



**NORTHERN COMMITTEE
TWELFTH REGULAR SESSION**

Fukuoka, Japan
29 August – 2 September 2016

**Proposed amendment to the current CMM 2015-04
(CMM to establish a multi-annual rebuilding plan for PBF)**

WCPFC-NC12-2016/DP-14

KOREA

PROPOSED AMENDMENT TO CONSERVATION AND MANAGEMENT MEASURE TO ESTABLISH A MULTI-ANNUAL REBUILDING PLAN FOR PACIFIC BLUEFIN TUNA

Proposal by the Republic of Korea
to the Twelfth Regular Session of the Northern Committee
of the Western and Central Pacific Fisheries Commission

Explanatory Note

1. Introduction

Korea proposes that:

- the reference weight of juvenile pacific bluefin tuna (PBF) be increased from the current 30kg to 80kg, taking into account the advice from the ISC that upwardly adjusting the size in the definition of “small fish (i.e., 50kg or 80kg)” could be one of management options that contribute to increasing the probability of achieving the WCPFC’s initial target (SSB_{MED} by 2024); and
- the monitoring, control and surveillance (MCS) for the farming of PBF be strengthened through proper monitoring tools (e.g. PBF farming observers, stereo video, etc)

2. Expected Conservation Effects

In 2016, the ISC’s Pacific Bluefin Tuna Working Group (PBFWG) laid out 11 harvesting scenarios based on the same reference fishing mortality between 2002-2004. Scenarios 3 and 4 assumed the threshold of small and large fish as 50kg and 80kg, respectively (Table 1), with a slight decrease in the catch of small fish in the Eastern Pacific Ocean (EPO).

Table 1. Future projection scenarios of PBF and their probability of achieving various target levels by various time schedules based on the base-case model

Harvesting Scenario#	Fishing mortality	Catch limit		Threshold of small/large	Recruitment scenario	Probability that SSB exceeds 38,000 t (bootstrap)	41,000	43,000	10%SSB0			20%SSB0			Average Catch		
		small	large				2024	2024	2024	2024	2029	2034	2024	2029	2034	2019	2024
							2024	2024	2024	2024	2029	2034	2024	2029	2034	2019	2024
scenario 1		scenario 6 in 2014 assessment			Low recruitment	77.0%	69.7%	64.3%	14.7%	28.0%	31.8%	0.0%	0.0%	0.1%	11619.2	13574.9	
scenario 2		50% of 02-04 average catch for WPO fisheries and 3300 tons for EPO commercial fisheries	02-04 average catch for WPO fisheries	30kg	Low recruitment	69.3%	61.5%	56.1%	13.6%	29.3%	35.4%	0.1%	0.4%	0.6%	11749.7	12994.2	
					average recruitment	99.6%	99.3%	99.3%	96.3%	99.8%	100%	73.8%	95.0%	98.0%	12958.4	14750.8	
					Stock Recruit relationship w/h=0.9	98.2%	97.7%	97.5%	93.5%	99.4%	99.9%	72.0%	97.3%	99.6%	13087.3	15020.1	
scenario 3	2002-2004	50% of 02-04 average catch		50kg	Low recruitment	80.5%	73.8%	69.1%	22.2%	43.6%	51.7%	0.2%	0.9%	1.3%	11404.4	12672.3	
scenario 4				80kg	Low recruitment	86.4%	80.6%	76.6%	27.8%	51.8%	61.3%	0.2%	1.1%	1.6%	11292.6	12542.7	
scenario 5		90% of scenario 2	same as scenario 2	30kg	Low recruitment	90.0%	85.3%	81.5%	35.0%	61.7%	70.4%	0.3%	2.5%	3.7%	11306.4	12881.3	
					average recruitment	99.9%	99.9%	99.9%	98.4%	100%	100%	82.2%	97.8%	99.3%	12442.0	14126.3	
					Stock Recruit relationship w/h=0.9	99.4%	99.2%	99.1%	97.0%	99.8%	100%	81.8%	99.0%	99.9%	12576.4	14448.2	
scenario 6		same as scenario 2	90% of scenario 2	30kg	Low recruitment	75.3%	67.2%	61.7%	15.7%	32.5%	38.7%	0.1%	0.5%	0.7%	11496.2	12632.4	
					average recruitment	99.7%	99.6%	99.5%	96.8%	99.9%	100%	75.1%	95.2%	98.1%	12686.3	14071.5	
					Stock Recruit relationship w/h=0.9	98.9%	98.6%	98.4%	95.0%	99.7%	100%	75.5%	98.0%	99.9%	12761.0	14379.7	
scenario 7		90% of scenario 2		30kg	Low recruitment	90.3%	86.2%	82.7%	39.4%	68.0%	77.4%	0.5%	3.5%	5.6%	11231.0	12607.1	
					average	99.9%	99.9%	99.9%	98.5%	100%	100%	83.5%	98.1%	99.6%	12139.4	13461.7	

				recruitment											
				Stock Recruit relationship w/h=0.9	99.2%	99.1%	99.0%	96.9%	99.8%	100%	81.6%	99.0%	99.9%	11227.3	12461.8
scenario 8		80% of scenario 2	same as scenario 2	Low recruitment	97.5%	96.1%	94.8%	65.4%	89.2%	94.0%	1.9%	14.5%	22.8%	10922.8	12688.4
scenario 9		same as scenario 2	80% of scenario 2	Low recruitment	78.1%	70.4%	65.0%	18.4%	37.1%	44.7%	0.2%	0.6%	0.9%	11327.0	12329.9
scenario 10		80% of scenario 2		Low recruitment	98.3%	97.4%	96.3%	73.2%	93.8%	97.5%	3.1%	22.4%	34.1%	10585.9	11586.4
				average recruitment	100%	100%	100%	99.7%	100%	100%	91.0%	99.5%	100%	11194.1	12104.9
				Stock Recruit relationship w/h=0.9	99.8%	99.7%	99.7%	98.7%	100%	100%	90.0%	99.7%	100%	11227.3	12461.8
scenario 11	2011-2013	same as scenario 2	same as scenario 2	Low recruitment	82.6%	75.9%	71.3%	23.6%	46.2%	56.0%	0.3%	1.2%	1.6%	12266.8	13587.4

In the low recruitment condition, these two scenarios are expected to increase the probability of achieving the WCPFC’s initial target (SSB_{MED}, 38,000t) by 2024 to 80.5% and 86.4%, respectively.

The ISC also advised that (i) the weight threshold in the CMM needs to be increased to 85kg (weight of age 5) if the intent is to reduce catches on all juveniles according to the maturity ogive in the assessment and (ii) the impact of a fishery on a stock depends on both the number and size of the fish caught by each fleet, indicating that catching a high number of smaller juvenile fish can have a greater impact on future spawning stock biomass than catching the same weight of larger fish.

Taking into account the ISC’s advice, it would be more prudent for the conservation of the stock to increase the reference weight of juvenile PBF up to 85kg. This way, fishery impacts on the stock are expected to be lowered while maintaining the current catch limits in the WCPO.

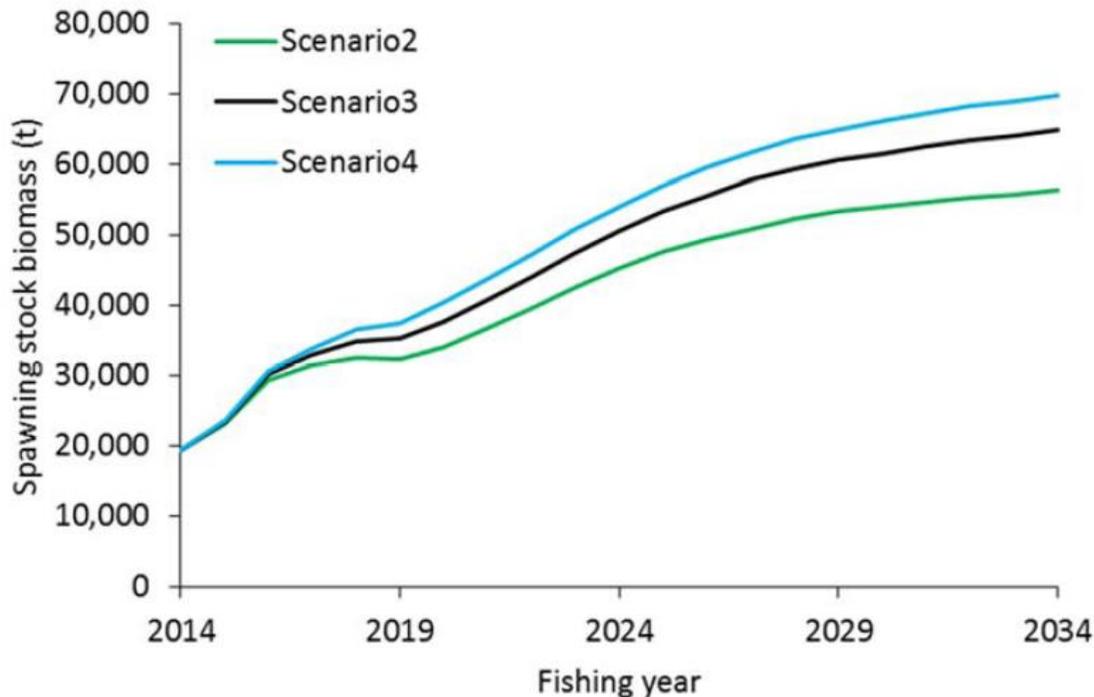


Figure 1. Comparisons of various projection results for PBF based on different definition of small fish 30kg-scenario 2 vs. 50kg-scenario 3 vs. 80kg-scenario 4 in low recruitment assumption)

**PROPOSED AMENDMENT TO CURRENT CMM 2015-04
(CONSERVATION AND MANAGEMENT MEASURE TO ESTABLISH
A MULTI-ANNUAL REBUILDING PLAN FOR PACIFIC BLUEFIN TUNA)**

Proposal by the Republic of Korea

The Western and Central Pacific Fisheries Commission (WCPFC):

Recognizing that WCPFC6 adopted Conservation and Management Measure for Pacific bluefin tuna (CMM 2009-07) and the measure was revised three times since then (CMM 2010-04, CMM 2012-06 and CMM 2013-09) based on the conservation advice from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) on this stock;

Expressing grave concern for the latest stock assessment provided by ISC Intercessional Plenary Meeting in March 2014 and 2016 indicating the following:

- The current (2012) Pacific bluefin tuna biomass level is near historically low levels and experiencing high exploitation rates above all biological reference points except for *Floss*;
- The average recruitment level for the last five years may have been below the historical average level;
- The recently adopted WCPFC CMM 2013-09 and IATTC resolution for 2014 (C-13-02), if continued in to the future, are not expected to increase spawning stock biomass (SSB) if recent low recruitment continues;
- If the low recruitment of recent years continues, the risk of SSB falling below its historically lowest level observed would increase;
- Further substantial reductions in fishing mortality and juvenile catch over the whole range of juvenile ages should be considered to reduce the risk SSB falling below its historically lowest level; ~~and~~
- Monitoring of recruitment should be strengthened to allow the trend of recruitment to be understood in a timely manner;—
- Catching a high number of smaller juvenile fish can have a greater impact on future spawning stock biomass than catching the same weight of larger fish;
- In the low recruitment condition, increasing the threshold of small/large fish to 50kg and 80kg are expected to increase the probability of achieving the WCPFC's initial target (SSB_{MED}, [38,000t]) by 2024 [to 80.5% and 86.4%,] respectively; and
- The weight threshold in the CMM needs to be increased to 85kg (weight of age 5) if the intent is to reduce catches on all juveniles according to the maturity ogive in the 2016 assessment.

Recognizing the importance of development of reference points for conservation and management of Pacific bluefin tuna in 2014; and

Further recalling that paragraph (4), Article 22 of the WCPFC Convention, which requires cooperation between the Commission and the IATTC to reach agreement to harmonize CMMs for fish stocks such as Pacific bluefin tuna that occur in the convention areas of both organizations;

Adopts, in accordance with Article 10 of the WCPFC Convention that:

General Provision

1. The Commission Members, Cooperating Non-Members and participating Territories (hereinafter referred to as CCMs) shall implement a provisional Multi-Annual Rebuilding Plan for Pacific bluefin tuna starting in 2015, with the initial goal of rebuilding the SSB to the historical median (42,592 t) within 10 years with at least 60% probability. Implementation and progress of this plan shall be reviewed based on the results of stock assessments and SSB projections to be conducted by ISC in 2016 and every three years thereafter. For this purpose, the ISC is requested to update the SSB projections for the harvest scenarios previously recommended by the WCPFC, along with any additional scenarios recommended by the Northern Committee. This CMM shall be amended if necessary upon such review.

2. The Northern Committee shall consider and develop reference points and harvest control rules for the long-term management of Pacific bluefin tuna at its meetings in 2015 and 2016. In light of the progress of this work, the provisional Multi-Annual Rebuilding plan provided in paragraph 1. shall be reviewed and, if necessary to rebuild the stock to a level consistent with the long-term management framework for the stock, amended in 2016.

Management measures

3. CCMs shall take measures necessary to ensure that:

(1) Total fishing effort by their vessel fishing for Pacific bluefin tuna in the area north of the 20° N shall stay below the 2002–2004 annual average levels.

(2) All catches of Pacific bluefin tuna less than ~~30-85~~kg shall be reduced to 50% of the 2002–2004 annual average levels. Any overage of the catch limit shall be deducted from the catch limit for the following year.

4. CCMs shall take every possible measure not to increase catches of Pacific bluefin tuna ~~30-85~~ kg or larger from the 2002–2004 annual average levels.

5. An emergency rule shall be developed in 2016 which stipulates specific rules all CCMs shall comply with when drastic drops of recruitment are detected.

6. CCMs shall report their 2002–2004 baseline fishing effort and ~~<30-85 kg and >=30-85 kg~~ catch levels for 2013 and 2014, by fishery, as referred to in the preceding two paragraphs, to the Executive Director by 31 July 2015. CCMs shall also report to the Executive Director by 31 July each year their fishing effort and ~~<30-85 kg and >=30-85 kg~~ catch levels, by fishery, for the previous year, accounting for all catches, including discards. The Executive Director will compile this information each year into an appropriate format for the use of the Northern Committee.

7. CCMs shall intensify cooperation for effective implementation of this CMM, including juvenile catch reduction.

8. CCMs, in particular those catching juvenile Pacific bluefin tuna, shall take measures to monitor and obtain prompt results of recruitment of juveniles each year.

8bis. CCMs that farm Pacific bluefin tuna, shall take measures to strengthen the monitoring, control and surveillance and data collection of farming activities for Pacific bluefin tuna, which may include farming observers and stereo video monitoring. The farming CCMs shall record and report all sources of mortality of Pacific bluefin tuna for farming, including towing mortality and farming mortality.

9. Consistent with their rights and obligations under international law, and in accordance with domestic

laws and regulations, CCMs shall, to the extent possible, take measures necessary to prevent commercial transaction of Pacific bluefin tuna and its products that undermine the effectiveness of this CMM, especially measures prescribed in the paragraph 3 above. CCMs shall cooperate for this purpose.

10. CCMs shall cooperate to establish a catch documentation scheme (CDS) to be applied to Pacific bluefin tuna as a matter of priority.

11. CCMs shall also take measures necessary to strengthen data collecting system for Pacific bluefin tuna fisheries in order to improve the data quality and timeliness of all the data reporting;

12. CCMs shall report to Executive Director by 31 July annually measures they used to implement paragraphs 3, 4, 6, 8, 9, 11 and 14 of this CMM. CCMs shall also monitor the international trade of the products derived from Pacific bluefin tuna and report the results to Executive Director by 31 July annually. The Northern Committee shall annually review those reports CCMs submit pursuant to this paragraph and if necessary, advise a CCM to take an action for enhancing its compliance with this CMM.

13. The WCPFC Executive Director shall communicate this Conservation Management Measure to the IATTC Secretariat and its contracting parties whose fishing vessels engage in fishing for Pacific bluefin tuna and request them to take equivalent measures in conformity with this CMM.

14. To enhance effectiveness of this measure, CCMs are encouraged to communicate with and, if appropriate, work with the concerned IATTC contracting parties bilaterally.

15. The provisions of paragraphs 3 and 4 shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the Convention Area whose current fishing activity for Pacific bluefin tuna is limited, but that have a real interest in fishing for the species, that may wish to develop their own fisheries for Pacific bluefin tuna in the future.

16. The provisions of paragraph 15 shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such developing coastal State, particularly Small Island Developing State Members or participating territories, unless such fishing is conducted in support of efforts by such Members and territories to develop their own domestic fisheries