3.2 History of Pacific Bluefin Tuna MSE

JWG Co-Chairs

Pacific bluefin tuna MSE

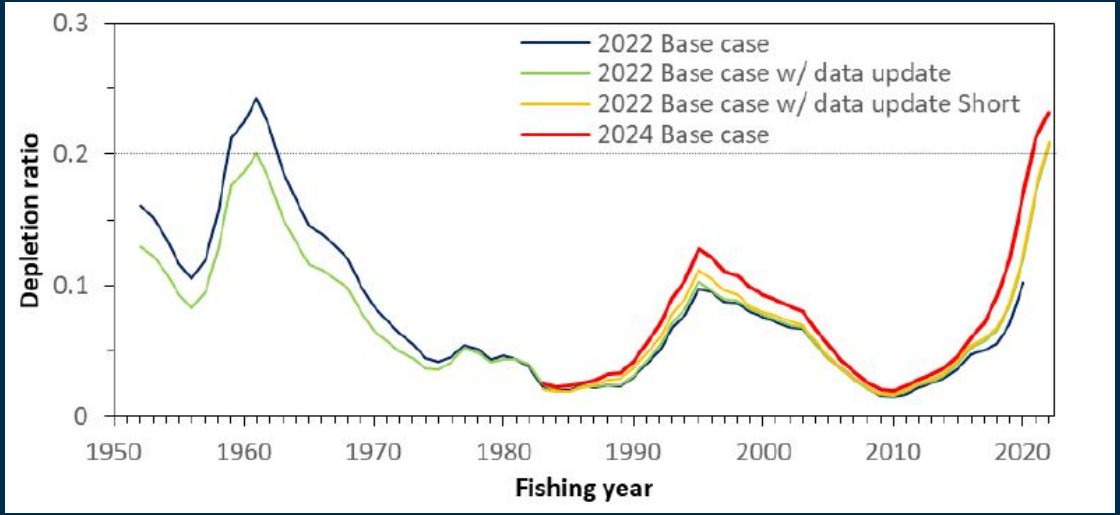
- Initial JWG discussions
- Candidate MSE elements
- MSE timeline

Initial JWG discussions on MSE

Identifying candidate elements

JWG intent to utilize MSE to evaluate performance of management. Initial timeline to develop candidate reference points and HCRs by 2019, complete MSE in 2024.

2016: IATTC C-16-03
IATTC C-16-08
2017: WCPFC HS-17-02
2018: IATTC C-18-02



MSE Workshops
Stakeholder engagement

Workshops educated stakeholders and sought input on identification of specific management objectives, including levels of risk and timelines.

2018: Yokohama, Japan

2019: San Diego, USA

2019 Terms of Reference
Roles & scope defined

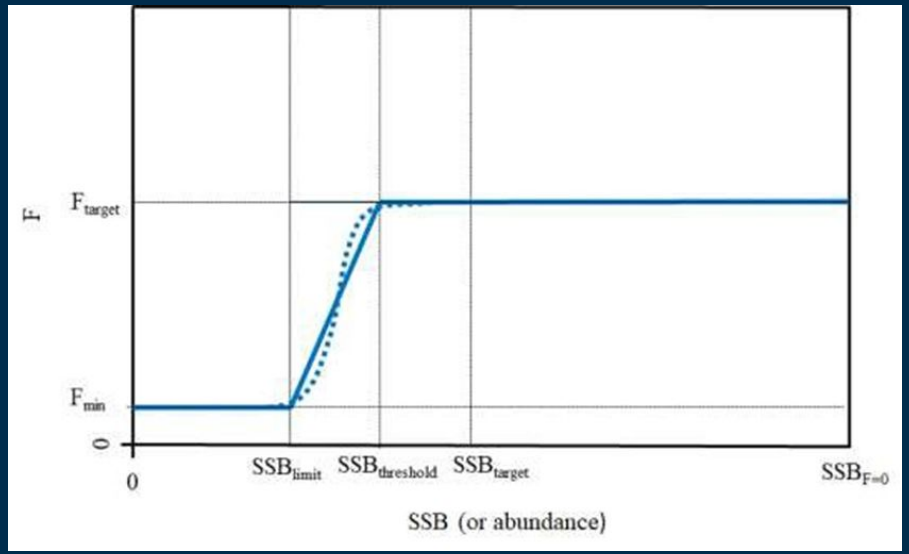
ROLES:
ISC: Technical guidance & model development

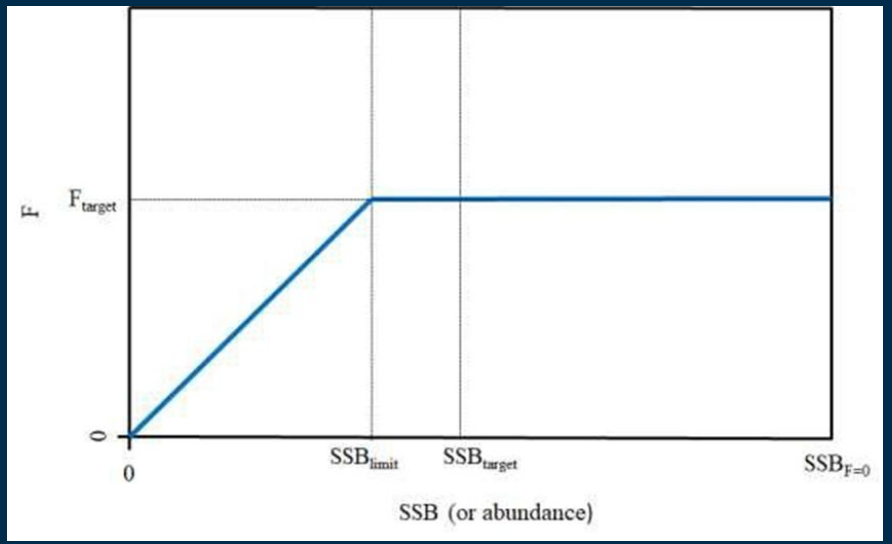
JWG: Requests, guidance and recommendations to ISC, IATTC, WCPFC-NC; hold meetings to solicit input from stakeholders as needed

SCOPE:
“To evaluate the expected performance of alternative long-term management strategies for PBF fisheries once the 2nd rebuilding target is reached.”

2019 Candidate elements identified

HCRs, Reference points sent to ISC





ISC identified need for dedicated resources to advance MSE analysis

2023 Progress

New candidate management objectives, reference points & HCRs adopted

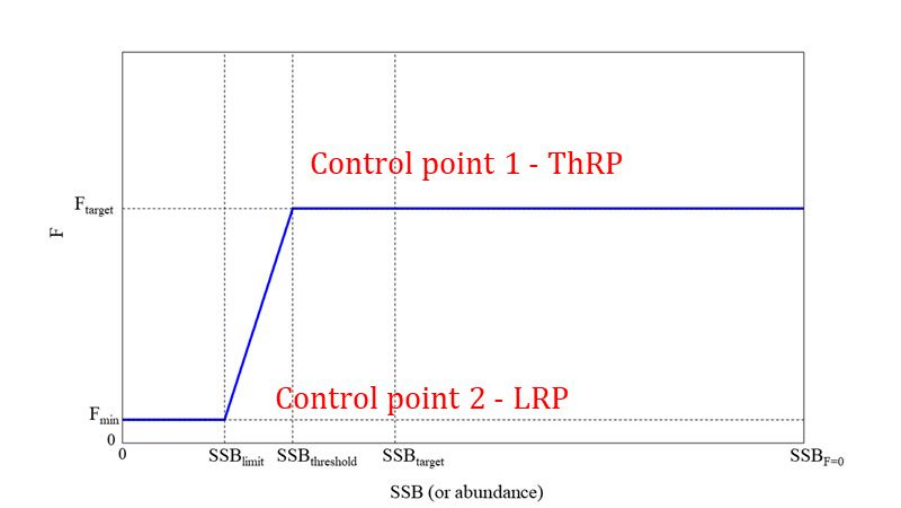
IATTC C-23-01

WCPFC HS 2023-02

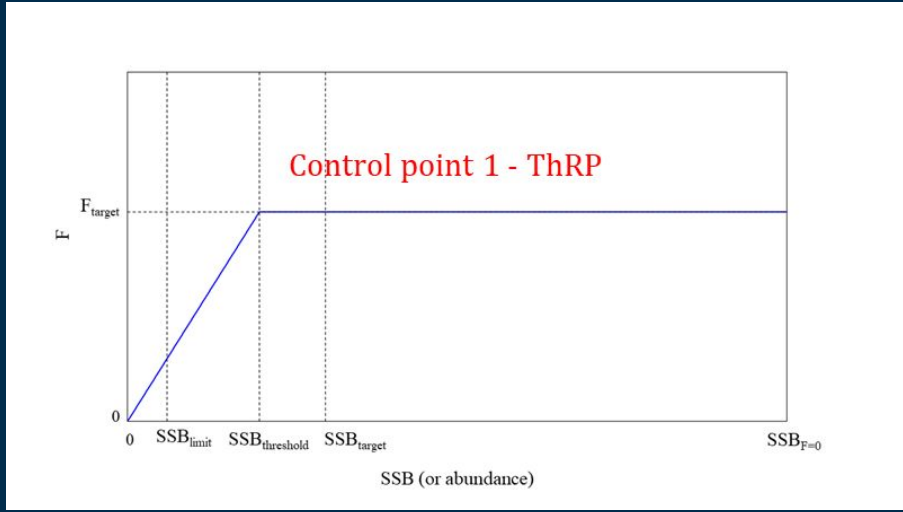
CANDIDATE OPERATIONAL MANAGEMENT OBJECTIVES AND PERFORMANCE INDICATORS FOR PACIFIC BLUEFIN TUNA

Category	Operational Management Objective	Performance Indicator
Safety	There should be a less than 20%[4] probability of the stock falling below the LRP	Probability that SSB< LRP in any given year of the evaluation period
Status	To maintain fishing mortality at or below F_{Target} with at least 50% probability	Probability that F≤FTARGET in any given year of the evaluation period Probability that SSB is below the equivalent biomass depletion levels associated with the candidates for F_{TARGET}
Stability	To limit changes in overall catch limits between management periods to no more than 25%, unless the ISC has assessed that the stock is below the LRP[5]	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 an equitable balance in proportional fishery impact between the WCPO and EPO	Median fishery impact (in %) on SSB in the terminal year of the evaluation period by fishery and by WCPO fisheries and EPO fisheries
	To maximize yield over the medium (5-10 years) and long (10-30 years) terms, as well as average annual yield from the fishery.	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 yield in any given year of the evaluation period, by fishery.
	To increase average annual catch in all fisheries across WCPO and EPO	

2023 Progress
Current candidate HCRs



HCR 1



HCR 2

Candidate HCRs and Reference Points to Evaluate in the MSE

HCR Number	HCR Shape	Fmin	LRP	ThRP	TRP
1	1	$F10\%F_{Target}$	$15\%SSB_{F=0}$	$20\%SSB_{F=0}$	FSPR30%
2	1	$F10\%F_{Target}$	$15\%SSB_{F=0}$	$25\%SSB_{F=0}$	FSPR30%
3	1	$F10\%F_{Target}$	$15\%SSB_{F=0}$	$20\%SSB_{F=0}$	FSPR40%
4	1	$F10\%F_{Target}$	$15\%SSB_{F=0}$	$25\%SSB_{F=0}$	FSPR40%
5	1	$F10\%F_{Target}$	$20\%SSB_{F=0}$	$25\%SSB_{F=0}$	FSPR40%
6	1	FSPR70%	$10\%SSB_{F=0}$	$20\%SSB_{F=0}$	FSPR30%
7	1	FSPR50%	$10\%SSB_{F=0}$	$20\%SSB_{F=0}$	FSPR25%
8	1*	N/A*	Median SSB 1952-2014	$20\%SSB_{F=0}$	FSPR30%
9	2	N/A	Median SSB 1952-2014	$20\%SSB_{F=0}$	FSPR20%
10	2	N/A	Median SSB 1952-2014	$15\%SSB_{F=0}$	FSPR25%
11	1	$F5\%F_{Target}$	$7.7\%SSB_{F=0}$	$15\%SSB_{F=0}$	FSPR30%
12	1	$F5\%F_{Target}$	$7.7\%SSB_{F=0}$	$20\%SSB_{F=0}$	FSPR30%

Plan for the stock assessment and MSE/MP TAC update

- The ISC is requested to provide the results from PBF MSE in 2025.
  - The PBFWG plans to finalize the MSE package in 2024 and evaluate MPs in early 2025.
    - ✓ There is some available time to have a science-management dialogue in Jan.-Feb. 2025.
  - The results from the MSE will be provided to the IATTC-WCPFC JWG in 2025 (June-Sept.?).
  - 3-year management cycle is currently considered.
    - ✓ SA (2024) -> 1st MSE with multiple MPs (2025) -> Research (2026) -> SA (2027) -> MP TAC update
    - ✓ The MP selected in 2025 will be updated every 3 years to calculate the TAC for the next 3 years.
    - ✓ SA focused on detailing what is going on the stock, and whether anything unexpected happens.

	2024	2025	2026	2027	2028	2029
Stock assessment	○			○		
CMM@ interim HCR		→				
MSE/MP		1st formal MSE			MP TAC update	
CMM@ MSE			→	→	→	→