



By-Product assessment report

BP016

TC Union Vietnam Co, Ltd

Report code	BP016	Date of issue	March 2026
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1. Application details			
Applicant	TC Union Vietnam Co, Ltd		
Applicant country	Vietnam		
2. Certification Body details			
Name of Certification Body (CB)	NSF (Global Trust Certification Ltd)		
Contact information for CB	Fisheries@nsf.org		
Assessor name	Sam Peacock		
CB internal peer reviewer name	Matthew Jew		
Internal peer review evaluation	Agree with evaluation		
Number of Assessment days	1		
Comments on the assessment	<p>This assessment covers two species each originating from three sources, producing a total of 6 byproducts. Neither species constitutes an ETP species, according to the MT definition. Two of the byproducts are sourced exclusively from Medium Risk flag states and were Approved source with caution.</p> <p>The remaining four byproducts originate from High Risk flag states and were subjected to a Step 3 assessment. All four passed the Category C assessment, and the applicant was able to provide full KDE information. The byproducts were therefore downgraded to Medium Risk, and Approved source with caution.</p>		
3. Approval validity	<table border="1"> <tr> <td>Valid from 03/2026</td> <td>Valid until 03/2027</td> </tr> </table>	Valid from 03/2026	Valid until 03/2027
Valid from 03/2026	Valid until 03/2027		
4. Assessment cycle	Re-Approval		

5. By-product assessment outcomes			
By-product species name	Flag country(ies)	Fishing Areas	MarinTrust approval status
Skipjack tuna (<i>Katsuwonus pelamis</i>)	Micronesia (FS of), Kiribati, Marshall Isl., Nauru, Korea (Rep. South), Taiwan, Vietnam, USA, Tuvalu, Vanuatu	FAO 71	Approved source with caution
Skipjack tuna (<i>Katsuwonus pelamis</i>)	Kiribati, Nauru, Korea (Rep. South), USA	FAO 77	Approved source with caution
Skipjack tuna (<i>Katsuwonus pelamis</i>)	Spain, France	FAO 51	Approved source with caution
Yellowfin tuna (<i>Thunnus albacares</i>)	Micronesia (FS of), Kiribati, Marshall Isl., Nauru, Korea (Rep. South), Taiwan, Vietnam, USA, Tuvalu, Vanuatu	FAO 71	Approved source with caution
Yellowfin tuna (<i>Thunnus albacares</i>)	Kiribati, Nauru, Korea (Rep. South), USA	FAO 77	Approved source with caution
Yellowfin tuna (<i>Thunnus albacares</i>)	Spain, France	FAO 51	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

Step 2 Assessment Outcomes

By-product species name	Flag country(ies)	IUCN Red List	CITES Appendices	Step 2 risk status	Step 3 required?
Skipjack tuna, <i>Katsuwonus pelamis</i>	Micronesia (FS of), Kiribati, Marshall Isl., Nauru, Korea (Rep. South), Taiwan, Vietnam, USA, Tuvalu, Vanuatu	Least concern	Not listed	High risk	Yes
Skipjack tuna, <i>Katsuwonus pelamis</i>	Kiribati, Nauru, Korea (Rep. South), USA	Least concern	Not listed	High risk	Yes
Skipjack tuna, <i>Katsuwonus pelamis</i>	Spain, France	Least concern	Not listed	Medium Risk	No
Yellowfin tuna, <i>Thunnus albacares</i>	Micronesia (FS of), Kiribati, Marshall Isl., Nauru, Korea (Rep. South), Taiwan, Vietnam, USA, Tuvalu, Vanuatu	Least concern	Not listed	High risk	Yes
Yellowfin tuna, <i>Thunnus albacares</i>	Kiribati, Nauru, Korea (Rep. South), USA	Least concern	Not listed	High risk	Yes
Yellowfin tuna, <i>Thunnus albacares</i>	Spain, France	Least concern	Not listed	Medium Risk	No

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Step 3 Assessment Outcomes

By-product species name	Flag country(ies)	Fishing Area	Stock name	Category C Assessment Outcome	Traceability information	Step 3 Risk Outcome
Skipjack tuna (<i>Katsuwonus pelamis</i>)	Micronesia (FS of), Kiribati, Marshall Isl., Nauru, Korea (Rep. South), Taiwan, Vietnam, USA, Tuvalu, Vanuatu	FAO 71	WCPO skipjack tuna	Pass	Path 1 - Yes	Downgraded to Medium risk
Skipjack tuna (<i>Katsuwonus pelamis</i>)	Kiribati, Nauru, Korea (Rep. South), USA	FAO 77	EPO skipjack tuna	Pass	Path 1 - Yes	Downgraded to Medium risk
Yellowfin tuna (<i>Thunnus albacares</i>)	Micronesia (FS of), Kiribati, Marshall Isl., Nauru, Korea (Rep. South), Taiwan, Vietnam, USA, Tuvalu, Vanuatu	FAO 71	WCPO yellowfin tuna	Pass	Path 1 - Yes	Downgraded to Medium risk
Yellowfin tuna (<i>Thunnus albacares</i>)	Kiribati, Nauru, Korea (Rep. South), USA	FAO 77	EPO yellowfin tuna	Pass	Path 1 - Yes	Downgraded to Medium risk
Comments on Step 3 Assessment: N/A						

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
Micronesia (FS of)	High	1.92	2.94	1.93	1	1	5	1	31.13%
Kiribati	High	1.79	3.11	1.96	1	1	5	1	42.92%
Marshall Isl.	High	1.79	3.17	1.89	1	1	5	1	37.74%
Nauru	Medium	2.04	1	1.64	1	1		1	53.30%
Korea (Rep. South)	Medium	3.67	3.11	1.97	1	1	1	1	83.96%
Taiwan	High	4.17	3.06	2.27	1	1	5	1	90.57%
Vietnam	High	2.3	2.11	2.8	1	3	1	1	36.32%
USA	Medium	2.29	3	2.37	1	1	1	1	91.04%

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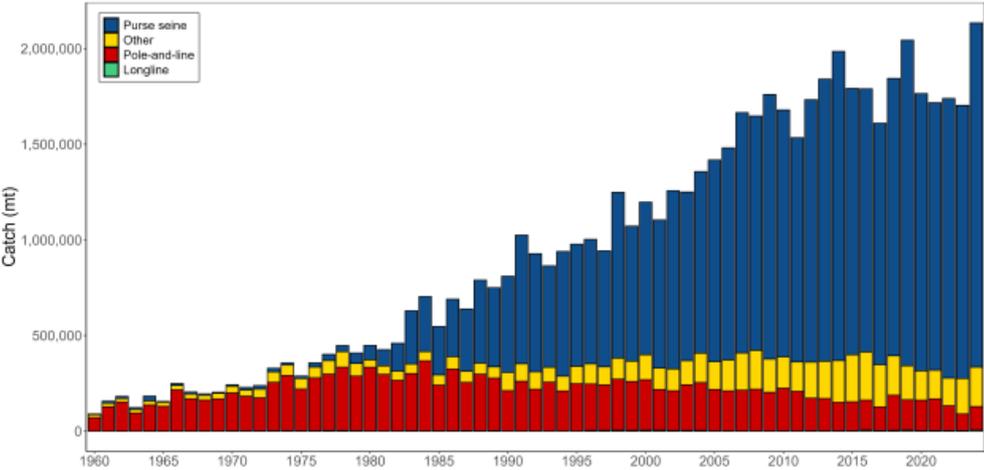
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Tuvalu	High	1.67	2.67	1.81	1	1	5	1	47.64%
Vanuatu	High	2.88	1.56	2.17	2	1	1	1	48.58%
Spain	Medium	3.21	3.39	2.03	1	1	1	1	75.94%
France	Medium	3.17	2.39	1.67	1	1	1	1	85.38%

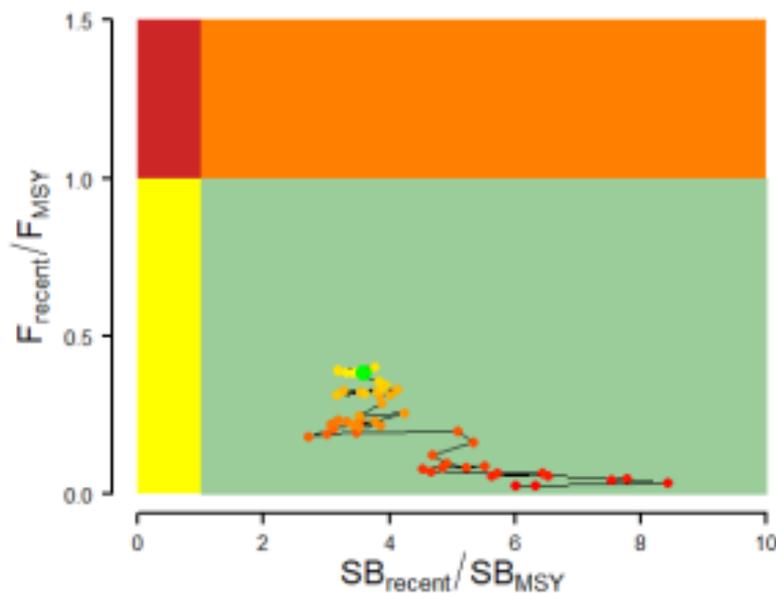
Step 3 outcomes

Category C assessment

Species name		<i>Katsuwonus pelamis</i> - Skipjack tuna	
Fishing area and stock		West Pacific skipjack	
C1	Category C Stock Status - Minimum Requirements		
	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.	PASS
	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.	PASS
Clause outcome:			PASS
<p>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.</p> <p>WCPO skipjack tuna is subjected to regular stock assessments by the WCPFC. The most recent of these was carried out in 2025, using data up to the end of 2024. The assessment incorporated catch, effort- and length-frequency estimates, and tag-recapture data (WCPFC 2025b). The stock assessment report does not raise major concerns about uncertainties due to lack of data. C1.1 is met.</p> <p>Catches are presented in the figure below:</p>  <p style="text-align: center;">Annual catches of skipjack by gear type in the WCPO area covered by the stock assessment (WCPFC 2025a)</p>			

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 2025 stock assessment for WCPO skipjack concluded that “Overall, the outcomes of this assessment suggest that the skipjack stock in the WCPO is not overfished nor undergoing overfishing” (WCPFC 2025a). SB_{RECENT}/SB_{MSY} was estimated to be 3.90, with an 80% CI of 2.95 – 5.61, suggesting biomass is highly likely to be above the MSY level. A Kobe chart summarising the status of the stock is shown below. **C1.2 is met.**



Kobe plot summarising the results for the dynamic MSY analysis of WCPO skipjack by the 2025 stock assessment. Dot colours go from red to green over time, with the green dot being the most recent SB estimate (WCPFC 2025a)

References

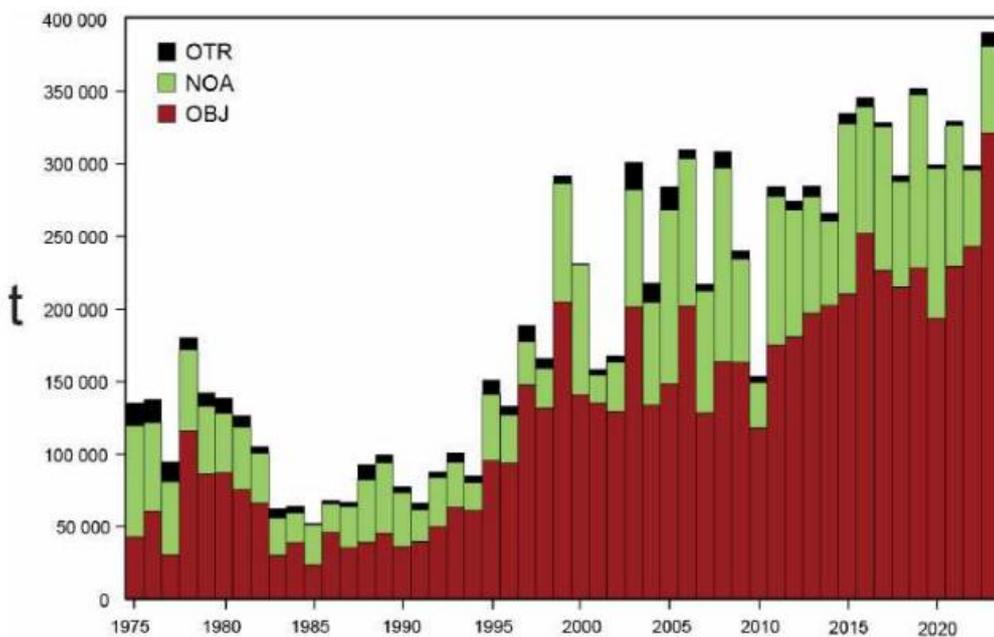
WCPFC (2025a). WCPO skipjack tuna stock assessment 2025. <https://meetings.wcpfc.int/node/26679>

WCPFC (2025b). Overview of tuna fisheries in the Western and Central Pacific Ocean, including economic conditions – 2024. <https://meetings.wcpfc.int/node/26697>

Species name		<i>Katsuwonus pelamis</i> - Skipjack tuna
Fishing area and stock		East Pacific skipjack
C1	Category C Stock Status - Minimum Requirements	
	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. PASS
	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. PASS
Clause outcome:		PASS

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.

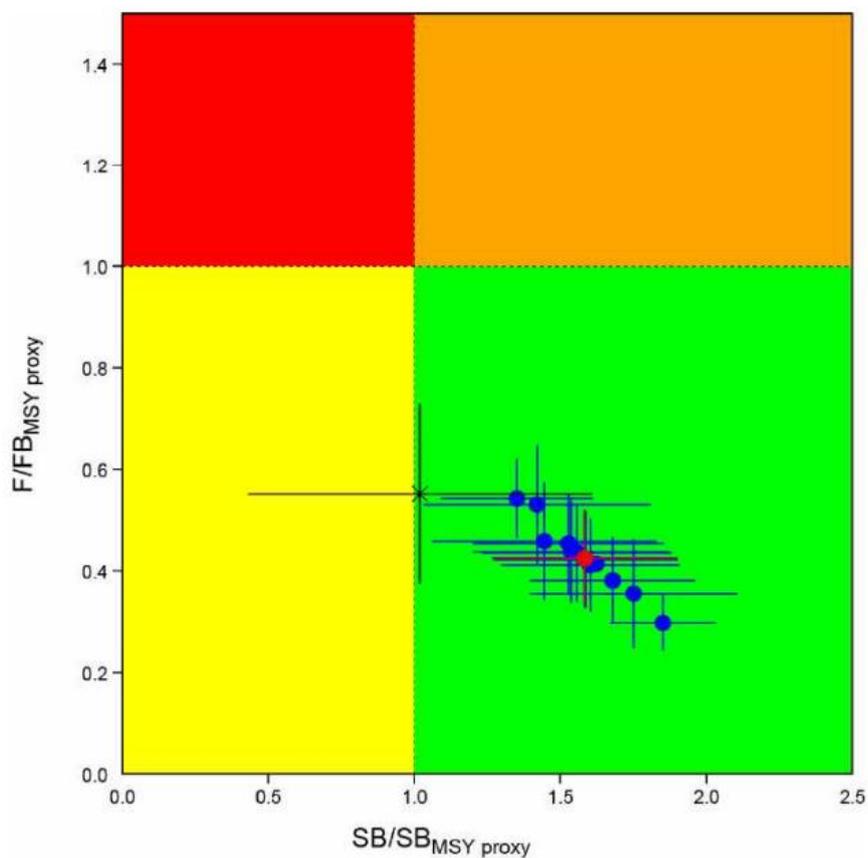
EPO skipjack has historically been subject to “interim” integrated statistical age-structured catch-at-length stock assessments carried out by the IATTC. In 2023, a benchmark stock assessment was conducted using an integrated statistical age-structured catch-at-length model in Stock Synthesis, which is considered by the IATTC to represent “a significant improvement from the initial interim assessment conducted in 2022” (IATTC 2024). The assessment incorporates all available data from across the EPO, including catch data but also size and age frequency data and other sources. Catches are shown in the chart below. **C1.1. is met.**



Skipjack catches (retained plus discards) in the EPO, 1975-2023 (IATTC 2024).

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.

MSY-based estimates and reference points cannot be estimated for EPO Skipjack due to the nature of the model used. Instead, the IATTC management process utilises a conservative proxy for target biomass of $SBR = 0.3$, with the fishing mortality corresponding to that target biomass used as the target reference point for fishing mortality (IATTC 2024). The reference model and most of the sensitivity analyses conducted in 2023 indicated that biomass is above the target reference point and fishing mortality is below the target level. None of the model scenarios concluded that stock biomass is below the limit reference point level. A Kobe chart summarising the status of the stock is shown below. **C1.2 is met.**



Kobe plot for skipjack tuna in the EPO (IATTC 2024).

References

IATTC (2024). The tuna fishery in the Eastern Pacific Ocean in 2023.

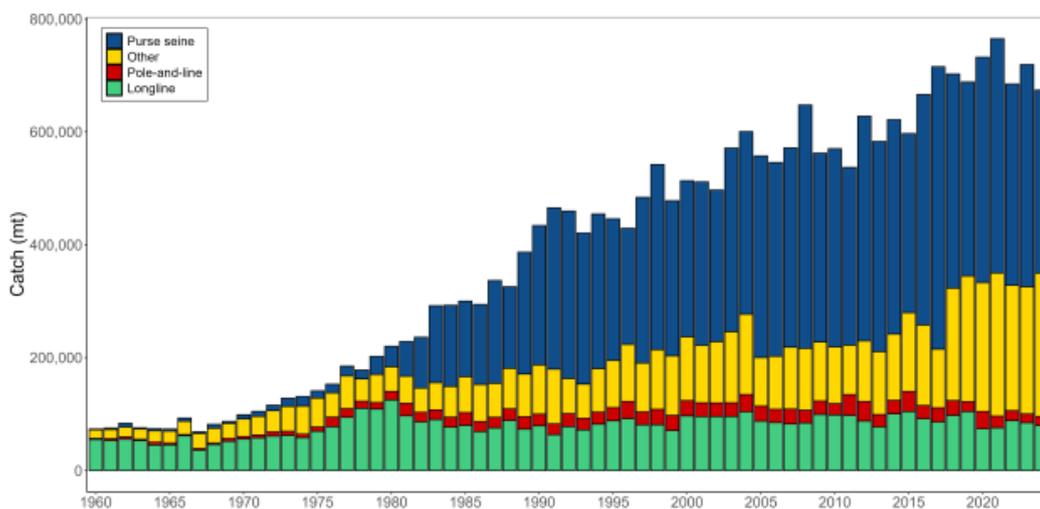
https://www.iatcc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Species name		<i>Thunnus albacares</i> -Yellowfin Tuna
Fishing area and stock		Western and Central Pacific yellowfin
C1	Category C Stock Status - Minimum Requirements	
	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.
	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.
		Clause outcome:
		PASS

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.

Western and Central Pacific Ocean (WCPO) yellowfin tuna is subject to regular stock assessments by the Western and Central Pacific Fisheries Commission (WCPFC). The most recent stock assessment was conducted in 2023 and utilised all available catch data, as summarised in the graph below. 54 models were used to provide a range of potential outcomes based on different key variables, a process which reduces the inherent level of uncertainty. **C1.1 is met.**

Catches are presented in the figure below:

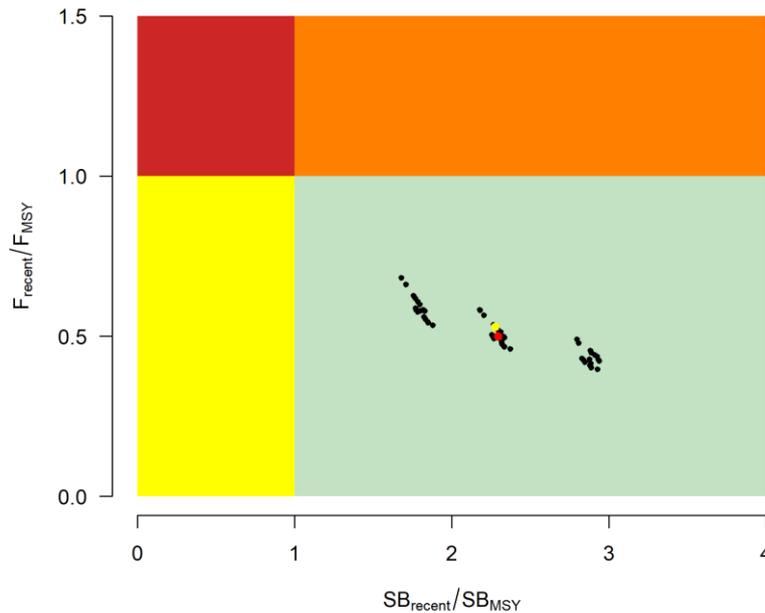


WCPO yellowfin catch by gear (WCPFC 2025)

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 2023 stock assessment produced a series of estimates of the current status of the stock relative to the target reference point BMSY. Biomass in 2021 was estimated to be between 1.91 and 3.11

times larger than BMSY with an 80% certainty; none of the model results indicated that biomass was below BMSY. Biomass is estimated by the most recent stock assessment to be above the target reference point with a high degree of certainty, and therefore also above any potential limit reference point (WCPFC 2023). A Kobe chart summarising the status of the stock is shown below. **C1.2 is met.**



WCPO yellowfin tuna, Kobe plot summarising the results of each of the stock assessment models. The yellow dot is the 2023 diagnostic model and the red dot is the median (WCPFC 2023).

References

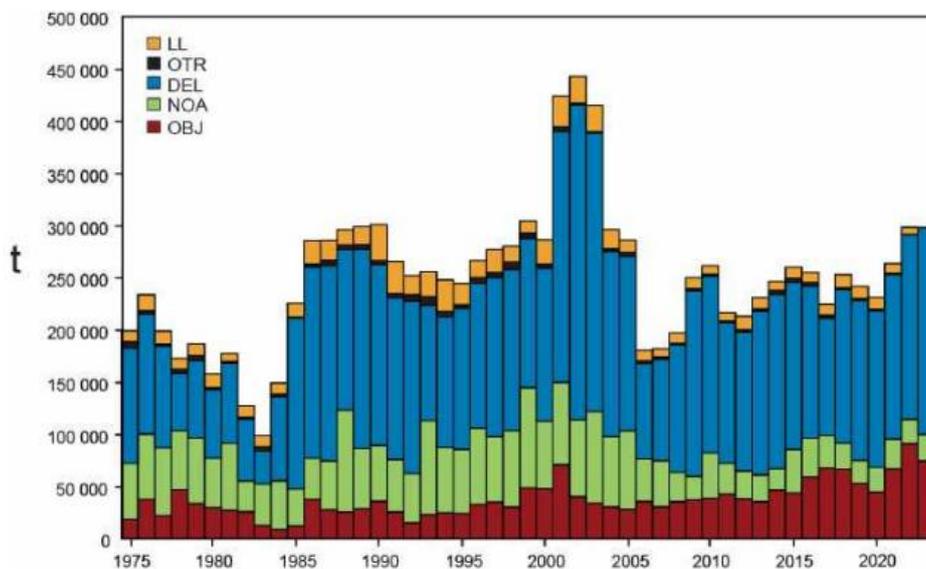
WCPFC (2023). WCPO Yellowfin Tuna, Stock Status and Management Advice. <https://www.wcpfc.int/file/1008665/download?token=wFUhc7q7tern>

WCPFC (2025). Overview of tuna fisheries in the Western and Central Pacific Ocean, including economic conditions – 2024. <https://meetings.wcpfc.int/node/26697>

Species name		<i>Thunnus albacares</i> -Yellowfin Tuna	
Fishing area and stock		East Pacific yellowfin	
C1	Category C Stock Status - Minimum Requirements		
	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.	PASS
	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.	PASS
		Clause outcome: PASS	

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.

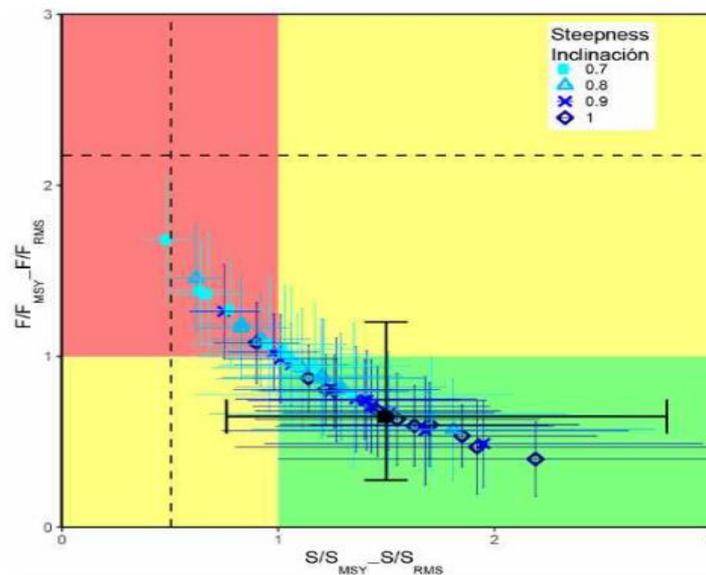
The Eastern Pacific Ocean (EPO) yellowfin tuna stock is managed and assessed by the Inter-American Tropical Tunas Commission (IATTC). A new risk-based approach was introduced to the management of the stock in 2022, with Stock Status Indicators (SSIs) developed using catch and other data collected from the EPO as a whole. This approach continued in 2023 (IATTC 2024). 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 2022). Fishery removals are a key component of the modelling used to generate SSI's, and their development and use is evidence that managers have sought out alternative mechanisms where stock assessment uncertainty is high. The most recent full stock assessment was conducted in 2020. Catches are shown in the chart below. **C1.1 is met.**



Total catches of yellowfin tuna in the EPO by set type (IATTC 2024)

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.

In the full stock assessments for this stock, multiple reference models are utilised to create a risk-based understanding of stock status. The most recent results, from 2020, indicated that “the probability of the spawning biomass being below S_{MSY_d} [i.e. the target reference point] is low (12%)” (IATTC 2024), and that the probability of the biomass being below the limit reference point S_{LIMIT} is zero. There was therefore a low probability that biomass is currently below the target reference point and almost no possibility it was below the limit reference point. A Kobe chart summarising the status of the stock is shown below. **C1.2 is met.**



Kobe plot for yellowfin tuna in the EPO of estimates of spawning stock size (S) and fishing mortality (F). Coloured panels are separated by the target reference points S_{MSY} and F_{MSY} . Limit reference points are approximately indicated by the dashed lines, although these vary between models. The solid black circle represents all models combined (IATTC 2024).

References

IATTC (2022). 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 (2024). The tuna fishery in the Eastern Pacific Ocean in 2023.
https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,_stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Traceability information

The applicant provided a full list of KDEs for all byproduct materials.

Species name	Skipjack tuna (all sources)			
Path 1	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Confirm all KDEs are provided	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Path 2	Yes <input type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
				Choose an item.
				Choose an item.

Species name	Yellowfin tuna (all sources)			
Path 1	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Confirm all KDEs are provided	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Path 2	Yes <input type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
				Choose an item.
				Choose an item.

Guidance for Applicants/Certificate holders on improved traceability

When by-product origin cannot be made more granular than major FAO Areas, or when the source fishery is taking place in the High Seas (i.e. outside of EEZs of all relevant nations), an assessor must evaluate the Coastal and Port scores for each nation that straddles that FAO Area. This may lead to higher risk outcomes for an applicant. To mitigate that risk, better practice involves securing KDEs from the source fishery of the by-products, thereby meeting Path 1 instead of Path 2.

What does better practices look like?

Comprehensive data collection and sharing: Collect detailed information using Key Data Elements (KDEs) including vessel identification and authorisation, species, catch areas, fishing method and dates. These are defined in the MarinTrust Standard clauses 2.11.2.2 and 3.2.5.

Supply chain transparency: Maintain detailed records at each step of the supply chain, from capture to final sale, to ensure traceability.

Interoperable systems and technologies to support the collection and transfer of this information.