Canada's Ocean Noise Strategy Draft
Input from Wildlife Conservation Society Canada (WCS Canada)

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Canada's Ocean Noise Strategy is a long-awaited and much-needed framework that provides a focused effort by the Government of Canada to understand, mitigate, and manage underwater noise in Canada's oceans. WCS Canada's Arctic Program operates a significant and long-term underwater acoustic initiative in the Canadian Arctic, including a dedicated effort to address knowledge gaps on underwater noise[1]. As experts in underwater acoustics and marine conservation in the Arctic, we are particularly pleased to see the Arctic referenced frequently throughout the strategy, addressing a key concern that we and others raised in the 2021 discussion document.

Nevertheless, the revised document feels tentative, with no goals, only a few objectives, and with needed actions presented as recommendations "intended to guide and support improved coordination of federal efforts". This is a concern given the urgency of the issue, Canada's recognition of this urgency, and the federal government's broad constitutional responsibility for marine waters. In the 2030 Nature Strategy released earlier this year, Canada committed to "finalize and implement a federal Ocean Noise Strategy" to advance action on Target 7 (Pollution and Biodiversity) of the Kunming-Montreal Global Biodiversity Framework

Based on our expertise, we highlight five key concerns with the draft Strategy, primarily stressing the urgency and priority of enacting guidelines and rules for managing and mitigating underwater noise, and the need for more specificity and detail in the recommendations. We end our submission with several recommendations for the final version.

Our five concerns:

1) **The choice and organization of the three themes de-emphasizes needed management actions**. The organization of the themes and recommendations implies that research and filling knowledge gaps should be the top priority for actions on underwater noise. While we

[1] For more information on WCS Canada and our expertise on underwater acoustics, see the section at the end of this document.

fully agree that research is important and that multiple important knowledge gaps are still evident, we feel that this emphasis takes away from the urgency of taking action on underwater noise now. We recommend that *Theme 2: Assessment and Management* should be the first theme, changing position with the current *Theme 1: Science, Knowledge Gathering, and Innovation*.

2) **The themes and recommendations in Chapter 2 are not clearly prioritized.** The draft document contains a list of recommendations organized by theme that provides no information on the relative urgency of each. A clear sense of urgency helps guide the allocation of resources and ensures that the most pressing concerns are addressed first, ultimately improving the efficiency and effectiveness of the strategy's implementation. For example, *Recommendation 12: Establish national guidance to support the assessment of ocean noise risks from marine activities and projects*, should be a top priority (i.e., high urgency), and the timeline for this could be relatively short if the existing NOAA guidelines were used as a starting point and adjusted for the Canadian context. *Recommendation 2: Improve understanding of ocean noise in dynamic and rapidly changing marine ecosystems*, is a relatively general recommendation, where urgency is perhaps still medium to high, but the timeline is much longer, since filling knowledge gaps like this could take many years of research. This recommendation overlooks the wealth of existing information that could immediately inform noise management decisions. By ignoring this fact, this recommendation suggests that actions must wait for more data, which is unnecessary for certain urgent interventions that should be clearly identified.

3) **Many recommendations are overly general**. Across all three themes, the recommendations are too broadly framed to inspire the necessary action(s). Respecting knowledge gaps, for example, *Recommendation 3: Conduct further research to address knowledge gaps on individual- and population-level impacts of ocean noise* needs to be far more specific, such as identifying species that are a priority for individual-level impacts. The desired outcome column similarly suggests that there are “high-priority knowledge gaps”. Has a gap analysis already been undertaken to categorize different species or contexts as high priority? Presumably species at risk, such as southern resident killer whales, are considered high priority for this issue. Perhaps a sub-component of this recommendation is to first identify what knowledge gaps exist for different species and then rank these gaps in order of priority. This recommendation is just one example, but this comment applies across many of the recommendations, where making the recommendations more specific will make them easier to implement and track.

4) **Underwater noise management and mitigation strategies should be specific to different species and environments.** Canada’s three oceans have different suites of species and have very different oceanographic and anthropogenic drivers of underwater sound levels. Multiple studies have demonstrated that a “one-size fits all” noise threshold

does not work for multiple species. There are both physiological and behavioural differences between species that make static noise thresholds impractical. For example, some Arctic species (beluga whales and narwhal) seem to be more sensitive to noise disturbance than species from the Atlantic or Pacific. Noise thresholds and other management or mitigation strategies applied in the Canadian Arctic should be tailored to the specific and unique conditions present in the Arctic marine environment. This includes lower thresholds used for Arctic species and the acknowledgement that the relatively low underwater sound levels in the Arctic means that Arctic species can detect underwater noise from further away.

5) **Many recommendations in the strategy emphasize additional planning rather than immediate action, which risks further delaying the necessary steps.** It has already taken 3.5 years to develop this Ocean Noise Strategy following the original discussion document in 2021. Disappointingly, many recommendations simply call for more planning, like a framework for ocean noise management (recommendation 11) or objectives to help minimize impacts (recommendation 13). We are not confident in the current projection that the Federal Action Plan will be released in 2025, and we are concerned that any development of a Federal Action Plan may not lead to any meaningful change or commitment to implementation. What assurances can be provided to coastal communities and the broader public that the Action Plan will be released on time, with concrete actions that will be implemented promptly?

We offer the following recommendations to address our concerns:

1) Finalize the Ocean Noise Strategy within three months, structuring it around a clear set of goals and objectives, rather than themes and recommendations.
2) Rank the objectives according to relative urgency; put management actions first.
3) Add more specificity to objectives.
4) Commit to the completion of an Action Plan with a clear timeline.

Thank you for the opportunity to provide feedback on Canada's Ocean Noise Strategy. This is an important first step for effectively dealing with the issue of underwater noise in Canada, and we hope to see swift and steady progress on this issue moving forward by the Government of Canada.

About WCS Canada and the Arctic Program

The mission of Wildlife Conservation Society Canada (WCS Canada) is to conserve wildlife and wild places in Canada through science, conservation action, and inspiring people to value nature. Our trademark is "muddy boots" biology, which we do by getting in the field and conducting the necessary research to fill key information gaps on Canada's fish, wildlife, and ecosystems. We then

use relevant information and our expertise, working with Government and regulatory agencies, conservation groups, Indigenous communities and industry, to resolve key conservation issues.

WCS Canada is a national affiliate of the Wildlife Conservation Society, which has been working in the Arctic since 2002. Since 2014, our work in the western Canadian Arctic has focused on: applying passive acoustic monitoring in Arctic marine environments to gather information on the activities of marine mammals, fish, and ships; modeling and measuring the impact of ship traffic on the behaviour of the wildlife; and using that knowledge to assess and recommend mitigation and protection measures. We carry out our work in close partnership with Fisheries and Oceans Canada, the local Inuvialuit, and other scientists conducting marine acoustic studies across the Canadian Arctic. To date we have deployed over 70 long-term acoustic moorings in the western Arctic, published our findings in multiple peer review scientific reports, and have been involved in the design and monitoring of solutions such as the Canadian Coast Guard's Notice to Mariners recently implemented in the western Arctic for whale avoidance by ships.

For more information, including a list of our publications on underwater noise and conservation of Arctic marine mammals, please see https://wcscanada.org/about/our-programs/western-arctic/ and http://www.arcticnoise.ca.