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AIR POLLUTION PREVENTION

Regulation 4.1 of MARPOL Annex VI must not be interpreted in isolation of other regulations, resolutions and obligations

Submitted by FOEI, WWF, Pacific Environment and CSC

SUMMARY

Executive summary: This document recalls the duty of State Parties to MARPOL Annex VI to not impair or damage the environment, human health, property or resources when approving alternative compliance methods and reflects on the importance of not interpreting regulation 4.1 of MARPOL Annex VI in isolation of other regulations and obligations.

Strategic direction, if applicable: 1

Output: 1.23

Action to be taken: Paragraph 12

Related documents: Resolution MEPC.67(37); MEPC 76/9/1, MEPC 76/INF.5; MEPC 79/5/3; PPR 9/INF.21; PPR 11/INF.20 and PPR 11/7/3

Background

1 Regulation 4 of MARPOL Annex VI ("Equivalent") provides for the use of alternative compliance methods for meeting emissions requirements, provided requisite criteria are met. The regulation states that national maritime administrations may allow alternative methods if they are at least as effective in reducing emissions regulated by the Annex (regulation 4.1). Administrations must inform IMO (regulation 4.2) and "should take into account any relevant guidelines developed by the Organization" (regulation 4.3). In doing so, the Administration "shall endeavour not to impair or damage its environment, human health, property, or resources or those of other States" (regulation 4.4).

2 The language of regulation 4 is broad insofar as it neither promotes, recommends, nor guarantees the use of any one specific fitting, material, appliance, apparatus, procedure, alternative fuel, or method. In the past decade, regulation 4 has been interpreted to justify fitting ships with wet sulphur oxide (SO_x) scrubbers as an alternative to low-sulphur fuels. This has provided cost-savings to the industry by enabling the use of less expensive high sulphur heavy fuel oils (HFO), while simultaneously creating a new form of pollution.

Scrubbers convert air pollution into water pollution

3 The use of scrubbers as an alternative compliance method has been questioned at previous MEPC and PPR meetings over environmental and social concerns. These concerns relate chiefly to the deposition of deleterious substances, acidification, and ecotoxicological effects associated with scrubber discharges. The International Council for the Exploration of the Sea (ICES), an impartial intergovernmental marine science organization whose purpose is to provide evidence on the state and sustainable use of the ocean, outlines many of these risks in documents MEPC 76/9/1 and MEPC 76/INF.5 (ICES). In document MEPC 76/9/1, ICES recommends "...a complete transition to the use of cleaner low-sulphur fuels to avoid the use of scrubbers..." and provides facts to support this conclusion as follows:

- .1 "Scrubber discharge water is toxic to marine biota and has been shown to have lethal and sub-lethal effects on the marine zooplankton community";
- .2 "Scrubbers discharge large amounts of metals and PAHs in dissolved, readily bioavailable form. These contaminants may concentrate at ultra-trace levels in the water column and bioaccumulate in plankton, fish and marine mammals, to levels that may impair vital functions and population productivity. Concentrations of these types of contaminants may be hundreds to million times higher in plankton than in the surrounding seawater"; and
- .3 "In areas of intense maritime traffic where scrubber water discharge is permitted, annual scrubber-related ocean acidification could be similar to that induced by carbon dioxide over several years to decades".

Equivalency in question

4 Concerns have been raised as to whether scrubbers are fit for purpose. Document PPR 9/INF.21 (Canada) reports that ships using scrubbers and HFO do not produce emissions that are equivalent to compliant low-sulphur fuels and result in greater emissions of particulate matter, including Black Carbon, and CO₂. Similarly, concerns have also been raised over documented instances of scrubber non-compliance. Document PPR 11/7/3 (FOEI et al.) relates findings from aerial surveillance operations carried out by the Royal Belgium Institute of Natural Sciences to monitor sulphur emissions from international shipping. These findings reveal that since 2020, 80% of red flags in the Baltic Sea have been associated with ships fitted with scrubbers. Recalling that the primary reason for tightening SO_x emissions was to limit impacts of ship emissions on human health, these findings cast doubt on whether scrubbers are a reliable alternative to low-sulphur fuels.

Treaty obligations

5 Legal questions have also been identified. Document MEPC 79/5/3 (FOEI et al.) argues that the discharge of scrubber waste into the aquatic environment appears to be inconsistent with general and specific obligations of State Parties under the United Nations Convention on the Law of the Sea (UNCLOS), including those provided by Articles 192, 194, 195, 196, 211, 212 and 222. Scrubber discharges also appear to be inconsistent with the body of international law which informs these articles, including the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). While treaty interpretation matters are the responsibility of State Parties, engaging in acts that defeat the object and purpose of a treaty undermines the rule of law.

Scrubbers externalize shipping industry costs

6 Still others have pointed out that using scrubbers externalizes shipping industry costs to other ocean users. Document PPR 11/INF.20 (Sweden) reports that "the global scrubber fleet has a surplus of €4.7 billion 2019 by installing scrubbers and using HFO instead of MGO (in SECA) or VLSFO (outside SECA since 2020)" and that "the cumulative societal damage cost, by not restricting scrubbers in the Baltic Sea Area since the implementation of SECA in 2015, amounts to €680 million in 2019."

7 Some have argued that using scrubbers represents a good faith attempt to comply with the global fuel sulphur limits provided in regulation 14 of MARPOL Annex VI. However, the co-sponsors note that IMO agreed to implement the 0.50% sulphur limit in 2020 based on research showing that enough compliant, low-sulphur content fuel would be available in 2020. Thus, it appears that the sole purpose of scrubbers is to reduce operating costs. While there is no inherent issue with the use of cost-effective compliance methods, MARPOL Annex VI makes clear that equivalent methods cannot impair or damage the environment or human wellbeing.

Application of the precautionary principle

8 There is also the matter of the precautionary approach. In response to calls to ban or restrict scrubbers, some have argued that insufficient evidence exists to support such measures. The co-sponsors strongly disagree and also point out that such arguments are a perverse reversal of the precautionary approach. The precautionary approach provides that the absence of adequate scientific information should not be used as a reason for postponing measures to prevent environmental degradation. IMO adopted resolution MEPC.67(37) on *Guidelines on incorporation of the precautionary approach* in 1995. More recently, the *Initial IMO Strategy on reduction of GHG emissions from ships* includes "the need for evidence-based decision-making balanced with the precautionary approach as set out in resolution MEPC.67(37)" as one of its guiding principles. Although there is ample evidence of the risks posed by scrubbers to justify banning and/or restricting scrubbers without having to invoke the precautionary principle, it nevertheless remains a tool that can be utilized by concerned Member States.

Conclusion

9 States have obligations and a moral duty to act on threats to the environment and to protect the wellbeing of wildlife and people. Regulation 4.1 of MARPOL Annex VI provides for the use of equivalents, but it is balanced by regulation 4.4 which states that "the Administration of a Party that allows the use of an equivalent as set forth in paragraph 1 of this regulation shall endeavour not to impair or damage its environment, human health, property, or resources, or those of other States." Ample evidence from disinterested parties on the risks associated with scrubbers exists to suggest that scrubbers do not fit the requisite criteria provided by regulation 4.4 to be considered an acceptable equivalent to low sulphur fuels. Further, those States that are Party to UNCLOS should reflect on their obligations to protect and preserve the marine environment and take steps accordingly.

10 While an initiative to resolve the international regulatory problem posed by scrubbers should be launched by IMO, States in the meantime can exercise domestic leadership. To this end, flag States can choose to no longer approve scrubbers as an alternative compliance method to the global sulphur cap for ships registered under their flags, and coastal States can ban scrubber discharges in their jurisdictional waters. A number of States and regional authorities have already adopted restrictions or bans on scrubber discharges in their jurisdictional waters citing numerous and diverse concerns. Document PPR 11/7/3 (FOEI et al.) relates that as of February 2023, a total of 80 bans and 13 restrictions were in place in 45 countries.

Recommendations

11 On the basis of the information presented, the co-sponsors believe that scrubbers are not an acceptable alternative compliance method for regulation 14 of MARPOL Annex VI and urge the Committee to:

- .1 consider whether the use of scrubbers as an equivalent to low sulphur fuels is aligned with the duties outlined in regulation 4.4 of MARPOL Annex VI;
- .2 amend MARPOL Annex VI regulation 4 to explicitly prohibit the use of scrubbers as a means of alternative compliance thereby removing practices under MARPOL which are inconsistent with the obligations of IMO Member States under UNCLOS; and
- .3 until a global ban is introduced, encourage national maritime administrations to ban the discharge of scrubber waste within their jurisdictional waters and to stop approving scrubbers as an alternative compliance method for ships registered under their flags.

Action requested of the Committee

12 The Committee is invited to consider the information contained in this document, in particular paragraph 11, when considering regulatory matters as per its scope of work and to take action, as appropriate.
