
HARVEST STRATEGY FOR NORTH PACIFIC ALBACORE FISHERY

Harvest Strategy 2023-01

Introduction and scope

This Harvest Strategy, applicable to all fisheries that harvest North Pacific albacore, was developed based on the results of the Management Strategy Evaluation (MSE) completed by the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) in 2021.

1. Management objectives

Considering the overarching objective of ensuring the sustainability of North Pacific albacore tuna and current fisheries supported by the stock in the Western and Central Pacific Ocean, the following management objectives are established:

- (a) Maintain Spawning Stock Biomass (SSB) above the Limit Reference Point (LRP), with a probability of at least 80% over the next 10 years.
- (b) Maintain depletion of total biomass around historical (2006-2015) average depletion over the next 10 years.
- (c) Maintain fishing intensity (F) at or below the target reference point with a probability of at least 50% over the next 10 years.
- (d) To the extent practicable, management changes (e.g., catch and/or effort) should be relatively gradual between years.

2. Reference points

For the purpose of the North Pacific albacore tuna harvest strategy, the following reference points are established.:

- (a) Target reference point (TRP) = $F_{45\%}$, which is the fishing intensity (F) level that results in the stock producing 45% of spawning potential ratio (SPR)
- (b) Threshold reference point ($SSB_{\text{threshold}}$) = $30\%SSB_{\text{current},F=0}$, which is 30% of the dynamic unfished spawning stock biomass
- (c) Limit reference point (LRP) = $14\%SSB_{\text{current},F=0}$, which is 14% of the dynamic unfished spawning stock biomass.

3. Acceptable levels of risk

The risk of breaching the Limit Reference Point based on the most current estimate of SSB shall be no greater than 20%.

4. Monitoring strategy

The ISC will conduct a stock assessment every three years, at which time the status relative to the reference points established under paragraph 2 will be evaluated.

When performing a stock assessment, the ISC will consider the criteria for identification of exceptional circumstances developed by the ISC, and notify the Northern Committee if these exceptional circumstances have occurred.

5. Harvest Control Rules (HCR)

The harvest control rules apply to all fisheries harvesting albacore in the EEZ and high seas in the Convention Area north of the equator.

The harvest control rule parameters produce a relationship between stock status and fishing intensity as shown in Figure 1 and are as follows with the minimum allowed fishing intensity (F_{min}) equal to $F_{87\%}$, which is the fishing intensity (F) level that results in the stock producing 87% of spawning potential ratio (SPR). $SSB_{current}$ refers to spawning stock biomass in the terminal year of the assessment and $SSB_{current, F=0}$ to the terminal year dynamic unfished spawning stock biomass.

- If $SSB_{current}/SSB_{current, F=0}$ is above or equal to $SSB_{threshold}$ with a probability of at least 50%, fishing intensity shall be maintained at or below the TRP on average over 10 years.
- If $SSB_{current}/SSB_{current, F=0}$ is below $SSB_{threshold}$ with a probability greater than 50%, and is above the LRP with a probability of at least 50%, fishing intensity shall be reduced¹ to a level in accordance with following formula:

$$F = \frac{TRP - F_{min}}{SSB_{threshold} - LRP} * (SSB_{current}/SSB_{current, F=0} - LRP) + F_{min}$$

- If $SSB_{current}/SSB_{current, F=0}$ is at or below the LRP with a probability greater than 50%, the WCPFC shall, in collaboration with the IATTC, consult with the ISC and adopt rebuilding measures that will rebuild SSB to levels of at least the $SSB_{threshold}$ with a probability of at least 65 % within 10 years of $SSB_{current}/SSB_{current, F=0}$ having been identified to be at or below the LRP with a probability greater than 50%. In the absence of such rebuilding measures, fishing intensity shall be set at F_{min} ².

If $SSB_{current}/SSB_{current, F=0}$ is above the LRP and below $SSB_{threshold}$ the maximum increase or decrease in catch or effort between the three-year management periods shall be 20% relative to the catch and effort levels specified for the previous year.

In the year following the relevant ISC stock assessment, the Northern Committee will recommend adjustment to the existing CMM for North Pacific Albacore to ensure fishing intensity is at or below the level set forth by this HCR using the latest ISC stock assessment. Changes to fishing intensity in accordance with the harvest control parameters shall apply between assessments starting the year after the stock assessment was completed, until the year following the next stock assessment that provides an estimate of unfished SSB.

Other Provisions

The Commission shall promote compatibility between the harvest strategy adopted herein and the

¹ When adopting proposed revisions to the conservation and management measures proposed, which may include inter alia reductions in fishing effort, CCMs will take into account historical fishing activity and the source of increased fishing mortality in reference to the average effort referenced in CMM 2019 -03.

² Ibid.

harvest strategy adopted by the Inter-American Tropical Tuna Commission with respect to North Pacific albacore tuna.

This Harvest Strategy replaces the “Harvest Strategy for North Pacific Albacore Fishery” adopted as Harvest Strategy 2022-01.

A review of the performance of the Harvest Strategy by the Northern Committee and the ISC shall be completed by 2030 and 2033. The aim of the review is to ensure the Harvest Strategy is performing as expected and to determine whether there are conditions that justify its continuation, or that warrant: reconditioning the MSE operating models; retuning the existing Harvest Strategy; including new indices into a new Harvest Strategy; and/or considering alternate candidate management procedures or development of a new MSE framework. Based on those reviews and subsequent ISC advice, the Commission in 2030 and 2033 shall decide on the future of the Harvest Strategy.

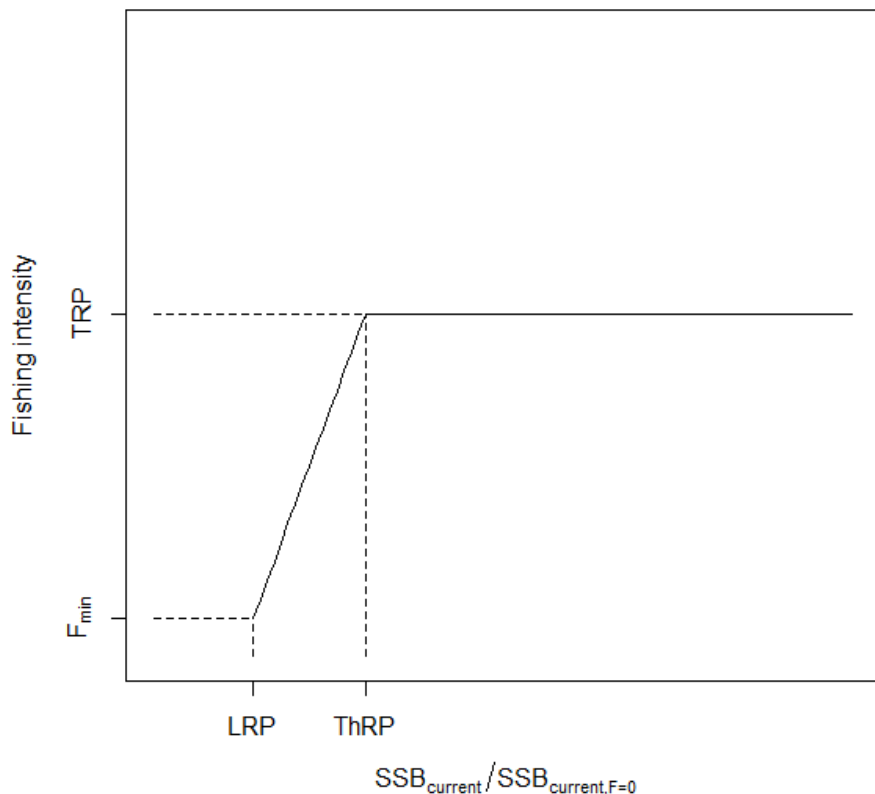


Figure 1. Illustration of the harvest control rules with target reference point (TRP), threshold reference point (ThRP), limit reference point (LRP), and the minimum allowed fishing intensity (F_{min}). The harvest control rules include the triggering of a rebuilding measure if the $SSB_{current} / SSB_{current,F=0}$ falls below the LRP.