

IMO SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE, 19 – 23 FEBRUARY 2024

The IMO Sub-Committee on Pollution Prevention and Response held its 11th session (PPR 11) in hybrid format from 19 – 23 February 2024 under the retiring chairmanship of Dr Flavio Fernandes (BRAZIL) and his Vice Chair, Dr Anita Makinen (FINLAND). As this was the final meeting conducted by Dr Fernandes in his term of office, the Sub-Committee voted Dr. Makinen to be his successor. Ms Stephanie Jannah (TOGO) was chosen for the position of Vice-Chair. The meeting was attended by representatives from IMO Member Governments, Associate Members, International Organisations and Non-Governmental Organisations in consultative status.

OPENING REMARKS BY IMO SECRETARY-GENERAL.

Welcoming delegates to the eleventh session of the Sub Committee, PPR 11, the Secretary-General expressed profound sadness in sharing the news of the death of Mr Jaideep SARKAR (USA Delegation and Vice Chair of SDC at its tenth meeting), following which the Sub-Committee observed a minute of silence in his honour.

Concerning the Red Sea, he urged the immediate release of the **Galaxy Leader** and its crew, reiterating his firm belief in respect for the exercise of navigational rights and freedom by merchant vessels. In light of the ongoing oil pollution incident in Trinidad and Tobago, he extended deepest sympathies to all those affected.

Following on from the theme for this year's World Maritime Day, "Navigating the future: safety first!", he referred to the work in preventing ship-source spills of plastic pellets, underscored by last December's incident along the coast of north-western Spain, and urged finalisation of recommendations for the carriage of plastic pellets by sea in freight containers and draft guidelines on clean-up of same from ship-source spills. Proposals submitted regarding instruments that could be used as the legal basis for the development of mandatory measures for the carriage of plastic pellets in packaged form will also be considered.

Additionally, he stated that the agenda for PPR 11 includes a variety of other items, deserving of significant progress, including those to:

1. Develop guidance on matters relating to in-water cleaning; 2.
2. Reduce shipping's impact on the Arctic caused by Black Carbon emissions;
3. Evaluate and harmonise rules and guidance on the discharge of discharge water from exhaust gas cleaning systems into the marine environment, including conditions and areas;
4. Revise MARPOL Annex IV and associated guidance to improve the lifetime performance of sewage treatment plants; and,

5. Draft amendments to MARPOL Annex V in order to enhance the reporting of fishing gear losses, in close cooperation with FAO.

The Secretary-General took the opportunity to thank the Chair of the ESPH Technical Group for the outcome of ESPH 29, the report of which will be duly considered, and finally, he expressed confidence that all the challenges presented by a lengthy agenda will be successfully dealt with, wishing delegates every success.

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1 **ADOPTION OF THE AGENDA.**

The agenda was duly adopted, following which 3 Working Groups (WG) and 2 Drafting Groups (DG) were set up and chaired as follows:

- WG 1: Prevention of Air Pollution from Ships (agenda items 6 and [7], 8 and [17], Mr. W. Lundy (United States));
- WG 2: Revision of MARPOL annex IV (agenda item 12), Dr. S. Ota (Japan);
- WG 3: Marine Plastic Litter from Ships (agenda item 13 excluding the draft guidelines on clean-up of plastic pellets from ship-source spills), Ms. A. Skelton (Australia);
- DG 1: In-water Cleaning (agenda item 5 – to prepare draft terms of reference for a correspondence group), Dr. S. Bailey (Canada); and,
- DG 2: Pollution Response (agenda items 9 and 10 and the draft guidelines on clean-up of plastic pellets from ship-source spills under agenda item 13), Dr. C Lacroix (France), and Mr. O. Kristian Bjerkemo (Norway).

Statements by delegations with respect to attacks on ships in the Gulf of Aden and the Red Sea. A large number of delegations made statements concerning the safety and welfare of seafarers, freedom of navigation, and stability of the global supply chain following the attacks by Houthi rebels on commercial ships in the Red Sea and the Gulf of Aden. In this context, delegations commended the Secretary-General for bringing this matter to the attention of the United Nations Security Council at its special session on 3 January 2024 and for his communication and dialogue with all relevant parties, as well as for his communication and dialogue with all relevant parties, and for prioritising the well-being of seafarers in his initiatives. With respect to adverse environmental effects, many delegations pointed out that the increase in fuel consumption and greenhouse gas (GHG) emissions resulting from ships avoiding the Red Sea and opting to navigate around the Cape of Good Hope could affect the Organisation's GHG reduction targets.

2. DECISIONS OF OTHER IMO BODIES.

The Sub-Committee noted the outcomes of the following IMO bodies pertaining to its work and took action under the relevant agenda items described by the Secretariat:

- .1 HTW 9, as reported in document PPR 11/2;
- .2 MSC 107, MEPC 80 and C 129, as reported in document PPR 11/2/1; and,
- .3 CCC 9, as reported in document PPR 11/2/2 (Secretariat).

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

Report of ESPH 29. The Sub-Committee considered the report of ESPH 29 (PPR 11/3) which took place from 30 October to 3 November 2023 and took action as follows.

Outcome of GESAMP/EHS 60. The Sub-Committee noted the outcome of GESAMP/EHS 60, and in particular; development of GESAMP Hazard Profiles for seven new substances; outcomes of the review of GESAMP Hazard Profile ratings for three existing substances; and, incorporation of the split C3 column and the new E1 ratings in the 2023 GESAMP Composite List.

Evaluation of products and cleaning additives. With regard to the provisional categorisation of liquid substances carried out by ESPH 29, the Sub-Committee concurred with the evaluation of pure or technically pure products and mixtures as a whole plus evaluation of trade-named mixtures and the evaluation of cleaning additives. Reporting countries that have products 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* were urged to contact the respective manufacturers, requesting them to review their products for the purpose of assessing whether any changes in the carriage requirements would be necessary.

Revision of MEPC.1/Circ.590 on Revised tank cleaning additives guidance note and reporting form. Following discussion, the Sub-Committee agreed to a draft Revised tank cleaning additives guidance note and reporting form, with a view to subsequent approval by MEPC 82. In addition, the Sub-Committee endorsed the view of the ESPH Technical Group that there is a need to re-evaluate the cleaning additives currently listed in annex 10 to the MEPC.2/Circular, taking into account, inter alia, the latest GESAMP Hazard Profiles and the revised guidance following its approval by MEPC.

Implications that the lack of toxic vapour detection equipment will have on the daily operation of chemical tankers. The Sub-Committee noted the deliberations of ESPH 29 with regard to products that have a newly-assigned toxic rating in column k of the carriage requirements in the latest revision of chapter 17 of the IBC Code and lack toxic vapour detection equipment. It was also noted that CCC 9, in the context of the output on "Revision of the Revised recommendations for entering enclosed spaces aboard ships (resolution A.1050(27))", had considered document CCC 9/8/7 (INTERTANKO), proposing an alternative means to determine that a tank atmosphere was safe for entry that would apply only on chemical tankers following the discharge of certain toxic products where no means of testing for toxicity existed. CCC 9 agreed to keep document CCC 9/8/7 in abeyance for the time being and to further consider this document together with the relevant outcomes of ESPH 29 and the PPR Sub-Committee. Subsequently, the Sub Committee invited the CCC Sub-Committee to note the outcome of ESPH 29 with regard to products that have a newly-assigned toxic rating in the latest revision of chapter 17 of the IBC Code.

4. AMENDMENTS TO MARPOL ANNEX II IN ORDER TO IMPROVE THE EFFECTIVENESS OF CARGO TANK STRIPPING, TANK WASHING OPERATIONS AND PREWASH PROCEDURES FOR PRODUCTS WITH A HIGH MELTING POINT AND/OR HIGH VISCOSITY.

The Sub-Committee had two documents for consideration: PPR 11/4 (Secretariat), reproducing the comments listed in paragraph 12.2 of the report of MEPC 79 in relation to the output; and, PPR 11/INF.21 (Kingdom of the Netherlands and Spain), providing further information concerning ways to improve the effectiveness of cargo tank stripping, tank washing operations and prewash procedures for products with a high melting point and/or high viscosity, supplementing the information in document MEPC 79/12.

The observer from INTERTANKO informed the Sub-Committee that it had established an aspirational strategy to move towards a future with zero discharge of MARPOL Annex II tank washing materials from chemical tankers, and that a detailed road map was being developed identifying what will need to be in place in order to achieve such an ambition, the major barriers that will need to be removed before the chemical tanker industry can fully realise this objective, and providing a plan of action for engaging relevant stakeholders in the chemical tanker industry.

Following consideration, the Sub-Committee:

.1 noted the information in document PPR 11/INF.21;

.2 referred documents PPR 11/4 and PPR 11/INF.21 to ESPH 30 for further consideration, with a view to advising PPR 12 on how to proceed; and,

.3 agreed to include this output as an additional item in the provisional agenda of ESPH 30, inviting Member States and international organisations to submit concrete proposals to ESPH 30.

5. DEVELOPMENT OF GUIDANCE ON MATTERS RELATING TO IN-WATER CLEANING.

The Sub-Committee recalled that MEPC 80 had adopted resolution MEPC.378(80) on the 2023 Guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species (2023 Biofouling Guidelines), as prepared by PPR 10. The Sub-Committee also recalled that, following a request by PPR 10, MEPC 80 had agreed to change the title of output 1.21 from "Review of the 2011 Guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species (resolution MEPC.207(62))" to "Development of guidance on matters relating to in water cleaning" and set the target completion year of the renamed output to 2025.

The Sub-Committee had twelve documents for its consideration, including PPR 11/INF.8 (ISO) following which ISO was invited to continue updating the Organisation on its further work relating to the development of standards on in-water cleaning. In the ensuing discussion, there was overwhelming support for the establishment of a correspondence group, as well as a drafting group to prepare its terms of reference. Finally, with regard to further proposals, suggestions and information in the various submitted documents, no specific objections were expressed with regard to their consideration and, therefore, all documents except document PPR 11/5/4 were forwarded to the drafting group for consideration of their potential inclusion in the CG's terms of reference.

Establishment of the Drafting Group on In-water Cleaning (DG 1). The Sub-Committee established the Drafting Group on In-water Cleaning, chaired by Dr. Sarah Bailey (Canada) and instructed it, taking into account comments and decisions made in plenary, and proposals and information in the submitted documents, to prepare draft terms of reference for a correspondence group on the development of guidance on matters relating to in-water cleaning.

Report of DG 1. Having considered the report of the Drafting Group, the Sub-Committee approved it in general and in particular, established the Correspondence Group on Development of Guidance on Matters Relating to In-water Cleaning with the draft terms of reference set out in the annex to PPR 11/WP.3, and encouraged interested Member States and international organisations to contact the Coordinator of the correspondence group, with a view to participating and contributing to the work of that group.

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

It was recalled that MEPC 77 had endorsed the terms of reference set out in document PPR 8/13 for the output on "Reduction of the impact on the Arctic of Black Carbon emissions from international shipping". Subsequently, PPR 10 established the Correspondence Group on Prevention of Air Pollution from Ships under the coordination of the United States and tasked it to further develop, with a view to finalisation, draft guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping. MEPC 80 noted the progress made by PPR 10 under this output and extended the target completion year to 2025. In addition, with regard to the geographical scope of Black Carbon emissions control measures, the Sub-Committee noted that MEPC 80 had agreed that, whilst voluntary measures might be developed for ships sailing in or near the Arctic in line with the language used in resolution MEPC.342(77) on *Protecting the Arctic from shipping Black Carbon emissions*, consideration by the Committee of any potential mandatory measures to expand the geographical scope of application or the definition of the Arctic should only be given when such a proposal was co-sponsored by a Party to MARPOL Annex VI.

Consideration of draft guidelines for reducing the impact on the Arctic of Black Carbon emissions from international shipping. Thirteen documents were submitted for consideration. During an extensive discussion, the Sub-Committee considered the draft Guidelines for reducing the impact on the Arctic of Black Carbon emissions from international shipping set out in annex 1 to document PPR 11/6, and an alternative table of "Technology options, measures, applicability and other considerations for BC control policies" set out in annex 3 to that document, in conjunction with other relevant documents submitted to this session. It was noted that there was a slight preference to add the table on "Technology options, measures, applicability and other considerations for BC control policies" as an appendix to the draft guidelines. Consequently, the Sub-Committee agreed to refer the draft Guidelines for reducing the impact on the Arctic of Black Carbon emissions from international shipping to the Working Group for finalisation, with an instruction to further review the above-mentioned table to ensure technology neutrality of the information therein and to clarify that the list would be indicative.

Consideration of draft Guidelines on recommendatory Black Carbon emission data collection, monitoring and reporting. The Sub-Committee recalled that PPR 10 had noted the update provided by the observer from the International Organisation for Standardisation (ISO) on the work undertaken for a possible indicator to characterise whether a marine fuel tended to be more paraffinic or aromatic in nature and the statement made by the delegation of Germany at that session regarding using the hydrogen to carbon (H/C) ratio as a potential alternative indicator. The observer from ISO provided an update on the work undertaken to provide the maritime industry with an informative indicator to characterise whether a marine fuel would tend to be more paraffinic or aromatic in nature (ISO/TC 28/SC 4/WG6), where both the methodology for using BMCI and VGC, as well as H/C ratio were considered although ultimately the use of the H/C ratio

was not supported. Several delegations expressed the view that within the aviation sector there was robust evidence of a high correlation between the H/C ratio of jet fuel and emissions of non-volatile particulate matter (nvPM).

The observer from ISO stated that findings from aviation fuels are not comparable with marine fuels as the latter are a far more complex and diverse mixtures of fuels, further clarifying that whilst in aviation and road transport the fuel characteristics had a major role in Black Carbon formation, in maritime transportation it was just one factor among others, making the H/C ratio test superfluous. Following consideration, the Sub-Committee agreed to refer the draft Guidelines on recommendatory Black Carbon emission data collection, monitoring and reporting to the Working Group for finalisation, and noted divergent views expressed on the possible instructions to the Working Group regarding marine fuel characteristics issues.

Establishment of the Working Group on Prevention of Air Pollution from Ships. WG1 was instructed to further develop the draft guidelines for reducing the impact on the Arctic of Black Carbon emissions from international shipping, using annex 1 to document PPR 11/6 as a basis, including the table on "Technology options, measures, applicability and other considerations for BC control policies" as an annex to the draft guidelines, with a view to finalisation. Also, to further develop the draft guidelines on recommendatory Black Carbon emission data collection, monitoring and reporting, using annex 2 to document PPR 11/6 as a basis, with a view to finalisation.

Report of the Working Group (WG 1). Having considered the relevant part of WG 1's report, the Sub-Committee took the following actions:

- .1 approved the draft guidance on best practice on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping and the associated draft MEPC resolution, with a view to adoption by MEPC 82;
- .2 approved the draft guidelines on recommendatory Black Carbon emission measurement, monitoring and reporting and the associated draft MEPC resolution, with a view to adoption by MEPC 82;
- .3 invited ISO to consider the development of a Polar fuel standard which may include the H/C ratio;
- .4 invited interested Member States and international organisations to conduct further research on the use of the H/C ratio or other indicators to characterise marine fuels, using the Reporting protocol for voluntary measurement studies to collect Black Carbon data, and submit findings to PPR 12 on the impact of fuel characteristics on the formation of Black Carbon emissions from international shipping; and,
- .5 invited interested Member States and international organisations to submit proposals to a future session on fuel characteristics which may impact Black Carbon formation.

7. EVALUATION AND HARMONISATION OF RULES AND GUIDANCE ON THE DISCHARGE OF DISCHARGE WATER FROM EGCS INTO THE AQUATIC ENVIRONMENT, INCLUDING CONDITIONS AND AREAS.

The Sub-Committee recalled that the scope of work for this output consists of four parts, namely: risk assessment; delivery of EGCS residues; regulatory matters; and, database of substances. Under part 1 and part 2, MEPC 78 had approved the 2022 Guidelines for risk and impact assessments of the discharge water from exhaust gas cleaning systems (MEPC.1/Circ.899) and the 2022 Guidance regarding the delivery of EGCS residues to port reception facilities (MEPC.1/Circ.900), respectively.

The Sub-Committee further recalled that part 3 of the scope of work for this output on "regulatory matters" contains three items of work, as follows:

- .1 assess the state of technology for EGCS discharge water treatment and control;
- .2 identify and develop as appropriate regulatory measures and instruments; and,
- .3 develop a database containing local/regional restrictions/conditions on the discharge water from EGCS.

With a number of relevant documents forwarded by MEPC 79, PPR 10 and MEPC 80, plus a further seventeen submitted directly to this session, the Sub-Committee had much to consider and agreed to structure the discussion as follows:

- .1 identification and development, as appropriate, of regulatory measures and instruments on the discharge of discharge water from EGCS;
- .2 development of a database containing local/regional restrictions/conditions on the discharge water from EGCS; and,
- .3 consideration of emission factors for use in the environmental risk assessment of the discharge water from EGCS.

Identification and development, as appropriate, of regulatory measures and instruments on the discharge of discharge water from EGCS. There was a lively discussion with widely divergent views, a sample of which follows;

- there is growing scientific evidence of the harmful impact of EGCS discharge water on the marine environment which justifies the application of the precautionary principle to regulate such discharges, in particular, in enclosed sea areas, shallow waters or archipelagos; 2021.
- EGCS discharge water quality is already regulated via the 2021 Guidelines for exhaust gas cleaning systems, suggesting that the Organisation should consider amending the 2021 EGCS Guidelines.

- the evidence of actual negative impact of EGCS discharge water on the aquatic environment is not clear and more scientific research is necessary to analyse the risk before potentially amending the water discharge criteria set out in the 2021 EGCS Guidelines.
- concerns were expressed regarding the possible penalisation of ships which have, in good faith and in accordance with regulations in place, installed EGCS as an alternative compliance method. Some stressed that a global ban on the use of EGCS, as suggested in document PPR 11/7/3, would create a negative precedent, leading to significant negative impact on trade which would impair the credibility of the Organisation and the trust of the shipping industry in the global regulations.
- Some delegations expressed a preference for regulating the discharge of discharge water from EGCS outside MARPOL Annex VI since this Annex addresses air pollution and not aquatic pollution. Others expressed a preference for regional approaches when considering controls to EGCS discharge water.

Noting the many divergent views expressed on this matter, the Chair provided his observations and understanding with a view to identifying possible common ground for further progressing the work under part 3 of the scope of work for the output. Subsequently, the Sub-Committee invited interested Member States and international organisations to submit further proposals to PPR 12 on the identification and development, as appropriate, of regulatory measures and instruments on the discharge of discharge water from EGCS, taking into account the discussions at this session.

Development of a database containing local/regional restrictions/conditions on the discharge water from EGCS. The Sub-Committee considered proposals on this matter foreseen in the scope of work for the output. In the ensuing discussion, many delegations supported the proposal to develop an IMO database of local/regional regulations on EGCS discharges within the public area of GISIS. Several made reference to the current lack of clarity and transparency with respect to the existence of some local restrictions. Others highlighted the fact that since countries are sovereign in their territorial waters, they should be the ones reporting on local restrictions.

Following consideration, the Sub-Committee:

- .1 noted with appreciation the initiatives taken by ICS and BIMCO to develop lists of local/regional restrictions/conditions on the discharge water from EGCS;
- .2 invited Member States to submit information on local/regional restrictions/conditions on the discharge water from EGCS using the "National Maritime Legislation" module of GISIS; and,
- .3 invited the Secretariat to explore other reporting options in GISIS, such as in the MARPOL Annex VI module.

Consideration of emission factors for use in the environmental risk assessment of the discharge water from EGCS. The Sub-Committee had for its consideration proposals on emission factors for use in the environmental risk assessment of the discharge water from EGCS, as set out in documents MEPC 78/9/3, MEPC 79/5/1 and PPR 11/7/5. In discussion, several delegations questioned the methodology used in the study underlying document PPR 11/7/5, especially the net concentration method used, and suggested that the methodology should be discussed in-depth in the Working Group. In highlighting the significant discrepancies between the values provided in documents MEPC 78/9/3 and PPR 11/7/5, it was suggested that the methodologies and data used should be presented in detail and discussed in the Working Group, also that the raw data should be made available for experts to review the values presented.

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

Following discussion, the Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships (WG 1) established under agenda item 6 to consider how to advance the development of unified and representative emission factors for use in the environmental risk assessment of the discharge water from EGCS, taking into account documents MEPC 78/9/3 (Germany), MEPC 79/5/1 (CESA) and PPR 11/7/5 (ICS and CLIA), comments and decisions made in plenary, and advise the Sub-Committee accordingly.

Report of the Working Group. Having considered the relevant part of WG 1's report on Prevention of Air Pollution from Ships, the Sub-Committee, with regard to the development of representative emission factors for use in the environmental risk assessment of EGCS discharge water, invited interested Member States and international organisations to:

- .1 submit relevant data to a future session;
- .2 submit proposals for terms of reference for the re-establishment of the GESAMP Task Team on EGCS to conduct further work on this matter to MEPC 82; and,
- .3 consider providing financial contributions to enable the re-establishment of the GESAMP Task Team on EGCS.

8. 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 INCLUDING CLARIFYING ENGINE TEST CYCLES.

The Sub-Committee recalled that MEPC 73 had agreed to 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". The scope of work stated;

"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”.

The Sub-Committee also recalled that, owing to time constraints, PPR 9 had forwarded all relevant documents on multiple engine operational profiles (MEOPs) to the Correspondence Group on Prevention of Air Pollution from Ships established at that session, with appropriate terms of reference. In addition, it had endorsed the points on which the Correspondence Group had reached general agreement in relation to Multiple Engine Operating Profiles (MEOPs) as follows:

.1 with regard to MEOPs, there was a general agreement in the Correspondence Group that MEOPs could be allowed under certain circumstances; that amendments regarding MEOPs and Not-To-Exceed (NTE) Zones should be placed in a new chapter 8 of the NO_x Technical Code 2008; and there was general agreement on a definition of "engine operational profile"; and,

.2 with regard to the EIAPP test cycles, the Group identified a need for clear terminology and application related to EIAPP test cycles; and, consequently, the Group supported extending the scope of the output to cover definitions of terminology and application related to EIAPP test cycles and related amendments to the NO_x Technical Code 2008.

.3 noted that the Correspondence Group had identified a number of outstanding issues to be further discussed;

.4 invited interested Member States and international organisations to submit proposed draft amendments to the NO_x Technical Code regarding MEOPs and EIAPP test cycles to this session, taking into account the points on which there was general agreement in the Correspondence Group and comments made at this session.

In addition to documents forwarded from previous sessions, a further seven submissions to this session were duly considered, leading to extensive discussion.

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

Following the discussion, and considering the highly technical nature of the work, the Sub-Committee instructed the Working Group on Prevention of Air Pollution from Ships (WG 1) established under agenda item 6, to finalise the draft amendments to the NO_x Technical Code 2008 and MARPOL Annex VI on the application of multiple engine operational profiles, test cycles and rational control strategies with a view to providing recommendations to the Sub Committee on how best to proceed.

Report of the Working Group on Prevention of Air Pollution from Ships. Having considered the relevant part of WG 1's report on Prevention of Air Pollution from Ships, the Sub-Committee:

.1 agreed the draft amendments to MARPOL Annex VI and the NO_x Technical Code 2008 on the use of multiple engine operational profiles (MEOPs) for a marine diesel engine including clarifying engine test cycles for approval by MEPC 82; and,

.2 agreed the draft amendments to the NO_x Technical Code 2008 on certification of an engine subject to substantial modification, for approval by MEPC 82.

9. DEVELOPMENT OF A GUIDE COMPILING BEST PRACTICES TO DEVELOP LOCAL-LEVEL MARINE SPILL CONTINGENCY PLANS TO AID STATES, PARTICULARLY LOCAL GOVERNMENTS AND KEY INSTITUTIONS, IN IMPLEMENTING THE OPRC CONVENTION AND OPRC-HNS PROTOCOL.

The Sub-Committee recalled that MEPC 78 had agreed to include a new output to develop a guide containing a compilation of best practices for developing local-level marine spill contingency plans to aid States in implementing the OPRC Convention and OPRC-HNS Protocol and assigned the PPR Sub-Committee as the associated organ, with two sessions needed to complete the output. Three documents were submitted, one of which, in the view of the Sub-Committee, that by Norway, contains draft guidelines sufficiently developed to assist Member States in the implementation of the OPRC Convention and its OPRC-HNS Protocol. In light of this, the Sub-Committee agreed that a drafting group should be established to finalise the work.

Report of the Drafting Group on Pollution Response (DG 2). Having considered the relevant part of the report of DG 2, the Sub-Committee agreed the draft guidelines for developing a local oil/hazardous and noxious substances marine pollution contingency plan, for submission to MEPC 82, with a view to approval and subsequent publication.

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

Draft guidelines on mitigation measures to reduce risks of use and carriage for use of heavy fuel oil by ships in Arctic waters. It was recalled that PPR 8 had agreed, in principle, to a version of the draft guidelines on mitigation measures to reduce risks of use and carriage for use of heavy fuel oil (HFO) as fuel by ships in Arctic waters set out in annex 2 to document PPR 8/6 (Russian Federation) being advanced and eventually finalised. The Sub-Committee also recalled that PPR 8 had agreed to request:

.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 (Familiarisation, training and drills).

Meanwhile, HTW 9, after noting the recommendations of the Working Group on the Implementation of the STCW Convention that the term "Ship operators" in the titles of section I be replaced by "Companies" and the term "Maritime Administrations" in the title of section II be replaced by "Administrations", respectively, had referred the matter to PPR 10; and, had agreed to the proposed amendments to the provisions for familiarisation, training and drills in sections I and II of the draft guidelines.

Fuel tank location. Having noted support for option 1 proposed in paragraph 10 of document PPR 11/10/2, namely to replace figure 1 in the draft guidelines and modify paragraph 4.4 under section I to make it clear that positioning the fuel tank at a distance of not less than 0.76 m from the outer plating gives better protection from oil spills and should be the only recommended arrangement of heavy fuel oil tanks, the Sub-Committee agreed to incorporate the above-mentioned proposal in the draft guidelines and delete new draft paragraphs 4.8 and 4.9.

Navigational measures and communications. The Sub-Committee considered the modifications proposed in document PPR 11/10/1 to chapter 2 (Navigational measures) of sections I and II of the draft guidelines which were generally supported. In addition, the Sub-Committee recalled that NCSR 9, after reviewing part 2 (Navigational measures) and part 5 (Communication) of sections I and II of the draft guidelines, had invited the Sub-Committee to consider limiting their scope only to ships using HFO as fuel, or carrying HFO for use as fuel, in Arctic waters, which are not currently covered by the Polar Code or other IMO instruments. Also, having noted the suggestion by the observer from the Inuit Circumpolar Council for text to be added to the draft guidelines indicating that the engagement of Arctic Indigenous Peoples and the utilisation of Indigenous Knowledge can support safe and low-impact shipping, contributing to reducing spill risks from HFO, the Sub-Committee agreed for such text to be added. In light of this, the Sub-Committee agreed to refer the draft guidelines on mitigation measures to reduce risks of use and carriage for use of heavy fuel oil (HFO) as fuel by ships in Arctic waters to the Drafting Group on Pollution Response (DG 2) for finalisation.

Report of the Drafting Group on Pollution Response. Having considered the relevant part of the report of the Drafting Group, DG 2, the Sub-Committee agreed to the draft guidelines on mitigation measures to reduce risks of use and carriage for use of heavy fuel oil as fuel by ships in Arctic waters and the draft cover MEPC circular for submission to MEPC 81 as an urgent matter, with a view to approval, due to the guidelines taking effect in July 2024 when regulation 43A of MARPOL Annex I (Special requirements for the use and carriage of oils as fuel in Arctic waters) will come into force.

11. REVIEW OF THE IBTS GUIDELINES AND AMENDMENTS TO THE IOPP CERTIFICATE AND OIL RECORD BOOK.

Having observed that no documents have been submitted to this session regarding potential amendments to MARPOL Annex I, and without the option of establishing any additional groups in accordance with the Committees' Method of Work, the Sub-Committee agreed once more to defer further consideration of this agenda item and all associated

documents to its next session. In this connection, the Sub-Committee noted that MEPC 80 had extended the target completion year for the output to 2025. Consequently, the Sub-Committee reiterated the invitation to interested Member States and international organisations to develop and submit relevant proposals for amendments to MARPOL Annex I to introduce requirements under which forced evaporation of oily bilge water would be considered an appropriate means of disposal, with a view to completing this output by 2025. In this regard, the Sub-Committee noted that, should such proposals not be submitted to PPR 12, it would have to seek the advice of MEPC concerning its outputs for which no submissions have been received for two consecutive sessions.

12. REVISION OF MARPOL ANNEX IV AND ASSOCIATED GUIDELINES. 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". With regard to the renamed output, the Sub-Committee also recalled that MEPC 74 had instructed it to: seek the input of the III and HTW Sub-Committees in relation to issues of port State control and human element; 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 penalised; and, further consider the comment by the observer from IACS, as noted by MEPC 74, seeking clarification on whether the scope of the work 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.

The Sub-Committee further recalled that PPR 7 had established the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines to progress the work intersessionally whilst PPR 8, PPR 9 and PPR 10 had all re-established it.

Report of the Correspondence Group and related documents. There were seven documents for consideration, six of which were commenting papers on PPR 11/12 and PPR 11/INF.5 (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 MEPC.284(70)); proposed draft guidelines on the implementation of MARPOL Annex IV for sewage treatment plants (STP); an overview of further work concerning the aforementioned three documents; and reports of the four virtual meetings organised as a complement to the work of the Correspondence Group.

The Sub-Committee noted the progress made by the Correspondence Group on the draft revision of MARPOL Annex IV and associated guidelines and also noted the documents commenting on the report of the Correspondence Group. Some of the views expressed were as follows;

- due to the challenges of COVID-19 in recent years and the complexity and technical nature of sewage systems, work on this output needs holistic review.
 - the results of a sampling survey on treated sewage from operating ships shows that the quality of sewage effluents could be improved to a considerable extent by proper operation and maintenance of STPs, pointing to the importance of requiring a sewage management plan and record book for existing ships.
- the adoption of amendments to MARPOL Annex IV should not be carried out in stages, as this would result in consecutive changes for all stakeholders and, considering the interdependence of the draft provisions in MARPOL Annex IV, the type approval guidelines and the draft implementation guidelines, focusing only on provisions for sewage management plan and record-keeping first is not the preferred way forward.
- measures that are simple to implement and relevant to all ships, such as a sewage management plan and record-keeping should be prioritised so that they can be finalised in a timely manner, which will yield tangible results in a shorter time scale. This would ensure that all sewage treatment systems are subject to requirements on recording and handling of effluent generated on board ships as well as maintenance of sewage treatment systems.
- performance monitoring and effluent limits should be applicable to all ships and all effluents should be treated continuously without exception.
- the current text in regulation 11 of the draft revised MARPOL Annex IV is unclear due to the inclusion of sewage sludge, which should have the same discharge requirements as sewage (i.e. more than 12 nautical miles) and draft regulations 11.1 and 11.3 should, therefore, be redrafted to address certain types of discharges according to types of sewage treatment systems (holding tank, comminuting and disinfecting system and sewage treatment plant).

Report of the Working Group on Revision of MARPOL Annex IV and Associated Guidelines. Having considered part 1 of the report of the Working Group on Revision of MARPOL Annex IV and Associated Guidelines, the Sub-Committee approved the report in general and took action as outlined hereunder:

- .1 endorsed the agreement of the method of work for this output;
- .2 invited interested Member States and international organisations to submit relevant proposals on the application of the requirements of performance tests and indicative monitoring to existing installations to PPR 12;
- .3 invited interested Member States and international organisations to start data collection in relation to the quality of effluent;

.4 agreed to the preliminary work plan for the completion of the output, keeping it under review;

.5 endorsed the agreement of the Group that the correspondence group should be tasked to further develop draft amendments to MARPOL Annex IV with regard to record of discharges, record of maintenance and management plan concerning discharge and maintenance as well as associated guidelines, as appropriate, with a view to submitting the draft text to PPR 12;

.6 re-established the Correspondence Group on Amendments to MARPOL Annex IV and Associated Guidelines to progress the work intersessionally, with the given terms of reference;

.7 agreed that the coordinators 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; and,

.8 noted that the written report on further development of draft amendments to MARPOL Annex IV and associated Guidelines will be issued as document PPR 11/WP.6/Add.1, to be considered by PPR 12.

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

Reduction of the environmental risk associated with the maritime transport of plastic pellets. The Sub-Committee recalled that MEPC 77 had considered document MEPC 77/8/3 (Sri Lanka), commenting on document MEPC 75/8/3 and discussing 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, highlighting the hazardous nature of plastic pellets and the need to establish, inter alia, international guidelines and requirements for loading, unloading, packaging, and emergency response protocols, with clear labelling of containers carrying pellets, and improved stowage instructions. It also referred document MEPC 77/8/3 to PPR 9 for the Sub-Committee to further consider the proposals, and requested the input of the CCC Sub-Committee, with a view to advising the Committee on how best to proceed.

PPR 9 established a Correspondence Group on Marine Plastic Litter from Ships, under the coordination of Norway and Spain, and had instructed it, in this context, to take into consideration relevant documents, as well as the comments and decisions made by PPR 9, and to further consider the options for reducing the environmental risk associated with the maritime transport of plastic pellets in order to advise the Sub-Committee on the way forward.

PPR 10 agreed a two-stage approach to reduce the environmental risk associated with the maritime transport of plastic pellets, which was subsequently noted by MEPC 80. This resulted in the development of a circular containing recommendations for the carriage of

plastic pellets by sea in freight containers addressing in particular, packaging, notification and stowage. At a later stage, amendments to appropriate mandatory instruments will be developed subject to concrete proposals by Member States and international organisations to a future session of the Sub-Committee that will take into account discussions to date, the table on "Potential instruments that could form a legal basis for mandatory provisions for the maritime transport of plastic pellets in freight containers", and experience from the implementation of any non-mandatory measures.

A draft MEPC circular on recommendations for the carriage of plastic pellets by sea in freight containers was agreed, requesting input by the CCC Sub-Committee on the draft. Preparation was made for a table on "Potential instruments that could form a legal basis for mandatory provisions for the maritime transport of plastic pellets in freight containers" in which interested Member States and international organisations were invited to submit concrete proposals on potential mandatory measures to a future session of the Sub Committee, taking into account discussions to date, the table of potential instruments, and experience from implementing any non-mandatory measures. It was agreed that plastic pellets should not be carried in bulk and interested Member States and international organisations were invited to submit relevant proposals to a future session of the Sub-Committee on potential regulatory changes that may be needed to prevent the shipment of plastic pellets in bulk.

With regard to the definition of plastic pellets, the Sub-Committee considered two that had been submitted in documents to this session, namely that by OSPAR and ISO, and the other, the existing text in the draft MEPC Circular by DGAC and CEFIC. A lot of heat was generated by this duo of definitions, but having considered all of the views expressed and taking into account the outcome of CCC 9 whilst noting that the Sub-Committee would have the opportunity to refine provisions when future mandatory provisions are considered, the Sub-Committee agreed to retain the existing text of paragraph 1.1 of the draft MEPC circular in order to facilitate its finalisation this session. Subsequently, the Sub-Committee agreed to establish the Working Group on Marine Plastic Litter from Ships and instructed it to finalise the draft MEPC circular on recommendations for the carriage of plastic pellets by sea in freight containers using annex 9 to document PPR 10/18 as a basis, taking into account the comments and decisions made in plenary and using the definition of plastic pellets in paragraph 5 of document PPR 11/13/12.

Development of amendments to appropriate mandatory instruments to address the environmental risk associated with the maritime transport of plastic pellets. The Sub-Committee had six documents for its consideration, including two proposals for potential mandatory instruments as follows:

- .1 an amendment to MARPOL Annex III splitting the definition of harmful substances into substances covered by the IMDG Code and those that are not (e.g. plastic pellets) combined with new regulations in MARPOL Annex III on the transport of plastic pellets outside the scope of the IMDG Code, as proposed in document PPR 11/13/1; and,

.2 assignment of an individual UN number (class 9) for plastic pellets, as proposed in document PPR 11/13/3.

In the ensuing discussion, many delegations stressed the urgency of discussing and pursuing mandatory measures in parallel with the implementation of the voluntary circular to protect the marine environment from future spills of plastic pellets, particularly in light of the recent incident off the coast of Spain. Many other delegations, however, expressed the view that moving forward with discussions and seeking agreement on mandatory measures was in contradiction with the two-stage approach agreed at PPR 10 and which had subsequently been noted by MEPC 80. These delegations stressed the importance of finalising the draft MEPC circular on recommendations for the carriage of plastic pellets by sea in freight containers at this session and using the experience gained from implementation of the voluntary measures to inform both the instrument to form a legal basis and the specific regulations to be developed.

Following extensive discussion, in light of the divergent views expressed, the Sub-Committee agreed that more time is required for consideration of the appropriate instruments that could form the legal basis for mandatory provisions, forwarding the relevant documents to PPR 12.

Proposed guidelines on clean-up of plastic pellets from ship-source spills. The Sub-Committee recalled that at PPR 9, having noted the information contained in document PPR 9/INF.20 (Norway), as well as widespread support for guidelines with best practices related to cleaning up plastic pellets, it had invited interested Member States and international organisations 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. Two submissions by France concerning the clean-up of ship source spills were referred to DG 2 with a view to finalising draft Guidelines at this session.

Matters relating to fishing gear. Consideration was given to the reporting of fishing gear lost or discharged overboard; proposed additional active measures to reduce fishing gear losses; marking of fishing gear; and input to the Intergovernmental Negotiating Committee to develop an international legally binding instrument on plastic pollution, including in the marine environment.

Establishment of the Working Group on Marine Plastic Litter from Ships. The Sub-Committee established the Working Group on Marine Plastic Litter from Ships (WG 3) and instructed it accordingly.

Report of the Working Group on Marine Plastic Litter from Ships. Having considered the report of the Working Group on Marine Plastic Litter from Ships (PPR 11/WP.7), the Sub-Committee:

.1 agreed the draft MEPC circular on Recommendations for the carriage of plastic pellets by sea in freight containers;

.2 agreed to request MEPC 81 to consider, as an urgent matter, the draft MEPC circular draft MEPC circular on Recommendations for the carriage of plastic pellets by sea in freight containers, with a view to approval;

.3 agreed to request the Secretariat, in consultation with the FAO Secretariat, to compile an initial comparative summary of the loss and discharged fishing gear reporting obligations in MARPOL Annex V;

.4 established the correspondence group on marine plastic litter from ships to progress the work intersessionally;

.5 noted the Group's discussions regarding the draft terms of reference for WG 3 in document PPR 11/13; and,

.6 noted the Group's deliberations and recommendations regarding the proposals in document MEPC 80/8 and, in particular, that Member States should be invited to submit information regarding the measures, both mandatory and voluntary, that they have implemented to reduce marine litter from fishing to PPR 12.

Report of the Drafting Group on Pollution Response (DG 2). With regard to follow-up work emanating from the Action Plan to address Marine Plastic Litter from ships, the Sub-Committee:

.1 agreed the draft IMO Guidelines on good practice relating to clean-up of plastic pellets from ship-source releases, for submission to MEPC 81 as an urgent matter due to the increased number of incidents involving plastic pellets and in the interest of early publication, with a view to approval and subsequent publication; and,

.2 requested the Committee to authorise the Secretariat, when preparing the final text of the Guidelines for developing a local oil/hazardous and noxious substances marine pollution contingency plan and the final text of the IMO Guidelines on good practice relating to clean-up of plastic pellets from ship-source releases, to effect any editorial corrections that may be identified.

14. UNIFIED INTERPRETATION OF PROVISIONS OF IMO ENVIRONMENT-RELATED CONVENTIONS.

The Sub-Committee had for its consideration document PPR 11/14 (Russian Federation), proposing a unified interpretation of regulation 3.5.1 of the IBC Code to permit discharge arrangements for permanent ballast tanks sited immediately adjacent to cargo tanks to be placed inside machinery spaces on ships engaged in transportation of cargoes that are non-toxic and non-flammable or have a flashpoint exceeding 60°C. Following discussion, the Sub-Committee noted that, regardless of any concerns in relation to the technical rationale behind the proposal in document PPR 11/14, addressing the matters raised

therein would require amendments to the IBC Code and a proposal for a new output, since an interpretation should not change the purpose of a regulation. Consequently, the Sub-Committee did not agree to the proposed unified interpretation.

15. BIENNIAL AGENDA AND PROVISIONAL AGENDA FOR PPR 12.

Biennial status report and Provisional agenda for PPR 12 . The Sub-Committee, taking into account the progress made at this session, prepared the biennial status report for approval by MEPC 82 and the provisional agenda for PPR 12.

Correspondence Groups established at this session. Three CGs were established, due to report to PPR 12: In-water Cleaning; Amendments to MARPOL Annex IV and associated Guidelines; and, Marine Plastic Litter from Ships.

Intersessional meetings. The Sub-Committee noted that MEPC 80 had approved the holding of an intersessional meeting of the ESPH Technical Group in 2024, which had been subsequently endorsed by C 130.

Date for the next session. The Sub-Committee noted that the twelfth session of the Sub-Committee has tentatively been scheduled to take place from 27 to 31 January 2025, but this may change as it coincides with Chinese New Year celebrations.

16. ELECTION OF CHAIR AND VICE-CHAIR FOR 2025.

In accordance with the Rules of Procedure of the Marine Environment Protection Committee, the Sub-Committee unanimously elected Dr. Anita Mäkinen (Finland)] as Chair and Ms. Stephanie Janneh (Togo) as Vice-Chair, both for 2025.

Expression of appreciation. The Sub-Committee expressed its appreciation to Dr. Flavio da Costa Fernandes (Brazil) and Dr. Anita Mäkinen (Finland) for their excellent service during the last five years, serving as Chair and Vice-Chair, respectively.

17. ANY OTHER BUSINESS.

Amendments to the NO_x Technical Code 2008 with regard to recertification procedures of existing marine diesel engines on board ships. The Sub-Committee recalled that MEPC 80 had included in the post-biennial agenda of the Committee a new output on "Amendments to the NO_x Technical Code 2008 with regard to recertification procedures of existing marine diesel engines on board ships". In this connection, the Sub-Committee had for its consideration document PPR 11/17 (Denmark and Germany), proposing draft amendments to the NO_x Technical Code 2008 introducing a definition of "retrofitting of existing engines" and amending the procedure within the NO_x Technical Code 2008 for the recertification of existing diesel engines on board ships for retrofitting with modern engine technologies when improving their energy efficiency, whilst maintaining the existing levels for nitrogen oxide emission regulations. Following consideration, the matter was referred to WG 1.

Report of the Working Group. Having considered the relevant part of the report of the Working Group on Prevention of Air Pollution from Ships (WG 1), agreement was given to:

- .1 the draft amendments to MARPOL Annex VI and the NO_x Technical Code 2008 on the use of multiple engine operational profiles (MEOPs) for a marine diesel engine including clarifying engine test cycles, for approval by MEPC 82; and,
- .2 the draft amendments to the NO_x Technical Code 2008 on certification of an engine subject to substantial modification, for approval by MEPC 82.

Volatile Organic Compound (VOCs) emissions. The Sub-Committee had for its consideration document PPR 11/17/2 (Norway), containing a proposal to request the SSE Sub-Committee to consider a requirement for new crude oil tankers to be fitted with P/V valves with a minimum opening pressure of 0.20 bar and identify any negative implications of such a requirement, highlighting that keeping a high pressure in cargo tanks would not only be a cost-effective way to reduce VOCs but also increase safety on board tankers by reducing crew exposure to toxic gases such as benzene and H₂S. Following consideration, the Sub-Committee invited the SSE Sub-Committee to consider a requirement for new crude oil tankers to be fitted with P/V valves with opening pressure of minimum 0.20 bar and identify any negative implications, taking into account comments made at this session.

Studies reporting on NO_x and SO_x emissions measurement campaigns. The Sub-Committee noted the information in document PPR 11/INF.2/Rev.1 (Belgium et al.), and PPR 11/INF.4 (United States) concerning recent NO_x and SO_x emissions measurement campaigns.

Holistic approach on the human element. The Sub-Committee recalled that MSC 105 had invited all relevant IMO bodies to assess their respective involvement in the human element within their remit and report back to the Committee, with a view to devising an outline for a holistic approach on the human element, taking into account resource and budgetary implications within the Organisation. In this connection, the Sub-Committee had for its consideration document PPR 11/17/1 (Secretariat), providing background information on the holistic approach to the human element. After consideration, the Sub-Committee:

- .1 noted the information on the Sub-Committee's work with regard to the relevance of the human element in relation to cargo handling, entry into cargo tanks, recording of operations and discharges, reporting incidents, monitoring of equipment performance, maintenance of equipment, and pollution preparedness and response;
- .2 noted the broad spectrum of relevant areas under the Sub-Committee's purview, as well as that additional time is required to conduct a detailed analysis;

.3 agreed to remain cognisant of the implications for the human element during ongoing and future work and endeavour to apply a holistic approach in that regard; and,

.4 invited interested Member States and international organisations to submit proposals on this matter to future sessions of the Sub-Committee under relevant agenda items.

18. REPORT TO THE MARINE ENVIRONMENT PROTECTION COMMITTEE.

The draft report of the session (PPR 11/WP.1) prepared by the Secretariat for consideration by the Sub-Committee was duly endorsed for approval by MEPC.

CLOSING REMARKS BY THE IMO SECRETARY-GENERAL.

In his concluding address, outlining the achievements of the meeting, the Secretary-General said he would simply confine himself to emphasising some of the most important achievements and outcomes of the week.

With regard to plastic pellets, the Sub-Committee has completed draft recommendations for the carriage of plastic pellets by sea and freight containers and that is a significant step in achieving our common aim of eliminating ship-source pellet spills while also recognising the need for additional work bearing in mind the experience with application of voluntary measures. Additionally, there was a broad initial exchange of views which was very important, even though we are still in the initial phase, and therefore he looked forward to additional proposals on the current options, encouraging engagement between sessions on the subject, taking into account lessons learned from the application of the voluntary measures.

On another relevant matter, namely the control of the emissions of nitrogen oxides, finalisation of the draft amendments to MARPOL annex VI and the NO_x technical code 2008 was achieved. These changes are key, not only for the use of multiple engine operational profiles for the marine diesel engine, but also in providing the necessary clarification of engine test cycles and likewise draft amendments to the NO_x technical code 2008, vital for the certification of engines subject to substantial modification.

And then, importantly, I should mention progress on the Arctic, and I am referring here to the draft guidance on best practice on recommendatory gold-based control measures, an important step towards the impact on Arctic black carbon emissions from international shipping. Thirdly, the draft guidelines on recommendatory black carbon emission measurement monitoring and reporting and mitigating measures to reduce the risk of use and carriage for use of heavy-fuel oil as fuel by ships in Arctic waters. These are three initiatives, and we are all very well aware of their relevance.

What these significant achievements show is the spirit of cooperation among all delegates and I would like to thank you for your commitment and support to the work of the organisation. I would refer in particular to the Chair of the Sub-Committee,

Dr Flavio Fernandes of Brazil, who has steered through some very challenging subjects, showing positivity and patience which have been instrumental in guiding the Sub-Committee towards success over the last five sessions with distinction and flair and it has been a pleasure to witness.

Finally, the Secretary-General acknowledged with thanks, the contributions made by the Vice-Chair, the Chairs of the Working and Drafting Groups, the Co-ordinators of the Correspondence Groups, and the ESPH Technical Groups. He went on to also thank the Marine Environment Division who led the preparations for the meeting and the dedication of all the staff of the Secretariat who worked tirelessly to provide the required professional support. He also thanked the Interpreters whose efforts were key to facilitating seamless communication and concluded by welcoming the incoming Vice-Chair.

End

Captain Paddy McKnight