

Ship noise causing disruption to Marine life.

Human-caused noise challenges marine animals with both its loudness and frequency (pitch). Shipping vessels, air guns, active sonar, underwater explosions and echo sounders all create interference for marine life to communicate with each other. Shipping noise is the most likely of all human-caused sounds to interfere with whale communication.

Light and chemical cues key to terrestrial animals, are sharply reduced in the ocean so evolution has shaped its inhabitants to depend on hearing for finding food and mates, avoiding predators, communicating and other critical functions. The ocean soundscape has been increasingly dominated by human-caused noise.

Prospecting for undersea oil and gas creates "the loudest sound we put into the ocean with any regularity" according to Douglas Nowacek, professor of marine conservation technology at Duke University. Slow moving ships crawling across the ocean, seismic airguns blasting air into the ocean every few seconds, day and night often for months on end. These pulses can penetrate miles into the seafloor and then bounce back. Instruments at Woods Hole Oceanographic Institute routinely pick up seismic blasting off Brazil and Iceland. In Arctic Canada's Baffin Bay, scientists suspect nearby seismic testing in 2008 is what caused spiral-tusked narwhals to delay their southward migration until it was too late. 1,000 died, trapped in ice.

It is not only the large ocean giants that are harmed but species of marine turtles, fish, invertebrates plus zooplankton which is a food source for other marine life.

The most pervasive ocean noise is the constant chronic sound generated by some 60,000 commercial ships on the seas at any given time. Shipping noise is always there with the added noise from other watercraft. Ship noise exacerbates other harms, muffling communication and disrupting social networks for species such as the North Atlantic right whale already struggling in warming New England waters.

Underwater noise from shipping has doubled since 1950. Fixes exist even if they are enacted at a snail's pace. Technology is allowing new ways of measuring behavior with drones, new ways of measuring behavioral effects with tissue sampling, new ways of measuring group structure with satellite imagery. Slowing ships down greatly decreases the noise. Canadian port authorities discount harbor dues for ships that implement sound-reducing technologies making them the first country to incentivize quieter ships. In April of 2021 Washington State approved funding for a quieter Puget Sound, the first in the U.S.

Global climate change contributes to the problem. Acidifying oceans absorb less sound. In the warming Arctic, instead of sound-muffling ice blanketing the sea as it used to, open water now amplifies sound while longer ice-free seasons draw rapid and noisy industrialization.

If you look at a map of the world showing the lights of humanity you may hear the human noise that marine life is being subject to but if you go where there are no lights you can still listen to an animal 1000 miles away. A natural underwater symphony we humans need to listen to.

Information Source: National Wildlife – October-November 2021