

# Nuevas normas medioambientales sobre el transporte marítimo: ¿amenaza u oportunidad para el TMCD?

Incluyendo Novedades de la 71<sup>a</sup> sesión del MEPC de IMO

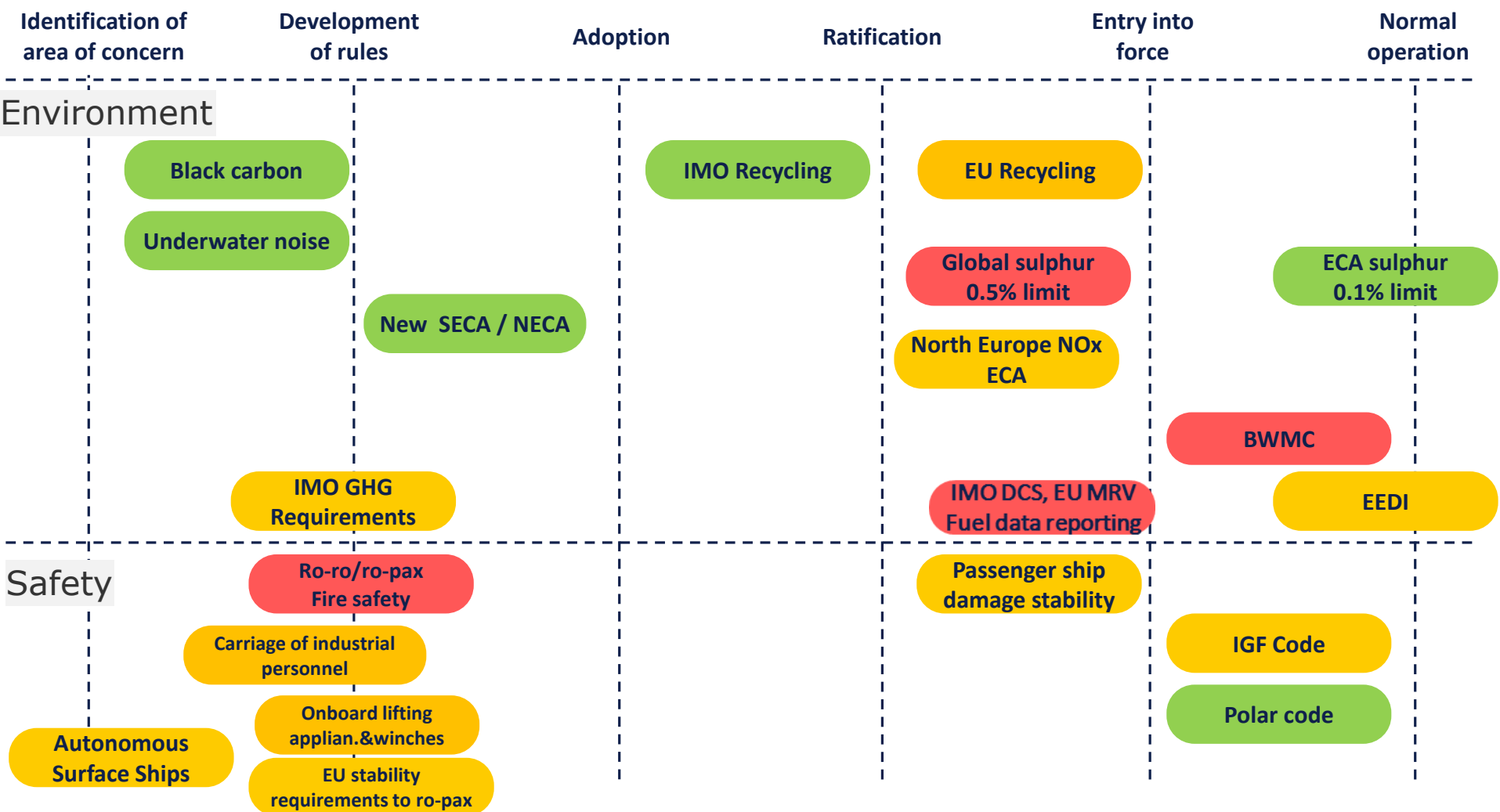


Nuevos Retos y Oportunidades para el Transporte Marítimo de Corta Distancia

Jueves, 26 de octubre de 2.017

Palacio de la Magdalena  
SANTANDER

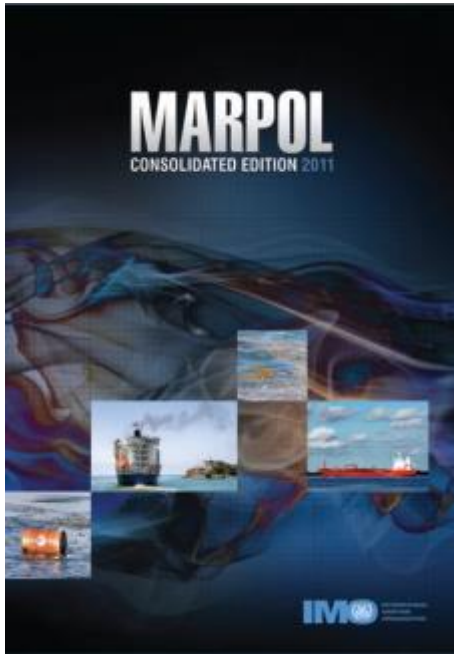
# What's hot on the Regulatory Agenda?



# Main regulatory instruments and bodies on environment



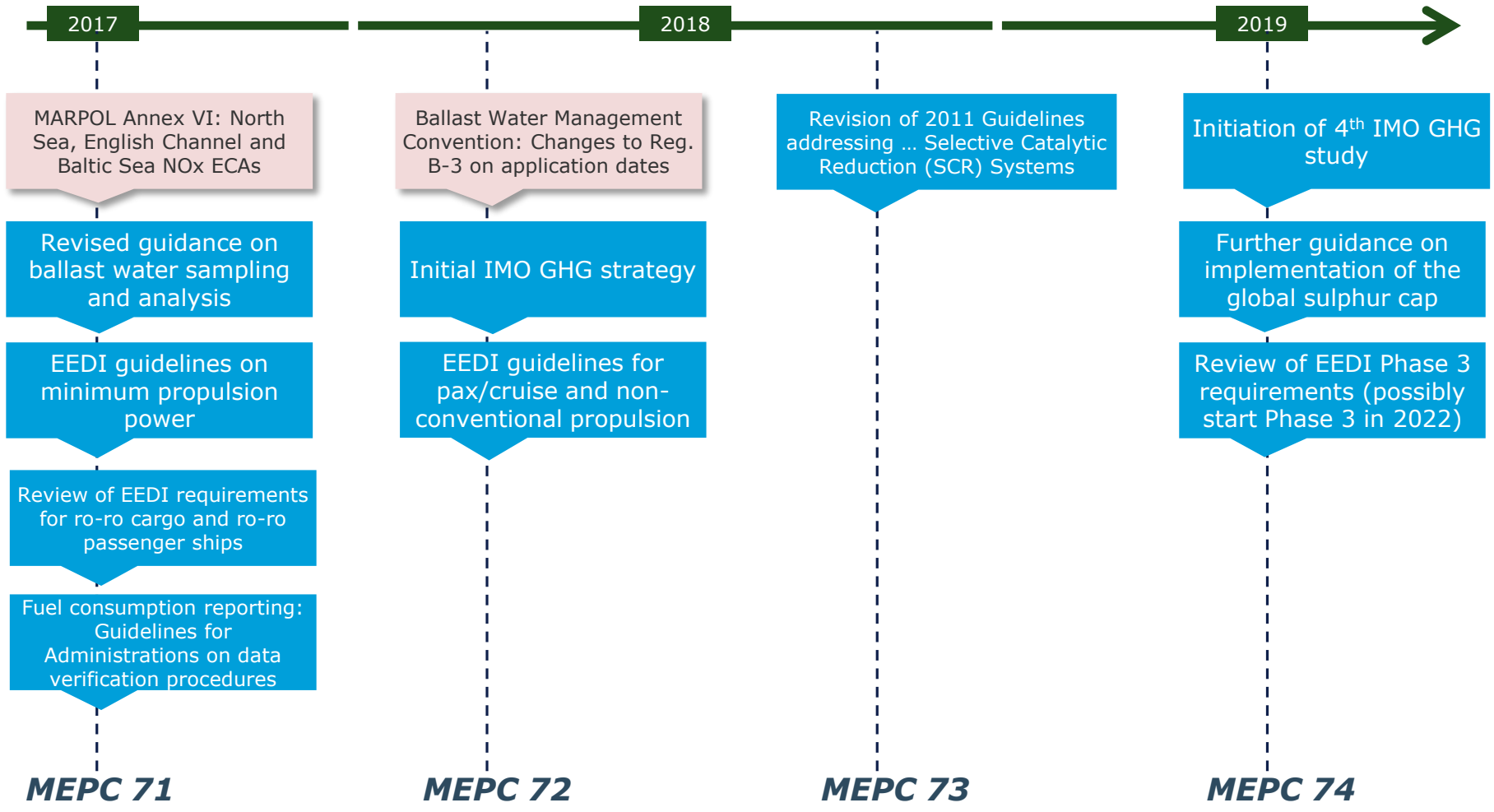
## International conventions



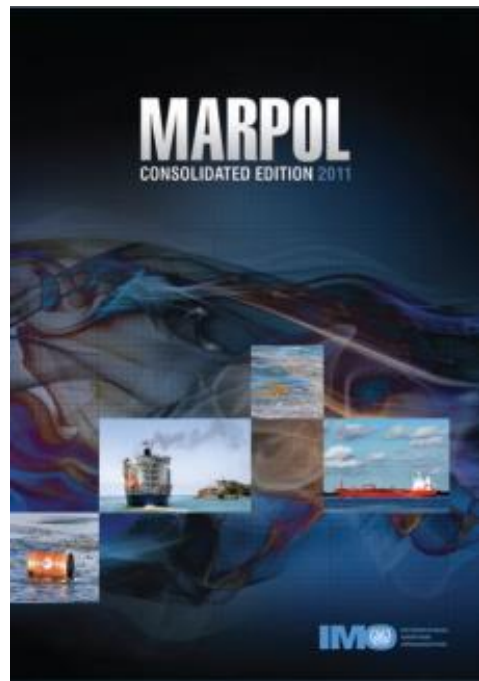
## Major regional/national regulating bodies



# Major IMO decisions – Environment



# MARPOL



Annex I: Prevention of pollution by **oil**

Annex II: Control of pollution by **noxious liquid substances**

Annex III: Prevention of pollution by **harmful substances in packaged form**

Annex IV: Prevention of pollution by **sewage** from ships

Annex V: Prevention of pollution by **garbage** from ships

Annex VI: Prevention of **Air Pollution** from Ships

## MEPC 70/71: Adopted amendments to MARPOL

- **Entry into force 1 March 2018**
  - **MARPOL Annex I, Appendix II**
    - Form B of the Supplement to the International Oil Pollution Prevention Certificate (MEPC.276(70))
  - **MARPOL Annex V**
    - HME substances and Form of Garbage Record Book (MEPC.277(70))
  - **MARPOL Annex VI**
    - Data collection system for fuel oil consumption of ships (MEPC.278(70))
- **Entry into force 1 January 2019**
  - **MARPOL Annex VI**
    - The designation of the Baltic Sea and the North Sea Emission Control Areas for NOX Tier III
  - **MARPOL Annex VI, Appendix V**
    - Information to be included in the bunker delivery note

## Amendments to MARPOL Annex I, Regulation 12 on tanks for oil residues (sludge)



- Regulation 12 of MARPOL Annex I was revised in 2011 prohibiting sludge discharge connections to the oily bilge water tanks, tank top or oily water separators for new vessels delivered after 1 January 2014.
- The same regulation has again been amended, now making it a retroactive requirement for all vessels irrespective of delivery date, effective from 1 January 2017.
- There can be no discharge connections from sludge tanks to the bilge systems, including tank top, except:
  - Manually controlled draining arrangements of the water phase.
  - A common shore discharging connection, provided a screw down non-return valve to prevent sludge transfer to bilge system.

### **Impact:**

Non compliant ships have to comply within the first renewal survey on or after **1 January 2017**.

### **Outcome:**

Amendments to MARPOL Annex I, Regulation 12, adopted by Res. MEPC 266(68)

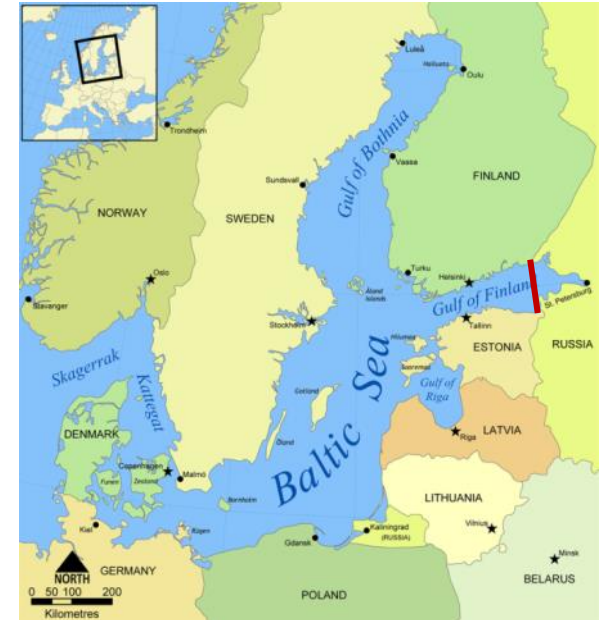
## MARPOL Annex IV: Baltic Sea Special Area

- The Baltic Sea was designated as a special area for sewage in 2011 but application was dependent on adequate reception facilities
- MEPC 69 agreed that these are in place and decided on application dates for the Baltic Sea special area
- The definition of a “new passenger ship” is revised to contract date on or after 2019-06-01.
- Sewage from passenger ships will either have to be treated by a MEPC.227(64) type approved treatment plant or delivered to on-shore reception facilities, provided the effective dates of the special area.

### **Impact:**

- 1 June 2019** for new passenger ships;
- 1 June 2021** for existing passenger ships; and
- 1 June 2023** for existing passenger ships en route\*

\*directly to or from a port located outside the special area and to or from a port located east of longitude 28° 10' E within the special area that do not make any other port calls within the special area.

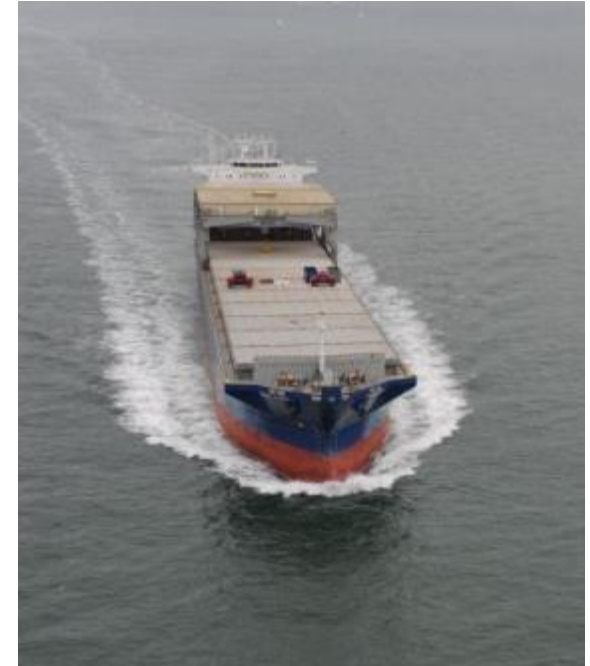


### **Outcome:**

- Amendments to MARPOL adopted by Res. MEPC.274(69)
- MEPC 69 decided on application dates, Res. MEPC.275(69)

# MARPOL Annex V: Discharge of wash water harmful to the marine environment (HME)

- MEPC.1/Circ. 810 allowed ships meeting inadequate reception facilities to discharge wash water from holds with cargoes declared harmful to the marine environment (HME) under MARPOL Annex V
- The provision expired on 31 December 2015.
- MEPC 69 decided not to prolong the provisions in order to encourage ports and terminals to provide the necessary reception facilities



## ***Impact:***

Bulkers carrying HME cargoes can not discharge wash water even in case of inadequate port reception facilities.

Inadequateness of reception facilities should be reported using the appendix in MEPC.1/Circ.834.

## ***Outcome:***

MEPC 69 in 2016 decided not to extend provisions in MEPC.1/Circ.810

## MARPOL Annex VI: Fuel oil quality

- Major concerns with fuel oil quality and BDN reliability re-iterated, industry seeking mandatory standards
- Limited support from port/flag states, limited to considering expansion on voluntary guidelines
- MEPC 69
  - decided to continue developing draft guidance for assuring the quality of fuel oil delivered for use on board ships
  - considered that the current legal framework in MARPOL Annex VI for assuring the quality of fuel oil for use on board ships is adequate
  - Continue the discussion at MEPC 71



### **Impact:**

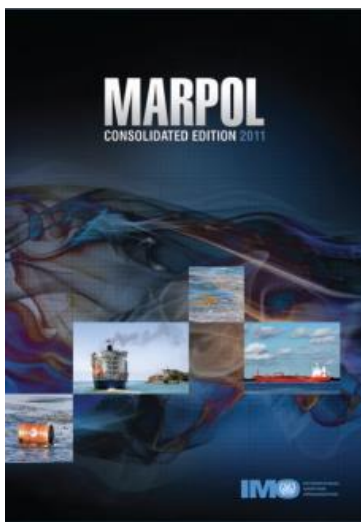
Guidelines for assuring the quality of fuel oil delivered for use on board ships

### **Outcome:**

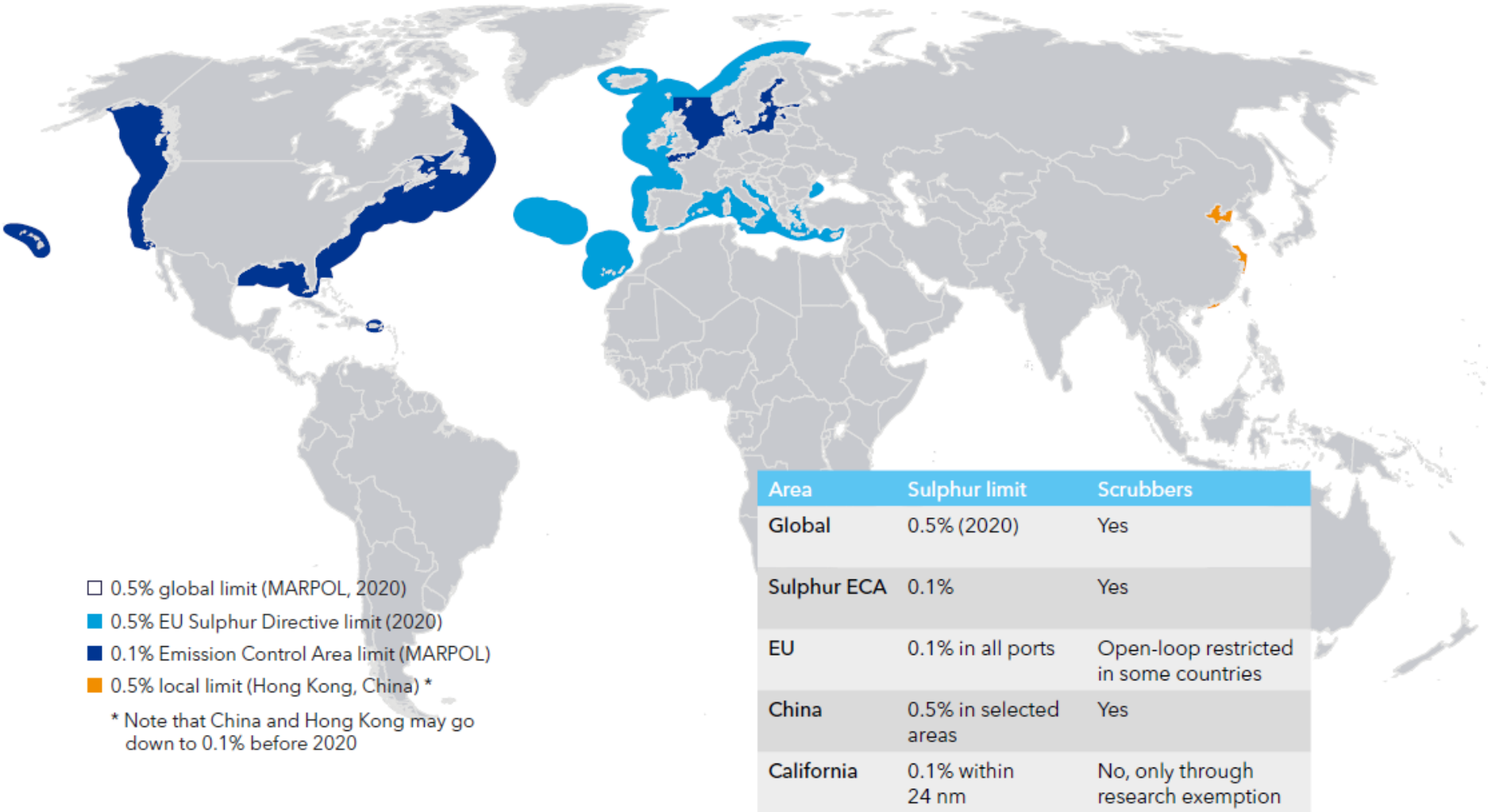
No changes to mandatory framework expected.

# Air emissions

## SO<sub>x</sub>, NO<sub>x</sub>, PM, Black Carbon



# Sulphur emission regulations



## MEPC 70 - Global sulphur limits from 2020

- The global 0.5% sulphur limit was confirmed to apply from 1 January 2020.
- PPR 4 in January 2017 will work on measures addressing implementation and enforcement



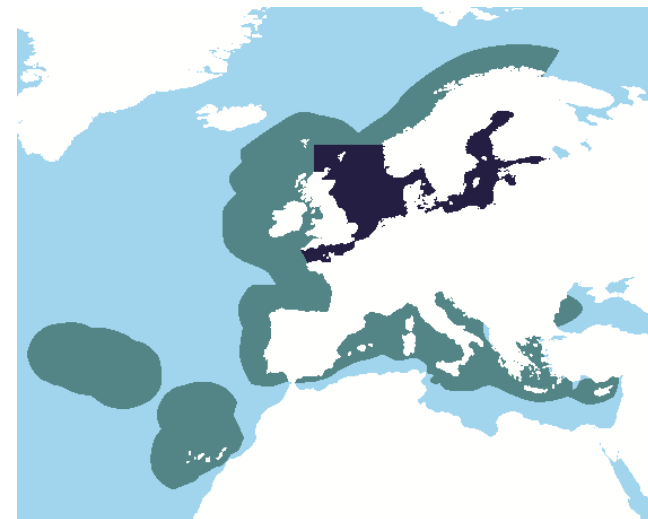
More information on the global sulphur cap 2020 can be found on a dedicated webpage, include a new brochure:

<https://www.dnvgl.com/maritime/download-global-sulphur-cap-2020.html>



## EU sulphur Directive - revision highlights

- **Revised Directive sought alignment with MARPOL Annex VI, but there are crucial differences;**
  - Covers ships “within EU waters”
  - 0.1% at berth and in inland waterways
- **Future actions and consequences**
  - Enforcement increasingly stringent
  - Acceptability of open loop scrubber discharge in doubt (e.g. Germany, Belgium), Water Framework Directive creating complications



### **Impact:**

0.1% at berth and in inland waterways from 2010  
PAX vessels on “regular service”; 1,5% in all non-ECA EU  
waters **until 2020** (200 NM).  
0.5% in EU EEZ waters **in 2020**

### **Outcome:**

Revised Directive agreed by  
EU in 2012  
Alignment with MARPOL  
Annex VI, but not identical



## Sulphur directive - Enforcement in the EU

- 2015 EMSA inspection statistics indicate high level of compliance
- Fines for SECA non-compliance (in EU from 1,500-50,000€) do not match potential savings, **non-compliance creates a competitive advantage**
- EC inspection requirements issued (10% inspected, 2-4% to be sampled by beginning 2016), EMSA inspection guidelines issued
- Industry grouping (Trident Alliance) lobbying for robust EU enforcement
- More stringent and frequent inspections to be expected, **BDN accuracy and trustworthiness will become even more critical**
- Future inspection technologies under consideration include drones, sniffing devices, etc.
- **Acceptability of open loop scrubbers** in doubt (Germany, Belgium), Water Framework Directive creating complications



# NOx emissions – NECA status post-MEPC70

**NOx**

2011: NOx Tier 2, -20%  
2016: NOx Tier 3, -80%\*

\* Applies to ships constructed on or after Jan.1 2016., only in existing North American / U.S. Caribbean NECA

**NECA - Baltic**

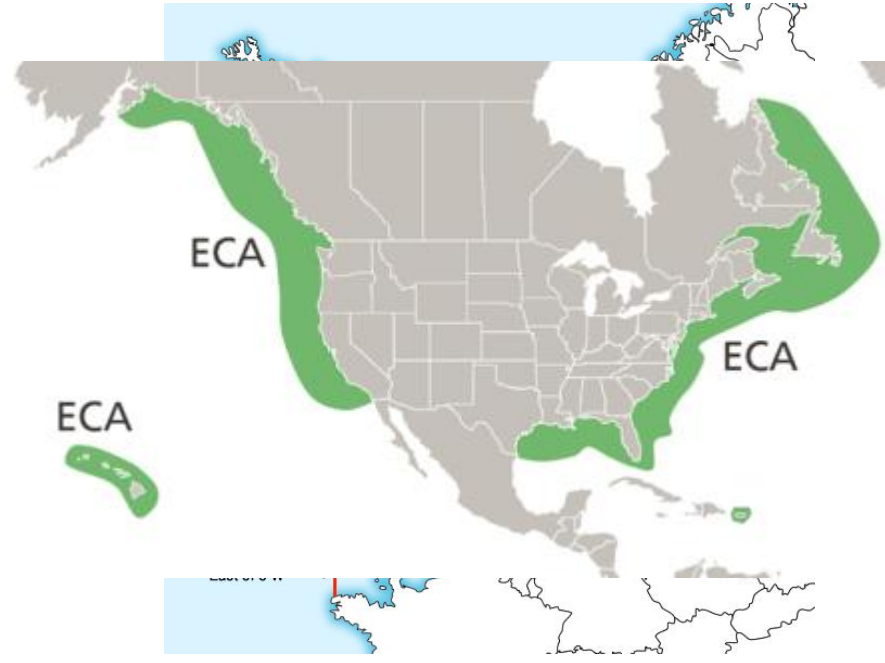
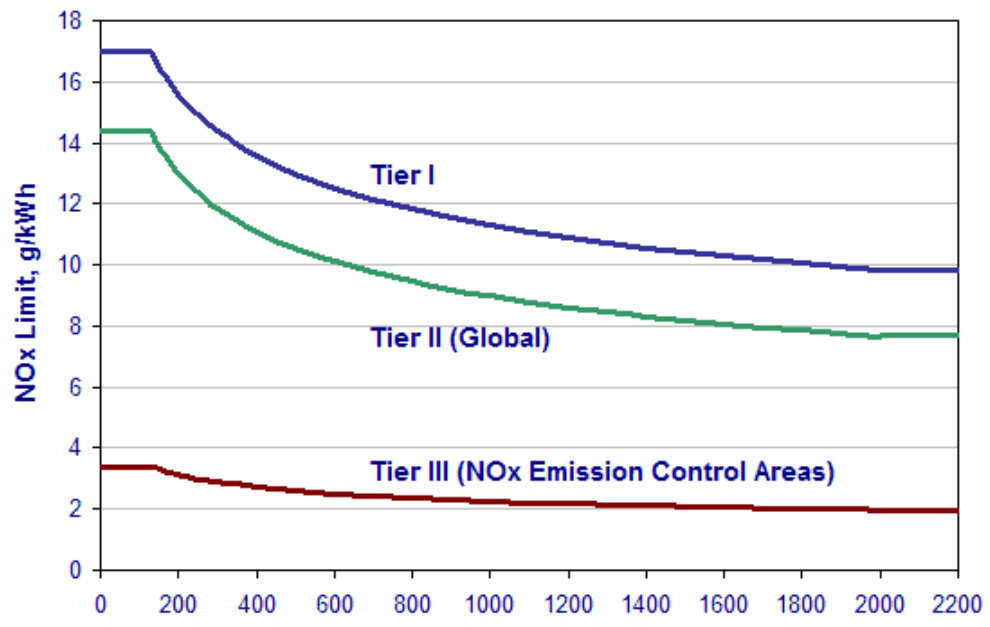
Agreed at MEPC 70

Adoption @ MEPC 71 expected, effective 1 Jan. 2021. Applies to ships constructed on or after Jan.1 2021.

**NECA – North Sea**

Agreed at MEPC 70

Adoption @ MEPC 71 expected, effective 1 Jan. 2021. Applies to ships constructed on or after Jan.1 2021.



## Black Carbon

- Agreement on definition
- Voluntary measurement studies requested
- The lack of consensus indicates that IMO control measures cannot be expected anytime soon
- IMO links black carbon to the discussion on climate change: global warming and ice melt
- Note: Regional EU work on PM reinvigorated, may impact on IMO black carbon discussions



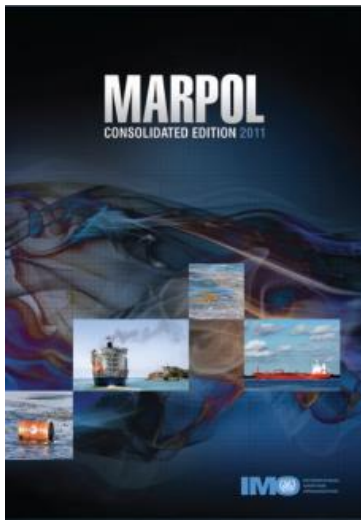
### ***Impact:***

Control measures cannot be expected anytime soon

### ***Outcome:***

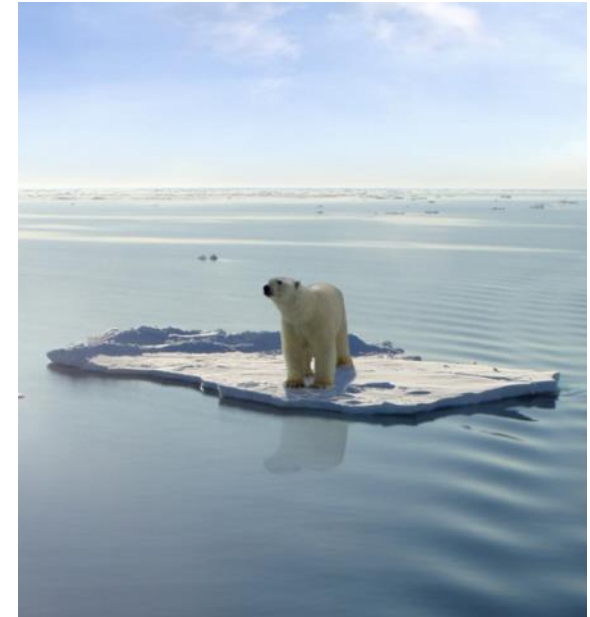
Significant disagreement on need for action, but topic remains on MEPC work program

# Green-house gases, CO<sub>2</sub>, energy efficiency



## IMO strategy on reduction of GHG from ships

- Roadmap agreed at MEPC 70 with the aim to develop a strategy at MEPC 72 in spring 2018.
- This strategy will contain an action plan with targets, measures and timelines
- The strategy will be assessed in the period up to 2023, based on
  - A fourth IMO GHG study
  - Analyses of the collected fuel consumption data.
- The revised strategy in 2023 should contain an implementation schedule for further measures to reduce GHG emissions



### **Impact:**

Strategy will have eventual implications for focus on ship operational- and design energy efficiency. May lead to Market Based Measures next decade

### **Outcome:**

Roadmap agreed with the aim to develop a strategy at MEPC 72 in spring 2018.

# MARPOL Annex VI amendments: Fuel consumption data collection system

- MEPC 70 adopted a data collection system for fuel consumption
  - Covers all ships above 5000 GT
  - Fuel consumption and distance sailed to be **monitored and aggregated by ship**, then verified, and reported annually to IMO database
  - Design deadweight as general cargo proxy in efficiency calculations, GT in special cases (passenger ships)
  - **Flag responsible** for verification and reporting to IMO, **RO role expected**
  - **Carriage requirement**; Statement of Compliance confirming that data for the preceding year was reported and verified
- Data collection and reporting methodology shall be described in a new part 2 of the SEEMP **assessed** by the Administration
- SEEMP part 2 agreed at MEPC 70, verification guideline for approval at MEPC 71



## **Impact:**

Covers all ships above 5000 GT. Entry into force 1 March 2018, but reporting starts **1 January 2019**. **Updated** SEEMP required within 31 December 2018, but assessment starts in spring 2018

## **Outcome:**

Amendments to MARPOL adopted at MEPC 70 in 2016  
Guidelines still under development

## Fuel consumption data collection - details

- All vessels above 5000 GT need to report fuel consumption with data collection starting **1 January 2019**.
- A plan for the data collection (SEEMP Part 2) to be included in the SEEMP latest **31 December 2018**
- An annual fuel consumption report (covering 1 January to 31 December), should be submitted and verified within **1 June in the subsequent year**.
- A confirmation of compliance will be provided after the SEEMP is updated and a Statement of Compliance will be issued after the annual report is verified and submitted to the Administration
- Guidelines under development

### To be reported:

- IMO number
- Ship type
- GT, NT, DWT,
- Power output engines (engines over 130 kW)
- EEDI (if applicable)
- Ice class
- Fuel oil consumption, by fuel oil type
- Distance travelled
- Hours underway
- Methods used for collecting fuel oil consumption data

# EU – CO2 Monitoring, Reporting and Verification (MRV)



- 4 ways of measuring fuel consumption
- Distance sailed, time at sea, transport work and efficiency data (e.g. CO2 per tonne-nm) to be reported
- All ships above 5000 GT to submit reporting plans by 31 August 2017, monitoring starts 1 January 2018
- Verified emission reports to be submitted to EC by 30 April 2019, EC to publish data by 30 June 2019
- Seen by the EU as a step toward a global IMO MRV system, and eventual carbon pricing
- Work on practical implementation and verification details in progress at EC advisory body ESSF. Legal text published, final guidance documents by mid-2017



## ***Impact:***

**Ships above 5000 GT** (all flags) have to annually report CO2 emission on voyages to, from and between EU ports. Reporting plan to be submitted by **31 August 2017** and monitoring starts in **1 January 2018**.

## ***Outcome:***

Regulation (EU) 2015/757 entered into force 1 July 2015



## Additional MRV information

- MRV information and tools on the DNV GL website;  
<https://www.dnvgl.com/maritime/mrv-regulation.html>



## Minimum propulsion power

- Ship designers may choose to reduce the ship's installed power to achieve the required EEDI
- A provision was added to regulation 21 in chapter 4 of MARPOL Annex VI, stating:
  - *"For each ship to which this regulation applies, the installed propulsion power shall not be less than the propulsion power needed to maintain the manoeuvrability of the ship under adverse conditions as defined in the guidelines to be developed by the Organization."*
- Interim guidelines for evaluating if a bulk or tank vessel has sufficient power is in place for Phase 0 and 1
- Ongoing R&D (e.g. SHOPERA) expected to provide solution for phase 2



### **Impact:**

Current guidelines applicable for **bulkers and tankers**, defining a minimum power line assessment method and an alternative simplified assessment method.

### **Outcome:**

MEPC 68 revised interim guidelines for Phase 1.

Awaiting outcome of research projects for Phase 2.

## EEDI review

- MARPOL Annex VI Ch 4 mandates two reviews of EEDI reduction rates, reference lines and phases. The first review will conclude by MEPC 71 in 2017, with any amendments adopted at MEPC 72 in 2018,
- The first review was concluded at MEPC 70:
  - No changes to Phase 2 requirements, except
  - For Ro-ro cargo and ro-ro passenger vessels which will be further reviewed at MEPC 71



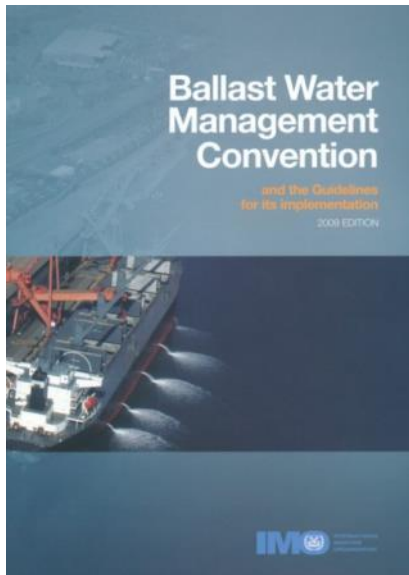
### ***Impact:***

Phase 3 may be moved forward to start in 2022. The next review will be initiated after MEPC 71.

### ***Outcome:***

No change to Phase 2 requirements. Ro-ro and ro-pax to be further evaluated at MEPC 71

# Ballast Water Management



# The IMO Ballast Water Management Convention

- Aims to minimize
  - transfer of invasive aquatic species between ecosystems
  - transfer of bacteria harmful to human health
- Invasive species do real damage;
  - Great lakes, Canada
    - Zebra Mussels
  - Argentina & Brazil
    - Golden mussels
  - Pandemic outbreak, South America
    - Cholera
- Requires all ships to treat ballast water



# BWM Convention reached the necessary ratification threshold on September 8 2016

## Global treaty to halt invasive aquatic species to enter into force in 2017

Accession by Finland has triggered the entry into force of a key international measure for environmental protection that aims to stop the spread of potentially invasive aquatic species in ships' ballast water.

The International Convention for the Control and Management of Ships' Ballast Water and Sediments (**BWM Convention**) will enter into force on 8 September 2017, marking a landmark step towards halting the spread of invasive aquatic species, which can cause havoc for local ecosystems, affect biodiversity and lead to substantial economic loss. Under the Convention's terms, ships will be required to manage their ballast water to remove, render harmless, or avoid the uptake or discharge of aquatic organisms and pathogens within ballast water and sediments

"This is a truly significant milestone for the health of our planet," said IMO Secretary-General Kitack Lim.

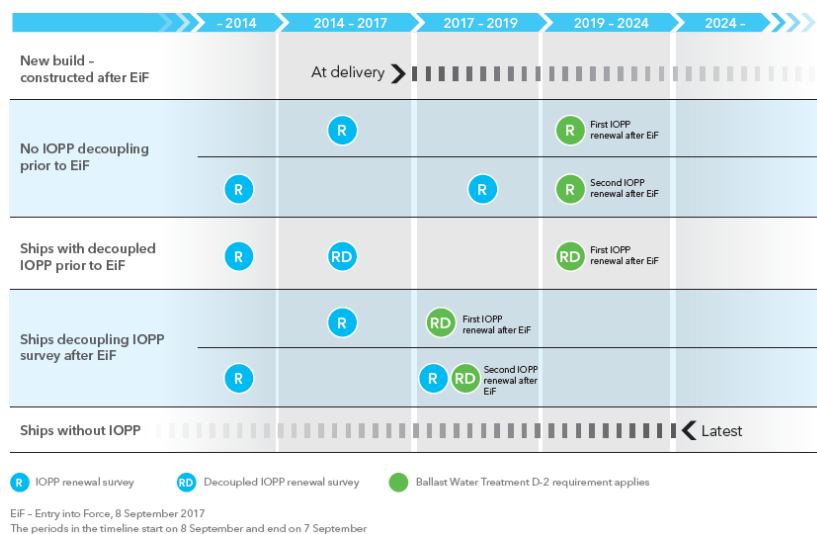
"The spread of invasive species has been recognized as one of the greatest threats to the ecological and



- Ratification by Finland brought the GT to 35.1441%, triggering entry into force on Sept 8 2017
- The applicable date of compliance with D-2 standard will then be **first IOPP renewal survey after entry into force**, for all ships. Ships constructed after entry into force will be required to have a treatment system installed at delivery.
- Liberia, Bahamas, Marshall Islands and numerous others now accepting decoupling of IOPP renewal from main class renewal. We expect more flags to follow suit

# Ballast water Management Convention – implementation of D-2 requirements

- MEPC resolution will ensure that this agreement is effective from the entry into force date of the BWMC: 8 September 2017



## Impact:

D-1 (Exchange): All ships need to comply **by 8 September 2017**, including a BW Management Plan (no change)

D-2 (Treatment): Ships constructed **on or after 8 September 2017** need to comply with D-2 **upon delivery**. Existing ships must in general comply by the **first IOPP renewal after 8 September 2019**. Ships below 400 GT must comply by **8 September 2024**.

## Outcome:

Amendments approved by MEPC 71 and expected to be adopted at MEPC 72.

# Ship Recycling



## Convention on Ship Recycling

The convention will provide regulations for:

- The design, construction, operation and preparation of ships so as to facilitate safe and environmentally-sound recycling
- The establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements (for example Inventory of Hazardous Materials, previously known as Green Passport)
- The operation of ship-recycling facilities in a safe and environmentally-sound manner

### **Impact:**

The Convention will enter into force 24 months after the date on which: 15 states; representing 40 per cent of world merchant shipping by gross tonnage the combined maximum annual ship recycling volume of those States must, during the preceding 10 years, constitute not less than 3 per cent of their combined merchant shipping tonnage



### **Outcome:**

New international convention adopted in May 2009 in Hong Kong

## Ship Recycling – Some Basics



The Convention calls for **inventory data**, a list of hazardous materials onboard, for all ships being delivered to a ship recycling facility

The Inventory of Hazardous Materials is the responsibility of the ship owner and includes 3 parts:

- Part 1 - Hazardous Materials Contained in the Ship's Structure and Equipment
- Part 2 - Operationally generated wastes
- Part 3 - Stores

# Revised Guidelines for the development of the Inventory of Hazardous Materials (IHM)

- The 2011 Guidelines for the Development of the Inventory of Hazardous Materials has been revised
- Threshold values being discussed include those for asbestos, anti-fouling systems containing organotin compounds (TBT), polychlorinated biphenyl (PCBs), cadmium, chromium, lead and mercury
- Asbestos threshold in practice set at 1.0%



## ***Impact:***

Revisions will apply to IHM's that are developed or updated after the adoption of the revised levels and are not applicable to existing IHMs and those under development

## ***Outcome:***

MEPC 68 adopted the 2015 Guidelines for the development of the Inventory of Hazardous Materials (IHM)



## EU - Ship recycling overview

- Aims to end scrapping of old EU-registered vessels on third-world countries beaches. Recycling only in EU-approved facilities (worldwide inventory).
  - New EU flagged ship (contract signed after 30 December 2013): IHM shall be established, verified and kept on board
  - Existing EU flagged ships: IHM shall be established, verified and kept on board not later than 31 December 2020 (or if going for recycling after 31 December 2016)
  - Non EU flagged ships: IHM shall be available and kept on board as from 31 December 2020
  - The scrapping requirements will apply to ships at the earliest 2015 and at the latest 2018, depending on the recycling capacity of approved yards recycling 2.5 millions LDT
  - EC to report in 2016 on mechanism to safeguards against reflagging prior to recycling, legislative proposal possibly in 2017
- Enforcement measures, including penalties are to be set by member states



### **Impact:**

Entered into force **30 December 2013**

EU flagged vessels, and non-EU flagged vessels when calling EU ports, are required to carry an inventory of hazardous materials

### **Outcome:**

Ship Recycling Regulation adopted by the EU

Regulation aimed at facilitating early ratification of the Hong Kong Convention

# Abbreviations

## Key abbreviations

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AMS – Alternative Management System  
BC – Black Carbon  
BCH Code - Dangerous Chemicals in Bulk Code  
BLG – Bulk Liquid and Gases (MEPC sub-committee)  
BWMC – Ballast Water Management Convention  
CARB – California Air Resources Board  
CG – Correspondence Group  
DMA – Marine gas oil  
DMB – Marine diesel oil  
EC – European Commission  
ECA – Emission Control Area  
ECJ – European Court of Justice  
EEDI – Energy Efficiency Design Index  
EEOI – Energy Efficiency Operational Indicator  
EEZ – Exclusive Economic Zone  
EiF – Entry into Force  
EMSA - European Maritime Safety Agency  
EPA – US Environmental Protection Agency  
ESSF – European Sustainable Shipping Forum  
EU – European Union  
FORS - Fuel Oil Reduction Strategy  
GHG – Greenhouse gases  
IAEA – International Atomic Energy Agency  
IBC Code - International Bulk Chemical Code

ICS – International Chamber of Shipping  
III Code – IMO Instruments Implementation Code  
ISPI - Individual Ship Performance Indicator  
LNG – Liquid Natural Gas  
MARPOL - International Convention for the Prevention of Pollution from Ships  
MBM – Market Based Measures (“carbon price”)  
MEPC – Marine Environmental Protection Committee  
MRV – Monitoring Reporting and Verification  
NEC – National Emission Ceilings Directive  
NECA – NO<sub>x</sub> Emission Control Area  
NO<sub>x</sub> - Nitrogen oxides  
PPR – Pollution Prevention and Response (MEPC sub-committee)  
SECA – SO<sub>x</sub> Emission Control Area  
SEEMP – Ship Energy Efficiency Management Plan  
SO<sub>x</sub> – Sulphur oxides  
TBD – To Be Determined  
UNFCCC – United Nations Framework Convention on Climate Change  
US – United States of America  
VGP – Vessel General Permit

**For additional information**

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