 8, 2017 if the first renewal survey after September 8, 2017 is completed prior to September 8, 2019, provided that the conditions of paragraph (B-3/10.1.2) are not met

USCG Final Rule

- First scheduled docking after January 1, 2016 (BW capacity >5000 m3)
- Existing extensions will be honored
- New extensions must consider current CG Type Approvals and include a compliance plan

Vessel	Ballast Capacity	Compliance Date
New	All	Delivery
Existing	< 1,500 m^3	First Scheduled Drydocking after January 1, 2016
	1,500 – 5,000 m^3	First Scheduled Drydocking after January 1, 2014
	> 5,000 m^3	First Scheduled Drydocking after January 1, 2016

- New vessel – constructed on or after December 1, 2013
- "An UWILD is not considered the "first scheduled drydocking"
- 1st scheduled drydocking date is the date the vessel enters a dry-dock

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US BWM Regulations

- Six USCG type approved BWMS

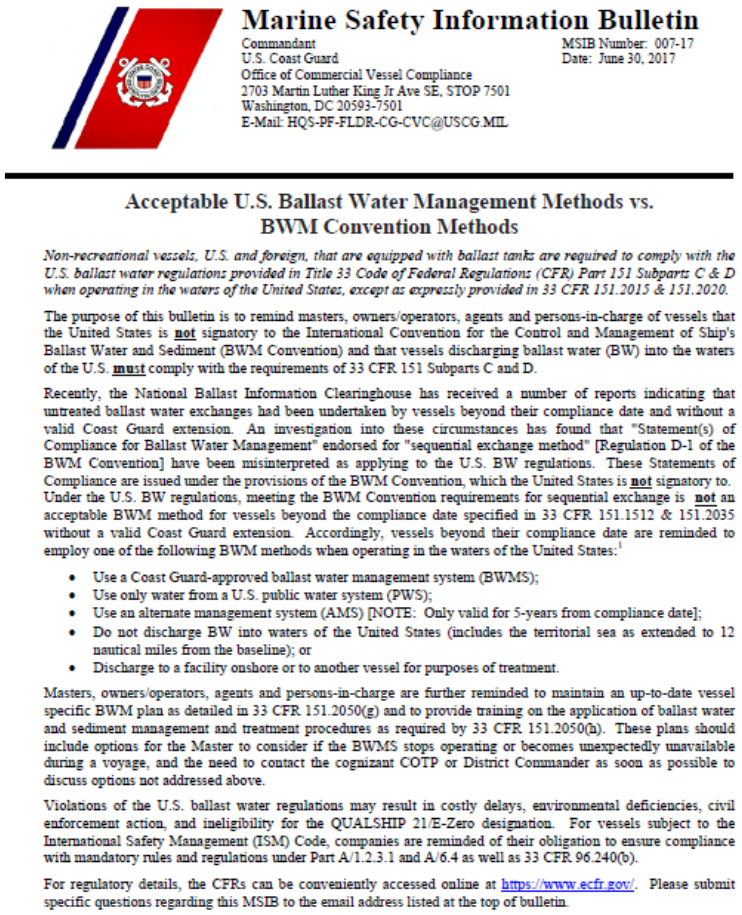
SYSTEM	Approval
Optimarin OBS	2 Dec 2016
PureBallast 3	23 Dec 2016
OceanSaver Mk II	23 Dec 2016
Sunrui Balclor	07 Jun 2017
Ecochlor BWTS	10 Aug 2017
Erma First FIT	18 Oct 2017

- New applications

SYSTEM	Application
SHI -Purimar	28 Sep 2017
Techcross - Electro-Cleen	31 Oct 2017
De Nora - Balpure	03 Mar 2018
Bio-UV - Bio-Sea B	12 Mar 2018
JFE - BallastAce	29 Mar 2018
Panasia - GloEn-Patrol	30 Mar 2018

USCG Next Steps - MSIB Number: 007-17

- Vessels beyond their compliance date are reminded to employ one of the following BWM methods:
  - Use a Coast Guard-approved ballast water management system (BWMS);
  - Use only water from a U.S. public water system (PWS);
  - Use an alternate management system (AMS) [Valid for 5-years from OCD];
  - Do not discharge BW into waters of the United States or
  - Discharge to a facility onshore or to another vessel for purposes of treatment
- Masters, owners/operators, are further reminded to:
  - Maintain an up-to-date vessel specific BWMP as detailed in 33 CFR 151.2050(g)
  - Provide training on the application of BW and sediment management and treatment procedures as required by 33 CFR 151.2050(h).
  - **Plans should include options for the Master to consider if the BWMS stops operating or becomes unexpectedly unavailable, and the need to contact the COTP or District Commander as soon as possible**
- Violations of the U.S. ballast water regulations may result in costly delays, environmental deficiencies, civil enforcement action, and ineligibility for the QUALSHIP 21/E-Zero designation



Marine Safety Information Bulletin

Commandant
U.S. Coast Guard
Office of Commercial Vessel Compliance
2703 Martin Luther King Jr Ave SE, STOP 7501
Washington, DC 20593-7501
E-Mail: HQS-PF-FLDR-CG-CVC@USCG.MIL

MSIB Number: 007-17
Date: June 30, 2017

Acceptable U.S. Ballast Water Management Methods vs. BWM Convention Methods

Non-recreational vessels, U.S. and foreign, that are equipped with ballast tanks are required to comply with the U.S. ballast water regulations provided in Title 33 Code of Federal Regulations (CFR) Part 151 Subparts C & D when operating in the waters of the United States, except as expressly provided in 33 CFR 151.2015 & 151.2020.

The purpose of this bulletin is to remind masters, owners/operators, agents and persons-in-charge of vessels that the United States is **not** signatory to the International Convention for the Control and Management of Ship's Ballast Water and Sediment (BWM Convention) and that vessels discharging ballast water (BW) into the waters of the U.S. **must** comply with the requirements of 33 CFR 151 Subparts C and D.

Recently, the National Ballast Information Clearinghouse has received a number of reports indicating that untreated ballast water exchanges had been undertaken by vessels beyond their compliance date and without a valid Coast Guard extension. An investigation into these circumstances has found that "Statement(s) of Compliance for Ballast Water Management" endorsed for "sequential exchange method" [Regulation D-1 of the BWM Convention] have been misinterpreted as applying to the U.S. BW regulations. These Statements of Compliance are issued under the provisions of the BWM Convention, which the United States is **not** signatory to. Under the U.S. BW regulations, meeting the BWM Convention requirements for sequential exchange is **not** an acceptable BWM method for vessels beyond the compliance date specified in 33 CFR 151.1512 & 151.2035 without a valid Coast Guard extension. Accordingly, vessels beyond their compliance date are reminded to employ one of the following BWM methods when operating in the waters of the United States:[1]

- Use a Coast Guard-approved ballast water management system (BWMS);
- Use only water from a U.S. public water system (PWS);
- Use an alternate management system (AMS) [NOTE: Only valid for 5-years from compliance date];
- Do not discharge BW into waters of the United States (includes the territorial sea as extended to 12 nautical miles from the baseline); or
- Discharge to a facility onshore or to another vessel for purposes of treatment.

Masters, owners/operators, agents and persons-in-charge are further reminded to maintain an up-to-date vessel specific BWM plan as detailed in 33 CFR 151.2050(g) and to provide training on the application of ballast water and sediment management and treatment procedures as required by 33 CFR 151.2050(h). These plans should include options for the Master to consider if the BWMS stops operating or becomes unexpectedly unavailable during a voyage, and the need to contact the cognizant COTP or District Commander as soon as possible to discuss options not addressed above.

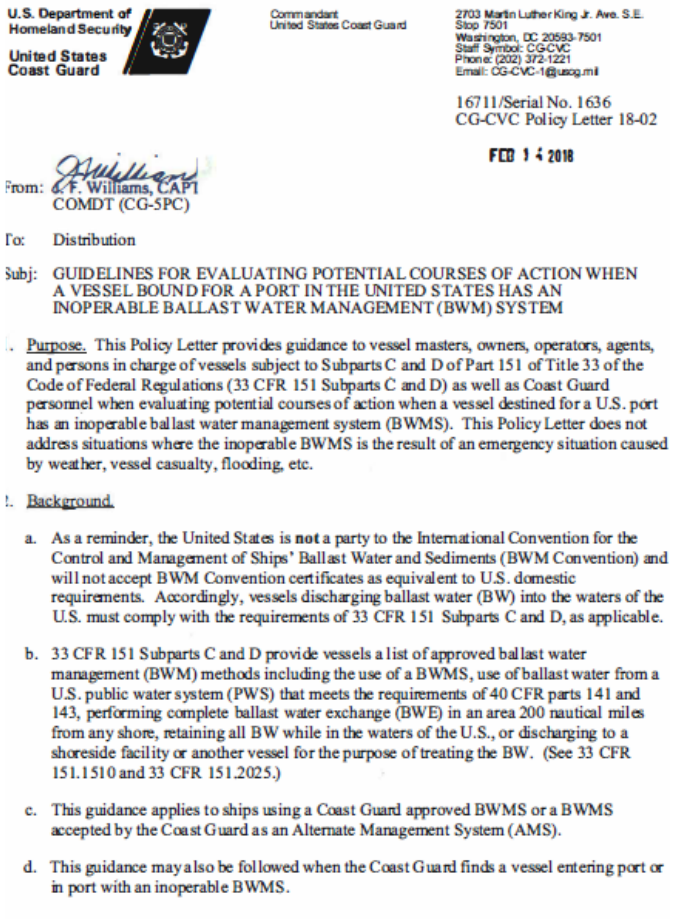
Violations of the U.S. ballast water regulations may result in costly delays, environmental deficiencies, civil enforcement action, and ineligibility for the QUALSHIP 21/E-Zero designation. For vessels subject to the International Safety Management (ISM) Code, companies are reminded of their obligation to ensure compliance with mandatory rules and regulations under Part A/1.2.3.1 and A/6.4 as well as 33 CFR 96.240(b).

For regulatory details, the CFRs can be conveniently accessed online at https://www.ecfr.gov/. Please submit specific questions regarding this MSIB to the email address listed at the top of bulletin.

USCG Next Steps - CVC Policy Letter 18-02

Courses of Action when a Vessel has an Inoperable BWMS

- May use one of the other BWM methods outlined in 33 CFR 151.2025(a).
  - BWE: must obtain approval from the District Commander or Captain of the Port (COTP) first. A vessel reporting its BWMS as inoperable <u>for the first time</u> may be allowed to use BWE.
  - A lack of consumables will not be justification to employ an alternative management method.
  - BWM Plan should include guidance on alternative BWM strategies.
  - Training of the master and crew on the application of ballast water and sediment management and treatment procedures is important.
  - The Coast Guard also highly encourages vessels to use their BWMS regularly, even if not bound to or departing from the United State, since this improves crew operational knowledge of the BWMS, thereby improving the BWMS' reliability.



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16711/Serial No. 1636
CG-CVC Policy Letter 18-02

FEB 1 4 2018

From: J. F. Williams, CAPT
COMDT (CG-5PC)

To: Distribution

Subj: GUIDELINES FOR EVALUATING POTENTIAL COURSES OF ACTION WHEN A VESSEL BOUND FOR A PORT IN THE UNITED STATES HAS AN INOPERABLE BALLAST WATER MANAGEMENT (BWM) SYSTEM

1. Purpose. This Policy Letter provides guidance to vessel masters, owners, operators, agents, and persons in charge of vessels subject to Subparts C and D of Part 151 of Title 33 of the Code of Federal Regulations (33 CFR 151 Subparts C and D) as well as Coast Guard personnel when evaluating potential courses of action when a vessel destined for a U.S. port has an inoperable ballast water management system (BWMS). This Policy Letter does not address situations where the inoperable BWMS is the result of an emergency situation caused by weather, vessel casualty, flooding, etc.

2. Background.

a. As a reminder, the United States is **not** a party to the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) and will not accept BWM Convention certificates as equivalent to U.S. domestic requirements. Accordingly, vessels discharging ballast water (BW) into the waters of the U.S. must comply with the requirements of 33 CFR 151 Subparts C and D, as applicable.

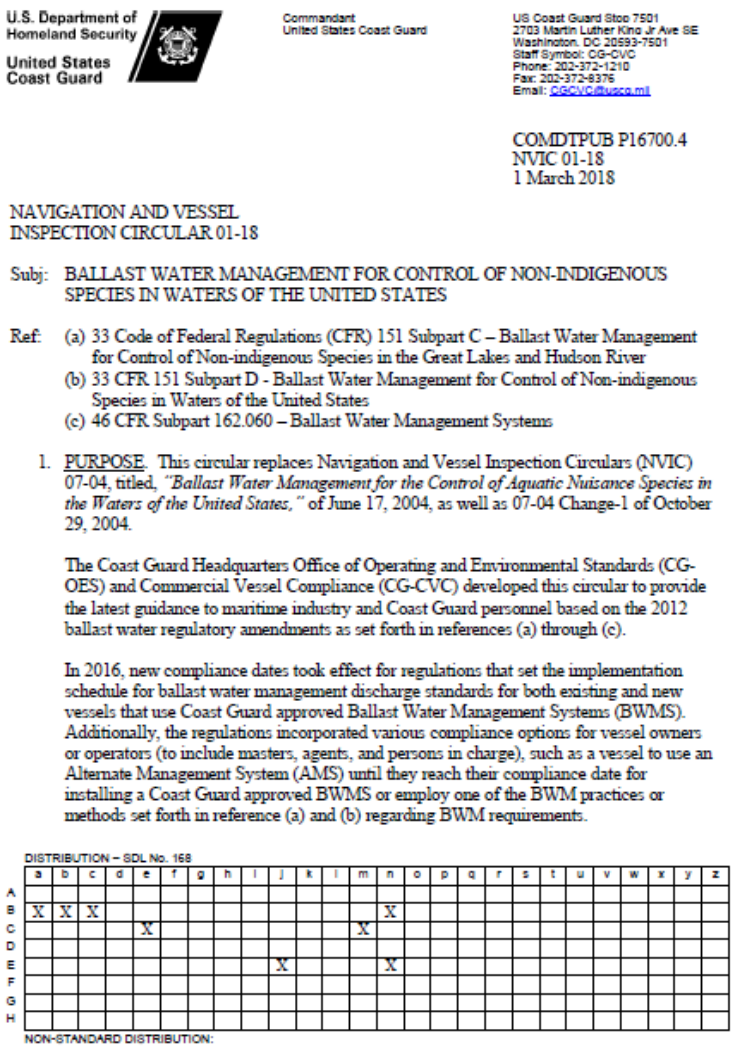
b. 33 CFR 151 Subparts C and D provide vessels a list of approved ballast water management (BWM) methods including the use of a BWMS, use of ballast water from a U.S. public water system (PWS) that meets the requirements of 40 CFR parts 141 and 143, performing complete ballast water exchange (BWE) in an area 200 nautical miles from any shore, retaining all BW while in the waters of the U.S., or discharging to a shoreside facility or another vessel for the purpose of treating the BW. (See 33 CFR 151.1510 and 33 CFR 151.2025.)

c. This guidance applies to ships using a Coast Guard approved BWMS or a BWMS accepted by the Coast Guard as an Alternate Management System (AMS).

d. This guidance may also be followed when the Coast Guard finds a vessel entering port or in port with an inoperable BWMS.

USCG Next Steps - NVIC 01-18

- Includes guidance on:
  - Applicability
  - Reporting
  - Recordkeeping
  - Compliance
  - Enforcement
- In addition, the following on the new USCG BWM extension policy:
  - **<u>Extensions will not be granted to vessels that plan to install an AMS</u>**. Also, a vessel with an installed AMS is not eligible for an extension.
  - **<u>The extension will generally not be longer than 12 months from the vessel's compliance date</u>** and may not necessarily coincide with the vessel's next scheduled drydock date.



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United States Coast Guard

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COMDTPUB P16700.4
NVIC 01-18
1 March 2018

NAVIGATION AND VESSEL
INSPECTION CIRCULAR 01-18

Subj: BALLAST WATER MANAGEMENT FOR CONTROL OF NON-INDIGENOUS SPECIES IN WATERS OF THE UNITED STATES

Ref: (a) 33 Code of Federal Regulations (CFR) 151 Subpart C – Ballast Water Management for Control of Non-indigenous Species in the Great Lakes and Hudson River
(b) 33 CFR 151 Subpart D - Ballast Water Management for Control of Non-indigenous Species in Waters of the United States
(c) 46 CFR Subpart 162.060 – Ballast Water Management Systems

1. PURPOSE. This circular replaces Navigation and Vessel Inspection Circulars (NVIC) 07-04, titled, *"Ballast Water Management for the Control of Aquatic Nuisance Species in the Waters of the United States,"* of June 17, 2004, as well as 07-04 Change-1 of October 29, 2004.

The Coast Guard Headquarters Office of Operating and Environmental Standards (CG-OES) and Commercial Vessel Compliance (CG-CVC) developed this circular to provide the latest guidance to maritime industry and Coast Guard personnel based on the 2012 ballast water regulatory amendments as set forth in references (a) through (c).

In 2016, new compliance dates took effect for regulations that set the implementation schedule for ballast water management discharge standards for both existing and new vessels that use Coast Guard approved Ballast Water Management Systems (BWMS). Additionally, the regulations incorporated various compliance options for vessel owners or operators (to include masters, agents, and persons in charge), such as a vessel to use an Alternate Management System (AMS) until they reach their compliance date for installing a Coast Guard approved BWMS or employ one of the BWM practices or methods set forth in reference (a) and (b) regarding BWM requirements.

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NON-STANDARD DISTRIBUTION:

USCG Next Steps - CG Maritime Commons 3/7/2018

- The six type approved BWMS cover nearly all classes of vessels and are compatible with a broad range of operational requirements.
- Vessel owners/operators may request an extension
  - Supporting information should include proof of acquisition of a type approved BWMS, and installation on a specific date
- Vessels have been granted extensions until the “next scheduled dry-dock” after a certain date, which was aligned with an upcoming drydock date:
  - If the upcoming dry-dock date slips and a vessel owner/operator requests the extension be amended to reflect that slip.
  - If a new extension is granted, it will likely be **for 2.5 years from the date of the originally scheduled dry-dock date**, rather than extending until the date of “next scheduled drydock.”

COAST GUARD Maritime Commons

The Coast Guard Blog for Maritime Professionals

3/7/2018: A closer look at NVIC 01-18 and BWMS compliance date extensions

Posted by LT Amy Midgett, Wednesday, March 7, 2018

The Coast Guard recently published Navigation and Vessel Inspection Circular (NVIC) 01-18, *"Ballast Water Management For Control Of Non-Indigenous Species In Waters Of The United States."* The purpose of this blog is to highlight guidance provided in NVIC 01-18 regarding requests for compliance extensions in accordance with 33 CFR §151.1513 or 33 CFR §151.2036.

Vessel owners and operators are reminded that there are several acceptable methods for managing ballast water listed in 33 CFR 151.1510 or 151.2025. For vessel owners and operators choosing to install a Ballast Water Management System (BWMS), there are six Coast Guard type approved BWMS at this time. The type approved BWMS cover nearly all classes of vessels and are compatible with a broad range of operational requirements.

Per 33 CFR §151.1513 or 33 CFR §151.2036, vessel owners/operators may request an extension of the vessel's compliance date. The Coast Guard will typically grant an extension to a vessel's compliance date only in those cases where the master, owner, operator, agent, or person in charge of a vessel can document that, despite all efforts, compliance with the requirements under 33 CFR §151.1510 or §151.2025 is not possible. Documentation that establishes this need may include information why existing type approved BWMS are not compatible, are unavailable or cannot be installed before the compliance date. In the last instance, the supporting information may include proof of acquisition of a type approved BWMS, and installation on a specific date. In general, extensions will not be granted for more than 12 months from the vessel's current compliance date.

No extensions will be granted to a vessel with an installed alternate management system (AMS) and no extensions will be granted to install an AMS. However, the Coast Guard will consider granting extensions to vessels that intend to install a BWMS that is expected to receive type approval in the near future. These requests should include specific documentation clearly indicating the system is expected to receive Coast Guard type approval within 12 months of the vessel's current compliance date. Documentation should include proof from the manufacturer or independent lab that shows they have applied for Coast Guard type approval, proof of acquisition of the BWMS, and proof of arrangements for installation on a specific date not to exceed 12 months from the vessel's current compliance date.

Selecting a BWMS prior to Coast Guard type approval carries the risk that the system may not achieve type approval by the date listed in the extension. Vessel owners and operators will not be granted further extensions if these systems do not become Coast Guard type approved. Furthermore, as this system is not installed as an AMS, the 5 year period normally allowed for AMS use beyond the vessel's compliance date is not applicable.

The Coast Guard recognizes the dynamic nature of vessel operations and scheduling. In some cases, scheduled dry-docks move or "slip" due to various reasons. Currently, a number of vessels have been granted extensions until the "next scheduled dry-dock" after a certain date, which was aligned with an upcoming dry-dock date. In some instances, the upcoming dry-dock date slips and a vessel owner/operator requests the

Agenda Item 5 & 6: Air Pollution and Energy Efficiency

- Agenda item 5:
  - Amendments to regulation 14 of MARPOL Annex VI and the form of the Supplement to the IAPP Certificate
  - Best practice for fuel oil purchasers/users
  - Application of the EEDI regulations for ice class ships;
  - Progress report of the Correspondence Group on EEDI review beyond phase 2;
  - Minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions;
- Agenda item 6:
  - Development of the IMO Ship Fuel Oil Consumption Database
  - Sample form of confirmation of compliance for SEEMP Part II
  - Prepare an MEPC circular for early submission of SEEMP part II on the ship fuel oil consumption data collection plan
  - Offshore and marine contracting vessels under the IMO data collection system.

ABS

MARPOL Annex VI Revision Approved and subject to Adoption at MEPC 73

- Regulation 14 - Sulphur oxides (SOX) and particulate matter
  - Paragraph 1 is amended as follows: "1 The sulphur content of fuel oil **used or carried for use on board** a ship shall not exceed 0.50% m/m."
- Requirements within emission control areas:
  - Paragraph 4 is amended as follows: "4 While a ship is operating within an emission control area, the sulphur content of fuel oil **used on board that ship** shall not exceed 0.10% m/m.“

MARPOL Annex VI Revision Approved and subject to Adoption at MEPC 73

- Supplement to the IAPP Certificate
  - Paragraphs 2.3.1 and 2.3.2 are amended and a new paragraph 2.3.3 is added:
  - For a ship without an equivalent arrangement approved in accordance with regulation 4.1, the sulphur content of fuel oil carried for use on board the ship shall not exceed 0.50% m/m as documented by bunker delivery notes

"2.3 *Sulphur oxides (SO_X) and particulate matter (regulation 14)*

2.3.1 When the ship operates outside of an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.50% m/m, and/or .....□

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.50% m/m .....□

2.3.2 When the ship operates inside an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.10% m/m, and/or .....□

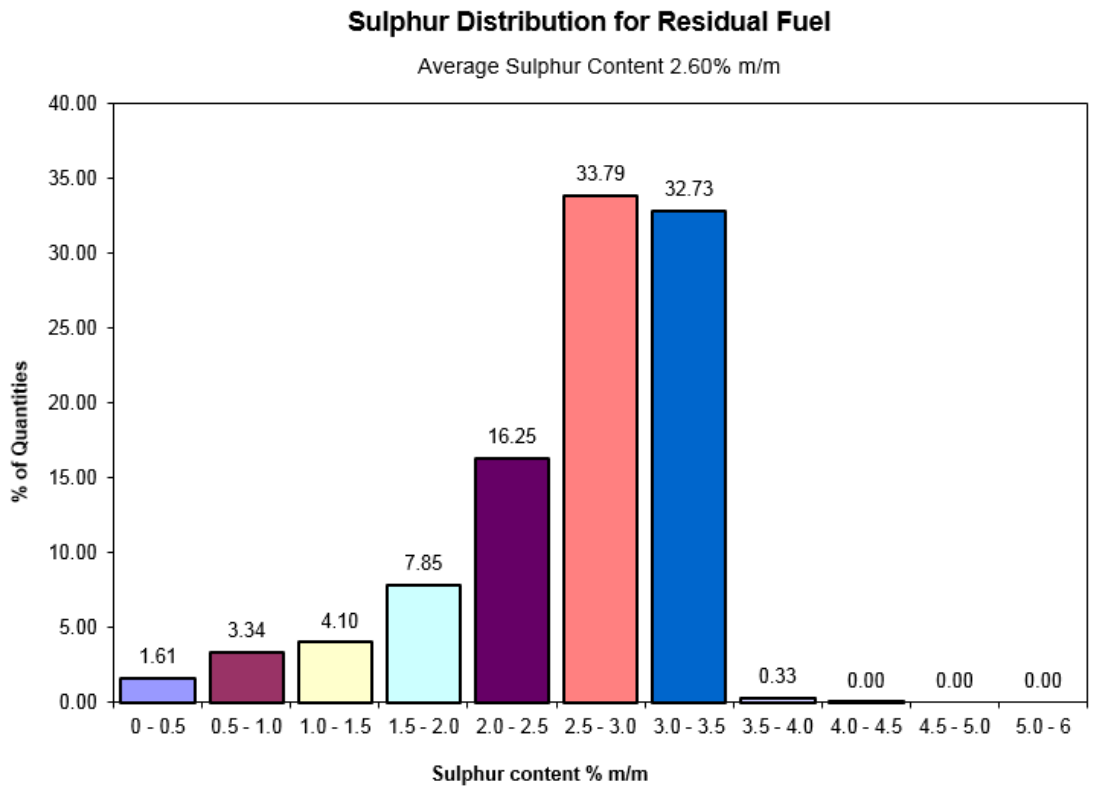
.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.10% m/m .....□

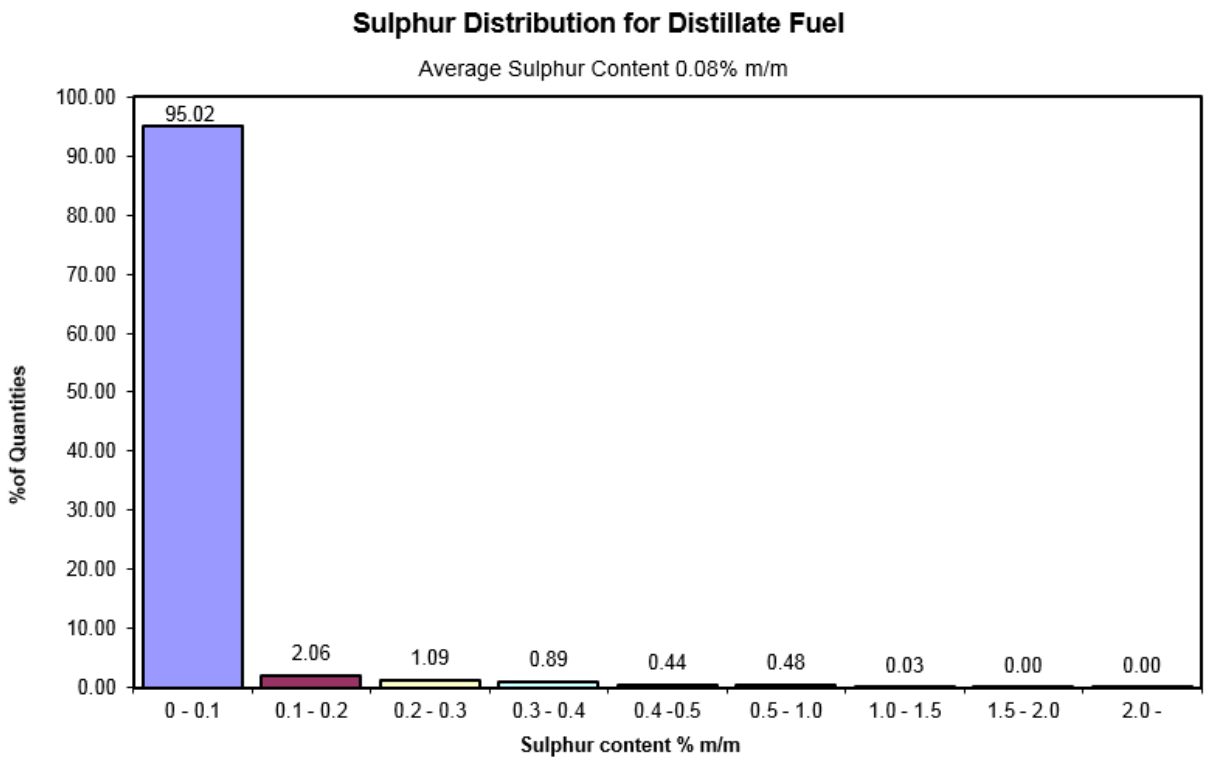
2.3.3 For a ship without an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6, the sulphur content of fuel oil carried for use on board the ship shall not exceed 0.50% m/m as documented by bunker delivery notes.....□"

Best practice for fuel oil purchasers/users

- MEPC 72 adopted guidance on best practice for fuel oil purchasers/users for mitigating the risk of poor quality fuel oil being delivered to the ship:
    - Choice of fuel oil supplier
    - Contracting
    - Documentation
    - Fuel oil receiving on board, sampling and testing
    - Dispute resolution
- Guidance on best practice for fuel oil suppliers (MEPC 72/INF.13)
    - MEPC 72 invited Member Governments and international organizations to submit comments on document MEPC 72/INF.13 to MEPC 73.

Sulphur monitoring for 2017



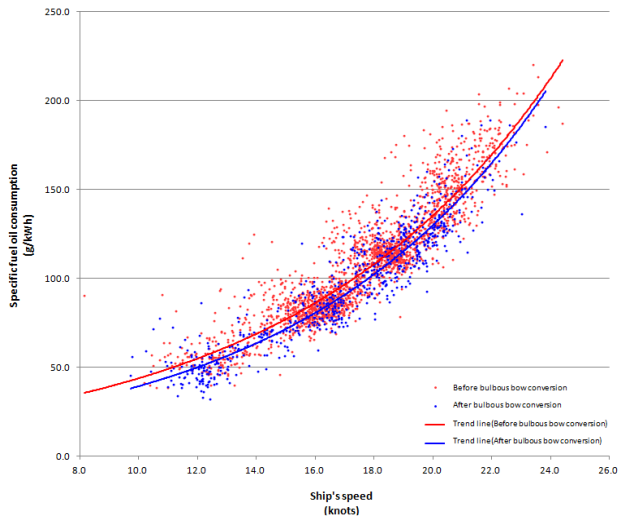


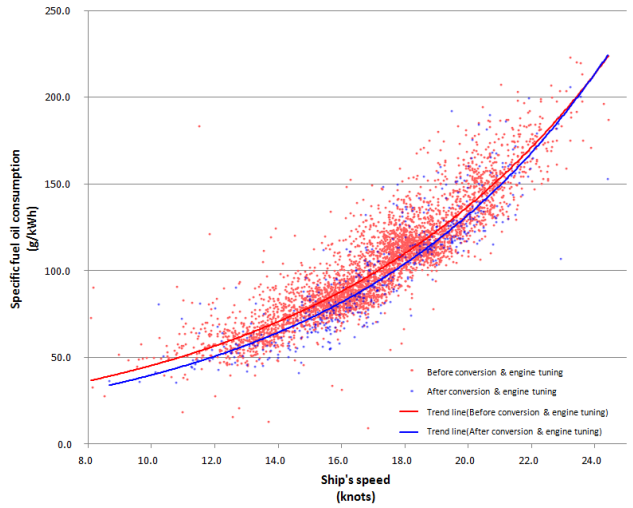
Total number of samples tested : 141,175
Corresponding quantity: 121,428,910 tonnes
Average sulphur content : 2.60% m/m

Total number of samples tested : 72,286
Corresponding quantity: 12,173,45 tonnes
Average sulphur content : 0.08% m/m

Progress report of the CG on EEDI review beyond phase 2

- Range of technologies that may be used to comply with the possible more stringent required EEDI including cost benefit analysis
- Progress of shipbuilders, designers and engine manufacturers towards incorporating such technologies
- Consider if the current correction factors for ice class ships should be amended
- Consider if a margin should be given to the reference line of ships having an ice class
- Consider how ships ice-strengthened in accordance with ice classes higher than IA Super should be defined and excluded from the EEDI
- Recommend to MEPC 73 the time period and the reduction rates for EEDI phase 3 requirements
- Consider a possible introduction of EEDI phase 4 requirements with associated time period and reduction rates
- The group is expected to complete its work and submit a final report to MEPC 74 in 2019.





EEDI reviews under Reg. 21.6

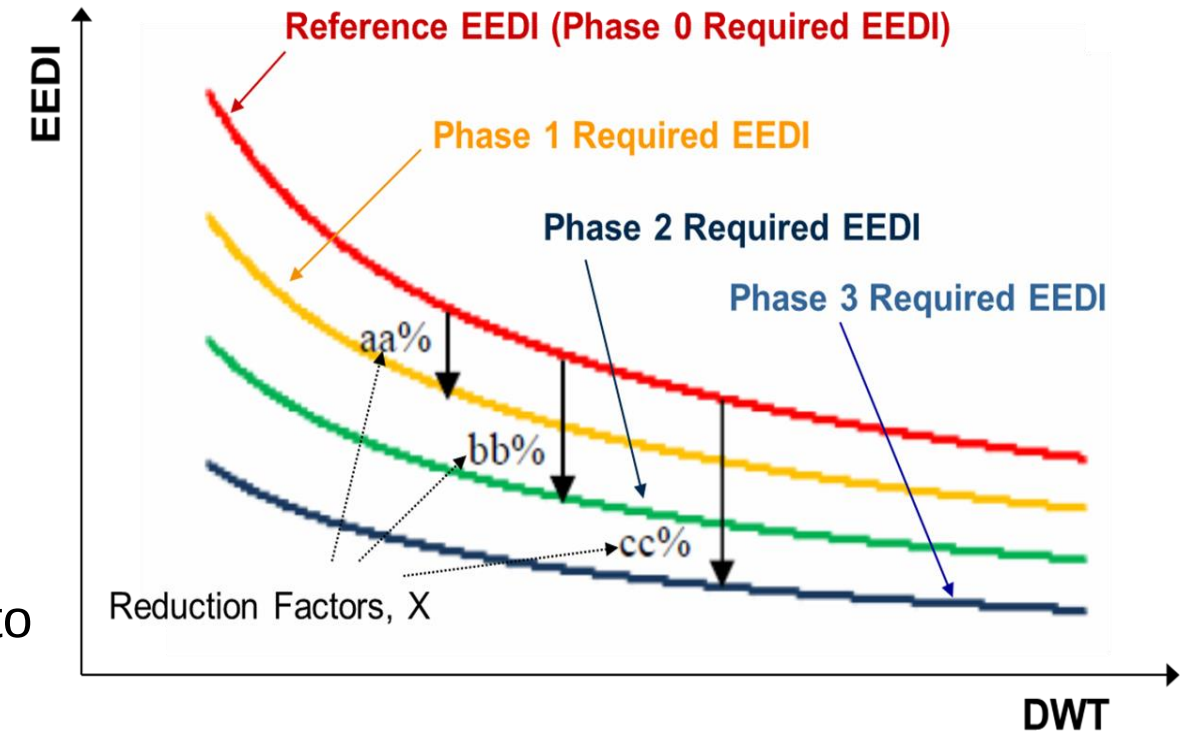
- Amendments to MARPOL Annex VI for Ro-ro cargo and ro-ro passenger ships

2.34 Ro-ro cargo ship	1405.15	DWT of the ship	0.498
	1686.17*	DWT of the ship where DWT≤17,000* 17,000 where DWT > 17,000*	
2.35 Ro-ro passenger ship	752.16	DWT of the ship	0.381
	902.59*	DWT of the ship where DWT≤10,000* 10,000 where DWT > 10,000*	

* to be used from phase 2 and thereafter.

EEDI reviews under Reg. 21.6

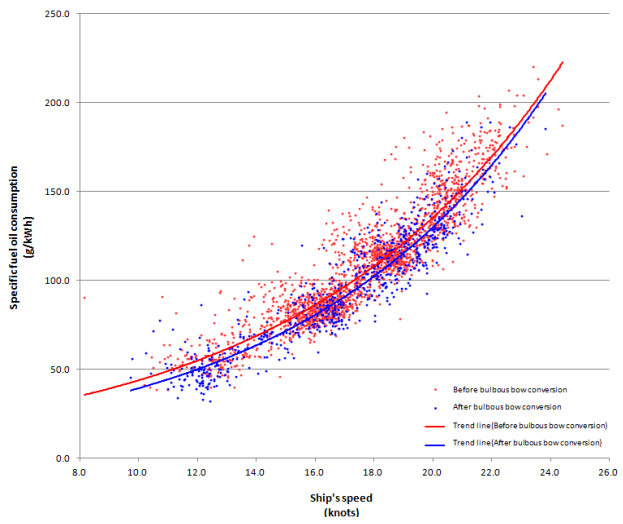
- MEPC 72/5/8 (China), proposing amendments to the reference line parameters for type large tonnage bulk carriers and tankers
  - MEPC 70 had agreed to retain the current reduction rates, time periods and EEDI reference line parameters in the phase 2 requirements for ship types other than ro-ro cargo and ro-ro passenger ships
  - MEPC72 agreed that the proposed approach to amend phase 2 EEDI requirements for large bulk carriers and tankers would not be taken forward.
  - Referred China document to the Correspondence Group on EEDI review beyond phase 2 for its consideration in terms of the EEDI requirements "beyond phase 2".



Exemption of EEDI for ice class ships higher than IA Super

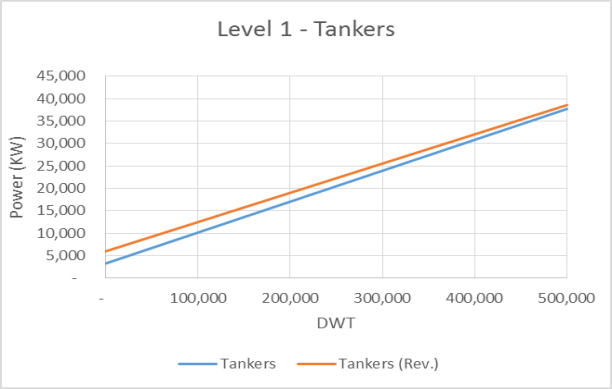
- Proposed modifications to regulation 19.3 of MARPOL Annex VI
  - “Regulations 20 and 21 shall not apply to ~~cargo ships having ice-breaking capability an ice class higher than IA Super~~ category A ships as defined in the Polar Code.“
  - The definition of "cargo ships having ice breaking capability" in regulation 2.42 of MARPOL Annex VI was not necessary and could be deleted,
  - The definition of the Polar Code should be added to regulation 2 of MARPOL Annex VI.
  - Information document on comparison of ice class in various documents (i.e., IACS URI, Finish-Swedish Ice Class Rules, etc.) for consideration at MEPC 73
  - The Correspondence Group will consider further this issue and report back to MEPC 73.

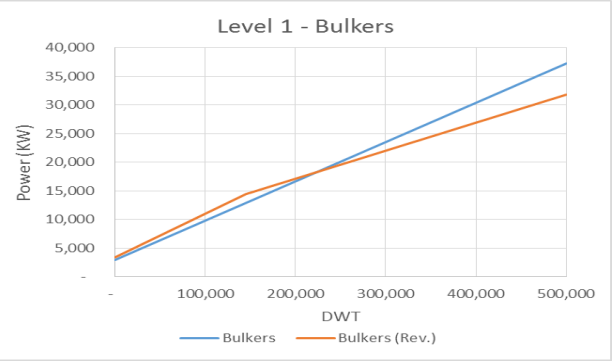
Ice class	Ice class correction factor for capacity due to hull ice-strengthening
Ice Class IC	$f_{i(IC)} = 1.0041 + 58.5/DWT$
Ice Class IB	$f_{i(IB)} = 1.0067 + 62.7/DWT$
Ice Class IA	$f_{i(IA)} = 1.0099 + 95.1/DWT$
Ice Class IA Super	$f_{i(IAS)} = 1.0151 + 228.7/DWT$



Minimum Propulsion Power

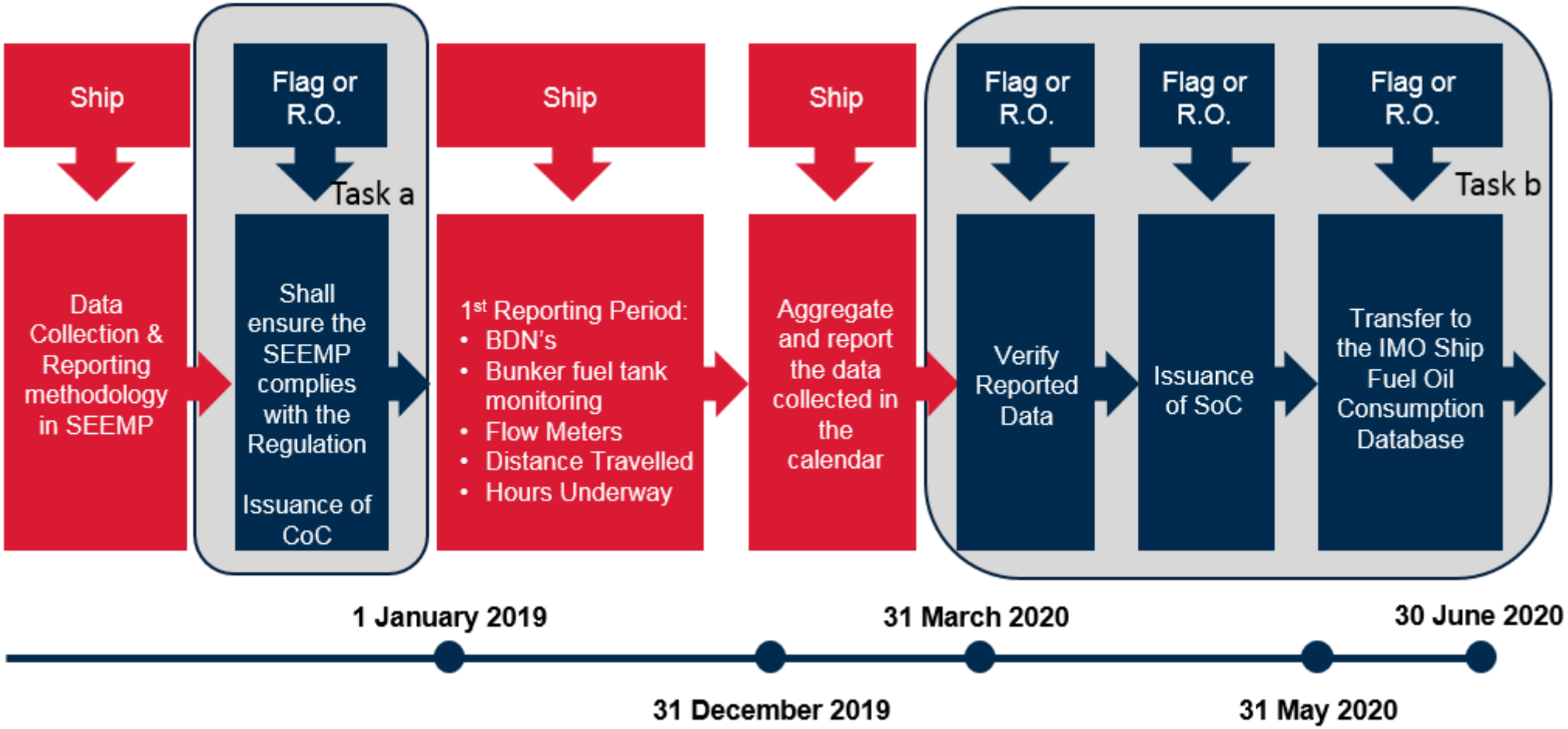
- MEPC 71 agreed to extend the application of the 2013 Interim MPP guidelines (resolution MEPC.262(68), as amended) to EEDI phase 2
- MEPC72 Considered two documents by China:
  - MEPC 72/5/9 proposing amendments to the 2013 Interim Guidelines in light of the thrust deduction factor and the added resistance in waves
  - MEPC 72/INF.16 providing information on an alternative numerical method for calculating quadratic transfer function of the added resistance in regular waves applied in the 2013 Interim Guidelines.
- MEPC72 decided to:
  - documents MEPC 72/5/9 and MEPC 72/INF.16 would not be considered further until more data has been provided
  - continue the discussion and invitation to interested Parties to further develop the draft revision of the Guidelines, for submission to MEPC 73





IMO Data Collection System (DCS)

- New Regulation 22A: Collection and reporting of ship fuel consumption data



MEPC Circular for Sample Format for the Confirmation of Compliance, and Early Submission of the SEEMP PART II

- Member Governments are invited to:
  - encourage stakeholders concerned to submit SEEMP part II to the Administration or its recognized organization by **1 September 2018;**
  - use the annexed sample format when applying regulation 5.4.5 of MARPOL Annex VI; and
  - bring the present circular to the attention of their Administration, industry, relevant shipping organizations, shipping companies and other stakeholders concerned, as appropriate.

SAMPLE FORMAT FOR CONFIRMATION OF COMPLIANCE

CONFIRMATION OF COMPLIANCE – SEEMP PART II

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution by Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

. . . . . .

(full designation of the Party)

by . . . . . .

(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship*

Name of ship . . . . . .

Distinctive number or letters. . . . . .

IMO Number† . . . . . .

Port of registry . . . . . .

Gross tonnage. . . . . .

SEEMP part II date of revision, as applicable . . . . . .

THIS IS TO CONFIRM:

Taking into account 2016 Guidelines for the Development of a Ship Energy Efficiency Management Plan (SEEMP) adopted by resolution MEPC.282(70), the ship's SEEMP has been developed and complies with regulation 22.2 of Annex VI of the Convention.

Issued at: . . . . . .

(place of issue of Confirmation)

Date (dd/mm/yyyy) . . . . . .

(date of issue) *(signature of duly authorized official issuing the Confirmation)*

(seal or stamp of the authority, as appropriate)

* Alternatively, the particulars of the ship may be placed horizontally in boxes.

† In accordance with the IMO ship identification number scheme, adopted by the Organization by resolution A.1117(30).

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ABS

Proxy for transport work for ships that do not carry cargo

- Two proposals for guidance on how to deal with offshore and marine contracting vessels
  - MEPC 72/6/1 (IOGP and IMCA) providing information on the practical difficulty of defining appropriate and meaning proxies for "transport work" for dynamically positioned (DP) ships and suggesting that the "transport work" proxy approach should not be applied to DP ships at the second stage of data analysis
  - MEPC 72/6/4 (Russian Federation) suggesting that a comprehensive and uniform approach be applied when identifying the types of ships not engaged in "transport work".
- MEPC72 invited interested Partes to submit proposals to a future session, with a view to developing a comprehensive and uniform approach for identifying ships not engaged in "transport work".

Agenda Item 7: Reduction of GHG emissions from ships

- Outcome of relevant UNFCCC meetings
- Reports of the second and third meetings of the Intersessional Working Group Reduction of GHG emissions from ships (ISWG-GHG).
- Finalize the draft MEPC resolution on the initial IMO strategy on reduction of GHG emissions from ships, with the view to adoption
- Prepare draft terms of reference for the fourth meeting of the intersessional working group on reduction of GHG emissions from ships

Roadmap for IMO Strategy on Reduction of GHG Emissions

October 2016 (MEPC 70)	Adoption of Data Collection System (DCS) Approval of Roadmap
Week before MEPC 71	Intersessional meeting to start discussions on a comprehensive IMO strategy
July 2017 (MEPC 71)	Discussion continues
October 2017	Intersessional meeting
Week before MEPC 72	Intersessional meeting
Spring 2018 (MEPC 72)	**Adoption of initial IMO Strategy (including short-, mid- and long term measures)**
January 2019	Start of Phase 1: Data collection (Ships to collect data)
Spring 2019 (MEPC 74)	Discussion continues Initiation of Fourth IMO GHG Study using data from 2012-2018
Summer 2020	Data for 2019 to be reported to IMO

ABS

Roadmap for IMO Strategy on Reduction of GHG Emissions

Autumn 2020 (MEPC 76)	Start of Phase 2: data analysis (no later than autumn 2020) Publication of Fourth IMO GHG Study for consideration by MEPC 76
Spring 2021 (MEPC 77)	Initiation of work for adjustments on Initial IMO Strategy, based on DCS data
Summer 2021	Data for 2020 to be reported to IMO
Spring 2022 (MEPC 78)	Phase 3: Decision step Secretariat report summarizing the 2020 data
Summer 2022	Data for 2021 to be reported to IMO
Spring 2023 (MEPC 80)	**Adoption of Revised IMO Strategy (short-, mid- and long-term measures)** Secretariat report summarizing the 2021 data pursuant to regulation 22A.10

Structure of IMO GHG Strategy

VISION

- **Vision**

PRINCIPLE

- **Levels of ambition & Guiding principles**

MEASURES

- **List of candidate short-, mid- and long-term further measures with possible timelines and their impacts on States**

BARRIER

- **Barriers and supportive measures; capacity building and technical cooperation; R&D**

REVIEW

- **Follow-up actions towards the development of the revised Strategy / Periodic review of the Strategy**

ABS

VISION

VISION

IMO remains committed to reducing GHG emissions from international shipping and, as a matter of urgency, aims to phase them out as soon as possible in this century.

AMBITION

AMBITION

1. carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships
   - to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate.
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, pursuing efforts towards 70% by 2050, compared to 2008**
3. GHG emissions from international shipping to peak and decline
   - to peak GHG emissions from international shipping as soon as possible and to reduce **the total annual GHG emissions by at least 50% by 2050 compared to 2008** whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO2 emissions reduction consistent with the Paris Agreement temperature goals

Note:

- "carbon intensity" is the CO2 rate relative to the intensity of a specific activity, or an industrial production process; for example grams of CO2 released per megajoule of energy produced, or the ratio of greenhouse gas emissions produced to gross domestic product (GDP)

ABS

PRINCIPLES

PRINCIPLES

1. Be cognizant of the principles enshrined in instruments already developed:
   - the principle of non-discrimination and the principle of no more favourable treatment, enshrined in MARPOL and other IMO conventions; and
   - the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, enshrined in UNFCCC, its Kyoto Protocol and the Paris Agreement
2. All ships to give full and complete effect, regardless of flag, to implementing mandatory measures to ensure the effective implementation of this strategy
3. Consider the impacts of measures on States, including developing countries, in particular, on
   - least developed countries (LDCs)
   - small island developing States (SIDS)
4. the need for evidence-based decision-making balanced with the precautionary approach as set out in resolution MEPC.67(37).

ABS

Measures

MEASURES

- Timelines
  1. **Short-term measures** could be measures finalized and agreed by the MEPC between **2018 and 2023**.
  2. **Mid-term measures** could be measures finalized and agreed by the MEPC between **2023 and 2030**.
  3. **Long-term measures** could be measures finalized and agreed by the MEPC **beyond 2030**.

Note:

Dates of entry into force and when each measure can effectively start to reduce GHG emissions would be defined for each measure individually.

ABS

Short-term Measures

MEASURES

1. Energy efficiency improvement focus on EEDI and SEEMP
2. Technical and operational energy efficiency measures for both new and existing ships (e.g. Fuel Oil Reduction Strategy (FORS), Individual Ship Performance Indicator (ISPI), etc)
3. Establishment of an Existing Fleet Improvement Programme
4. Consider and analyse the use of speed optimization and speed reduction as a measure
5. Consider and analyse measures to address emissions of methane and further address VOCs
6. Encourage the development and update of national action plans to develop policies and strategies to address GHG emissions
7. Continue and enhance technical cooperation and capacity-building activities under the ITCP (Integrated Technical Cooperation Programme)
8. Consider and analyse measures to encourage port developments and activities globally to facilitate reduction of GHGs
9. Initiate R&D to address marine propulsion and innovative technologies
10. Incentives for first movers to develop and take up new technologies
11. Develop robust lifecycle GHG/carbon intensity guidelines for all types of fuels
12. Actively promote the work of the organization to the international community
13. Undertake additional GHG emission studies and consider other studies to inform policy decisions

ABS

Mid-term Measures

MEASURES

1. Implementation programme for the effective uptake of alternative low-carbon and zero-carbon fuels, including update of national actions plans;
2. Operational energy efficiency measures including indicators in line with three-step approach to indicate and enhance the energy efficiency performance
3. new/innovative emission reduction mechanism(s), possibly including Market-based Measures (MBMs), to incentivize GHG emission reduction
4. further continue and enhance technical cooperation and capacity-building activities such as under the ITCP; and
5. development of a feedback mechanism to enable lessons learned on implementation of measures to be collated and shared through a possible information exchange on best practice.

ABS

Long-term Measures

MEASURES

- Pursue the development and provision of –
  - zero-carbon or
  - fossil-free fuels

  to enable the shipping sector to assess and consider decarbonization in the second half of the century.

- Encourage and facilitate other possible new/innovative emission reduction mechanism(s).

ABS

BARRIER

BARRIER

Barriers and supportive measures; capacity building and technical cooperation; R&D

1. IMO recognizes that developing countries, in particular the LDCs and SIDSs, have special requirements with regard to capacity building and technical cooperation.
2. IMO acknowledges that the development and availability of new energy sources is a specific barrier to the implementation of various measures.
3. IMO should assist the efforts to promote low-carbon technologies by facilitating public-private partnerships and information exchange.
4. IMO should provide mechanisms for facilitating information sharing, technology transfer, capacity building and technical cooperation.
5. Assess periodically the provision of financial and technological resources and capacity-building to implement the Strategy through the ITCP and other initiatives including the GloMEEP project.

ABS

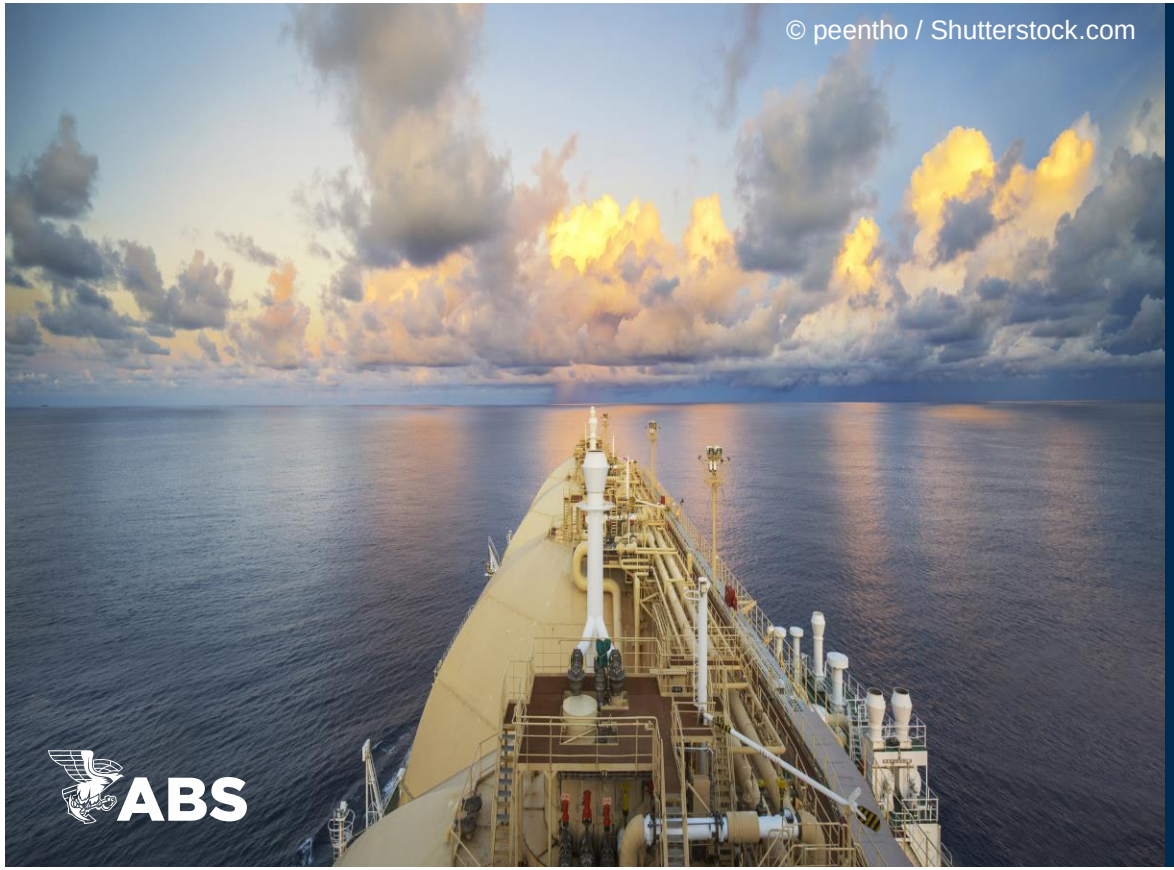
REVIEW

REVIEW

- Follow-up actions Periodic review of the Strategy
  - The Revised Strategy is to be adopted in Spring 2023.
  - The Marginal Abatement Cost Curve (MACC) for each measure should be ascertained and updated, and then evaluated on a regular basis.
  - The revised Strategy will be subject to a review five years after its final adoption.
  - IMO shall undertake the review including defining the scope of the review and its terms of reference

Measures to reduce risks of use and carriage of HFO as fuel in Arctic

- MEPC 71 had invited concrete proposals on what types of measures should be developed, with a view to giving clear instructions to PPR 6
- Different views expressed:
  - Proposal to ban HFO use and carriage for use as fuel in Arctic waters
  - Consider the potential impacts on Arctic communities and economies when developing measures.
  - There was no justification for the proposed ban - all possible measures should be considered before the proposed ban was established.
  - There was a need for a clear definition of HFO to be developed.
- MEPC72 approved the following scope of work for PPR:
  - Develop a definition of HFO taking into account regulation 43 of Annex I;
  - Prepare a set of Guidelines on mitigation measures,
  - Develop a ban on HFO, on an appropriate timescale and on the basis of an assessment of the impacts, .
- MEPC 72 invited interested Parties to submit concrete proposals to MEPC 73 on an appropriate impact assessment methodology process.



Thank You

Environmentalperformance@eagle.org

www.eagle.org

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