



Canada's Draft Ocean Noise Strategy

A coordinated approach to minimize impacts on marine life

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Government of Canada
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National information session

Canada

Outline

- Ocean noise and its impacts
- Introducing Canada's Draft Ocean Noise Strategy
- Consultation process
- Question and answer session



Importance of sound in the ocean

- Sound is essential for life under water
- Marine animals produce sounds to:
 - monitor their environment and navigate
 - communicate and socialize
 - forage for food
 - find mates
 - avoid predators
- Many marine animals have evolved efficient systems to make and hear sounds of interest, sometimes from long distances



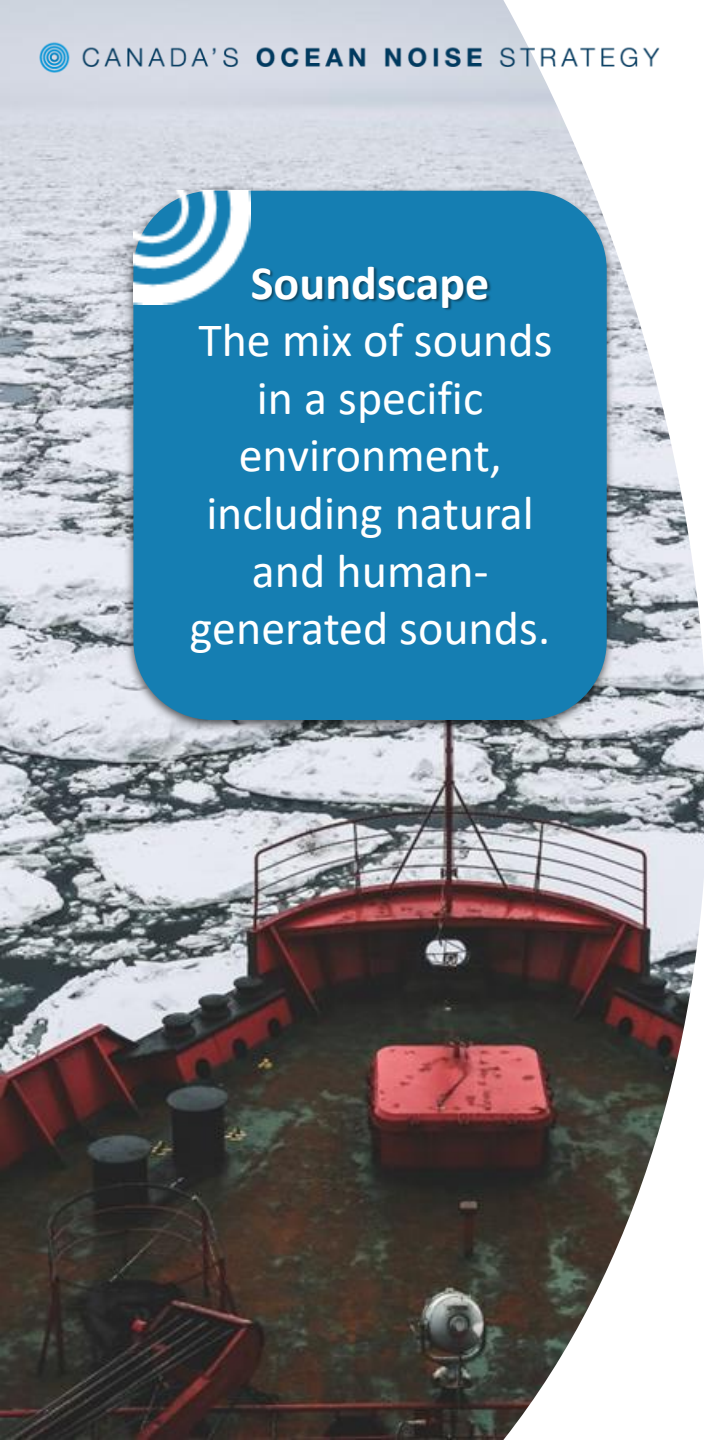


Soundscape

The mix of sounds in a specific environment, including natural and human-generated sounds.

Human activities can also generate underwater sounds

- Human activities in or near the ocean contribute to the overall **soundscape** of the underwater environment
- Human sources of sound include:
 - vessels
 - military, industrial and construction activities
 - echosounders and sonar
 - seismic surveys
- Sounds from human activities can negatively impact marine life



Underwater ocean noise and its impacts

- Ocean noise has a wide range of impacts on marine species, including but not limited to:
 - masking, decreasing an animal's ability to detect, recognize, and understand important sound signals
 - physiological effects, including increased stress
 - behavioural changes and disrupting normal activities
 - physical injuries, including hearing impairment, and in some extreme cases, even death



Working together to manage ocean noise

- Indigenous partners and communities, provinces and territories, industries, universities and environmental organizations have undertaken extensive and important work on ocean noise
- Over the past decade, the Government of Canada has led or supported at least 300 collaborative ocean noise-related initiatives.
- Commitments such as the Oceans Protection Plan and Whales Initiative address ocean noise impacts
 - Published [case studies](#) highlight regional and national initiatives



The need for a coordinated and balanced approach to address ocean noise



The marine economy is an important contributor to the wellbeing of Canadians



The Government of Canada has key responsibilities for assessing and managing ocean noise



Efforts to date have often been in response to threats to a particular species or driven by the need to assess and manage specific projects



Ocean noise is a complex problem that requires ongoing learning, adaption, intervention and collaboration

Introducing Canada's Ocean Noise Strategy

- With the goal of undertaking a coordinated approach to address this complex issue, the federal government has developed a draft Ocean Noise Strategy
- The Strategy defines the government's vision and will guide future efforts to address human-generated underwater ocean noise



Purpose

A comprehensive strategy is required to:

- address the complex and evolving problem of ocean noise
- build on existing work while maximizing the use of knowledge and resources
- support a balance between marine conservation and socio-economic considerations
- coordinate actions
- guide future partnerships to minimize impacts of ocean noise on marine life



Scope

Canada's Draft Ocean Noise Strategy focuses on:

- marine, coastal, and estuarial waters (does not extend to freshwater lakes or rivers)
- policies and desired outcomes that are nationally applicable and allow for regional flexibility for implementation
- domestic actions while emphasizing Canada's role in international noise-reduction efforts.



Guiding Principles

- 1 Encourage the application of ecosystem-based management approaches
- 2 Balance economic development with environmental protection and conservation
- 3 Contribute to building renewed nation-to-nation, Inuit-Crown and government-to-government relationships with First Nations, Inuit and Métis
- 4 Commit to accessibility, diversity, equity, and inclusion
- 5 Employ a precautionary approach using best available knowledge
- 6 Foster transparency and accountability to enhance collaboration and coordination



Strategy Themes

Theme 1: Science, Knowledge Gathering, and Innovation

Objective 1: Gather and integrate evidence to address knowledge gaps and develop innovative methods, tools, and technologies

Theme 2: Assessment and Management

Objective 2: Enhance collaboration and application of evidence-based tools and technologies to develop and implement clear guidance and management actions

Theme 3: Communication, Coordination, and Engagement

Objective 3: Strengthen communication, coordination, and engagement to raise awareness and increase participation in the management of ocean noise

Strategy Recommendations

- A key component of the draft Strategy is a series of recommendations
 - Intended to guide and support federal efforts in the areas covered by the themes and objectives
- Each recommendation is supported by a rationale for its development and a desired outcome



Recommendations under Theme 1: Science, Knowledge Gathering, and Innovation

Theme 1 Recommendations focus on:

- collaborative ocean noise research to drive innovation and evidence-based decision making
- improving our ability to accurately describe noise characteristics and assessing the impacts on species and populations
- development of innovative tools and guidance to help assess and manage ocean noise
- learning from Indigenous Knowledge holders, local knowledge holders and the scientific community to create comprehensive ocean noise management
- support for technologies and practices to reduce ocean noise, improve monitoring, transform data analysis, and standardize data handling

Recommendations under Theme 2: Assessment and Management

Theme 2 Recommendations focus on:

- reducing complexity and promoting transparency and consistency in Government of Canada management processes and approaches
- support for Indigenous communities to directly participate in ocean noise management
- development of timely management measures that are aligned with Government of Canada objectives and promote effective evaluation methodologies and adherence
- support of international cooperation and joint initiatives to manage ocean noise

Recommendations under Theme 3: Communication, Coordination, and Engagement

Theme 3 Recommendations focus on:

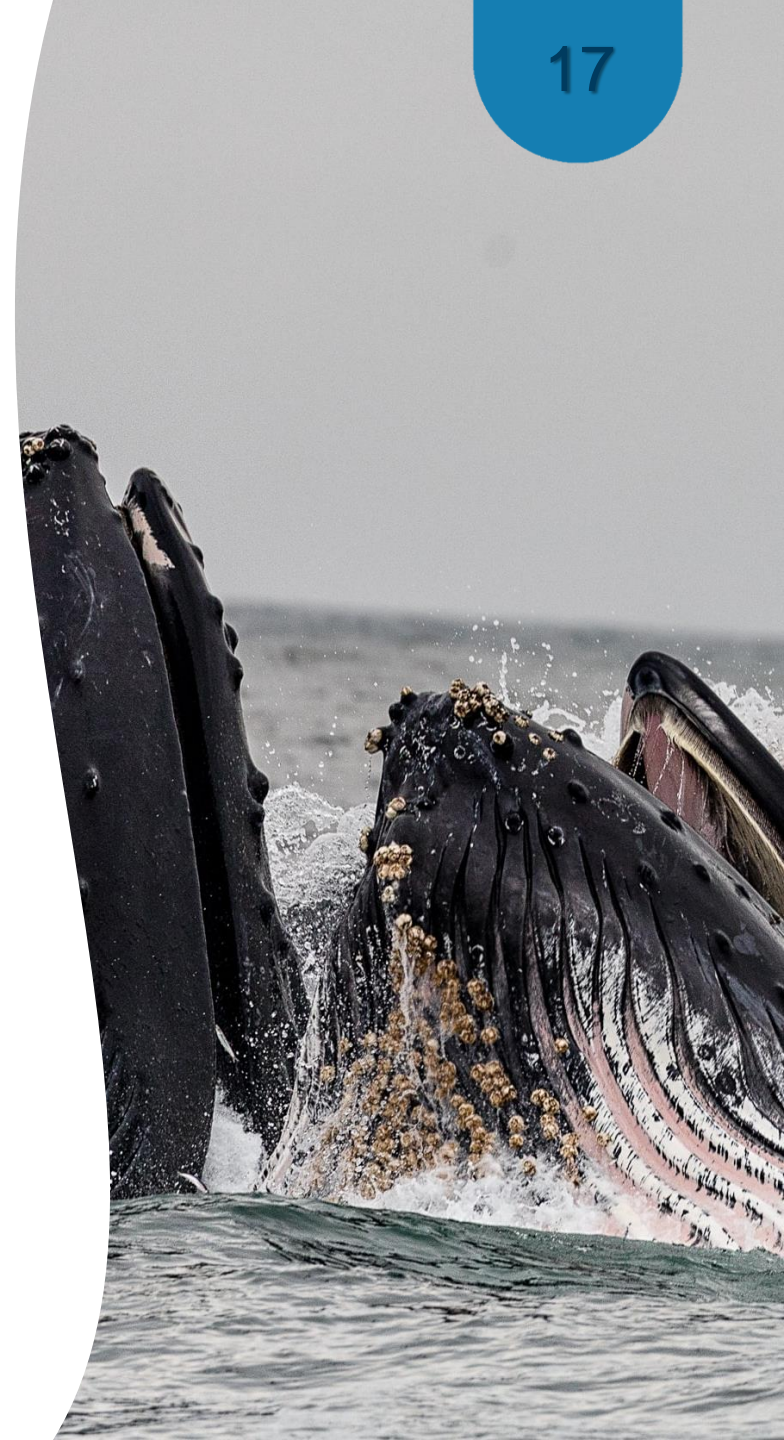
- strengthening coordination and collaboration with partners to build trust and enhance informed decision-making in ocean noise management
- establishing effective information-sharing processes to reduce duplication and improve planning and decision-making
- enhancing awareness and understanding of ocean noise impacts



Desired Outcomes

Implementing the Strategy recommendations will help to:

- identify remaining knowledge gaps
- develop new methods for understanding ocean noise
- further recognize Indigenous knowledge in minimizing ocean noise impacts
- accelerate creative noise reduction approaches
- clarify federal roles and responsibilities
- encourage proactive management of ocean noise
- advance Canadians' awareness and understanding of ocean noise and its impacts



Developing a Federal Action Plan

- To address the Strategy's recommendations, a Federal Action Plan on ocean noise will track implementation and associated actions at the federal level
- This online plan will present a summary of ocean noise initiatives and include timelines and the name of the lead organization(s)
- Some actions will come from ongoing initiatives (e.g., Oceans Protection Plan) to maintain priorities, avoid duplication, and enhance collaboration
- New actions will originate from public consultation, expert proposals, and reviews of international policies and academic research

Consultations: Public comment period

- Publication of the Draft Ocean Noise Strategy initiated a 60-day public comment period (August 23 - October 22, 2024)
- Canadians are invited to visit DFO's Open Consultations webpage, read the draft Strategy, and complete the questionnaire to prioritize recommendations
- Feedback can also be provided through email and mail

Ocean Noise Strategy Next Steps

- The final recommendations and first draft of the Federal Action Plan on ocean noise are anticipated to be released in 2025
- Consultation and engagement on the Federal Action Plan will follow



Make your voice heard!

Please take the time to read the draft [Ocean Noise Strategy](#).

Provide your feedback by visiting Fisheries and Oceans Canada's [Strategy Consultation webpage](#) and completing [the survey](#).

-OR-

Send a message to [DFO's Marine Environmental Quality team](#).



Thank you for
your interest
and participation
in

Canada's Draft
Ocean Noise
Strategy



Annex

Current actions and collaborative initiatives

These case studies offer valuable insights into the various types of Government of Canada's collaborative ocean noise-related initiatives around the country.

CASE STUDY

Reducing the impacts of ocean noise from vessels: Government of Canada support for innovation in the marine transport sector



CASE STUDY

Protecting the St. Lawrence Estuary beluga and other whales from underwater noise



CASE STUDY

How community leadership is directing underwater noise mitigation in Canada's Arctic



CASE STUDY

Using new technology to listen for whales in Placentia Bay, Newfoundland and Labrador



CASE STUDY

Collaborating to reduce the impacts of underwater ocean noise on endangered Southern Resident killer whales

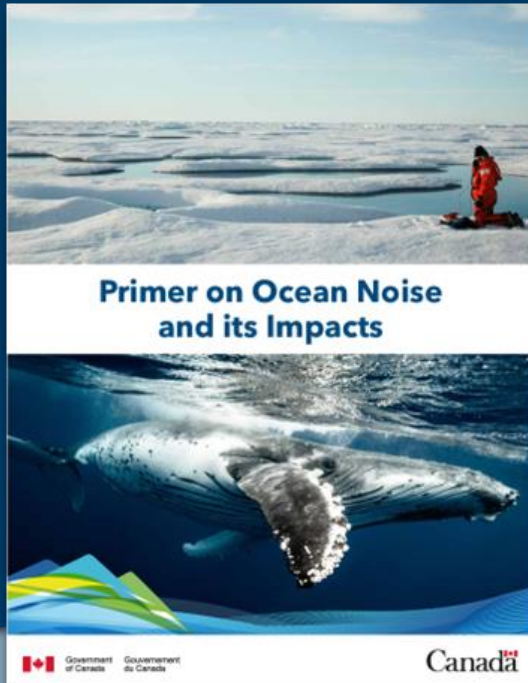


CASE STUDY

Working together to manage ocean noise in the Gully Marine Protected Area



Primer on ocean noise



Provides general information about the importance of sound in the marine environment and the impact of ocean noise on marine life and cultural and societal practices of coastal and Indigenous communities



Anthropogenic ocean noise does not only have great impacts on wildlife, it also has an impact on many cultural and societal practices of coastal and Indigenous communities.^{96,98} For example, coastal communities and Indigenous subsistence hunting and fishing rely heavily on certain important marine species being available in specific habitats and at specific times. The presence of ocean noise can drive these species away, disrupt traditional practices, and impact the pursuit of constitutionally protected Indigenous rights.⁹⁷



Whale watching boat near surfacing marine mammal. Credit: Ruth Troughton.



First Nations community working with Fisheries and Oceans Canada to collect sockeye salmon (*Oncorhynchus nerka*) broodstock for hatchery production. Credit: Fisheries and Oceans Canada.

Primer on Ocean Noise and Its Impacts

Informing Strategy development: Coordination within the Federal Government

- Atlantic Canada Opportunities Agency
- Canadian Coast Guard
- Crown-Indigenous Relations and Northern Affairs Canada
- Department of National Defence (including Defence Research and Development Canada)
- Fisheries and Oceans Canada
- Impact Assessment Agency of Canada
- National Research Council
- Natural Resources Canada
- Parks Canada
- Transport Canada

Draft Ocean Noise Strategy Recommendations (Theme 1)

Recommendations that support achieving Strategy Objective 1: *Gather and integrate evidence to address knowledge gaps and develop innovative methods, tools, and technologies.*

1	Enhance the Government of Canada's support for collaborative ocean noise research with domestic and international partners.
2	Improve understanding of ocean noise in dynamic and rapidly changing marine ecosystems.
3	Conduct further research to address knowledge gaps on individual- and population-level impacts of ocean noise.
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 understand and manage ocean noise.
5	Support 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.

Draft Ocean Noise Strategy Recommendations (Theme 1, cont'd)

Recommendations that support achieving Strategy Objective 1: *Gather and integrate evidence to address knowledge gaps and develop innovative methods, tools, and technologies.*

6	Support technologies that directly reduce ocean noise at its source.
7	Develop or adopt common best practices and standardized methodologies across federal organizations for acoustic data collection, storage, processing and reporting.
8	Sustain and increase strategic acoustic data collection by continuing investments in underwater sound-monitoring instruments.
9	Promote the use of innovative methods and techniques (i.e., analytical tools, computing power and training) to efficiently analyze acoustic data.
10	Promote the development of evidence-based tools and guidance to better assess impacts of ocean noise on marine life.

Draft Ocean Noise Strategy Recommendations (Theme 2)

Recommendations that support achieving 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.
12	Establish national guidance to support the assessment of ocean noise risks from marine activities and projects.
13	Develop appropriate management objectives supported by the implementation of specific and timely measures to help minimize impacts of ocean noise on marine species.
14	Support the active leadership of Indigenous communities in initiatives to understand and manage ocean noise.
15	Promote participation in voluntary ocean noise measures and enhance compliance with mandatory ocean noise measures.
16	Develop and employ standardized methods and indicators to measure the effectiveness of ocean noise management measures.
17	Support international cooperation and joint initiatives to manage ocean noise.

Draft Ocean Noise Strategy Recommendations (Theme 3)

Recommendations that support achieving Strategy Objective 3: *Strengthen communication, coordination, and engagement to raise awareness and increase participation in the management of ocean noise.*

18	Strengthen coordination between the Government of Canada and partners and stakeholders concerning ocean noise assessment and management.
19	Increase the sharing of ocean noise information and knowledge among federal departments and agencies.
20	Partner with public- and private-sector organizations and Indigenous communities to foster enhanced awareness and understanding of ocean noise and its impacts.