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Re: Feedback on Government of Canada's draft Ocean Noise Strategy

World Wildlife Fund Canada (WWF-Canada) is pleased to provide solicited feedback on the draft Ocean Noise Strategy. WWF-Canada is the country's largest international conservation organization. With the active support of more than 150,000 Canadians who care about nature, we help create the conditions to reverse the steep decline of wildlife, at home and internationally. To deliver long-term conservation impact we work in places that are unique and ecologically important, like Canada's marine ecosystems. We work to protect species at risk and areas rich in biodiversity that are experiencing loss or are at high risk of loss, to ensure that the ocean remains ecologically rich and economically prosperous.

Over the past decade, WWF-Canada has invested significant time and resources to increase the understanding and awareness of underwater noise impacts, and to broker solutions to underwater noise pollution. We see this Ocean Noise Strategy as an important opportunity to address underwater noise pollution more effectively in Canada, provided it is developed, structured and implemented with meaningful goals and objectives.

Canada's Ocean Noise Strategy was identified as a need in 2016, and a draft was promised for 2021. The release of the draft Strategy mid-2024 is an important, yet significantly delayed step forward. WWF-Canada has advocated for the urgent need for action since 2020 when we provided feedback on Canada's Ocean Noise Strategy Discussion Document. In 2023, WWF-Canada launched a national Underwater Noise Campaign, asking for #lessnoise through expedited national efforts to manage underwater noise. Over 10,000 Canadians have added their voice to our call for a strong Ocean Noise Strategy that includes measures to effectively manage and reduce underwater noise pollution such as mandating ecologically-based noise targets and thresholds, and implementing mechanisms to enforce them.

General Comments on Draft Ocean Noise Strategy

Efforts to effectively protect marine life from the harmful impacts of underwater noise pollution have not kept pace with rising levels of noise pollution generated by human activities in Canada's Oceans. WWF-Canada supports the federal government's commitment to a comprehensive Ocean Noise Strategy, and ongoing efforts to address the complex and rapidly increasing pressures to wildlife caused by underwater noise pollution. Overall, these efforts need to be ambitious, actionable and time bound to match the scale of the issues we face with noise pollution. The draft Ocean Noise Strategy contains important elements that are necessary for a strong, transparent and actionable Strategy. However, the Strategy is lacking clarity and intent on **how** and **when** Canada will take action to **measurably** reduce noise impacts.

The stated intention of the draft Strategy is "to be a coordinated approach to minimize impacts on marine life" (page 8). While coordination to achieve noise management is laudable, the objective to "minimize impacts of noise" is too narrow and insufficient for the purpose of dealing with the current state of increasing underwater

noise pollution in Canada. Objectives for underwater noise management and reduction should be ecologically based and regionally specific. We recommend that “minimize impacts on marine life” be replaced with “effectively manage and protect marine life and the ecosystems that support them”.

Additionally, the recommendations address important and necessary items within the three themes, however, there needs to be stronger incorporation of two important guiding principles:

- The application of ecosystem-based management approaches in an active, adaptive manner that considers the complexity of ecosystems.
- Opportunities to employ a precautionary approach to the development and implementation of recommendations using best-available knowledge

The final Ocean Noise Strategy must include a clear **intent** to identify noise management measures that use the best available scientific and Indigenous knowledge to apply area-based targets, thresholds and limits that provide immediate and adaptive protection measures for affected species. A clear pathway or roadmap to implementation of short, medium and long-term management measures should be outlined in the connected Federal Action Plan, with specific timelines for implementation of priority recommendations within one year of the finalization of the Ocean Noise Strategy and Federal Action Plan. Identifying, implementing, monitoring and enforcing area-based noise targets, thresholds and/or limits are all imperative to measure the effectiveness of the Strategy at mitigating increasing ocean noise impacts to sensitive marine ecosystems from human activities that cumulatively contribute to adverse impacts, and threaten the recovery and sustainability of Canada’s oceans.

WWF-Canada strongly supports the application of the precautionary approach as one of the six guiding principles; however, we are disappointed to see it absent from the recommendations. In many areas, such as the Salish Sea, the St. Lawrence Estuary, and Eclipse Sound, a strong foundation of scientific and Indigenous knowledge and data already exists and can guide the rapid development and implementation of precautionary noise management measures, such as adaptive ecosystem-based targets or limits based on ambient noise levels, and biological thresholds in surrounding soundscapes. While we support additional research in areas where there is less available knowledge about underwater noise and its impacts on marine life, lack of data should not be used as justification for delaying the implementation of noise management measures in these areas.

Feedback on the 20 Recommendations of the draft Ocean Noise Strategy for Canada

Direct feedback on the draft Ocean Noise Strategy is provided in the table below including language revisions (in red) to recommendations (first column) and desired outcomes (second column). The third column provides actions for inclusion in the Federal Action Plan to effectively achieve each recommendation. Recommendations 3, 5, 6, 10, 13, and 15 require strong coordinated action and are considered a priority to WWF-Canada. We expect the Federal Action Plan to include a clear pathway to implementation and specific timelines for each of these recommendations.

Table 1: Comments on recommendations that support achieving Strategy Objective 1 (gather and integrate evidence to address knowledge gaps and develop innovative methods, tools and technologies):

Proposed Updates to Recommendation	Proposed Updates to Desired Outcome	Action Required to Achieve Recommendation Outcome
1: Enhance the Government of Canada’s support for collaborative ocean noise research with domestic and international partners.	Government of Canada support for collaborative research with partners is enhanced, resulting in new ideas and synergies and fostering evidence-based decision making.	Establish a national inter-agency working group on underwater noise research and partnerships within one year of the formalization of the Strategy and Federal Action Plan. The working group will seek advice from external experts to prioritize key federal research collaborations

		that will advance underwater noise management.
<p>2: Improve understanding of ocean noise in dynamic and rapidly changing marine ecosystems.</p>	<p>Understanding of changing ocean conditions, including rapidly changing ecosystems due to ocean noise exposure and human activity, particularly in the Arctic, is improved.</p>	<p>Work collaboratively with Indigenous and coastal communities to monitor and understand regional soundscapes and establish noise baselines where marine ecosystems are projected to rapidly change, such as Arctic regions and North Coast British Columbia.</p> <p>Monitor and track changes in noise levels to inform the development of area-based noise limits that preserve or restore more natural soundscape conditions.</p> <p>Equip Guardian programs and community organizations with funding, technology and ongoing logistical support to establish or expand localized acoustic monitoring programs to collect standardized baseline data, as referenced in Recommendations 4, 5, 7-9.</p> <p>Ensure that localized research and monitoring programs meet regional standards and defined criteria for improving comprehensive knowledge of ocean noise in connected soundscapes, in coordination with Recommendations 3-9.</p> <p>Expand Canada’s role in the Protection of the Arctic Marine Environment (PAME) initiative under the Arctic Council, which is increasingly focused on mitigating noise from increased shipping due to melting ice.</p> <p>Adapt the U.S. National Oceanic and Atmospheric Administration (NOAA) Arctic noise mitigation strategies for Canadian waters.</p> <p>Learn from and adapt international best practices for sensitive ecosystems like the EU’s Arctic Monitoring and Assessment Programme (AMAP), that provides a blueprint for incorporating climate-driven changes into acoustic monitoring frameworks.</p>
<p>3: Conduct further research to address knowledge gaps on individual- and population-level impacts of ocean noise.</p>	<p>High-priority knowledge gaps related to the scope and severity of ocean noise impacts to individuals and populations of marine species are addressed and incorporated into long-term noise management, while an adaptive and precautionary approach is used to manage</p>	<p>Prioritize modeling of species-specific and ecosystem-based biological thresholds, and acute and cumulative physiological effects of short- and long-term noise exposure. Such measures have been mandated by the European Marine Strategy Framework Directive (MSFD), which sets population-level noise exposure criteria and limits for member states to fulfill in respective regional and sub-regional waters.</p>

	<p>underwater noise impacts in the interim during the knowledge building phase.</p>	<p>Prioritize filling knowledge gaps associated with:</p> <ul style="list-style-type: none"> - Priority at risk species (including those of ecological, cultural and economic importance) in regions that are impacted by underwater noise and where the natural soundscape is significantly changed or projected to change due to human activities. - Areas where local and regional scientific and Indigenous knowledge on indicator species is available but has not been applied to support noise management. <p>Gather knowledge on broader, area-based ecosystem conditions and soundscapes, recognizing that gathering comprehensive knowledge on individual and population-level impacts of ocean noise on all impacted species may never be achievable.</p> <p>Use knowledge of individual and population level impacts of ocean noise to inform the development and management of area-based biological thresholds and limits for noise generating activities. Clear linkages should be made between how the outcomes of Recommendation 3 will inform and strengthen ocean noise management efforts as stated in Recommendations 5, 10, 13.</p> <p>Take immediate action to reduce noise impacts on species and regions where the soundscapes are significantly influenced by human-generated noise, regardless of knowledge gaps.</p> <p>Within one year of finalization of the Strategy and Action Plan, identify adaptive and precautionary approaches to noise management and reducing noise impacts using best available scientific and Indigenous knowledge, as stated in the Strategy’s guiding principles.</p>
<p>4: In collaboration with First Nations, Inuit and Métis across Canada, develop ways to consider and weave together different knowledge systems and cultural perspectives to better</p>	<p>Indigenous Knowledge and learnings from knowledge-holders and scientists deepen understanding of ocean noise and impacts, informing more holistic decision making.</p>	<p>Prioritize this recommendation. Identify clear commitments towards funding and supporting Indigenous communities’ ocean noise research, monitoring and co-management, including additional support for Guardian programs and community-based knowledge building and sharing opportunities.</p>

understand and manage ocean noise.		
<p>5: Support Enhance research and monitoring of marine species to understand their distribution and habitat use in areas at risk from existing or potential sources of ocean noise and use this data to inform species recovery requirements.</p>	<p>Generation of distribution and habitat use data for marine species is supported, enabling the identification of important geographic areas where ocean noise and population densities of different marine species overlap.</p>	<p>Collect and utilize the significant existing research assessing species distribution and habitat use in areas already exposed to or facing future threats from expanding human activity.</p> <p>Incorporate underwater noise impacts into SARA recovery plans.</p> <p>Assess changes to species' spatial and temporal patterns in recent years to appropriately and accurately designate critical habitat for marine species that are negatively impacted by ocean noise whose critical/important habitat has not been accurately assessed to reflect current anthropogenic conditions and seasonal distribution patterns, including killer whales, fin whales, humpbacks, narwhal, bowhead, blue whales and North Atlantic right whales.</p> <p>Amend recovery plans to identify and incorporate mitigative actions required for reducing chronic noise exposure in critical habitat. Include such actions as vessel slowdowns and limits to activities that contribute to noise levels exceeding biological limits that at-risk species can withstand without adverse effects.</p>
<p>6: Support technologies Prioritize and mandate the development and widespread adoption of technologies that directly reduce ocean noise at its source.</p>	<p>Support Requirements for noise quieting technologies facilitates the accelerated development and mass implementation of safe, environmentally responsible and effective low-noise technologies and operational practices.</p>	<p>Identify a clear pathway to mandate the mass adoption of noise quieting technologies across sectors. Providing support and/or incentives to develop and implement noise quieting technologies and operational practices is not sufficient to mitigate noise impacts across maritime sectors.</p> <p>Implement immediate measures to quiet excessive noise from the source in the interim, including prioritizing no-go zones in protected and conserved areas, and slowing vessels down in congested waterways.</p> <p>Put in place mechanisms to expedite the adoption or implementation of quiet technologies. This includes the prescription of regulatory standards relating to noise emissions. Actionable work here includes moving the work done by Transport Canada on the Underwater Vessel Noise Reduction Targets (UVNRT) to implementation through prescribing noise</p>

		thresholds for different classes of marine vessels in Canadian waters.
7: Develop or adopt common best practices and standardized methodologies across federal organizations for acoustic data collection, storage, processing and reporting.	Standardized methodologies and best practices are developed and applied across the Government of Canada for acoustic data collection, storage, processing and reporting.	<p>Prioritize the development of technical working groups and advisory committees to formulate best practices and standardize methodologies so current acoustic data collection and monitoring programs can be streamlined, and databases are readily accessible to inform noise management and mitigation measures. This includes setting precautionary and adaptive targets and limits that evolve as knowledge gaps are filled [Recommendations 3, 5, 10, 13]</p> <p>Develop a shared platform for federal agencies to improve data-sharing across departments. Internationally, platforms like the UNEP World Conservation Monitoring Centre provide examples of how standardized datasets can drive global marine policy coordination.</p>
8: Sustain and increase strategic acoustic data collection by continuing investments in underwater sound-monitoring instruments.	Acoustic data collection is sustained and enhanced, leading to a deeper understanding of marine soundscapes and how marine species use their habitat, validation of ocean noise models and improved support for evaluating ocean noise management measures.	<p>Expand existing hydrophone networks and acoustic monitoring programs into under-observed and rapidly developing regions, including Central and North Coast British Columbia and Nunavut.</p> <p>Prioritize strategic acoustic data collection efforts through leadership and involvement with regional initiatives and Indigenous Guardian programs using a standardized and collaborative data-sharing network, as indicated in Recommendations 3-5, 7, 10.</p> <p>Expand acoustic monitoring stations throughout Arctic waters to provide critical baseline data on new and increasing noise sources where marine species may be disproportionately impacted (e.g., in areas of increased shipping activity due to ice melt and expanding industrial operations such as Baffinland).</p> <p>Review NOAA's work in the U.S. Exclusive Economic Zone for insights on how continuous monitoring can inform regulatory decisions, and the EU's Marine Knowledge 2020 initiative for a scalable model for collecting marine acoustic data in Europe.</p>
9: Promote the use of innovative methods and techniques (i.e., analytical tools, computing power and training) to efficiently analyze acoustic data.	Innovative analytical methods and tools are adopted and investments in training and capacity are increased, facilitating efficient data processing and enabling faster identification of crucial insights	Explore artificial intelligence (AI) and machine learning tools, like those developed by NOAA, to analyze large volumes of acoustic data more efficiently. International collaborations with the EU's Horizon 2020 Program, which funds AI-based environmental monitoring projects, could

	<p>and trends that contribute to agile ocean noise management.</p>	<p>boost Canada’s capacity to analyze vast acoustic datasets.</p> <p>Commit to nation-wide accessibility, uptake and utilization of currently available, advanced acoustic detection and monitoring tools, including infrared and AI, to enhance real-time data collection, monitoring and enforcement for effective noise management (e.g., Canada has invested in advanced detection technologies through the Whale Detection Initiative under the Oceans Protection Plan).</p> <p>Ensure innovative analytical methods are durable and built off modern standards by leading experts, in alignment with Recommendations 16-18.</p>
<p>10: Promote the Development and implement evidence-based tools and guidance to better assess measurably mitigate and manage impacts of ocean noise on marine life.</p>	<p>Evidence-based tools (e.g., metrics, criteria, thresholds) and guidance to better assess impacts of ocean noise on marine life are developed and available used to support enact noise requirements management decisions in the Canadian marine environment, including to support the recovery of marine species of concern setting area-based targets that reflect the biological thresholds of marine species of concern, and setting limits to noise producing activities that are required to achieve effective noise management.</p>	<p>Apply a precautionary, ecosystem-based management approach to develop tools and guidance incorporating criteria, metrics, and thresholds based on existing biological and acoustic data, including biological thresholds.</p> <p>Develop tools and guidance informed by frameworks built upon existing knowledge that sets criteria and requirements for regional or area-based noise targets and limits. Use the EU MSFD’s revised mandatory noise limits, which set short-term and long-term area-based binding limits for impulsive and continuous noise, as an example.</p> <p>Establish and enact Marine Environmental Quality (MEQ) criteria, standards and requirements under the <i>Oceans Act</i> that mirror those set by the European Marine Directive, which establishes noise thresholds based on biological thresholds.</p> <p>Define ocean noise tools with clear and quantitative targets and limits. Implementation of these tools should be prioritized as an urgent measure and a clear timeline should be defined within the Federal Action Plan by 2030 to uphold Canada’s climate and biodiversity commitments to protect 30% of Canada’s oceans by 2030.</p> <p>Modernize the application of SARA by incorporating noise impact assessment tools into recovery plans under SARA. This can follow the model used by the U.S. <i>Endangered Species Act</i>, which mandates assessments of acoustic impacts for at-risk marine mammals.</p>

		Amend the <i>Impact Assessment Act</i> to require project-level assessments of noise impacts on marine populations using thresholds informed by biological limits and informed by international best practices to ensure that population-level impacts are factored into offshore development approvals, monitoring and reporting.
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Table 2: Comments on recommendations that support Strategy Objective 2 (enhance collaboration and application of evidence-based tools and technologies to develop and implement clear guidance and management actions)

11: Establish a clear and transparent Government of Canada framework for ocean noise management with defined roles and responsibilities.	A new federal management framework is established that reduces complexity, ensures accountability, and promotes transparency.	<p>Integrated Noise Management Framework: While establishing Canada’s national framework, integrate laws from the <i>Oceans Act</i>, <i>Canada Shipping Act, 2001</i> and <i>Species at Risk Act</i> to enact meaningful protections for regional soundscapes, and ensure transparent roles and departmental accountability across government bodies in addressing ocean noise.</p> <p>Establish a dedicated federal committee to oversee noise regulation, involving federal agencies, similar to NOAA’s <i>Ocean Noise Strategy Roadmap</i>, which streamlines efforts across U.S. federal entities.</p>
12: Establish national guidance to support the assessment of ocean noise risks from marine activities and projects.	Guidance on assessing the risks of ocean noise from marine activities and projects is developed, resulting in more consistent outcomes and greater clarity and certainty for regulators, partners and stakeholders. Outcomes should include quantifiable objectives, such as targets and limits, for reducing assessed risks from noise generating activities.	<p>Integrate accountability mechanisms for all departments that are responsible for industries and activities that contribute to cumulative noise impacts on marine soundscapes.</p> <p>Develop standardized risk assessment tools modeled after the UK’s <i>Marine Noise Registry</i> to ensure consistent evaluation of noise impacts across Canadian waters. This would allow decision-makers to assess cumulative noise risks across multiple projects and regions.</p> <p>Create and enforce standardized noise assessment protocols for all marine projects under the <i>Impact Assessment Act</i>, ensuring nationwide consistency in evaluating risks and mitigation strategies.</p>
13: Develop appropriate management objectives supported by the implementation of specific and timely measures to effectively manage help minimize impacts of ocean	Ocean noise management objectives are developed and supported by specific measures that are employed in a timely manner to effectively manage minimize impacts on marine species and soundscapes.	MEQ Objectives: Establish marine environmental quality standards and requirements, as prescribed under the <i>Oceans Act</i> , for ocean noise that pertain to regional and sub-regional ecosystem needs and requirements, including setting precautionary upper limits for noise according to biological

<p>noise on marine species and their associated ecosystems.</p>		<p>thresholds of indicator species, based on available scientific and Indigenous knowledge.</p> <p>MPA-Specific Noise Objectives: Create and enforce specific noise management objectives in existing and future Marine Protected Areas (MPAs) management plans, including limiting or restricting chronic noise exposure from noise producing activities, including commercial shipping. This can build on the EU's <i>Marine Strategy Framework Directive</i>, which integrates noise limits in MPAs to protect sensitive species.</p> <p>Timely Management Interventions: Establish a formal system for implementing rapid-response noise mitigation measures (e.g., vessel slowdowns or rerouting) in areas of heightened risk, similar to NOAA's rapid intervention protocols for protecting endangered marine species from noise.</p> <p>Ensure that management objectives align with the guiding principles of the Strategy and are informed and created in alignment with Recommendations 2-5, 7-8, 10.</p>
<p>14: Support the active leadership of Indigenous communities in initiatives to understand and manage ocean noise.</p>	<p>Indigenous communities are supported and encouraged to lead and participate in planning, information gathering, analysis and decision-making associated with ocean noise management.</p>	<p>Build capacity for Indigenous communities to lead noise management initiatives. Canada is already a lead on co-management frameworks that integrate traditional knowledge into biodiversity conservation.</p> <p>Provide long-term funding and support for Indigenous communities to take leadership roles in regional ocean noise governance, especially through the Indigenous Guardians programs to ensure Indigenous knowledge informs decision-making on noise reduction strategies.</p> <p>Support active leadership from Indigenous communities with streamlined monitoring, data management and processing capabilities that align with, and are adaptable to standardized best practices and data management platforms as per Recommendations 7-10.</p>
<p>15: Promote participation in Enhance, expand and incentivize voluntary ocean noise measures and enhance compliance with mandatory ocean noise measures.</p>	<p>Increased participation in voluntary measures is achieved through federal leadership, ambition and incentivization, together with greater compliance with mandatory measures that aim to minimize effectively manage the impacts of ocean noise on marine</p>	<p>Identify government agencies responsible for promotion, monitoring and enforcement of noise management measures, including voluntary and mandatory speed reduction programs.</p> <p>Prescribe regional standards for noise levels required to be maintained for healthy soundscapes (e.g. under MEQ regulations in the <i>Oceans Act</i> – see Recommendation 13). These</p>

	<p>species and their associated ecosystems.</p>	<p>standards will set expectations for voluntary and mandatory measures to achieve.</p> <p>Identify how the effectiveness of these measures is to be assessed (pertinent to Recommendation 16).</p> <p>Specify and expand voluntary noise management measures and programs with measures to immediately mitigate noise impacts, such as industry-wide slowdown or exclusion zones. Prioritize geographic regions where the state of knowledge on noise exposure and related impacts on marine species is well understood, and sufficient data is available.</p> <p>Identify priority regions for enhanced voluntary and mandatory measures using at-risk species that face significant imminent threats from ocean noise as indicator species for broader ecosystem-based noise reduction efforts, including killer whale populations in coastal British Columbia and belugas in the St. Lawrence Estuary.</p> <p>Update and strengthen mandatory slowdown measures, such as in the Gulf of St. Lawrence (formerly voluntary, now on year-7 of an interim order) to reflect current scientific knowledge on seasonal range and distribution patterns of North Atlantic Right Whales.</p> <p>Expand mandatory slowdown measures to include protection measures for other marine species impacted by noise in the Gulf of St. Lawrence.</p> <p>Transport Canada to introduce an interim order under the <i>Canada Shipping Act, 2001</i> that transitions voluntary measures to mandatory. This will increase compliance and effectiveness of regional measures as opposed to relying on industry participation to achieve noise management targets.</p> <p>Coordinate the creation and implementation of voluntary and/or mandatory noise management measures between federal departments, as stated in Recommendations 1-2, 18-20 including DFO, Parks Canada and ECCC.</p>
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<p>16: Develop and employ standardized methods and indicators to measure the effectiveness of ocean noise management measures.</p>	<p>Standardized performance-measurement methods and indicators are developed and employed to accurately evaluate the effectiveness of specific management actions for all noise producing activities and sectors.</p>	<p>Identify and develop standardized noise impact evaluation informed by information and results gathered in Recommendations 7-12.</p> <p>Use regional MEQ standards established under the Oceans Act as noted in Recommendations 13 and 15 as baselines for desired soundscape conditions that measures for noise management can be assessed against.</p> <p>Develop robust indicators and measurement methods to assess activity-based management measures, including through mechanisms such as the <i>Impact Assessment Act</i> process, ensuring that project developers and regulators can effectively measure whether mitigation efforts are achieving the desired noise reduction outcomes.</p> <p>Identify effectiveness monitoring indicators and methods to evaluate the effectiveness of acute and cumulative commercial shipping impacts, through authorizations under the <i>Oceans Act</i> and <i>Canada Shipping Act, 2001</i>.</p>
<p>17: Adopt a leadership role with a view to advance support of international cooperation and joint initiatives to manage, mitigate, and reduce ocean noise.</p>	<p>Support for international cooperation and joint initiatives to address ocean noise is increased, resulting in more effective collaboration and management along with increased international awareness of the threat posed by ocean noise.</p>	<p>Enhance Canada’s role within the <i>International Maritime Organization (IMO)</i> by advocating for stronger global noise reduction measures, including:</p> <ul style="list-style-type: none"> (a) prioritizing the establishment of mandatory targets for Member States and in areas beyond national jurisdiction (b) supporting energy efficiency measures for ships with co-benefits for the reduction of underwater noise (c) conducting case studies and engaging in knowledge-sharing, in line with the IMO’s Action Plan to further prevent and reduce underwater radiated noise (URN) from ships and bring findings to the IMO (d) responding to Inuit Circumpolar Council’s invitation to help develop guidance on reducing underwater noise in the Arctic and Inuit Nunaat (e) ensuring ships registered to Canada’s flag are implementing IMO’s revised

		<p>Guidelines for the Reduction of Underwater Noise from Commercial Shipping.</p> <p>Collaborate on international research projects, such as the <i>International Quiet Ocean Experiment (IQOE)</i> to enhance global efforts to mitigate ocean noise.</p> <p>Continue ongoing and undertake further work at the Arctic Council to address transboundary noise impacts in the Arctic, as Norway and Russia have done through joint efforts to monitor and manage noise in Arctic shipping corridors.</p>
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Table 3: Comments on recommendations that support achieving Strategy Objective 3 (Strengthen communication, coordination and engagement to raise awareness and increase participation in the management of ocean noise)

<p>18: Strengthen coordination between the Government of Canada and partners and stakeholders concerning ocean noise assessment and management.</p>	<p>Coordination and collaboration between the Government of Canada and partners and stakeholders continue to be strengthened, leading to greater trust in decision-making processes associated with ocean noise assessment and management and an enhanced ability to arrive at informed decisions that consider diverse interests.</p>	<p>Establish regional multi-stakeholder advisory committees and working groups by 2025.</p> <p>Incorporate stakeholder contributions into the finalization and implementation of the Strategy, including clear mechanisms to communicate departmental authorities and responsibilities, accountability and overall effectiveness on noise management decisions over time.</p>
<p>19: Increase the sharing of ocean noise information and knowledge among federal departments and agencies.</p>	<p>Effective and timely information-sharing processes are established, reducing duplication and facilitating better understanding, planning and evidence-based decision making across federal organizations.</p>	<p>In developing a “framework for integrated noise management” (Recommendation 11), mandate ocean noise to be considered a pollutant in federal legislation, and require active monitoring across Government of Canada activities, using reporting on the NBSAP to regularly update monitoring.</p> <p>Develop a centralized data-sharing platform where all federal departments can access and upload noise-related data. This would enhance real-time collaboration between agencies, similar to the EU’s Marine Knowledge 2020 program.</p>
<p>20: Partner with public- and private-sector organizations and Indigenous communities to foster enhanced awareness and understanding of ocean noise and its impacts.</p>	<p>Awareness and understanding of ocean noise and its impacts are enhanced through various outreach activities delivered with partners.</p>	<p>Support ongoing outreach and information dissemination on the impacts of ocean noise on communities and Indigenous Peoples and steps being taken to appropriately address ocean noise concerns at a local, regional and national scale.</p>

Closing Comments

WWF-Canada looks forward to continuing to work with DFO and the Government of Canada, throughout the consultation period and beyond, to deliver a stronger plan to protect whales and marine life from underwater noise pollution. We'll continue to call for a **final** Ocean Noise Strategy and Federal Action Plan that:

- **Establishes a clear and imminent pathway to enact noise limits for activities we know have a negative effect on regional soundscapes** such as shipping and natural resource exploration and exploitation. These noise limits should be based on the biological limits of impacted species as well as by scientific and Indigenous knowledge.
- **Includes a clear roadmap to establishing adaptive area-based noise reduction targets in places where human-made noise already dominates the natural soundscape** (for example, the Salish Sea and St. Lawrence seaway) **and noise limits to preserve the natural soundscapes of areas that are rapidly developing** (such as the Arctic and northern coast of British Columbia.).
- **Upholds Canada's conservation commitments by quieting marine protected areas and critical habitat for species at risk.** Recognition and clear definitions of continuous and impulsive noise pollution from human activity should be incorporated into MPA management plans and SARA recovery plans to accurately reflect cumulative noise impacts on the protection and recovery of species in defined habitats, based on current knowledge and adapted as knowledge gaps improve.
- **Incentivizes the development and mass adoption of quieter technologies** while immediately implementing operational measures that can reduce noise such as ship slowdowns in critical habitats and marine protected areas.
- **Enshrines regulations** to ensure noise levels are monitored and limits and reduction targets are enforced. Without teeth, it's unlikely Canada's Ocean Noise Strategy will help.

How and **when** the ambitions of the draft strategy will be met or even defined is currently unclear. The process of going from a draft to implementation won't happen fast enough to protect endangered marine species. WWF-Canada is urging the federal government to take immediate actions to mitigate the escalating impacts of underwater noise pollution in the interim. Our recent report, *Canada's Ocean Noise Strategy: Legislation and Policy Analysis*, identifies key existing legal mechanisms that Canada can use to safeguard marine biodiversity. These include:

- Marine Environmental Quality provisions in the *Oceans Act* to set regional noise standards and limits.
- The *Species at Risk Act* to strengthen protections for acoustic components of critical habitat and listed species from noise.
- The *Canada Shipping Act* to manage for cumulative vessel noise levels.
- The *Canadian Environmental Assessment Act* to require adherence to noise limits and reduction targets and project-based conditions to manage noise impacts.
- Designing and implementing new Marine Protected Areas, and amending existing ones, with measures to limit noise generating activities within their boundaries.

As the *Ocean Noise Strategy: Legislation and Policy Analysis* describes, Canada has the knowledge and tools required to take precautionary and impactful steps towards conserving quieter oceans while simultaneously addressing knowledge gaps and future management needs. Through finalizing a strong and actionable Ocean Noise Strategy, we can measurably manage ongoing and increasing noise impacts on marine life.

Thank you for the opportunity to comment and provide feedback on the draft Ocean Noise Strategy.

Regards,

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