



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE
West Coast Region
7600 Sand Point Way N.E.
Seattle, Washington 98115

Agenda Item G.1.a
NMFS Report 2
September 2015

July 14, 2015

150413WCR2014SF00204:AR

Ms. Dorothy Lowman, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, Oregon 97220-1384

Dear Chair Lowman:

This letter is to inform you that the National Marine Fisheries Service (NMFS) determined that the North Pacific swordfish stock in the Eastern Pacific Ocean (EPO) is subject to overfishing and that the Pacific Fishery Management Council (Pacific Council) must take appropriate action to address this overfishing.

Background

Swordfish (*Xiphias gladius*) is a management unit species in both the Fishery Ecosystem Plan for Pelagic Fisheries of the Western Pacific Region (Pelagic FEP) that was developed by the Western Pacific Fishery Management Council (Western Pacific Council) and the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) that was developed by the Pacific Council. Based on the best scientific information available, the swordfish population in the North Pacific is comprised of two stocks, which are generally separated by a diagonal boundary extending from Baja, California, to the Equator. The stocks are the Western and Central North Pacific Ocean (WCNPO) stock, distributed in the western and central Pacific, and the EPO stock, distributed in the eastern Pacific (see Figure 1).

In addition to the management efforts of NMFS and the two fishery management councils, these swordfish stocks are also subject to international management efforts. The Inter-American Tropical Tuna Commission (IATTC) has authority over fisheries operating in an area east of 150° W. in the area bounded by 50° N., 50° S., and the coast of the Americas (IATTC Convention Area). The Western and Central Pacific Fisheries Commission (WCPFC) has authority over fisheries operating north of the Equator and west of 150° W. (WCPFC Convention Area). Management of the WCNPO stock of swordfish is shared between the WCPFC and the IATTC. However, the EPO stock occurs almost entirely within the IATTC Convention Area, except for a small area within the WCPFC Convention Area extending from the Equator to approximately 5° N., and between 150° and 170° W., encompassing a portion of the U.S. exclusive economic zone around the unincorporated islands of Palmyra Atoll and Kingman Reef, south of the Hawaiian Islands.



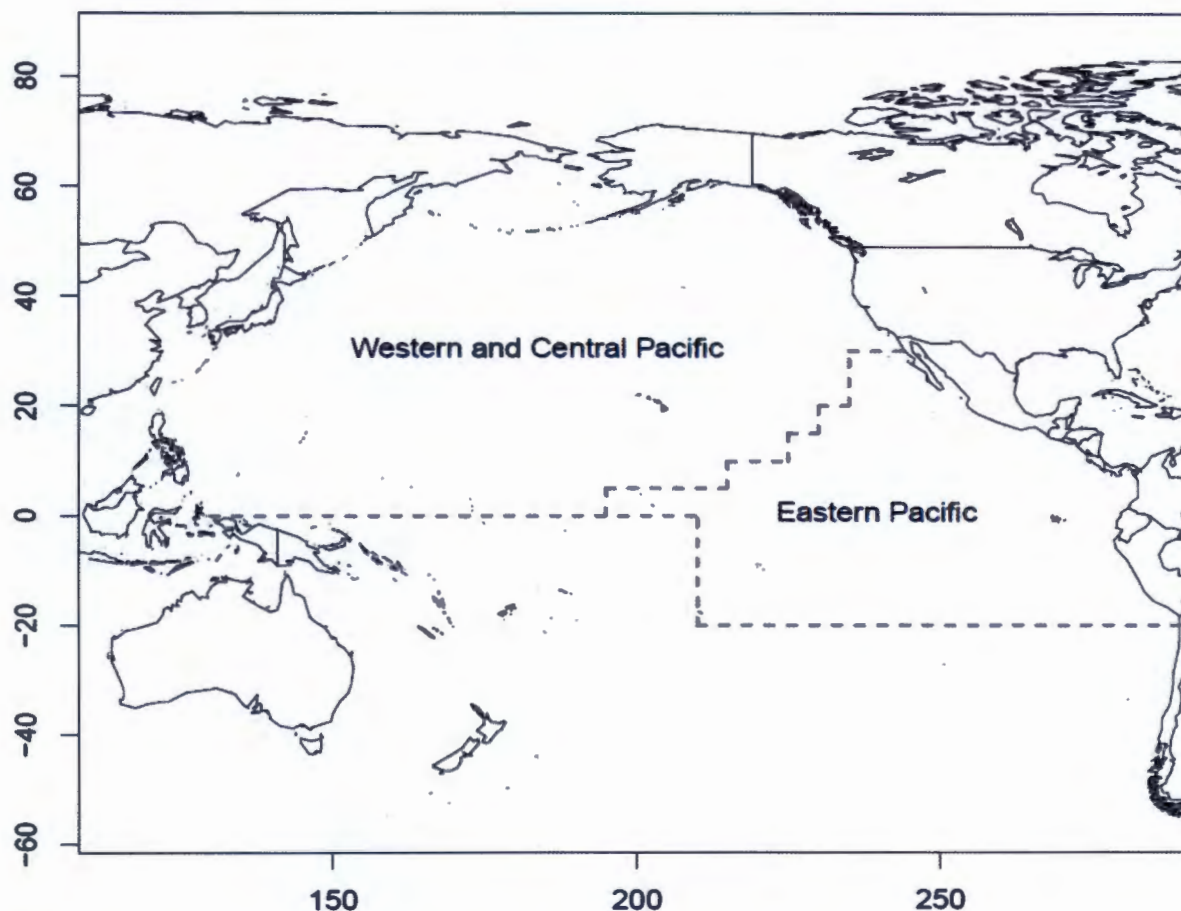


Figure 1. Stock structure for swordfish (*Xiphias gladius*) in the North Pacific, indicating the Western and Central Pacific Ocean and the Eastern Pacific Ocean stocks. Source: ISC, 2014¹.

Basis for Stock Status Determinations

Based on scientific consensus that a two-stock scenario is likely, the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) completed a stock assessment in 2014 using data through 2012 for the separate WCNPO and EPO swordfish stocks. This assessment used a generalized Bayesian Surplus Production model with a very similar structure to the previous 2010 assessment. NMFS considers the 2014 assessment to be the best scientific information available for judging the status of North Pacific swordfish and for managing fisheries that catch North Pacific swordfish.

The Pelagic FEP and the HMS FMP include criteria for overfishing and overfished status determinations. Under both plans, overfishing occurs when the fishing mortality rate (F) for one or more years is greater than the maximum fishing mortality threshold (MFMT), which is the fishing mortality rate that produces MSY (F_{MSY}). Thus, if the F/F_{MSY} ratio is greater than 1.0,

¹ ISC. 2014. North Pacific Swordfish (*Xiphias gladius*) Stock Assessment in 2014. Report of the Billfish Working Group. July 16-22, 2014. Taipei, Chinese-Taipei.

then overfishing is occurring. Under both plans, a stock is considered overfished when its biomass (B) has declined below the minimum stock size threshold (MSST), the level necessary to produce MSY on a continuing basis (B_{MSY}). The $B_{MSST} = (1-M)*B_{MSY}$, where M is the natural mortality rate of the stock. Based on an updated natural mortality rate for Pacific swordfish of 0.35 provided in the 2014 stock assessment, $B_{MSST} = 0.65*B_{MSY}$. Thus, if the B/B_{MSY} ratio falls below 0.65, then the stock is overfished. At present, the WCPFC and the IATTC have not formally adopted overfishing and overfished limit reference points for North Pacific swordfish.

The results of the 2014 assessment support the conclusions that the WCNPO stock is not subject to overfishing, but that the EPO stock is subject to overfishing. The results indicate that the WCNPO stock is not subject to overfishing because $F_{2012}/F_{MSY} = 0.58$, and it is not overfished because $B_{2012}/B_{MSY} = 1.20$. Numerical estimates and year of fishing mortality, biomass, and reference points for the WCNPO stock are as follows: $F_{2012}=0.14$, $F_{MSY}=0.25$; $B_{2012}=72,500$ metric tons (mt), $B_{MSY}=60,720$ mt, and $B_{MSST} = 39,468$ mt (see Table 1). Similarly, the assessment results indicate that the EPO stock is not overfished because $B_{2012}/B_{MSY} = 1.87$. However, the EPO stock is subject to overfishing because $F_{2012}/F_{MSY} = 1.11$. Numerical estimates and year of fishing mortality, biomass, and reference points for the EPO stock are as follows: $F_{2012}=0.19$, $F_{MSY}=0.18$; $B_{2012}=58,590$ mt, $B_{MSY}=31,200$ mt, and $B_{MSST} = 20,280$ mt.

Table 1. Summary of estimates and year of fishing mortality, biomass, and reference points for the WCNPO and EPO stock of North Pacific swordfish.

	F_{2012}	F_{MSY}	F_{2012}/F_{MSY}	B_{2012}	B_{MSY}	B_{2012}/B_{MSY}	B_{MSST}
WCNPO	0.14	0.25	0.58	72,500 mt	60,720 mt	1.20	39,468 mt
EPO	0.19	0.18	1.11	58,590 mt	31,200 mt	1.87	20,280 mt

Recent Catches

The majority of catch of the EPO stock of swordfish has been harvested by longline fishing vessels from Japan, Spain, China, Korea, and Taiwan, which together accounted for over 9,200 mt of the total 9,910 mt harvest in the EPO in 2012. The remaining catch was harvested by Belize, Mexico, Chile, French Polynesia, Peru, Vanuatu, and the United States. Based on Federal logbook records, 4 mt of EPO swordfish were caught by U.S. fishing vessels in 2012; specifically, by Hawaii longline vessels.

Council Obligations

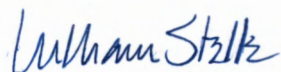
Section 304(i) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) applies in this circumstance because the overfishing of North Pacific swordfish in the EPO is due largely to excessive international fishing pressure and because the IATTC and WCPFC do not have measures in place to end overfishing. Therefore, consistent with MSA 304(i), the Pacific Council is required within one year to develop and submit recommendations to the Secretary of State for domestic regulations to address the relative impact of fishing vessels of the United States on the EPO stock and to develop and submit recommendations to the Secretary of State and to Congress for international actions that will end overfishing on the EPO stock. As

indicated earlier, recent U.S. catches of EPO swordfish have been of negligible quantity and harvested by the Hawaii-based longline fleet.

This obligation applies equally to the Western Pacific Council. NMFS also recently notified the Western Pacific Council of its obligations. I encourage the two councils to cooperatively develop appropriate management recommendations.

My staff is ready to work with the Pacific Council on these efforts.

Sincerely,

A handwritten signature in blue ink that reads "William W. Stelle, Jr." The signature is written in a cursive style.

William W. Stelle, Jr.
Regional Administrator

cc: NMFS Pacific Islands Regional Office – M. Tosatto
Western Pacific Fishery Management Council – K. Simonds
Pacific Fishery Management Council – D. McIsaac