

## Transcript Humans are Making Oceans too Noisy

Human activity is changing the surface and temperature of the planet. But new research shows it is also changing the sound of the Earth's oceans and seas.

Scientists say the changes in the sounds of our oceans, seas, and other waterways affect many **marine** animals -- from very small shrimp to huge whales.

Sound travels "very far underwater," Francis Juanes told the Associated Press. Juanes is an ecologist at the University of Victoria in Canada. He is also co-writer of the recent research published in the magazine, *Science*.

"For fish," he explained, "sound is probably a better way to sense their environment than light."

Sounds help fish and other marine animals survive. They use sounds to **communicate** with each other. Sounds also help some ocean animals find food and avoid their hunters. Many ocean animals use sounds to find good places to mate.

However, increased noise from humans is making it harder for these animals to hear each other. The noise is coming from shipping traffic, motorized fishing ships, underwater oil and gas exploration, offshore construction, and other noisy human activity.

"For many marine **species**, their attempts to communicate are being masked by sounds that humans have **introduced**," said Carlos Duarte. The marine ecologist at the Red Sea Research Center in Saudi Arabia co-wrote the paper with Juanes.

Experts at the U.S. National Oceanic and Atmospheric Administration, or NOAA, explain the term masking on its website. Masking happens when one or more noises in the water block sound important to a marine animal's existence.

The Red Sea, Duarte said, is one of the world's most important shipping passages. It is full of large ships traveling to Asia, Europe, and Africa. Some fish and other animals, he said, now avoid the noisiest areas.



In this Friday, July 26, 2019 file photo, a ship crosses the Gulf of Suez towards the Red Sea as holiday-makers ride a jet ski at al Sokhna beach in Suez, 127 kilometers (79 miles) east of Cairo, Egypt. (AP Photo/Amr Nabil)

Also, the overall number of marine animals has gone down by about half since 1970. In some parts of the ocean, scientists now record “fewer animals singing and calling than in the past – those voices are gone,” said Duarte.

Juanes and Duarte examined studies and research articles documenting changes in noise **volume** and **frequency** in the world's oceans. Then they put together a detailed picture of how the ocean soundscape is changing and how marine life is affected.

Scientists use underwater devices to record fish sounds. These sounds are in the same low frequencies as shipping traffic noise. NOAA experts state that masking is most noticeable when “a noise is at the same frequency and loudness as biologically important sounds, such as mating calls.”

Climate change, the researchers found, also affect physical processes that shape ocean sounds. These include such things as wind, waves, and melting ice

Experts at NOAA say that effects of noise on marine mammals are not well understood. However, some studies suggest that noise may cause hearing loss. The **stress** from human noise might also affect the immune system - an animal's natural defense system - as well as reproductive health or behavior.



In this Sunday, June 28, 2015 file photo, sergeant major fish, a type of damselfish, swim near the surface of the Red Sea in the resort town of Sharm el-Sheikh, south Sinai, Egypt. (AP Photo/Hassan Ammar)

“Imagine having to raise your kids in a place that’s noisy all the time,” said Joe Roman. He is a marine ecologist at the University of Vermont and was not involved in the research. Roman added that it should come as no surprise that many marine animals are showing higher “levels of stress due to noise.”

Another marine ecologist not involved with the paper is Neil Hammerschlag of the University of Miami.

“When people think of threats facing the ocean,” he said, “we often think of climate change, plastics, and overfishing. But noise pollution is another **essential** thing we need to be **monitoring**.”

“If you make something for the ocean,” Hammerschlag suggested, “think about how to make it quieter.”

Scientist Juanes says sound pollution may be easier to deal with than other ocean threats. “In theory,” he said, “you can reduce or turn off sound immediately. It’s not like plastics or climate change, which are much harder to undo.”

I’m Anna Matteo.

*The Associated Press reported this story. Anna Matteo adapted it for VOA Learning English. Caty Weaver was the editor.*