

SUB-COMMITTEE ON SHIP DESIGN AND
CONSTRUCTION
12th session
Agenda item 8

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EXPERIENCE-BUILDING PHASE FOR THE REDUCTION OF UNDERWATER RADIATED NOISE FROM SHIPPING

Comments on document SDC 12/8

Submitted by CSC, FOEI, IFAW, Pacific Environment and WWF

SUMMARY

Executive summary: This document provides comments on the report of the Correspondence Group on Underwater Radiated Noise, supporting the proposed establishment of a working group at this session and providing input on next steps under the proposed terms of reference for this group.

*Strategic direction,
if applicable:* 1

Output: 1.16

Action to be taken: Paragraph 19

Related document: SDC 12/8

Introduction

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of MSC-MEPC.1/Circ.5/Rev.6, *Organization and method of work of the Maritime Safety Committee and Marine Environment Protection Committee and their subsidiary bodies*, and comments on document SDC 12/8 (Belgium), supporting the establishment of a working group under agenda item 8, and highlighting areas of interest associated with the proposed terms of reference for this group.

Background

2 Underwater radiated noise (URN) has been intermittently on the agenda of different bodies of this Organization since 2008. *Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life* (MEPC.1/Circ.833) were approved in 2014. However, limited uptake led to the inclusion of the current agenda item in 2021 in MEPC's biennial agenda, with objectives to review and improve the Guidelines and further identify the means to ensure that they are applied to ships.

3 In 2023, MEPC 80 approved the *Revised guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life* (MEPC.1/Circ.906) (Revised Guidelines), followed by a further revision approved at MEPC 82 (MEPC.1/Circ.906/Rev.1). A three-year experience building phase (EBP) was initiated at MEPC 80 to address application of the Revised Guidelines in the near term through:

- .1 awareness building regarding the importance of reducing URN;
- .2 making use of existing capacity to measure and model URN; and
- .3 evaluating how much quieting is occurring due to other modifications to ships to make them more efficient.

4 MEPC 82 endorsed the *Action plan for reducing underwater noise from commercial shipping* (URN Action Plan); updated the title of output 1.16 to "Experience-building phase for the reduction of underwater radiated noise from shipping"; extended the target completion date to 2026, and included output 1.16 on the provisional agendas of SDC 11 and SDC 12 to support continued technical work on both EBP and URN Action Plan. The Committee also placed this output on the provisional agendas of MEPC 83, MEPC 84, and MEPC 85 to allow consideration of any submissions from Member States, international organizations, or the SDC Sub-Committee, that may require higher-level guidance or policy decisions (MEPC 82/17, paragraphs 9.15 to 9.17).

5 MEPC 82 further noted that the three-year duration of the EBP may need to be revisited in the future for a possible extension of up to two years, and the Committee requested SDC 12 to provide a recommendation in that regard to MEPC 84 or MEPC 85, as appropriate, based on the programme of meetings for 2026 (MEPC 82/17, paragraph 9.21).

6 Finally, MEPC 82 requested the Secretariat to inform the SDC Sub-Committee of outcomes of its work concerning energy efficiency measures that might be relevant to the work on URN, including the outcome of the second Workshop on the relationship between energy efficiency and URN, and invited interested Member States and international organizations, once terms of reference are finalized, to provide the necessary in-kind and financial support for an IMO commissioned study predicting URN from shipping in support of further measures (SDC 11/17, paragraph 15.20).

Input into next steps proposed for discussion and decision at SDC 12

7 The establishment of a working group at SDC 12 is proposed in document SDC 12/8 and the corresponding terms of reference (ToR), as proposed in paragraph 44 of that document, are supported. Each of these ToR are considered to be essential to ensure continuing progress under the existing URN Action Plan, and fulsome consideration of the basis for SDC 12's recommendation to MEPC as to whether or not to extend the EBP. The present document offers considerations associated with each proposed ToR.

8 The EBP framework has been developed and introduced as a tool to help build a common understanding of progress and shortcomings in global efforts to apply the Revised Guidelines, as submitted to IMO thus far. The process must remain structured, guided and time-bound to result in clear, demonstrable application of that IMO instrument to the design, retrofit and operation of vessels, moving beyond baseline evaluation of their URN.

9 Policy work should also continue to move forward in parallel through MEPC, and the EBP should conclude at a clearly defined end point, not resulting in a delay of efforts by the Organization to address the lack of application of the Revised Guidelines. Initial analysis using

this tool supported the URN Correspondence Group discussions, as reported in document SDC 12/8, and demonstrated that both efforts to begin Noise Management Planning through baseline measurement of existing ships and general awareness of noise reduction objectives within the industry are increasing. However, later stages of the Noise Management Plan implementation remain limited, such as the purposeful implementation of measures to reduce URN, or documentation of planned work, as dictated by the Revised Guidelines. An updated progress analysis using the EBP framework, as proposed under ToR 1, is considered particularly relevant. To this end, it is necessary to continue prioritization of experience needed to address the known barriers to uptake of quieting measures, documented through previous submissions to SDC.

10 It is considered essential that short to medium-term actions in the URN Action Plan, associated with the development of IMO policy on URN, are conducted in parallel with the remaining technical work under the EBP. In particular, technical input from SDC to MEPC in support of an IMO URN roadmap to guide further policy could clarify these inter-relationships. For example, the URN Action Plan considers a global URN prediction study, to be commissioned by IMO, as a tool to support evaluation of URN targets and to consider multiple environmental objectives of the Organization in tandem. A timeline for commissioning this study and the roles for SDC and MEPC in informing its implementation, and considering its results, should be clarified under this ToR (see paragraph 17).

11 As summarized in document SDC 12/8, at the two-year mark of the three-year EBP, significant experience has been gained, in particular that awareness has not yet led to integration of purposeful noise assessment and control in commercial ship design and major retrofit activity, and that, although there is considerable co-benefits in the adoption of energy efficiency technologies and URN, this is not always the case. This is, for instance, the trade-off present in the design of propellers, where more efficient propellers may also be noisier.

12 While there is considerable global variation, studies submitted to the EBP suggest that noise contributed by vessels continues to increase or remains at heightened levels in highly trafficked regions and could increase dramatically because of development pressures (see document SDC 12/8/3 (CSC)). It is also rising rapidly in new regions where new navigation routes are established, including the Arctic. This suggests that there is urgency in ensuring that noise is accounted for in efficiency gains made by the world's fleets, through design, operations and maintenance approaches.

13 Extension of the EBP by as much as two years should not be granted in the absence of meaningful policy advancement. Such advancement was given high priority in the medium term (6 years) in the URN Action Plan, understood to be the period immediately following the three-year, short-term, EBP. Further, while workload considerations for MEPC remain heightened, it has been highlighted throughout the existing EBP that industry sees benefit in the inclusion of URN in their work to reduce fuel use and increase efficiency, rather than addressing noise as a new regulatory need after advancements have been made that could lead to unintended noise increases. To do this, URN must stay on the MEPC's agenda to work on instruments that will ensure holistic progress in the next two years.

14 The second workshop on the relationship between energy efficiency and URN reduction showcased technical methods and operational approaches that can increase vessel efficiency and reduce noise*. Such methods were noted to be numerous, providing opportunities for appropriate applications to a wide variety of vessel types and operational

* Further information on the second workshop on the relationship between energy efficiency and URN reduction can be found [here](#). Report of the workshop submitted to this session as document SDC 12/INF.8.

profiles. Full scale measurements are increasingly supporting predictive modelling for noise reduction approaches, as approaches are implemented by demonstration vessels and monitored over time. However, industry case studies found that the evaluation of the noise consequences of retrofits and new builds that are implementing approaches for increased efficiency remains limited. Naval architects and engineers highlighted the importance of including purposeful noise control in the design process both for new builds and retrofits, to achieve co-benefits.

15 Discussions of global models to inform understanding of the status quo and future URN under projected shipping scenarios further noted the need for data on the numbers of vessels that have implemented technical or operational measures, as well as continued ground-truthing of actualized noise reduction. Such models, refined regionally, were referenced as tools for assessments relative to threshold values such as those in development by EU Member States. The discussion of Noise Management Plans as a vehicle for gathering such data, was noted, as well as overlaps with data needs under other IMO frameworks and corresponding indices (e.g. EEDI, EEXI and CII). As part of proposed ToR 4, methods to leverage priority data that are needed to predict URN, and that are also being collected to support energy efficiency and CII compliance should be identified to ensure efficiencies in progressing the Organization's environmental objectives.

16 Noting the request by MEPC 82 for the Secretariat to ensure information exchange between the Organization's energy efficiency and URN work as appropriate, and noting the importance of this relationship to participants in the Correspondence Group on URN (as reported in document SDC 12/8), the drafting of an MEPC circular on key findings from the IMO-sponsored workshops, is supported, as proposed in ToR 5. This circular could advance best practices to avoid unintentional increases in noise associated with a few propeller designs, as well as highlighting resources for selecting and further evaluating operational and technical methods to realize co-benefits. It should be noted that such a circular could also serve to communicate refocused information needs, requesting, for example, increased experience with purposeful designs that account for both efficiency and noise.

17 Furthermore, annex 6 of document SDC 12/8 provides draft ToR for an IMO commissioned study to predict global URN in support of target setting, highlighting the means by which such a model can support IMO policy development. Foremost, such a tool would allow Member States and international organizations to evaluate a wide range of different and yet inter-related URN reduction objectives, including ship-specific reductions in noise, realized regional URN reductions and reductions in global contributions by ships to ocean-basin noise levels. Commissioned by IMO, or with close oversight and coordination with the IMO Secretariat, the draft ToR presents a method to quantify what URN reductions are projected to occur as an incidental result of increasing efficiency and air emission reduction measures, as well as directed noise control approaches, and in alignment with scenarios developed by the Organization. This understanding will be essential to advancing effective IMO policy to reduce URN that is synergistic with other environmental goals.

18 The finalization of the ToR for a commissioned study (proposed ToR 6 in paragraph 44 of document SDC 12/8) and a clear timeline for its implementation, including reporting of its results, within no more than two years should be central to determining the need for any extension of the existing EBP.

Action requested of the Sub-Committee

19 The Sub-Committee is invited to note the above information and consider the views expressed, and proposals in paragraphs 8 to 10, 13, and 15 to 18, and to take action, as appropriate.