



MEMORANDUM FOR: Janet L. Coit
Assistant Administrator for Fisheries

CLEARED THROUGH: Sarah Malloy on August 28, 2024,
Deputy Regional Administrator

FROM: Kelly Denit
Director, Office of Sustainable Fisheries

SUBJECT: Recommended Stock Status Determination for Striped Marlin -
Western and Central North Pacific Ocean (*Kajikia audax*)

For Western and Central North Pacific Ocean (WCNPO) striped marlin, I recommend:

- Changing the overfished status from overfished to not overfished–rebuilding; and
- Maintaining the overfishing status as subject to overfishing.

Please indicate below if you concur with this recommendation.

BACKGROUND

Striped marlin (*Kajikia audax*) 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 and the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP) developed by the Pacific Fishery Management Council. 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.

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 Western and Central North Pacific Ocean (WCNPO) striped marlin. While noting that there is uncertainty in the stock structure for Pacific striped marlin, the 2023 stock assessment is based on boundaries of the convention area of the Western and Central Pacific Fisheries Commission (WCPFC), and includes waters of the NPO bounded on the south by the equator and on the east by 150°W. Vessels in the Hawaii-based longline fishery account for nearly all of the U.S. domestic landings of WCNPO striped marlin, and average U.S. landings are



approximately 18 percent of the total WCNPO landings from 2016-2020 based on the 2023 assessment.

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 WCPFC and Inter-American Tropical Tuna Commission (IATTC). Since 2010, total U.S. catch of striped marlin in the WCPO has remained below the levels adopted by the WCPFC in [Conservation and Management Measure \(CMM\) 2010-01](#). At its 16th Regular Session held December 2019, the WCPFC adopted an [interim rebuilding plan](#) for WCNPO striped marlin, where the stock is targeted to rebuild by 2034. Since adopting the interim rebuilding plan, the WCPFC has not further considered management actions to achieve the objective of the plan or updated catch limits from those defined in CMM 2010-01. To date, the IATTC has not adopted any management measures applicable to striped marlin in the NPO, EPO or SWPO.

CURRENT STATUS

- In July 2019, the ISC) completed a stock assessment for the WCNPO striped marlin stock, using the Stock Synthesis 3.30.08 model with data through 2017. It supported a determination that the stock was subject to overfishing and was overfished.
- At present, the WCPFC and the IATTC have not formally adopted overfishing and overfished status determination criteria (SDC) for striped marlin. The Pelagic FEP and the HMS FMP both include SDC for overfishing and overfished status determinations. In accordance with Section 304(e) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), NMFS will rely on these SDCs for recommending stock status. Under both plans, overfishing occurs when average recent fishing mortality (F) exceeds the maximum fishing mortality threshold (MFMT), the fishing mortality rate that produces the maximum sustainable yield (F_{MSY}). In the 2019 assessment, MFMT = 0.6.
- Under both plans, a stock is overfished when its biomass (B) or spawning biomass (SB) has declined below the minimum stock size threshold (MSST), the level necessary to produce MSY on a continuing basis. Under both plans, $MSST = cSB_{MSY}$ where c is the difference of 1 minus the natural mortality rate (M) or 0.5, whichever is greater. In the 2019 assessment, MSST for the stock = $0.5SB_{MSY} = 1,302$ t.
- Based on the overfishing and overfished SDC described in the Pelagic FEP and HMS FMP, the 2019 assessment supported a determination that the stock was subject to overfishing because $F_{2015-2017}$ (0.64) was greater than the MFMT (0.6) and was overfished because SB_{2017} (981 t) was less than MSST (1,302 t).

INFORMATION THAT SUPPORTS RECOMMENDED STATUS

- In July 2023, the Billfish Working Group of the ISC completed a stock assessment for the WCNPO striped marlin stock, using the Stock Synthesis 3.30 model with data through 2020. This assessment supports a determination that the stock continues to be subject to overfishing, and is no longer overfished.
- The SDCs of the Pelagic FEP and HMS FMP remain unchanged since the previous assessment, and the numerical estimates of MFMT and MSST were slightly revised, primarily due to three additional years of data and updated historical catch data from Japan.
- The 2023 assessment supports a determination that the stock is subject to overfishing because $F_{2018-2020}$ (0.68) is greater than MFMT (0.63), but is no longer overfished because SB_{2020} (1,696 t) is greater than MSST (1,460 t). Furthermore, SB_{2020} (1,696 t) is 72% greater than SB_{2017} (981 t), indicating stock biomass is rebuilding,
- 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 and is applicable for determining the status of the striped marlin stock in the WCNPO and for use in management.

RECOMMENDATION

I recommend that you determine that WCNPO striped marlin is:

- Not overfished—rebuilding and subject to overfishing.

1. I concur. _____
Date

2. I do not concur. _____
Date