

# Anthropogenic threats

Like their relatives around the world, whales and dolphins in the Pacific islands now face a whole new range of threats, most of which are new hazards:

## Noise



The oceans are now much noisier places than in previous years. Modern ships are generally bigger, faster and noisier. This is a particular problem for whales and dolphins, which rely primarily on sound to communicate with each other and to locate their prey, and loud noises mask their own sounds.

## Industrial developments



Some of the loudest and most intrusive noises in the ocean come from industrial developments such as pile-driving, dredging, and the seismic surveys undertaken to identify deposits of hydrocarbons, as well as hydrographic mapping and military exercises involving the use of powerful sonars. A new potential hazard of unknown magnitude is deep-sea mining, which may not only generate considerable noise, but also produce sediment plumes from the mining of the seabed that could interfere with the normal behaviour of deep-diving whales.

## Vessel strike



The approaches to busy ports can be dangerous places for whales - they stand little chance of survival if they are struck by a large vessel. While this has not yet been identified as a problem for Pacific island ports, there is a good precedent in the approaches to Auckland Harbour, where a significant number of Bryde's whales have been struck by large cargo vessels in recent years. Following an extensive research programme and consultation with the shipping industry, there is now a voluntary code of practice in place in the Hauraki Gulf, and vessels slow down to maximise their chances of seeing and avoiding a whale.

## By-catch



Many dolphins are unintentionally caught in fishing gear (especially gill nets) every year - as many as 300,000 per annum worldwide. There are no reliable estimates for by-catch in the SPREP region, except for the purse-seine fishery for tuna, where cetacean by-catch does not appear to be a major problem. Getting more reliable information is a priority.

## Entanglement



Every year, new reports are received from around the region of whales that have been entangled in fishing gear and other marine debris that is deliberately discarded or accidentally lost. A whale that becomes entangled is doomed to a slow and painful death unless it can be released. In association with the Secretariat of the International Whaling Commission, SPREP has conducted training workshops to learn techniques for the safe disentanglement of whales for Tonga and Vanuatu. A priority for the Year of the Whale will be to conduct similar training courses for other SPREP members.

## Climate change



The impacts of climate change on whales and dolphins are likely to be subtle, but nonetheless profound. For the great whales that feed on krill at the ice-edge in the Antarctic Ocean, for example, melting ice may make their annual migrations longer, giving them less time available for feeding. For dolphins that spend their lives in tropical waters, a changing climate and warmer seas may result in some of their prey becoming less available - especially squid, which may be seriously impacted by ocean acidification.