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DEVELOPMENT OF GUIDANCE ON MATTERS RELATING TO IN-WATER CLEANING

Guidance on biofouling monitoring and in-water inspections

Submitted by CESA

SUMMARY

Executive summary:	This document provides comments to the proposal in document PPR 11/5/1, while focusing on in-water inspections in the context of biofouling management, outlining issues related to how inspections are conducted today, and making a series of proposals on how to address the issues. Overall, CESA proposes that guidance on biofouling monitoring and in-water inspections be developed in conjunction with the guidance on in-water hull cleaning and that such guidance be attached in the 2023 Biofouling Guidelines.
Strategic direction, if applicable:	1
Output:	1.21
Action to be taken:	Paragraph 21
Related document:	PPR 11/5/1

Introduction

1 This document provides comments to document PPR 11/5/1 (Norway) and is submitted in accordance with the provisions of paragraph 6.12.5 of MSC-MEPC.1/Circ.5/Rev.5. CESA supports the proposal by Norway to establish a working group during PPR 11 to progress work under this agenda item.

2 This submission furthermore addresses various other aspects of document PPR 11/5/1, while focusing on in-water inspections in the context of biofouling management, outlining issues related to how inspections are conducted today, and making a series of proposals on how to address the issues.

Background

3 On 14 July 2023, the Marine Environment Protection Committee (the Committee) adopted resolution MEPC.378(80) on the *2023 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species* (hereafter the 2023 Biofouling Guidelines).

4 In practice, table 1 of the 2023 Biofouling Guidelines drives decision-making related to management actions; however, there is no clear guidance on how to analyse the results and apply this table.

5 Biofouling management entails three key activities: 1) choosing an anti-fouling system (AFS); 2) monitoring for biofouling accumulation risks; and 3) taking corrective/maintenance actions to control biofouling and ensure a "clean hull". In-water inspections are a key aspect of monitoring for biofouling accumulation.

Discussion

IMO guidelines to address monitoring and in-water inspections

6 The industry would appreciate additional attention through updated IMO guidelines to the activities of monitoring for biofouling accumulation risks and in-water inspections. Current practices vary considerably and there is very little standardization. Clear guidance on in-water inspection would both increase the effectiveness of biofouling management practices and reduce the burden to the industry through:

.1 addressing when specific hull sections should be cleaned, predicated by having a standardized inspection process. For example, in case of hull fouling, possibly only light cleaning in certain sections may be required, but not in other sections. Cleaning sections that are not fouled may result in premature deterioration of the coating system or even contribute to chemical contamination of the water column; and

.2 including a standard method for analysing and interpreting inspection results and for rating biofouling growth.

7 CESA therefore supports the statement in paragraph 11 of document PPR 11/5/1 that it is important to identify which part of the hull and niche areas are at risk of biofouling growth when exposed to various biofouling risk parameters. Because biofouling accumulation susceptibility varies based on ship hull design, CESA further supports paragraph 3.9 in the annex to document PPR 11/5/1, which underscores the importance of developing a ship-specific inspection plan that is attached to the Biofouling Management Plan.

New Zealand Craft Risk Management Standard for Vessels

8 Paragraph 7 of document PPR 11/5/1 addresses biosecurity risk as well as deterioration of the AFC. It should be noted that the scope of the referenced New Zealand Craft Risk Management Standard for Vessels is focused on biosecurity and not on hull performance or AFS condition.

Develop specific guidance for doing inspections and for analysing inspection results

9 CESA members note increased demand for more thorough inspections with particular emphasis on niche areas. Such in-water inspections are commonly conducted by human divers. The diving procedures, the inspection report, and the evaluation standards used by each diving service provider can vary considerably. Quality control of the inspection process underwater is very difficult in practice and analysing inspection results entails subjective evaluations.

10 Although new technologies are emerging, which automate and standardize the inspection process, these are still in an early stage. As such, there is a need for an inspection process and for clear guidance on analysing inspection results. A key consideration in this respect is the process of inferring the overall hull condition and by extension biofouling risk based on limited sampled hull section.

Inspections: reference areas

11 Inspection operations usually cover only a limited set of the ship's hull sections underwater and not the whole hull. This means that, based on an inspection that looks at, e.g. 10% of the hull, a decision would be made which rates those areas and assigns a biofouling rating for the whole hull. In line with paragraph 3.9 of the annex to document PPR 11/5/1, which states the need to add a ship-specific inspection plan in the Biofouling Management Plan, it is important to outline the inspection reference areas that each ship should consider for inspections.

Types and purposes of in-water inspections

12 In the 2023 Biofouling Guidelines, chapter 8 indirectly outlines two types of in-water inspections and purposes:

.1 An inspection conducted by independent organization at fixed, scheduled intervals to evaluate the condition of the AFS system. Such independent and scheduled in-water inspections need to be conducted 12 months after coating application or latest 18 months after coating application, if the ship has a performance monitoring system. If only noon reports are used, then the foregoing 12 months limit applies.

.2 Inspections conducted by crew or personnel competent for the purpose of contingency actions. Such contingency inspections should be conducted after certain issues have been identified. For example, an issue is identified after 11 months and, consequently, a contingency plan is established as part of the Biofouling Management Plan to conduct inspections at every port to identify the extent and rate of fouling and conduct hull cleaning as needed.

13 It is important that the guideline outlines different inspection purposes and further specifies the operational differences between various inspection scopes and regimes.

Inspection scopes

14 Depending on the purpose of each inspection there are different inspection scopes, which should be clarified within the guideline as some require more detailed inspections with particular focus on niche areas while others may focus on the main hull sections in order to decide if hull cleaning is required and what specific hull cleaning tools are needed. The following (non-exhaustive) list of inspection scopes could be considered:

.1 inspection to evaluate AFS performance (fixed inspections as proposed in document PPR 11/5/1);

.2 inspection for biosecurity;

.3 inspection conducted by classification societies; and

.4 pre-cleaning and post-cleaning inspection.

15 Although one inspection operation may cover multiple scopes, this may be practicly impossible owing to, e.g. time limitations and high-water turbidity.

Inspections: pre-cleaning and post-cleaning inspection

16 Identifying the inspection scope for pre-cleaning and post-cleaning inspections is of critical importance for hull cleaning operations. In order to understand the type, size and density of biofouling growth (and thus the tools and time needed for cleaning), this scope should include an inspection before hull cleaning operations start and a post-cleaning inspection to establish how much has been cleaned in the time frame. It should also identify if and when the next cleaning intervention needs to take place. Using document PPR 11/5/1, outlining guidance on in-water hull cleaning. as a basis, it is critical to further specify and standardize the pre- and post-cleaning inspection.

Inspection plan model to include sampling process

17 Industry would benefit from a standard inspection plan model which can be applied to individual ships and included in ship Biofouling Management Plans. The inspection plan model should include a sampling process based on reference areas which can support ship specific decision-making process regarding the overall hull condition based on a limited set of observations.

18 Inclusion of areas identified for sampling in the inspection plan should be included in the Biofouling Management Plan thereby ensuring prioritization of the inspection of those areas. The exact reference areas to be inspected would vary depending on the inspection scopes.

Consideration of standardized biofouling risk rating

19 Industry would invite for consideration of standardized biofouling risk ratings, for instance based on biofouling types, biofouling coverage, biofouling density, AFC type and age, and ship trading pattern. Such an approach would proceed to assign a risk rating after in-water inspection and would serve to standardize the risk evaluation from all involved stakeholders, including but not limited to ship operators, port authorities and diving service providers.

Proposal

20 Considering the foregoing, CESA proposes that detailed guidance on biofouling monitoring and in-water inspections be developed in conjunction with the guidance on in-water hull cleaning and that such guidance be attached in the 2023 Biofouling Guidelines.

Action requested of the Sub-Committee

21 The Sub-Committee is invited to note of the information and comments, consider the proposals contained in paragraph 20, and take action, as appropriate.