



**BUREAU
VERITAS**

MARINE & OFFSHORE DIVISION MANAGEMENT
Regulatory & Institutional

**77TH MEETING OF MARINE ENVIRONMENT PROTECTION COMMITTEE
22 TO 26 NOVEMBER 2021
MAJOR OUTCOMES OF MEPC 77**

SUMMARY

The seventy-seventh session of the Marine Environment Protection Committee (MEPC 77) was held remotely from 22 to 26 November 2021.

MEPC 77 adopted :

- Res. MEPC.XXX (77) on 2021 Guidelines for exhaust gas cleaning systems (**item 5**) ;
- Res. MEPC XXX (77) on the Strategy to address marine plastic litter from ships (**item 8**) ;
- Res. MEPC.XXX(77) protecting the Arctic from shipping black carbon emissions (**item 9**) ;

MEPC 77 approved :

- BWM.2/Circ.XXX draft unified interpretation of the Date to be used for determining the implementation of mandatory commissioning testing of individual ballast water management systems in accordance with resolution MEPC.325(75) (**item 4**) ;
- MEPC.1/Circ.883/Rev.1 circular on Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the exhaust gas cleaning system (EGCS) fails to meet the provisions of the EGCS Guidelines (**item 5**) ;
- MEPC.1/Circ.XXX on 2021 Guidance on treatment of innovative energy efficiency technologies for calculation and verification of the attained EEDI and EEXI (**item 5**) ;
- MEPC/Circ.XXX on cross-referencing tables between the 2021 Revised MARPOL Annex VI and the previous MARPOL Annex VI (**item 7**) ;
- MSC-MEPC.5/Circ.XXX on Model agreement for the authorization of recognized organizations acting on behalf of the Administration (**item 10**) ;
- draft amendments to the IBC Code with a view to subsequent adoption at MEPC 78 (**item 10**) ;
- draft amendments to MARPOL Annex I, with a view to adoption at MEPC 78 (**item 10**).

MEPC 77 also approved :

- draft amendments to MARPOL Annex II - regulations for the control of pollution of noxious liquid substances in bulk, in the view of adoption at MEPC 78 (**item 9**) ;
- draft Procedures for port State control, 2021 and the associated draft Assembly resolution, for adoption at the thirty-second session of the Assembly (**item 10**) ;

- draft Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2021 and the associated draft Assembly resolution for adoption at the thirty-second session of the Assembly (**item 10**);
- draft 2021 Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code) and the associated draft Assembly resolution for adoption at the thirty-second session of the Assembly (**item 10**).

Item 4 - Harmful aquatic organisms in ballast water

MEPC 77 was instructed to :

- consider the draft unified interpretation of regulations E-1.1.1 and E-1.1.5 of the BWM Convention to clarify the timing for mandatory implementation of the commissioning testing of individual ballast water management systems (BWMS) ;
- prepare, with a view to finalization, the draft BWM.2 circular on guidance for the application of the BWM Convention to ships operating at ports with challenging water quality.

Unified interpretation of regulations E-1.1.1 and E-1.1.5 of the BWM Convention

MEPC 77 approved the BWM.2/Circ.XXX draft unified interpretation of the Date to be used for determining the implementation of mandatory commissioning testing of individual ballast water management systems in accordance with resolution MEPC.325(75).

DRAFT UNIFIED INTERPRETATION TO REGULATIONS E-1.1.1 AND E-1.1.5 OF THE BWM CONVENTION

Date to be used for determining the implementation of mandatory commissioning testing of individual ballast water management systems in accordance with resolution MEPC.325(75)

Interpretation

Irrespective of new ships under construction subject to regulation E-1.1.1 or existing ships retrofitting ballast water management system(s) (BWMS) on board subject to regulation E-1.1.5, the commissioning testing of individual BWMS, taking into account the guidelines developed by the Organization,* should be conducted if the initial or additional survey is completed on or after 1 June 2022. If the initial or additional survey is completed before 1 June 2022, the commissioning testing of individual BWMS remains subject to the specific requirements of the Administration(s).

Footnote:

* Refer to the *2020 Guidance for the commissioning testing of ballast water management systems* (BWM.2/Circ.70/Rev.1), as amended.

Application of the BWM Convention to ships operating at ports with challenging water quality

Due to the large number of issues to resolve, MEPC 77 was not able to finalize the draft BWM.2 circular on Guidance for the application of the BWM Convention to ships operating at ports with challenging water quality at this session.

Main matters identified as requiring further consideration were :

- whether the context and focus would be around specific ports/waters or specific situations, the consideration following a case-by-case approach based on the circumstances faced by individual ships and their BWMS;
- potential bypassing of BWMS and acceptance criteria for allowing it;
- aspects of the practice of ballast water exchange plus treatment (BWE+BWT), including regulatory, technical and safety implications;
- relevance of system design limitations (SDLs) to this matter, based on interpretations of the scope and intent of SDLs (e.g. limited to BWMS type approval testing only or subsequent operation as well);
- to what extent the matter at hand, or specific elements thereof, would be more akin to contingency measures (exceptional situations) or to normal practice;

- to what extent some aspects of this matter may already be covered by existing instruments including parts of the BWM Convention itself or its associated guidelines;
- the links of the matter at hand with contingency measures, including whether this matter could be dealt with through a revision of the Guidance on contingency measures under the BWM Convention (BWM.2/Circ.62) rather than a new stand-alone guidance.

Some delegations also made references to potential links to the experience-building phase (EBP), in the sense that information from the implementation of such practices could feed into the EBP; however, it was noted that the data gathering stage of the EBP had concluded.

Item 5 - Air pollution prevention

MEPC 77 was instructed to :

- finalize the draft 2021 Guidelines for exhaust gas cleaning systems (2021 EGCS Guidelines);
- finalize the draft revised MEPC circular on Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument;
- prepare amendments to the 2013 Guidance on treatment of innovative energy efficiency technologies for calculation and verification of the attained EEDI (MEPC.1/Circ.815).

Draft 2021 Guidelines for exhaust gas cleaning systems (2021 EGCS guidelines)

MEPC 77 has adopted Res. MEPC.XXX (77) on 2021 Guidelines for exhaust gas cleaning systems.

PPR 7 had prepared the draft 2020 Guidelines for exhaust gas cleaning systems.

MEPC 77 agreed:

- to the format of the application dates proposed, i.e. linking the installation of the exhaust gas cleaning system to the keel-laying date of the ship;
- to the date of application being six months after the date of adoption rather than the 12 months after the date of adoption ;
- that the 2021 EGCS Guidelines would also apply to existing exhaust gas cleaning systems to which amendments to the EGCS Technical Manual (ETM) ETM-A or ETM-B were undertaken on or after the date of application.

The Committee also introduced paragraph 8.5 to the draft 2021 EGCS Guidelines, stating that the onboard monitoring manual-OMM should be approved by the Administration and retained on board so that it would be available for surveys, in order to be consistent with the requirement in respect of other EGCS documentation.

MEPC circular on Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the exhaust gas cleaning system (EGCS) fails to meet the provisions of the EGCS guidelines

MEPC 77 has approved MEPC.1/Circ.883/Rev.1 circular on Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the exhaust gas cleaning system (EGCS) fails to meet the provisions of the EGCS Guidelines.

PPR 7 had prepared a revision of MEPC.1/Circ.883 to make the guidance contained therein generally applicable to all versions of the EGCS Guidelines, including the 2020 EGCS Guidelines once adopted, rather than it being specific to the 2015 EGCS Guidelines

MEPC 77 firstly considered the proposal to append the draft Guidance on indication of ongoing compliance to the 2021 EGCS Guidelines, but finally agreed to keep the draft Guidance on indication of ongoing compliance as a separate circular.

MEPC 77 also agreed that the draft guidance was general and relevant not only to exhaust gas cleaning systems that would be approved under the 2021 EGCS Guidelines but also systems that had been approved in accordance with the 2009 EGCS Guidelines and the 2015 EGCS Guidelines.

Revised 2013 Guidance on treatment of energy efficiency technologies for calculation of the attained EEDI

MEPC 77 approved the MEPC.1/Circ.XXX on 2021 Guidance on treatment of innovative energy efficiency technologies for calculation and verification of the attained EEDI and EEXI.

It had for its consideration various documents, a-o :

- providing an acquisition method to obtain the wind propulsion system force matrix, which is presented in 2013 Guidance on treatment of innovative energy efficiency technologies for calculation and verification of the attained EEDI (MEPC.1/Circ.815), based on wind tunnel model testing;
- proposing draft amendments to MEPC.1/Circ.815 with a view to reflecting the effect of the wind propulsion system by providing the global wind probability matrix and technical guidance for the conduct and the verification of performance tests;
- proposing draft amendments to MEPC.1/Circ.815 with the aim of incentivizing wind propulsion systems within the EEDI/EEXI framework;
- proposing amendments to MEPC.1/Circ.815 on the consolidation of the calculation of the wind propulsion system force matrix and a proposal to amend all references to the EEDI in the 2013 Guidance to also include the EEXI;
- how to handle certain technical issues for calculation and verification of WAPS.

Owing to the fact that there is still ongoing research and further work which could be incorporated into future versions of the guidance, MEPC 77 agreed to keep this Guidance under review in the light of experience gained in its application.

Item 7 - Reduction of GHG emissions from ships

Discussion on a resolution strengthening the objectives of the IMO GHG Strategy

In order to signal clearly to the shipping industry that GHG emissions should reach zero by no later than 2050 and that effective pathways are being developed, MEPC 77 was invited to adopt at this session a clear, overarching statement, in the form a resolution, that the Organization is committed to GHG emissions from international maritime transport being reduced to zero by at least 2050.

A majority of delegations agreed to defer the adoption of such a resolution, in opposing the move on the grounds the 2050 target should be set as part of revising the IMO's greenhouse gas strategy, due by 2023. France and others said they shared the objective and ambition of the resolution's co-sponsors but couldn't see the point of adopting a resolution dealing with levels of ambition in isolation from other important aspects of the strategy. It would be preferable to focus efforts on concrete proposals rather than a resolution.

Some others said they supported climate action but was cautious about setting absolute reduction targets for 2030 and 2040. Any revised ambition should be taken as part of the revision of the Strategy and follow a thorough review process which should remain inclusive for all Member States, especially developing countries, including SIDS and LDCs, in order to ensure a fair and equitable transition.

Some opponents stressed that proposed resolution did not comply with the requirements of the United Nations Framework Convention on Climate Change, the Paris Agreement and the Glasgow Climate Pact, nor did it reflect the principle of “common but differentiated responsibilities” and principle of fairness. The proposed resolution did not mention the mechanisms and measures needed to achieve the target nor did it address the problems of finance, feasibility, technology transfer and capacity building for developing countries.

Finally, the Committee invited interested Member States and international organizations to work together and to submit concrete proposals for a revised IMO GHG Strategy to MEPC 78 for consideration.

Report of ISWG GHG 9

MEPC 77 noted the discussion and the progress made in the development of the draft LCA guidelines, including the identified priority areas for further work to advance the development of the guidelines

It has also noted the discussions of ISWG-GHG 9 on the reduction of methane slip, and that methane emissions would be further considered in the context of the lifecycle GHG/carbon intensity guidelines by ISWG-GHG 11.

Report of ISWG GHG 10

The Committee was invited to approve the report of the ISWG GHG 10 Group in general, and to agree upon following points :

- note the urgency of adopting the outstanding guidelines associated with the implementation of the short-term measures at MEPC 78 to allow sufficient time for ships, Administrations and ROs for preparation and implementation of the short-term measure when it would enter into effect in November 2022;
- note the discussion by the ISWG GHG 10 on the consideration of the scope of and timeline for the development of a mandatory carbon intensity and the view that it was premature to conclude on the possible timing for initiating the work on the development of the code and the scope of the code;
- note the discussion on how to keep the impacts of the short-term measure under review and how to undertake a lessons-learned exercise of the comprehensive impact assessment of the short-term measure;
- invite the IMO Secretariat to liaise with UNCTAD, as well as other international organizations, as appropriate, to consider the possibility of making relevant data and models available;
- encourage proponents of candidate mid-term measures, as well as any other delegations, to further consider the development/refining proposals for mid-term measures for consideration during Phase I of the Work plan.

MEPC 77 also agreed in principle on the proposal to set up new working arrangements suitable to carry out the overwhelming work related to all these topics. At ISWG GHG10 there was a support from a majority of delegations for the proposal for a standing technical group on reduction of GHG emissions from ships (ST-GHG) to replace the ISWG-GHG in the future.

MEPC asked delegations for submission on this topic at ISWG-GHG 12 this matter of addressing the increasing workload and consideration of possible alternative working arrangements.

Discussion on mid- and long-term measures

In order to progress effectively with the next package of such measures, MEPC 76 approved a work plan for the development of mid- and long-term measures, which as its first phase envisages collation

and initial consideration of proposals for measures. The first phase of the work plan should be concluded in spring 2022

MEPC 77 had for its consideration a new submission from Marshall Islands and Solomon Islands (MEPC 77/7/4) which restates calls for the implementation of targets for international shipping commensurate with a no more than a 1.5°C temperature trajectory and the establishment of an universal mandatory greenhouse gas levy.

The levy proposal is intended to ensure that the price of fossil fuels increases gradually so that fuels with lower emissions of greenhouse gases become more competitive in a predictable manner. The level of the levy must be increased at regular intervals, proposed following five-yearly review. The built-in increases give the maritime transport industry and the prospective fuel and technology suppliers the certainty they are requesting.

The proposed necessary requirements to establish this system are included in a new chapter 5 to MARPOL Annex VI, with a new regulation 33.1 requiring each ship to make a levy contribution at the time of bunkering. The amount of the levy would be paid to a fund established by an MEPC resolution and this payment would be certified by a Statement of Compliance.

Such a levy is not a tax as no payments are collected by any State and no disbursements are made by any State. Since the purpose of the International Greenhouse Gas Levy Fund (GHGF) is achieving the adopted GHG targets for international shipping, the Fund is suggested to be placed under IMO but with the ability to channel funds to other agencies for distribution. In the present proposal the entity suggested is the Green Climate Fund (GCF), established within the framework of the UNFCCC as an operating entity of the Financial Mechanism of that Convention. To administer the revenue raised, it is suggested that the Organization set up a Board consisting of members of the Committee, including SIDS and LDCs.

MEPC 77 had also for its consideration a proposal from Norway (MEPC 77/7/16) of a fuel GHG intensity limit and an emissions cap and trading as a package of mid- and long-term measures. The package establishes a cap and a price on GHG emissions through trading of allowances, while the fuel GHG intensity limit sets a mandatory technical requirement. Both measures work together providing a framework to ensure the supply and uptake of sustainable low- and zero-carbon fuels.

A carbon price makes low- and zero-carbon fuels competitive with fossil fuels and together with a technical requirement ensures that suppliers can build production capacity and infrastructure with the certainty that there is a demand :

- A fuel GHG intensity limit will ensure that shipping is required to start using sustainable low-carbon and zero-carbon fuels and will provide for sufficient predictability for investments in fuel supply and in ship technologies to use such fuels. The measure will also ensure that international shipping meets the ambition on carbon intensity.
- An emissions cap and trading system will ensure the reduction of total GHG emissions and that international shipping meets the ambition of halving emissions by 2050, by setting a cap on total emissions from shipping. An emission trading system will incentivize the uptake of sustainable low- and zero-carbon fuels by removing the price gap and the competitive advantage of existing fossil fuels. Further, channelling payment of a carbon price to a climate fund can support climate actions in developing countries and accelerate the introduction of sustainable low- and zero carbon fuels and technologies, in particular the development of fuel production and infrastructure capacity. The carbon price resulting from the cap needs to be high enough to ensure it is more attractive for ships to comply with the technical requirement. The GHG intensity limit is gradually phased in with increased stringency for existing ships. At some point, all new builds would be subject to a stringent GHG intensity limit and finally the limit for existing ships will be the same as for new builds.

According to Norway, there are several important reasons for moving forward with a cap-and-trade system compared to a levy-based system :

- A cap-and-trade system directly mandates an emission level designed to meet the absolute GHG emission reduction target in 2050, while it is difficult to know the implications on the emission level of a levy.
- If the levy is placed on marine fuel it will in many cases be the charterer that pays the carbon price, and the shipowner will only see the cost indirectly. This effect is the split-incentives barrier where the cost and any cost savings are not experienced by the investment decision-maker.

ICS raised many criticism about those two proposals. And it must be recalled that ICS and INTERCARGO in previous meetings set out a comprehensive regulatory package to demonstrate how a carbon levy, based on mandatory IMO climate contributions by ships per tonne of CO₂ emitted to an IMO Climate Fund, could be brought into effect quickly to expedite the uptake of zero-carbon technologies and fuels, via adoption of a new chapter to MARPOL Annex VI, while explaining the current preference of the shipping industry for a levy-based system.

Here are the main concerns raised by ICS :

- Concerning the implementation timeframe, ICS suggests that decision "in principle" would be premature and inconsistent with the Work plan for the development of mid- and long-term measures agreed at MEPC 76 which, up to spring 2022, requires "collation and initial consideration of proposals for measures".
- A cap-and-trade system, combined with a fuel GHG intensity limit (or the CII rating system) seems overly complex and likely to result with market distortion with disproportionately negative impacts on global trade. The proposal appears to suggest that the Organization itself would establish its own in-sector emissions trading system.
- With an emissions trading system, the future price of carbon allowances will be determined by the market and very difficult to predict, especially with regard to assessing how the impacts on trade may change over the longer term. On the opposite, a carbon levy will have the advantage that it will be possible to conduct a comprehensive assessment of the economic impacts on States of the proposed quantum of the carbon levy, including the impact on developing countries and States geographically distant from markets.
- Norway proposes that "the number of Ship Emission Units will be limited to the agreed emissions cap which is gradually reduced towards IMO's 2050 ambition". But unless there is an immediate and rapid acceleration of Technology Readiness Levels by 2030, the agreed level of ambition would not be possible to achieve fully by 2050. This could have the effect, if a cap-and-trade system was established, of rationing the amount of maritime trade that can be conducted worldwide in the future due to a lack of available "Ship Emission Units". This would potentially have serious impacts on global trade and economic development, especially if the current level of ambition in the Initial IMO Strategy is increased.
- The variable and volatile price of carbon allowances under a trading system makes future investment decisions with regard to the deployment of new zero-carbon technologies far more difficult.

A proposal from EU member (MEPC 77/7/12) states suggested a number of criteria for assessment and comparison of carbon pricing measures, considering that it is of utmost importance to first consider a set of criteria against which market-based measures can be assessed and compared.

Here are the main criteria :

- MBMs should create a significantly effective, clear and measurable response to the climate emergency in the form of reduced GHG emissions;
- MBMs should place a price on GHG emissions following the "polluter pays principle";
- MBMs should send a clear signal to the market on the future regulation and timetable of decarbonization. This would provide clear long-term price trajectory;

- MBMs should be goal-based with the aim to encouraging fuels and technologies that provide for effective emissions reduction; any future MBM focuses on the goal of effectively reducing GHG emissions from ships without favouring or excluding the use of any specific renewable and low-carbon fuels or technologies;
- MBMs should be designed to be flag-neutral and they should ensure equal treatment of all operators;
- MBMs should not be duplicative. In case of any national or regional action by Member States to further accelerate GHG emission reduction from shipping, double counting of CO₂ emissions should be avoided;
- significant funds should be used to support maritime climate mitigation and adaptation activities, in particular in developing countries.

Clean Shipping Coalition also set up a list of criteria against which one MBMs should be appraised.

The measure must be designed so that it:

- decreases pollution from ships as soon as possible before 2030, and bridges the price gap between fossil and zero-carbon sustainable fuels
 - An IMO carbon price should be set at a level high enough to generate an effective, measurable and direct result. In addition to a carbon price signal, other complementary policies (such as stringent energy efficiency targets, zero-GHG-fuel standards, targeted revenue recycling) can help to support rapid deployment of technologies to ensure the sector decarbonizes on time.
- brings the shipping sector in line with the Paris Agreement's 1.5°C target
 - The shipping sector needs to have a transparent and environmentally ambitious carbon budget in line with the 1.5°C target. To this end ship GHG emissions should reach zero well before 2050 and ideally by 2040. A carbon budget related to a carbon levy would be more complicated to implement than an Emissions Trading Scheme cap. The height of a carbon levy does not automatically translate into a total amount of carbon emissions reduced annually (as an ETS cap does), but this problem can be solved by setting a clear long-term decarbonization target with frequent intermediate milestones expressed in absolute emission reduction objectives, and by having other measures such as a fuel standard and/or medium- to long-term CII targets operating alongside the carbon price.
- uses revenues wisely to i) support countries most at risk from climate change impacts, and countries and workers most affected by the transition, and ii) invest in decarbonizing the sector by supporting research and infrastructure development and roll-out.
 - Least developed countries (LDCs) must be shielded from undue burden. Instead of exempting such countries from the carbon pricing scheme, they should be supported through earmarking revenues and rebates.
 - A second priority for using revenues is financing in-sector climate action, including research, innovation and zero-carbon infrastructure, including designing and deploying zero- emission ships (use of renewable energy, developing supply chains for sustainable and scalable marine fuels, and investing in energy savings technologies, retrofitting existing ships)
- is negotiated and implemented fast without pilot phases to avoid further delays in global action
 - The mid-term measures, including carbon pricing, should be fully operational as soon as possible, and designed to deliver substantial emission reductions before 2030.
- does not include offsets, free allocations or generous exemptions that would let polluters off the hook.
 - The lesson from existing carbon pricing schemes, and especially the EU Emissions Trading System (EU ETS), is clear: cheap offsets and free allocation of emission permits lead to windfall profits and climate loopholes. The rebates approach mentioned earlier is a more effective way to protect countries and workers that are at risk of adverse impacts.
- does not undermine other more climate-ambitious regulations internationally, or in countries or regions

More environmentally ambitious measures must not be watered down or discarded just because a global measure exists. Countries and regions should retain the right to go above and beyond any international measure.

In addition, countries and regions will need to undertake significant climate action on land to enable the decarbonization of the maritime sector. These actions, including infrastructure investment and developing supply chains for sustainable and scalable marine fuels, can only be implemented through national or regional policies. Synergies between direct maritime and maritime-related land regulations can best be achieved through national/regional action and global negotiations should not undermine these complementary efforts.

France and others wished a balanced approach between technical and MBM measures, gathered in a basket of measures.

ICS proposal for a \$5bn green research and development fund drew support from several countries despite questions over its effectiveness, governance, and fairness to developing countries.

Cyprus, Panama, Mexico, Australia, Jamaica and South Korea were among countries that supported setting up an International Maritime Research Fund, which would be funded by a \$2-a-tonne tax on fuel and administered by a board run by the IMO.

But countries largely skirted around the details of the tougher market-based measures on the agenda, such as the Marshall Islands' \$100-a-tonne carbon levy and Norway's cap-and-trade scheme, deferring discussion to the intersessional working group on greenhouse gas emissions.

MEPC chair handed the proposal, along with other mid- and long-term emissions measures, to the ISWG-GHG 12 for further talks.

EEXI-CII in DCS database

MEPC 77 had, for its consideration, documents containing proposals related to revision of the IMO Ship Fuel Oil Consumption DCS, suggesting the inclusion of information on the ship's required and attained EEXI and CII values and rating.

Due to lack of time, these documents are deferred for consideration to ISWG GHG 12 which will report to MEPC 78.

Cross-referencing tables between the versions of MARPOL Annex VI

MEPC 77 approved MEPC/Circ.XXX on cross-referencing tables between the 2021 Revised MARPOL Annex VI and the previous MARPOL Annex VI, noting that it was to be applied from 1 November 2022 when the 2021 Revised MARPOL Annex VI would enter into force and that "previous MARPOL Annex VI" refers to MARPOL Annex VI which was in force before that date.

Item 8 – Action plan to address marine plastic litter from ships

IMO recognized the ongoing problem of marine plastic pollution required further consideration, in pursuance of the target of Sustainable Development Goal 14 to prevent and significantly reduce marine pollution of all kinds by 2025. In recognition of the urgency to address marine plastic litter from ships, IMO adopted the Action Plan to address marine plastic litter from ships (resolution MEPC.310(73)).

MEPC 77 has adopted resolution MEPC XXX (77) on the Strategy to address marine plastic litter from ships to guide, monitor and oversee the timely and effective implementation of the Action Plan.

This strategy applies to all ships, including fishing vessels. The framing of Action Plan relies on key goals and steps to achieve the goals.

MEPC 77 agreed to reflect the ambition to achieve zero discharges by 2025 while recognizing that it may not be practical in all situations due to the application of regulation 7 of MARPOL Annex V, in cases where such discharge is necessary for the safety of the ship or those on board, saving life at sea; or accidental loss of garbage or fishing gear.

Proposal regarding making the Garbage Record Book mandatory for ships of 100 GT and above

The Committee had for its consideration proposal of expanding the obligation to carry a Garbage Record Book to all ships of 100 gross tonnage and above by amending the chapeau of regulation 10.3 and regulation 10.3.6 of MARPOL Annex V.

Given the widespread support that the proposal received, MEPC 77 instructed the PPR to prepare draft amendments to MARPOL Annex V.

Item 9 –Pollution prevention

Black carbon

MEPC resolution for the voluntary use, by ships operating in or near the Arctic, of distillate oil fuel of low aromaticity or other cleaner alternative fuels or methods of propulsion

MEPC 74 had noted that action considered in respect of reducing the impact on the Arctic of Black Carbon emissions from international shipping could include non-mandatory instruments such as guidance the revised terms of reference recommend, inter alia, to develop, as a starting point, guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping.

One of the identified control measures to reduce Black Carbon emissions from ships is switching fuel while operating in the Arctic. The Fourth IMO GHG Study 2020 indicates that when used in the same engine, a switch to distillate fuel can reduce Black Carbon emissions per kilogram of fuel consumption by up to 79% in 2-stroke engines and by up to 52% in four-stroke engines.

Some delegations (Germany, UK, France, USA, Norway, etc) had proposed that MEPC take its first concrete action to address Black Carbon emissions by developing a non-mandatory instrument in the form of an MEPC resolution to support a voluntary use of cleaner fuels by ships operating in or near the Arctic.

MEPC 77 has consequently adopted a Res. MEPC.XXX(77) protecting the Arctic from shipping black carbon emissions.

This resolution

- encourages Member States to commence addressing the threat to the Arctic from Black Carbon emissions, and report on measures and best practices to reduce Black Carbon emissions from shipping;
- urges Member States and ship operators to voluntarily use distillate or other cleaner alternative fuels or methods of propulsion that are safe for ships and could contribute to the reduction of Black Carbon emissions from ships when operating in or near the Arctic.

Terms of reference for further work

Noting that progress on developing and adopting control measures to reduce Black Carbon emissions from international shipping was slow, PPR 8 prepared revised draft terms of reference for further work.

MEPC 77 endorses the TORs drafted by PPR8 as follows:

- develop, as a starting point, guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of Black Carbon emissions from international shipping (cf.above) ;
- 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;
- develop a standardized sampling, conditioning and measurement protocol, including a traceable reference method and an uncertainty analysis, taking into account the three most appropriate Black Carbon measurement methods (FSN, PAS, LII), to make accurate and traceable (comparable) measurements of Black Carbon emissions.

Draft amendments to MARPOL Annex II – regulations for the control of pollution of noxious liquid substances in bulk

MEPC 75 noted the finalization of GESAMP Reports and Studies No.102 (GESAMP Hazard Evaluation Procedure for Chemicals Carried by Ships, 2019) which included two changes in the GESAMP Hazard Profile table, namely the sub-categorization of column C3 and the reassignment column E1 (MEPC 75/18, paragraph 10.3).

In light of the above-mentioned changes to the GESAMP Hazard Profile table, MEPC requested the Secretariat to prepare the draft consequential amendments to appendix I to MARPOL Annex II.

Hence, MEPC 77 approved draft amendments to MARPOL Annex II - regulations for the control of pollution of noxious liquid substances in bulk, in the view of adoption at MEPC 78.

Item 10 - reports of other sub-committees

Matters to be considered by the thirty-second session of the Assembly

MEPC 77 approved, in concurrence with MSC 104, for submission to the thirty-second session of the Assembly for adoption :

- the draft Procedures for port State control, 2021 and the associated draft Assembly resolution;
- the draft Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2021 and the associated draft Assembly resolution;
- the draft 2021 Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code) and the associated draft Assembly resolution

Model agreement for the authorization of ROs acting on behalf of an Administration

MSC 104, having noted, in particular, that III7 had aligned paragraph 6.5.5 of the draft Model agreement with paragraph 5.3.2.4 of part 3 of the RO Code with respect to the scope of the "statutory certification and services" as defined in the RO Code, had approved the draft MSC-MEPC.5 circular on Model agreement .

In concurrence with the decision of MSC 104 on this matter, MEPC 77 approved MSC-MEPC.5/Circ.XXX on Model agreement for the authorization of recognized organizations acting on behalf of the Administration.

Watertight doors on cargo ships

SDC 7 had developed draft amendments to MARPOL Annex I, the 1988 LL Protocol, the IBC Code, and the IGC Code regarding watertight doors on cargo ships

MSC 102, having considered the outcome of SDC 7 with regard to watertight doors on cargo ships, approved draft amendments to the 1988 LL Protocol, the IBC Code, and the IGC Code. Having noted that the amendments to the 1988 LL Protocol, the IBC Code, and the IGC Code would have no impact on existing ships, it had agreed to apply them to all ships.

MSC 102 has invited MEPC to concurrently approve the draft amendments to the IBC Code and the corresponding draft amendments to MARPOL Annex I.

MEPC 77 approved the draft amendments to the IBC Code with a view to subsequent adoption at MEPC 78, having concurred with the decision of MSC 102 to apply them to all ships.

MEPC 77 also approved the draft amendments to MARPOL Annex I, with a view to adoption at MEPC 78.

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Terms of reference of working groups established by MEPC 77

Correspondence group on carbon intensity reduction

The CG is instructed to:

1. further consider and finalize the draft updated Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP) and paying particular attention to the role and structure of the SEEMP for ships to which regulation 28 applies and other proposals for inclusion into the SEEMP guidelines;
2. further consider and update existing guidelines, procedures or guidance,
 - 2017 Guidelines for administration verification of ship fuel oil consumption data (resolution MEPC.292(71));
 - 2017 Guidelines for the development and management of the IMO Ship Fuel Oil Consumption Database (resolution MEPC.293(71));
 - Procedure on Submission of data to the IMO data collection system of fuel oil consumption of ships from a State not Party to MARPOL Annex VI (MEPC.1/Circ.871); and
 - Procedures for port State control, 2019 (resolution A.1138(31));
3. develop draft guidelines on correction factors for certain ship types, operational profiles and/or voyages for the CII calculations (G5)
4. develop in new or existing guidelines specific guidance on:
 - the audit and verification processes of SEEMP including the framework for verification of the SEEMP by administrations and verification of revised SEEMP for ships required to develop a plan of corrective actions (PCA);

- develop possible parameters and templates for reporting, verification and submission of data for trial CIIs of individual ships on voluntary basis, as specified in G1 and for other trial metrics of offshore and marine contracting vessels;
 - aggregation and reporting of ship's fuel consumption data to the new Administration and/or company in the event of change from one Administration to another and/or from one company to another;
5. consider proposed amendments to the EEXI calculation guidelines and the EEXI survey and certification guidelines to incorporate the in-service measurement method to determine a reference speed

Ad-hoc expert workshop on impact assessments (8-9 March 2022)

The Expert Workshop is instructed, to:

1. review the assumptions and methodologies for both assessing impacts on ships and on States, including in relation to use of reviewed/approved baselines and MACCs and other input data;
2. identify how to carry out qualitative/stakeholders assessments;
3. submit a written report to ISWG-GHG 11.

ISWG-GHG 11 (14-18 March 2022)

The ISWG is instructed to :

1. further consider the development of draft lifecycle GHG and carbon intensity guidelines for maritime fuels;
2. consider concrete proposals on how to keep the impacts of the short-term measure under review;
3. pursue the lessons-learned exercise of the comprehensive impact assessment of the short-term measure, also taking into account the outcome of the Ad-Hoc Expert Workshop on impact assessment
4. consider proposals for the revision of the ship fuel oil consumption Data Collection System (DCS).

ISWG-GHG 12 (16-20 May 2022)

The ISWG is instructed to :

1. consider any issue arising from the final report of the Correspondence Group on Carbon Intensity Reduction;
2. consider concrete proposals for mid- and long-term measures and associated impact assessments in the context of Phase I of the Work plan for the development of mid- and long-term measures, as well as the proposal to establish an International Maritime Research Board;
3. further consider the matter on how to address the increasing workload on reduction of GHG emissions from ships and proposals for possible alternative working arrangements;
4. submit a written report to MEPC 78.

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