

The Southeast Alaska sperm whale avoidance project (SEASWAP): background and history

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Sperm whales (*Physeter macrocephalus*) associate with fishing operations, particularly demersal longline operations, in a number of locations around the globe. In the Gulf of Alaska (GOA), depredation of longline caught sablefish (*Anoplopoma fimbria*) by sperm whales has been occurring since at least the mid 1970s. At that time both the abundance of sperm whales and sablefish were low and there was relatively little longline effort directed at sablefish. In the early 1980s the sablefish resource and fishery increased dramatically and fleet expansion resulted in a much reduced season, 10 days in 1994. In 1995, individual fishing quotas were implemented with an 8-month season. Sperm whales were heavily exploited by commercial whaling in the eastern North Pacific Ocean until 1988. Since the cessation of this commercial whaling, it is thought that the sperm whale population is increasing (although the population size is unknown). The combination of a longer sablefish season and a likely increasing sperm whale population provided more opportunity for sperm whales to depredate longline gear and, since 1997; reports of depredation have increased dramatically. Fishermen have reported that not all whales associated with fishing activities engage in feeding on the longline gear, so the presence or absence of sperm whales does not adequately describe the depredation interaction. Hill and Mitchell (1998) found sperm whales near 38% of observed GOA vessels while fishing and 27% of these vessels had whale interactions with longline gear. Sperm whales are distributed into the Bering Sea, yet no depredation has been reported. Sperm whale stomach content data, from commercial whaling, indicated that squid were the primary prey in the Bering Sea while fish were the primary prey in the GOA. Reports of depredation in the GOA continue to increase and sperm whale depredation on halibut longline gear and on lingcod dinglebar troll gear have also been reported. In Alaska, injury to whales has not yet occurred but fishermen are concerned about the possibility of a fishery related take of an endangered species and they have experienced economic impacts due to reduced catch. In 2003 and 2004, the North Pacific Research Board (NPRB) funded the first phase of a collaborative study between fishermen, scientists and managers to collect quantitative data on longline depredation including data on the timing of interactions seasonally and diurnally. The core team of 10 fishing boats for the Southeast Alaska Sperm Whale Avoidance Project (SEASWAP) participated during the 2003 and 2004 fishery. Our ultimate goal is to provide recommendations for strategies to reduce or eliminate depredation.