

## Report of PPR 7

Sub-committee on Pollution Prevention and Response

17<sup>th</sup> – 21<sup>st</sup> February 2020

International Maritime Organization (IMO), London headquarters

### ITF delegation

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Working Group on Heavy Fuel Oil in Arctic Waters and Review of the IBTS Guidelines	Oscar Lindgren (Expert)
Drafting Group on MARPOL Annexes IV and V	Tracey Mayhew (Expert)
Technical Group on Amendments to the AFS Convention	Jihyeon Gina Kim (IMO liaison assistant)
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The Sub-committee on Pollution Prevention and Response (PPR) undertakes technical matters related to marine environmental protection and response, covering the control and management of harmful aquatic organisms in ships' ballast water and sediments, anti-fouling systems, pollution preparedness, response and cooperation for oil spills, standards for the carriage of hazardous and noxious substances and recycling of ships. With growing concerns on environmental soundness, it is imperative for maritime workers to be appropriately and promptly prepared.

The Sub-committee at this session considered the following agendas:

- Carriage ban of heavy fuel oil (HFO) in the Arctic waters;
- Consistent implementation of 2020 sulphur limit;
- Review of the 2015 Guidelines on Exhaust Gas Cleaning Systems (scrubbers);
- Discharges of gas cleaning systems;
- The impact on the Arctic of Black Carbon emissions;
- Prohibiting cybutryne in anti-fouling systems and review of biofouling Guidelines;
- Commissioning testing of ballast water management systems; and
- Tackling marine plastic litter.

### **Working Group on Prevention of Air Pollution from Ships**

As of 1<sup>st</sup> March 2020, the restriction of the carriage of oil fuel (except for ships with exhaust gas cleaning systems installed) sulphur content more than 0.50% entered into force. The effective implementation shall be supported by various measures that cover all stakeholders, not only the Administration. It is to be ensured that such oil fuel is not delivered. The Group finalised the *2020 Guidelines for On Board Sampling of Fuel Oil*.

Moreover, there have already been approximately 3000 Exhaust Gas Cleaning Systems (EGCS) units installed. A lack of practical operating experience was addressed.

the Group revised the 2015 Guidelines on *Exhaust Gas Cleaning Systems (EGCS)* considering effective ways to implement such Guidelines, taking into account a variety of development of technologies and urgent needs for uniformed standards.

#### **Outcome of the Group**

1. The Group finalised the *Guidelines for On Board Sampling of Fuel Oil*. The purpose of this sampling is to verify sulphur content. Sulphur is nearly the same throughout a tank unless the fuel oil has stratified which rarely happens given the size of bunker tanks.

2. The Group finalised the *Guidelines for Exhaust Gas Cleaning Systems*, covering continuous monitoring requirements and discharge water quality criteria, including minimum pH, maximum PAHs (Polycyclic Aromatic Hydrocarbons) concentration; provisions to minimize suspended particulate matter, including heavy metals and ash, and to prevent discharge of nitrates beyond specified levels.

The Onboard Monitoring Manual (OMM) recommended spare parts should be carried aboard to facilitate repair of a failed component that impacts on compliant operation of the EGCS.

3. It should be noted that the use of scrubbers and switching fuel oil types are highly regulated in ECAs. Fuel oil usage plan should be strictly complied in such areas.

4. MEPC 75 has been invited to re-issue MEPC.1/Circ.883 *Guidance on Indication of Ongoing Compliance in the Case of the Failure of a Single Monitoring Instrument, and Recommended Actions to Take if the Exhaust Gas Cleaning System (EGCS) Fails to Meet the Provisions of the 2015 EGSC Guidelines* (resolution MEPC.259(68)) to include all EGCS units.

#### **Further work**

1. Matters regarding multiple engine operational profiles will be dealt in the next session of the Sub-committee (PPR 8), seafarers' safety shall be addressed.

2. The Sub-committee will look at evaluation and harmonization of rules and guidance on the discharge of discharge water from EGCS into the aquatic environment, including conditions and areas. The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) will report outcome of its relevant research.

3. The ITF will address that the importance of safety of crew onboard and applicability of the measures are appropriately embedded in finalised Guidelines throughout the whole process.



### **Working Group on Heavy Fuel Oil in Arctic Waters and Review of the IBTS Guidelines**

Currently, the use or carriage of heavy grade oils on ships are banned in the Antarctic pertaining to MARPOL and the Polar Code. To broaden the application of such restrictions, it is inevitable to apply the same for ships in the Arctic.

*The Integrated Bilge Water Treatment System (IBTS)*<sup>1</sup> Guidelines should be regarded as guidance in achieving an efficient and effective system for the handling of oily bilge water and oily residues (sludge) for new buildings. To better reflect the current arrangements and operational procedures, the IBTS Guidelines and guidance for the recording of operations in the oil record book were to be revised.

#### **Outcome of the Group**

1. Amendments to MARPOL Annex I and a new regulation 43A were drafted to prohibit the use and carriage of heavy fuel oil (HFO) in the Arctic (effective on and from 1 July 2024).
2. Exemptions are given to ships engaged in securing the safety of ships, or in search and rescue operations, and ships dedicated to oil spill preparedness and response.
3. For vessels complying with MARPOL regulation 12A *Oil fuel tank protection*<sup>2</sup> (e.g. double hull), the entry into force date could be 1 July 2029. In addition, States with an Arctic coastline can enjoy waiving the requirement for ships flying its flag operating in its water until 1 July 2029.
4. The Group reviewed efficacy of the provisions currently and revised to improve shipowners, ship builders and classification societies for ships to have the most appropriate bilge water treatment systems. As for the ITF, it was important to update how system is going to be transformed and equipped in a ship.

#### **Further work**

1. The ITF will take part in a correspondence group for further development of draft guidelines on measures to reduce risks of use and carriage of HFO as fuel by ships in Arctic waters that encompass:
  - ship operation;
  - ship construction and heavy fuel oil bunkering;
  - infrastructure and communication;
  - enhancement of heavy fuel oil spill preparedness;
  - early detection and response; and
  - drills and training.

The focuses of the ITF are on matters concerning seafarers' roles and responsibilities in the event of an oil spill in the Arctic waters.

2. MEPC 76 has been invited to consider legal issues concerning whether bilge water may be evaporated or not.

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<sup>1</sup> is a system to minimize the amount of the oily bilge water generated in machinery spaces by means to treat the leaked water and oil separately and also provides integrated means to process the oily bilge water and oil residue (sludge).

<sup>2</sup> The application of the regulation is to all ships with an aggregate oil fuel capacity of 600 m<sup>3</sup> and above which are delivered on or after 1 August 2010, as defined in regulation 1.28.9 of MARPOL Annex I.

### **Drafting Group on MARPOL Annexes IV and V**

*The IMO Action Plan to address marine plastic litter from ships*, adopted in 2018, aims to enhance existing regulations and introduce new measures to reduce marine plastic litter from ships. By 2025, actions will be completed and all ships, including fishing vessels, will have to comply with them.

At this stage, the importance of accurate data based on scientific research and transparent information exchange mechanisms are identified as priorities.

#### **Outcome of the Group**

1. Terms of Reference for the Correspondence Group on Amendment to MARPOL Annex IV and Associated Guidelines and for the Group on Marine Plastic Litter from Ships (MARPOL Annex V related) were developed.
2. The Group developed two MEPC Circulars on *Provision of adequate facilities at ports and terminals for the reception of plastic waste from ships* and *Sharing of results from research on marine litter and encouraging studies to better understand microplastics from ships*.
3. Having introduced advanced communication technology, the use of electronic documents during port State (PSC) control inspection, in particular port reception facilities, has been under consideration. The Sub-committee agreed to consider further security measures to include in the Guidelines on Procedures for PSC.

#### **Further work**

1. The two Correspondence Groups are to consider how to amend MARPOL Annex V and the *2017 Guidelines for the implementation of MARPOL Annex V* (resolution MEPC.295(71)), to facilitate and enhance reporting of the accidental loss or discharge of fishing gear (regulation 10.6 of MARPOL Annex V), and consider the reporting mechanisms and modalities for all stakeholders.
2. The importance for the ITF is whether the workplan will consider the safety of maritime workers and embed effective implementation strategies which cover the entire process from shore-ship-shore by taking part in both Correspondence Groups.

### **Technical Group on Amendments to the AFS Convention and Ballast Water Management and Biofouling**

#### **Part 1. Amendments to the AFS Convention and Biofouling**

It is generally widespread understanding that ship's biofouling has negative effects on ship's energy management plan, but also soundness of marine ecosystem. Thus, biofouling removal – part of anti-fouling – is essential throughout a ship's life cycle - design, construction, navigating at sea, maintenance in dry-docking, etc. However, due to well-known harmful effect of biocides using organotin compounds on marine environment and human health, the IMO Convention for the Control of Harmful Anti-fouling Systems on Ships (AFS Convention) provides relevant mandatory requirements. At this session, the Group drafted restriction requirements over the use of cybutryne as anti-fouling measures in the AFS Convention.



The 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (resolution MEPC.207(62)) provide the control and management measurements. However, it has been understood that the effectiveness of this instrument to be reviewed for more robust implementation.

### **Outcome of the Group**

1. The Group identified key elements to be focused in each section of the Guidelines (resolution MEPC.207(62)) focusing on improving robust enforcement by Administration and the industry.

2. The Group drafted amendment of annex 1 to the AFS Convention to include removal on cybutryne. The following scenarios should be noted:

- Ships built before 1<sup>st</sup> July 2022, shall either remove any antifouling system containing cybutryne or apply a coating that could be a barrier to the cybutryne substances;
- Ships built after 1<sup>st</sup> July 2022 should not have antifouling system containing cybutryne; and
- All ships should remove cybutryne within their antifouling system, by 1<sup>st</sup> July 2027.

A ship, in pursuant to 2008 amendments to AFS Convention, should have a record on her antifouling system. With new amendments, Master and crew should make sure the record is available and her antifouling system complies with the amendments. In the event of PSC, a ship should have an appropriate documentation such as International Anti-Fouling System Certification with a supplement of a record.

### **Further work**

1. The established Correspondence Group on the review of the biofouling guidelines will assess the Guidelines according to the identified key elements. The ITF participates in the work to make sure safety of crew to be engraved and appropriate training measures provided, which was not fully considered during the Group's discussion.

2. The Group will look at other relevant IMO instruments to facilitate implementation of the reviewed Resolution MEPC.207(62).

3. Sampling and compliance testing methods of cybutryne should be further discussed. Taking into account variable scenarios, for instance, occasions applied paint might have contained cybutryne but still could comply with the threshold in accordance with the Convention.

## Part 2. Ballast Water Management

The Group also considered matters related to ballast water management, in particular, the *Guidance on sampling and analysis for trial use in accordance with the BWM Convention and Guidelines (G2)* (BWM.2/Circ.42/Rev.1). The Guidance provides measures for ships to undertake while PSC inspection onboard. Having a number of sampling and testing methods available has created immense confusions for both PSC and ships. The aim is to provide the most appropriately attested methods, not all possible methods. The consequences will be on seafarers and PSC officers.

### **Outcome of the Group**

1. A new indicator element was introduced to BWM.2/Circ.42/Rev.1, “Total living bacteria including *Enterococci*, *Escherichia coli* and *Vibrio cholerae*” which could be considered as one of semi-quantitative indicative analysis results for PSC inspection.
2. New methods were introduced to the abovementioned circular under the section *Detailed analysis methods for use when testing for compliance with the D-2 standard* for further evaluation.

### **Further work**

1. Regarding BWM.2/Circ.42/Rev.1, indicators and analysis methods are going to be attested and determined whether to be mandate or not during experience-building phase (EBP). The ITF should note the timeline and collated any relevant information of ballast water management PSC inspection.
2. In the next session, the Sub-Committee will finalise draft *the Guidance on methodologies that may be used for enumerating viable organisms for type approval of ballast water management systems* (BWM.2/Circ.61).
3. In the next session, the Group will discuss a standard for verification of ballast water compliance monitoring systems, as a critical matter. Developing standardised Commissioning procedures of BWM system is in utmost urgency, thus the MEPC 76 will carry out the work.

### **The impact on the Arctic of Black Carbon emissions**

Black Carbon is known as the product of incomplete combustion of carbon-based fuels. It is yet to say whether Black Carbon is deemed to have a significant effect on air pollution. Considering the fact that it is inevitable for carbon-based fuels to have it as by product, zero Black Carbon emissions would be difficult to imagine unless such fuels are completely prohibited. Therefore, the shipping industry has been discussing and conducting studies to implement the most realistic and effective solutions.

### **Outcome and Further work**

1. The Sub-committee considered proposals to look at the aromatic content of blends of fuel oil. A high aromatic content, among other factors, could increase Black Carbon emissions from ships. Further discussion will be carried out through a Correspondence Group on Black Carbon Emissions. The ITF participates.
2. The Group is to consider:
  - the development of a standardised sampling, conditioning, and measurement protocol to make accurate and traceable measurements of Black Carbon emissions; and
  - the linkages between the measurement systems and policy options.



### **Action requested**

Environmental protection is not a brand-new concept. Throughout the years, the industry has already experienced impact of environmental regulations on ship's operations. Seafarers are on the final frontier of law enforcement, therefore have the great deal of advantages to discover unexpected flaws as well as come up with ideas to improve efficiency of ships. The differences of current stream are the scopes of protection area and subjects are global and broader. As a results, more number of international maritime workers' working and living conditions are to affected.

The ITF affiliates, noting the connection between marine environmental related issues and safety and health of maritime workers aboard and ashore, should disseminate the discussion agenda and background information provided in this document amongst members.

The ITF delegation at the IMO strongly advocates that regulations should put the human-centered perspective as the utmost priority.

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\*Aforementioned IMO documents can be provided if requested.