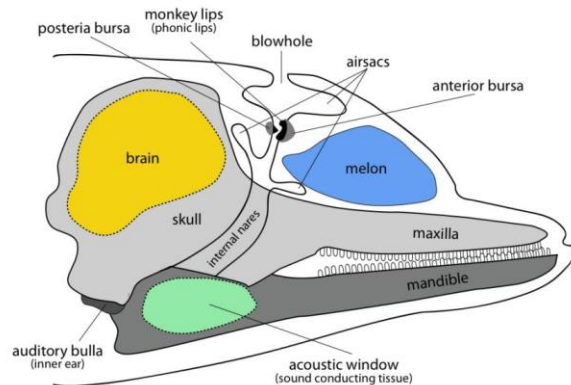


# Human-Made Noise Pollution is Threatening Marine Life

By Kate Vine

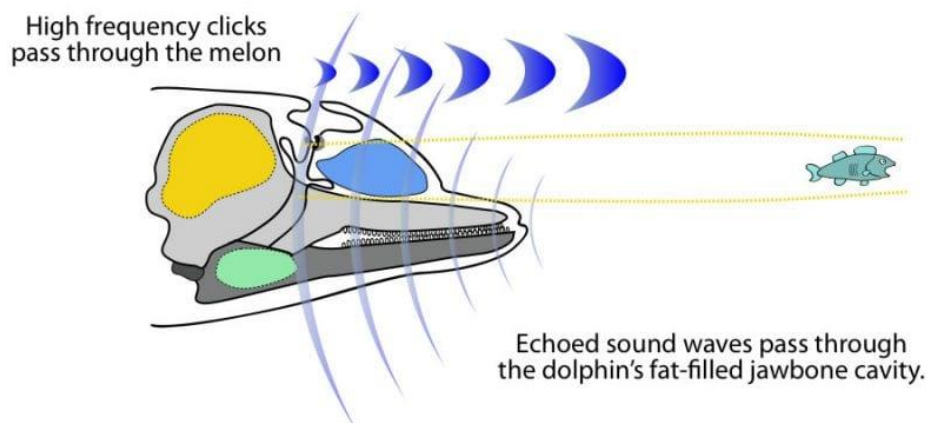
Many people think that noise pollution in the oceans is not a problem, after all it is only noise! The oceans are not silent worlds. They are full of natural sound. Since human technologies have advanced, it has become increasingly noisier underneath the waves. Shipping, coastal industries and offshore oil rigs are responsible for creating much of the noise pollution. Human activities have made it harder to hear the many natural sounds that are a part of the undersea world, such as the sounds of meadows of seagrass and the environments around coral reefs. Human sounds are also affecting the whales and dolphins that use echolocation to find their food and their mates.

Echolocation is a form of communication and navigation for many marine animals. Simply described, it is like seeing with sound. Dolphins are one example of a species that use echolocation. Generally, dolphins make two types of sounds; clicks and whistles. The whistles are used for communication and the clicks are used for echolocation. First, the dolphins create the sound waves in their nasal sacs. Dolphins have an area consisting of fatty fluids and tissue, which is called the melon. The melon serves as a lens to focus the sound when echolocation is used. The sound waves then bounce off objects, travel back to the dolphin and are detected by their lower jaw, which is also filled with a fatty fluid, similar to the melon. The sound



Sounds generator: The Monkey Lips/Dorsal Bursae Complex (MLDB)

waves travel from the jaw to the inner ear, to the nerves connected to the brain, where they translate the sound into an image of their surroundings. Echolocation is also incredibly precise; researchers have found that bottlenose dolphins can detect an object the size of a ping pong ball from a football field away! They have also found that dolphins can determine what an object consists of. This amazing skill is essential for dolphins and the other marine animals who use it as it is their primary way hunting in low light or murky water, avoiding predators and navigating.



The excessive noise generated by human activity interfere when dolphins and sea creatures try to listen to their own sounds. Marine animals depend on these echoes and sounds to swim to the habitats where they need to survive, to hunt and to socialise. Examples of the impacts of the excessive sound include marine animals being driven away from parts of their normal ranges, limiting their food resources. It has also made marine animals stressed, impacting on their ability to communicate and socialise. The consequences of this are rapidly declining populations. These consequences are almost comparable to those of other global ocean stresses, such as overfishing, habitat destruction, chemical pollution, or climate change. Sensing sound and using sound to echolocate is vital for many marine species. Minimising excessive noise in marine environments can help sustain their ecosystems for the benefit of all.

### Sources

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