

REPORT TO THE MARINE ENVIRONMENT PROTECTION COMMITTEE

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1 GENERAL

1.1 The Sub-Committee on Pollution Prevention and Response (PPR) held its ninth session remotely from 4 to 8 April 2022. The session was chaired by Dr. Flavio da Costa Fernandes (Brazil). The Vice-Chair, Dr. Anita Mäkinen (Finland), was also present.

1.2 The session was attended by delegations from Member Governments and Associate Members of IMO; representatives from a United Nations Programme and specialized agency; observers from intergovernmental organizations with agreements of cooperation; and observers from non-governmental organizations in consultative status, as listed in document PPR 9/INF.1.

Opening address

1.3 The Secretary-General welcomed participants and delivered his opening address, the full text of which can be downloaded from the IMO website at the following link: <https://www.imo.org/en/MediaCentre/SecretaryGeneral/Pages/Secretary-GeneralsSpeechesToMeetings.aspx>

Chair's remarks

1.4 In responding, the Chair thanked the Secretary-General for his words of guidance and encouragement and assured him that his advice and requests would be given every consideration in the deliberations of the Sub-Committee.

Measures taken to facilitate the remote session

1.5 The Sub-Committee noted that at the joint extraordinary session of all IMO Committees (ALCOM/ES), held in September 2020, the Committees jointly approved MSC-LEG-MEPC-TCC-FAL.1/Circ.1 on *Interim guidance to facilitate remote sessions of the Committees during the COVID-19 pandemic*. The Sub-Committee also noted that the Committees had agreed to waive rule 3 of their respective rules of procedure, in part to allow sessions to be held remotely, as well as other relevant rules.

Adoption of the agenda and related matters

1.6 The Sub-Committee adopted the agenda (PPR 9/1) and agreed to be guided in its work, in general, by the information and proposed arrangements for the session contained in document PPR 9/1/1 (Chair).

Impacts of the situation in the Black Sea and the Sea of Azov on the marine environment and the safety and security of shipping and seafarers

1.7 The Sub-Committee noted the intervention by the delegation of Ukraine, as set out in annex 16, relating to incidents of marine pollution and seafarer injuries, including a casualty, as a result of the ongoing aggression by the Russian Federation against Ukraine.

1.8 Subsequently, many delegations condemned Russia's invasion of Ukraine as a violation of international law and the United Nations Charter, and raised concerns about the impact of the situation in the Black Sea and the Sea of Azov on shipping, seafarers, and the environment, consistent with the decisions of the thirty-fifth extraordinary session of the Council. The statements made by a number of delegations in this regard are set out in annex 16.

1.9 The Sub-Committee also noted the intervention by the delegation of the Russian Federation in this context, as set out in annex 16.

1.10 In this connection, the Sub-Committee recalled that the thirty-fifth extraordinary session of the Council (C/ES.35), which had been held remotely from 10 and 18 March 2022 to discuss the impacts on shipping and seafarers of the situation in the Black Sea and the Sea of Azov, had issued its summary of decisions on this matter (C/ES.35/D, paragraphs 3.4 and 3.5). In particular, the Sub-Committee recalled that C/ES.35 had, inter alia, strongly condemned the Russian Federation's violation of the territorial integrity and the sovereignty of a UN Member State; deplored the attacks of the Russian Federation and their impact on maritime safety and security, the welfare of seafarers and the marine environment; and demanded that the Russian Federation cease its unlawful activities and for the parties to resolve the crisis through diplomatic means.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted the outcomes of the following IMO bodies that were relevant to its work:

- .1 MSC 103 and MEPC 76, as reported in document PPR 8/2 (Secretariat);
- .2 MSC 104 and MEPC 77, as reported in document PPR 8/2/1 (Secretariat);
and
- .3 SDC 8 and HTW 8, as reported in paragraphs 11.2 to 11.6 of document PPR 9/1/1 (Chair).

2.2 Subsequently, the Sub-Committee took action under the relevant agenda items.

3 SAFETY AND POLLUTION HAZARDS OF CHEMICALS AND PREPARATION OF CONSEQUENTIAL AMENDMENTS TO THE IBC CODE

Report of ESPH 27

3.1 Having recalled that ESPH 27 had taken place as a remote session from 11 to 15 October 2021, the Sub-Committee considered the report of ESPH 27 (PPR 9/3) and took action, as outlined in paragraphs 3.2 to 3.6.

Outcome of GESAMP/EHS 58

3.2 The Sub-Committee noted the outcome of GESAMP/EHS 58 and that the full report from the meeting, together with the revised GESAMP Composite List, had been disseminated as PPR.1/Circ.11. In the context, the Sub-Committee noted in particular:

- .1 the development of GESAMP Hazard Profiles for 13 new substances, including "Palm oil mill effluent oil", "Palm oil mill effluent oil refined" and "Palm oil mill effluent oil fatty acid distillate" (PPR.1/Circ.11, section 3);
- .2 the review and revision of GESAMP Hazard Profile ratings for three existing substances, namely "Calcium chloride solution" (EHS 2519), "Concentrated filtrate of the neutralized reaction product of 5-[2-(methylthio)alkyl]imidazolidine-2,4-dione and potassium carbonate" (EHS 2524), and "Choline hydroxide solution" (EHS 2525) (PPR.1/Circ.11, paragraphs 4.3 to 4.6);

- .3 the advice regarding the assessment of mixtures against the new discharge requirement in regulation 13.7.1.4 of MARPOL Annex II (PPR.1/Circ.11, paragraphs 5.1 to 5.4); and
- .4 the clarifications in relation to the assessment of complex substances – Creosote (coal tar) (PPR.1/Circ.11, section 7).

Evaluation of products and cleaning additives

3.3 With regard to the provisional categorization of liquid substances carried out by ESPH 27, the Sub-Committee:

- .1 concurred with the evaluation of pure or technically pure products and mixtures as a whole, including the evaluation of "Palm oil mill effluent oil" as a replacement for the generic entry for "Palm oil mill effluent (POME) technical oil", and their respective inclusion in list 1 of MEPC.2/Circ.27 (published on 1 December 2021), with validity for all countries and with no expiry date;
- .2 concurred with the evaluation of trade-named mixtures and their respective inclusion in lists 2 and 3 of MEPC.2/Circ.27, with validity for all countries and with no expiry date, along with the consequential additions to list 5 of MEPC.2/Circ.27;
- .3 noted the deliberations of the Group on how to assess mixtures against the criteria for the discharge requirement in regulation 13.7.1.4 of MARPOL Annex II (PPR 9/3, paragraphs 3.84 to 3.90);
- .4 concurred with the evaluation of cleaning additives and noted their inclusion in annex 10 to MEPC.2/Circ.27;
- .5 noted the review undertaken of the draft of MEPC.2/Circ.27 and the amendments and deletion of products from the lists that had reached their expiry dates or were no longer shipped or had been re-evaluated and met the criteria for complex mixtures in paragraph 9.2 of MEPC.1/Circ.512/Rev.1; and
- .6 urged reporting countries that had products listed in list 2 or list 3 of the MEPC.2 circular on *Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code* to contact the respective manufacturers and request them to review their products for the purpose of assessing whether any changes in the carriage requirements would be necessary, taking into account the revised chapter 21 of the IBC Code, the latest GESAMP Hazard Profiles for the components, MEPC.1/Circ.512/Rev.1 and PPR.1/Circ.10.

3.4 With regard to products in lists 2 or 3 of the MEPC.2 circular, which upon re-evaluation by the ESPH Technical Group had been deemed as meeting the criteria for complex mixtures in paragraph 9.2 of MEPC.1/Circ.512/Rev.1 and would therefore be deleted from the MEPC.2 circular in order to be shipped instead as MARPOL Annex I cargoes (e.g. the cargoes reported by Belgium in document ESPH 27/6), one delegation expressed the view that such reclassifications should be communicated in a formal and official manner. To that end, it was proposed that:

- .1 a new annex should be introduced in the MEPC.2 circular, listing products previously assessed as MARPOL Annex II cargoes but subsequently re-assessed and deemed to be MARPOL Annex I cargoes; and
- .2 in the period between the publication of the MEPC.2 circular in December of one year and the publication of the next edition in December of the following year, a running list of reassessed products should be maintained and posted on the IMO website.

3.5 The Chair of the ESPH Technical Group recalled that ESPH 27, having considered various options for disseminating information on the products which upon re-assessment had been deemed to meet the criteria in paragraph 9.2 of MEPC.1/Circ.512/Rev.1 and were therefore to be shipped as MARPOL Annex I cargoes, had acknowledged that more time was necessary to give due consideration to the potential consequences of any proposals in that regard; had agreed to consider the matter further at future sessions; and had encouraged interested Member States and international organizations to submit relevant proposals to assist the Group in its deliberations. Accordingly, the Sub-Committee noted that ESPH 28 would report the outcome of any relevant deliberations to PPR 10.

Provisional agenda for ESPH 28

3.6 Having recalled that MEPC 76 had approved the holding of an intersessional meeting of the ESPH Technical Group in 2022, which had subsequently been endorsed by C 125, the Sub-Committee approved the proposed provisional agenda for ESPH 28, as set out in annex 1.

4 DEVELOPMENT OF AN OPERATIONAL GUIDE ON THE RESPONSE TO SPILLS OF HAZARDOUS AND NOXIOUS SUBSTANCES (HNS)

4.1 The Sub-Committee recalled that MEPC 74 had agreed to include the proposal for a new output to develop an operational guide compiling good practices on preparedness and response to spills of Hazardous and Noxious Substances (MEPC 74/14/3) on the agenda of the Committee and had referred the matter to this Sub-Committee to complete the work (MEPC 74/18, paragraph 14.20).

4.2 The Sub-Committee also recalled that MEPC 76 had subsequently approved the provisional agenda for PPR 9 (MEPC 76/15/Add.2, annex 16) to include the new output on "Development of an operational guide on the response to spills of Hazardous and Noxious Substances (HNS)".

4.3 The Sub-Committee considered document PPR 9/4 (REMPEC) containing the marine HNS response manual developed by REMPEC, the Bonn Agreement and HELCOM, proposing that it be used as the basis for the development of an IMO guide on the response to HNS.

4.4 Having considered several options for progressing this work, the Sub-Committee agreed to invite interested delegations to work intersessionally to develop an operational guide on the response to spills of HNS using document PPR 9/4 as the basis and to submit a draft guide to PPR 10.

4.5 Recognizing the amount of work required to develop the guide, the Sub-Committee invited MEPC 78 to extend the target completion year for the output to 2023.

4.6 The Sub-Committee noted the launch of IMO's e-Learning Management System (LMS), including the new e-Learning course titled "An Introduction to Oil Pollution Preparedness, Response and Cooperation", which had been developed by IMO in collaboration with World Maritime University.

5 REVISED GUIDANCE ON METHODOLOGIES THAT MAY BE USED FOR ENUMERATING VIABLE ORGANISMS

5.1 The Sub-Committee recalled that PPR 7, having noted the intention of the Netherlands to submit further information to PPR 8 with regard to the addition of the flow cytometry method in BWM.2/Circ.61, had agreed to the draft text for the revision of the *Guidance on methodologies that may be used for enumerating viable organisms for type approval of ballast water management systems*, as set out in annex 4 to document PPR 7/WP.4/Add.1, and had kept this text in abeyance, for consolidation at PPR 8, with a view to approval at MEPC 77 and dissemination as BWM.2/Circ.61/Rev.1.

5.2 The Sub-Committee also recalled that MEPC 75 had approved a reduced provisional agenda for PPR 8 that did not include output 1.15, and that, consequently, MEPC 76 had extended the target completion year of the output to 2022.

5.3 The Sub-Committee noted that no documents had been submitted to this session under this agenda item. In addition, the delegation of the Netherlands advised that, while the validation of the flow cytometry method for detailed analysis of viable organisms had been in progress with a view to submission of relevant information and proposals to the Sub-Committee, COVID-19 restrictions had led to a suspension of the validation process and it was not certain when the validation would start again.

5.4 In the absence of additional information and proposals on new analysis methods to this session, the Sub-Committee agreed to the draft text for the revision of the *Guidance on methodologies that may be used for enumerating viable organisms for type approval of ballast water management systems*, as set out in annex 4 to document PPR 7/WP.4/Add.1 and also reproduced in annex 2, with a view to approval at MEPC 78 and dissemination as BWM.2/Circ.61/Rev.1.

Completion of the work on the output

5.5 The Sub-Committee invited the Committee to note that the work on output 1.15 (Revised guidance on methodologies that may be used for enumerating viable organisms) had been completed.

6 REVISION OF GUIDELINES ASSOCIATED WITH THE AFS CONVENTION AS A CONSEQUENCE OF THE INTRODUCTION OF CONTROLS ON CYBUTRYNE

6.1 The Sub-Committee recalled that PPR 7 had agreed to the draft amendments to the AFS Convention, introducing controls on the use of cybutryne, and that, subsequently, MEPC 76 had adopted resolution MEPC.331(76) on amendments to the AFS Convention, concerning controls on cybutryne, which were expected to enter into force on 1 January 2023.

6.2 The Sub-Committee recalled also that:

- .1 PPR 7 had invited proposals to PPR 8 on amendments to the *Guidelines for brief sampling of anti-fouling systems on ships*, the *2010 Guidelines for survey and certification of anti-fouling systems on ships*, and the *2011 Guidelines for inspection of anti-fouling systems on ships* (resolutions MEPC.104(49), MEPC.195(61) and MEPC.208(62), respectively);
- .2 MEPC 75 had extended the target completion year of output 2.19 to 2022 and had changed the title of the output from "Amendment of Annex 1 to the AFS Convention to include controls on cybutryne, and consequential revision of relevant guidelines" to "Revision of guidelines associated with the AFS Convention as a consequence of the introduction of controls on cybutryne"; and

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- .3 MEPC 75 had approved a reduced provisional agenda for PPR 8 that did not include output 2.19.

6.3 The Sub-Committee recalled further that, having noted the need to consider an update to the list of items in the Inventory of Hazardous Materials under the Hong Kong Convention to include cybutryne when the respective controls entered into force, MEPC 75 had requested the Sub-Committee to advise it on any consequential amendments to appendix 1 to the Hong Kong Convention, taking into account that the Hong Kong Convention had not entered into force.

6.4 The Sub-Committee had for its consideration the following documents:

- .1 PPR 9/6 (Austria et al.), containing proposed modifications to the three guidelines associated with the AFS Convention, as a consequence of introducing controls on cybutryne: the *Guidelines for brief sampling of anti-fouling systems on ships* (resolution MEPC.104(49)), the *2010 Guidelines for survey and certification of anti-fouling systems on ships* (resolution MEPC.195(61)) and the *2011 Guidelines for inspection of anti-fouling systems on ships* (resolution MEPC.208(62));
- .2 PPR 9/6/1 (China), commenting on document PPR 9/6 and proposing amendments to appendix 1 to the *2010 Guidelines for survey and certification of anti-fouling systems on ships* (resolution MEPC.195(61)), expressing support for the proposal in document PPR 9/6 on the threshold value of cybutryne, and proposing to amend the aforementioned Guidelines to include the option for specimens of paint for analysis during survey and certification to be taken as wet paint from product containers, in addition to dry paint film sampled from the hull; and
- .3 PPR 9/INF.9 (Austria et al.), providing relevant information in support of the proposals contained in document PPR 9/6.

Establishment of the Working Group on Marine Biosafety

6.5 Considering that PPR 8 did not consider this matter due to its reduced agenda, the reduced time available during virtual meetings and the need for draft revisions to the aforementioned Guidelines to be finalized at this session, the Sub-Committee established the Working Group on Marine Biosafety and referred all of the above-mentioned documents, as well as the matter of the update to the list of items in the Inventory of Hazardous Materials under the Hong Kong Convention, directly to the Working Group for detailed consideration, having noted that all proposals were highly technical.

6.6 The Sub-Committee instructed the Working Group on Marine Biosafety to:

- .1 finalize the draft text of the revised *Guidelines for brief sampling of anti-fouling systems on ships*, *Guidelines for inspection of anti-fouling systems on ships* and *Guidelines for survey and certification of anti-fouling systems on ships*, using annexes 1, 2 and 3 to document PPR 9/6, respectively, as the basis and taking into account the proposals in document PPR 9/6/1 and the information in document PPR 9/INF.9; and
- .2 consider the need for an update to the list of items in the Inventory of Hazardous Materials under the Hong Kong Convention to include cybutryne when the respective controls entered into force, taking into account that the Hong Kong Convention had not entered into force, and advise the Sub-Committee accordingly.

Report of the Working Group

6.7 Having considered the relevant parts of the report of the Working Group (PPR 9/WP.3, paragraphs 4 to 12 and annexes 1 to 3), the Sub-Committee approved the report in general and took action, as described in paragraphs 6.8 to 6.14.

Revision of guidelines associated with the AFS Convention

6.8 The delegation of the Marshall Islands highlighted an issue regarding the draft 2022 Guidelines for inspection of anti-fouling systems on ships, in particular paragraph 2.1.7 of the draft Guidelines, which stated that the survey for issuance of the International Anti-fouling System Certificate should match the dry-dock period listed in the ship's log(s). In this regard, while recognizing that this was pre-existing language from the current 2011 Guidelines and not part of the amendments that the Working Group had reviewed and agreed to, the delegation of the Marshall Islands noted that, in accordance with operative paragraph 4 of resolution MEPC.331(76) on adoption of amendments to the AFS Convention, a Certificate in the amended form should be issued following a survey request by the shipowner, and that in many cases such a survey would not necessitate a dry-docking. To address this matter, the delegation of the Marshall Islands proposed the insertion of a footnote in the aforementioned paragraph, as follows:

"2.1.7 Particular attention should be given to verifying that the survey for issuance of the current IAFS Certificate matches the dry-dock period listed in the ship's log(s)* and that only one tick box is marked for each of the substances controlled under Annex 1.

Footnote:

* This provision, regarding the matching of the survey with the dry-dock period, is not applicable for the survey referred to in operative paragraph 4 of resolution MEPC.331(76)."

6.9 In the ensuing discussion, there was overwhelming support for this proposal. Therefore, the Sub-Committee agreed to the addition of this footnote in paragraph 2.1.7 of the 2022 Guidelines for inspection of anti-fouling systems on ships, and requested the Secretariat to implement this addition in the final report of the session.

6.10 In conclusion, the Sub-Committee agreed to the draft texts of the 2022 Guidelines for brief sampling of anti-fouling systems on ships, 2022 Guidelines for inspection of anti-fouling systems on ships and 2022 Guidelines for survey and certification of anti-fouling systems on ships, together with the associated draft MEPC resolutions, set out in annexes 3, 4 and 5, respectively, with a view to their adoption by MEPC 78, and requested the Secretariat to conduct an editorial review of the texts prior to their submission for adoption.

6.11 In addition, the Sub-Committee invited the Committee to instruct the III Sub-Committee to review the *2022 Guidelines for inspection of anti-fouling systems on ships* with a view to them being added as a new appendix to a future version of the *Procedures for port State control*, in accordance with the methodology agreed by the Committees.

Update of the Inventory of Hazardous Materials under the Hong Kong Convention

6.12 The Sub-Committee agreed that there was no need for an update to the list of materials for the Inventory of Hazardous Materials under the Hong Kong Convention to include cybutryne when the respective controls entered into force, as the existing relevant text in appendix I of the Hong Kong Convention was generic enough.

6.13 On the other hand, the Sub-Committee noted that there might be a need to consider amending the *2015 Guidelines for the development of the Inventory of Hazardous Materials* (resolution MEPC.269(68)), which contained more specific guidance currently limited to organotin compounds.

Completion of the work on the output

6.14 In light of the above, the Sub Committee invited the Committee to note that the work on output 2.19 (Revision of guidelines associated with the AFS Convention as a consequence of the introduction of controls on cybutryne) had been completed.

7 REVIEW OF THE 2011 GUIDELINES FOR THE CONTROL AND MANAGEMENT OF SHIPS' BIOFOULING TO MINIMIZE THE TRANSFER OF INVASIVE AQUATIC SPECIES (RESOLUTION MEPC.207(62))

7.1 The Sub-Committee recalled that PPR 8 had re-established the Correspondence Group on Review of the Biofouling Guidelines, under the coordination of Norway.

7.2 The Sub-Committee recalled also that MEPC 76 had extended the target completion year of this output to 2023, and had instructed the Sub-Committee to consider document MEPC 76/13/2 (BIMCO and ICS) under this agenda item and to advise the Committee accordingly.

7.3 The Sub-Committee had for its consideration the following documents:

- .1 PPR 9/7 (Norway), containing the report of the Correspondence Group on Review of the Biofouling Guidelines, which included, inter alia, a list of issues requiring further specific consideration and conclusion, and proposing that the Correspondence Group should be re-established to finalize the revised Guidelines after PPR 9, to be ready for the Sub-Committee's approval at PPR 10 in 2023;
- .2 PPR 9/7/1 (Chile), providing information on Chile's experience with regard to measures it had developed in respect of hull cleaning to prevent biofouling and the introduction of invasive species, and requesting the Sub-Committee to encourage Member States to submit their experiences in order to enhance the revision of the Biofouling Guidelines;
- .3 PPR 9/7/2 (China), providing comments on document PPR 9/7, proposing that further consideration be given to the recommended maximum interval between inspections of target areas defined as low-risk and suggesting that the inspection of biofouling be conducted, taking into consideration the requirements on the inspection of the exterior of the ship's bottom, in accordance with the Cargo Ship Safety Construction Certificate;
- .4 PPR 9/7/3 (ICS, BIMCO and INTERTANKO), reporting on the results of a survey asking shipowners and other stakeholders about their biofouling management and how the results may be used to support the review of the Biofouling Guidelines, and proposing that risk-based categorization should be carefully planned and needed further development by the Correspondence Group, and that risk-based categorization of ships should consider the measures established by ships in accordance with the Biofouling Management Plan and/or the planned maintenance system (PMS);

- .5 PPR 9/7/4 (Bahamas, et al.), providing comments on document PPR 9/7, and proposing that the concerns on cost burden due to frequent cleaning in dry dock and the practicability of cleaning be taken into account at the Correspondence Group to be re-established at this session;
- .6 PPR 9/INF.4 (Norway), containing comments received during the final round of the work of the Correspondence Group on Review of the Biofouling Guidelines;
- .7 PPR 9/INF.6 (Belgium), providing information about in-water hull cleaning procedures in Belgian ports and proposing to include this method as a best practice in the review of the Biofouling Guidelines;
- .8 PPR 9/INF.12 (Argentina), providing information on actions to minimize biofouling through the implementation of the Biofouling Guidelines and the *Guidance for Minimizing the Transfer of Invasive Aquatic Species as Biofouling (Hull Fouling) for Recreational Craft* (MEPC.1/Circ.792);
- .9 PPR 9/INF.19 (ICS, BIMCO and INTERTANKO), containing a report on the results of a survey asking shipowners and other stakeholders about their biofouling management, and presenting the results of the survey together with possible explanations related to the work of the Sub-Committee;
- .10 PPR 9/INF.24 (Secretariat), containing the report commissioned by the Global Industry Alliance (GIA) for Marine Biosafety, established under the GEF-UNDP-IMO GloFouling Partnerships project, to identify existing and impending regulations and standards related to biofouling management, including recommendations based on its findings that could be considered by the Correspondence Group on Review of the Biofouling Guidelines; and
- .11 MEPC 76/13/2 (BIMCO and ICS), providing information on an industry standard on in-water cleaning with capture, which was published in January 2021, suggesting that it be included in the review of the Biofouling Guidelines, expressing the view that this standard and the accompanying explanatory notes can be of valuable support to the ongoing work on the review of the Guidelines, and proposing that this document be sent to the re-established Correspondence Group on Review of the Biofouling Guidelines for its further consideration.

Instructions to the Working Group on Marine Biosafety

7.4 Considering the reduced time available during virtual meetings, the Sub-Committee referred all of the above-mentioned documents directly to the Working Group on Marine Biosafety for detailed consideration, having noted that all proposals were highly technical.

7.5 The Sub-Committee instructed the Working Group on Marine Biosafety established under agenda item 6 (see paragraph 6.5) to:

- .1 prepare draft terms of reference for the re-establishment of the Correspondence Group on Review of the Biofouling Guidelines, taking into account documents PPR 9/7, PPR 9/7/1, PPR 9/7/2, PPR 9/7/3 and PPR 9/7/4, as well as the information in documents PPR 9/INF.4, PPR 9/INF.6, PPR 9/INF.12, PPR 9/INF.19, PPR 9/INF.24 and MEPC 76/13/2; and

- .2 if time permits, consider any issues that may benefit from discussion in order to better prepare for the work to be carried out by the re-established Correspondence Group on Review of the Biofouling Guidelines.

Report of the Working Group

7.6 Having considered the relevant parts of the report of the Working Group (PPR 9/WP.3, paragraphs 25 to 34 and annex 5), the Sub-Committee approved the report in general and took action, as described in paragraphs 7.7 to 7.9.

7.7 The Sub-Committee re-established the Correspondence Group on Review of the Biofouling Guidelines with the following terms of reference:

- .1 finalize the draft revised Biofouling Guidelines, with a view to approval by PPR 10, using the annex to document PPR 9/7 as the basis, including the further consideration of the issues highlighted in paragraphs 19 to 41 and 48 to 49 of document PPR 9/7, taking into account the information and comments in documents PPR 9/7/1, PPR 9/7/2, PPR 9/7/3, PPR 9/7/4, PPR 9/INF.4, PPR 9/INF.6, PPR 9/INF.12, PPR 9/INF.19, PPR 9/INF.24 and MEPC 76/13/2, as appropriate, and taking also into account the comments made at PPR 9; and
- .2 submit a report to PPR 10.

7.8 In this regard, the Sub-Committee encouraged interested Member States and international organizations to contact the Coordinator¹ of the Correspondence Group, with a view to participating and contributing to the work of that Group.

7.9 In addition, the Sub-Committee noted the Working Group's discussions on issues relating to the revision of the Biofouling Guidelines and that they would be further considered in the Correspondence Group that would report to PPR 10.

8 REDUCTION OF THE IMPACT ON THE ARCTIC OF BLACK CARBON EMISSIONS FROM INTERNATIONAL SHIPPING

8.1 The Sub-Committee recalled that MEPC 77 had noted the deliberations of PPR 7 and PPR 8 regarding the reduction of the impact on the Arctic of Black Carbon emissions from international shipping, had endorsed the terms of reference for this output set out in paragraph 5.23 of document PPR 8/13, and had agreed to extend the target completion year of the output to 2023.

8.2 The Sub-Committee had for its consideration the following documents submitted to this session:

- .1 PPR 9/8 (Finland), providing a summary of three Black Carbon measurement campaigns conducted using the three methods identified by the Organization (photoacoustic spectroscopy (PAS), laser-induced incandescence (LII), and

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filter smoke number (FSN)); and concluding that although overall the three candidate methods were feasible for measurement, the FSN method was shown to be especially suitable for measurement of Black Carbon emissions from the marine diesel engine exhaust;

- .2 PPR 9/8/1 (Denmark and Finland), providing draft guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping by specifying recommendations for the testing, survey and certification of marine diesel engines (following the principles of the NO_x Technical Code, 2008, as amended), exhaust gas treatment systems, and low-emission fuels, in combination or individually, to ensure low Black Carbon emissions from the engine, the equipment installed, or the fuel used;
- .3 PPR 9/8/2 (WWF et al.), stressing the urgent need for action to reduce Black Carbon emissions from international shipping; and proposing priority measures for rapid implementation including mandatory measures as follows: 1) further development and use of diesel particulate filters or electrostatic precipitators; 2) the expansion and/or establishment of additional Emission Control Areas (ECAs); 3) strengthened EEXI and EEDI requirements to significantly reduce GHG and Black Carbon emissions in line with 1.5°C warming trajectory; and 4) the promotion and use of onshore power while in port;
- .4 PPR 9/8/3 (FOEI et al.), highlighting the need for urgent action to reduce ship Black Carbon emissions impacting the Arctic and stating that the key to reducing Black Carbon emissions was the adoption of binding measures including those aimed at improving the quality of the fuels used on board ships; and
- .5 PPR 9/8/4 (IMarEST), providing the initial outline of a control measure to reduce Black Carbon actually emitted from the exhaust duct, which should: 1) control Black Carbon on the basis of the measured Black Carbon emissions in the exhaust of each marine diesel engine when operating in Arctic waters; 2) be technology and process neutral; 3) use FSN as the in-service measurement method; 4) set a limit value – or values – as found appropriate; and 5) establish the application criteria which sufficiently cover the intended Black Carbon sources to be controlled.

8.3 The Sub-Committee had also been forwarded by MEPC 77 the following documents for its information:

- .1 MEPC 76/INF.43 (China), providing information on Black Carbon measurements collected from the actual operation of two 180,000 DWT bulk carriers of the same series with the same main engine and auxiliary engines and presenting an analysis of the influence of different factors on Black Carbon emissions;
- .2 MEPC 76/INF.44 (China), providing measurement results regarding the impact of the marine fuel quality (sulphur content and cetane number), lubricating oil type, speed, engine load, fuel injection characteristics, engine type, after-treatment system, etc. on Black Carbon emissions; showing that the Black Carbon emission values obtained by FSN and PAS measurement methods had a good overlap and a good correlation on different engines;

identifying the factor with the largest influence weight on Black Carbon emissions from marine engines on a preliminary basis being excess air coefficient; and providing input for the Committee to introduce reasonable measures to reduce Black Carbon emissions from Arctic shipping;

- .3 MEPC 76/INF.45 (China), providing information on a measurement campaign conducted by China to study the effect of fuel properties and engine types on the emission characteristics of Black Carbon from ships, including results of particulate matter components analysis (including elemental carbon (EC) and organic carbon (OC)), element type analysis, aliphatic and aromatic analysis, and ionic compositions) based on actual ship measurements; and
- .4 MEPC 77/INF.11 (China), providing the results of an investigation on elementary characteristics of Black Carbon particulate emissions from marine low-speed, two-stroke diesel engine fuelled with heavy fuel oil (HFO) at different loads, an analysis of the significant changes of nanostructure, particle size distribution, and information on the spatial distribution of the main metal elements included in Black Carbon elementary particles.

8.4 In the ensuing discussion, which was limited due to time constraints, all delegations that spoke supported the further consideration of all the above documents by the Working Group on Prevention of Air Pollution from Ships.

8.5 Several delegations stressed that the Organization should aim at developing effective regulatory measures to control Black Carbon emissions from ships and, in accordance with point .1 of the terms of reference for this output, supported, as a starting point, the further development in a correspondence group of draft guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping, using the annex to document PPR 9/8/1 as a basis. One delegation highlighted that engine characteristics affecting Black Carbon emissions should be taken into account in the further development of recommended emission thresholds for marine diesel engines.

8.6 Several other delegations, in recalling that Black Carbon was not currently regulated under MARPOL Annex VI, expressed concerns regarding the proposal set out in document PPR 9/8/1, including creating linkages in voluntary guidelines with mandatory requirements in MARPOL Annex VI, e.g. references to the IAPP Certificate. Several delegations and observer organizations highlighted that since Black Carbon formation did not follow the same patterns as NO_x formation, it was not appropriate to use the existing NO_x control framework for the control of Black Carbon emissions from ships. Some of these delegations also highlighted the need to stick to the terms of reference and scope agreed by the Committee, i.e. impact on the Arctic of emissions of Black Carbon from international shipping. Some delegations also highlighted the need to clarify whether proposals for onboard monitoring and control of Black Carbon emissions would be applicable to all engines or only new engines.

8.7 Several delegations, in recalling the scale and seriousness of climate change in the Arctic, as also stressed in recent IPCC reports and by COP 26, supported the adoption of a mandatory switch to distillates for ships navigating in the Arctic, and that, to this end, the Sub-Committee should prioritize the development of guidance on how to implement resolution MEPC.342(77) on *Protecting the Arctic from shipping Black Carbon emissions*. These delegations also highlighted that the Organization should focus its efforts on the utilization of Diesel Particulate Filters (DPFs) and the development of fuel standards and aromatic content as opposed to engine standards.

8.8 Regarding measurement methods, several delegations, in referring in particular to document PPR 9/8 (Finland), reiterated that the three measurement methods selected by the Organization (FSN, PAS and LII) were appropriate and correlated well with each other, and that the FSN method was shown to be especially suitable for the measurement of Black Carbon emissions from the marine diesel engine exhaust.

8.9 The delegation of Canada provided an oral update on the efforts of an international Technical Working Group (TWG) developing a standardized methodology for the sampling, conditioning and measurement of Black Carbon from marine engines. The Sub-Committee noted that the efforts of the TWG had been primarily directed towards developing a state of knowledge document and a list of research gaps; and that the TWG was moving forward with a round-robin inter-laboratory comparison exercise to compare and evaluate the performance of various Black Carbon instruments (FSN, PAS and LII) being used for measurements of marine engine Black Carbon emissions. The delegation of Canada highlighted that a specific measurement and reporting protocol would be developed by the TWG and that the data gathered from the round-robin exercise and its results may inform the development of a standardized calibration and performance verification of instruments used to measure Black Carbon emissions from marine engines.

Instructions to the Working Group on Prevention of Air Pollution from Ships

8.10 Following consideration, the Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships established under agenda item 10 (see paragraph 10.21) to prepare draft terms of reference for a Correspondence Group on Prevention of Air Pollution from Ships, taking into account the terms of reference for the output on "Reduction of the impact on the Arctic of Black Carbon emissions from international shipping" agreed by MEPC 77, relevant documents submitted to MEPC 76, MEPC 77, PPR 7, and PPR 9, and comments made in plenary on specific issues such as on NO_x control and Black Carbon formation.

Report of the Working Group on Prevention of Air Pollution from Ships

8.11 During the consideration of the relevant parts of the report of the Working Group on Prevention of Air Pollution from Ships (PPR 9/WP.4, paragraphs 4 to 13 and annexes 1 and 6), the observers from FOEI and CSC made statements stressing the urgency of taking mandatory action to reduce emissions of Black Carbon from shipping. The full statements are set out in annex 16.

8.12 Having noted the Working Group's discussion on reduction of the impact on the Arctic of emissions of Black Carbon from international shipping, the Sub-Committee took action as described in paragraphs 8.13 to 8.15.

Relations with the International Organization for Standardization

8.13 The Sub-Committee invited the observer from ISO to continue to report on its relevant work for fuel characterization. The corresponding statement by the observer from ISO is set out in annex 16.

Establishment of a correspondence group

8.14 The Sub-Committee established the Correspondence Group on Prevention of Air Pollution from Ships to progress the work relating to the reduction of the impact on the Arctic of Black Carbon emissions from international shipping intersessionally, with terms of reference as set out in paragraph 19.23.

8.15 The observer from IACS informed the Sub-Committee that, considering the fundamental nature of the concerns with the basis of proposals in document PPR 9/8/1 reflected in paragraph 8.6, IACS did not agree to use document PPR 9/8/1 as a basis; however, considered it a good starting point for discussion in the Correspondence Group on Prevention of Air Pollution from Ships.

9 STANDARDS FOR SHIPBOARD GASIFICATION OF WASTE SYSTEMS AND ASSOCIATED AMENDMENTS TO REGULATION 16 OF MARPOL ANNEX VI

9.1 The Sub-Committee had for its consideration document PPR 9/9 (Panama), containing the full text of the draft standard specification or guidelines for thermal waste treatment devices, and superseding the previous documents submitted by Panama on the subject matter (PPR 7/10 and PPR 7/INF.12).

9.2 Owing to time constraints, the Sub-Committee agreed to refer document PPR 9/9 directly to the Working Group on Prevention of Air Pollution from Ships, with a view to the Working Group including it in draft terms of reference for a Correspondence Group on Prevention of Air Pollution from Ships.

Instructions to the Working Group on Prevention of Air Pollution from Ships

9.3 The Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships established under agenda item 10 (see paragraph 10.21), taking into consideration document PPR 9/9, to prepare draft terms of reference for the Correspondence Group on Prevention of Air Pollution from Ships to progress this matter intersessionally.

Report of the Working Group on Prevention of Air Pollution from Ships

9.4 Having noted the discussion of the Working Group on Prevention of Air Pollution from Ships on standards for shipboard gasification of waste systems and associated amendments (PPR 9/WP.4, paragraphs 14 to 18 and annex 1), the Sub-Committee agreed to forward document PPR 9/9 to the Correspondence Group on Prevention of Air Pollution from Ships, with terms of reference set out in paragraph 19.23.

10 EVALUATION AND HARMONIZATION OF RULES AND GUIDANCE ON THE DISCHARGE OF DISCHARGE WATER FROM EXHAUST GAS CLEANING SYSTEMS (EGCS) INTO THE AQUATIC ENVIRONMENT, INCLUDING CONDITIONS AND AREAS

10.1 The Sub-Committee recalled that MEPC 74 had approved, in principle, a new output on "Evaluation and harmonization of rules and guidance on the discharge of liquid effluents from EGCS into waters, including conditions and areas" in the 2020-2021 biennial agenda of the PPR Sub-Committee and the provisional agenda for PPR 7, with a target completion year of 2021 (MEPC 74/18, paragraph 14.11), while also requesting PPR 7 to refine the title and the scope of the output and advise MEPC 75 accordingly.

10.2 The Sub-Committee recalled also that MEPC 77 had agreed:

- .1 for the title of output 1.23 to be "Evaluation and harmonization of rules and guidance on the discharge of discharge water from EGCS into the aquatic environment, including conditions and areas"; and
- .2 to the scope of work, as set out in annex 3 to document MEPC 77/WP.8, with a target completion year of 2022.

10.3 The Sub-Committee had for its consideration the following documents that had been submitted to this session:

- .1 PPR 9/10 (Republic of Korea), describing the parameters to be considered while developing a risk assessment that considered local environments, and data to be included in a database for evaluating hazardous substances in the discharge water from exhaust gas cleaning systems (EGCS);
- .2 PPR 9/10/1 (Japan), providing the background to and outline of combined draft guidelines for risk and impact assessments, as set out in document PPR 9/INF.10, on the basis of documents MEPC 76/9/2 (Austria et al.) and MEPC 76/INF.33 (Japan);
- .3 PPR 9/10/2 (China), presenting the reception and treatment practices of EGCS residues in some ports around the world together with the identified problems, and drawing attention to the management of EGCS residues, with a view to standardizing the delivery of EGCS residues in ports;
- .4 PPR 9/10/3 (New Zealand), presenting a summary of the methodology, preliminary results, key findings and recommendations from an environmental risk assessment of discharges from EGCS in New Zealand waters, which indicated, through modelling for 11 representative locations, that EGCS discharges had the highest potential impact in ports and other marine environments subject to high levels of ship activity; and highlighting that the final report found that management should be designed with this in mind, including consideration of areas not covered in the scope of the assessment;
- .5 PPR 9/10/4 (FOEI et al.), identifying the risks associated with EGCS wastewater discharges, recommending criteria that should be considered when risk and impact assessment guidelines are developed, and identifying local, regional and international regulatory instruments and measures which should be considered and included when a database containing such restrictions is being developed;
- .6 PPR 9/10/5 (CLIA), providing comments on document MEPC 76/9/2 (Austria et al.) and documents MEPC 76/9/6 and MEPC 76/INF.33 (Japan), in particular concerning procedure, the precautionary principle, impact assessments and regulatory aspects; proposing that the target completion year of the output be extended to 2023 to ensure sufficient time for consideration; and also proposing that the GESAMP-EGCS Task Team review the proposed draft guidelines presented in document PPR 9/INF.10 (Japan) and submit an initial report to PPR 10;
- .7 PPR 9/10/6 (Brazil), providing comments on document PPR 9/10/4 in relation to restrictions said to be imposed by the Brazilian Maritime Authority on the discharge of EGCS discharge water;
- .8 PPR 9/INF.2 (OSPAR Commission), providing information on the OSPAR Commission's work on discharge from EGCS into waters, including results of a questionnaire highlighting the lack of data regarding both the volume of EGCS discharges and the area where the discharges take place in the OSPAR Area, as well as important disparities in national regulations;

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- .9 PPR 9/INF.3 (CLIA), providing information comparing CO₂ lifecycle emissions of the two main options to comply with MARPOL Annex VI sulphur requirements, i.e. using low-sulphur fuels or using high-sulphur fuels in combination with an EGCS;
 - .10 PPR 9/INF.5 (Belgium), providing the results of a study on the impact of EGCS discharge water on the water quality in a Belgian estuary (the Scheldt) and in the port of Antwerp, whose objectives were to estimate contaminant concentrations in EGCS washwater and to assess the effects of EGCS discharge on water quality, with a focus on metals and polycyclic aromatic hydrocarbons (PAHs);
 - .11 PPR 9/INF.8 (CESA), summarizing a study, performed by the Danish Hydraulic Institute (DHI) on behalf of the EGCS System Association (EGCSA), whose objective was to evaluate the potential effects on the aquatic environment of discharge water from EGCS operated in open loop mode; and providing information on a risk assessment included in the report on the basis of a series of ecotoxicological studies of EGCS inlet and discharge water collected from four different ships during open-loop EGCS operation at sea;
 - .12 PPR 9/INF.10 (Japan), containing combined draft guidelines for risk and impact assessments that have been developed based on documents MEPC 76/9/2 and MEPC 76/INF.33 and suggesting using the annexed draft guidelines as a reference document for further discussion;
 - .13 PPR 9/INF.16 (Sweden), containing the results of a study on the impact on the marine environment of EGCS in Swedish waters, which suggests that the pressure of contaminants on many Swedish coastal waters is too high and, as a result, many coastal water basins have failed to reach good ecological status and none of the water basins have reached good chemical status (as defined by the EU Water Framework Directive (WFD));
 - .14 PPR 9/INF.17 (Sweden), providing a case study on the valuation of environmental impact of EGCS from shipping in the Baltic Sea, based on a scientific publication on the valuation of environmental impacts from shipping on the marine environment, whose aim was to develop a comprehensive framework on how different pressures from shipping degrade marine ecosystems, air quality and human welfare;
 - .15 PPR 9/INF.18 (Sweden), providing information on a study aiming to estimate the load of metals and PAH from shipping and leisure boating, relative to other sources, on the Baltic Sea and specifically to: identify the metals and PAHs with the highest load (tonnes/year) from ships and leisure boats; and compare these loads to other sources (rivers, atmospheric deposition and coastal point sources), in order to discuss how maritime shipping and leisure boats can reduce the loads of metals and PAHs to the Baltic Sea;
 - .16 PPR 9/INF.21 (Canada), containing a study by the International Council on Clean Transportation (ICCT), which had been contracted by Environment and Climate Change Canada to conduct a detailed literature review and to recommend emission factors for releases to air and water from ships using EGCS; and

- .17 PPR 9/INF.22 (FOEI et al.), summarizing the results of the first global assessment by the International Council on Clean Transportation (ICCT) of the mass of wastewater discharges expected from ships using EGCS, and showing, inter alia, that: absent additional regulations, ships with EGCS will emit at least 10 gigatonnes (Gt) of EGCS wastewater each year; approximately 80% of EGCS discharges occur within 200 nautical miles of shore; and there are hot spots in heavily trafficked regions.

10.4 The Sub-Committee also had for its consideration the following documents that had been forwarded to this session by MEPC 77:

- .1 MEPC 76/9/1 (ICES), recommending actions to reduce the impacts on the marine environment following wide-scale use of EGCS and the associated water discharge; and presenting the highlights of the second ICES Viewpoint entitled "EGCS discharge water from ships – risks to the marine environment and recommendations to reduce impacts" and of the background study on which the Viewpoint was based;
- .2 MEPC 76/9/2 (Austria et al.), providing early proposals for relevant draft guidelines and regulations, as set out in the appendix to the document, to address key aspects and develop the elements outlined in parts 1 to 4 of the draft scope of work agreed by PPR 7, with the aim of achieving early consensus on the scope and the way forward;
- .3 MEPC 76/9/6 (Japan), providing comments on document MEPC 76/9/2; expressing concerns on the proposed procedure in document MEPC 76/9/2; informing the Committee of the draft guideline for risk assessment of the discharge water from EGCS developed by Japan, as set out in the annex to document MEPC 76/INF.33 (Japan); and proposing, inter alia, that the target completion year of output 1.23 be extended to 2023 to ensure sufficient time for discussions, and that the GESAMP-EGCS Task Team be re-established to review the two draft guidelines for risk and impact assessment of discharge water from EGCS presented in documents MEPC 76/9/2 and MEPC 76/INF.33, and submit an initial report to PPR 9 and a final report to PPR 10;
- .4 MEPC 76/9/8 (FOEI et al.), providing comments on documents MEPC 76/9/1 (ICES) and MEPC 76/9/2 (Austria et al.); proposing that the title of output 1.23 be amended to "Evaluation and harmonization of rules and guidance on the discharge of discharge water from EGCS into the aquatic environment, including if, when, or where discharges should be allowed" based on the information contained in those and other documents; and supporting the call by ICES for a rapid transition to compliant fuels which meet the sulphur air emission limits without the use of EGCS;
- .5 MEPC 76/INF.5 (ICES), providing the background information referenced in document MEPC 76/9/1, specifically the ICES "Viewpoint" article entitled "EGCS discharge water from ships – risks to the marine environment and recommendations to reduce impacts" and the scientific report by Hassellöv et al. (2020) upon which the Viewpoint article was based;
- .6 MEPC 76/INF.11 (Belgium), providing the results of an analysis undertaken by Belgium on the potential impact of washwater effluents from EGCS on water acidification in the southern North Sea;

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- .7 MEPC 76/INF.33 (Japan), providing the draft guideline for risk assessment of the discharge water from EGCS in the annex to the document as a reference document for further discussion on output 1.23;
 - .8 MEPC 76/INF.38 (Cyprus), presenting a summary of the findings of the first phase of a study of an EGCS discharge water sampling and analysis, during which discharge water samples from 25 Cyprus-flagged vessels equipped with open-loop EGCS were sampled and analysed between July 2019 and October 2020;
 - .9 MEPC 76/INF.42 (China), introducing an updated method on the simulation of discharge and diffusion of liquid effluents from EGCS that is based on the operation modes of ships and three-dimensional hydrodynamic modelling of the specific water area, and may provide a profile on the behaviour and potential impact of the pollutants in the liquid effluents (washwater) discharged from EGCS;
 - .10 MEPC 75/10/5 (CLIA), providing comments on the report of the GESAMP Task Team on EGCS (PPR 7/INF.23), which, in CLIA's view, did not give sufficient consideration to the studies set out in documents MEPC 74/INF.24 (Japan), PPR 7/INF.18 (CLIA and INTERFERRY) and the information provided in document MEPC 74/INF.27 (CLIA), and inviting the Committee to ensure that further third-party evaluation of EGCS discharge water fully consider the three aforementioned studies as well as any updates or follow-on versions that become available in the time required;
 - .11 MEPC 75/INF.10 (Sweden), containing a report on the environmental impact assessment of discharge water from EGCs; and
 - .12 MEPC 75/INF.13 (Greece) containing an environmental impact assessment of EGCS effluent discharges by the Massachusetts Institute of Technology (MIT).

10.5 The Sub-Committee noted that all documents submitted to this session or forwarded by MEPC 77 under this agenda item had relevance to its consideration of risk assessment and impact assessment of the discharge of EGCS discharge water into the aquatic environment and EGCS residue delivery guidelines. In addition, the Sub-Committee noted that document PPR 9/INF.10 (Japan) contained draft guidelines for risk and impact assessments that had been developed based on documents MEPC 76/9/2 and MEPC 76/INF.33, and that annex 2 to document MEPC 76/9/2 contained draft EGCS residue delivery guidelines.

10.6 The Sub-Committee noted also that:

- .1 with regard to regulatory matters, in addition to document MEPC 76/9/2, which contained draft amendments to MARPOL Annex VI, several other documents submitted or forwarded to this session also related to regulatory matters, in particular documents PPR 9/10/3, PPR 9/10/4, PPR 9/10/5 (specifically paragraphs 16 to 18), PPR 9/10/6, PPR 9/INF.2, PPR 9/INF.22, MEPC 76/9/1 and MEPC 76/9/6 (specifically paragraphs 10 to 15); and
- .2 with regard to the database of substances, document PPR 9/10 and documents reporting the results of studies on EGCS discharge water should also be taken into account, namely documents PPR 9/INF.5, PPR 9/INF.8, PPR 9/INF.16, PPR 9/INF.17, PPR 9/INF.18, PPR 9/INF.21, MEPC 75/INF.10, MEPC 75/INF.13, MEPC 76/INF.5, MEPC 76/INF.11 and MEPC 76/INF.38, and the studies referred to in document MEPC 75/10/5.

10.7 In the ensuing discussion, all delegations that spoke supported the further consideration of all the above documents by the Working Group on Prevention of Air Pollution from Ships.

Development of guidelines for risk and impact assessment and delivery of EGCS residues

10.8 The Sub-Committee recalled Part 1-A (Risk assessment), Part 1-B (Impact assessment) and Part 2 (Delivery of EGCS residues) of the scope of work under this output as set out in annex 3 to document MEPC 77/WP.8.

10.9 Concerning the development of guidelines for risk assessment and impact assessment of the discharge of EGCS discharge water into the aquatic environment, the Sub-Committee:

- .1 agreed for the annex to document PPR 9/INF.10 to be used as a basis for the further development of the guidelines by the Working Group; and
- .2 welcomed, in general, document PPR 9/10, containing in appendix 1 a list of categories of factors to be collected at each stage for risk assessment; however, having noted that a number of delegations could not support the proposed risk-parameters and expressed reservations about the proposed step-wise approach, the Sub-Committee instructed the Working Group to further consider the document, taking into account the comments made in plenary.

10.10 Concerning the development of guidance on the delivery of EGCS residues, the Sub-Committee agreed for annex 2 to document MEPC 76/9/2 to be used as a basis for the further development of the guidance by the Working Group.

Finalization of the remaining work under this output

10.11 The Sub-Committee recalled Part 3 (Regulatory matters) and Part 4 (Database of substances) of the scope of work under this output, as set out in annex 3 to document MEPC 77/WP.8.

10.12 With regard to regulatory matters, several delegations, when referring to the proposed amendments to MARPOL Annex VI in annex 3 to document MEPC 76/9/2, expressed support to include, in MARPOL Annex VI, a specific reference to the ability of Member States to regulate EGCS discharges in ports, harbours, estuaries or other sea areas under their jurisdiction, also taking into account the risk assessment guidelines to be developed by the Organization, and to notify the Organization of any such local regulations and restrictions.

10.13 Several delegations recalled that the main focus under this output was to harmonize the assessment of risks of EGCS discharges to the aquatic environment in order to determine whether any restrictions or conditions were required, but regardless, and in accordance with international law, Member States were already in a position to introduce and enforce such restrictions in waters falling under their jurisdiction and therefore did not see the added value of any amendments to MARPOL Annex VI to that purpose.

10.14 In this regard, several delegations supported the proposed development of a database containing local/regional restrictions on the discharge of EGCS discharge water as part of the scope of work on regulatory matters, and made reference to the current lack of clarity with respect to the existence of some local restrictions.

10.15 Several delegations expressed the view that there was sufficient scientific evidence available already for agreeing to a ban of EGCS washwater discharges and that no further work on risk assessments was needed.

10.16 Several other delegations, while not excluding possible discharge restrictions in the future, could not support such a ban and favoured carrying out appropriate risk assessments, also underlining the importance of developing the guidelines on risk assessments, before considering the introduction of restrictions in certain areas.

10.17 Several delegations expressed the view that further scientific evidence would be needed before the introduction of any restrictions to EGCS discharges and that a ban may send the wrong message to industry which had invested in good faith in EGCS as an approved equivalent method to comply with IMO2020 under MARPOL Annex VI.

10.18 With regard to the establishment of a database of chemical and toxicological substances, as envisaged under Part 4 of the output, while several delegations supported the creation of the proposed database, there were divergent views in terms of the level of detail of such a database; whether such a database should be accommodated by the Organization or any other more appropriate entities; the associated costs; how to manage and ensure such a database would remain updated; and other practicalities related to the development and maintenance of such a database.

10.19 In this context, several delegations commented on the proposed extension of the target completion year of the output to 2023 in document PPR 9/10/5 (CLIA) and recalled that MEPC 77 had agreed to 2022 being the target completion year. In this regard, several delegations stressed that work at this session should focus on all elements of the agreed scope of work and that the target completion year should not be extended beyond. However, several other delegations were of the view that it would be difficult to realistically finalize all work at this session.

10.20 Following the discussion on regulatory matters and the proposed establishment of a database of chemical substances, the Sub-Committee agreed to instruct the Working Group to further consider how to best finalize the remaining work under this output.

Establishment of the Working Group on Prevention of Air Pollution from Ships

10.21 Subsequently, the Sub-Committee established the Working Group on Prevention of Air Pollution from Ships, and instructed it, taking into consideration all documents under this agenda item, as well as the comments and decisions made in plenary, and in accordance with the scope of work set out in annex 3 to document MEPC 77/WP.8, to:

- .1 develop a framework (guidelines) for risk and impact assessments of the discharge water from EGCS, using the annex to document PPR 9/INF.10 (Japan) as a basis, with a view to finalization at this session;
- .2 develop guidelines on the delivery of EGCS residues, using annex 2 to document MEPC 76/9/2 (Austria et al.) as a basis, with a view to finalization at this session; and
- .3 advise the Sub-Committee on how best to finalize the remaining work under this output.

Report of the Working Group on Prevention of Air Pollution from Ships

10.22 Having considered the relevant parts of the report of the Working Group on Prevention of Air Pollution from Ships (PPR 9/WP.4, paragraphs 19 to 59 and annexes 2 and 4), the Sub-Committee took action, as described in paragraphs 10.23 to 10.29.

Development of guidelines for risk and impact assessments of the discharge water from EGCS

10.23 The Sub-Committee noted the Working Group's discussion on the development of guidelines for risk and impact assessments of the discharge water from EGCS.

10.24 In this connection, the observer from CLIA made a statement recommending that further technical review of the draft guidelines prepared by the Working Group be undertaken. Additionally, the observer from CESA made an intervention regarding the lack of time for Member States and international organizations to submit commenting documents to MEPC 78, should the draft 2022 guidelines for risk and impact assessment of the discharge water from exhaust gas cleaning systems be agreed by the Sub-Committee; and suggesting to either extend the deadline for submitting commenting documents to four weeks before MEPC 78, or to defer the consideration of the draft guidelines for approval by MEPC 79. The statements by the observers from CESA and CLIA are set out in annex 16.

10.25 Subsequently, the Sub-Committee, agreed to the draft MEPC circular on the 2022 Guidelines for risk and impact assessments of the discharge water from exhaust gas cleaning systems, as set out in annex 6, with a view to its approval by MEPC 78.

Development of guidelines on the delivery of EGCS residues and stored discharge water

10.26 Having noted the Working Group's discussion on the development of guidelines on the delivery of EGCS residues and stored discharge water, the Sub-Committee agreed to the draft MEPC circular on the 2022 Guidance regarding the delivery of EGCS residues and stored discharge water to port reception facilities, as set out in annex 7, with a view to its approval by MEPC 78.

Finalization of the remaining work under this output

10.27 The Sub-Committee noted the Group's discussion on how best to finalize the remaining work on "regulatory matters" and on the "development of a database on substances identified in EGCS discharge water" under this output regarding the discharge of EGCS discharge water.

10.28 In this regard, the Sub-Committee invited the Secretariat to explore the possible development of a database of local/regional regulations on EGCS discharges within the MARPOL Annex VI module in GISIS.

10.29 The Sub-Committee agreed to postpone part 3 (Regulatory matters) and part 4 (Database of substances) of the scope of work of this output and to request MEPC 78 to:

- .1 extend the target completion year to 2025;
- .2 agree not to include the output in the provisional agenda for PPR 10; and
- .3 consider reinstating the output in the provisional agenda of a future session of the Sub-Committee (after PPR 10) subject to further proposals to the Committee on parts 3 and 4 of the scope of work of the output by interested Member States and international organizations.

11 DEVELOPMENT OF AMENDMENTS TO MARPOL ANNEX VI AND THE NO_x TECHNICAL CODE ON THE USE OF MULTIPLE ENGINE OPERATIONAL PROFILES FOR A MARINE DIESEL ENGINE

11.1 The Sub-Committee recalled that MEPC 73 had agreed to the inclusion of a new output on "Development of amendments to MARPOL Annex VI and the NO_x Technical Code on the use of multiple engine operational profiles for a marine diesel engine" in the post-biennial agenda of the Committee, assigning the PPR Sub-Committee as an associated organ, with two sessions needed to complete the work.

11.2 The Sub-Committee also recalled that MEPC 73 had agreed to the following scope of work for the output:

"Taking into account the concept of Not to Exceed (NTE) Zones, as described in documents MEPC 73/11/1 and MEPC 73/INF.15, clarify whether multiple engine operational profiles are allowed, and if so, what regulatory controls should be applied, noting these may also need to include amendments to MARPOL Annex VI and the NO_x Technical Code 2008; and if not allowed, then what amendments would be necessary to MARPOL Annex VI and the NO_x Technical Code 2008 to explicitly prohibit multiple engine operational profiles."

11.3 The Sub-Committee further recalled that:

- .1 owing to time constraints, PPR 7 had agreed to defer all documents concerning multiple engine operational profiles to PPR 8 for detailed consideration;
- .2 the output on "Development of amendments to MARPOL Annex VI and the NO_x Technical Code on the use of multiple engine operational profiles for a marine diesel engine" had not been included in the provisional agenda of PPR 8 due to MEPC 75 having approved a reduced provisional agenda for that session of the Sub-Committee; and
- .3 MEPC 77 had instructed PPR 9 to consider document MEPC 77/11/1 (Finland et al.) and advise the Committee accordingly.

11.4 In this connection, the Sub-Committee had for its consideration the following documents:

- .1 PPR 9/11(EUROMOT), discussing further aspects to the work item on the use of multiple engine operational profiles, proposing a concept for off-cycle NO_x emission control assessment, taking into account the concept of Not to Exceed (NTE) Zones, and also proposing draft amendments to MARPOL Annex VI and the NO_x Technical Code 2008;
- .2 PPR 9/11/1 (IACS), discussing the use of multiple Engine Operational Profiles, which are linked to the certification test cycles; noting that the current MARPOL Annex VI and the NO_x Technical Code 2008 test cycle requirements do not adequately address application to variable-speed/variable-load engines used for main propulsion or ship power generation; and proposing amendments to clarify test cycle application;
- .3 PPR 9/11/2 (EUROMOT), providing further details on screening criteria for Tier II engines and a proposal for the entry into force of requirements regarding the use of multiple engine operational profiles and off-cycle NO_x emission control assessment procedure as set out in document PPR 9/11;

- .4 PPR 9/11/3 (United States), commenting on the proposals set out in document PPR 9/11 to amend MARPOL Annex VI and the NO_x Technical Code 2008 and proposing further modifications to the draft amendments proposed in document PPR 9/11 on multiple engine operational profiles;
- .5 PPR 9/11/4 (Finland), commenting on document PPR 9/11/1, providing further considerations to clarify test cycle applications regarding variable-speed/variable-load generator engines, and proposing new definitions related to selection of test cycles;
- .6 PPR 9/11/5 (IMarEST), expressing support in general for the proposals outlined in document PPR 9/11; proposing that they should be covered solely by additions or amendments to the NO_x Technical Code 2008, since the proposals all relate to marine diesel engine certification, hence no amendments to regulation 13 of MARPOL Annex VI would be necessary; commenting that the NTE concept, and MEOP as a sub-set thereof, are seen as relevant only to electronically controlled engines where there is far greater potential flexibility in terms of operating characteristics as compared to the mechanically controlled engines on which the existing NO_x Technical Code 2008 is fundamentally based; and recommending that related provisions scattered throughout the Code should be covered by a new dedicated chapter 8;
- .7 MEPC 77/11/1 (Finland et al.), proposing an extension of the existing output 2.15 to address test cycles and providing related draft amendments to the NO_x Technical Code 2008 with a view to improving section 3.2 of the NTC 2008 to permit its consistent application;
- .8 PPR 7/13 (United States), providing draft amendments to MARPOL Annex VI and the NO_x Technical Code to specify when the use of multiple operational profiles would be allowed (i.e. instances where an engine is certified to multiple emission tiers and where the engine can operate on dual fuels) and recommending the introduction of NTE zones to address other ship operating concerns;
- .9 PPR 7/13/1 (EUROMOT), providing comments on documents MEPC 73/11/1 and MEPC 73/INF.15 and input to the discussion on multiple operational profiles, including the view that the current definitions and relevant regulations of MARPOL Annex VI (regulations 2.6, 2.13 and 13.8) should represent the legal ground for compliant use of Engine Operational Profiles (EOPs); proposing that consideration be given to the development of explanatory guidelines for the use of multiple EOPs, including guidance on how Administrations may assess auxiliary control devices and their documentation; and supporting the consideration of NTE Zones;
- .10 PPR 7/13/2 (Finland), proposing to clarify the use of certification test cycles given in the NO_x Technical Code 2008 by adding three new definitions to chapter 1 of the NO_x Technical Code 2008 for main propulsion, diesel electric drive and auxiliary engine;
- .11 PPR 7/13/3 (Japan), proposing that multiple engine profiles should be allowed subject to a robust verification mechanism being in place; a "worst case" verification method to ensure compliance with regulation 13 of MARPOL Annex VI in the case of multiple EOPs being used; and a draft unified interpretation of the NO_x Technical Code 2008 to clarify how the "worst-case" method could be conducted;

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- .12 MEPC 73/11/1 (United States), reiterating the concerns of the United States regarding the use of multiple engine operation profiles and proposing an approach known as "Not to Exceed (NTE) Zones" to ensure that NO_x reductions were achieved when an engine would be operating at modes not included in the certification test cycle; and
 - .13 MEPC 73/INF.15 (United States), providing information about the development of NTE Zones in the United States Federal marine diesel engine regulatory process.

11.5 Owing to time constraints, the Sub-Committee referred all of the above-mentioned documents directly to the Working Group on Prevention of Air Pollution from Ships for detailed consideration, having noted that all proposals were highly technical.

Instructions to the Working Group on Prevention of Air Pollution from Ships

11.6 The Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships established under agenda item 10 (see paragraph 10.21) to take into account the relevant documents submitted to MEPC 71, MEPC 73, MEPC 77, PPR 7 and PPR 9, and in accordance with the scope of work agreed at MEPC 73 (MEPC 73/19, paragraph 15.18):

- .1 clarify whether multiple engine operational profiles are allowed; and consequently, prepare terms of reference for a Correspondence Group on Prevention of Air Pollution from Ships to identify what regulatory controls and/or amendments to MARPOL Annex VI and the NO_x Technical Code 2008 may be needed; and
- .2 consider extending the scope of output 2.15 to also address test cycles and related amendments of the NO_x Technical Code 2008, taking into account document MEPC 77/11/1 and advise the Sub-Committee accordingly.

Report of the Working Group on Prevention of Air Pollution from Ships

11.7 Having noted the discussion of the Working Group on Prevention of Air Pollution from Ships on possible use of multiple engine operational profiles (PPR 9/WP.4, paragraphs 60 to 69 and annex 1), including the agreement of the Group to further discuss the extension of the scope to also cover engine test-cycles, as proposed in document MEPC 77/11/1, in the Correspondence Group on Prevention of Air Pollution from Ships, the Sub-Committee agreed to forward all the documents considered under this agenda item to the Correspondence Group on Prevention of Air Pollution from Ships, with the terms of reference set out in paragraph 19.23.

12 DEVELOPMENT OF MEASURES TO REDUCE RISKS OF USE AND CARRIAGE OF HEAVY FUEL OIL AS FUEL BY SHIPS IN ARCTIC WATERS

12.1 The Sub-Committee recalled that at its previous session it had agreed, in principle, to the version of the draft guidelines on mitigation measures to reduce risks of use and carriage for use of HFO as fuel by ships in Arctic waters set out in annex 2 to document PPR 8/6 (Russian Federation) being advanced and finalized by a drafting group at this session.

12.2 The Sub-Committee also recalled that it had requested:

- .1 the NCSR Sub-Committee to review section 2 (Navigational measures) and section 5 (Communication) of the draft guidelines;

- .2 the SDC Sub-Committee to review paragraph 4.4 concerning the location of fuel tanks; and
- .3 the HTW Sub-Committee to review section 7 (Familiarization, training and drills),

with a view to being advised at this session of the outcome of their consideration.

12.3 In this connection, the Sub-Committee noted the following views that had been expressed at SDC 8:

- .1 the text of paragraph 4.4 states that "...HFO should preferably be either located at a distance of not less than 0.76m from the outer plating..."; however, the figure showed the tank placed directly onto the bottom plating, which would give no bottom protection and thus indicated a mismatch between the guideline text and its associated figure;
- .2 there was a general disconnect between the text and the figure and, if the text was assumed to be correct, there should be two illustrative figures: one showing a protection of 0.76 m from the tank to the outer plating (outer sides and bottom) and the other showing the entire tank below the waterline; and
- .3 clarification was needed if it was the intention to allow an HFO tank to be placed directly to the outer shell plating as long as the tank was fully submerged in all loading conditions.

12.4 The Sub-Committee also noted that SDC 8 had agreed that clarification was needed with respect to the above comments and remarks and, consequently, had invited PPR 9 to advise SDC 9 accordingly.

12.5 With regard to the relevant outcome of HTW 8, the Sub-Committee noted that:

- .1 in considering the relevant sections of the draft guidelines, HTW 8 had noted the view expressed that those section(s) contained duplicative provisions both in the context of the Polar Code and the STCW Code and could even go beyond the scope of the latter; and
- .2 HTW 8 had agreed to postpone consideration to HTW 9 and had invited interested Member States and international organizations to submit documents to HTW 9, taking into account the comments made at HTW 8.

12.6 The delegation of Norway commented that paragraph 4.4 of the draft guidelines on mitigation measures to reduce risks of use and carriage for use of HFO as fuel by ships in Arctic waters should be reviewed at PPR 10, having concurred with the views expressed during SDC 8, specifically that:

- .1 there was a general disconnect between the text and the figure in paragraph 4.4 of the draft guidelines;
- .2 there should be two illustrative figures: one showing a protection of 0.76 m from the tank to the outer plating and the other showing the entire tank below the waterline; and

- .3 clarification was necessary, due to the text implying that the protection provided by a fully submerged HFO tank placed directly against the outer shell plating was equal to the protection by an HFO tank located 0.76 m from a ship's outer side and bottom plating.

12.7 The delegation of the Russian Federation:

- .1 recognized the need for the location of the fuel tanks to be described and depicted in more detail;
- .2 acknowledged that, while the figure in paragraph 4.4 of the draft guidelines showed one of the acceptable options for the location of the fuel tank in which damage does not lead to a fuel spill, it was difficult to convey all the nuances of a safe fuel tank location in one drawing and therefore considered it necessary to supplement the figure;
- .3 confirmed that a fuel tank located directly adjacent to a ship's outer skin was acceptable, provided that the tank was located below the waterline and the hydrostatic balance condition was also met;
- .4 explained that at any point of the ship's outer skin one of the following conditions must be met: either the distance to the fuel tank must be at least 0.76 m; or the hydrostatic balance condition must be fulfilled, meaning that all parts of the tank must be located below the waterline in all loading conditions, so that the pressure created by the static column of fuel oil is less than the water pressure at any damage site, thus resulting in water flowing into the tank rather than fuel leaking out in the event of a fuel tank wall being damaged and breached; and
- .5 expressed its intention to prepare and submit a corresponding document to PPR 10.

12.8 Having noted the input provided by the SDC and HTW Sub-Committees, and the comments outlined in paragraphs 12.6 and 12.7 above, the Sub-Committee agreed to take them into account when finalizing the draft guidelines. In this regard, owing to NCSR 9 having been scheduled to take place after PPR 9, the Sub-Committee agreed to keep this agenda item in abeyance until its next session at which point it could consider the relevant outcome of NCSR 9.

Extension of the target completion year

12.9 Consequently, the Sub-Committee invited the Committee to extend the target completion year for the output to 2023.

13 DEVELOPMENT OF NECESSARY AMENDMENTS TO MARPOL ANNEXES I, II, IV, V AND VI TO ALLOW STATES WITH PORTS IN THE ARCTIC REGION TO ENTER INTO REGIONAL ARRANGEMENTS FOR PORT RECEPTION FACILITIES (PRFS)

13.1 The Sub-Committee recalled that MEPC 74 had agreed to include a new output in the post-biennial agenda of MEPC on "Development of necessary amendments to MARPOL Annexes I, II, IV, V and VI to allow States with ports in the Arctic region to enter into regional arrangements for port reception facilities", assigning the PPR Sub-Committee as the associated organ, with two sessions assigned/needed to complete the work. The Sub-Committee also recalled that MEPC 76 had subsequently approved the provisional agenda for PPR 9, which included this output.

13.2 The Sub-Committee had for its consideration document PPR 9/13 (Canada et al.), proposing draft amendments to MARPOL Annexes I, II, IV, V and VI to allow the obligation to provide adequate port reception facilities in the Arctic to be met through regional arrangements; and associated draft amendments to the *2012 Guidelines for the Development of a Regional Reception Facility Plan* (resolution MEPC.221(63)).

13.3 Having noted general support for the proposals in document PPR 9/13, the Sub-Committee agreed to refer the proposed amendments to a drafting group for finalization.

Establishment of the Drafting Group on Regional Arrangements for Port Reception Facilities in the Arctic

13.4 The Sub-Committee established the Drafting Group on Regional Arrangements for Port Reception Facilities in the Arctic and instructed it, taking into consideration the comments and decisions made in plenary, to finalize:

- .1 the draft amendments to MARPOL Annexes I, II, IV, V and VI, using annex 1 to document PPR 9/13 as a basis; and
- .2 the draft amendments to the *2012 Guidelines for the Development of a Regional Reception Facility Plan* (resolution MEPC.221(63)), using annex 2 to document PPR 9/13 as a basis, and prepare an associated draft MEPC resolution.

Report of the Drafting Group

13.5 Having considered the report of the Drafting Group (PPR 9/WP.6), the Sub-Committee approved it in general and took action, as described in paragraphs 13.6 and 13.8.

13.6 The Sub-Committee agreed to the draft amendments to MARPOL Annexes I, II, IV, V and VI, as set out in annex 8, with a view to approval by MEPC 78 and subsequent adoption by MEPC 79 (see also paragraph 19.29 and 19.30).

13.7 The Sub-Committee also agreed to the draft amendments to the *2012 Guidelines for the development of a regional reception facility plan* (resolution MEPC.221(63)) along with the associated draft MEPC resolution, as set out in annex 9, with a view to adoption by MEPC 79, in conjunction with the adoption of the above-mentioned draft amendments to MARPOL Annexes I, II, IV, V and VI.

Completion of the work on the output

13.8 The Sub-Committee invited the Committee to note that the work on this output had been completed.

14 REVISION OF MARPOL ANNEX IV AND ASSOCIATED GUIDELINES TO INTRODUCE PROVISIONS FOR RECORD-KEEPING AND MEASURES TO CONFIRM THE LIFETIME PERFORMANCE OF SEWAGE TREATMENT PLANTS

14.1 The Sub-Committee recalled that MEPC 74 had considered document MEPC 74/14 (Norway), proposing to expand the scope of output 1.26 to include a revision of MARPOL Annex IV and Associated Guidelines, and agreed to amend the title of the output to "Revision of MARPOL Annex IV and Associated Guidelines to introduce provisions for record-keeping and measures to confirm the lifetime performance of sewage treatment plants".

14.2 With regard to the renamed output, the Sub-Committee also recalled that MEPC 74 had instructed it to:

- .1 seek the input of the III and HTW Sub-Committees in relation to issues of port State control and human element, as appropriate;
- .2 give due consideration to the application of draft amendments to MARPOL Annex IV, taking into account the general principle that ships should not be unduly penalized; and
- .3 further consider the comment by the observer from IACS, as noted by MEPC 74, seeking clarification on whether the scope of the work (MEPC 74/14, paragraph 16) should include not only amendments to regulations of MARPOL Annex IV but also development of associated templates or guidelines in relation to sewage record-keeping and sewage management plan.

14.3 The Sub-Committee further recalled that:

- .1 PPR 7 had established the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines to progress the work intersessionally, with the terms of reference set out in paragraph 16.9 of document PPR 7/22 (Secretariat); and
- .2 PPR 8, having noted the progress made by the Correspondence Group and the Group's summaries of areas that required further work, had re-established the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines to progress the work intersessionally, with the terms of reference set out in paragraph 7.11 of document PPR 8/13 (Secretariat).

Report of the Correspondence Group and related documents

14.4 The Sub-Committee had for its consideration the following documents:

- .1 PPR 9/14 and PPR 9/INF.7 (Norway), containing the report of the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines, including draft amendments to MARPOL Annex IV; draft amendments to the *2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants* (resolution MEPC.227(64), as amended by resolution MEPC.284(70)) (2012 Guidelines); proposed draft guidelines on the implementation of MARPOL Annex IV for sewage treatment plants (STP); and summaries of the comments and work of the Correspondence Group;
- .2 PPR 9/14/1 (Japan), providing draft guidelines for improving the performance of sewage treatment plants installed on existing ships to be considered in conjunction with paragraph 38.5.1 of document PPR 9/14;
- .3 PPR 9/14/2 (IACS), providing comments on document PPR 9/14 and also providing proposed amendments of MARPOL Annex IV regarding application to new and existing ships to facilitate the consideration and development of amendments to MARPOL Annex IV;

- .4 PPR 9/14/3 (IACS), providing comments on document PPR 9/14 and containing proposals for further revisions of the draft amendments to MARPOL Annex IV and Associated Guidelines, including, inter alia, requirements to undertake an STP commissioning test as a part of an additional survey to address the cases where the existing STP is to be replaced by a new STP, or an additional STP is to be installed on board an existing ship in service;
- .5 PPR 9/14/4 (China), providing comments on document PPR 9/14 in relation to procedures on sampling, sample conservation and sample handling, and proposing to develop a new annex to the 2012 Guidelines to specify standardized sampling and conservation methods for all sewage technical specifications; and
- .6 PPR 9/14/5 (FOEI et al.), commenting on document PPR 9/14 and providing data from Alaska demonstrating the need for actions to ensure the performance of existing STPs, including monitoring, maintenance and establishing effluent limits.

Further instructions to the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships

14.5 Considering the reduced time available during the virtual meeting, the Sub-Committee referred all documents listed in paragraph 14.4 above to the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships, established under agenda item 15 (paragraph 15.30), and instructed the Working Group to:

- .1 consider the proposed modifications to the title of output 1.26 and the expansion of the scope of work in paragraph 33 of document PPR 9/14 and advise the Sub-Committee accordingly;
- .2 using document PPR 9/14 as a basis, further develop draft amendments to MARPOL Annex IV and Associated Guidelines, taking into account documents PPR 9/14/1, PPR 9/14/2, PPR 9/14/3, PPR 9/14/4 and PPR 9/14/5, as well as the information in document PPR 9/INF.7, as appropriate; and
- .3 develop draft terms of reference for a correspondence group on amendments to MARPOL Annex IV and Associated Guidelines, using the text in paragraph 38 of document PPR 9/14 as a basis and taking into account progress made at PPR 9.

Report of the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships

14.6 Having considered the part of the report of the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships dealing with this agenda item (PPR 9/WP.5, paragraphs 4 to 13 and annex 1), the Sub-Committee approved the report in general and took action as described in paragraphs 14.7 to 14.11.

Modifications to the title of output 1.26

14.7 The Sub-Committee agreed to recommend to MEPC to amend the title of output 1.26 to "Revision of MARPOL Annex IV and Associated Guidelines to introduce provisions for record-keeping and measures to confirm the lifetime performance of sewage treatment plants; and further, on new ships, a prohibition of fitting comminuting and disinfecting systems (CDS)".

Re-establishment of the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines

14.8 With regard to terms of reference for a correspondence group on amendments to MARPOL Annex IV and Associated Guidelines, the Sub-Committee noted the discussion of the Working Group regarding a proposal to introduce a threshold number of persons on board ships in relation to the application of the draft MARPOL Annex IV amendments under development. In this context, the Sub-Committee noted that the Working Group had agreed that the suggested additional term of reference should be further considered at PPR 10, taking into account the relevant outcome of MSC 105 with regard to the draft IP Code and the consideration by MEPC 78 of the proposal contained in document MEPC 71/14/3 (India).

14.9 Subsequently, the Sub-Committee re-established the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines, under the coordination of Norway,² with the following terms of reference:

Taking into account the report of the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines that was established by PPR 8 (PPR 9/14 and PPR 9/INF.7), documents PPR 9/14/1, PPR 9/14/2, PPR 9/14/3, PPR 9/14/4 and PPR 9/14/5, and the relevant comments and decisions of PPR 9 (PPR 9/21, section 14), the Correspondence Group, with the option of meeting virtually if members of the Group wished to do so, is instructed to:

- .1 further develop draft amendments to the *2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants*, using annex 2 to document PPR 9/14 as a basis;
- .2 further develop draft amendments to the *Guidelines on implementation of MARPOL Annex IV for sewage treatment plants*, using annex 3 to document PPR 9/14 as a basis;
- .3 further develop the draft amendments to MARPOL Annex IV, using annex 1 to document PPR 9/14 as a basis and taking into consideration the amendments in the associated guidelines (ToRs 1 and 2 above);
- .4 develop amendments of the relevant regulations in MARPOL Annex IV concerning the use of comminuting and disinfecting systems for new ships subject to the decision of the Committee;
- .5 consider the completion status of ToRs 1 to 3 and based on that further:
 - .1 review the scope of application of the draft amendments to MARPOL Annex IV to new and existing ships, including Appendix III, taking into account the general principle that ships should not be unduly penalized and, in parallel, address the matters described in paragraphs 10.1 and 10.2 of document PPR 8/7/8; and
 - .2 review the need to provide adequate port reception facilities;

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- .6 consider other guidelines that may need to be amended as a result of the new draft requirements concerning STP and advise the Sub-Committee accordingly; and
- .7 submit a written report to PPR 10.

14.10 The Sub-Committee agreed that the coordinator of the Correspondence Group could have the flexibility to convene virtual meetings, but only as a complement to the work by correspondence and taking into account relevant decisions by the Council and MEPC.

Further development of draft amendments to MARPOL Annex IV and associated guidelines

14.11 Having considered an oral report by the Chair of the Working Group regarding further development of draft amendments to MARPOL Annex IV and Associated Guidelines, the Sub-Committee noted the progress achieved and that the written report on that work would be issued as document PPR 9/WP.5/Add.1 to be considered by PPR 10.

15 FOLLOW-UP WORK EMANATING FROM THE ACTION PLAN TO ADDRESS MARINE PLASTIC LITTER FROM SHIPS

15.1 The Sub-Committee recalled that MEPC 74 had approved the scope of work of the PPR Sub-Committee in relation to marine plastic litter from ships (MEPC 74/18, paragraph 8.37.1; and MEPC 74/18/Add.1, annex 21 as corrected by MEPC 74/18/Add.1/Corr.1), and had agreed to add output 4.3 on "Follow-up work emanating from the Action Plan to address marine plastic litter from ships" to the provisional agenda of PPR 7, with four sessions assigned to complete the work.

Proposals to reduce the environmental risk of plastic pellets transported by ship

15.2 The Sub-Committee recalled that with regard to document MEPC 77/8/3 (Sri Lanka), which commented on document MEPC 75/8/3 and discussed the impacts of the **MV X-Press Pearl** spill of 11,000 tonnes of plastic pellets off the shore of Colombo, Sri Lanka in May 2021, MEPC 77 had referred the document to PPR 9 and had instructed the Sub-Committee to further consider the proposals, requesting the input of the CCC Sub-Committee as appropriate, with a view to advising the Committee on how best to proceed.

15.3 In this context, the Sub-Committee also had for its consideration the following documents:

- .1 PPR 9/15/1 (Cook Islands, et al.), proposing: amendments to MARPOL Annex III to identify substances such as plastic pellets, granules, nurdles, flakes and powders as harmful substances in order to reduce the environmental risks associated with the shipping of plastic pellets in packaged form; that MEPC 78 should instruct CCC 9 to develop and issue, as a short-term measure, a circular with appropriate measures to that effect; that consideration be given to the acceptability of transporting plastic pellets in bulk; and that the Sub-Committee consider and recommend appropriate activities to encourage additional ratifications of the HNS Convention;
- .2 PPR 9/15/2 (Norway), proposing to develop guidelines on best practices related to the clean-up of plastic pellets and providing a draft outline;

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- .3 PPR 9/15/4 (FOEI, Pacific Environment and CSC), proposing to classify all plastic pellets, flakes and powders under the IMDG Code as Class 9; and to develop and mandate verifiable best practice for handling, management, clear and consistent labelling, below deck stowage and emergency response procedures to contain and mitigate the impact of accidental losses;
 - .4 PPR 9/15/8 (CEFIC), expressing the views that plastic pellets were an essential material that should not be found in the environment, that proposals contained in documents PPR 9/15/1 and PPR 9/15/4 to identify plastic pellets as a harmful substance and classify them as marine pollutant Class 9 according to the IMDG Code would not address the root cause of the accidental release of pellets due to freight containers lost or breached at sea, and that alternative solutions were required to achieve prevention of loss to the environment during maritime transport;
 - .5 PPR 9/15/9 (DGAC), expressing the views that the discharge of plastic pellets into the oceans was unacceptable and must be prevented; that proposals to classify plastic pellets as dangerous goods did not address the root cause of discharges in maritime transport, would disharmonize a harmonized classification scheme, and would apply protections that were not intended to, and could not, prevent the discharge of plastic pellets when containers were lost or damaged at sea; and that alternative approaches were needed; and
 - .6 PPR 9/INF.20 (Norway), containing a report with the Norwegian Coastal Administration's experience from the clean-up operation after the **MV Trans Carrier** incident.

15.4 In the ensuing discussion, all delegations that spoke expressed support for measures that would reduce the environmental risk of plastic pellets transported by ship and that pollution resulting from the loss of such plastic pellets should be addressed as soon as possible.

15.5 Many delegations called for urgent action on the issue and, to that end, supported proposals to classify plastic pellets as a harmful substance, either through amendments to MARPOL Annex III, as proposed in document PPR 9/15/1, or the IMDG Code, as proposed in document PPR 9/15/4. In this context, the delegation of Italy made a statement, which is set out in annex 16. The delegation of Norway recommended that the proposed amendments to MARPOL Annex III ought to be agreed at this session, for approval in principle by MEPC 78. In the view of the delegation of Norway, the CCC Sub-Committee would be invited to provide input on the appropriate names for plastic pellets and report to MEPC 79, with a view to approval by MEPC 79 of draft MARPOL Annex III amendments.

15.6 Several delegations expressed the view that alternative solutions to reduce the risks associated with the transport of plastic pellets should be found, such as developing guidance with best practices for handling plastic pellets, improved stowage requirements for containers containing plastic pellets, pursuing better methods of securing containers and performing risk assessments. Some delegations raised the potential for unintended consequences in the multimodal transport chain resulting from the proposed amendments in documents PPR 9/15/1 and PPR 9/15/4, as well as the need to address the root causes of incidents. Some delegations expressed the view that, despite the need for effective and immediate action, MARPOL Annex III and the IMDG Code were not the correct instruments to prevent the loss of plastic pellets from ships. In this context, a statement from the observer from DGAC is set out in annex 16.

15.7 The majority of delegations supported further analysis and a detailed review of all proposed options to reduce the environmental risks of transporting plastic pellets by ship and supported sending all related documents to the Working Group for further consideration of all possible options on how to address this matter most effectively. In this regard, several delegations suggested that the Working Group prepare draft terms of reference for a Correspondence Group on Marine Plastic Litter from Ships with a view to progressing the work intersessionally.

15.8 With regard to a short-term measure to reduce the environmental risk of plastic pellets transported by ships, many delegations spoke in support of a draft circular containing interim measures to be developed as a matter of urgency.

15.9 During the discussion, several delegations highlighted the need for Member States to ratify the HNS Convention to ensure that valid claims following pollution and other damages caused by ships would be promptly met. In this context, one delegation proposed considering and recommending appropriate activities the Organization could initiate to encourage Member States to ratify the HNS Convention in line with the corresponding proposal in document PPR 9/15/1.

15.10 The Sub-Committee recognized the importance of taking action to prevent further releases of plastic pellets being transported by ships into the marine environment. Nevertheless, in light of the discussion, the Sub-Committee also acknowledged that further analysis would be needed to determine which potential measures would be most effective.

15.11 Subsequently, the Sub-Committee agreed to instruct the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships to further consider documents MEPC 77/8/3, PPR 9/15/1, PPR 9/15/4, PPR 9/15/8 and PPR 9/15/9 with a view to including them in draft terms of reference for a correspondence group that would review all possible options on how to reduce the environmental risk of plastic pellets transported by ships.

15.12 Having noted the information contained in document PPR 9/INF.20, as well as widespread support for guidelines with best practices related to cleaning up plastic pellets, the Sub-Committee invited interested Member States and international organizations to submit documents with draft guidelines on best practices related to response to and the clean-up of plastic pellet spills to a future session of the Sub-Committee, using the draft outline set out in the annex to document PPR 9/15/2 (Norway) as a starting point.

Marking of fishing gear

15.13 With regard to the marking of fishing gear, the Sub-Committee recalled that MEPC 77 had forwarded documents MEPC 75/8/1 (FAO), MEPC 75/8/2 (FAO), MEPC 75/8/4 (Vanuatu) and MEPC 77/8/2 (Japan and United Kingdom) to PPR 9 and had instructed the Sub-Committee to further consider the potential regulatory (mandatory and recommendatory) options for promoting marking of fishing gear, taking into account the work of FAO, with a view to advising the Committee on how to proceed. The Sub-Committee also recalled that MEPC 77 had also requested the Secretariat to provide legal advice regarding the points raised in paragraphs 4 to 6 of document MEPC 77/8/2.

15.14 With the relevant documents forwarded by MEPC 77 and the relevant documents submitted directly to this session, the Sub-Committee had the following eight documents for its consideration:

- .1 MEPC 75/8/1 (FAO), providing information on the requirements for the effective reporting on abandoned, lost or otherwise discarded fishing gear (ALDFG), which is a crucial part of an effective fishing gear marking system

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- in the context of FAO's Voluntary Guidelines on the Marking of Fishing Gear (VGMFG), as well as providing examples of different gear reporting systems at regional, sub-regional and national levels;
- .2 MEPC 75/8/2 (FAO), providing information on fishing gear marking ALDFG in the context of FAO's VGMFG, as well as reporting results of two stakeholder surveys regarding gear marking and measures to combat ALDFG and challenges facing Member States;
 - .3 MEPC 75/8/4 (Vanuatu), proposing to address measure 2 contained in the *Action Plan to address marine plastic litter from ships* (resolution MEPC.310(73)), i.e. "consider making mandatory, through an appropriate IMO instrument (e.g. MARPOL Annex V), the marking of fishing gear with the IMO Ship Identification Number, in cooperation with the Food and Agriculture Organization of the United Nations (FAO)" through a new regulation 10A in MARPOL Annex V which would require fishing gear to "be marked providing a simple, pragmatic, affordable and verifiable means of identifying ownership of fishing gear or parts of fishing gear and its link with the vessel(s) or operator(s) undertaking the fishing operation in case of accidental loss or discharge of fishing gear as provided for in regulations 7.1.3 and 7.1.4 or illegally discharged under regulation 3";
 - .4 MEPC 77/8/2 (Japan and the United Kingdom), providing comments on document MEPC 75/8/4, specifically to point out that it is not appropriate to uniformly regulate marking of fishing gear through MARPOL Annex V without regard for the characteristics of different types of fishing gear and actual fishing situations in different countries/regions;
 - .5 PPR 9/15 (Cook Islands, et al.), complementing document MEPC 75/8/4 on action 2 of the *Action Plan to address marine plastic litter from ships* which was considered by MEPC 77 and forwarded to PPR 9 to further consider the potential regulatory (mandatory and recommendatory) options for promoting marking of fishing gear, and further explaining reasons why MARPOL Annex V is the appropriate instrument to make the marking of fishing mandatory through goal-based standards;
 - .6 PPR 9/15/5 (FOEI, Pacific Environment and CSC), discussing the progress to address abandoned, lost and discarded fishing gear (ALDFG) at IMO through proposed amendments to MARPOL Annex V for the marking of fishing gear and the reporting of lost fishing gear, inviting the Sub-Committee to consider whether these amendments will be facilitated by IMO action, and requesting an update from the IMO Secretariat on the discussions surrounding a proposed global agreement on plastic pollution and the inclusion of sea-based sources within such an agreement;
 - .7 PPR 9/15/6 (Secretariat), providing information and legal advice regarding the definition of garbage for fishing gear in Annex V of MARPOL and on marking of fishing gear, as requested by MEPC 77; and
 - .8 PPR 9/INF.23 (Netherlands), sharing the key findings and recommendations of a new study by Wageningen University and Research into the sources and pathways of fishing net litter collected on beaches throughout the North-East and Arctic region of the Atlantic Ocean, and that it was found that most are mismanaged off-cuts from bottom trawling nets, produced on deck during mending.

15.15 The Sub-Committee noted the legal advice from the Secretariat contained in document PPR 9/15/6 and, in particular, the available options that could be considered, either singly or in combination, if Parties to MARPOL wished to more fully address the issues of discharge and the marking of fishing gear (PPR 9/15/6, paragraph 28), which were the following:

- .1 adoption of a new annex to MARPOL;
- .2 amendment to Annex V to clarify its object and purpose to include the issue of non-garbage fishing gear;
- .3 adoption of a new chapter in Annex V;
- .4 adoption of a code under Annex V; or
- .5 adoption or revision of guidelines.

15.16 The observer from FAO was unable to attend PPR 9 and therefore had requested the Secretariat to convey the message in its statement made at MEPC 77 (MEPC 77/16/Add.1, annex 13). The Sub-Committee was further advised that work on an FAO technical manual for the marking of fishing gear was progressing and that completion of the manual was expected near the end of 2022. As requested, the statement from FAO is set out in annex 16.

15.17 During discussion, many delegations spoke in favour of a mandatory requirement for the marking of fishing gear and supported the proposal in document PPR 9/15 that:

- .1 MARPOL Annex V was the adequate tool to make mandatory the marking of fishing gear; and
- .2 the development of goal-based standards would best address the concerns raised with regard to legal and implementation issues.

15.18 In this connection, those delegations expressed the view that a goal-based approach, rather than prescriptive regulations, would provide flexibility to Administrations when developing national legislation, and noted that many countries and regions had already implemented schemes for the mandatory marking of fishing gear. In this context, the delegation of Vanuatu made a statement which is set out in annex 16.

15.19 Many other delegations expressed the view that the proposal for a mandatory requirement for the marking of fishing gear was premature due to the challenges associated with implementing such a measure, including, inter alia, the need for further development of gear marking equipment, the need for a global vessel registration system, and the potential for confusion among fishing vessel operators and Administrations. In light of these identified challenges, while recognizing the need to address ALDFG, these delegations supported only voluntary measures at this stage while also highlighting the need for cooperation with FAO and regional fisheries management organizations (RFMOs). One delegation expressed the view that MARPOL Annex V was not the most appropriate or effective instrument for such a requirement, and that instead, FAO or RFMOs should develop any mandatory requirements for the marking of fishing gear.

15.20 Recognizing that document PPR 9/15/6 did not identify alternative instruments to MARPOL Annex V for regulating ALDFG, some delegations considered the development of a code under MARPOL Annex V to provide a discrete instrument to address fishing vessel related garbage as a possible way forward.

15.21 Having noted that the PPR Sub-Committee had been instructed by MEPC to advise the Committee on how to proceed with regard to the potential regulatory options for promoting

the marking of fishing gear, several delegations supported inviting MEPC to make a policy decision on the matter, taking into account the legal advice provided by the Secretariat. In this connection, one delegation invited FAO to submit a document to the Committee regarding its work on the marking of fishing gear.

15.22 Following discussion, the Sub-Committee agreed that as a short-term measure an MEPC circular could be developed by the Sub-Committee with a view to promoting the implementation of fishing gear marking systems and the FAO Voluntary Guidelines for the Marking of Fishing Gear, taking into account additional work by FAO such as the technical manual on marking of fishing gear being developed by FAO.

15.23 Recognizing the divergent views on the potential regulatory options and on the feasibility of making marking of fishing gear mandatory, as well as the need for clarity on high-level policy in order to progress its future work in an effective manner, the Sub-Committee invited the Committee to provide further advice on possible regulatory options, taking into account:

- .1 the proposed mandatory goal-based approach to be developed under the framework of MARPOL Annex V, as proposed in document MEPC 75/8/4 and further elaborated in document PPR 9/15;
- .2 the alternative voluntary approach as described in document MEPC 77/8/2, focusing on enhanced cooperation with FAO and regional fisheries management organizations (RFMOs);
- .3 the legal advice provided by the Secretariat on available options (PPR 9/15/6); and
- .4 relevant information provided by FAO, including the statement set out in annex 16.

Reporting of lost or discharged fishing gear

15.24 The Sub-Committee recalled that PPR 7 had established the Correspondence Group on Marine Plastic Litter from Ships, under the coordination of France, and had instructed it to:

- .1 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, as currently provided in regulation 10.6 of MARPOL Annex V; and
- .2 also consider the information to be reported to Administrations and IMO, the reporting mechanisms and the modalities, taking into account the comments and decisions made at PPR 7, document PPR 7/17 and any relevant documents submitted to MEPC and the PPR Sub-Committee associated with the *Action Plan to address marine plastic litter from ships*.

15.25 The Sub-Committee also recalled that PPR 8:

- .1 had noted the progress made by the Correspondence Group but due to time constraints had been unable to consider the report of the Group (PPR 8/8) and the commenting document PPR 8/8/1 (Palau, United Arab Emirates and Vanuatu) in detail; and

- .2 having recognized that further deliberations would be facilitated by in-person discussions in a working group and by additional written proposals, either containing draft text building on the framework for proposed amendments developed by the Correspondence Group or elaborating on the matters that required further consideration (e.g. on the frequency of reporting, data management, information sharing and harmonization of reporting formats), as well as by additional consultations with the fishing industry and FAO, PPR 8 forwarded documents PPR 8/8 and PPR 8/8/1 to PPR 9 for detailed consideration and invited interested Member States and international organizations to submit additional proposals or commenting documents to PPR 9 to build on the work of the Correspondence Group.

15.26 In this context, the Sub-Committee had for its consideration the following four documents and relevant parts of documents MEPC 75/8/1, PPR 9/15/5 and PPR 9/INF.23 as described in paragraph 15.14:

- .1 PPR 8/8 (France), providing the report of the Correspondence Group on Marine Plastic Litter from Ships, including the draft amendments to MARPOL Annex V that had been developed by the Group together with a draft skeleton of the associated draft MEPC resolution on adoption, a non-exhaustive list of the functionalities for a proposed new GISIS module on reporting of loss or discharge of fishing gear and draft terms of reference for a proposed working group;
- .2 PPR 8/8/1 (Palau, the United Arab Emirates and Vanuatu), commenting on the report of the Correspondence Group on Marine Plastic Litter from Ships and offering some justification as to the need to report the identification of the fishing vessels as well as the marking of lost or discharged fishing gear;
- .3 PPR 9/15/3 (Norway), highlighting the variability in fisheries internationally and proposing a way forward in order to resolve the issues concerning the ongoing work on MARPOL Annex V and the 2017 *Guidelines for the implementation of Annex V* aiming to enhance reporting of accidentally lost or otherwise discharged fishing gear; and
- .4 PPR 9/15/7 (Austria et al.), commenting on document PPR 8/8 (France) and proposing to establish a correspondence group to develop amendments to MARPOL Annex V together with corresponding draft amendments to the 2017 *Guidelines for the implementation of MARPOL Annex V*, which would report to PPR 10.

15.27 Due to time constraints, the Sub-Committee instructed the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships to prepare draft terms of reference for a correspondence group on marine plastic litter from ships to further progress work on reporting mechanisms, the modalities and the information to be reported to Administrations and IMO to facilitate and enhance reporting of the accidental loss or discharge of fishing gear, without prior consideration in plenary.

Amendments to MARPOL Annex V to make the Garbage Record book mandatory for ships of 100 GT and above

15.28 The Sub-Committee recalled that MEPC 77 had instructed PPR 9 to prepare draft amendments to MARPOL Annex V to make the Garbage Record book mandatory for ships of 100 GT and above, using document MEPC 77/8 (Cook Islands et al.) as a basis, taking into account the relevant comments made at MEPC 77.

15.29 Due to time constraints, the Sub-Committee instructed the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships to prepare draft amendments to MARPOL Annex V to make the Garbage Record book mandatory also for ships of 100 gross tonnage and above and less than 400 gross tonnage, using document MEPC 77/8 (Cook Islands et al.) as a basis, taking into account the relevant comments made at MEPC 77, without prior consideration in plenary.

Establishment of the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships

15.30 The Sub-Committee established the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships and instructed it, taking into consideration the comments and decisions made in plenary, to:

- .1 further consider documents MEPC 77/8/3, PPR 9/15/1, PPR 9/15/4, PPR 9/15/8 and PPR 9/15/9 with a view to including them in draft terms of reference for a Correspondence Group on Marine Plastic Litter from Ships;
- .2 prepare draft amendments to MARPOL Annex V to make the Garbage Record book mandatory also for ships of 100 gross tonnage and above and less than 400 gross tonnage, using document MEPC 77/8 as a basis, taking into account the relevant comments made at MEPC 77 as reported in paragraph 8.17 of document MEPC 77/16; and
- .3 prepare draft terms of reference for a correspondence group on marine plastic litter from ships to further progress work on reporting mechanisms, the modalities and the information to be reported to Administrations and IMO to facilitate and enhance reporting of the accidental loss or discharge of fishing gear, taking into account documents PPR 8/8, PPR 8/8/1, MEPC 75/8/1, PPR 9/15/3 and PPR 9/15/7, the information and proposals regarding lost fishing gear reporting in document PPR 9/15/5 and the information in document PPR 9/INF.23.

Report of the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships

15.31 Having considered the relevant parts of the report of the Working Group on Sewage Treatment Plants and Marine Plastic Litter from Ships (PPR 9/WP.5, paragraphs 14 to 31 and annexes 2 and 3), the Sub-Committee approved the report in general and took action as described in paragraphs 15.32 to 15.38.

Amendments to MARPOL Annex V to make the Garbage Record book mandatory for ships of 100 GT and above

15.32 The Sub-Committee agreed to the draft amendments to MARPOL Annex V to make the Garbage Record book mandatory also for ships of 100 gross tonnage and above and less than 400 gross tonnage, as set out in annex 10, with a view to approval by MEPC 78 and subsequent adoption.

15.33 In this regard, the Sub-Committee requested the Secretariat to submit a document to PPR 10 providing a list of guidelines that would require consequential amendments due to the draft amendments to MARPOL Annex V regarding the Garbage Record book.

Correspondence Group on Marine Plastic Litter from Ships

15.34 During the consideration of the draft terms of reference for a correspondence group on marine plastic litter from ships, the delegation of Norway made a statement expressing the view that because documents regarding the reporting of fishing gear had not been considered in plenary, the Working Group should not have made a decision regarding making the data to be reported to IMO mandatory through an appendix to MARPOL Annex V. In this regard, Norway proposed that the Correspondence Group terms of reference should be updated to reflect that a decision to make the data to be submitted to IMO by the Administration mandatory through an appendix to MARPOL Annex V had not yet been made.

15.35 The delegations of France and Vanuatu expressed support for retaining the outcome and proposed terms of reference for the Correspondence Group that had been developed by the Working Group, noting the discussions and work that had been done by the previous Correspondence Group on Marine Plastic Litter from Ships, provided in document PPR 8/8.

15.36 In light of the above comments, the Sub-Committee agreed not to amend the draft terms of reference developed by the Working Group, noting that interested Member States and international organizations could submit documents concerning, for example, flexibility as to what data should be reported, thresholds for reporting, and confidentiality of data to the next session of the Sub-Committee, should they wish to propose an alternative approach to the outcome of the Correspondence Group.

15.37 Subsequently, having noted the discussions by the Working Group on proposals to reduce the environmental risk of plastic pellets transported by ship as well as the reporting of lost or discharged fishing gear, the Sub-Committee established a Correspondence Group on Marine Plastic Litter from Ships, under the coordination of Norway and Spain,³ and, with the option of meeting virtually if members of the Group wished to do so, instructed it to:

- .1 take into consideration documents MEPC 77/8/3, PPR 9/15/1, PPR 9/15/4, PPR 9/15/8 and PPR 9/15/9, as well as the comments and decisions made by PPR 9, and further consider the options for reducing the environmental risk associated with the maritime transport of plastic pellets and advise the Sub-Committee on the way forward;
- .2 using document PPR 8/8 as a basis, taking into consideration documents PPR 8/8/1, MEPC 75/8/1, PPR 9/15/3, PPR 9/15/5, PPR 9/15/7 and PPR 9/INF.23, as well as the comments and decisions made by PPR 9:
 - .1 further consider the draft amendments to MARPOL Annex V to provide for the reporting mechanisms, the modalities and the information to be reported to Administrations and IMO to facilitate and enhance reporting of the loss or discharge of fishing gear; and

³**Co-coordinators:**

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- .2 develop appropriate draft amendments to the *2017 Guidelines for the implementation of MARPOL Annex V* (resolution MEPC.295(71)) to support the implementation of the contemplated draft amendments to MARPOL Annex V; and
- .3 submit a written report to PPR 10.

15.38 Following the establishment of the Correspondence Group, the Sub-Committee agreed that the coordinator(s) could have the flexibility to convene virtual meetings, but only as a complement to the work by correspondence and taking into account relevant decisions by the Council and MEPC.

16 UNIFIED INTERPRETATION TO PROVISIONS OF IMO ENVIRONMENT-RELATED CONVENTIONS

Unified interpretations of provisions of MARPOL Annex VI and the NO_x Technical Code 2008

16.1 The Sub-Committee had for its consideration the following documents, containing proposed unified interpretations of the provision of MARPOL Annex VI and the NO_x Technical Code 2008:

- .1 PPR 9/16 (IACS), proposing to add an additional paragraph to the existing unified interpretation of paragraph 4.4.6.1 of chapter 4 of the NO_x Technical Code 2008, set out in circular MEPC.1/Circ.895, specifying that the unified interpretation should in general not be applied to the Engine Family except where the applicant has provided clear evidence that an Engine Family concept, allowing for different numbers and arrangements of cylinders, will result in the same or lower NO_x emissions of the engines with different cylinder numbers compared to the NO_x emissions of the related parent engine;
- .2 PPR 9/16/1 (IACS), proposing a draft unified interpretation for MARPOL Annex VI to provide clarity on the application of regulation 14.8 (In-use and onboard fuel oil sampling and testing) and regulation 14.10 (In-use fuel oil sampling point) of MARPOL Annex VI, in a manner similar to the unified interpretation already set out in circular MEPC.1/Circ.795/Rev.5 for regulations 18.5 and 18.6 of MARPOL Annex VI;
- .3 PPR 9/16/3 (China), introducing a different understanding on the incinerator temperature rise test and proposing to modify the unified interpretation of regulation 16.9 of MARPOL Annex VI, as set out in circular MEPC.1/Circ.795/Rev.5, to mention that the temperature requirement "only needs to be tested and verified at the time of type approval, while not subject to verification after installation on board."; and
- .4 MEPC 77/7/7 (IACS), as forwarded by MEPC 77, proposing a draft unified interpretation to regulation 18.3 of MARPOL Annex VI relating to the use of biofuels and seeking clarification on ISO 8217 and on the possible need for future amendments to relevant provisions of MARPOL Annex VI and the NO_x Technical Code 2008.

16.2 Considering the reduced time available during virtual meetings, the Sub-Committee referred all of the documents listed in paragraph 16.1 directly to the Working Group on Prevention of Air Pollution from Ships for detailed consideration.

Instructions to the Working Group on Prevention of Air Pollution from Ships

16.3 The Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships established under agenda item 10 (see paragraph 10.21) to consider the proposals in documents PPR 9/16, PPR 9/16/1, PPR 9/16/3 and MEPC 77/7/7, to prepare unified interpretations, as appropriate, and advise the Sub-Committee.

Report of the Working Group on Prevention of Air Pollution from Ships

16.4 Having considered the relevant parts of the report of the Working Group on Prevention of Air Pollution from Ships (PPR 9/WP.4, paragraphs 70 to 84 and annex 4 and 5), the Sub-Committee approved the report in general and took action, as described in paragraphs 16.5 to 16.11.

Unified interpretations to the NO_x Technical Code 2008

16.5 The Sub-Committee noted the Working Group's discussion on the draft amendments to the *Unified interpretations to the NO_x Technical Code 2008, as amended* (MEPC.1/Circ.895), as proposed in document PPR 9/16, and the subsequent editorial changes made by the Working Group.

16.6 The Sub-Committee agreed to the draft amendment to the unified interpretation of paragraph 4.4.6.1 of the NO_x Technical Code 2008 (i.e. addition of new paragraph specifying that the unified interpretation may be applied to the Engine Family under certain conditions), as set out in annex 11, with a view to approval by MEPC 78 and inclusion in a revision of MEPC.1/Circ.895 (i.e. MEPC.1/Circ.895/Rev.1).

Unified interpretations to MARPOL Annex VI

16.7 The Sub-Committee noted that there was no agreement in the Working Group for the unified interpretations proposed in documents PPR 9/16/1 and PPR 9/16/3 to be IMO unified interpretations.

16.8 With regard to the issues raised in document MEPC 77/7/7, the Sub-Committee noted that, in the Working Group, several delegations had emphasized the importance and urgency of the issues being addressed to provide more clarity on the use of biofuels on board of ships and possible implications on NO_x emissions.

16.9 Subsequently, the Sub-Committee agreed to the draft unified interpretation of regulation 18.3 of MARPOL Annex VI, with regard to the use of biofuels, as set out in annex 12, with a view to approval by MEPC 78 and inclusion in a further revision of MEPC.1/Circ.795 (i.e. MEPC.1/Circ.796/Rev.6).

16.10 The observer from IACS recalled that:

- .1 in document MEPC 77/7/7 the Committee had been invited to consider and provide advice on three points, the draft unified interpretation being one; and
- .2 MEPC 78 had instructed PPR 9 to address the matter of the draft unified interpretation.

16.11 Consequently, the Sub-Committee invited the Committee to note that the remaining two requests in document MEPC 77/7/7, pertaining to the revision of MARPOL Annex VI and the NO_x Technical Code would need to be further considered.

Unified interpretations of provisions of the BWM Convention

16.12 The Sub-Committee recalled that the Committee had instructed it to consider documents MEPC 75/3/5 (China) and MEPC 77/4/11 (IACS), concerning unified interpretations of the form of the International Ballast Water Management Certificate (IBWMC) and regulation B-3.10 of the BWM Convention, respectively, under this agenda item, and to advise the Committee accordingly.

16.13 The Sub-Committee had for its consideration the following documents:

- .1 PPR 9/16/2 (IACS), commenting on document MEPC 75/3/5 (see paragraph 16.6.6) and proposing a draft unified interpretation of appendix I "Form of International Ballast Water Management Certificate" to the BWM Convention, concerning the principal ballast water management method(s) employed on the ship in order to issue a certificate in a consistent manner;
- .2 PPR 9/16/4 (Republic of Korea), providing comments on document MEPC 77/4/11 (see paragraph 16.6.5), along with alternative amendments to the proposed unified interpretation to regulation B-3.10 of the BWM Convention, and expressing the view that the fundamental purpose of the amendments to regulation B-3, i.e. that all ships must meet the D-2 standard by 8 September 2024, which was established in the spirit of cooperation and compromise to promote the effective implementation of the BWM Convention, should be maintained;
- .3 PPR 9/16/5 (Republic of Korea), providing comments on document PPR 9/16/2, along with alternative amendments to the proposed unified interpretation to appendix I to the BWM Convention;
- .4 PPR 9/16/6 (China), also commenting on document PPR 9/16/2 and providing further consideration and proposed amendments to the draft unified interpretation of appendix I to the BWM Convention concerning the principal ballast water management method(s) employed on the ship;
- .5 MEPC 77/4/11 (IACS), as forwarded by MEPC 77, proposing a unified interpretation of regulation B-3.10 of the BWM Convention concerning the deadline for compliance with the D-2 standard for ships constructed before 8 September 2017 but which do not have an initial survey associated with the IOPPC until after 8 September 2019, including the notion that the deadline for compliance with regulation D-2 of the BWM Convention, based on the first renewal survey required by regulation 6.1.2 of MARPOL Annex I after the initial survey required by regulation 6.1.1 of MARPOL Annex I, may be after 8 September 2024; and
- .6 MEPC 75/3/5 (China), as forwarded by MEPC 76, commenting on the draft amendments to the BWM Convention regarding the form of the IBWMC, as had been set out in document MEPC 75/3/1, seeking clarification on the new item "other approach in accordance with regulation..." added in the form of the IBWMC under "Details of ballast water management method(s) used", and proposing that a unified interpretation on how to complete the IBWMC was needed in order to issue the IBWMC in a consistent manner.

16.14 Considering the reduced time available during virtual meetings, the Sub-Committee referred all of documents listed in paragraph 16.6 directly to the Working Group on Marine Biosafety for detailed consideration, having noted that all proposals were highly technical.

Instructions to the Working Group on Marine Biosafety

16.15 The Sub-Committee instructed the Working Group on Marine Biosafety established under agenda item 6 (see paragraph 6.5) to:

- .1 consider the proposals in documents MEPC 77/4/11 and PPR 9/16/4, prepare a unified interpretation of regulation B-3 of the BWM Convention, as appropriate, and advise the Sub-Committee; and
- .2 consider the proposals in documents PPR 9/16/2, PPR 9/16/5 and PPR 9/16/6, prepare a unified interpretation of appendix I to the BWM Convention, as appropriate, and advise the Sub Committee.

Report of the Working Group on Marine Biosafety

16.16 Having considered the relevant parts of the report of the Working Group on Marine Biosafety (PPR 9/WP.3, paragraphs 13 to 23 and annex 4), the Sub-Committee approved the report in general and took action, as described in the following paragraphs.

16.17 The Sub-Committee agreed to the draft unified interpretation of appendix I to the BWM Convention (Form of International Ballast Water Management Certificate) set out in annex 13 and invited the Committee to approve it for inclusion in a further revision of BWM.2/Circ.66 (i.e. BWM.2/Circ.66/Rev.3).

16.18 In this connection, the Sub-Committee noted the discussion in the Working Group on the concept of no ballast water and sediments on board, and invited interested Member States and international organizations to submit proposals on this concept to a future session of the Committee.

16.19 The Sub-Committee noted that the Group could not agree on a unified interpretation of regulation B-3 of the BWM Convention, and further noted the diverging views on this matter that were expressed during the relevant discussion in the Working Group.

17 BIENNIAL STATUS REPORT AND PROVISIONAL AGENDA FOR PPR 10

Biennial status report

17.1 The Sub-Committee recalled that MEPC 77 had approved the Sub-Committee's biennial agenda for 2022 – 2023 and the provisional agenda for PPR 9.

17.2 The Sub-Committee also recalled that A 32 had adopted the *Revised Strategic Plan for the Organization for the six-year period 2018 to 2023* (resolution A.1149(32)), containing the list of outputs for the 2022-2023 biennium.

17.3 Taking into account the progress made at this session, the Sub-Committee prepared the biennial status report, as set out in annex 14, for approval by MEPC 78.

Provisional agenda for PPR 10

17.4 Taking into account the progress made at this session and the relevant decisions of MEPC 77 and MSC 104, the Sub-Committee prepared the provisional agenda for PPR 10, as set out in annex 15 for consideration by MEPC 78.

Correspondence Groups established at this session

17.5 The Sub-Committee established the following correspondence groups, due to report to PPR 10:

- .1 Correspondence Group on Review of the Biofouling Guidelines;
- .2 Correspondence Group on Prevention of Air Pollution from Ships;
- .3 Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines;
- .4 Correspondence Group on Marine Plastic Litter from Ships; and
- .5 Correspondence Group on Development of a Protocol for Verification of Ballast Water Compliance Monitoring Devices.

Arrangements for the next session

17.6 The Sub-Committee, taking into account the decisions made under the respective agenda items, anticipated that the following working, technical and drafting groups may be established at PPR 10:

- .1 Working Group on Marine Biosafety (agenda items 5 and 16 regarding ballast water compliance monitoring devices);
- .2 Working Group on Prevention of Air Pollution from Ships (agenda items 6, 7, 8 and 9);
- .3 Working Group on MARPOL Annexes IV and V (agenda items 11 and 12);
- .4 Technical Group on Evaluation of Safety and Pollution Hazards of Chemicals (agenda item 3); and
- .5 Drafting Group on HNS and Arctic Matters (agenda items 4 and 10),

whereby the Chair, taking into account the submissions received on the respective subjects, would advise the Sub-Committee well before PPR 10 on the final selection of such groups.

17.7 In this regard, the Sub-Committee also noted that due consideration would be given with regard to the principle established under paragraph 5.18 of the Committee's Method of work (MSC-MEPC.1/Circ.5/Rev.2) when the final recommendation was made.

Intersessional meetings

17.8 The Sub-Committee noted that MEPC 76 had approved the holding of an intersessional meeting of the ESPH Working Group in 2022, which had been subsequently endorsed by C 125. The Sub-Committee invited MEPC 78 to approve the holding of an intersessional meeting of the ESPH Working Group in 2023.

Date for the next session

17.9 The Sub-Committee noted that the tenth session of the Sub-Committee had tentatively been scheduled to take place from 24 to 28 April 2023.

18 ELECTION OF CHAIR AND VICE-CHAIR FOR 2023

18.1 In accordance with the Rules of Procedure of the Marine Environment Protection Committee, the Sub-Committee unanimously re-elected Dr. Flavio da Costa Fernandes (Brazil) as Chair and Dr. Anita Mäkinen (Finland) as Vice-Chair, both for 2023.

19 ANY OTHER BUSINESS**Development of a protocol for verification of ballast water compliance monitoring devices**

19.1 The Sub-Committee recalled that, following consideration of a revised draft of the protocol for verification of ballast water compliance monitoring devices, PPR 8 had established the Correspondence Group on Development of a Protocol for Verification of Ballast Water Compliance Monitoring Devices, under the coordination of the United Kingdom.

19.2 The Sub-Committee recalled also that MEPC 76 had instructed it to consider document MEPC 76/4/1 (ISO) in the context of the consideration of a protocol for the verification of compliance monitoring devices and to advise the Committee accordingly.

19.3 The Sub-Committee had for its consideration the following documents:

- .1 PPR 9/19 (United Kingdom), containing the report of the Correspondence Group on Development of a Protocol for Verification of Ballast Water Compliance Monitoring Devices established by PPR 8, which included, inter alia, a list of outstanding areas for further consideration, and proposing that the Correspondence Group should be re-established with a view to finalizing the draft protocol for submission to PPR 10;
- .2 PPR 9/INF.13 (ISO), providing an update on the development of the ISO Standard that provides technical methods for the performance evaluations of compliance monitoring devices, describing key elements of the methods, and specifying the timeline for the development of the Standard; and
- .3 MEPC 76/4/1 (ISO), providing an update on the development of the aforementioned ISO Standard subsequently updated further in document PPR 9/INF.13.

19.4 Considering the reduced time available during virtual meetings, the Sub-Committee referred all of the above-mentioned documents directly to the Working Group on Marine Biosafety for detailed consideration, established under agenda item 6 (see paragraph 6.5), having noted that all proposals were highly technical.

Other information relating to marine biosafety

19.5 The Sub-Committee noted the information provided in document PPR 9/INF.14 (China), outlining the results of a study on the use of neutral red staining microscopy for the analysis of 10-50 µm plankton in ballast water, showing that the neutral red stain microscopy was no less accurate than the FDA/CMFDA dual fluorescence stain microscopy method and recommending it as a complement to the FDA/CMFDA dual fluorescence staining microscopy method.

Instructions to the Working Group on Marine Biosafety

19.6 The Sub-Committee instructed the Working Group on Marine Biosafety to consider the report of the Correspondence Group on Development of a Protocol for Verification of Ballast Water Compliance Monitoring Devices (PPR 9/19) and, taking also into account the information in documents PPR 9/INF.13 and MEPC 76/4/1 (ISO), further develop the draft revised protocol for the verification of ballast water compliance monitoring devices using annex 3 to document PPR 9/19 as a basis.

Report of the Working Group on Marine Biosafety

19.7 Having considered an oral report on the outcome of the Working Group regarding the development of a protocol for verification of ballast water compliance monitoring devices, and having noted that a written report would be submitted to PPR 10 (PPR 9/WP.3/Add.1), the Sub-Committee took action as described in paragraphs 19.8 to 19.10.

19.8 The Sub-Committee noted the progress achieved on the development of a protocol for verification of ballast water compliance monitoring devices and the updated draft of the protocol, which would be used as the basis for further intersessional work with a view to finalization of the protocol at the next session.

19.9 In this connection, the Sub-Committee re-established the Correspondence Group on Development of a Protocol for Verification of Ballast Water Compliance Monitoring Devices with the following terms of reference:

- .1 finalize the draft protocol for verification of ballast water compliance monitoring devices, with a view to approval by PPR 10, using the annex to document PPR 9/WP.3/Add.1 as the basis, focusing only on the outstanding issue of laboratory tests using treated water (paragraphs 5.3, 5.4, 5.8, 5.9 and table 1 of the draft protocol only)⁴ and the development of a standard reporting format; and
- .2 submit a report to PPR 10.

19.10 In this regard, the Sub-Committee encouraged interested Member States and international organizations to contact the Coordinator⁵ of the Correspondence Group, with a view to participating and contributing to the work of that Group.

⁴ The paragraph numbers being referenced are from annex 3 to document PPR 9/19.

⁵ **Coordinator:**
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UK Technical Services Ship Standards
Maritime & Coastguard Agency
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Proposal for a new output on matters related to SCR systems

19.11 The Sub-Committee recalled that MEPC 77 had instructed it to consider the following two documents, with a view to advising the Committee accordingly:

- .1 MEPC 77/11/2 (Marshall Islands et al.), proposing a new output and revision of the *2017 Guidelines addressing additional aspects of the NO_x Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with Selective Catalytic Reduction (SCR) systems* (resolution MEPC.291(71), as amended by resolution MEPC.313(74)) to improve clarity and enable uniform implementation; and
- .2 MEPC 77/INF.6 (EUROMOT), providing a EUROMOT position paper advising that further requirements on the application of paragraph 3.2.8.1 of the 2017 SCR Guidelines proposed in document MEPC 77/11/2, which are based on IACS UI MPC112 Rev.1 and require a NO_x measurement device to be within a specified margin compared to the analyser used during the parent engine test in order to be accepted for monitoring of degradation of the SCR catalyst, are disproportionate and not in line with today's available technology for NO_x sensors; providing further details on how to assure the emission-compliant operation; and proposing that the use of current NO_x sensor technology should be possible by the individual applicant demonstrating that the system achieves emissions control within the limit.

19.12 Owing to time constraints, the Sub-Committee agreed to refer documents MEPC 77/11/2 and MEPC 77/INF.6 directly to the Working Group on Prevention of Air Pollution from Ships, established under agenda item 10, for further consideration.

Control of Volatile Organic Compound (VOCs) emissions

19.13 The Sub-Committee recalled that MEPC 77 had noted the discussions of ISWG-GHG 9 on the reduction of emissions of volatile organic compounds (VOCs), and had invited interested Member States and international organizations to provide more information, in particular on technical opportunities to reduce VOC emissions from shipping and proposals on how best to improve the current IMO regulatory framework. The Sub-Committee also recalled that, in this connection, the Committee had instructed it to investigate how the reduction of VOC emissions could be further addressed.

19.14 In this connection, the Sub-Committee had for its consideration the following documents:

- .1 PPR 9/19/2 (OCIMF), providing OCIMF's views on document ISWG-GHG 9/3 regarding Study on Volatile Organic Compound (VOC) control measures and potential MARPOL amendments to address VOC emissions from international shipping; and identifying areas where further consideration was required;
- .2 PPR 9/INF.11 (OCIMF), introducing the OCIMF publication "Volatile Organic Compound Emissions from Cargo Systems on Oil Tankers" and addressing safety issues relating to the control of volatile organic compound emissions;
- .3 PPR 9/19/4 (Norway), proposing that the Sub-Committee agree to conduct a thorough review of the current legal framework (regulation 15 of MARPOL Annex VI, MEPC.1/Circ.680 and MEPC.185(59)) for the reduction of VOC emissions from ships and identify issues for initial consideration; and

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- .4 PPR 9/19/5 (INTERTANKO), commenting on the study set out in document ISWG-GHG 9/3 (Canada and Norway) and providing concrete proposals for adequate review of the regulation; and noting that further successful reduction of VOC emissions is conditioned by investments and participation of shore terminals, including mandating terminals to provide Vapour Emission Control Systems (VECS)/shore facilities for the reception of VOC emissions during loading by a due date.

19.15 The Sub-Committee agreed, to refer documents PPR 9/19/2, PPR 9/INF.11, PPR 9/19/4 and PPR 9/19/5 directly to the Working Group on Prevention of Air Pollution from Ships, with a view to the Working Group including these documents in draft terms of reference for a Correspondence Group on Prevention of Air Pollution from Ships.

Proposed methods for monitoring the compliance of the fuel oil sulphur limit

19.16 The Sub-Committee had for its consideration the following documents related to monitoring the compliance of the fuel oil sulphur limit:

- .1 PPR 9/19/1 (Chile), proposing to study the feasibility of a monitoring system for exhaust gas cleaning systems and the establishment of a centre to collect information from ships in terms of operating conditions of EGCS and scrubbers, namely SO₂(ppm)/CO₂(%v/v) parameters, to monitor compliance with the standard and the operation of equipment, and to alert the port State in a timely manner regarding an EGCS malfunction; and
- .2 PPR 9/INF.15 (China), containing outcomes of a series of experiments conducted to monitor ship exhaust emissions between 2018 and 2021 in China and providing information on the remote monitoring methods for ship exhaust emissions, including the mainstream ship exhaust emissions monitoring technology, the site selection method of ship exhaust emissions monitoring stations, the estimation method of the fuel sulphur content and a specific criterion in the calculated fuel sulphur content (%m/m) for the anticipation of compliance with the MARPOL Annex VI sulphur limit.

19.17 The Sub-Committee agreed to refer documents PPR 9/19/1 and PPR 9/INF.15 directly to the Working Group on Prevention of Air Pollution from Ships, with a view to the Working Group including these documents in draft terms of reference for a Correspondence Group on Prevention of Air Pollution from Ships.

Instructions to the Working Group on Prevention of Air Pollution from Ships

19.18 The Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships, established under agenda item 10 (see paragraph 10.21), taking into consideration all documents listed in paragraphs 19.6, 19.9 and 19.11, to prepare draft terms of reference for the Correspondence Group on Prevention of Air Pollution from Ships.

Report of the Working Group on Prevention of Air Pollution from Ships

19.19 Having considered the relevant parts of the report of the Working Group on Prevention of Air Pollution from Ships (PPR 9/WP.4, paragraphs 85 to 93 and annex 1), the Sub-Committee took action as described in paragraphs 19.19 to 19.23.

Proposal for a new output on the revision of the SCR Guidelines

19.20 The Sub-Committee noted that the Working Group supported, in general, a new output on the revision of the 2017 SCR Guidelines but could not support the proposal in document MEPC 77/11/2. Subsequently, the Sub-Committee, in noting that the output proposed in document MEPC 77/11/2 could be subject to further improvement, in particular as to the scope of the revision of the 2017 SCR Guidelines, also taking into account document MEPC 77/INF.6, agreed to recommend to the Committee to invite Member States and international organizations to submit proposals for a new output on the revision of the SCR Guidelines to a future session of the Committee, taking into account the discussion during this session.

Control of Volatile Organic Compounds (VOCs) emissions

19.21 The Sub-Committee noted the Working Group's discussions on the control of Volatile Organic Compounds (VOCs) emissions. In this regard, the Sub-Committee noted that due to time restraints, the Working Group agreed to forward all relevant documents, PPR 9/19/2 (OCIMF), PPR 9/19/4 (Norway) and PPR 9/19/5 (INTERTANKO) to the Correspondence Group on Prevention of Air Pollution from Ships with a view to identifying the outline of a scope of work on the reduction VOC emissions. The terms of reference for the Correspondence Group are set out under paragraph 19.23.

Proposal to establish a centre on monitoring and surveillance of EGCS

19.22 The Sub-Committee noted that the Working Group did not support the establishment of a centre on monitoring and surveillance of EGCS as proposed in document PPR 9/19/1.

Establishment of a Correspondence Group on Prevention of Air Pollution from Ships

19.23 Following consideration, the Sub-Committee established a Correspondence Group on Prevention of Air Pollution from Ships under the coordination of Denmark,⁶ and instructed it, taking into account the decisions and comments made at PPR 9, to:

- .1 with regard to the reduction of the impact on the Arctic of Black Carbon emissions from international shipping:
 - .1 develop draft guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping, recognizing possible different approaches for new and in-service ships, using documents PPR 9/8/1 (Denmark and Finland) and PPR 9/8/4 (IMarEST) as a basis, taking into account other relevant documents and views expressed;
 - .2 in view of approaches considered under 1.1, review existing data on the recommended Black Carbon measurement methods (FSN, PAS, LII) to be used in conjunction with such draft recommendatory goal-based control measures with a view to:

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- .1 identifying the most suitable measurement method(s) to be followed, taking into account relevant documents including those submitted to MEPC 76, MEPC 77 and PPR 9;
 - .2 identifying the related sampling, measurement, reporting and calibration procedures;
 - .3 identifying how to develop and apply potential threshold (limit) value(s) for Black Carbon; and
 - .4 gathering relevant information on the development of a standard approach to the characterization of marine fuels in terms of their aromatic and paraffinic nature; and
- .3 further consider regulating or otherwise directly control Black Carbon emissions from marine diesel engines (exhaust gas) to reduce the impact on the Arctic of Black Carbon emissions from international shipping, taking into account the identified candidate control measures (PPR 6/20/Add.1, annex 9), other relevant documents and views expressed;
- .2 with regard to standards for shipboard gasification of waste systems and associated amendments to regulation 16 of MARPOL Annex VI:
 - .1 develop draft standard specification/guidelines for thermal waste treatment devices, using the annex to document PPR 9/9 (Panama) as a basis;
- .3 with regard to the development of amendments to MARPOL Annex VI and the NO_x Technical Code on the use of multiple engine operational profiles (EOPs) for a marine diesel engine:
 - .1 in accordance with the scope of work agreed at MEPC 73 (MEPC 73/19, paragraph 15.18), and taking into account relevant documents submitted to MEPC 71, MEPC 73, MEPC 77, PPR 7 and PPR 9:
 - .1 further consider how to incorporate, and prepare regulatory controls and/or draft amendments on, the use of multiple Engine Operating Profiles (EOPs) in MARPOL Annex VI and/or the NO_x Technical Code 2008 as appropriate;
 - .2 clarify the need for definitions of terminology and application related to EIAPP test cycles and related amendments to the NO_x Technical Code 2008; and
 - .3 in relation to possible outcomes from 3.1.1 and 3.1.2 above, consider whether to extend the scope of the output, and advise the Sub-Committee accordingly;
- .4 with regard to the reduction of Volatile Organic Compound (VOC) emissions:
 - .1 identify the outline of a scope of work on the reduction of Volatile Organic Compound (VOC) emissions, taking into account documents PPR 9/19/2 (OCIMF), PPR 9/INF.11 (OCIMF), PPR 9/19/4 (Norway) and PPR 9/19/5 (INTERTANKO); and

- .5 submit a written report to PPR 10.

Pollution prevention equipment for machinery space bilges of ships

19.24 The Sub-Committee recalled that MEPC 77 had instructed it to consider:

- .1 document MEPC 77/14/2 (China), proposing to amend paragraph 6.2.2 of the *Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships* (resolution MEPC.107(49)) to include a provision for a light and sound alarm to be triggered and the overboard discharge of oily water to be stopped in the event that a 15 ppm bilge alarm had lost sample water; and
- .2 the possible option proposed by the United Kingdom in paragraph 20 of document MEPC 77/1/1/Add.1 that, with regard to the proposed amendments in document MEPC 77/14/2, interested Member States and international organizations should be invited to submit proposals for a new output to a future session of the Committee.

19.25 In the context, the Sub-Committee also had for its consideration document PPR 9/19/3 (China), commenting on the outcome of MEPC 77 in relation to document MEPC 77/14/2, and reiterating the proposal to amend paragraph 6.2.2 of the *Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships*.

19.26 In the ensuing discussion, all delegations who spoke stressed that the proper functioning of pollution prevention equipment was critical to ensuring the protection of the marine environment.

19.27 In this context, the Sub-Committee noted:

- .1 general support for future technical discussion on the best way forward to address the issues raised in documents PPR 9/19/3 and MEPC 77/14/2; and
- .2 that due to, inter alia, the significance of resolution MEPC.107(49), the broad impact of any amendments on the global shipping industry, and the prospect of detailed requirements relating to installation and testing needing to be developed and introduced for smooth implementation of any new provisions, the majority of delegations who spoke agreed with the view expressed by the United Kingdom at MEPC 77 that a proposal for a new output should be submitted to the Committee.

19.28 Consequently, the Sub-Committee invited interested Member States and international organizations to submit a proposal to the Committee for a new output on development of amendments to the *Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships* (resolution MEPC.107(49)) to ensure that no discharge of water with oil content exceeding 15 ppm occurs in the event that access of sample water to the oil content meter is inadvertently or deliberately blocked.

Title of section 5 of Form B of the Supplement to the International Oil Pollution Prevention Certificate

19.29 The Sub-Committee was informed by the Secretariat that while the title of section 5 of Form B of the Supplement to the International Oil Pollution Prevention Certificate was

indicated as being "Construction (regulations 18, 19, 20, 21, 22, 23, 26, 27, 28 and 33)" in the amendments to MARPOL Annex I that had been adopted by resolution MEPC.276(70), the title of section 5 had not formally been amended (i.e. in accordance with article 16 of MARPOL) to include references to regulations 21, 22 and 23.

19.30 In light of this information, the Sub-Committee requested the Secretariat to include an additional paragraph in the draft amendments to MARPOL Annex I agreed under agenda item 13 (see 13.6 and annex 8), to amend the title of section 5 of Form B of the Supplement to the International Oil Pollution Prevention Certificate so that it matches the title appearing in the annex to resolution MEPC.276(70). The Sub-Committee notes that the above-mentioned draft amendment would be considered by MEPC 78, with a view to approval and subsequent adoption alongside the draft amendments to MARPOL Annex I concerning regional arrangements for port reception facilities in the Arctic.

20 CONSIDERATION OF THE REPORT OF THE SUB-COMMITTEE

20.1 The draft report of the Sub-Committee (PPR 9/WP.1) was prepared by the Secretariat, in consultation with the Chair, and considered by the Sub-Committee during the virtual meeting held on 8 April 2022. Subsequently, the Secretariat, in consultation with the Chair, prepared and published on IMODOCS the final draft report (PPR 9/WP.1/Rev.1) incorporating the changes to document PPR 9/WP.1 that had been agreed during its consideration in the virtual meeting. Thereafter, delegations wishing to comment on the final draft report were given a deadline of Monday, 25 April 2022, 23.59 (UTC+1), to do so by correspondence in accordance with paragraph 21 of the *Interim guidance to facilitate remote sessions of the Committees during the COVID-19 pandemic* (MSC-LEG-MEPC-TCC-FAL.1/Circ.1).

20.2 With no comments having been received, the report of the Sub-Committee was finalized by the Secretariat in consultation with the Chair.

21 ACTION REQUESTED OF THE COMMITTEE

21.1 The Marine Environment Protection Committee, at its seventy-eighth session, is invited to:

- .1 concur with the evaluation of products and their respective inclusion in lists 1, 2, 3 and 5 of MEPC.2/Circ.27 (published on 1 December 2021), with validity for all countries and with no expiry date where appropriate (paragraphs 3.3.1 and 3.3.2);
- .2 note that advice on how to assess mixtures against the criteria for the discharge requirement in regulation 13.7.1.4 of MARPOL Annex II had been provided by GESAMP/EHS 58 and would be taken into consideration by the Sub-Committee and the ESPH Technical Group, on a case-by-case basis, when assessing mixtures to which special requirement 16.2.7 of the IBC Code might be applicable (paragraphs 3.2.3 and 3.3.3);
- .3 concur with the evaluation of cleaning additives and their inclusion in annex 10 to MEPC.2/Circ.27 (paragraph 3.3.4);
- .4 note that prior to MEPC.2/Circ.27 being published, a review was undertaken by ESPH 27 and amendments were made, including the deletion of products that had reached their expiry dates, or were no longer shipped, or had been re-evaluated and met the criteria for complex mixtures in paragraph 9.2 of the *Guidelines for the provisional assessment of liquid substances transported in bulk* (MEPC.1/Circ.512/Rev.1) (paragraph 3.3.5);

- .5 urge reporting countries that have products listed in list 2 or list 3 of the MEPC.2 circular on *Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code* to contact the respective manufacturers and request them to review their products for the purpose of assessing whether any changes in the carriage requirements would be necessary, taking into account the revised chapter 21 of the IBC Code, the latest GESAMP Hazard Profiles for the components, MEPC.1/Circ.512/Rev.1 and PPR.1/Circ.10 (paragraph 3.3.6);
- .6 approve the revised *Guidance on methodologies that may be used for enumerating viable organisms for type approval of ballast water management systems*, for dissemination as BWM.2/Circ.61/Rev.1 (paragraph 5.4 and annex 2);
- .7 adopt the draft MEPC resolutions on:
 - .1 *2022 Guidelines for brief sampling of anti-fouling systems on ships* (paragraph 6.10 and annex 3);
 - .2 *2022 Guidelines for inspection of anti-fouling systems on ships* (paragraph 6.10 and annex 4); and
 - .3 *2022 Guidelines for survey and certification of anti-fouling systems on ships* (paragraph 6.10 and annex 5);
- .8 instruct the III Sub-Committee to review the *2022 Guidelines for inspection of anti-fouling systems on ships*, with a view to them being added as a new appendix to a future version of the *Procedures for port State control* in accordance with the methodology agreed by the Committees (paragraph 6.11);
- .9 concur with the view that there is no need for an update to the list of materials for the Inventory of Hazardous Materials under the Hong Kong Convention to include cybutryne following the entry into force of the respective controls, as the existing relevant text in appendix I of the Hong Kong Convention is generic enough (paragraph 6.12);
- .10 note that there may be a need to consider amending the *2015 Guidelines for the development of the Inventory of Hazardous Materials* (resolution MEPC.269(68)), which contain more specific guidance currently limited to organotin compounds (paragraph 6.13);
- .11 approve the draft MEPC circular on the 2022 Guidelines for risk and impact assessments of the discharge water from exhaust gas cleaning systems (paragraph 10.25 and annex 6);
- .12 approve the draft MEPC circular on the 2022 Guidance regarding the delivery of EGCS residues and stored discharge water to port reception facilities (paragraph 10.26 and annex 7);
- .13 note that the proposal in document MEPC 77/11/1 (Finland, United States and IACS) to extend the scope of output 2.15 (Development of amendments to MARPOL Annex VI and the NO_x Technical Code on the use of multiple engine operational profiles for a marine diesel engine) to cover engine

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- test-cycles, will be further considered by a correspondence group in conjunction with all other documents relating to output 2.15 that the Sub-Committee had for its consideration (paragraphs 11.7 and 19.23);
- .14 approve the draft amendments to MARPOL Annexes I, II, IV, V and VI, concerning regional reception facilities in the Arctic, with a view to subsequent adoption (paragraph 13.6 and annex 8);
- .15 approve, in principle, the draft amendments to the *2012 Guidelines for the development of a regional reception facility plan* (resolution MEPC.221(63)), along with the associated draft MEPC resolution, with a view to subsequent adoption in conjunction with the adoption of the amendments to MARPOL Annexes I, II, IV, V and VI (paragraph 13.7 and annex 9);
- .16 agree to amend the title of output 1.26 to "Revision of MARPOL Annex IV and associated guidelines to introduce provisions for record-keeping and measures to confirm the lifetime performance of sewage treatment plants; and further, on new ships, a prohibition of fitting comminuting and disinfecting systems (CDS)" (paragraph 14.7);
- .17 note that, with regard to marking of fishing gear, the Sub-Committee agreed that an MEPC circular could be developed by the Sub-Committee as a short-term measure to promote the implementation of fishing gear marking systems and the FAO Voluntary Guidelines for the Marking of Fishing Gear, taking into account additional work by FAO, such as the technical manual on marking of fishing gear being developed by FAO (paragraph 15.22);
- .18 note that divergent views on the potential regulatory options with regard to marking of fishing gear and on the feasibility of making marking of fishing gear mandatory were expressed, as well as the need for clarity on high-level policy in order for the Sub-Committee to progress its future work in this regard in an effective manner (paragraph 15.23);
- .19 provide further advice to the Sub-Committee on possible regulatory options for addressing marking of fishing gear, taking into account:
- .1 the proposed mandatory goal-based approach to be developed under the framework of MARPOL Annex V, as proposed in document MEPC 75/8/4 and further elaborated in document PPR 9/15;
 - .2 the alternative voluntary approach as described in document MEPC 77/8/2, focusing on enhanced cooperation with FAO and regional fisheries management organizations (RFMOs);
 - .3 the legal advice provided by the Secretariat in document PPR 9/15/6 on available options; and
 - .4 relevant information provided by FAO, including the statement by FAO annexed to the Sub-Committee's report and the report of MEPC 77 (paragraph 15.23);
- .20 approve the draft amendments to MARPOL Annex V to make the Garbage Record book mandatory also for ships of 100 gross tonnage and above and less than 400 gross tonnage, with a view to subsequent adoption (paragraph 15.32 and annex 10);

- .21 with regard to the reduction of the environmental risk of plastic pellets transported by ships:
 - .1 note that interested Member States and international organizations were invited to submit documents with draft guidelines on best practices related to response to and the clean-up of plastic pellet spills to a future session of the Sub-Committee (paragraph 15.12); and
 - .2 note that document MEPC 77/8/3, together with other relevant documents submitted to the Sub-Committee, would be further considered by a correspondence group and all possible options on how to reduce the environmental risk of plastic pellets transported by ships would be reviewed (paragraphs 15.7 and 15.37.1);
- .22 approve the draft amendment to the unified interpretation of paragraph 4.4.6.1 of the NO_x Technical Code 2008, for inclusion in a revision of MEPC.1/Circ.895 (i.e. MEPC.1/Circ.895/Rev.1) (paragraph 16.6 and annex 11);
- .23 approve the draft unified interpretation of regulation 18.3 of MARPOL Annex VI, with regard to the use of biofuels, for inclusion in a further revision of MEPC.1/Circ.795 (i.e. MEPC.1/Circ.796/Rev.6) (paragraph 16.9 and annex 12);
- .24 note that the remaining two requests in document MEPC 77/7/7, pertaining to the revision of MARPOL Annex VI and the NO_x Technical Code would need to be further considered (paragraph 16.11);
- .25 approve the draft unified interpretation of appendix I to the BWM Convention (Form of International Ballast Water Management Certificate), for inclusion in a further revision of BWM.2/Circ.66 (i.e. BWM.2/Circ.66/Rev.3) (paragraphs 16.12, 16.15.2 and 16.17; and annex 13);
- .26 note that the Sub-Committee, having considered document MEPC 77/4/11 and a commenting document, could not agree on a unified interpretation of regulation B-3 of the BWM Convention (paragraphs 16.15.1 and 16.19);
- .27 approve the biennial status report of the Sub-Committee for the current biennium and the provisional agenda for PPR 10 (paragraphs 17.3 and 17.4 and annexes 14 and 15, respectively);
- .28 approve the holding of an intersessional meeting of the ESPH Technical Group in 2023 (paragraph 17.8);
- .29 with regard to documents MEPC 77/11/2 and MEPC 77/INF.6:
 - .1 note that, while there was support, in general, for a new output on revision of the 2017 SCR Guidelines, the proposal in document MEPC 77/11/2 could not be supported (paragraph 19.20); and
 - .2 invite Member States and international organizations to submit proposals for a new output on the revision of the 2017 SCR Guidelines to a future session of the Committee, taking into account

document MEPC 77/INF.6 and the view that the output proposed in document MEPC 77/11/2 could be subject to further improvement, in particular as to the scope of the revision of the 2017 SCR Guidelines (paragraph 19.20); and

- .30 note that following consideration of document MEPC 77/14/2, along with a commenting document and the relevant comments made at MEPC 77, the Sub-Committee invited interested Member States and international organizations to submit a proposal to the Committee for a new output on development of amendments to the *Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships* (resolution MEPC.107(49)) (paragraphs 19.24 to 19.28).

ANNEXES

(The annexes to this report have been issued as document PPR 9/21/Add.1)
