



September 6, 2024

Taulapapa William Sword
Chair, Western Pacific Fishery Management Council
1164 Bishop Street, Suite 1400
Honolulu, HI 96813

Dear Chair Sword,

On September 5, 2024, the National Oceanic and Atmospheric Administration (NOAA) Assistant Administrator for Fisheries determined, based on the best scientific information available, that the Western and Central North Pacific Ocean (WCNPO) stock of striped marlin (*Kajikia audax*) continues to be *subject to overfishing* but is *not overfished*.

Background

Striped marlin is a management unit species in both the Fishery Ecosystem Plan for Pelagic Fisheries of the Western Pacific Region (Pelagic FEP) developed by the Western Pacific Fishery Management Council (WP Council) and the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) developed by the Pacific Fishery Management Council (Pacific Council). In addition to domestic management measures under the Pelagic FEP and HMS FMP, U.S. fisheries for striped marlin are subject to international management by the Western and Central Pacific Fisheries Commission (WCPFC) and Inter-American Tropical Tuna Commission (IATTC). To date, neither the WCPFC nor the IATTC has adopted criteria for determining when striped marlin are subject to overfishing or overfished. Therefore, in accordance with Section 304(e) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), NMFS relies on the status determination criteria (SDC) in the FEPs for recommending stock status.

The Pelagic FEP and the HMS FMP specify one Pacific-wide stock of striped marlin and do not identify separate stocks. Genetic studies suggest there are at least three distinct striped marlin populations in the Pacific Ocean: one population in the North Pacific Ocean (NPO) that includes Japan, Hawaii, and California; a second population in the Eastern Pacific Ocean (EPO) that includes the equator and Peru; and a third population in the Southwest Pacific Ocean (SWPO) around Australia and New Zealand. Other studies suggest a fourth genetically distinct group, which separates adults around Hawaii into a different group than juveniles. Tagging studies also indicate there is mixing between the NPO, EPO, and SWPO. While noting that there is uncertainty in the stock structure for Pacific striped marlin, the stock assessments for WCNPO striped marlin are based on boundaries of the convention area of the WCPFC, which consists of waters of the NPO bounded on the south by the Equator and on the east by 150°W.



Criteria for Stock Status Determination

National Standard 1 of the Magnuson-Stevens Act defines maximum sustainable yield (MSY) as the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets. The MSY fishing mortality rate (F_{MSY}) is the fishing mortality rate that, if applied over the long term, would result in MSY. Stock biomass at MSY (B_{MSY}) means the long-term average size of the stock or stock complex that would result from fishing at F_{MSY} . Size of the stock can be measured in terms of spawning biomass (SB) or other appropriate measure of the stock's reproductive potential.

Consistent with National Standard 1, the FEPs contain overfishing and overfished SDC based on MSY for pelagic management unit species, including the striped marlin. Under these SDC, a stock is overfished if spawning stock biomass (SSB) in the terminal year of an assessment falls below the minimum stock size threshold (MSST). The $MSST = cSSB_{MSY}$ where c is either 1 minus the natural mortality rate (M) or 0.5, whichever is greater. Expressed as a ratio, a stock is overfished when $SSB/MSST < 1$. A stock is subject to overfishing if the fishing mortality rate (F) averaged over the most recent three years in an assessment exceeds the maximum fishing mortality threshold (MFMT) for a period of one year or more. The value of MFMT changes depending on whether the stock is overfished or not. If a stock is not overfished, then $MFMT = F_{MSY}$. If a stock is overfished, then the MFMT declines from F_{MSY} in proportion to $SSB/MSST$. Expressed as a ratio, a stock is experiencing overfishing when $F/MFMT > 1$.

Basis for Stock Status Determination

In 2023, the Billfish Working Group of the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) completed a benchmark stock assessment for the WCNPO striped marlin. The 2023 assessment included up-to-date catch, catch-per-unit-effort, and composition data from 1975–2020 provided by individual ISC countries, the WCPFC, and the IATTC (Table 1). This assessment was discussed, reviewed, and approved by the ISC Plenary in July 2023. It was subsequently presented, reviewed, and approved by the Scientific Committee of the WCPFC in August 2023, and by the WCPFC in December 2023. All of the above meetings included participation by NMFS scientists and staff. Based on this review, on May 20, 2024, the Pacific Islands Fisheries Science Center and Southwest Fisheries Science Center concluded that the 2023 stock assessment is the best scientific information available (BSIA) and is applicable for judging the status of the striped marlin stock in the WCNPO and for use in management.

The 2023 assessment supports a domestic determination that the stock is **subject to overfishing** because $F_{2018-2020}$ (0.68) is greater than the MFMT (0.63) and **not overfished** because the SSB_{2020} (1,696 t) is larger than MSST (1,460 t). Stated as ratios, $F/MFMT = 1.08$ and $SSB/MSST = 1.16$. Furthermore, SSB_{2020} (1,696 t) is 72% greater than SSB_{2017} (981 t), indicating stock biomass is rebuilding.

Conservation and Management Measure 2010-01, adopted by the WCPFC in 2010, requires participating member countries to reduce retained catch of striped marlin in the Western and

Central Pacific Ocean (WCPO) to 80 percent of the maximum levels taken between 2000 and 2003. Since 2010, retained U.S. catch of striped marlin in the WCPO has remained below the recommended level of 457 t; however, the total catch of U.S. fisheries used for the assessment, when adjusted to include unlanded bycatch and corrected for species misidentification, has been greater than 457 t in some years (Table 2). Reported catches of WCNPO striped marlin in 2020 by all fishing nations totaled 2,303 t (Table 2). Total U.S. domestic catch of WCNPO striped marlin, most of which is caught in the Hawaii-based longline fishery, was 13 percent of the total WCNPO catch in 2020. On average from 2011 through 2020, U.S. catch was 16 percent of total WCPFC catch. To date, the IATTC has not adopted any management measures applicable to striped marlin in the NPO, EPO or SWPO.

Table 1. Estimates of fishing mortality, biomass, and other reference points for the WCNPO striped marlin in the 2019 and 2023 assessments.

Element	Previous Assessment	Current Assessment (BSIA)
Year assessment was finalized	2019	2023
Most recent data year used	2017	2020
Spawning stock biomass ($SSB_{current}$)	$SSB_{2017} = 981$ t	$SSB_{2020} = 1,696$ t
Minimum stock size threshold (MSST)	1302 t	1460 t
$SSB_{current}/MSST$	0.75	1.16
Overfished?	Yes	No
Fishing mortality (F_{recent})	$F_{2015-2017} = 0.64$	$F_{2018-2020} = 0.68$
Maximum fishing mortality threshold (MFMT)	0.60	0.63
$F_{recent}/MFMT$	1.07	1.08
Experiencing overfishing?	Yes	Yes

Table 2. Total catch and U.S. total catch of WCNPO striped marlin since 2011 (ISC 2023).

Year	Total catch (t)	U.S. total catch (t)	U.S. percent of total catch
2011	2,942	418	14%
2012	3,217	321	10%
2013	3,016	447	15%
2014	2,745	481	18%
2015	3,272	550	17%
2016	2,457	437	18%
2017	2,256	345	15%
2018	2,177	423	19%
2019	2,695	515	19%
2020	2,412	325	13%
2011-2020 Average	2,719	426	16%

At its 16th Regular Session in 2019, the WCPFC adopted a rebuilding plan for WCNPO striped marlin, with an interim target of rebuilding spawning biomass to 20 percent of the unfished level by 2034, with at least a 60 percent probability of rebuilding. This objective will be subject to further consideration by the WCPFC, as this rebuilding plan did not specify catch limits necessary to achieve the rebuilding goal.

Council Obligations

Because the 2023 WCNPO striped marlin stock assessment supports a determination that the stock is subject to overfishing but is no longer overfished nor approaching a condition of being overfished, NMFS has determined that the stock is no longer subject to the provisions of Magnuson-Stevens Act section 304(i). Therefore, NMFS rescinds its June 4, 2020, letter to Mr. Soliai from Michael Tosatto directing the WP Council to recommend domestic management measures to address the relative impact of fishing vessels of the United States on the WCNPO striped marlin stock. For these reasons, NMFS intends to withdraw the proposed rule to implement catch and retention limits for striped marlin caught in the WCPO (88 FR 14036, February 26, 2024). NMFS also intends to implement a catch limit consistent with its obligations under the WCPFC CMM 2010-01, or a new striped marlin measure if adopted by the WCPFC at its upcoming November 2024 meeting.

Finally, although section 304(i) no longer applies to WCNPO striped marlin, NMFS will continue to engage with the Council as the U.S. delegation works with the WCPFC to end international overfishing of this stock. Additionally, while National Standard 1 guidelines and the Pelagic FEP exempts striped marlin from annual catch limits (ACLs), they do not preclude the Council from applying ACLs or other catch limits to stocks under international agreements, if such action was deemed to be appropriate and consistent with the Magnuson-Stevens Act and other statutory mandates.

My staff in the Sustainable Fisheries Division are ready to work with the WP Council regarding management of WCNPO striped marlin. If you have any questions, please contact David O'Brien at 808-725-5038 or david.s.obrien@noaa.gov.

Sincerely,



Sarah Malloy,
Regional Administrator

cc: Western Pacific Fishery Management Council – K. Simonds
NMFS PIFSC – C. Littnan
NOAA GCPI – F. Tucher
NMFS OSF – K. Denit