

Thank you

A special thank you to all those who attended the Fisheries Depredation Symposium at Poets Cove on Pender Island. By all accounts it was a very successful meeting. We sincerely appreciate the willingness with which participants shared their experiences and perspective on this challenging issue.

Warm Regards,

Lance Barrett-Lennard, on behalf of the Program and Organizing Committees

Principal Findings and Advice

Below is a quick summary of the key findings of the meeting:

- 1) The problem of depredation (the raiding of fishing gear) by killer whales and sperm whales is growing around the world. This increase likely reflects a) diminishing natural food supplies for these species, and b) the transmission of depredation behaviours between whales by social learning. Hook and line fisheries are most affected, whereas depredation of net fisheries by these species is very rare.
- 2) Depredation is much easier to prevent or control before it becomes an entrenched behaviour. It is very difficult to control the behaviour of whales that have become dependent on depredation.
- 3) Depredation by killer and sperm whales is not widespread in BC yet, but appears to be increasing and could become a serious problem in several years. At present, the fishers most affected are commercial salmon trollers and sport fishers targeting chinook and coho salmon.
- 4) Depredation is a severe problem in Alaska. In the Alaskan panhandle, sperm whales depredating the valuable sablefish (black cod) fishery are the main problem. Along the NW coast of Alaska and the Aleutian Island chain, the main problem is killer whales that raid sablefish and halibut fishers. In the southern ocean, the lucrative toothfish (Chilean sea bass) fishery is seriously affected, whereas in the tropics, various species of tuna are taken.
- 5) The principle problem posed by depredating whales to fishers is the loss of catch. Gear damage is relatively minor and rare, and the whales do not appear to pose a danger to fishers.
- 6) As well as causing serious problems to fishermen, depredation harms whale populations in at least two ways. First, efforts to deter depredating whales can cause injury. Second, dependence on depredation can cause whales to lose natural behaviours, harming their populations in the long run.
- 7) Various research projects are being initiated to look for ways to reduce or prevent depredation. Most promising among these are acoustic devices and modifications to fishing gear, particularly the conversion of hook and line gear to pots and traps. Research will be conducted collaboratively with both fishers and researchers.
- 8) Because no "quick fix" solution exists at present, the best immediate advice for fishermen is a strict "do not reward" policy. Long-line fishers should drop their gear and troll fishers should remove theirs from the water when whales approach; both should only resume fishing when whales have left the area.

Background

Fisheries depredation (removal of fish from fishing gear) by toothed whales is a widespread problem in many oceans of the world. The negative impacts of depredation include economic losses to fishermen, increased pressure on fish stocks, and injury or mortality of whales caused by deterrent methods, entanglement, or accidental hooking. Because it provides an additional food supply, depredation also has the potential to cause whale populations to increase beyond their natural carrying capacity, and/or for previously-existing behaviours related to hunting or seasonal movements to be lost.

In 2002, a workshop in Samoa produced a report entitled [Interactions between Cetaceans and Longline Fisheries](#), which focuses on the South Pacific and contains background papers on specific fisheries affected by depredation. The report provides general recommendations regarding possible methods for reducing depredation, improving data collection, identifying whale species involved in depredation, and increasing the awareness of depredation among governmental and non-governmental agencies.

Symposium Objectives The 2006 symposium focused on depredation by killer and sperm whales, and built on progress made in Samoa. Its objectives were:

A) to broaden understanding of :

- cues and behaviours whales use to locate gear and remove fish
- variability of depredation behaviours within and between species
- spread of depredation between groups of whales
- extent of losses resulting from depredation
- implications of depredation for fisheries management

B) to produce specific guidelines for the fishing industry and fisheries management agencies on:

- how fishing operations can be modified to reduce or eliminate depredation
- preventing depredation from spreading to new or existing fisheries experiencing no depredation at this time

The first part of the symposium consisted of presentations focused on:

- aspects of natural behaviour and social organisation of killer and sperm whales, with emphasis on populations involved in depredation
- case-history examples of killer and sperm whale depredation with special emphasis on the behaviour of the whales involved and associated changes in their social structure, ecology, or demography
- impacts of depredation on the fishing industry
- methods of passive deterrence, including modification of fishing behaviours, timing, and /or gear
- methods of active deterrence
- examples of successful measures used to reduce human conflict with species other than cetaceans

The second part of the meeting was comprised of in-depth, workshop-style group discussions focused on reducing the extent of the problem where it currently exists, limiting its spread to other fisheries and other regions, and producing guidelines for fishermen and fisheries managers affected by killer and sperm whale depredation.

Outcome Participants have been asked to contribute to a symposium report document, which is in progress, and which will summarize versions of the presentations, reports of the workshop discussion groups, and which will contain a set of specific guidelines for fishermen, fisheries managers, and policy makers. This proceedings document will be available on this web site as soon as it is complete. The web site is also being updated to include examples of data collection protocols and forms in order to more systematically quantify the effects of depredation.