Regulatory developments in Safety and Environment

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Passenger ship Safety

Required_Subdivision Index R (SOLAS II-1/ Reg 6)

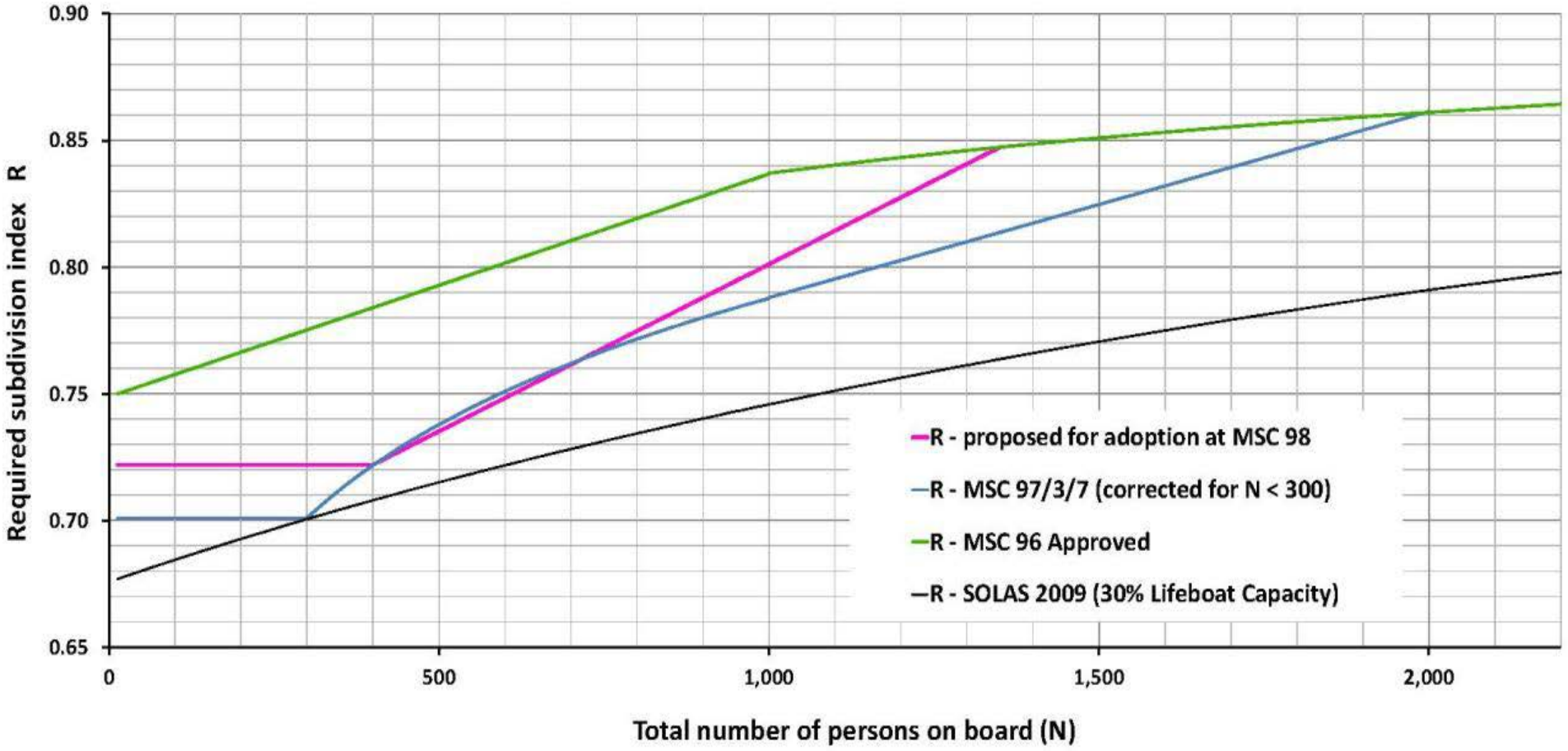
The Maritime Safety Committee at the 98th meeting adopted a revised formula for subdivision index R for passenger ships effective from 01 Jan 2020.

Proposal based on EMSA 3 studies was initially discussed at MSC 97. However, at MSC 98 a consensus proposal by China, Japan, Philippines and the United States was agreed considering practicality of application to small passenger ships carrying less than 400 passengers.

The R value depends on Number of Passengers N:

N < 400	**R = 0.722**
400 ≤ N ≤ 1,350	**R = N / 7,580 + 0.66923**
1,350 < N ≤ 6,000	**R = 0.0369 ∗ Ln (N + 89.048) + 0.579**
N > 6,000	**R = 1 – (852.5 + 0.03875 ∗ N) / (N + 5,000)**

Passenger ship Safety



R value for N<400 has a reasonable increase above the current safety level while still being achievable for small passenger ships that have less flexibility in their subdivision arrangements and port facility constraints

Passenger ship Safety

Other significant amendments :

- MSC 98 approved Revised guidance for watertight doors on passenger ships which may be opened during navigation. This confirms that watertight doors are no longer permitted to be left open during navigation.

- MSC 98 approved amendments to SOLAS II-1/ 1 and II-1/8-1 regarding computerized stability support for existing passenger ships for adoption at MSC 99. Guidelines to be prepared for vessels built before 01 Jan 2014.

- MSC adopted amendments to SOLAS Regulation II-2/9.4.1.3: Clarified that Windows facing survival craft on passenger ships carrying not more than 36 passengers shall have fire integrity at least equal to A-0 Class.

- Adopted amendments to SOLAS Ch III requiring damage control drills on all passenger ships from January 2020

MODU Code amendments

MSC 98 adopted resolution MSC.435(98) on *Amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code)*

The 2009 MODU code was amended taking into account recommendations arising from the investigation into the explosion, fire and sinking of the Deepwater Horizon in the Gulf of Mexico, in April 2010.

The identified vulnerabilities due to hydrocarbon fires emanating from drilling operations are taken into account

The main changes are related to machinery and electrical installations in hazardous areas, fire safety, life saving appliances and equipment:

MODU Code amendments

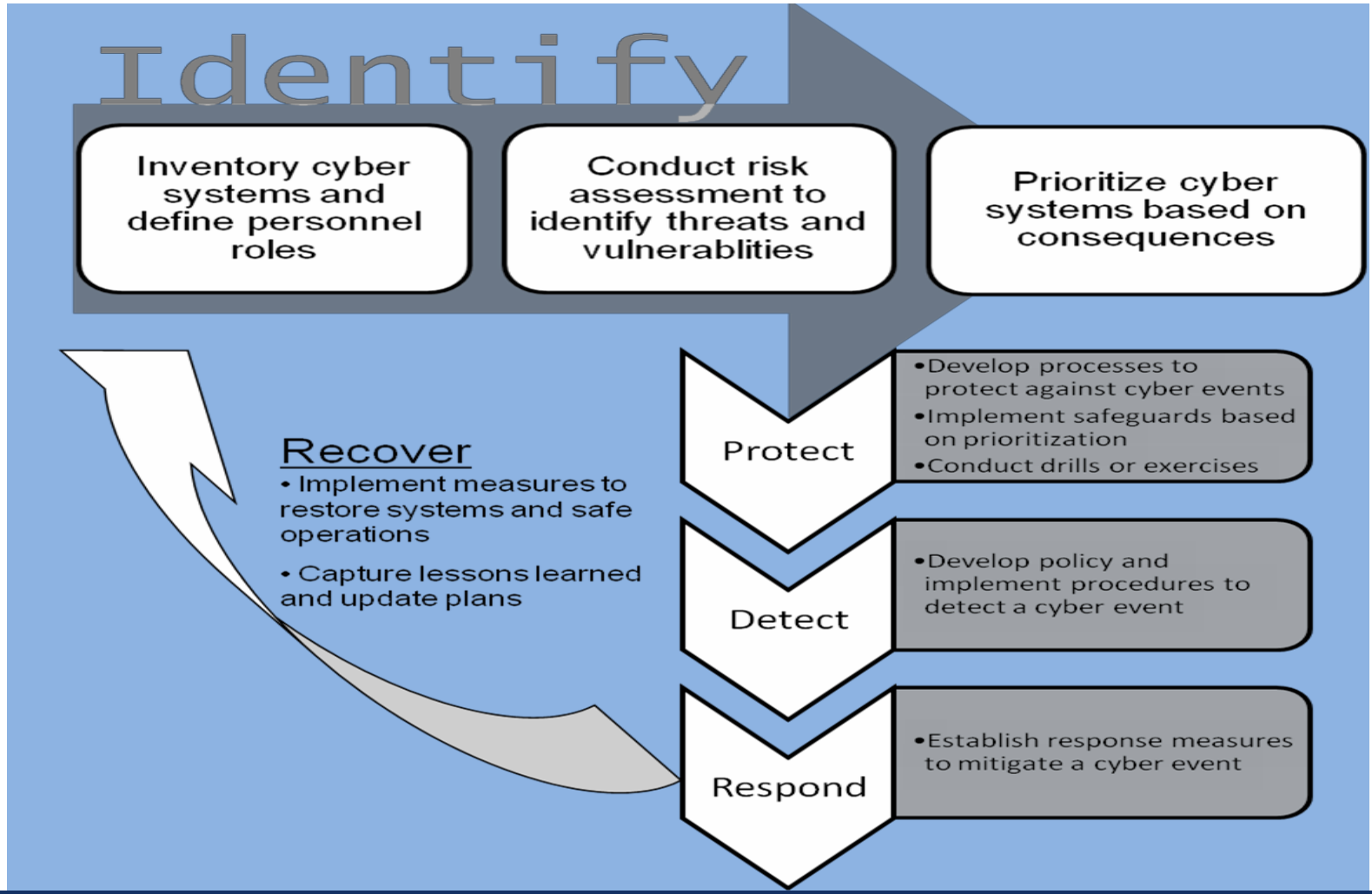
- maintenance of operational control over the integrity of the well and station-keeping capability
- maintenance and repair of hazardous area certified equipment
- provision for use of certified equipment in hazardous area zone 0, zone 1 or zone 2

- "H-60" standard explosion-proof bulkheads/decks and their locations introduced
- provision of a deluge system and enhanced fire-extinguishing arrangements for the drill floor

- average body mass of the lifeboat occupants increased from 82.5 to 95 kg
- prohibition of a lifeboat to be accepted as a rescue boat
- quarterly abandonment drills are to include lowering of a rigid life-raft

Cyber Risk Management

Basic functional Elements of CRM in the Guidelines



Cyber Risk Management

- **MSC 98 approved MSC-FAL.1/Circ.3 on *Guidelines on maritime cyber risk management***
- **MSC 98 adopted Resolution MSC.428 (98), on Maritime cyber risk management in safety management systems which is recommendatory in nature & non mandatory.**
- The resolution recalls that the ISM Code requires all identified risks to ships, personnel and the environment to be assessed and appropriate safeguards to be established
- Accordingly the resolution encourages Administrations to ensure that cyber risks are appropriately addressed in safety management systems no later than the first annual verification of the company's Document of Compliance after 1 January 2021

OSV Chemical Code

- **MSC 98 approved the draft Assembly resolution on the *Code for the Transport and Handling of Hazardous and Noxious Liquid Substances in Bulk on Offshore Support Vessels* (OSV Chemical Code. It was also approved by MEPC 71 for submission to A-30, with a view to adoption**

- **Although the code is not mandatory, a tentative effective entry into force date was agreed as 1 July 2018**

- **The Code supersedes the LHNS Guidelines A 673 (16)**

OSV Chemical Code

- The new Code updates existing resolution A.673(16) to take into account the need for larger quantities of hazardous and noxious liquid substances to be carried

- The Code addresses the safety concerns of carrying hazardous cargo. The requirements for stability vary depending on the Length of vessel, Cargo capacity and Type of cargo (based on the type of IBC code vessel which carries such cargo).

- Existing Offshore support Vessels (OSVs) may be permitted to carry products identified as requiring Ship Type 2 carriage requirements in the IBC Code, provided that they comply with the new Code, except for the stability requirements in chapter 2.

FRP Guidelines

- MSC 98 approved MSC.1/Circ. 1574 **Interim guidelines for use of Fibre Reinforced Plastic (FRP) elements within ship structures intended to facilitate the safe use of FRP elements in shipbuilding.**

- **An element, for the purpose of these guidelines, is defined as a structure which may be removed without compromising the safety of the ship**

- **FRP elements considered in shipbuilding for example may be categorized as:**

  a) integrated structures (not contributing to global strength) : e.g. sliding roof, stage, tender platform, etc

  - b) components: e.g. balcony, mast, gantry, flooring, etc

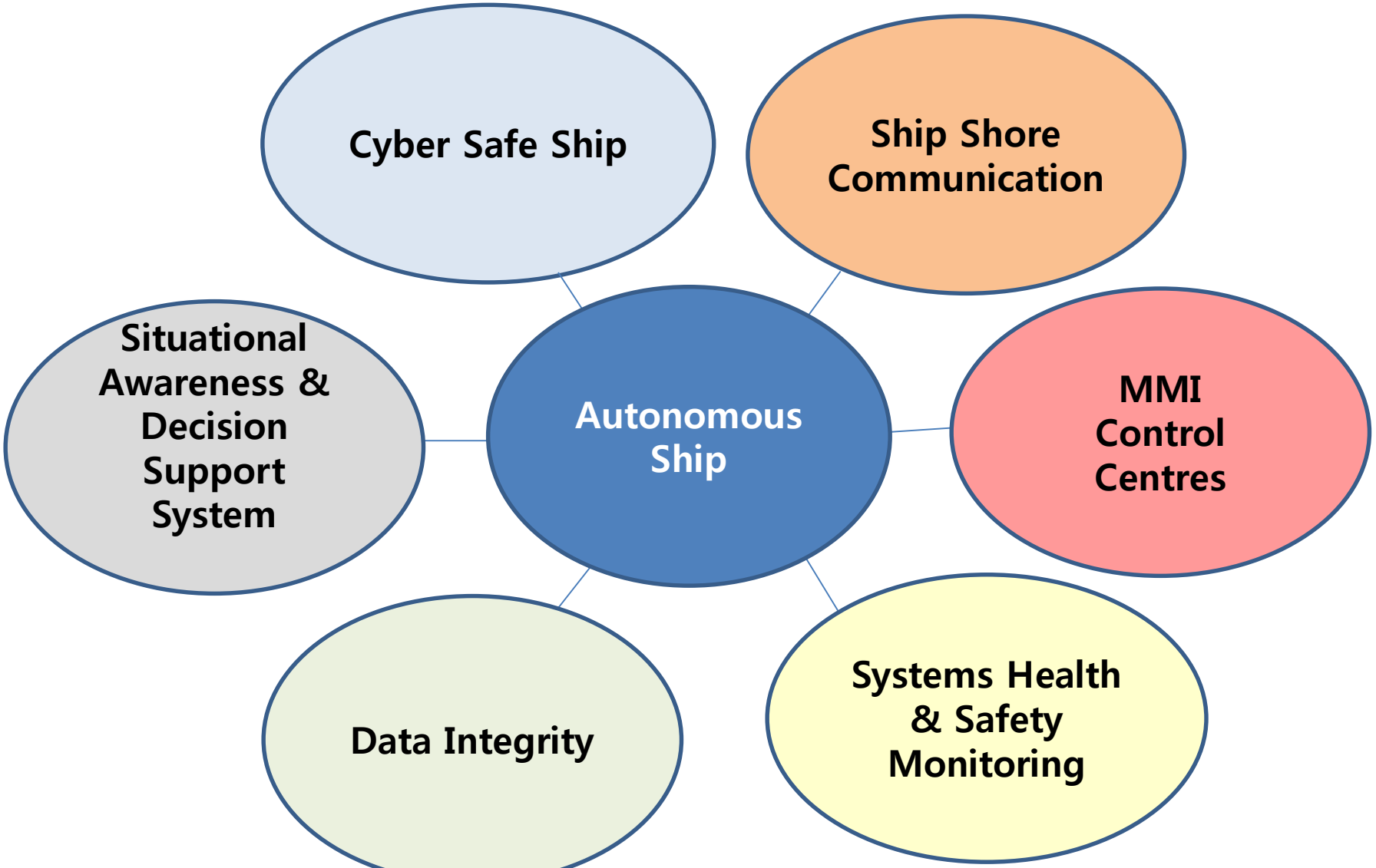
Autonomous Ships

- **MSC 98 agreed for scoping exercise to determine how the safe, secure and environmentally sound operation of Maritime Autonomous Surface Ships (MASS) may be introduced in IMO instruments as a starting point.**

- **The Scoping exercise would identify:**
  - Regulations which preclude operation of autonomous ships
  - Regulations which are not applicable
  - Regulations that need amendment

- **A range of issues will be addressed such as:**
  - Human Element
  - Safety and Security
  - Interactions with Ports and Pilotage
  - Responses to incidents
  - Protection of the marine environment

Autonomous ships



Regulations on Environment

- Ballast Water Management
- Air Pollution matters
- IMO Roadmap and Strategy for Reduction of GHG Emissions
- Fuel oil consumption Data Collection System (DCS)

Ballast Water Management

MEPC 71 approved a pragmatic schedule for ships to comply with D-2 Standard of BWM Convention. (Regulation B-3)

- **New ships (constructed on or after 08 September 2017) to comply with D-2 Standard when they are put to service.**
- **For existing Ships compliance with D-2 Standard is related to the date of IOPP renewal Survey (By the first or second renewal survey on or after 08 September 2017)**

- By the First Renewal Survey: when it takes place on or after 08 September 2019 or if a renewal survey has been completed on or after 08 September 2014 but prior to 08 September 2017.

- By the Second Renewal Survey: when the first renewal survey takes place before 08 September 2019 , provided renewal survey has not been completed during the period between 08 September 2014 and 08 September 2017.

Ballast Water Management

The following Guidelines/ resolutions were adopted at MEPC 71:

- 2017 Guidelines for Ballast water Exchange (G6)
- 2017 Guidelines for Risk assessment under Regulation A-4 of the BWM Convention (G7) Same Risk area (SRA) Concept introduced

- Resolution on Experience Building Phase associated with the BWM Convention. Data will be gathered and analysed during this phase for addressing the problems in implementation.

The following were approved, inter alia, at MEPC 71:

- Code for approval of BWMS and amendments to BWM Convention to make the code mandatory (to be adopted at MEPC 72)
- Guidance on Contingency measures under the BWM convention
- Circular on application of BWM convention to ships operating in areas where BW exchange is not possible.

Air Pollution matters

Global Sulphur limit:

- MEPC 71 agreed the scope of work to achieve consistent implementation of the Global Sulphur limit of 0.5% for fuel oil which comes into effect from 01 January 2020.

- PPR Sub-Committee has been instructed to explore what actions are to be taken to ensure consistent implementation of the limit for ships not fitted with other means such as scrubbers.

Other resolutions:

- **MEPC 71 adopted the 2017 Guidelines addressing additional aspects to the NOx Technical Code 2008 for Marine Diesel engines fitted with Selective Catalytic Reduction (SCR) systems**

Reduction of GHG Emissions

MEPC 70 approved the Roadmap for developing a comprehensive strategy for reduction of Green House Gas Emissions from ships.

Spring 2018 (MEPC 72)	Adoption of initial IMO Strategy
January 2019	Start of Phase 1: data collection (ships to collect data)
Autumn 2020 (MEPC 76)	Start of Phase 2: data analysis
Spring 2022 (MEPC 78)	Phase 3: decision step for reduction of GHG
Spring 2023 (MEPC 80)	Adoption of the revised IMO Strategy

Reduction of GHG Emissions

MEPC 71 noted the agreement of the Inter sessional WG on a draft outline for the structure of initial IMO Strategy:

1. Introduction including emission scenarios
2. Vision
3. Levels of ambition and Guiding principles

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

5. Barriers and supportive measures; capacity building and technical co-operation; R&D

6. Follow-up actions towards the development of the revised Strategy
7. Periodic review of the Strategy

IMO Data Collection System

Fuel oil Consumption Data Collection System:

- **While EU has implemented their MRV (Monitoring, Reporting and Verification) with a view to reduce GHG emissions from shipping, IMO has adopted the fuel oil Data Collection System (DCS) which would be applied Globally.**

- The IMO Data Collection System was adopted at MEPC 70 through new Regulation 22A in MARPOL Annex VI Chapter 4 entering into force on 01 March 2018.
- All Ships of 5000 GT and above are required to collect data on fuel consumption from 01 January 2019 using revised SEEMP and procedures.

- Data includes a) Fuel oil Consumption, b) Distance travelled and c) Hours underway
- Data for the calendar year to be reported within 3 months after the end of the year to Flag/RO who will verify the data and issue a Statement of Compliance before forwarding the data to IMO.

IMO Data Collection System

MEPC 71 adopted the following Guidelines for IMO DCS:

- **“2017 Guidelines for Administration verification of ship fuel oil consumption data” .**
- **“ 2017 Guidelines for the development and management of the IMO Ship fuel oil consumption database”**

Major differences between EU MRV and IMO DCS

EU MRV requires cargo carried to be reported for each voyage. IMO DCS uses Deadweight of the vessel instead.

The Verification procedures of EU MRV are based on ISO 14064 which are robust. IMO DCS uses a practical approach, using only those aspects of ISO 14064 which are within the scope of Regulation 22A of MARPOL Annex VI.

Concluding Remarks

- **IMO recognizes that with the advancement of technological development, new technologies will continue to affect Shipping and Shipbuilding.**

- **IMO's regulatory framework is being continuously adapted to the challenges and global developments in order to ensure safety, security and environmental protection. IMO is also developing a comprehensive Strategy on reduction of GHG emissions from ships which will be ambitious and realistic.**

- **With the acceptance of ASEF as a NGO with consultative status at IMO, ASEF can contribute effectively to the development of global regulations, providing valuable inputs on ship design and construction based on the experience of its Members.**

- **ACS will make all efforts provide inputs to ASEF, especially on matters of interest to the Asian Maritime Community.**

Thank you
for your attention

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http://www.asiancs.org