

FISHERY MANAGEMENT PLAN  
FOR U.S. WEST COAST FISHERIES FOR  
HIGHLY MIGRATORY SPECIES

**APPENDIX J**

BIGEYE TUNA REBUILDING PLAN

Pacific Fishery Management Council

June 2007

Both the Pacific and Western Pacific Fishery Management Councils were notified by letter from NMFS dated December 15, 2004, that the Secretary of Commerce had determined that overfishing of bigeye tuna was occurring Pacific-wide. In response, the Council has articulated a strategy to address overfishing of bigeye tuna in the EPO. Together with action taken by the WPFMC, it is intended to end overfishing of bigeye tuna Pacific-wide. The specific actions to actually end overfishing would have to be developed by multilateral cooperation through appropriate regional fishery management organizations (RFMOs), and, as necessary, domestic regulation. The elements of the Council's strategy are described below.

As part of its strategy the Council recognizes that restrictions applied to a single fishery would be insufficient to curtail fishing mortality to a level not exceeding average MSY (AMSY). Therefore, restrictions on both longline and purse-seine fisheries are necessary to end overfishing.

## Management Objectives and Measures to Immediately End Overfishing

The Council will transmit recommendations for immediate specified reductions in fishing mortality to NMFS, the Department of State, and the U.S. delegations to Pacific tuna RFMOs. With regard to bigeye tuna in the EPO, the Council will work with the General Advisory Committee, established under the Tuna Conventions Act, and the U.S. Section to the Inter-American Tropical Tuna Commission (IATTC) to establish management goals to guide any necessary reductions in fishery-specific catch/effort in the EPO. To the extent practicable, these goals will be consistent with IATTC staff recommendations.

Based on stock assessments in 2005 (WCPFC 2005) and 2006 (IATTC 2006), fishing mortality on Pacific bigeye in the EPO by longline vessels must be reduced by 30 percent and purse fishing vessel mortality by 38 percent as compared to 2003-04 fishing levels. In the WCPO, fishing mortality on Pacific bigeye by longlines and purse seines must be reduced by 20 percent from 2001-03 levels for each gear type. Any specific fishery management measure adopted by the IATTC or the WCPFC should reflect traditional participation in fisheries. In coordination with the WPFMC these measures are cumulative across the two regions (EPO and WCPO) since although Pacific bigeye tuna is thought to be a single population, it is managed in two segments, fished by different fisheries and managed by two separate RFMOs. Specific catch/effort management goals may be revised over time to be consistent with changes in stock status. The following general principals should be adhered to when proposing management measures intended to meet these goals:

1. Use science-based measures that consider historical participation, and provide for sustained participation by local communities.
2. Strive for consistent measures (e.g., between the WCPO and EPO) where possible.
3. Focus on fisheries with the greatest impacts.
4. Focus on regions of highest catches and on spawning areas.
5. Reduce surplus capacity.
6. Restrict the use of purse seines set on fish aggregating devices (FADs).
7. Consider exempting fleets that catch less than 1 percent of the total Pacific-wide catch from some or all measures.<sup>1</sup>
8. Improve species-specific fishery monitoring.
9. 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, (2-6) are concerned with minimizing fishing mortality of bigeye, while the

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<sup>1</sup> With respect to exempting fleets with comparably minimal historical catch (e.g., less than 1 percent of the total), the Council supports using a formula such as that described in IATTC Resolution C-06-02. This resolution applies to longline vessels, but in the event of the adoption of national quotas applicable to a wider range of fisheries, a similar formula to accommodate traditional participation should be considered.

remainder are concerned with participation in fisheries and 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:

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

The Council may modify elements of its strategy, consistent with recommendations from IATTC staff or other scientific advisory bodies (such as the Councils' SSC), in order to further support ending overfishing on bigeye tuna in the EPO and Pacific-wide.

## Rationale for Recommendations

In proposing measures to the IATTC it is essential to avoid confusion and potential conflict between that organization and the WCPFC with respect to management measures regarding FMU species subject to overfishing. 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. The Pacific Council will principally focus on providing advice to the IATTC to address overfishing in the EPO, but as appropriate, may provide advice to the WCPFC for stocks, such as bigeye tuna, that for assessment purposes are considered a single, Pacific-wide stock.

The general recommendations outlined above, such as focusing on the fisheries with the greatest impacts and on the regions of highest catches and on spawning areas, reducing surplus capacity, and restricting the use of purse seine FADs, support the identification of those measures that will have a measurable impact on bigeye tuna conservation. Similarly, an exemption for those fleets that catch less than 1 percent of the total Pacific-wide catch (or some other, similar formula) 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 and other FMU stocks.

Reducing fishing capacity is a recognized goal and NMFS has stated that its target is to eliminate or significantly reduce overcapacity in 25 percent of federally-managed fisheries by the end of 2009 and in a substantial majority of fisheries in the following decade (NMFS 2004). 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 m<sup>3</sup> (well volume) for the total purse seine fleet in the Eastern Pacific, 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. Improvements to spawning stock biomass 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 MSA's National Standard 1 establishes 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 should propose reference points for relevant FMU species for consideration by the IATTC and the WCPFC. 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. Moreover, the United States, as a member of RFMOs, should establish and adhere to the general principles outlined above to guide the U.S. in developing and promoting conservation and management programs and associated monitoring and compliance.

## References

- IATTC (2006). Staff Recommendations on Conservation. IATTC 74th Meeting, Busan, Korea. La Jolla, Inter-American Tropical Tuna Commission.
- NMFS (2004). United States National Plan of Action for the Management of Fishing Capacity. Silver Spring MD, National Marine Fisheries Service.
- WCPFC (2005). Report of the first regular session of the Scientific Committee, Noumea, New Caledonia, 8-19 August, 2005. Pohnpei, FSM, Western and Central Pacific Fishery Commission.