

BIGEYE TUNA OVERFISHING RESPONSE

National Marine Fisheries Service (NMFS) notified the Council that it must take action to address overfishing of bigeye tuna by June 14, 2005. A similar notification was given to the Western Pacific Fishery Management Council (WPFMC). At the June 2005 meeting, the Council moved to begin work on an amendment to the fishery management plan (FMP) for U.S. West Coast Fisheries for Highly Migratory Species (HMS) as the proper response to address this issue. NMFS Southwest Region agreed to take lead responsibility on developing the amendment package for Council consideration.

The HMS Stock Assessment and Fishery Evaluation (SAFE) Report, available at this Council meeting, includes new information indicating that the Eastern Pacific Ocean bigeye tuna stock is apparently overfished (i.e., the stock biomass is below the minimum stock size threshold). The December 15, 2004, letter notifying the Council that overfishing is occurring states that “the stock structure of bigeye tuna in the Pacific Ocean is unresolved.” It based the determination on two stock assessments, one treating bigeye as a single Pacific-wide stock and the other, conducted by the Inter-American Tropical Tuna Commission, for the Eastern Pacific only. A reevaluation of this question could lead to a reconsideration of stock status in the Eastern Pacific. If declared overfished, the Council would be required to prepare a rebuilding plan.

At this meeting NMFS will provide a preliminary range of alternatives for the Council to consider to address overfishing of bigeye tuna. These alternatives form the basis for the development of an FMP amendment.

Council Task:

Review the range of alternatives presented by NMFS, identify modifications to the range of alternatives or propose new alternatives, and adopt the resulting range of alternatives for public review.

Reference Materials:

1. Agenda Item J.5.b, Attachment 1: Draft Amendment 1 to the U.S. West Coast Fisheries For Highly Migratory Species Fishery Management Plan to Stop Overfishing in the Eastern Pacific Ocean.

Agenda Order:

- a. Agenda Item Overview
- b. NMFS Report
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. **Council Action:** Adopt Public Review Draft FMP Amendment Alternatives Responding to Overfishing of Bigeye Tuna

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**DRAFT AMENDMENT 1 TO THE U.S. WEST COAST FISHERIES FOR
HIGHLY MIGRATORY SPECIES FISHERY MANAGEMENT PLAN TO STOP
OVERFISHING IN THE EASTERN PACIFIC OCEAN**

COVER SHEET

EXECUTIVE SUMMARY

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1.0 INTRODUCTION

1.1 PURPOSE OF AND NEED FOR ACTION

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The Pacific Fishery Management Council (PFMC) proposes to develop and implement an amendment to the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (WC HMS FMP) to end overfishing of Pacific bigeye tuna (*Thunnus obesus*). The most recent bigeye tuna stock analyses were completed in 2003 and 2004. The 2003 single-stock and 2004 two-region assessment results found that bigeye tuna overfishing is occurring Pacific-wide. Both the PFMC and the Western Pacific Fishery Management Council (WPFMC) were notified concerning the status of overfishing in a letter sent on December 15, 2004, by the regional administrators of NOAA Fisheries' Southwest and Pacific Islands Regional Offices. In order to end overfishing of bigeye tuna in the Pacific Ocean, fishing mortality will need to decrease and both the PFMC and the WPFMC are responsible for developing respective plans for implementation by NMFS to assist in ending overfishing Pacific wide.

The overfishing determination was also reported to Congress in the Annual Status of Fisheries for 2003. The report was transmitted on June 15, 2004 and, as required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act or MSA) (16 U.S.C. 1854(e)(3)) and the implementing regulations for National Standard 1 (50 CFR 600.310(e)(3)), the PFMC has one year from the notification date to develop remedial action for NMFS to implement to end overfishing of Pacific bigeye tuna.

Fishery stock status is determined using two criteria, one of which identifies those stocks that are overfished and the second for those stocks experiencing overfishing. Overfishing definitions are based on a minimum biomass threshold and a maximum fishing threshold. When the stock biomass falls below the biomass threshold [the minimum stock size threshold (MSST)], the stock is said to be in an overfished condition. A stock is subject to overfishing if the fishing mortality rate exceeds the maximum fishing mortality threshold (MFMT) for one year (50 CFR 600.310(d)(ii)). The MSST and MFMT for stocks are specified in fishery management plans, and in the case of Pacific bigeye tuna are found in the WC HMS FMP.

Fishing activities contributing to the mortality of Pacific bigeye tuna are primarily longlining and purse seine, with the major fishing nations including Japan, China, Philippines, Australia, Indonesia, and Korea. The total catch level (fishing mortality) reported annually is approximately 200,000 metric ton (mt). The United States lands approximately 10,000 mt of Pacific bigeye tuna per year, or about five percent of the total Pacific-wide landings.

Longline fishing targets the larger more valuable fish, which are used in Japan's sashimi market, while smaller fish are used mainly for canning. Longliners from Japan, Korea, and more recently Taiwan continue to primarily target large Pacific bigeye in deeper distant waters. Longliners from Pacific Island countries tend to target the smaller fish, also sashimi grade found closer to the surface and near shore. Longliners take medium to large (3 to 6 feet) fish while the surface fishery catches smaller fish (1 to 3 feet).

The total catch of small Pacific bigeye tuna by the purse seine fishery is uncertain as the bigeye often school with yellowfin tuna (*Thunnus albacares*) and are not separated at

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landing points or recorded separately in fishing logs. It is known, however, that over the past 10 years, there has been an increase in levels of Pacific bigeye tuna taken incidentally when purse seiners target skipjack tuna (*Katsuwonus pelamis*) and juvenile yellowfin tuna found around fish aggregating devices.

Management of nomadic stocks, such as Pacific bigeye tuna, is challenging due to the highly migratory nature of the fish, as the search for food takes them across multiple political and geographical boundaries. Management and conservation options must therefore be agreed upon and are a shared responsibility of both domestic and international fisheries management entities. The requirement to reduce fishing mortality will dictate that the United States find an appropriate balance between protecting the resource and achieving a sustainable utilization of the resource within its straddling jurisdictions, then introduce the strategy to reduce fishing mortality on Pacific bigeye tuna to relevant international fisheries management organizations with the hope that such measures are agreed upon, adopted, and implemented.

As indicated in the MSA, and required by the implementing regulations for National Standard 1 (50 CFR 600.310(e)(3)), the PFMC was requested by the Secretary to develop remedial action to end Pacific bigeye overfishing within one year of being notified that overfishing was occurring. Although unilateral action by the PFMC will not end overfishing of Pacific bigeye, the actions described in this document are consistent with the MSA which states at 304(e)(3):

Within one year of identification under paragraph (1) or notification under paragraphs (2) or (7), the appropriate Council (or the Secretary, for fisheries under section 302(a)(3)) shall prepare a fishery management plan, plan amendment, or proposed regulations for the fishery to which the identification or notice applies:

- (A) To end overfishing in the fishery and to rebuild affected stocks of fish; or
- (B) To prevent overfishing from occurring in the fishery whenever such fishery is identified as approaching an overfished condition.

This amendment is also consistent with NMFS' Atlantic Highly Migratory Species FMP which includes a "foundation plan" as its response to overfishing of highly migratory species, including bluefin tuna and swordfish. As in the Atlantic, a multilateral management action is essential to ensure that overfishing on bigeye tuna in the Pacific Ocean ends.

From years 2003 – 2006, the Inter-American Tropical Tuna Commission (IATTC) has implemented management measures for purse seine and longline fisheries in response to concerns about the condition of bigeye tuna in the Eastern Pacific Ocean (EPO). The longline fleets of member nations of the IATTC were allocated a bigeye tuna quota equivalent to the 2001 level of catch. Based on this level of fishing, the US fleet-wide bigeye tuna quota was set at 150 mt.

Given that further management actions for U.S. Pacific fisheries are likely to be considered by the IATTC and the newly emergent Commission for the Conservation and

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Management of Highly Migratory Fish Stocks in the Western and Central Pacific (more commonly referred to as the Western & Central Pacific Fisheries Commission or WCPFC), the PFMC and the WPFMC determined that it was necessary to also amend the Pelagics FMP to include a protocol regarding both Councils' role in the development and implementation of measures stemming from Regional Fishery Management Organizations (RFMOs) such as the IATTC and WCPFC. The Councils also recognized the need to implement measures for domestic fisheries in the Western Pacific in response to the overfishing of bigeye tuna. These international and domestic fishery management measures for Pacific bigeye tuna are the major focus of this amendment.

1.2 Background

1.2.1 The Magnuson-Stevens Act

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) (16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The MSFCMA established autonomous rights and exclusive fishery management authority over most fishery resources within the U.S. exclusive economic zone (EEZ), an area that extends from 3 to 200 nautical miles.

The MSFCMA also created the National Marine Fisheries Service (NMFS) an agency within the Department of Commerce's National Oceanic and Atmospheric Administration. The NMFS oversees eight regional fisheries management councils, of which are charged with the conservation and management of fish stocks found in their jurisdiction.

Section 305(a) of the MSFCMA requires the Secretary of Commerce to publish a list of authorized fisheries under the authority of each Council and all fishing gear used in such fisheries in the EEZ.

The MSFCMA was most recently amended in 1996, by the Sustainable Fisheries Act (SFA), (Public Law 104-297) at which time it was renamed the Magnuson-Stevens Fishery Conservation Act (MSA). New provisions of the MSA include emphasis on the precautionary approach to manage U.S. fish stocks; putting an end to overfishing; rebuilding overfished stocks; minimizing bycatch and bycatch mortality to the extent practicable; and to identify and protect essential fish habitat.

1.2.2 The National Standards for Fishery Conservation and Management

1.2.3 Essential Fish Habitat

1.2.4 Coastal Zone Management

1.2.5 Endangered Species Act

1.2.6 Marine Mammal Protection Act

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1.2.7 National Environmental Policy Act

This environmental assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA). In context of NEPA, the EA analyzes a variety of alternatives to avoid or minimize adverse impacts to the human environment.

1.2.8 Paperwork Reduction Act

1.2.9 Regulatory Flexibility Act

1.2.10 Executive Order 12866 (E.O. 12866)

1.2.11 Data Quality Act

1.3 History of Management

1.4 International Management

1.4.1 IATTC and its Relationship to the Magnuson-Stevens Act

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Chapter 2 Contents

This chapter describes the proposed action and alternatives to the proposed action. An attempt was made to establish a range of “reasonable” alternatives. A reasonable alternative is one that would be expected to achieve the objectives for the proposed action, as described in Chapter 1, and summarized as follows:

- Meet the requirement under the MSA to end overfishing of Pacific bigeye tuna; and
- Establish management protocol for the Councils’ participation in the development and implementation of U.S. proposals for international management.

This chapter also includes discussions of the differences in the environmental effects of each of the alternatives.

2.2 *Proposed Action*

NMFS, after consulting with the Council, will recommend conservation and management measures through the appropriate channels to the RFMOs such as time/area closures and prescribe minimize size limits for Pacific-wide fishing effort, set targets for recovery, place limits on fishing mortality rates, establish measurable stock improvement milestones, and encourage and support development of an international management program to end Pacific bigeye tuna overfishing.

2.3 *Alternative 1 (Status quo alternative)*

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NMFS and the PFMC would not develop and implement controls necessary to end overfishing by Pacific-wide fishermen, nor submit comments or actively participate in the development of input and recommendations on the conservation and management of Pacific bigeye to the U.S. delegation to relevant RFMOs.

2.4 *Alternative 2*

Alternative 2 would provide a means by which the PFMC would work with NMFS to develop conservation and management recommendations for Pacific bigeye tuna, of which NMFS would then recommend to the appropriate RFMOs. Management options would include a combination of measures that if adopted may include: (1) closure of the purse seine fishery in the EPO for two months; (2) reduce longline catches in the EPO to 2000 levels; reduce the purse seine fishing effort on Pacific bigeye by 50% in 2007 with one or more of the following management options:

a) Close the purse seine fishery for six months in the area between 8°N and 10°S west of 95°W (this closure would not be intended to occur simultaneously with the two month EPO closure); or

b) Close the purse seine fishery on floating objects for six months in the area west of 95°W (this closure is not intended to occur simultaneously with the two month EPO closure); or

c) Limit the total annual catch of bigeye by each purse seine vessel that is required to carry an observer to 500 metric tons, estimated either by the observer or, at the request of the Captain, by scientific sampling of the vessel's catch conducted by IATTC staff at the time of unloading. If this latter option is chosen, the vessel would be responsible for the costs of the sampling.

(3) prohibit landings, transshipments and commercial transactions in tuna or tuna products that have been positively identified as originating from fishing activities that disregard conservation and management options specified for Pacific bigeye tuna.

Alternative 2 would provide specific protocol for the development of input and recommendations on the conservation and management of Pacific bigeye to the U.S. delegation to RFMOs. The NMFS and the Council would respond in a formal manner to any resolution adopted by the RFMOs by implementing appropriate fishery management requirements in the Pacific.

2.5 *Alternative 3*

Alternative 3 would include all management options contained in alternative 2, plus would exempt fleets that catch 1% or less of the total Pacific bigeye tuna landings in the EPO and provide an annual international fishing quota of X amount based on fishing history divided among all nations fishing on the stock. Additionally, alternative 3 requires minimum size limitations geared toward reducing fishing mortality on juvenile Pacific bigeye.

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2.6 *Alternative 4*

Close all fisheries under the Council's jurisdiction that target Pacific bigeye tuna in the EPO.

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 Physical Environment

3.2 Biological Environment

3.2.1 Pelagic Management Unit Species

3.2.2 Pacific Bigeye Tuna (*Thunnus obesus*)

Bigeye ranges worldwide in warmer seas and from central Washington to Peru and the Galapagos Islands. It is a pelagic species, and has been found as deep as 250 m. Specimens as large as 244 cm have been observed, but bigeye are usually smaller than 183 cm (Eschmeyer and Herald, 1983). Prior to 1994, the average catch of bigeye in the ETP by surface gear was approximately 4,000 mt. In 1994, the annual catch increased to 29,000 mt, in 1995, to 37,000 mt, and in 1996, to 52,000 mt. Between 1995 and 2001, bigeye catches averaged 47,088 mt annually (IATTC, 2002b). The estimated catch in 2002 was 35,201 mt (IATTC, 2003). These increasing catches resulted from the discovery that bigeye associated with floating objects, but well below the surface, and could be detected with sonar and caught with purse seines. Many of these floating objects are FADs placed in the water by fishermen. The biomass of bigeye has declined since 2000 (Maunder and Harley, 2001).

3.2.3 Life History and Habitat

3.2.4 Movement

3.2.5 Stock Structure

3.2.6 Marine Mammals

3.2.7 Sea Turtles

3.2.8 Sea Birds

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3.3 Fisheries

3.3.1 EPO Tuna Fisheries and Bigeye Landings

3.3.2 Economic Environment

3.3.3 U.S. Purse Seine Fleet

3.3.4 International Purse Seine Fleets

3.3.5 U.S. Longline Fleet

3.3.6 International Longline Fleet

4.0 ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS OF THE ALTERNATIVES

4.1 Impacts of the Proposed Action

4.2 Impacts of Alternative 1: No Action Alternative (Status Quo)

By implementing the status quo alternative (i.e. failure to implement measures that end overfishing) it is possible that a continued decline in Pacific bigeye

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stocks would result. If this scenario did result from implementation of this alternative (no action), the stock could become overfished.

4.2 Impacts of Alternative 2:

4.3 Impacts of Alternative 3:

Alternative 3, if implemented would provide a solid basis for collaboration between the Council, NMFS, and the DOS, to ensure effective representation of the Council's constituents.

4.4 Impacts of Alternative 4:

5.0 LIST OF AGENCIES AND PREPARERS

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