

**Excerpt from the Western Pacific Regional Fishery Management Council's Draft Pelagic Fishery Management Plan Amendment 14
November, 2006**

8.0 Management Recommendations for International Fisheries to Address Overfishing of Pacific-wide Bigeye Tuna and WCPO Yellowfin Tuna

Sections 8 through 11 have been prepared as an Environmental Assessment in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, to assess the impacts on the human environment that may result from the proposed Federal action. This Environmental Assessment examines a range of alternatives designed to address issues related to overfishing of Pacific-wide bigeye and WCPO yellowfin tuna. It also incorporates by reference the cover sheet (page ii), table of contents (page vii), list of agencies (page 1), public review process and schedule (page 1), list of preparers (page 2), discussion of the purpose and need for action (page 2), list of references (page 183), and additional text from other sections of this document as indicated.

The goal of the Council is to take appropriate action to address its statutory requirement under the Magnuson-Stevens Act to end overfishing of Pacific bigeye and WCPO yellowfin tunas in a cost-effective and equitable manner. Following general management, research and monitoring recommendations for Pacific bigeye and WCPO yellowfin tunas, management alternatives to end overfishing of both species are presented. How these alternatives would address the reduction of fishing mortality in the WCPO and the EPO are discussed separately, however, as each are subject to different management authorities (the WCPFC in the Western and Central Pacific and the IATTC in the Eastern Pacific). Recommendations for domestic fisheries are discussed in Section 9.0.

The Council recommends that the United States promote the following measures in the international arena.

8.1 General Recommendations for the Management, Monitoring and Research of Bigeye and Yellowfin Tunas in the Pacific Ocean

These recommendations are consistent with requirements of the MSA and its National Standards. For example, providing consistency between the WCPO and EPO is appropriate under National Standards 3, 5, and 7. Further it is essential to avoid confusion and potential conflict between the WCPFC and the IATTC with respect to management measures regarding bigeye and yellowfin tunas. Moreover, the areas of competence of these two RFMOs overlap in the South Pacific so it is essential that management measures are harmonized as far as possible.

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Recommendations such as focusing on the fisheries with the greatest impacts and on the regions of highest catches and spawning areas, reducing surplus capacity and restricting the use of purse seine FADs are designed to identify those measures that will have a measurable impact on bigeye and yellowfin tuna conservation. Similarly, an exemption for those fleets that catch less than 1% of the total from some or all measures recognizes the need to avoid overly burdening those fleets and countries which are peripheral in generating fishing mortality for bigeye tuna

Reduction of fishing capacity is a recognized goal and NMFS has stated that its target is to eliminate or significantly reduce overcapacity in 25% of federally managed fisheries by the end of 2009 and in a substantial majority of fisheries in the following decade (NMFS 2004)¹. There is known to be an excess of purse seine capacity for skipjack tuna, as recognized by a 2001 resolution by the World Tuna Purse Seine Organization to achieve a 35% reduction in fishing effort by member countries. Although the purse seine vessels are targeting skipjack rather than bigeye tuna, they are a major contributor to fishing mortality through catches of bigeye and yellowfin juveniles around FADs. Consequently reduction of purse seine fishing capacity overall would likely have a marked conservation benefit for bigeye and yellowfin tuna. In this regard, the IATTC promulgated resolutions in 2000 and 2003 to limit fishing capacity of purse seine vessels operating in the Eastern Pacific. The IATTC established a target of 158,000 m³ (well volume) for the total purse seine fleet in the Eastern Pacific, but which took into account stock status and the rights of coastal States and other States with a longstanding and significant interest in the tuna fisheries of the Eastern Pacific to develop and maintain their own tuna fishing industries.

Restricting the use of FADs by purse seine vessels in the Pacific, to aggregate skipjack tuna, will reduce the overall catch of bigeye and yellowfin tunas, and specifically the catches of juvenile bigeye and yellowfin tunas, which also aggregate beneath FADs. It is expected that this reduction in juvenile bigeye catch will likely improve recruitment of bigeye tuna to the longline fishery, where fish are caught at larger sizes and at higher value. It is also likely that a reduction in FAD-associated harvests of juvenile and sub-adult yellowfin tuna will improve recruitment of yellowfin to longline fisheries and purse seine landings of larger, higher value yellowfin. Improvements to spawning stock biomass for both species would also result. Similarly, any measure designed to develop time/area closures in spawning grounds or areas of high juvenile bigeye and yellowfin tuna densities would reduce fishing mortality on spawning fish and reduce the catch of juvenile fish before they had a chance to recruit to the longline fishery. The area of the southern Philippines, Indonesia and Papua New Guinea (PNG) are highly relevant as they have large-scale longline and FAD-based surface fisheries and are situated in the core area of WCPO spawning and juvenile development for both species. While fishery data collection and reporting mechanisms are well developed in PNG, significant improvements to species specific catch and effort data in the Philippines and Indonesia are urgently required.

The MSA's National Standard 1 established a process for the use of biomass based reference points and fishing mortality limits to determine whether fisheries are overfished or subject to overfishing. In the absence of existing reference points from the RFMOs, the Council's reference points for bigeye and yellowfin tunas should be advanced for consideration by the WCPFC

¹ United States National Plan Of Action for the Management of Fishing Capacity August 2004 Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service

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and the IATTC. This will be useful to the Council as, at this time, outputs from these stock assessments generate the estimates of indicators used in the Council's overfishing control rule. In addition, the Pacific Council also has similar status reference points for highly migratory species such as bigeye and yellowfin tunas in the Eastern Pacific Ocean. Moreover, the United States as a member of regional fishery management organizations should establish and adhere to general principles to guide the U.S. in developing and promoting conservation and management programs and associated monitoring and compliance, The Council recommends the following:

General recommendations for management and monitoring:

- i. **Use science-based measures that consider historical participation, and provide for sustained participation by local communities.**
- ii. **Strive for consistent measures (e.g. WCPO and EPO) where possible.**
- iii. **Focus on fisheries with greatest impacts.**
- iv. **Focus on regions of highest catches and spawning areas.**
- v. **Reduce surplus capacity.**
- vi. **Restrict the use of purse seine FADs.**
- vii. **Consider exempting fleets that catch less than 1% of the total from some or all measures.**
- viii. **Improve species specific fishery monitoring.**
- ix. **Establish standardized vessel registry system for the WCPO.**
- x. **To the extent practicable the U.S. should seek RFMO decisions that are consistent with National Standard 1 of the MSA and its guidelines as codified.**

Half of the elements in this list, (ii-vi) are concerned with minimizing fishing mortality of bigeye and yellowfin tunas in the WCPO, while the remainder are concerned with participation, monitoring and management of pelagic fishing. With respect to principles and priorities for research and data collection, the Council recommends that the U.S. should also promote the following:

General recommendations for research:

- i. **Determine consistent science-based reference points that are appropriate for management use. In the absence of international reference points, promote the establishment and application of MSY based reference points and associated control rules with respect to preventing and ending overfishing.**
- ii. **Improve stock assessments that provide region specific information and understanding of recruitment.**
- iii. **Promote pan-Pacific assessments that provide region specific information.**
- iv. **Improve understanding of responses to FADs.**
- v. **Investigate gear and fishing characteristics of vessels with above-average CPUE.**
- vi. **Collect and define vessel and gear attributes useful for effort standardization for all fleets.**
- vii. **Define total costs of management on governments and participants.**

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8.2 Council Management Protocol for Pacific Bigeye and Yellowfin Tunas

The role of Pacific-based domestic fishery management Councils has become particularly important with the advent of the Western and Central Pacific Fisheries Commission in 2004, as the entire Western Pacific Region's EEZ waters are contained within the boundaries of the WCPFC area of management competence, although some longline fishing by Hawaii-based longline vessels does occur in the EPO. The Inter-American Tropical Tuna Commission has already begun to implement management measures for bigeye tuna, commencing with seasonal closures of purse seine fishing and bigeye tuna quotas for U.S. longline vessels (both Hawaii-based and California-based) for the years 2004-2006. The IATTC may at some point in the future introduce management measures for yellowfin tuna. Moreover, the measures adopted by the IATTC for Pacific bigeye tuna could also have a limiting effect on WCPO yellowfin landings. A formal Council management protocol for the development of input and recommendations that will be provided to the U.S. delegations and U.S. representatives to the RFMOs is needed to ensure that both the WPRFMC and PFMC are informed and afforded the opportunity to substantively participate in all of the activities leading up to the development and implementation of U.S. proposals for international management².

The adoption of a formal management protocol creates a mechanism and a timetable for the Council to review the status of stocks, to consider and advise on impending RFMO actions, to deliberate on the Council's own proposals for conservation and management, to inform NMFS and the Department of State about the Council's positions and concerns, to participate in international meetings, and to apply their expertise in the subsequent implementation of any resultant agreements. The amendment is intended to provide a solid basis for collaboration of the Council with its partners (NMFS, DOS) to ensure

- effective involvement of the Council on behalf of its constituents and members in the development of U.S. positions in RFMOs;
- a good track record for the Council's use in generating inputs to the U.S. positions and for the Council's subsequent use in determining what if any conservation and management measures are needed; and
- a process that NMFS and DOS can point to as having obtained solid advice from constituents in carrying out U.S. obligations under international treaties.

This management protocol must be synchronized with both RFMO and Council meetings to ensure adequate review prior to and following RFMO meetings. Without such a process, the Council would have to continue to respond in an *ad hoc* manner to fishery management requirements stemming from RFMOs in the Pacific. The Council would still seek the opportunity to review and comment on management proposals and to advance its own recommendations for U.S. proposals to RFMOs, but an *ad hoc* process is inefficient and untimely, and runs the risk of marginalizing the Councils' role in developing proposals for international management.

². During the drafting of this amendment, staff from the Western Pacific Regional Fishery Management Council were included in the delegations to the June 2005 and June 2006 meetings of the IATTC and the Western and Central Pacific Fishery Commission's second meeting in December 2005.

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Moreover, an *ad hoc* process does not provide a framework for collaboration between the Department of State, NMFS and the Councils that is necessary to ensure that the Councils' views are fully considered.

The following issues and criteria were considered in the development of the protocol

- Likelihood of effectiveness in RFMOs
- Timeliness
- Completeness of inputs
- Transparency of decision making
- Linkage of international and MSA authorities
- Credibility with stakeholders

Council recommended protocol for international management of Pacific highly migratory pelagic species:

- a. The Council participates in U.S. delegations to Regional Fishery Management Organizations (RFMOs e.g. IATTC and WCPFC) in the Pacific Ocean and is included in all pre and post meetings and negotiations.**
- b. The Council and NMFS monitor RFMO meetings and actions and relevant fisheries, Council becomes aware of a need for management action or receives notice from NMFS or the RFMO directly of a need for such action, with supporting documentation.**
- c. The Council reviews information from RFMO, NMFS, and other sources concerning stock assessment, area of consideration, fishery issues and data supporting determinations, and the role of U.S. fisheries in causing or contributing to overfishing.**
- d. NMFS provides formal notice of overfishing determination or other management concerns and the time frame for Council action within MSA and RFMO frameworks.**
- e. The Council refers information to its Pelagics Plan Team, Advisory Panel(s), SSC and other advisors for review and advice with focus on:**
 - **Definition and condition of the stock or other fishery management unit, and the issue of concern (e.g., overfishing, bycatch, allocation, etc.),**
 - **Possible reasons for the situation including fishery and environmental conditions that may be relevant to the stock condition or other management concern,**
 - **Relative role of U.S. fisheries in overall stock harvests and management situation,**
 - **Existing conservation and management measures of the RFMO with jurisdiction over the stock or fishery involved,**
 - **Possible multi-lateral measures to avoid or end overfishing, rebuild the stock, or resolve other management concerns.**

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- f. The Council's PPT, AP, SSC and other advisory bodies recommend possible domestic and international fishery conservation and management measures, including a comparison and evaluation of alternative measures including distinctions between Pacific-wide, regional, and local measure's effects and effectiveness.
- g. The Council makes initial decision on how to address problem (initial action).
- h. The Council distributes a draft background and action document for public review and advice.
- i. The Council makes formal recommendations to NMFS and the Department of State on:
 - domestic regulations,
 - international actions.
- j. The Council drafts a position paper on how RFMOs should address the situation (the position paper should clearly and forcefully state the Council's recommendation on every substantial issue).
- k. The Council presents its position within the U.S. delegation to the RFMO.
- l. The RFMO meets and acts on fishery conservation and management needs in the international arena.
- m. The Council considers the RFMO's actions, U.S. government positions and requirements under applicable treaties and the MSA.
- n. The Council determines its appropriate regulatory response for domestic fisheries consistent with international agreements and the MSA.
- o. The Council takes final action (if any) to recommend regulations for NMFS' approval and implementation.
- p. NMFS implements approved recommendations.

8.3 Recommendations to Address International Overfishing of Pacific-wide Bigeye and WCPO Yellowfin Tuna

Three alternatives were developed to address international overfishing of Pacific bigeye and WCPO yellowfin tuna as follows:

International Alternative 1. No action

Under International Alternative 1 (No action), the Council would not take any action to address the international overfishing of Pacific-wide bigeye tuna and WCPO yellowfin tuna, and WCPO

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and EPO tuna fishing would continue to operate under current conditions as described in Section 10.8.

International Alternative 2. End overfishing immediately (Preferred)

Under International Alternative 2 (preferred), the Council would transmit a recommendation for the immediate specified reductions in fishing mortality to NMFS, the Department of State, and the U.S. delegations to the Pacific tuna RFMOs. Based on stock assessments conducted in 2005 (WCPFC 2005) and 2006 (IATTC 2006a), fishing mortality on Pacific bigeye and WCPO yellowfin stocks by both longlines and purse seines needs to be reduced in the WCPO by 20% from 2001-2003 levels for each gear type. In the Eastern Pacific Ocean (EPO) fishing mortality on Pacific bigeye by longline vessels needs to be reduced by 30% and purse seine fishing mortality by 38% as compared to 2003-2004 fishing levels (IATTC 2006a). All measures must consider traditional participation and emerging island fisheries. These measures are cumulative across the two regions since although Pacific bigeye tuna is thought to be a single population, it is managed as two segments of the same population, fished by different fisheries and managed by two separate RFMOs

International Alternative 3. Phase out overfishing over a maximum of 10 years

Under International Alternative 3, the Council would transmit a recommendation for a phased approach for achieving this action's objectives for reductions in fishing mortality (as described above and in Section 6) to NMFS, the Department of State, and the U.S. delegations to the Pacific tuna RFMOs. Actions included to achieve this phased approach are described below. All measures must consider traditional participation and emerging island fisheries.

A. Output controls

WCPO (for Pacific-wide bigeye and WCPO yellowfin)

- If required, implement quotas on a country level basis with domestic allocation left to each country
- Gradually (over a maximum of 10 years) reduce quotas to achieve objectives

EPO (for Pacific-wide bigeye)

- Implement an EPO bigeye longline quota equal to 1999 harvests
- Provide the U.S. longline fleet with EPO bigeye quota of 250 mt
- Exempt fleets that take less than 1% or 550 mt of EPO annual bigeye catch
- Exempt U.S. longline vessels not targeting bigeye tuna from the annual EPO quota
- Gradually (over a maximum of 10 years) reduce quotas to achieve objectives

B. Input controls

WCPO (for Pacific-wide bigeye and yellowfin)

- Gradually decrease longline fishing effort (number of vessels), starting with rollback to 1999 levels

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- Register and limit the use of purse seine FADs
- Gradually (over a maximum of 10 years) increase input controls to achieve objectives

EPO (for Pacific-wide bigeye)

- Gradually reduce EPO purse seining on bigeye by 38%
- Gradually (over a maximum of 10 years) increase input controls to achieve objectives

9.0 Recommendations to Address Overfishing of Pacific Bigeye and WCPO Yellowfin Tuna in Domestic WPRFMC Fisheries

9.1 Recommendations for WPRFMC Pelagic Longline and Purse Seine Fisheries

Existing longline vessels managed by the Council (those based in Hawaii and American Samoa) caught only 2.3% of total reported Pacific bigeye landings in 2003 and 0.22% of total reported Pacific yellowfin landings (see Table 22). This is largely because both of these fleets are managed under limited entry programs that include caps on the numbers of vessels as well as on vessel lengths. No foreign fishing is allowed in EEZ waters under the Council's jurisdiction and portions of EEZ waters around Hawaii and Guam are closed to domestic longliners. Given these regulatory controls in place for these fisheries (and associated low bigeye and yellowfin catch levels), and the fact that the necessary international actions required to end Pacific-wide overfishing are underway, the Council has determined that it should continue to seek substantive participation (see Section 8) in the international management fora that are necessary to develop effective solutions to the Pacific-wide overfishing of bigeye and yellowfin tunas. The Council also determined that further unilateral management actions for these domestic fisheries would be premature and would not have a meaningful effect on the Pacific-wide overfishing problem. Moreover, it would also be inconsistent with MSA Section 304(e)(4)(C), which states that actions to address overfishing in fisheries managed under international agreements shall "reflect traditional participation in the fishery, relative to other nations, by fishermen of the United States". The Council intends to manage overfishing by these fisheries through its international management protocol described in Section 8.2. However, given the potential for the development of domestic longline fisheries based in Guam or CNMI, as well as the potential for domestic purse seiners to fish in WPRFMC EEZ waters, the Council made the following recommendation:

Establish a control date of June 2, 2005 for domestic longline and purse seiners fishing under open access programs in U.S. EEZ waters in the Western Pacific region, including developing longline fisheries in Guam and CNMI.³

This control date would apply to vessels that are or may begin fishing under open-access programs and would not bind the Council to establishing limited access or other management programs for these fisheries, but it would notify current and prospective fishery participants that additional management measures may be taken by the Council for these fisheries. The implementation of a control date is in recognition of the fact that unlimited expansion of purse seining and longline fishing is untenable with the conservation of bigeye and yellowfin tuna.

³ Notification of this control date was published August 15, 2005 in the Federal Register, Vol. 70, No. 156

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9.2 Recommendations for Other WPRFMC Pelagic Fisheries

Regarding commercial small boat pelagic fisheries (i.e. non-longline and non-purse seine) managed by the Council in the Western Pacific region, based on their low catches of bigeye (0.13% of Pacific-wide 2004 catches) and yellowfin (0.13% of Pacific-wide catches, see Table 22), the Council made no new recommendations regarding the activities of these fisheries. However, although reported and estimated bigeye and yellowfin tuna catches by Hawaii-based small boats are low; data for some sectors is believed to be incomplete due to non-reporting and is certainly often many months behind in collection, inputting, processing and availability to fishery scientists and managers. Recreational landings are unknown as there are no reporting requirements for these vessels. Preliminary data from NMFS' Marine Recreational Fishing Statistics Survey (MRFSS) is currently under review by NMFS following the release of an external review of this program by the National Research Council which questioned the sampling and extrapolations methodologies used by NMFS (NRC 2006). As such the Council has recommended that MRFSS catch estimates should not be used for management purposes until these problems have been resolved. Thus the Council considered a range of regulatory and non-regulatory measures designed to improve the availability of data regarding bigeye and yellowfin catch and effort by these fisheries. In sum, the Council considered the following alternatives for the management of the region's pelagic small boat commercial and recreational fisheries:

Small boat Alternative 1. No action

Under this alternative the Council would not take any action to address the role of small boat domestic pelagic fisheries in the overfishing of Pacific-wide bigeye and WCPO yellowfin tunas, and these fisheries would continue to operate under current conditions as described in Section 10.9.

Small boat Alternative 2. Implement fishery controls

Under this alternative the Council would implement limits to fishing for Pacific bigeye and WCPO yellowfin tuna by small boat domestic pelagic fisheries. These could include measures such as fleet-wide quotas, trip limits, or time and area closures.

Small boat Alternative 3. 3 Establish control date⁴ (Preferred)

Under this alternative, the Council would implement a June 2, 2005 control date for entry into small boat commercial pelagic fisheries (i.e. non-longline and non-purse seine) in U.S. EEZ waters around Hawaii. This control date does not bind the Council to establishing limited access or other management programs for these fisheries, but it does notify current and prospective fishery participants that additional management measures may be taken by the Council for these fisheries.

⁴ Notification of this control date was published August 15, 2005 in the Federal Register, Vol. 70, No. 156

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Small boat Alternative 4. Increase data collection (Preferred)

Under this alternative, the Council would a) require federal permits and logbooks for all Hawaii-based small boat commercial pelagic fishermen; b) implement a voluntary reporting system for Hawaii-based small boat recreational pelagic fishermen; c) implement a targeted survey of all Hawaii-based small boat pelagic owners and operators to obtain information on their fishing effort and catches. Although the Council considered these measures in a comprehensive context (i.e. wherever such vessels operate) legal counsel has stated that the Council's authority does not extend into state waters and thus any resultant regulations would not apply in those areas.

9.3 Alternatives Considered but not Analyzed in Detail

Closure of all Council fisheries that catch bigeye or yellowfin tunas in the Pacific Ocean

Closing all fisheries under the Council's jurisdiction that catch bigeye or yellowfin tunas in the Pacific Ocean would appear to address the contribution to overfishing by U.S. vessels. However, as discussed above this unilateral action would place an unfair burden on U.S. fishermen and would not result in any significant impact on reducing bigeye and yellowfin fishing mortality. This is not consistent with the Council's objective of addressing overfishing in a cost-effective and equitable manner, or with the MSA Section 304(e)(4)(C) as described above. For these reasons this alternative was not analyzed in detail.

Time area closures of spawning areas or areas with high concentrations of juvenile bigeye or yellowfin tunas

The major fishing mortality impact on bigeye is generated by longline vessels; although the impact of purse seine caught juvenile bigeye has greatly exacerbated the overfishing problem on this species. By contrast, purse seine and other surface fisheries (pole-and-line etc.) are the main source of mortality for yellowfin tuna. One possible management approach might therefore be to look at areas of the ocean where juvenile bigeye and yellowfin tuna are caught in substantial quantities and develop time/area closures to minimize catches. However, a preliminary analysis investigating the catch of juvenile bigeye and yellowfin tunas by different purse seine fleets for the years 1989 through 2003 (SPC 2005), failed to identify any such juvenile 'hot spots' in the Western and Central Pacific. The IATTC has also analyzed time area closures for the Eastern Pacific for reducing purse seine catches of bigeye tuna. The IATTC has also tried to manage purse seine fishing around FADs in the Eastern Pacific since 1998, however, this was found to be difficult to implement due to disputes over when a purse seine set was actually a FAD set. Accordingly, the IATTC decided to simply close all purse seine fishing for two six week periods in 2004, 2005 and 2006. Similarly, the WCPFC has opted to follow the example of the IATTC to limit purse seine fishing effort by a combination of Vessel Day Scheme for PNA member countries, limitation of effort to either 2004 levels or the average of 2001 to 2004 for other CCMs and to develop a proposal for temporary purse seine closures at the third session of the WCPFC in December 2006.

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Moratorium on the expansion of longline fisheries in other parts of the Western Pacific Region (i.e. open access fisheries in Guam and CNMI)

Longline fishing is not currently conducted by fishermen based in other parts of the Council's jurisdiction. A blanket moratorium on future expansion of longlining in these areas was not analyzed in detail as it would be inequitable and discriminatory to allow longline fishing only in some parts of the Western Pacific. It would also be inconsistent with Section 2 (a)(10) which states that "Pacific Insular Areas [including Guam and CNMI] contain unique historical, cultural, legal, political, and geographical circumstances which make fisheries resources important in sustaining their economic growth". However, the control date recommended by the Council can be used to check unconstrained expansion of longline fishing in these areas.