



## By-Product assessment report

BP001

Seatech International Inc

<b>Report code</b>	<b>BP001</b>	<b>Date of issue</b>	08 August 2024
--------------------	--------------	----------------------	----------------

1. Application details		
<b>Applicant</b>	Seatech International Inc	
<b>Applicant country</b>	Colombia	
2. Certification Body details		
<b>Name of Certification Body (CB)</b>	NSF / Global Trust Certification Ltd	
<b>Contact information for CB</b>	NSF-MarinTrust@nsf.org	
<b>Assessor name</b>	Ana Elisa Almeida Ayres	
<b>CB internal peer reviewer name</b>	Matthew Jew	
<b>Internal peer review evaluation</b>	Agree with evaluation	
<b>Comments on the assessment</b>	N/A	
3. Approval validity	Valid from 08/2024	Valid until 08/2025

4. By-product assessment outcomes		
By-product species name	Flag country(ies)	MarinTrust approval status
Skipjack tuna ( <i>Katsuwonus pelamis</i> )	Colombia	Approved source with caution
Yellowfin tuna ( <i>Thunnus albacares</i> )	Colombia	Approved source with caution
Bigeye tuna ( <i>Thunnus obesus</i> )	Colombia	Approved source with caution

#### **Guidance for on-site auditor**

For the audit, the auditor will check how the facility manages by-products deemed medium risk. Any by-products downrated from high to medium risk will require additional due diligence checks.

It is important that facilities check all raw materials from and verify their suppliers especially if there is a perceived risk of sourcing from known or suspected IUU fishing activity. This requires checking supplier records or procedures in place to understand how the supplier can ensure there is no IUU in the raw material they provide. For raw materials risk rated medium, additional or more frequent checks may be required until the facility is certain that the raw materials are not from IUU fishing activity.

The audit requirements are covered in clause 2.11.3 of the MarinTrust Global Standard for Responsible Supply of Marine Ingredients (the MarinTrust Standard) and associated interpretation guidance.

#### **Approved by-products**

- No further checks are required beyond those included in the MarinTrust Standard.

#### **Additional checks of Approved Source with Caution by-products**

- Review supplier records or procedures in place.

#### **Additional checks of by-products Approved Source with Caution via Step 3 assessment**

- In addition to checks for medium risk Approved Source with Caution by-products, by-products that have had risk downgraded from high to medium at Step 3 (use **Appendix 1** to identify these by-product species), confirm that the relevant traceability information continues to be collected for this by-product. During the audit, a traceability check on any by-products downgraded from high to medium risk shall be included as part of the required traceability checks (Section 4).

#### **Guidance for the applicant/certificate holder**

The applicant/certificate holder is responsible for ensuring the relevant actions are taken to comply with the MarinTrust Standard.

The certificate holder is responsible for communicating any changes to the by-products sourced by submitting a scope extension request through the MarinTrust online Application Portal.

## Appendix 1 – assessment outcomes

<b>By-product species name</b>	<b>Flag country(ies)</b>	<b>IUCN Red List</b> <i>Select IUCN red list category from dropdown</i>	<b>CITES Appendices</b> <i>Select CITES appendix status from dropdown</i>	<b>Step 2 risk status</b> <i>Low risk/ Medium risk/ High risk</i>	<b>Step 3 required</b> <i>Yes / No</i>	<b>Step 3 risk Outcome</b> <i>Not applicable /Risk downgraded to Medium risk/ Remains High risk</i>
Skipjack tuna <i>(Katsuwonus pelamis)</i>	Colombia	Least concern	Not listed	High risk	Yes	Risk downgraded to Medium risk
Yellowfin tuna <i>(Thunnus albacares)</i>	Colombia	Least concern	Not listed	High risk	Yes	Risk downgraded to Medium risk
Bigeye tuna <i>(Thunnus obesus)</i>	Colombia	Vulnerable	Not listed	High risk	Yes	Risk downgraded to Medium risk

## Appendix 2 – detailed assessment outcomes (step 2 and step 3 if applicable)

### Step 2 outcomes

Flag state	Risk rating	Flag score	Port score	General score	Flag State is contracting party or cooperating non-contracting party to all relevant RFMOs	'Carded' under EU Carding system	Flag state party to PSMA	Flag state mandatory vessel tracking for commercial seagoing fleet	WGI Governance rank
Colombia	High	1.71	2.94	2.58	1	1	5		56.60%

## Step 3 outcomes

### Category C assessment

<b>Species name</b>		Skipjack tuna ( <i>Katsuwonus pelamis</i> )	
<b>Fishing area and stock</b>		FAO areas 77 and 87, Eastern Pacific Ocean skipjack tuna	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
<b>Clause outcome:</b>			Pass
<p><b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b></p> <p>MSY-based quantities cannot be estimated for skipjack tuna, because the trade-off between growth and natural mortality, in combination with the assumption that recruitment is independent of stock size, implies fish should be caught at the youngest ages to maximize yield, implying that the optimal fishing mortality should be infinite. An integrated statistical age-structured catch-at-length stock assessment was developed for skipjack tuna in the eastern Pacific Ocean using Stock Synthesis in 2022. A conservative proxy target biomass reference point of 30% of the unexploited spawning biomass (0.350) based on ranges estimated for yellowfin and bigeye tuna in under different assumptions was proposed. Although the assessment is termed interim by the staff, the staff considers it reliable for management advice (IATTC, 2022a and 2024).</p>			

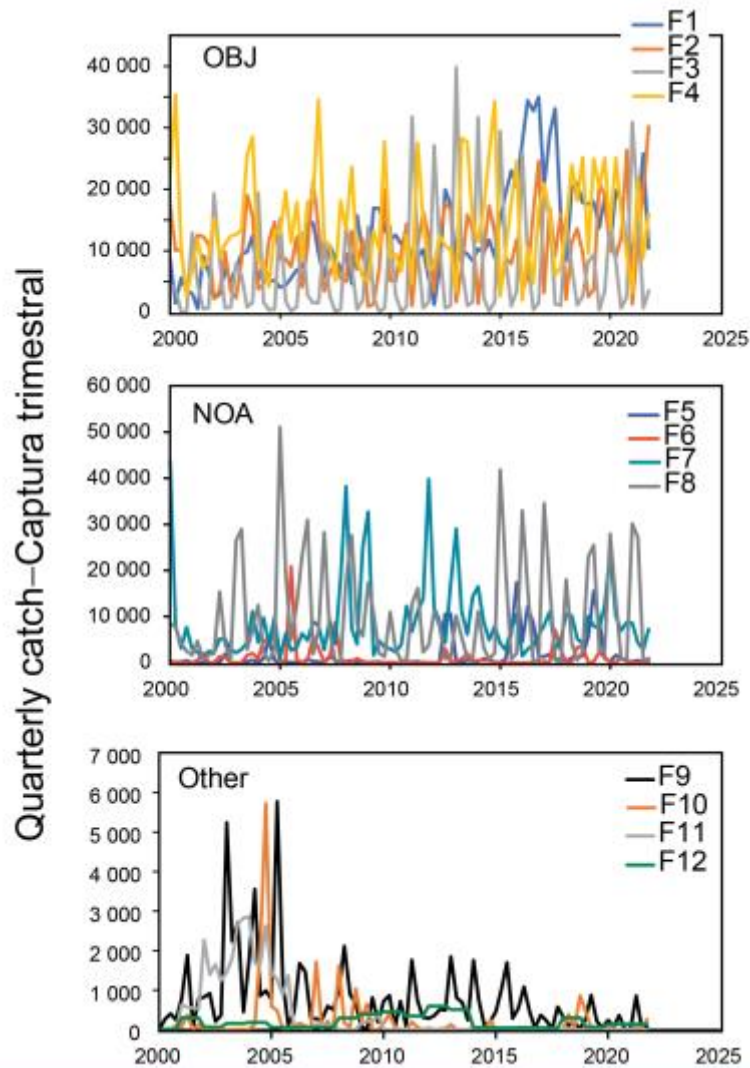


Figure 1. Quarterly catches of skipjack tuna, in tons, in the EPO, 2000-2021, by fishery. NOTE: The y-axis scale varies by plot (IATTC 2022a).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. C.1.1 is met.

**C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.**

According to IATTC (2024), the estimated probability of the spawning biomass being below the limit reference point is zero for all models applied. This reference point is defined by IATTC as the spawning biomass that produces 50% of the virgin recruitment assuming that the spawner-recruitment relationship follows the Beverton-Holt function with a conservative steepness ( $h$ ) of 0.75 (SAC-05-14). The spawning biomass at the limit reference point is equal to 0.077 of the equilibrium unfished spawning biomass ( $S_0$  or  $B_0$ ).

Except by one model, all the other models showed a 95% or higher chance of being above the proposed  $S/S_0 = 0.30$  target reference point.

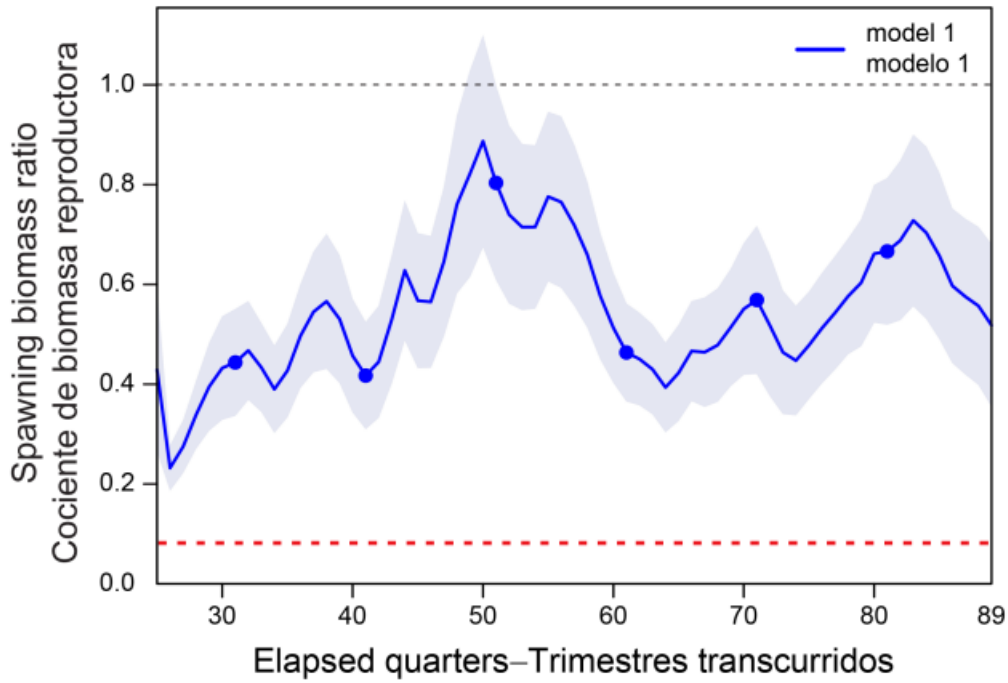


Figure 2. Spawning biomass ratio for skipjack tuna in the EPO, 2006-2021 estimated by the reference model. The solid lines represent the maximum likelihood estimates and the shaded area the approximate 95% confidence intervals around those estimates. The red dashed horizontal line (at 0.077) identifies the limit reference point and the grey dashed line identifies the target reference point (IATTC, 2022a).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy). C.1.2 is met.

#### References

IATTC (2024). Status of the tuna and billfish stocks in 2022. Stock Assessment Report 24. [https://www.iattc.org/GetAttachment/6cdc278b-c722-4497-8fce-7984de1b2732/No-24-2024\\_Status-of-the-tuna-and-billfish-stocks-in-2022.pdf](https://www.iattc.org/GetAttachment/6cdc278b-c722-4497-8fce-7984de1b2732/No-24-2024_Status-of-the-tuna-and-billfish-stocks-in-2022.pdf)

IATTC (2022a). Skipjack tuna in the Eastern Pacific Ocean, 2021: Interim assessment. DOCUMENT SAC-13-07. [https://www.iattc.org/GetAttachment/0acfc999-fbcd-4b07-9e8d-fc5f85fd88e8/SAC-13-07\\_Skipjack-tuna-interim-assessment-2022.pdf](https://www.iattc.org/GetAttachment/0acfc999-fbcd-4b07-9e8d-fc5f85fd88e8/SAC-13-07_Skipjack-tuna-interim-assessment-2022.pdf)



**Category C assessment**

<b>Species name</b>		Yellowfin tuna ( <i>Thunnus albacares</i> )	
<b>Fishing area and stock</b>		FAO areas 77 and 87, Eastern Pacific Ocean (EPO) yellowfin tuna	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
<b>Clause outcome:</b>			Pass
<p><b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b></p> <p>For assessment and management purposes, two discrete stocks of yellowfin tuna are recognized in the Pacific Ocean differentiated by the 150°W:</p> <ol style="list-style-type: none"> <li>1. Western Central Pacific Ocean (WCPO) yellowfin (west of 150°W), managed via the Western and Central Pacific Fisheries Commission (WCPFC).</li> <li>2. Eastern Pacific Ocean (EPO) yellowfin (east of 150°W), managed by the Inter-American Tropical Tuna Commission (IATTC).</li> </ol> <p>Although the western boundary of FAO area 77 is at 175°W, the client confirmed that the fishing area focused on Eastern Pacific Ocean, thus the Eastern Pacific Ocean (EPO) yellowfin tuna stock is analysed here. The last benchmark assessment for yellowfin tuna was conducted in 2020 and followed a risk assessment framework, considered sufficiently reliable to be used as the basis for providing management advice. This framework uses Stock Status Indicators (SSIs), which have become particularly important as supplemental information to, or temporary replacement of formal stock assessments for yellowfin because the staff considered that the results of the assessments at that time were not sufficiently reliable to be used as the basis for its management advice. SSIs are simply time series of raw or lightly processed data for a stock that may reflect trends in abundance or exploitation of that stock. SSIs estimations include quantities such as fishing effort, catch, catch per unit effort, and the size of fish in the catch (IATTC 2023a).</p>			

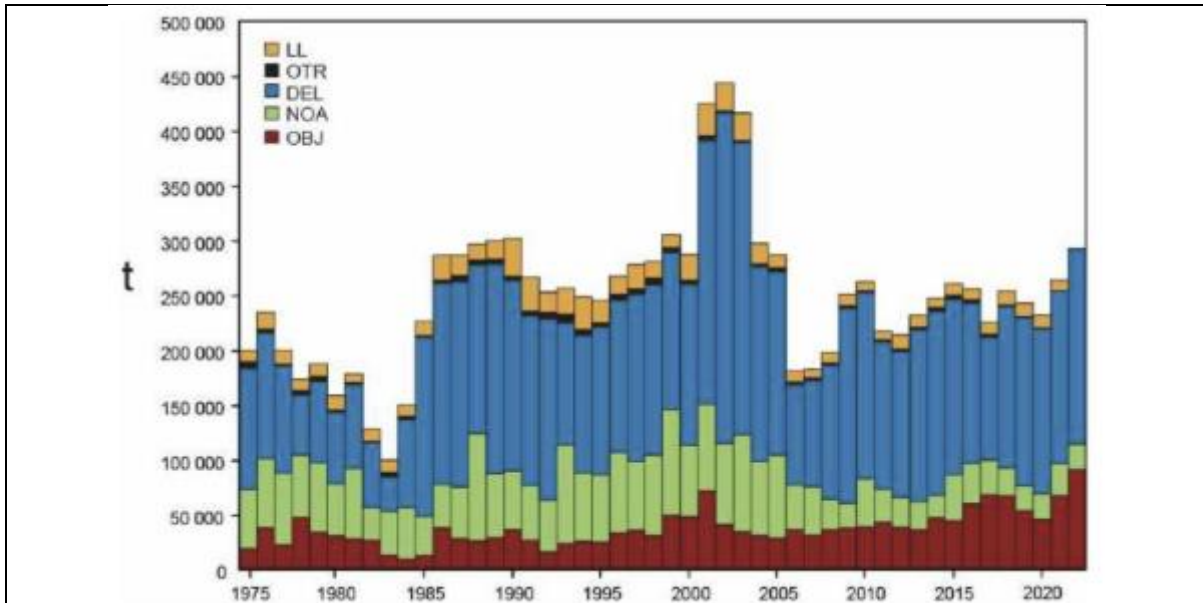


Figure 3. Total catches (retained catches plus discards) for the purse-seine fisheries, by set type (DEL, NOA, OBJ), and retained catches for the longline (LL) and other (OTR) fisheries, of yellowfin tuna in the eastern Pacific Ocean, 1975-2022. The purse-seine catches are adjusted to the species composition estimate obtained from sampling the catches. (IATTC 2023b).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. C.1.1 is met.

**C1.2** The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.

The results from multiple reference models are combined in a risk analysis to provide management advice. The most recent results published in 2023 indicates that the probability of the spawning biomass being the level at dynamic MSY ( $S_{MSY_d}$ ) is low (12%) and the probability of the spawning biomass exceeding  $S_{LIMIT}$  is zero (IATTC 2023b).

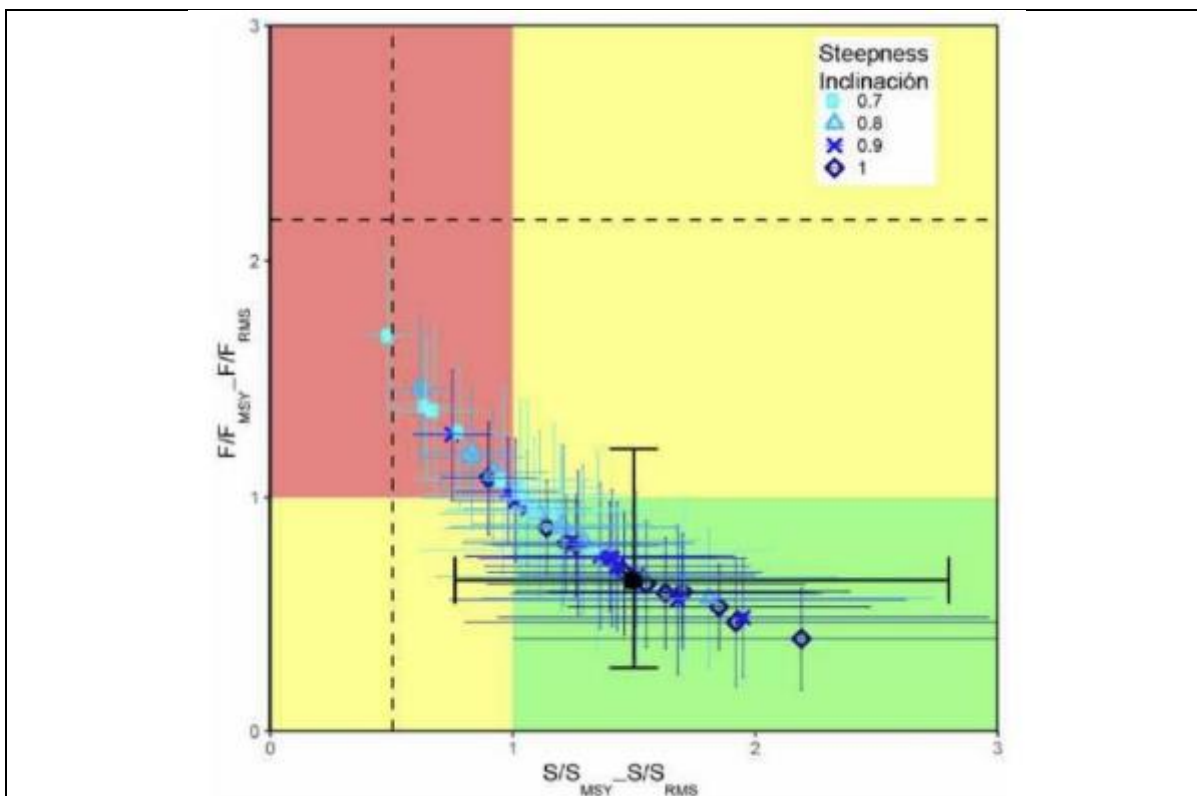


Figure 4. Kobe (phase) plot of the time series of estimates of spawning stock size ( $S$ ) and fishing mortality ( $F$ ) of yellowfin tuna relative to their MSY reference points. The coloured panels are separated by the target reference points ( $S_{MSY}$  and  $F_{MSY}$ ). Limit reference points (dashed lines), which correspond to a 50% reduction in recruitment from its average unexploited level, based on a conservative steepness ( $h$ ) of 0.75 for the Beverton-Holt stock-recruitment relationship, are merely indicative, since they vary by model and are based on all models combined. The center point for each model indicates the current stock status, based on the average fishing mortality ( $F$ ) over the last three years; The solid black circle represents all models combined; to be consistent with the probabilistic nature of the risk analysis and the HCR, it is based on  $P(S_{cur}/S_{LIMIT-x}) = 0.5$  and  $P(F_{cur}/F_{MSY-x}) = 0.5$ . The lines around each estimate represent its approximate 95% confidence interval (IATTC 2023b).

**The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy). C.1.2 is met.**

#### References

IATTC (2023a). Stock Status Indicators (SSIs) for tropical tunas in the Eastern Pacific Ocean. Document SAC-14-04. May 2023. [https://www.iattc.org/GetAttachment/663cdcdd-f599-4802-b9fd-6611959ff893/SAC-14-04\\_Stock-status-indicators-\(SSIs\)-fortropical-tunas-in-the-EPO.pdf](https://www.iattc.org/GetAttachment/663cdcdd-f599-4802-b9fd-6611959ff893/SAC-14-04_Stock-status-indicators-(SSIs)-fortropical-tunas-in-the-EPO.pdf)

IATTC (2023b). The tuna fishery in the Eastern Pacific Ocean in 2022. [https://www.iattc.org/GetAttachment/0f48f889-2aa5-437f8d03-648d62ecfb75/No-21-2023\\_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2022.pdf](https://www.iattc.org/GetAttachment/0f48f889-2aa5-437f8d03-648d62ecfb75/No-21-2023_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2022.pdf)

### Category C assessment

<b>Species name</b>		<b>Bigeye tuna (<i>Thunnus obesus</i>)</b>	
<b>Fishing area and stock</b>		<b>FAO areas 77 and 87, Eastern Pacific Ocean (EPO) bigeye tuna</b>	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	<b>C1.2</b>	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
<b>Clause outcome:</b>			<b>Pass</b>
<p><b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</b></p> <p>The most recent full stock assessment was conducted in 2020. The assessment utilised all international catch data. 44 models were applied to take into account the main sources of uncertainty, and the results are presented alongside the likely confidence intervals. In 2023, risk-based Stock Status Indicators (SSIs) were introduced. SSIs are considered to be important alternatives to formal stock assessments, particularly where those stock assessments may be too unreliable to form the basis for management advice (IATTC 2022b). In the case of bigeye, they are incorporated into the annual stock status review (IATTC 2023c). All available catch data are incorporated into the assessment as well.</p>			

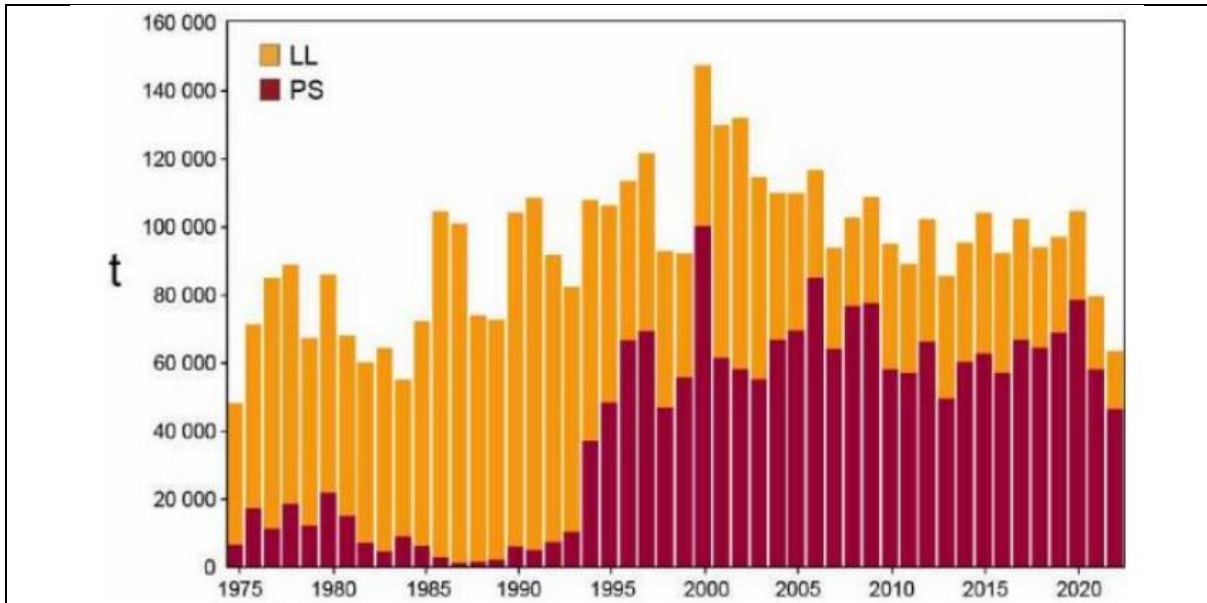


Figure 5. Total EPO bigeye catch by purse seine gears (PS), and retained catches by longline gears (LL), 1975 – 2022. 2021 and 2022 data are preliminary (IATTC 2023c).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. C.1.1 is met.

**C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.**

The 2020 stock assessment produced statistical probabilities for the status of the stock relative to target and limit reference points. The key conclusion for the purposes of this byproduct assessment is that “the probabilities of spawning biomass at the beginning of 2020 (*S<sub>cur</sub>*) being lower than the target and limit reference levels are 53% and 6%, respectively” (IATTC 2023c). Therefore, there was a very low probability of the biomass being below the limit reference point.

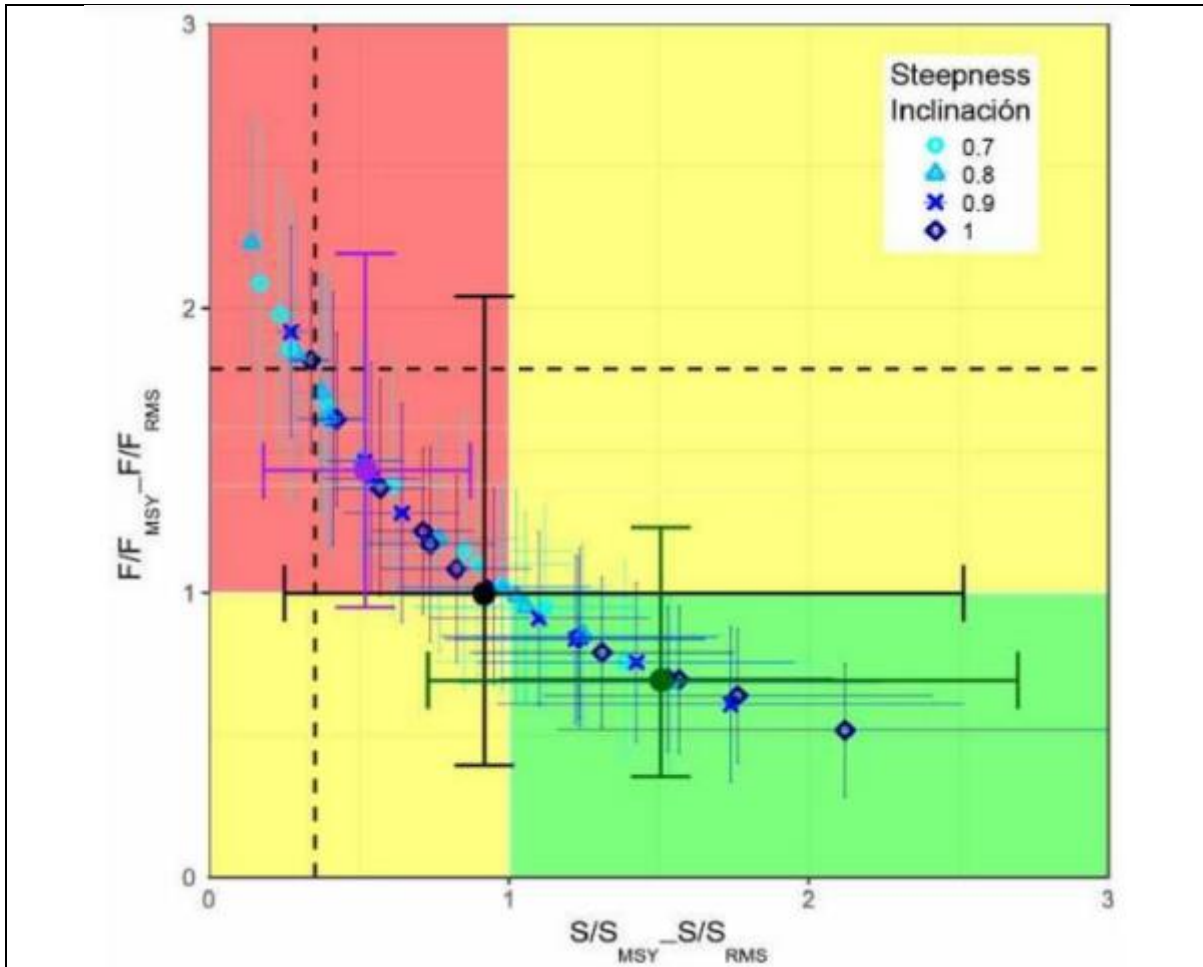


Figure 6. Kobe plot of the most recent estimates of spawning biomass ( $S$ ) and fishing mortality ( $F$ ) relative to their MSY (target) reference points. Black dashed lines indicate the average limit reference points generated by the 44 converged model runs. The black dot represents the combined estimate across all models, with the purple and green dots representing all pessimistic and all optimistic models, respectively (IATTC 2023c).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy). C.1.2 is met.

#### References

IATTC (2022b). Stock Status Indicators (SSIs) for tropical tunas in the Eastern Pacific Ocean. 13th Meeting of the IATTC Scientific Advisory Committee, Document SAC-13-06 Corr. [https://www.iattc.org/GetAttachment/22511b5b-ba2b-4126-9ba2-0bffee89f4d5/SAC-13-06%20-%20Stock%20status%20indicators%20\(SSIs\)%20for%20tropical%20tunas%20in%20the%20EPO](https://www.iattc.org/GetAttachment/22511b5b-ba2b-4126-9ba2-0bffee89f4d5/SAC-13-06%20-%20Stock%20status%20indicators%20(SSIs)%20for%20tropical%20tunas%20in%20the%20EPO)

IATTC (2023c). The tuna fishery in the Eastern Pacific Ocean in 2022. [https://www.iattc.org/GetAttachment/0f48f889-2aa5-437f-8d03-648d62ecfb75/No-21-2023\\_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2022.pdf](https://www.iattc.org/GetAttachment/0f48f889-2aa5-437f-8d03-648d62ecfb75/No-21-2023_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2022.pdf)

**Traceability information**

Information provided for Step 3 Path 1 or Path 2

<b>Species name</b>		Skipjack tuna ( <i>Katsuwonus pelamis</i> )		
<b>Path 1</b>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Confirm all KDEs are provided		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Path 2</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Path 2 outcome</b>	<b>Flag country</b>	<b>Coastal score</b>	<b>Port score</b>	<b>Risk outcome</b>
	Colombia	2.86	2.94	Downgraded to medium risk

**Traceability information**

Information provided for Step 3 Path 1 or Path 2

<b>Species name</b>		Yellowfin tuna ( <i>Thunnus albacares</i> )		
<b>Path 1</b>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Confirm all KDEs are provided		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Path 2</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Path 2 outcome</b>	<b>Flag country</b>	<b>Coastal score</b>	<b>Port score</b>	<b>Risk outcome</b>
	Colombia	2.86	2.94	Downgraded to medium risk

**Traceability information**

Information provided for Step 3 Path 1 or Path 2

<b>Species name</b>		Bigeye tuna ( <i>Thunnus obesus</i> )		
<b>Path 1</b>		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Confirm all KDEs are provided		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
<b>Path 2</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
<b>Path 2 outcome</b>	<b>Flag country</b>	<b>Coastal score</b>	<b>Port score</b>	<b>Risk outcome</b>
	Colombia	2.86	2.94	Downgraded to medium risk