POSITION PAPER

Underwater Noise Pollution

(Revision 3)

IACS
International Association of Classification Societies

Our Position

IACS supports IMO as the appropriate and technically competent body to address the mitigation of underwater noise from commercial shipping globally. IACS is working to support the maritime industry by ensuring reproducible and comparable results when measuring underwater noise. IACS contributes technical expertise, measurement standardization and fleet-wide survey experience to support the evaluation of URN assessment methodologies and mitigation options.

BACKGROUND

Globally it is accepted that maritime activities are tightly linked to the sustainability of sensitive areas including natural habitats and endangered marine species. The underwater noise induced by marine traffic and its impact on aquatic fauna has increased in proportion to the increase of traffic. The shipping industry is generally aware of this situation, and many stakeholders have already taken actions.

The International Maritime Organization (IMO)'s consideration of the underwater noise has set up global mitigation pathways. Since 2014, the IMO's Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life (MEPC.1/Circ.833) have provided the basis to address this topic within the shipping industry.

In July 2023, MEPC 80 approved a revision of the guidelines (MEPC.1/Circ.906), in addition to Guidelines for underwater radiated noise reduction in Inuit Nunaat and the Arctic (MEPC.1/Circ.907). MEPC 82, in November 2024, approved an Action Plan and, in order to support these revised guidelines, introduced a three-year Experience Building Phase (EBP) to allow initial implementation.

In May 2026, MEPC 84 extended the Experience-Building Phase by two years to address remaining gaps, needs and barriers. MEPC 84 approved MEPC.1/Circ.924 on technical guidance on co-optimizing energy efficiency and underwater radiated noise at the design and retrofit stage and also initiated further consideration of an IMO URN policy roadmap, inviting proposals to be submitted to MEPC 85.

Scientific evidence of the impact of underwater noise on marine ecosystems is continuously growing, and the revised guidelines identify propeller cavitation as potentially the dominant URN source at typical operating speeds. This underlines the need for continued international collaboration and for a robust quantitative basis on which to evaluate different mitigation options. It clearly goes along with all sustainability efforts conducted by IMO, by its member states, at national level, and by international associations such as IACS.

The whole maritime industry is evolving to optimize the design of future ships and the operations of existing fleet aiming at reducing its footprints under different drivers, including underwater noise.



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IACS POSITION

IACS highlights that establishing a common and technically robust approach for assessing underwater noise induced by shipping is a key step towards effective mitigation measures. Harmonized quantification of ship underwater acoustics together with an improved understanding of the various contributing factors can provide an effective means to support industry efforts to reduce URN.

IACS recognizes the importance of addressing URN in conjunction with ship energy-efficiency improvements at both the design and retrofit stages, while leveraging potential co-benefits.

IACS, which has around 20-years of experience in the control of noise and vibration on-board vessels, developed through the standardization of comfort consideration and structure-borne noise assessment, will use its knowledge and expertise to support new measures that are technically feasible and capable of being applied globally and consistently.

Within its technical remit, IACS promotes robust, harmonized and practicable approaches to URN assessment, measurement and mitigation, while supporting voluntary experience-building and respecting commercially sensitive information.

IACS therefore confirms its willingness to contribute to development of harmonized assessment procedures for URN in order to support the maritime industry in response to the future need for quieter vessels.

SUMMARY OF WORK CARRIED OUT BY IACS ON THIS ISSUE TO DATE

- IACS has published Recommendation No. 181 on the Measurement of Underwater Radiated Noise (November 2024), currently under revision following publication of ISO 17208-3:2025 on shallow-water measurements, to further strengthen harmonization between IACS recommendations and ISO measurement standards, including the procedures for relating shallow-water and deep-water results.

Recommendation No. 181 aims to establish a common framework for URN measurements by IACS Members, ensuring harmonization, consistency and comparability of results across different class notations within inherent uncertainties.

Using the established industry initiatives and emerging ISO standards, the Recommendation sets out:

1. common definitions and terminologies to be used for URN measurements;

2. relevant measurement methodologies for URN;

3. appropriate methodologies for post processing of data from the URN measurements; and

4. parameters to be included in the URN measurement reports to support the comparison of results.

- IACS is actively participating in the IMO EBP for the reduction of Underwater Radiated Noise from shipping (new target completion 2028) by contributing to the IMO Correspondence Group and Expert Group on URN and by sharing knowledge and experience through the industry tripartite working group.

- IACS participated to IMO workshops (2023 and 2025) on the relationship between energy efficiency and URN.

- IACS has actively participated in the IMO work to revise the Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life (MEPC.1/Circ.906/Rev.1).

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