

The Alaska Groundfish Fishery and Steller Sea Lions

CONTEXT

Policy Context:

Steller sea lions are found throughout the North Pacific with about 70% living in Alaskan waters. The Alaskan populations have declined by roughly 80% from the mid-1970's to the present. In 1990, the Steller sea lion was listed as a threatened species and in 1997 reclassified as two distinct populations with the population west of 144 degrees W listed as an endangered species and the eastern population still listed as threatened. The causes of this decline are uncertain, although food quality and availability are often cited as likely contributing factors.

Under the Endangered Species Act (ESA), federal agencies are required to ensure that their actions, or actions authorized or funded by them, are not likely to jeopardize the survival or recovery of protected species or damage their critical habitat. Section 7 of the ESA requires that when an action may affect a marine listed species or its critical habitat, the federal agency conducting or authorizing that action must consult with the National Marine Fisheries Service (NMFS). As part of the authorization of the fishery management plans for the commercial groundfish fisheries in the Bering Sea and Aleutian Islands (BSAI) region and the Gulf of Alaska (GOA) region, NMFS summarized the consultation in a biological opinion as required under Section 7 of the ESA. The purpose of the biological opinion is to ascertain if the groundfish fisheries, as implemented under the fishery management plans, are likely to imperil the continued existence of Steller sea lions (and other listed species) or are likely to destroy or adversely modify critical habitat. In the opinion issued on December 22, 1998, NMFS concluded that the groundfish fisheries were unlikely to cause harm to listed species. This opinion was challenged in court and found to be arbitrary and capricious for failing to include a sufficiently comprehensive analysis of groundfish fisheries and their individual, combined, and cumulative effects. On this basis, the court found that NMFS was out of compliance with the ESA (*GreenPeace v. National Marine Fisheries Service*, 80 F. Supp. 2d 1137 WD. Wash. 2000). In the revised Biological Opinion issued on November 30, 2000, NMFS concluded that Steller sea lion populations are jeopardized by the Alaska groundfish fisheries due to competition for prey and modification of prey distribution in critical habitat.

At the heart of the recent Biological Opinion is the question of whether the groundfish fisheries compete with Steller sea lions for prey species. Answering this question requires evaluation of the dietary requirements, feeding behavior, and foraging success of the sea lions and analysis of commercial fishing practices at appropriate scales of time and space. Competition occurs if the fisheries reduce the availability of prey such that recovery of the population is compromised. Decreased sea lion condition, growth, reproduction, and survival are key indicators.

Technical Context:

There have been many factors proposed to explain the continuing steep decline in the western population of Steller sea lions. These include availability of prey species, predator/prey relationships, predation by other marine mammals, interactions between fisheries and Steller sea lions, including the localized depletion hypothesis, regime shift, climate change, and other impacts associated with changing environmental conditions in the North Pacific and Bering Sea, disease, juvenile and pup survival rates, nutritional stress, foreign commercial harvest of sea lions outside the exclusive economic zone, and residual effects of past programs allowing the intentional take of sea lions.

It is critical to understand the cause of the population decline in order to develop policies that are most likely to benefit Steller sea lions. The Ocean Studies Board has been asked to review the scientific basis of the Biological Opinion issued under Section 7 of the ESA to ensure that the best scientific information and analyses are being used in response to the endangered status of the western Steller sea lion population.

PLAN OF ACTION

Statement of Task:

This study will review the scientific basis for the November 2000 Biological Opinion on the Alaskan groundfish fishery, issued under the Endangered Species Act by the National Marine Fisheries Service (NMFS). In particular, the Biological Opinion examines the potential impacts of the management and operation of the fishery on the endangered western population of Steller sea lions (*Eumetopias jubatus*). Based on this examination, the Biological Opinion finds support for the localized depletion hypothesis, concluding that temporal and spatial concentration of fishing effort is likely to reduce the quality of habitat for foraging sea lions. The study will assess whether this and other hypotheses, conclusions reached, and reasonable and prudent alternatives presented in NMFS' Biological Opinion are consistent with the available data and the level of scientific uncertainty.

Preliminary Work Plan:

A committee of 10 experts will be appointed. The committee will meet five times, including two public sessions, one in Alaska and one in the Washington State. The committee will base its findings on: evaluation of the scientific basis for the Biological Opinion and supporting materials, input from the public meetings, other written materials submitted to the committee, and examination of other scientific literature as needed. The committee will issue a brief, interim report on the Biological Opinion seven months from receipt of funding. A full, in depth report will be produced 24 months after receipt of funding. The additional 4 months in the performance period will allow for final editing, layout, and production of the printed report, mailing to study participants and other interested parties, and briefings on the report by staff and committee.

Total Cost:

Approx. \$700,000