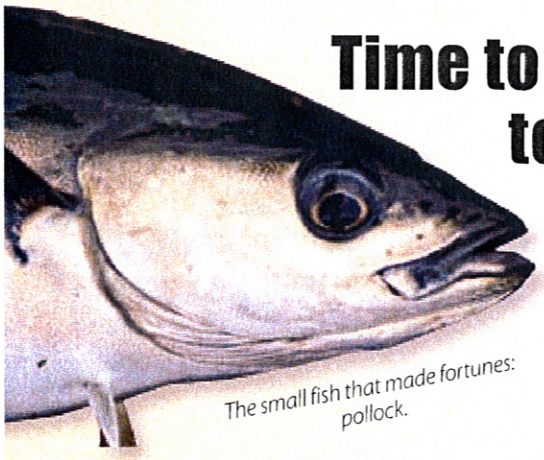
by Jason Anderson

Time to rethink the Bering Sea total allowable catch



The small fish that made fortunes: pollock.

Waters off Alaska produce some of the largest fisheries in the world, and the North Pacific Fishery Management Council is a leader in innovative, sustainable management practices. The council has adopted a conservative management approach, and limited aggregate Bering Sea and Aleutian Islands (BSAI) annual total allowable catch (TAC) amounts to 2 million metric tons.

The cap, as it's known in fish circles, has been billed as a conservation measure that restricts total catch even if acceptable biological limits (ABC) would allow additional harvest. However, the cap has resulted in unintended negative consequences. A periodic review of whether the cap is meeting council obligations under the Magnuson-Stevens Act is appropriate and timely.

The council adopted the cap in 1981, and it was implemented in 1984. While the cap was described as promoting conservative harvests, one of its principle functions was to provide opportunity for expanding domestic harvest capacity and to promote Americanization of the fishery. Very simply, as domestic harvesting capacity increased under the cap, foreign shares were reduced.

The cap was largely an arbitrary number; scientific analysis did not evaluate whether the 2 million-ton mark was appropriate biologically, or whether it would promote ecosystem conservation goals. Instead, it was based on historic foreign catch levels determined by relatively unreliable observer data.

While the cap has undoubtedly encouraged conservative fishery management and has resulted in harvesting groundfish species well below sustainable levels, the cap has also resulted in several unintended negative consequences.

Changes in Alaska: The North Pacific Fishery Management Council has been at the forefront of developing groundfish rationalization programs. The halibut and sablefish individual fishing quota program was implemented in 1995. Pollock cooperatives began operations in 1998. A catcher-processor flatfish multi-species cooperative program was established in 2008. Longline catcher processors recently formed a voluntary harvesting cooperative.

Under these programs, excess capacity has been reduced, the fleet has experienced increased economic stability, bycatch has dropped drastically, long-term stock health has remained stable or increased, and rationalized fishers have been able to avoid limiting species and increase harvests of targeted species. Vessels are able to manage their individual catch in real time, decreasing overages that tend to occur in overcapitalized, derby-style fisheries.

In 1984, biological information used to understand fishery health was limited. Annual surveys now monitor stock health, however, and NMFS has made significant advances in stock assessment methodology. Scientific uncertainty has decreased, acceptable biological limits have consequently increased, and fishery-ecosystem effects are better understood.

Increased discards (bycatch): The Magnuson-Stevens Act defines bycatch as "...fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic and regulatory discards..."

As TACs are reached for non-allocated species, NMFS managers close these fisheries to directed fishing. If closed species are harvested while prosecuting other fisheries, vessel captains are forced to discard marketable species. Often, TACs are intentionally set low to remain below the overall cap, despite robust stock assessments that would allow for much higher catch levels.

Under the cap, high biomass coupled with low TACs result in increased bycatch.

For example, Alaska plaice are harvested as part of the mixed species flatfish fishery. The 2011 Alaska plaice TAC was set at 16,000 tons, but the acceptable biological limit is 69,100 tons. NMFS closed Alaska plaice to directed fishing on June 2 to avoid exceeding the TAC. Since then, vessels have been forced to discard any Alaska plaice harvested above maximum retainable amounts.

Food web: Setting high TAC amounts for some species forces down the harvest of other species. Intuitively, this could create ecosystem imbalances. For example, the 2010 NMFS arrowtooth flounder stock assessment notes that the Bering Sea population is increasing dramatically, probably due to current environmental conditions. However, the council chose to set the 2011 TAC well below potential harvestable amounts to accommodate other species under the cap.

Some scientists theorize that the increasing arrowtooth flounder biomass may be competing with Pacific halibut, contributing to the reduced size-at-age issue that plagues the halibut biomass.

Alaska pollock are known predators. Forcing reduced pollock TACs to accommodate the cap could result in negative effects to other species, including salmon and crab. Ironically, because pollock are cannibalistic, underharvest could affect subsequent year-classes. These effects have never been studied relative to the cap.

Tough decisions: The council is forced to make difficult decisions about where to assign TACs under the cap. When certain species are at high biomass levels, this often results in unnecessarily depressed catch limits for other species. The cap essentially forces the council to choose winners and losers regardless of whether there's a conservation issue. Forgone catch results in forgone protein resources and is in direct conflict with Magnuson-Stevens Act requirements to evaluate sustainable yield and economic effects.

Conclusion: Good public policy dictates that the basis for and effect of the cap be periodically revisited. Foreign vessels no longer harvest United States resources off Alaska, other management measures encouraging responsible harvesting practices may have replaced the need for a cap, biological uncertainty has been reduced, and the cap itself appears to result in unintended negative consequences.

For these reasons, the council should initiate a review of the cap and evaluate whether it should be revised, eliminated, or remain the same. ⚓

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