

INTER-AMERICAN TROPICAL TUNA COMMISSION

98TH MEETING

(by videoconference)

23 – 27 August 2021

DOCUMENT IATTC-98 INF-G

VIEWS OF THE IATTC STAFF REGARDING STOCK STATUS AND MANAGEMENT OF SKIPJACK TUNA IN THE EASTERN PACIFIC OCEAN

SUMMARY

There currently is no conventional stock assessment for skipjack tuna in the eastern Pacific Ocean (EPO) and the status of the stock is inferred using a PSA rationale based on the status of bigeye tuna. Applying the PSA rationale to the 2020 stock assessment and overall results of the risk analysis for bigeye, the staff inferred that, relative to the [established reference points at IATTC](#), the skipjack stock did not breach the reference points during the 2017-2019 *status quo* period. In addition to the conservation measures currently in place, the staff has recommended precautionary measures to keep the fishing mortality at the *status quo* level amid the great potential for increased fishing mortality associated with the floating-object fishery.

Further increases in fishing mortality, implied by increases in the number of floating-object sets and by the established positive significant relationship between the number of floating-object sets and fishing mortality for bigeye, may cause the reference points to be breached. If future management action is not consistent between bigeye and skipjack, the PSA rationale may no longer hold, and the status of skipjack can only be determined based on an assessment for skipjack tuna. A tagging-based assessment for skipjack is under development but it will be available until 2023. The staff is developing an alternative interim assessment methodology for skipjack in case that the PSA rationale is broken ([IATTC-98 INF-F](#)).

BACKGROUND

There is currently no conventional stock assessment available for skipjack tuna in the EPO. [Several assessment methodologies have been investigated](#) for skipjack, however they were deemed unreliable. As a result, an interim procedure has been used by the staff until a conventional assessment is available to evaluate the skipjack stock status. This approach is based on the Productivity and Susceptibility Analysis (PSA) research that determined that skipjack has a similar susceptibility to purse-seine fishing as bigeye tuna, but skipjack is more productive (Duffy *et al.* 2019). Therefore, the interim PSA rationale states that the status of skipjack tuna should be more optimistic than the BET status. In other words, if bigeye does not breach the reference points, neither should skipjack.

SKIPJACK STOCK STATUS

Under the PSA rationale and based on the 2020 stock assessment and overall results of the risk analysis for bigeye, the staff inferred the skipjack stock to be in a healthy condition during the *status quo*¹ period. Relative to the [established reference points at IATTC](#), the skipjack stock did not breach the reference points during the *status quo* period:

¹ *Status quo* period: The recent reference level for fishing mortality (*F*) based on the 3-year average for 2017-2019.

Target RP	
$F_{cur} > F_{MSY}$	<50%
$S_{cur} < S_{MSY}$	<53%
Limit RP	
$F_{cur} > F_{LIMIT}$	<5%
$S_{cur} < S_{LIMIT}$	<6%

However, the continuing increasing number of sets in the floating-object fishery, along with some other [long-term trends in fishery indicators](#), shows that the reference points could potentially be exceeded in the near future as a result of increased fishing mortality. Therefore, the IATTC staff has recommended additional precautionary measures to keep the fishing mortality at the *status quo* level.

FUTURE ASSESSMENTS

The determination of stock status for skipjack is currently dependent on the applicability of the PSA rationale and the availability of a reliable stock assessment for bigeye tuna. If future management action is not consistent between bigeye and skipjack (e.g., implementation of an IVL scheme for bigeye catch only, or set limits on floating-objects sets only), the PSA argument may no longer hold and the status of skipjack can only be determined based on an assessment for skipjack itself. The staff is currently developing a tagging-based skipjack benchmark assessment which will use the tagging data collecting under the Regional Tuna Tagging Program still underway until 2022. This benchmark assessment is planned to be presented to the SAC in 2023. The staff is also proposing an alternative [interim assessment method for skipjack](#) that determines the current stock status relative to the 2017-2019 *status quo*, when the PSA rationale is known to be valid, to be used until the tagging-based assessment becomes available in 2023 in case that the PSA rationale is broken.