INTERNATIONAL MARITIME ORGANIZATION

E

SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE
13th session
Agenda item 5

PPR 13/5/17
18 December 2025
Original: ENGLISH
Pre-session public release: ☒

DEVELOPMENT OF A LEGALLY BINDING FRAMEWORK FOR THE CONTROL AND MANAGEMENT OF SHIPS' BIOFOULING TO MINIMIZE THE TRANSFER OF INVASIVE AQUATIC SPECIES

Comments on the application of goal-based standards to the development of a mandatory biofouling instrument and the importance of feasibility assessment

Submitted by ICS

SUMMARY

Executive summary:	This document provides consolidated comments on documents PPR 13/5/2 (Norway), PPR 13/5/6 (Canada), PPR 13/5/9 (Republic of Korea and BEMA) and PPR 13/5/11 (China). It emphasizes that agreement on goals, followed by development of functional requirements, is essential to embed feasibility, technological achievability and global implementability at the outset of the process, before considering biofouling instrument structure or prescriptive provisions. It further notes that analytical tools such as control-point analysis may be informative but should not replace or pre-empt the development of functional requirements under the goal-based standards framework.
Strategic direction, if applicable:	7
Output:	7.16
Action to be taken:	Paragraph 14
Related documents:	PPR 13/5/2, PPR 13/5/6, PPR 13/5/9, PPR 13/5/11 and MSC.1/Circ.1394/Rev.2

Introduction

1 This document is submitted in accordance with paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.6), comments on documents PPR 13/5/2 (Norway), PPR 13/5/6 (Canada), PPR 13/5/9 (Republic of Korea and BEMA) and PPR 13/5/11 (China) and aims to highlight that the development of a mandatory IMO biofouling instrument must follow the goal-based standards (GBS) methodology in MSC.1/Circ.1394/Rev.2. In particular, functional requirements should be determined before

drafting specific provisions or regulations, ensuring feasibility assessment is taken into account during the development of a mandatory biofouling instrument.

Discussion

2 ICS notes the broad support across documents PPR 13/5/2, PPR 13/5/6, PPR 13/5/9 and PPR 13/5/11 for applying a goal-based standards (GBS) methodology as set out in MSC.1/Circ.1394/Rev.2. However, ICS also notes that the above four documents differ markedly on how the GBS steps would be operationalized. As per MSC.1/Circ.1394/Rev.2:

.1 step 1 requires agreement on the overarching goal;

.2 step 2 requires development of functional requirements (FRs), which should provide the criteria to be complied with in order to meet the goals (paragraphs 11 to 14 of MSC.1/Circ.1394/Rev.2); and

.3 only once goals and functional requirements are agreed can prescriptive provisions be developed, consistent with the GBS hierarchy as shown in figure 1 of MSC.1/Circ.1394/Rev.2.

Alignment on developing goals

3 ICS further notes that all four submissions (PPR 13/5/2, PPR 13/5/6, PPR 13/5/9 and PPR 13/5/11) acknowledge the need to first identify and agree the goals of the future biofouling framework. Norway (PPR 13/5/2) additionally proposes draft goals and functional requirements, while Canada (PPR 13/5/6), Republic of Korea and BEMA (PPR 13/5/9) and China (PPR 13/5/11) also support beginning with goal or objective setting.

Need for functional requirements and divergence across submissions

4 ICS additionally notes that there is no consensus among the four documents PPR 13/5/2, PPR 13/5/6, PPR 13/5/9 and PPR 13/5/11 on how the functional requirements should be developed:

.1 Norway (PPR 13/5/2) proposes draft functional requirements directly derived from elements of the 2023 Biofouling Guidelines and the Guidance on in-water cleaning;

.2 Canada (PPR 13/5/6) proposes an analytical control-point approach as an alternative step 2;

.3 Republic of Korea and BEMA (PPR 13/5/9) propose developing the structure of the instrument without reference to functional requirements; and

.4 China (PPR 13/5/11) supports a goal-based approach but does not specify how functional requirements should be developed.

5 ICS would like to emphasize that functional requirements, as envisaged in paragraphs 11 to 14 of MSC.1/Circ.1394/Rev.2, are the primary mechanism through which feasibility and technological achievability are assessed before any regulatory provisions are drafted. Proceeding directly to develop a structure or prescriptive text detailing specific provisions of the biofouling instrument, without agreed functional requirements, risks bypassing this critical feasibility assessment and may result in an overly prescriptive biofouling instrument that lacks a clear, performance-based justification.

Importance of developing functional requirements

6 In ICS' opinion, functional requirements define the essential performance outcomes any IMO instrument must deliver and provide the necessary framework for assessing whether those outcomes are practically achievable. Without agreed functional requirements there is a risk that:

.1 prescriptive requirements may be introduced prematurely without feasibility assessment, contrary to paragraph 12.3 of MSC.1/Circ.1394/Rev.2, which requires functional requirements to provide verifiable compliance criteria;

.2 regulatory overreach may occur, including the introduction of requirements that are not supported by existing or foreseeable technologies; and

.3 the biofouling instrument may replicate challenges experienced under the Ballast Water Management Convention, where regulatory ambition has at times outpaced technological readiness.

7 As a result, ICS stresses that functional requirements are indispensable to ensuring that feasibility considerations are embedded at the initial stages of the biofouling instrument development process rather than addressed retrospectively.

Control-point analysis

8 ICS recognizes the analytical value of control-point analysis proposed in document PPR 13/5/6 as a descriptive tool for understanding the gaps present in the existing voluntary IMO measures (resolution MEPC.378(80) and MEPC.1/Circ.918), but emphasizes that such an analysis does not, in itself, provide a mechanism for assessing feasibility or technological achievability and therefore should not replace the development of functional requirements, which MSC.1/Circ.1394/Rev.2, paragraphs 11 to 13, explicitly requires before drafting regulations. In the view of ICS, control-point analysis should only serve as a supplementary tool to inform the development of functional requirements and not as a basis for proposing prescriptive provisions as proposed in paragraph 9 of document PPR 13/5/6.

9 Also, in the view of ICS, the control-point analysis approach described in document PPR 13/5/6 risks creating an implicit expectation that every "identified gap" must be addressed through a development of a new mandatory requirements. ICS would want to highlight that the presence of a "gap" may not imply that a mandatory regulation should be developed. Many gaps reflect genuine technological constraints, such as:

.1 inability to fully maintain zero macrofouling growth in niche areas;

.2 limited global capacity of in-water cleaning with capture; and

.3 port-permit restrictions beyond IMO's jurisdiction.

10 In the opinion of ICS, the use of control-point analysis without a prior framework of agreed goals and functional requirements risks driving regulatory responses that are not grounded in feasibility assessment. Such an approach risks disregarding feasibility considerations, including technological limitations, operational constraints and enforcement realities and may lead to the development of an impractical mandatory biofouling instrument.

11 Therefore, ICS believes that Canada's control-point analysis approach proposed in document PPR 13/5/6 can be useful as a subsidiary analytical tool to inform the development of functional requirements but not directly determine the regulatory content or the specific provisions of the biofouling instrument.

Comments on the proposed terms of reference (ToR)

12 ICS expresses concern that the terms of reference proposed by Norway (PPR 13/5/2, paragraph 16) and by the Republic of Korea and BEMA (PPR 13/5/9, paragraph 17) would advance directly into developing structures and draft provisions before agreement on goals and functional requirements. Such an approach risks prejudging the regulatory outcomes, bypassing the development and agreement of functional requirements that is central to the GBS methodology, and is inconsistent with MSC.1/Circ.1394/Rev.2, which requires:

.1 functional requirements be developed immediately after the goals (paragraph 11);

.2 functional requirements provide criteria for all subsequent regulations (paragraph 12.3);

.3 functional requirements must be independent from technical realization, leaving space for further technological development (paragraph 12.4); and

.4 regulations or specific provisions must be justified against functional requirements (paragraphs 13 and 14).

Alternate terms of reference

13 As an alternative, ICS proposes the consideration of the following ToR for the Correspondence Group tasked with developing the biofouling instrument. The goal-based standard approach aligned ToR are as follows:

.1 identify and agree the goals of the mandatory biofouling instrument, consistent with Tier 1 of MSC.1/Circ.1394/Rev.2;

.2 determine whether a control-point analysis is needed to inform the development of functional requirements, recognizing that such analysis should not be used to justify the development of prescriptive provisions;

.3 develop functional requirements in accordance with paragraph 11 to 14 of MSC.1/Circ.1394/Rev.2, defining the performance criteria to meet the goals; and

.4 only after steps 1 to 3 are completed, develop a potential structure for the instrument, ensuring alignment with the sequencing in MSC.1/Circ.1394/Rev.2 (paragraphs 11 to 14 and figure 1), which require functional requirements to precede drafting of detailed rules or structures.

Action requested of the Sub-Committee

14 The Sub-Committee is invited to consider the discussion in paragraphs 2 to 13 and the proposed draft alternate ToR in paragraph 13 and take action as appropriate.