

Whale sound studies win defence award

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Researcher Doug Cato, who has been awarded the 2012 Defence Science Award.

Working out how whales are affected by noise isn't easy when there's plenty of action in their modi operandi - breaching, lunging and lobtailing to cite a few.

Researcher Doug Cato's work, focusing on humpback whales and whether sounds may have a long-term impact on their biology, has earned him the 2012 Defence Science Award for outstanding contribution to defence science.

Scientists and regulators are not just concerned about minor behavioural changes by whales in response to noise, the adjunct professor at Sydney University and researcher at Defence Science and Technology Organisation told AAP on Tuesday. "If for some reason noise was causing animals to move away from feeding areas to somewhere the food is not so plentiful - over a long term that could affect their health," Dr Cato said.

Understanding the giant creatures wasn't easy, he said.

"It is pretty difficult because they show a lot of behaviour anyway. They come to the surface, they are not just swimming," Dr Cato said.

His current research on how people can operate in the ocean without having an undue impact on whales in particular, but also fish, has several years to run. Defence operations and exercises, submarine and on the surface, create noise. So do sonars, seismic surveying, pile driving and normal shipping.

High-noise activities in the ocean are usually managed through an exclusion zone - when a whale is spotted, the activity stops until the whales pass.

But there could be other solutions.

Dr Cato has spent 40 years working in marine acoustics, particularly ambient noise, propagation and source localisation.

His advice on management of acoustic disturbance has led to the Australian navy's mitigation strategies being internationally recognised as among the world's best.

The award, presented by Minister for Defence Science and Personnel Warren Snowdon in Canberra on Tuesday, carries a \$15,000 taxable cash prize.