



**Summary of  
Modifications to the Territorial Catch, Effort, and Allocation Limits Measure  
and  
Multi-Year Territorial Bigeye Tuna Catch/Allocation Limits**

**194<sup>th</sup> Council Meeting  
March 2023  
Guam**

**Abstract**

This document summarizes a proposed Amendment (pending Amendment 11) to the Fishery Ecosystem Plan for Pelagic Fisheries of the Western Pacific Region ('Pelagic FEP' or PFEP) by the Western Pacific Regional Fishery Management Council (Council) for reconsideration of initial action at its 194<sup>th</sup> Meeting. Amendment 11 would allow the flexibility for the Council to amend the territorial catch/effort and allocation limit framework of the Pelagic FEP (Amendment 7) by: 1) providing flexibility to specify multi-year limits of pelagic management unit species (PMUS) catch or associated effort that may be allocated from the US Pacific Island Territories of American Samoa, Guam, and the Commonwealth of Northern Mariana Islands (CNMI) to U.S.-flagged longline vessels; and 2) providing that the Council may recommend territorial allocation limits without requiring that the Council also recommend territorial catch or effort limits. The Council initially proposed Amendment 11 to the Pelagic FEP in 2018 and took final action in 2019. However, it has not been promulgated into regulation. The Council may consider reinitiating Amendment 11 but also consider timing of a multi-year specification (how many fishing years, structure of agreement timing) and how many agreements can be made per U.S. Pacific Territory with U.S.-flagged vessels.

In addition to a framework modification under Amendment 11, the Council may also consider specifying multi-year catch or effort limits of the annual longline bigeye tuna (hereafter, bigeye) limits that may be allocated from US Pacific Island Territories to U.S.-flagged vessels based out of Hawaii. The Council may or may not deem it necessary to have catch or effort limits of bigeye for the U.S. Pacific Island Territories under the proposed framework modifications.

**1. U.S. Territorial Catch/Effort and Allocation Limits**

**Overview of Framework to Establish U.S. Territorial Catch and Allocation Limits**

In November 2011, the U.S. Congress passed the Consolidated and Further Continuing Appropriations Act of 2012 or CFCAA (Pub. Law 112-55, 125 Stat. 552 *et seq.*). Section 113 of the CFCAA (hereafter Section 113) authorized American Samoa, Guam and the Northern Mariana Islands to use, assign, allocate and manage their catch and effort for highly migratory species,

including PMUS, through fishing arrangement with U.S. vessels permitted under the PFEP to support fisheries development in the U.S. territories. Section 113 also directed the Council to recommend an amendment to the PFEP and associated regulations to implement Section 113 under the authority of the Magnuson-Stevens Act. Consistent with Section 113, the Council in 2014, developed and NMFS approved Amendment 7 to the PFEP. Regulations implementing Amendment 7 became effective on October 24, 2014.

Amendment 7 to the Pelagic FEP established the framework to specify catch and/or effort limits for pelagic fisheries in American Samoa, Guam and the CNMI, collectively termed the U.S. Participating Territories. The process involves the Council annually recommending catch or fishing effort limits that may also include authorization for the governments of each U.S. Participating Territory to allocate a portion of its catch or fishing effort limits to a U.S. fishing vessel permitted under the PFEP.

Amendment 7 also established criteria that a specified fishing agreement must satisfy, which include among other requirements, that agreements identify those vessels subject to the agreement, and that such vessels land fish in the territory, or deposit funds into the Western Pacific Sustainable Fisheries Fund (WP SFF). Pursuant to Section 204(e)(4) of the Magnuson-Stevens Act, funds deposited into the WP SFF may be used for the implementation of a marine conservation plan (MCP). See 50 CFR 665.819 for regulations implementing Amendment 7.

Because a specification under Amendment 7 is annual action, analysis and administrative procedures related to the National Environmental Protection Act (NEPA) must be updated with each annual specification. The Council and NMFS must also review and approve the annual limits and Specified Fishing Agreements in order for them to be implemented.

### **Timeline and Overview of Annual Territorial Bigeye Tuna Catch and Allocation Limits**

At the time Amendment 7 was proposed and promulgated, the Western and Central Pacific (WCPO) bigeye tuna stock was considered to be experiencing overfishing per status determination criteria under the Pelagic FEP based on best scientific information available (BSIA). Therefore the Council and NMFS found it necessary to set catch limits for U.S. Participating Territories in order to transfer a portion of catch or effort from any U.S. Participating Territory to other U.S. fishing vessels. Since 2017, updated BSIA has rendered the WCPO bigeye tuna stock to not be overfished and to not be experiencing overfishing.

From 2014 to 2019, the Council had recommended, and NMFS has approved, a limit of 2,000 metric tons (mt) of longline-caught bigeye tuna for pelagic fisheries of each U.S. participating territory, and authorized each U.S. territory to allocate up to 1,000 mt of its 2,000-mt bigeye tuna limit to a U.S. longline fishing vessel or vessels identified in a Specified Fishing Agreement. This would allow up to 3,000 mt of bigeye tuna catch allocation to be transferred from the three U.S. Participating Territories to U.S. longline vessels.

At its 178th Meeting in June 2019, the Council voted, under Amendment 9 (since enumerated to Amendment 11) to the PFEP, to set multi-year catch and/or effort limits for pelagic fisheries in the U.S. Participating Territories, remove catch limits for the U.S. Participating Territories, and made

specifications of catch allocation limits (1500 mt) from territories to U.S. fishing vessels through 2023. This has since been the *preferred alternative* for Amendment 11. Amendment 11 has yet to go through the rule-making processes due to administrative timing. A Biological Opinion (BiOp) pursuant to Section 7 of the Endangered Species Act (ESA) has been pending since 2018 for the U.S. Hawaii deep-set longline fishery, rendering uncertainty in the ability to implement Amendment 11 into regulation with specification for bigeye tuna. A new BiOp is expected May 2023. Furthermore, an update in BSIA for bigeye and yellowfin tuna was provided in 2020 and it is anticipated in August 2023.

Since 2020, the Council had recommended (under Amendment 7) and NMFS has approved and authorized each U.S. territory to allocate up to 1,500 mt of its 2,000-mt bigeye tuna limit to a U.S. longline fishing vessel or vessels identified in a Specified Fishing Agreement – but total allocations not to exceed 3,000 mt. On December 28, 2019, the US deep-set longline fishery closed before the end of the 2019 fishing year, because only two U.S. Participating Territories were able to agree on Specified Fishing Agreements. Thus only up to 2,000 mt of allocation transfers were available for fishing year 2019. As a result, the Council, at its 181<sup>st</sup> Meeting recommended for fishing year 2020, a catch limit of 2,000 mt for each US Participating Territory and specify that each US Participating Territory can allocate up to 1,500 mt of their bigeye tuna catch limit through specified fishing agreements with eligible US longline vessels permitted under the Pelagic FEP. The Council further recommended NMFS not authorize more than 3,000 mt in total allocations in 2020. This was to ensure that environmental impacts were to remain consistent with potential total catches attributed to US and US Participating Territories in previous years. The same specifications were made for fishing years 2021, 2022, and 2023.

Council action on Amendment 11 would require new NEPA analyses from an Environmental Assessment (EA). An EA was most recently conducted in 2019 (NMFS, 2019) for specifications under Amendment 7. A EA was drafted for Amendment 11 and is in progress. The Council is also awaiting a BiOp for the Hawaii deep-set longline fishery. The BiOp will determine if reasonable and prudent measures (RPMs) or Reasonable and Prudent Alternatives (RPAs) are needed to satisfy provisions of the ESA, which may render a need for further analyses under NEPA and other applicable laws. A new stock assessment for WCPO bigeye tuna is also anticipated in 2023, conducted by scientific staff of the Pacific Community (SPC).

## **2. International Management and Stock Status of WCPO Bigeye Tuna**

The Western and Central Pacific Fisheries Commission (WCPFC) is a regional fisheries management organization (RFMO) that internationally manages highly migratory fish stocks (HMS) in the WCPO. The WCPFC is comprised of 26 members, 7 participating territories, and 6 cooperating non- members.<sup>1</sup> Conservation and management measures (CMM) for HMS are agreed

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<sup>1</sup> **Members:** Australia, China, Canada, Cook Islands, European Union, Federated States of Micronesia, Fiji, France, Indonesia, Japan, Kiribati, Republic of Korea, Republic of Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America, Vanuatu.

**Participating Territories:** American Samoa, Commonwealth of the Northern Mariana Islands, French Polynesia, Guam, New Caledonia, Tokelau, Wallis and Futuna

**Cooperating Non-member(s):** Ecuador, El Salvador, Liberia, Mexico, Panama, Thailand, Vietnam.

to by the WCPFC and then implemented under domestic law by members and cooperating non-members. The current CMM for tropical tunas, CMM 2021-01, assigns catch limits for bigeye tuna in longline fisheries and effort limit regimes for purse seine fisheries. That catch limit for U.S. longline fisheries is 3,554 mt. This catch limit is discussed further in Section 5 of this document and considered in stock impact analyses discussed in Section 4.

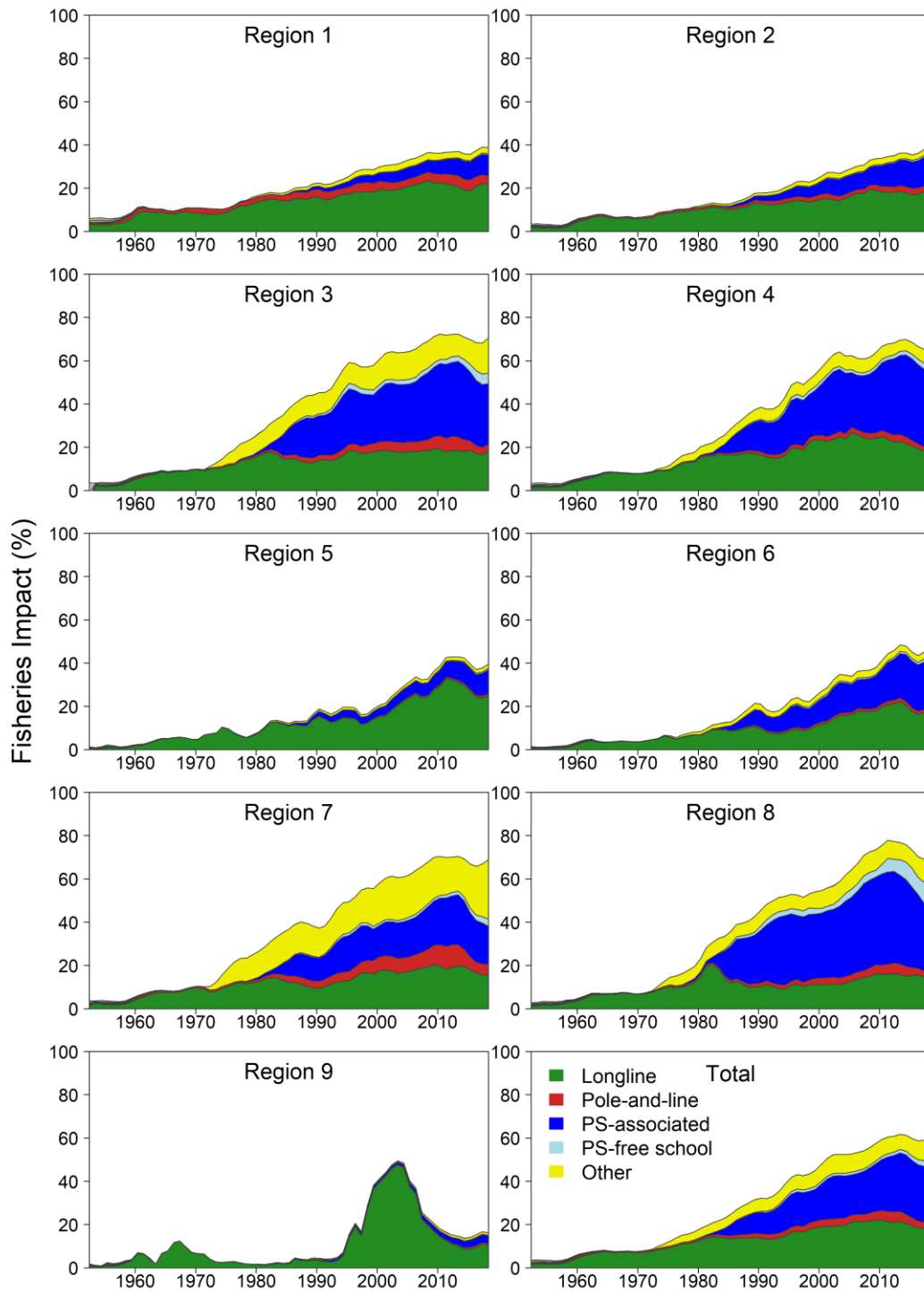
Under Article 43 of the Honolulu Convention, American Samoa, Guam, and CNMI are provided the status of Participating Territories of the Western and Central Pacific Fisheries Commission (WCPFC). The US Participating Territories also grouped among Small Island Developing States and Territories within WCPFC conservation and management measures, and as such, may receive different catch and effort allocations than the US, which is a contracting party (member) of the WCPFC.

### WCPO Bigeye Tuna Stock Status

The Secretariat of the Pacific Community (SPC) prepared the most recent stock assessment for WCPO bigeye tuna August 2020, which covers bigeye tuna from Indonesia in the far western Pacific, to the 150° W. meridian in the central Pacific Ocean (Ducharme-Barth et al, 2020). The WCPFC Scientific Committee (SC) reviewed and endorsed the 2020 bigeye stock assessment at its Sixteenth Regular Session (SC16) as the most advanced and comprehensive assessment yet conducted for this species. SC16 also endorsed the use of the assessment model uncertainty grid, an ensemble of model runs under varying plausible configurations, as best available scientific information to characterize stock status and management advice. SC16 recommended to retain only model runs with newest growth information, comprising 36 model configurations and noted variance in the assessment results with respect to regional stock structure. The resulting uncertainty grid was used to characterize stock status, to summarize reference points and to calculate the probability of breaching the Commission-adopted spawning biomass limit reference point (LRP) of 20% unfished biomass, whereas  $0.2 * SB_{F=0}$  and  $F_{recent}$  being greater than  $F_{MSY}$  (Table 1).

**Table 1. Stock assessment reference points and outputs from Ducharme-Barth et al, 2020.**

	Mean	Median	Minimum	10 <sup>th</sup> percentile	90 <sup>th</sup> percentile	Maximum
$C_{latest}$	159,738	159,288	157,297	157,722	162,033	162,271
$Y_{Recent}$	136,568	134,940	117,800	124,668	149,424	161,520
$f_{mult}$	1.45	1.38	0.83	0.98	2.03	2.33
$F_{MSY}$	0.05	0.05	0.04	0.04	0.07	0.07
MSY	146,715	140,720	117,920	125,628	179,164	187,520
$F_{recent}/F_{MSY}$	0.74	0.72	0.43	0.49	1.02	1.21
$SB_{F=0}$	1,395,173	1,353,367	903,708	982,103	1,780,138	1,908,636
$SB_{MSY}$	320,162	321,550	192,500	219,810	443,730	482,700
$SB_{MSY}/SB_{F=0}$	0.23	0.23	0.19	0.2	0.26	0.26
$SB_{latest}/SB_{F=0}$	0.38	0.38	0.23	0.3	0.47	0.51
$SB_{latest}/SB_{MSY}$	1.7	1.67	0.95	1.23	2.15	2.6
$SB_{recent}/SB_{F=0}$	0.4	0.41	0.21	0.27	0.52	0.55
$SB_{recent}/SB_{MSY}$	1.78	1.83	0.87	1.18	2.32	2.84



**Figure 1. Estimates of reduction in spawning potential due to fishing (fishery impact =  $(1 - SB_t/SB_{t;F=0}) * 100\%$ ) by region, and over all regions (lower right panel), attributed to various fishery groups for the diagnostic model from Ducharme-Barth et al (2020). Region 2 includes operation of Hawaii-based longline fishery.**

Based on the uncertainty grid adopted by SC16, the WCPO bigeye tuna spawning biomass is likely above the MSST of the Pelagics FEP and the WCPFC's biomass LRP. Additionally, recent  $F$  is likely below  $F_{MSY}$  (MFMT). Therefore noting the level of uncertainties in the current assessment it appears that the stock is not experiencing overfishing or is in an overfished state. Based on the WCPFC LRP, the SC16 noted that there was 0% probability (0 out of 24 models) that the recent (2015-2018) spawning biomass had breached the adopted LRP and there was 12.5% probability (3 out of 24 models) that the recent (2014-2017) fishing mortality was above  $F_{MSY}$ .

The majority of fishing effort by the U.S. longline fishery operating out of Hawaii occurs north of 20° N in Region 2 (Figure 1), where stock depletion is among the lowest in regional estimates (Ducharme-Barth, 2020). Moreover, 98% of bigeye tuna caught by this fishery occurs north of 10° N, which is above the core equatorial zone of the heaviest purse seine and longline fishing (NMFS unpublished data). SC16 noted that the region where the US fishery operates has some of the lowest relative regional depletion and serves as a 'buffer' for the stock. According to the PFEP status determination criteria, the WCPO bigeye tuna stock is not overfished or experiencing overfishing.

### **3. Alternatives Previous Considered Under Amendment 11**

The Council developed two alternatives for modification of the territorial catch, effort, and allocation limits measure that meet the purpose and need for the proposed action: 1) no change to the measure, and 2) modifying the measure to decouple the catch or effort and allocation limits and allow multi-year limits. There are no potential effects on the environment, fisheries, or management setting purely from modifying the measure, which is an administrative change. Actions implemented under the measure (i.e., bigeye tuna catch and allocations limits), however, have the potential to affect the environment, fisheries, and the management setting.

From 2014 to 2019, the Council had recommended annual longline bigeye catch limits of 2,000 mt for each U.S. participating territory and recommended that each territory could allocate up to 1,000 mt of that limit. Since 2020, the Council recommended allocation limits up to 1,500 mt per U.S. Participating Territory, with total allocations not to exceed 3,000 mt. The Council made these recommendations taking into account WCPFC decisions, Magnuson-Stevens Act requirements, other applicable law, and bigeye tuna stock status. Prior to 2017, the SPC assessed bigeye tuna as experiencing overfishing. As previously mentioned, the best scientific information available indicates that bigeye is no longer experiencing overfishing. In light of the updated and improved stock status of WCPO bigeye tuna since 2017 and recent BSIA (Ducharme-Barth, 2020), the Council considered the projected impact of various catch and attribution scenarios on the stock (Section 4). The analyses in Section 4 assumes that under CMM 2021-01, the countries with annual longline bigeye tuna catch limits in excess of 2,000 t would each catch their full annual limit, and longline fleets without limits would catch their average 2013-2015 levels every year until 2045. The results indicate that under all levels of U.S. territorial catch and allocation limits analyzed, including an allocation limit of 3,000 t per U.S. participating territory, WCPO bigeye tuna would not be subject to overfishing or overfished in 2045. CMM 2021-01, which the WCPFC may re-negotiate in 2023, does not expire until the end of 2023.

The Council at its June 2019 and June 2021 meetings considered recommending bigeye tuna catch and/or allocation limits assuming the proposed modifications to the measure and various levels of

catch allocated among the U.S. and U.S. participating territory longline fleets. These sub-alternatives address the purpose and need for bigeye tuna catch and/or allocation limits and will need to be further analyzed in an updated EA.

Previous analyzed alternatives and sub-alternatives with associated outcomes included:

- (1) No change to the measure
  - a. Do not specify territory bigeye tuna catch or allocation limits (No Management Action); and
  - b. Specify for each U.S. participating territory, a 2,000 mt catch limit and 1,000 mt allocation limit (Status Quo).
- (2) Modify Measure
  - a. Specify for each U.S. participating territory no catch limit and an allocation limit of 1,000 mt;
  - b. Specify for each U.S. participating territory no catch limit and an allocation limit of 1,500 mt (Previous Preferred Alternative);**
  - c. Specify for each U.S. participating territory no catch limit and an allocation limit of 2,000 mt;
  - d. Specify for each U.S. participating territory no catch limit and an allocation limit of 3,000 mt (for comparative purposes only);

**Table 2: Comparison of Implementation Features between Previously Considered Alternatives**

<b>Topic</b>	<b>Alternative 1: No Change to Measure (No Action)</b>	<b>Alternative 2: Modify Measure (Preferred)</b>
Catch or Effort Limits	Required in order for a U.S. participating territory to transfer catch or effort to U.S. vessels fishing under approved specified fishing agreements Expire at the end of the fishing year; annual limits only	Not required in order for a U.S. participating territory to transfer catch or effort to U.S. vessels fishing under approved specified fishing agreements; but available, if necessary Expire at the end of the recommended fishing year or when modified or rescinded; annual or multi-year limits
Authority to Transfer	NMFS could authorize transfer up to the allocation limit Transfer occurs between vessels permitted under the Pelagics FEP and U.S. participating territory government through a specified fishing agreement	No change
Maximum Transferable Limits	Recommended by the Council Expire at the end of the fishing year	Recommended by the Council Expire at the end of the recommended fishing year or when modified or rescinded
Method of Implementation	Specification	Specification or Regulation
Council Review	Annual review of catch or effort limits provided to the U.S. participating territories by the WCPFC, the conservation status of the fishery resource, and the needs of	No change

Topic	Alternative 1: No Change to Measure (No Action)	Alternative 2: Modify Measure (Preferred)
	fishing communities dependent on the particular fishery resource	
Territory agreement criteria	Agreement must either provide a landing requirement to offload catch in the ports of the territory for which the agreement exists or deposits of sufficient amount to substantially contribute to MCP fisheries development objectives under the agreement must be made to the WP SFF	Need further analyses on whether multiple agreements may be made between U.S. Participating Territories and U.S. fishing vessels.
Approval of specified fishing agreements	U.S. participating territory governments submit agreement to Council Executive Director and NMFS for review for consistency with Pelagics FEP, implementing regulations, and other applicable law and if consistent, transmits with written recommendation to NMFS RA for review. Effective within 30 days of submission unless RA provides written notice to each party that the agreement fails to comply with applicable requirements.	No change
Catch Attribution	For the purposes of annual reporting to the WCPFC, NMFS attributes catch or effort made under an effective specified fishing agreement to the territory party to the agreement. Attribution starts seven days before NMFS projects the U.S. limit to be reached, or upon the effective date of the agreement, whichever is later. NMFS attributes catches above the allocation limit back to the U.S. or U.S. participating territory to which the vessel(s) is registered and permitted.	No change
Accountability Measures	NMFS will monitor catch and fishing effort with respect to any territorial catch/effort and/or allocation limit. When NMFS projects a catch/effort and/or allocation limit to be reached, the RA will publish a notice restricting fishing which may include, but is not limited to, a prohibition on retention, closure of a fishery, closure of specific areas, or other catch or fishing effort restrictions. The restriction will remain in effect until the end of the fishing year.	No change



#### **4. Impact of Considered Alternatives on WCPO Bigeye Tuna Stock**

The SPC, upon request from WCPFC members, conducts stock projections into the future based on anticipated levels of catch and fishing effort. The draft EA (WPRFMC, 2019) includes analyses by Kingma and Bigelow (2019, 'Evaluation of US Territorial Bigeye Tuna Catch and Allocation Limits') in Appendix A. This analyses includes projected stock impacts based on levels of future fishing into 2045 using the 2018 stock assessment for WCPO bigeye tuna, as provided by the SPC. Projections are modeled into 2045, so that population affects can be inferred by a stable stock at equilibrium. Baseline catches assumed into the future are 2012-2015 levels of purse seine and longline catches affecting the WCPO bigeye stock. Catch scenarios are augmented by increased U.S. longline bigeye tuna catches from various allocation agreements between U.S. longline vessels and U.S. Participating Territories. Probabilities associated with an overfishing relative to  $F_{MSY}$  or overfished stock biomass relative to an LRP of 20%  $SB/SB_{F=0}$  are updated from SPC 2021 analyses (SPC Ocean Fisheries Programme, 2021). Stock projections assume population recruitment to be from 'recent' years as described by the 16<sup>th</sup> Science Committee of the WCPFC (2020). Table 3 summarizes risks under previously considered alternative described in Section 3. This information will be updated following a new stock assessment, presented to the WCPFC Science Committee in August 2023.

**Table 3: Summary of Impacts on WCPO Bigeye (BET) Stock Based on Catch and Allocation Scenarios Previously Considered for Amendment 11.**

	No catch or allocation limit		<u>No Catch Limits</u> and up to 2,000 mt Allocation Limit for each U.S. Participating Territory					
No. of U.S. Participating Territories and Total Transfers	No Fishing Agreements and No BET Transfers		3 U.S. Participating Territories and 3,000 mt of BET Transfers		3 U.S. Participating Territories and 4,500 mt of BET Transfers ( <i>Previous Preferred Alternative</i> )		3 U.S. Participating Territories and 6,000 mt of BET Transfers	
Total assumed BET Catch by U.S. and U.S. Participating Territory Longline Vessels	4,095 t		7,095 t		8,595 mt		10,095 t	
Scaled U.S. Longline BET Catch	3,998 mt		6,963 mt		8,498 mt		9,998 mt	
	HI: 3,554 HI/AS Dual: 444 Transfers: 0		HI: 3,554 HI/AS Dual: 444 Transfers: 3,000		HI: 3,554 HI/AS Dual: 444 Transfers: 4,500		HI: 3,554 HI/AS Dual: 444 Transfers: 6,000	
		Percent Change		Percent Change		Percent Change		Percent Change
$F_{2045}/F_{MSY}$	<b>0.82</b>	0.0	<b>0.85</b>	3.6	<b>0.86</b>	4.9	<b>0.87</b>	6.0
$SB_{2045}/SB_{F=0}$	<b>0.38</b>	0.0	<b>0.37</b>	-2.6	<b>0.37</b>	-2.6	<b>0.36</b>	-5.5
Probability Overfishing in 2045	0%		0%		0%		0%	
Probability Overfished in 2045	0%		0%		0%		0%	

## 5. Summary of Other Considerations for Council Decisions

The Council had selected previous preferred alternatives for modification of Amendment 7 framework with multi-year specifications for U.S. Territorial longline allocation limits. However, some previously analyzed alternatives may need further analyses as anticipated future information is provided or for needed clarifications on modifications to the territorial catch and allocation measure. This may include BiOps, new stock assessments, or speculative changes to international management. The Council will also need to consider current fishery performance and optimal fishery production for the U.S. longline fishery relative to its current capacity.

### Anticipated or Needed New Information in 2023

Issue	Anticipated Timing
BiOp for the Hawaii Deep-Set Longline Fishery – A new BiOp may render reasonable or prudent measures (RPMs) or reasonable and prudent alternatives (RPAs). Implementation of RPMs or RPAs may need full analyses and may need implementation before proceeding with Amendment 11. Analyses may need to be analyzed in a Programmatic Environmental Impact Statement (EIS) or may be covered under a thorough EA.	May 2023
New stock assessment for WCPO bigeye tuna – A new stock assessment is expected but little changes are anticipated. However, a new stock assessment with projections on catch scenarios will be needed to update analyses presented in Section 4.	August 2023
Speculation of a new WCPFC tropical tuna CMM – although purely speculative, range of analyses should consider possible catch increases under the WCPFC based on projection analyses.	December 2023
Nature of territorial agreements – analyses on allowing multiple U.S. vessels to have concurrent agreements with a U.S. Participating Territory needs to be conducted. Review of regulatory changes to consider such a change will also need to be analyzed.	Ongoing

### Fishery Performance of the Hawaii Deep-set Longline Fishery

Since 2015, the total catch of bigeye tunas (in numbers) by Hawaii longline fleet has stabilized and been higher than the previous decades, but with 2020 and 2021 showing declines (Figure 3). These declines are likely associated with COVID-19 inhibiting fishing operations and La Nina oceanographic conditions altering tuna distributions. Associated catches of yellowfin tuna have increase over two-fold since 2015, though slightly declining since 2019 from an all-time high in 2017. Since the 2015 peak in CPUE for bigeye in the Hawaii deep-set longline fishery has experienced a gradual decline, with 2021 being the worst year on record since 2012 (Figure 4; WPRFMC, 2022). CPUE for yellowfin increased in 2021.

In 2018 and 2019, fishing effort for the deep-set fishery continued to increase to over 62 million hooks in 2019 (Figure 2; WPRFMC, 2022) while the catch (mt kept) per unit effort (CPUE, hooks) for bigeye tuna by the Hawaii longline fleet exhibited higher than the preceding 2007-14 average, based on nominal (not standardized) CPUE (Figure 4; WPRFMC, 2022). Furthermore, since 2014,

the average size of bigeye tuna may have increased, thus rendering high tonnage of bigeye tuna per deep-set effort. Both of these factors, combined with phased catch limit reductions, have contributed to the Hawaii longline fishery reaching the US WCPO longline bigeye limit sooner than in previous years.

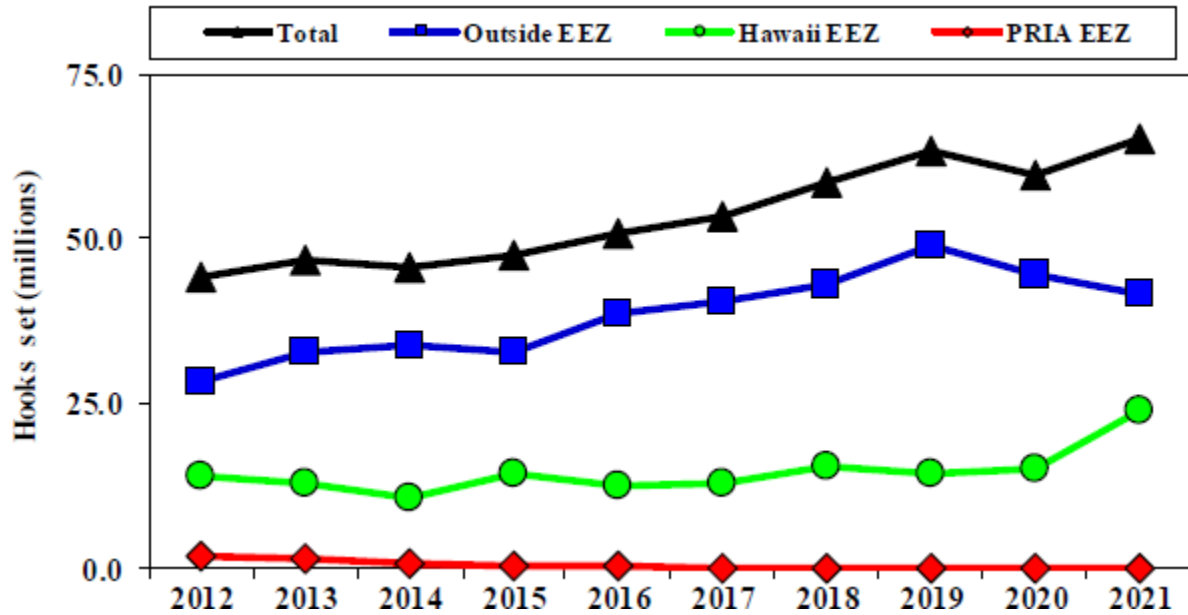


Figure 2: Number of hooks set by the Hawaii i-permitted deep-set longline fishery, 2012-2021.

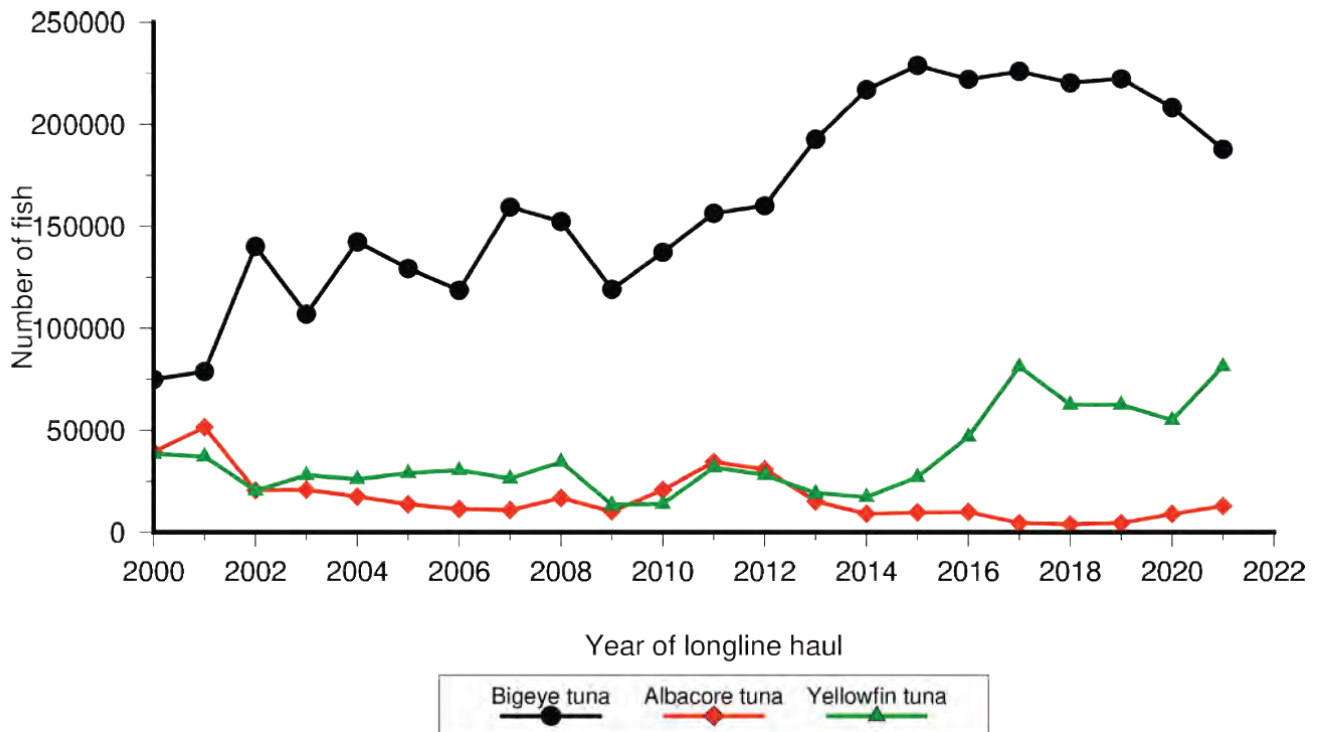
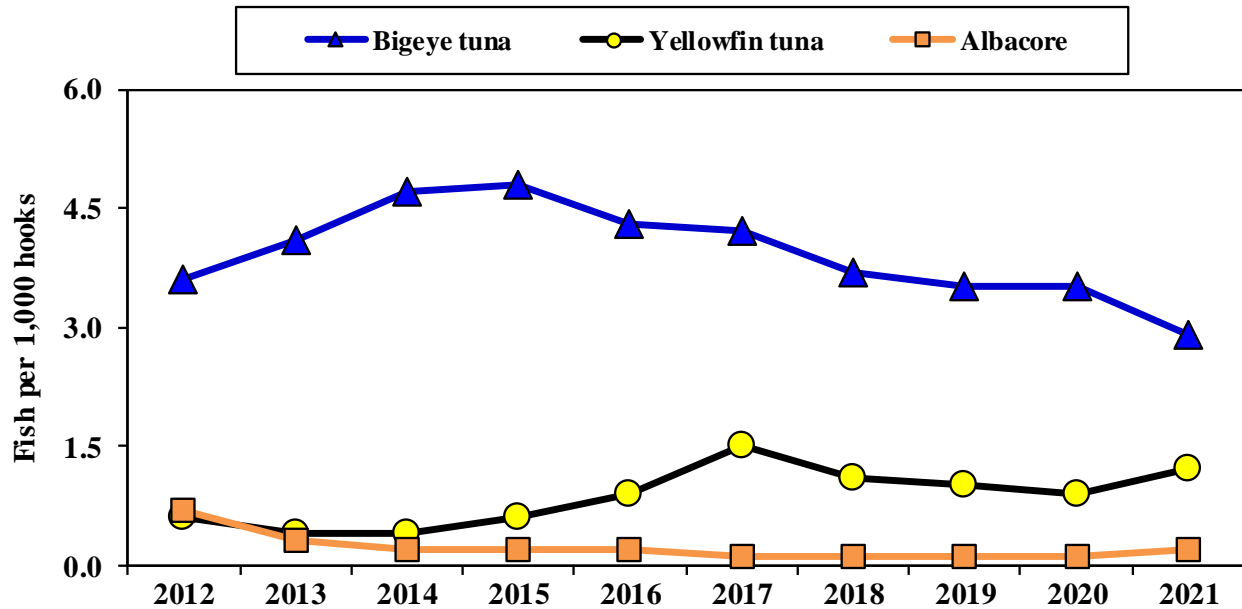


Figure 3: Total catch of tunas in the Hawaii longline fishery (in numbers caught) 2000-2021.



**Figure 4: Catch per unit effort (CPUE) of tunas in the Hawaii deep-set longline fishery, in fish per 1,000 hooks, 2012-2021.**

### **Possibility of Changes to WCPFC Management Measures**

The annual U.S. WCPO longline bigeye limits are principally applicable to the Hawaii longline deep-set fishery, which historically has landed over 5,000 mt of bigeye in Honolulu. There are less than 10 longline vessels based in southern California, which occasionally fish in the WCPO for bigeye tuna. Under CMM 2008-01, the US WCPO longline bigeye limit was 3,763 mt from years 2009-2014. Since 2015 and under the current CMM 2021-01, the US WCPO longline bigeye limit was reduced to 3,554 mt. CMM 2021-01 expires at the end of 2023 with catch limits specified by Table 4.

The current U.S. position is to increase catch limits for U.S. longline fisheries under CMM 2021-01. An increase in U.S. longline catch limits under a new WCPFC CMM for tropical tunas may reduce the need for increased U.S. territorial bigeye tuna allocations for U.S. longline vessels. Analyses provided in Section 4 likely includes a range of alternatives and associated impacts on the WCPO stock that may include a plausible increase in a U.S. longline catch limit with allocation limits with catches consistent with the U.S. fishery’s capacity (U.S. catches up to 9,998 mt).

**Table 4: Annual WCPO Bigeye Longline Catch limits (mt) Adopted by the WCPFC (CMM 2021-01)**

<b>CCM</b>	<b>Recent Catch (mt)*</b>	<b>2022 Catch limit (mt)</b>	<b>2023 Catch limit (mt)</b>
Japan	12,791	17,765	17,765
Korea	13,011	13,942	13,942
Chinese Taipei	7,519	10,481	10,481
China	7,416	8,724	8,724
Indonesia	638	5,889	5,889
<b>USA</b>	<b>3,548</b>	<b>3,358</b>	<b>3,554</b>
Australia	290	2000	2000
New Zealand	67	2000	2000
Philippines	0	2000	2000
EU	40	2000	2000
SIDS & PTs	12,455	N/A	N/A

## 6. References

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