



March 14, 2019

Re: Comments on TC technical paper on *Reducing Underwater Noise through Underwater Noise Management Plan*

The Shipping Federation of Canada, which was incorporated by an Act of Parliament in 1903, is the voice of the owners, operators and agents of the ocean-going vessels carrying Canada's imports and exports to and from world markets. The Federation's members represent over 200 shipping companies and the vessels of our members call ports throughout Canada, from the Atlantic to the St. Lawrence and Great Lakes to the West Coast and the Arctic.

We have reviewed Transport Canada's consultation paper and discussed the numerous proposals and questions contained in this document with our Environment Committee which is made up of containers, bulk and tanker carriers.

As an overall comment, we believe that Transport Canada's proposal for the development and implementation of an Underwater Noise Management Plan (UNMP) is premature – certainly as it relates to its applicability to the international fleet.

Firstly, essential elements are missing to properly and effectively develop an UNMP at a fleet level, including but not limited to, baseline noise data for individual vessels and continuous noise measurements worldwide so that progress in quieting individual vessels can be quantified and work from.

The recent international technical workshop on quiet ship design and retrofit hosted by Transport Canada at the International Maritime Organisation (IMO) in London highlighted significant knowledge gaps – notably the need for international standardisation in the measurement of underwater radiated noise (both in deep and shallow water environments), the limitations of existing acoustic models and the lack of sufficient vessel source level measurements under different operating conditions to validate and improve noise modelling. The workshop also highlighted some of the many challenges regarding the feasibility and efficiencies of existing vessel noise reduction technologies applicable to the various types of vessels and the lack of maturity of such technologies.



Recommendation: Considering the above, Transport Canada should take the lead on implementing an effective network of noise measurement stations domestically and promoting same internationally, as an important pre-requisite to effectively moving forward the discussion on design/retrofit options for mitigating vessel noise. At the national level, Transport Canada has recently invested in an underwater listening station to measure vessel noise in the shipping lanes in Boundary Pass in the Salish Sea. Similar investments must be made to support deployment of calibrated underwater listening stations on the east coast as well. In this respect, we encourage Transport Canada to invest in the “MARS project” which has been developed by a collective of scientific and industrial partners in order to ensure that the gaps in vessel noise measurement on the St. Lawrence and Great Lakes trade corridor are being addressed. Noise measurement capacity will also be needed for the traffic in the Atlantic trade corridor with the overall objective of enabling vessel noise measurements throughout Canadian waters.

The Canadian Government should also exercise its leadership to support a swift harmonisation of vessel “silent notification” among class societies and to standardize noise measurement methodologies at the international level. In addition, the discussion on ship quiet technologies need to progress under the auspices of IMO, with greater involvement from shipyards and propeller and engine manufacturers, prior to Transport Canada advancing any UNMP concept applicable to the international fleet.

Secondly, we believe that the timing for the development and implementation of a concept like the UNMP must be reconsidered. Over the next 5 years or so, international shipowners are required to proceed with significant investments and retrofits in order to meet immediate IMO requirements for ballast water management, compliance with the 2020 global sulphur limits, and reduction of green house gas (GHG) emissions.

Recommendation: In this context, there is a need to establish some methodology to identify and test priorities for investment in fleet modification instead of exposing shipowners to yet another set of disconnected priorities. Furthermore, the relationship between reduction of underwater noise and energy efficiency must be further investigated and better understood prior to moving on with a UNMP approach. In this respect, the 2014 IMO guidelines on reducing underwater noise states that “*A successful strategy to reduce radiated noise should consider interactions and contributions from measures provided to achieve other objectives such as reduction of onboard noise and improvements in energy efficiency*”. This needs to be done to enable shipowner to develop effective “management plans” for underwater noise that are holistic in their approach to the design or retrofit of “green vessels”.



Looking at some of the specific questions raised in the paper:

- 1. UNMP at the “fleet level”:** TC’s consultation document proposes the development of UNMP at the fleet level – which raises questions as to what vessels would be included in a shipowner’s fleet? In several cases – taking the container sector as an example – only a small fraction of the fleet will be “owned vessels” while the rest of the “fleet” will be chartered vessels. In the later case, the shipowner has no control when it comes to maintenance and retrofit of the chartered vessels and therefore cannot be held accountable for the application of an UNMP to this segment of the fleet. Furthermore, it is important to keep in mind that - very often – only a fraction of an international “shipowners’ fleet” operate in Canadian waters and the frequency of calls of these vessels to Canadian ports may be less than 5 transits per vessel per year; Canada unilaterally requesting international shipowners to develop a UNMP at the “fleet level” – even on a voluntary basis - would create unrealistic expectations on international shipowners.

Recommendation: Any UNMP concept must be developed at the IMO in order to be effectively applicable to the international fleet.

- 2. UNMP as a green marketing tool?** We are not aware of vessel underwater noise being yet on the radar of sizeable cargo owners either domestically or internationally (Nike, Wal-Mart, Ikea, Canadian tire, etc.). These types of discussions between cargo owners and shipowners currently happen mostly in relation to GHG reductions and even in this context, securing commitment from cargo owners to pay additional freight rates for “eco-friendly vessels” appears to be the exception rather than the norm. We would also note that very few ports are currently acknowledging “quiet ships”. In Canada, only four of the eighteen Canada Port Authorities offer any kind of green shipping incentives, with a very small subset of these ports – the ports of Vancouver and Prince Rupert - providing incentives for those shipowners who have invested in ship quiet technologies/design/management. A similar finding applies internationally, with a very low number of ports worldwide offering financial recognition or incentives for quiet ships. In this context, we do not believe that UNMP could be seen as a marketing tool for cargo ships in the foreseeable future.

Recommendation: The discussions on the role of green incentives within the logistic chain to support shipowners’ investment in green technologies have yet to happen and we encourage Transport Canada to assume a more active leadership in promoting this development at the domestic and international levels. There is definitively a need for a concerted national approach to expand on and implement a network of green ship incentive programs – including incentives for “quiet ships” throughout all Canada Port Authorities – as a first step.



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- 3. Green Marine's Marine Mammal Management Plans (MMMP):** We note the reference in Transport Canada's technical paper to Green Marine's Marine Mammal Management Plan. First, it is important to mention that Green MMMP does not require the establishment of noise reduction targets. Furthermore, certain aspects of these plans have progressed at a slower pace than anticipated for those international carrier members of Green Marine, due in part to the challenges mentioned above (i.e., absence of vessel noise signature and the lack of maturity of noise reduction technologies). Green Marine is also reviewing some of the metrics for the underwater noise indicator (including the role of cavitation inception speed). This situation is indicative of the challenges that need to be addressed prior to meaningfully advancing any UNMP concept that would be broadly applicable to the international fleet through the IMO.
- 4. Approach to set up ship noise reduction targets in UNMPs and noise reductions technologies:** At this stage, we believe that incorporating individual noise targets at the fleet level as part of a UNMP approach is not realistic neither efficient for the international fleet – considering the challenges in securing vessel noise baseline and regular noise measurements to properly assess the efficiency of the noise target and deliver continuous improvement. In the same manner, we question the link between UNMP and the setting of regional noise targets. If the criteria to link a UNMP to regional noise targets is the noise measurement at the fleet/vessel level – then all of the above noted challenges apply for international shipping. On the other, if the link between UNMP and regional noise targets is the fact that the UNMP would be attesting that the vessel/fleet is equipped with quiet technologies – then imposing an additional UNMP requirement would not add much to the equation; Furthermore, we question the premise of a UNMP that would provide a “passing mark” under “regional noise targets” without source noise measurement, since a vessel may be equipped with “a quiet propeller” but may still be a noisy vessel as a result of other components or its original noise level. A Canadian-made point-based system suffer from the same above flaws. Furthermore, it would be very inefficient for international shipowners managing a fleet that is operating worldwide.

On the issue of noise reduction technologies, we support one of the recommendations that emerged from the technical workshop in London to develop a guide for shipbuilders on available technologies. Although more work remains to be done – including active contribution from shipyards and propeller and engine manufacturers – to fully canvass and understand applicable technologies and their limits by type of ships and operating conditions – such a guide developed through the IMO – would be a positive step in providing shipowners with greater certainty regarding noise reduction technologies. This guide should be developed in the context of the work done on energy efficiency and GHG reductions to prevent negative interactions, as mentioned above.



During recent consultation sessions, TC suggested that if noise reduction technologies are not mature enough for introduction in UNMPs, the content of such management plan could be limited to “operational measures” with for example applicable regional speed restrictions. We strongly question the benefit of UNMPs if such instrument was to serve mostly to record applicable regional speed restrictions that have an independent existence (outside of the UNMP). International shipowners are already required to develop several management plans including ballast water management plans and Ship Energy Efficiency Management Plan; Development of a UNMP approach should be considered if and when the effectiveness of such management plan has been demonstrated and the applicability to the international fleet should be done through the IMO.

We thank you for this opportunity to submit comments and we look forward to further discussing effective approach(es) to minimizing the impacts of underwater noise from vessels on marine mammals.

Respectfully submitted,

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