

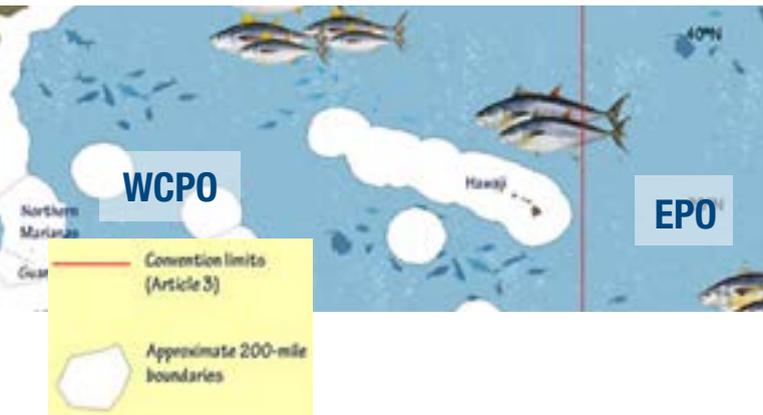


METHODS:

To assess the impacts of the closure, researchers Laurie Richmond and Dawn Kotowicz attended the Honolulu fish auction and had regular conversations with people connected to the fishery including fishermen, auction employees, buyers, retailers, consumers, and fishing associated industries such as gear shops and airline freight companies. We also compiled and analyzed fishery statistics about supply and price of bigeye during the closure.

KEY FINDINGS:

- There was a decrease in the supply of bigeye to local markets, particularly for a couple of weeks and some days throughout the last month of the year. But many buyers reported that the closure was not nearly as severe as they had anticipated.
- Hawaii-based longline vessels that fished in the Eastern Pacific Ocean, longliners also having an American Samoa permit, and small boats not affected by the closure kept a fairly consistent supply of bigeye coming in during the closure.
- Many reported that the quality of the bigeye landed during the closure was lower as a result of the long travel and hold times for boats fishing in the Eastern Pacific Ocean.
- As a result of shortened supply and reduced quality, the auction and retail price of bigeye increased during the closure, especially for higher grades of tuna.
- The closure created challenging conditions for buyers and retailers during the important holiday season. Some were not able to fill certain orders.



This figure depicts the line at 150 degrees that separates the Western and Central Pacific Ocean (WCPO) and the Eastern Pacific Ocean (EPO). The Hawaii longline fleet has an annual quota of 3,763 metric tons of bigeye in the WCPO. Once the quota is reached, the fleet cannot capture bigeye in the WCPO but can catch bigeye if they travel farther to fish in the EPO.



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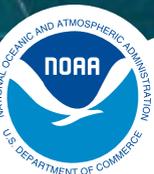
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Socioeconomic Impacts of the 2010 Bigeye Tuna Longline Fishery Closure

NOAA FISHERIES
Pacific Islands Region





STUDY BACKGROUND:

On November 22, 2010, Hawaii's US longline fleet reached its bigeye tuna quota and was prevented from harvesting bigeye in the Western and Central Pacific Ocean until January of 2011. This significant closure took place during the holiday season, a culturally important time of year for tuna consumption in Hawaii. NOAA's Pacific Islands Fisheries Science Center initiated a study to examine the socioeconomic impacts of the closure on various stakeholders connected to Hawaii's bigeye fishery. Our research focused on three questions:

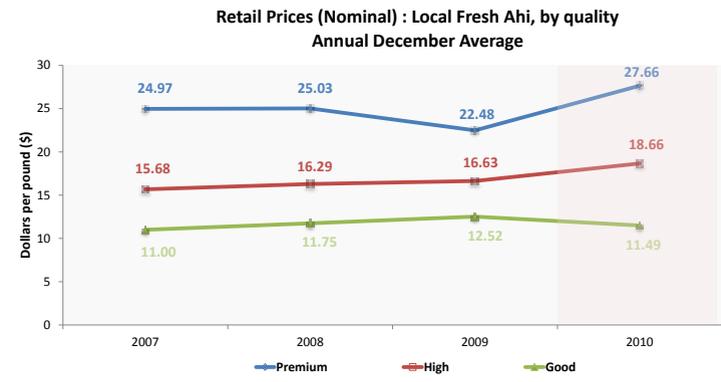
- What were the impacts of the closure and how did they compare to fears at the outset?
- How did people respond and adapt to the conditions of the closure?
- What would stakeholders like to see changed about management in the future?

IMPLICATIONS FOR MANAGEMENT:

- Results of the research were presented in February, 2011, to the Western Pacific Regional Fishery Management Council for consideration in bigeye tuna longline fishery management.
- Buyers, wholesalers, retailers, consumers are important stakeholders who are affected by fishery policies but are typically not involved in policy-making processes.
- Stakeholders offered many different management recommendations including changing the timing of the closure, implementing catch share programs, and adding quota from other territories, but there was no agreement on any particular strategy.
- The 2010 closure was 40 days long; if the length of the closure were to increase in future years, the impacts could be greater.
- The PIFSC Human Dimensions Research Program is continuing to monitor the fishery and report on the conditions. The PIFSC Economics Research Program is continuing to develop models estimating effects on the Hawaii economy.

"The small boats, they did their job, they caught a good supply. The boats that went far in the closed period they did their job the best they could. Some guys got real fresh ones, some guys struggled."

—Buyer describing how fishermen worked to keep up the supply of bigeye during the closure 1/12/11



Average December retail prices in seafood markets in Honolulu based on weekly consumer-level prices gathered by NOAA Fisheries retail monitoring program. Ahi includes both bigeye and yellowfin tuna and quality distinctions are based on retailer labels.

"How can you serve someone filet mignon one week and a burger the next and then convince them that it should cost the same?"

—Buyer describing the challenges of reduced quality and increased prices during the closure 12/3/10



Bigeye of different qualities caught on the same fishing trip to the EPO. The fish at the top was caught early and stored for the remainder of the trip while the fish on the bottom was caught later in the trip and appears fresher.

Interviewer: "What's up?"

Buyer: "The price"

-Buyer response at a high-priced auction day during the closure 12/17/10



HOW DOES THE CLOSURE YEAR (2010) COMPARE WITH OTHER YEARS?

The table below compares statistics of the bigeye longline fishery during the closure in December of 2010 with average fishery statistics from the month of December in the previous five years.

Hawaii Bigeye Data	2005-2009 Dec. Average	Dec. 2010	% Change
Pieces Sold	17,481	13,378	-24%
Weight Sold (pounds)	1,269,269	868,483	-32%
Average Weight (pounds)	85.09	75.41	-11%
Price/lb (whole weight)	\$4.23	\$6.16	+46%
Total Value (in millions)	\$5.26	\$5.35	+1.8%