Sea otter stock status in Southeast Alaska

In 1965 the Alaska Department of Fish and Game (department) captured 412 sea otters near Amchitka Island and in Prince William Sound and translocated them to several locations in Southeast Alaska, in an effort to renew the collapsed sea otter population and to mitigate nuclear testing in western Alaska. The Southeast Alaska sea otter population remained small until 1987 when a period of rapid growth began. The most recent sea otter survey in Southeast Alaska was done in 2012 and was conducted by the United States Fish and Wildlife Service (USFWS). At that time the sea otter population was estimated to be 25,712 sea otters which is more than double the 2008 estimate. The estimated growth rate of the Southeast Alaska sea otter stock is estimated to be 12-14% per year and the population is increasing.

Sea otter harvest and fishery-related mortality

While there is little observer coverage on most commercial fisheries in Southeast Alaska, sea otter mortality caused by commercial fishing operations is believed to be very low. Sea otters are hunted by Alaska Natives and average annual harvest during the five-year period 2006-2010 was 447 animals, an increase from the annual average harvest of 322 animals during the previous five year period (Figure 1). The current harvest level is well below the Potential Biological Removal (PBR) of 2,179 animals.

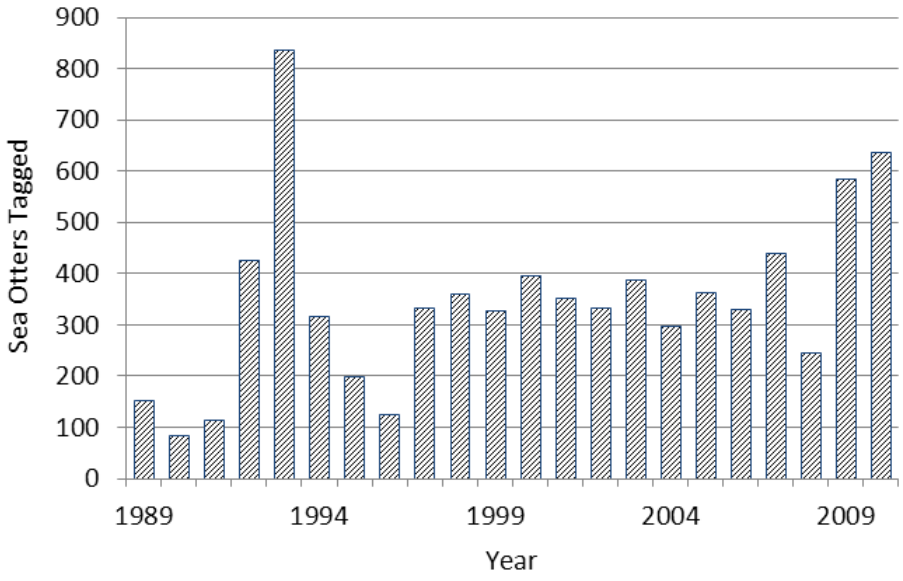

Figure 1. Sea otter harvest in Southeast Alaska, 1989-2010. Data from U.S. Fish and Wildlife Service.

Sea otter impacts on fisheries

Sea otters prey primarily on benthic invertebrates, including mollusks, echinoderms, and crustaceans. The increasing population of sea otters in Southeast Alaska has had negative impacts on the region's commercial dive fisheries by reducing stock biomass, which has resulted in lower allowable harvests and fishery closures in some areas. Although the amount of lost biomass and revenue due to sea otters is probably substantial, it is difficult to quantify because changes in stock size due to sea otter predation are intertwined with declines due to fishing and other sources of mortality. Sea otter impacts are most easily detected on geoduck and sea urchin populations because physical signs of predation are obvious, while impacts to sea cucumber stocks are more difficult to confirm. The department estimates that 39% of sea cucumber, 66% of geoduck, and 64% of sea urchin commercial fishing areas have been impacted (i.e. reduced) by sea otters (Figure 2).

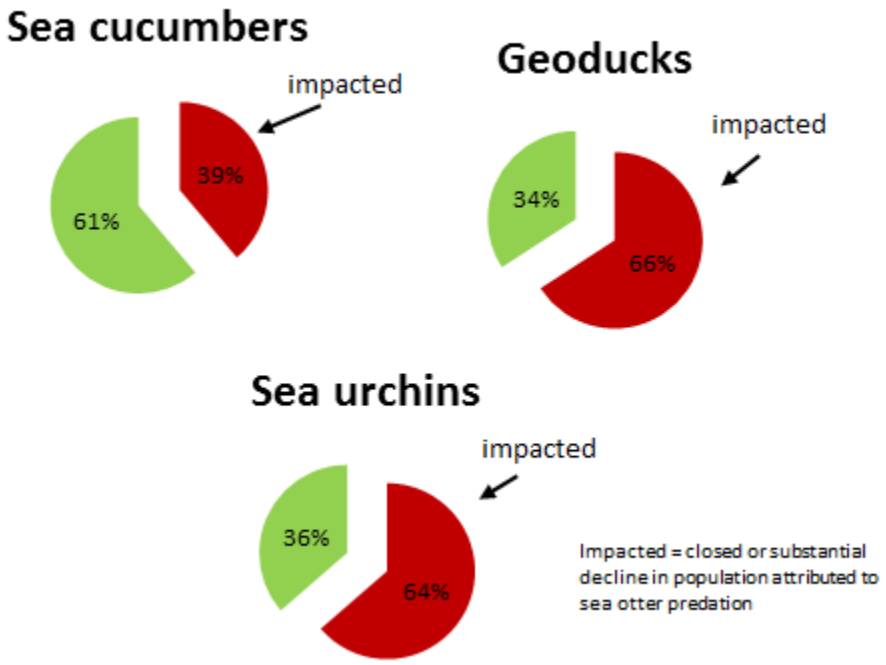

Figure 2. Percentage of Southeast Alaska commercial dive fishery areas impacted by sea otters through 2016.

Efforts to mitigate sea otter impacts on commercial fisheries

As the Southeast Alaska sea otter population has increased and had a deleterious effect on commercially important shellfish species, mitigation of these impacts has been discussed. These efforts have centered on informing policy makers of the harm to Southeast Alaska coastal communities caused by sea otter predation, research to quantify and describe impacts and improve knowledge of sea otter biology, and exploration of legislative and regulatory remedies.

Aside from successfully describing the problem, none of these steps have been particularly successful or yielded significant benefits for the commercial fishing industry.

The department was involved with a relatively informal group of stakeholders assembled to discuss sea otter issues in Southeast Alaska. This stakeholder group was supported by the previous administration and none of the department staff tasked to the group are still employed by the state. Information on those meeting outcomes is sparse. The last meeting of the group is believed to have occurred in spring 2014. Overall there appears to be disappointment from the stakeholders in the level of engagement and policy direction on sea otters from the state.

Future direction and recommendations

Amending the federal Marine Mammal Protection Act (MMPA) Endangered Species Act (ESA) to ease restrictions on sea otter harvest and use may result in increased sea otter harvest and concomitant reduction in predation on commercially important species. However, even if harvest increased up the PBR level the sea otter population would likely continue to grow. Attempting to amend the MMPA and ESA may require expenditure of considerable effort by Alaska's Congressional Delegation and other state officials.

The state has been asked by the Southeast Alaska Regional Dive Fisheries Association (SARDFA) to reform the sea otter stakeholder workgroup. The request was to assign appropriate state policy makers to the workgroup and reengage in development of an ecosystem based management approach for Southeast Alaska sea otters. Unless the USFWS service agrees to such an ecosystem based approach, including sea otter harvests adequate to reduce the sea otter population on commercially important shellfish grounds, formation of a workgroup is not likely to benefit the commercial fishing industry in a meaningful way.

One approach to lengthen the period of time that Southeast Alaska dive fisheries remain viable is a limited entry permit buyback program. This action could reduce the number of active permit holders and increase profits for the remaining permit holders to offset losses caused by sea otters and could be without changes to federal policy or law. SARDFA continues to discuss how to arrange and fund a buyback program.