

## SONAR AND SEISMIC EXPLORATION: A MAJOR HEADACHE FOR WHALES



Imagine trying to function with a jackhammer outside your window, night and day. Dr Lance Barrett-Lennard, at the Vancouver Aquarium Marine Science Centre, uses this analogy to describe the deafening torment endured by whales in areas of oils and gas exploration.

Noise is even more detrimental to marine mammals than to terrestrial creatures, as hearing is their primary sense. [...]

Marine noise is not a new phenomenon. Natural noises occur in the oceans constantly, including earthquakes, storms and singing baleen whales. However, it is the man-made noises that are causing problems: in particular, military sonar and the use of seismic test for oil and gas exploration.

The Navy uses sonar to detect enemy submarines. [...] At present, mid-frequency active sonar (MFA) is in widespread use and low frequency active sonar (LFA) is being developed for use by the US and its allies. LFA sonar can generate one of the loudest sounds that it is possible for humans to make.

Whales use their own form of sonar – echolocation – to navigate and to find food. They also use sound for communication. The loud and far-carrying noise of sonar is thought to disrupt the whales' ability to navigate and communicate. It is also believed to cause the whales to panic, inducing collisions.

Mid-frequency sonar can cause whales to make a dramatic change in behaviour. On hearing sonar, whales may dive or rise deeply and rapidly. This can cause a form of decompression sickness, also known as “the bends”, resulting in sometimes fatal damage to the lungs, brain and ears.

*Extrait du site : <http://www.vanaqua.org/aquanews/features/sonar.html>  
By Xanthe Pamboris, AquaNews Correspondent September 13, 2004*

**a jackhammer** = un marteau piqueur

**deafening** = assourdissant

**widespread** = très répandu

**1. Present the document.**

**2. Using the document and your own knowledge, describe what are the advantages and disadvantages of using sound waves in the sea.**