

**JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE
MANAGEMENT OF PACIFIC BLUEFIN TUNA
EIGHTH SESSION (JWG-08)**

Fukuoka, Japan
3 – 5 July 2023

Japan's thoughts on Long-term/Interim Harvest Strategy for Pacific Bluefin Tuna

IATTC-NC-JWG08-2023/DP-16

1. LONG TERM HARVEST STRATEGY

(1) Candidate Reference Points and Harvest Control Rules

Japan appreciates IATTC-NC-JWG08-2023/DP-13 submitted by the U.S. that proposes refinement to candidate reference points and harvest control rules for Pacific bluefin tuna. Japan wishes to suggest adding the following combinations of candidate reference points and harvest control rules for the assessment by the ISC through the MSE process (Table 1).

Table 1: List of HCRs suggested by Japan for the ISC assessment through MSE

No.	HCR ^{*1}	LRP	ThRP	TRP	Fmin
Japan (1)	1a	10%SSB _{F=0}	20%SSB _{F=0}	FSPR30%	FSPR70%
Japan (2)	1a	10%SSB _{F=0}	20%SSB _{F=0}	FSPR25%	FSPR50%
Japan (3)	1a ^{*2}	20%SSB _{F=0}	20%SSB _{F=0}	FSPR30%	N/A ^{*2}
Japan (4)	2	N/A	20%SSB _{F=0}	FSPR30%	N/A
Japan (5)	2	N/A	20%SSB _{F=0}	FSPR20%	N/A
Japan (6)	2	N/A	15%SSB _{F=0}	FSPR25%	N/A

*1: As defined in Attachment F of JWG-04 Summary Report or Attachment G of NC15 Summary Report

*2: In this HCR, when %SSB_{F=0} is lower than ThRP (20%SSB_{F=0}), fishing intensity will be controlled by the management measures that were taken for and succeeded in the recovery of the stock (i.e., WCPFC CMM2020-02 and IATTC Resolution C-18-01).

Figure 1 illustrates the candidate HCRs suggested by the U.S. and Japan, as well as plots of historical (1952-2020) stock status obtained from the latest stock assessment results conducted in 2022. Lines in blue colors show candidate HCRs suggested by U.S., while lines in yellow/red colors show the candidate HCRs suggested by Japan. HCR Japan (3) is not on the figure. Black dots represent stock status in 1952-2014, while red dots represent that in 2015-2020.

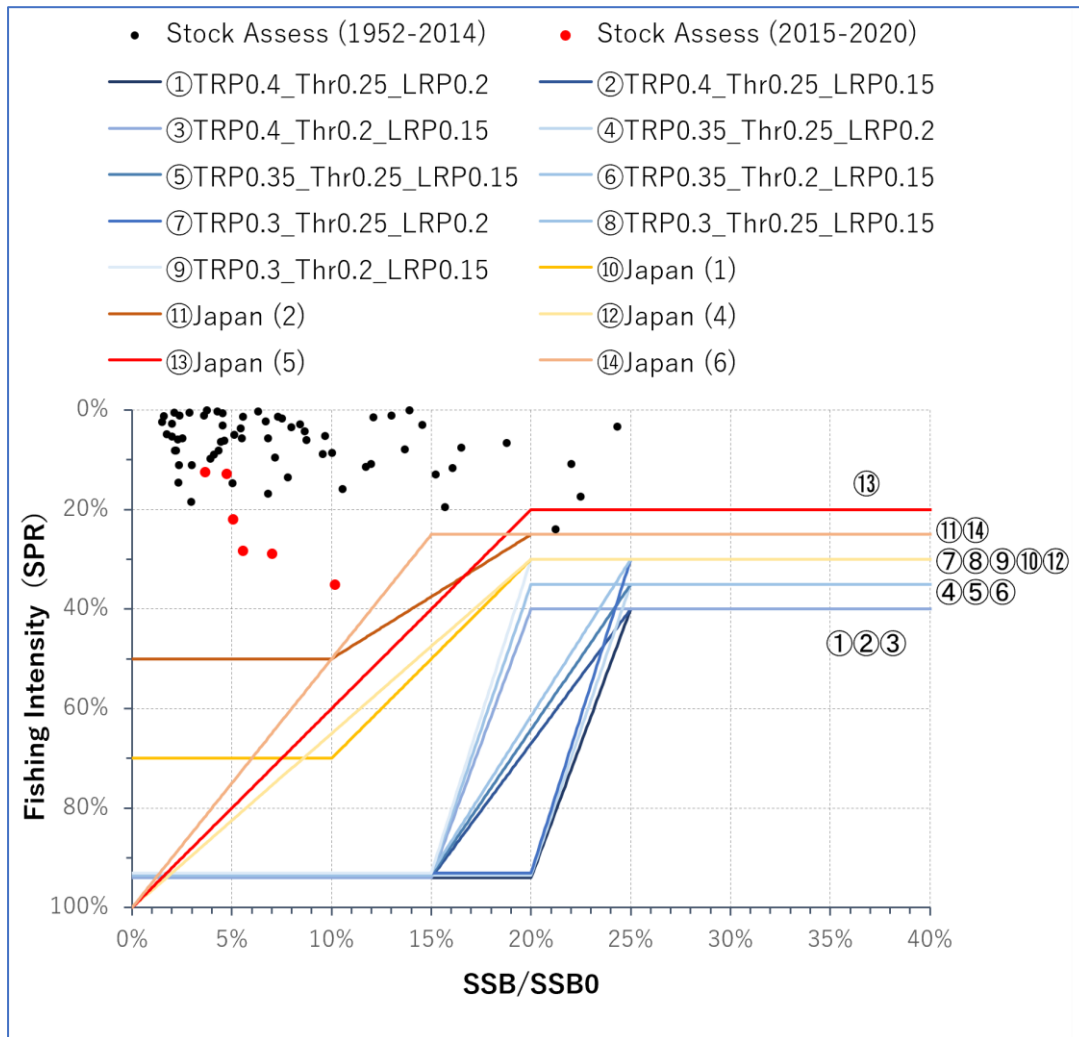


Figure 1. Illustration of HCRs suggested by U.S. and Japan, as well as plots of historical (1952-2020) stock status.

(2) Candidate Operational Management Objectives and Performance Indicators

JWG07 discussed this matter based on IATTC-NC-JWG07-2022/DP-12 submitted by the U.S. and agreed revisiting this topic at JWG08 and containing work-in-progress list as an Annex E of the Summary Report¹. Japan's thoughts on the list is inserted in yellow highlight.

Note: JWG07 reviewed JWG07-DP-12, produced this Annex, and agreed to revisit this at JWG08.

Category	Operational Management Objective	Performance Indicator
Safety	There should be a less than 5-20% 20% ² probability of the stock falling below the LRP* *In case HCR without LRP (such as HCR2) is adopted, "probability of the stock falling below the median SSB for 1952-2014 (i.e. rebuilding target adopted in HS2021-01)" should be used.	<ul style="list-style-type: none"> • Probability that SSB < LRP in any given year of the evaluation period (10-30)10 years subject to the number of scenarios; NPA use 30 years; can be confirmed in 2023)
Status	To maintain fishing mortality at or below FTarget with at least 50-75 50% probability	<ul style="list-style-type: none"> • Probability that F ≤ FTARGET in any given year of the evaluation period
Stability	To limit changes in overall catch limits between management periods to no more than 15-25% downwards, unless the ISC has assessed that there is a greater than 50% chance the stock is below the LRP]	<ul style="list-style-type: none"> • Percent change upwards in catches between management periods excluding periods when SSB < LRP • Percent change downwards in catches between management periods excluding periods when SSB < LRP
Yield	[[Maintain a proportional fishery impact between the WCPO and EPO [similar to the average proportional fishery impact from 1971-1994]]]	<ul style="list-style-type: none"> • Median fishery impact (in %) on SSB in any given year of the evaluation period by fishery and by WCPO fisheries and EPO fisheries • The probability that the proportional EPO fishery impact is at least the 1971-1994 average in any given year
	To maximize yield over the medium (5-10 years) and long (10-30 years) terms, as well as average annual catch yield from the fishery.	<ul style="list-style-type: none"> • Expected annual yield over years 5-10 of the evaluation period, by fishery. • Expected annual yield over years 10-30 of the evaluation period, by fishery. • Expected annual catchyield in any given year of the evaluation period, by fishery.
	[[To increase average annual catch in all fisheries across WCPO and EPO]] To achieve the historical highest yield in each Member across WCPO and EPO	

¹ Provisional Agenda of this meeting (IATTC-NC-JWG08-2023/02) contains this document as Attachment A for reference.

² The acceptable levels of risk may vary depending on the LRP selected, but should be no greater than 20%.

2. INTERIM HARVEST STRATEGY

JWG07 discussed this matter based on IATTC-NC-JWG07-2022/DP-12 submitted by the U.S. and agreed revisiting this topic at JWGO8 and containing work-in-progress list as an Annex F of the Summary Report³. Japan's suggested revision to the text is shown in yellow highlight in the following text.

Note: JWGO7 reviewed JWGO7-DP-13, produced this Annex, and agreed to revisit this at JWGO8.

The following harvest control rules shall be applied based on the results of stock assessments and SSB projections to be conducted by the ISC during the period from the year in which the stock is projected to achieve the second rebuilding target of 20%SSB0 to 2029 or the year ~~when~~ a long-term harvest strategy based on an MSE process is implemented.

- a. If the SSB projection indicates that SSB will be below 20%SSB0 with a probability of 60%, management measures shall be modified to increase the SSB to at least 20%SSB0 with 60% probability. For this purpose, the ISC ~~will be~~ is requested, ~~if necessary,~~ to provide information on possible management measures to achieve 60% that the stock is above 20%SSB0 after 10 years of the latest stock assessment.
- b. If the SSB projection indicates that SSB will be greater than 20%SSB0 with a probability of 60%, modifications to management measures may be considered so long as any changes maintain SSB greater than 20%SSB0 with a probability of 60%.

[Maintain a and replace b with:

If the SSB projection indicates that SSB will be greater than 20%SSB0 with a probability of 60%, management measures ~~shall be modified~~ will be adjusted to the extent that the stock is maintained above 20%SSB0 with a probability of 60%. For this purpose, the ISC is requested to provide information on possible management measures to achieve 60% that under which the stock is maintained above 20%SSB0 with a probability of 60%.]

[Replace both a and b with:

Management measures shall be taken to ensure the stock is maintained at or above 20%SSB0 in 2029 with a probability of 60%, before 2029 or the year when harvest strategy based on MSE process is initiated whichever earlier. For this purpose, the ISC is requested to provide information on possible management measures to achieve 60% that the stock is maintained at or above 20% SSB0 in 2029.]

- c. Any adjustments to management measures shall be considered in cooperation between the two RFMOs taking into account historical and future projected proportional fishery impacts on SSB between fisheries in the EPO and fisheries in the WCPO. For this purpose, ISC is requested, to provide relevant information, including projected proportional fishery impact of potential management measures changes.
- d. This harvest control rule will be reviewed and modified, as necessary, if depletion estimates across the time-series have been adjusted due to changes in assumptions and/or settings of the stock assessment model.

³ Provisional Agenda of this meeting (IATTC-NC-JWGO8-2023/02) contains this document as Attachment C for reference.