



Noise disturbance



Whale and cargo ship © Getty

Marine mammals use sound for communication, [navigation](#), and hunting. Human activities like shipping, fishing, oil and gas exploration and marine military activities, marine renewable energy production, and recreational water activities produce noise and can disrupt marine mammals. These disturbances can interfere with the animals' natural behaviours, like feeding, caring for their young, socialising, resting, and [migrating](#). As a result, individual [fitness](#) and [survival rates](#) may decrease.

Easy to mitigate
Easy to quantify

Difficult to mitigate
Difficult to quantify



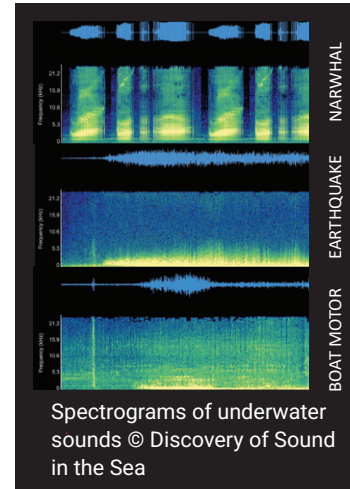
Did you know that...

- For the average human ear, only sound signals between 20 [Hertz](#) and 20,000 [Hertz](#) are audible. In contrast, the range of sounds and signals emitted and detected by marine mammals spans a much broader spectrum, from 7 [Hertz](#) to 160,000 [Hertz](#) , showing the higher sensitivity of marine mammals to noise.
- Disturbance may affect individuals and be a [welfare](#) issue, but it may also have effects at the [population](#) level.
- While noise is still a challenge for [management](#), once we stop emitting noise, it will be gone immediately, unlike other threats like [pollution](#) that take decades to degrade and thus, to [mitigate](#).

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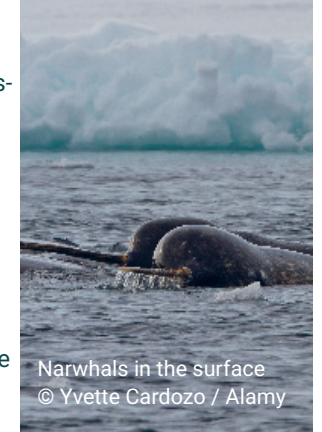


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The oceans are filled with sounds, both natural and human-made. Natural sounds include those generated during earthquakes or produced by marine life, such as marine mammals, fish, and some [invertebrates](#). Noise from human activities, known as [anthropogenic](#) noise, also contribute to the ocean's [soundscape](#). Sound can be classified as continuous—low in [intensity](#) but more constant, like noise from shipping (motors and [sonar](#)) and industrial activities—or impulsive—high in intensity and shorter in duration, such as explosions, [pile-driving](#), [seismic exploration](#), and military [sonar](#) activity. Scientists study underwater noise using [spectrograms](#).

The underwater [soundscape](#) of the Arctic is becoming increasingly noisy as a consequence of [climate change](#). As the [sea ice](#) decreases and thins, previously inaccessible areas are opening up to human activities, contributing to increased noise [pollution](#) [1]. This noise can significantly disrupt marine mammals, particularly species that are sensitive to sound, such as narwhals. Research has shown that narwhals, typically deep-divers, reduce their [foraging](#) activity and shift to shallower depths when exposed to human-made noise [2]. Other deep-diving species, like [beaked whales](#), may react negatively to impulsive noise causing them to resurface too quickly and suffer [decompression sickness](#) [3].



Narwhals in the surface © Yvette Cardozo / Alamy



Discuss: How can we balance the economic benefits of activities like fishing and tourism with the need to [conserve](#) marine mammals from disturbance?

Read more about noise on the NAMMCO website:

