By-Product assessment report

BP111

Pioneer Food Cannery Limited –

The Scoular Company

Report code	BP111	Date of issue	March 2026

1. Application details	
Applicant	Pioneer Food Cannery Limited - The Scoular Company
Applicant country	Ghana
2. Certification Body details	
Name of Certification Body (CB)	NSF (Global Trust Certification Ltd)
Contact information for CB	Fisheries@nsf.org
Assessor name	Ana Elisa Almeida Ayres
CB internal peer reviewer name	Matthew Jew
Internal peer review evaluation	Agree with evaluation
Number of Assessment days	1

Comments on the assessment	None of the byproduct species listed in this assessment meet the MarinTrust definition of an Endangered, Threatened, or Protected (ETP) species; therefore, all are eligible for byproduct assessment. The yellowfin tuna (*Thunnus albacares*), bigeye tuna (*Thunnus obesus*) and Skipjack tuna (*Katsuwonus pelamis*) are caught by vessels flagged under Ghana, Bahamas, Lithuania, France, Italy, Mauritius, Seychelles, and Spain. As Ghana and Bahamas received a High-Risk rating in Step 2, Step 3 was required for these byproducts. Albacore tuna (*Thunnus alalunga*) is caught by vessels flagged under Namibia, which receives a Medium Risk rating, therefore this by-product is approved with caution and did not need to be evaluated under Step 3. The client provided information on the fisheries' operational areas and landing ports (coastal and port details) for all the byproducts under the evaluation. Based on the fishing areas provided, 12 stocks were identified: Eastern skipjack tuna, western skipjack tuna, Atlantic yellowfin tuna, Indian ocean yellowfin, Atlantic bigeye tuna, Indian ocean bigeye tuna, eastern Atlantic skipjack, western Atlantic skipjack, South Atlantic albacore and Indian ocean albacore tuna. Based on this data, Step 3 was conducted, concluding that all byproducts from Pioneer Food Cannery Limited - The Scoular Company may be sourced with caution.	
3. Approval validity	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**
Yellowfin tuna (*Thunnus albacares*)	Lithuania, France, Italy, Mauritius, Seychelles, Spain	FAO 34,41,47, & 51	Approved
Yellowfin tuna (*Thunnus albacares*)	Ghana, Bahamas	FAO 34,41,47, & 51	Approved source with caution
Bigeye tuna (*Thunnus obesus*)	Lithuania, France, Italy, Mauritius, Seychelles, Spain	FAO 34,41,47, & 51	Approved
Bigeye tuna (*Thunnus obesus*)	Ghana, Bahamas	FAO 34,41,47, & 51	Approved source with caution
Skipjack tuna (*Katsuwonus pelamis*)	Lithuania, France, Italy, Mauritius, Seychelles, Spain	FAO 34,41,47, & 51	Approved
Skipjack tuna (*Katsuwonus pelamis*)	Ghana, Bahamas,	FAO 34,41,47, & 51	Approved source with caution
Albacore tuna (*Thunnus alalunga*)	Namibia	FAO 47 & 51	Approved

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?
Yellowfin tuna (*Thunnus albacares*)	Lithuania, France, Italy, Mauritius, Seychelles, Spain	Least concern	Not listed	Medium risk	No
Yellowfin tuna (*Thunnus albacares*)	Ghana, Bahamas	Least concern	Not listed	High risk	Yes
Bigeye tuna (*Thunnus obesus*)	Lithuania, France, Italy, Mauritius, Seychelles, Spain	Vulnerable	Not listed	Medium risk	No
Bigeye tuna (*Thunnus obesus*)	Ghana, Bahamas	Vulnerable	Not listed	High risk	Yes
Skipjack tuna (*Katsuwonus pelamis*)	Lithuania, France, Italy, Mauritius, Seychelles, Spain	Least concern	Not listed	Medium risk	No
Skipjack tuna (*Katsuwonus pelamis*)	Ghana, Bahamas,	Least concern	Not listed	High risk	Yes
Albacore tuna (*Thunnus alalunga*)	Namibia	Least concern	Not listed	Medium risk	No

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
Yellowfin tuna (*Thunnus albacares*)	Ghana, Bahamas	FAO 34, 41, & 47	Atlantic yellowfin tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Yellowfin tuna (*Thunnus albacares*)	Ghana, Bahamas	FAO 51	Indian ocean yellowfin	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Bigeye tuna (*Thunnus obesus*)	Ghana, Bahamas	FAO 34, 41, & 47	Atlantic bigeye tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Bigeye tuna (*Thunnus obesus*)	Ghana, Bahamas	FAO 51	Indian ocean bigeye tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Skipjack tuna (*Katsuwonus pelamis*)	Ghana, Bahamas	FAO 34, 41, & 47	Eastern and Western Atlantic skipjack tuna	Pass	Path 2 – Yes	Risk downgraded to Medium Risk
Skipjack tuna (*Katsuwonus pelamis*)	Ghana, Bahamas	FAO 51	Indian Ocean skipjack tuna	Pass	Path 2 – Yes	Risk 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
Ghana	High	1.67	2	2.23	1	3	1	1	44.81%
Bahamas	High	2.38	2.33	2.04	2	1	1		47.17%
Lithuania	Medium	2.33	1.89	2.03	1	1	1	1	87.74%
France	Medium	3.17	2.39	1.67	1	1	1	1	85.38%
Italy	Medium	2.54	2.17	1.73	1	1	1	1	68.87%
Mauritius	Medium	2.13	2.72	1.97	1	1	1	1	84.43%
Seychelles	Medium	1.79	2.39	1.57	1	1	1	1	62.26%
Spain	Medium	3.21	3.39	2.03	1	1	1	1	75.94%
Namibia	Medium	1.96	2.33	2	1	1	1	1	52.36%

Step 3 outcomes

Category C assessment

Species name		**Yellowfin tuna (*Thunnus albacares*)**	
Fishing area and stock		**FAO Areas 34, 41, 47 (Atlantic yellowfin tuna)**	
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.

A full stock assessment was conducted for yellowfin tuna in 2024 using an age-structured model framework (Stock Synthesis) applied to the available data through 2022.

The assessment incorporated all available catch data along with three key abundance indices: a joint-CPC tropical Atlantic longline index; an acoustic echosounder buoy index; and a purse seine free school index (ICCAT 2024)(Figure 1).

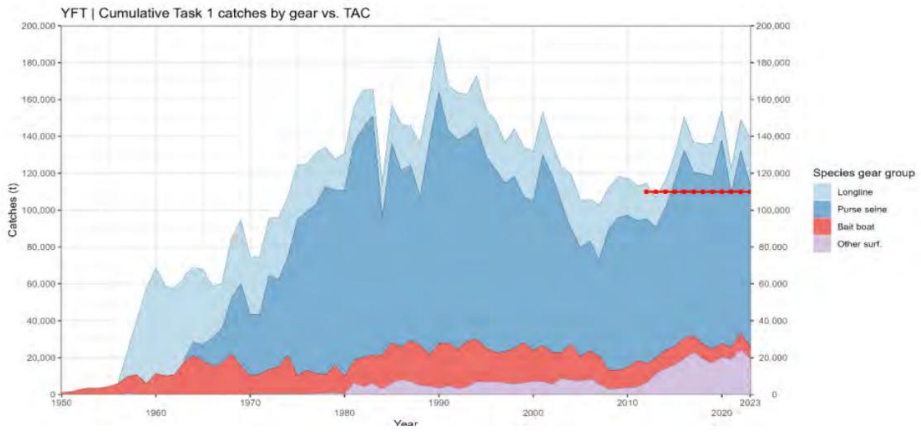

Figure 1. Yellowfin tuna total catch 1950-2023 by main fishing gear group. The red dotted line represents the TAC (ICCAT 2024).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, C1.1 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 ICCAT stock assessment report includes an indication of the estimated stock status relative to target reference points. The median estimate of SSB2022/SSBMSY was 1.37 (80% confidence interval: 0.91 - 2.15), indicating the stock was not overfished in 2022 with 81% probability. The median estimate of F2022/FMSY was 0.89 (0.40 - 1.46), indicating that overfishing was not occurring in 2022 with 58% probability. The median MSY estimated was 121,661 t with 80% confidence intervals of 107,485 and 188,456 t. The probability of the stock being in each quadrant of the Kobe plot in 2022 is provided in Figure 2 below. There was a 58% probability that the stock was in the green quadrant (not overfished nor subject to overfishing) a 23% probability of being in the orange quadrant (subject to overfishing but not being overfished), and a 19% probability in the red quadrant (being both overfished and subject to overfishing) (ICCAT, 2024). Therefore, the stock is likely that stock biomass was above the target reference point level, and therefore highly likely to be above the limit reference point level.

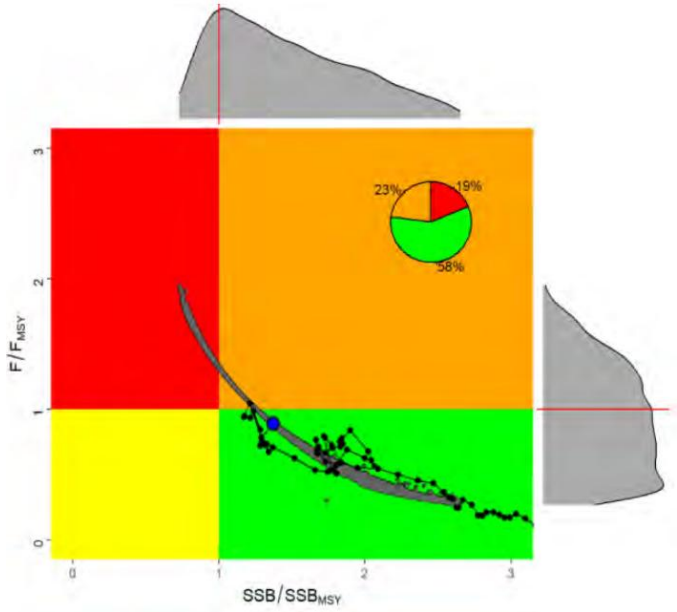

Figure 2. Kobe plot of the stock status of Atlantic yellowfin tuna in 2022. Gray dots are the 4,000-stock synthesis model runs; the blue circle is the median of these runs and marginal histograms represent the distribution of either SSB/SSBMSY or F/FMSY. The black line indicates the stock status trajectory starting in 1958. The inserted pie chart indicates the proportion of model iterations within each Kobe colour quadrant, 58% in the green quadrant, 23% in the orange quadrant, and 19% in the red quadrant (ICCAT 2024).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

ICCAT. 2024. Stock summary, yellowfin tuna. https://www.iccat.int/Documents/SCRS/ExecSum/YFT_ENG.pdf

Species name	Yellowfin tuna (*Thunnus albacares*)	
Fishing area and stock	FAO 51 (Indian Ocean 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.

No new stock assessment was carried out for yellowfin tuna in 2025. The stock status for yellowfin tuna was estimated based on the stock assessment carried out in 2024, which used Stock Synthesis III (SS3), a fully integrated model that is currently used to provide scientific advice for the three tropical tunas stocks in the Indian Ocean. The model uses four types of data: catch, size frequency, tagging and CPUE indices (IOTC 2025a). Figure 3 shows the accumulative catches of the stock.

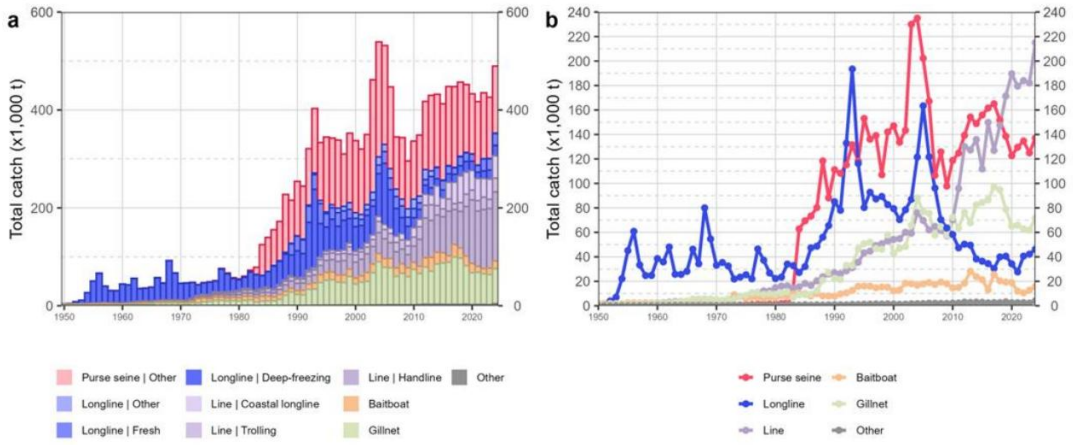

Figure 3. Annual time series of (a) cumulative nominal catches (metric tonnes; t) by fishery and (b) individual nominal catches (metric tonnes; t) by fishery group for yellowfin tuna during 1950-2024. FS = free-swimming school; LS = school associated with drifting floating objects. Purse seine|Other: coastal purse seine, purse seine of unknown association type, ring net; Longline | Other: swordfish and sharks-targeted longlines; Other: all remaining fishing gears (IOTC, 2025a).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, C1.1 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.

2023 spawning biomass is considered to be 32% above the interim target reference point of SBMSY and above the interim limit reference point of 0.4*SBMSY. 2023 fishing mortality is considered to be 25% below the interim target reference point of FMSY, and below the interim limit reference point of 1.4*FMS

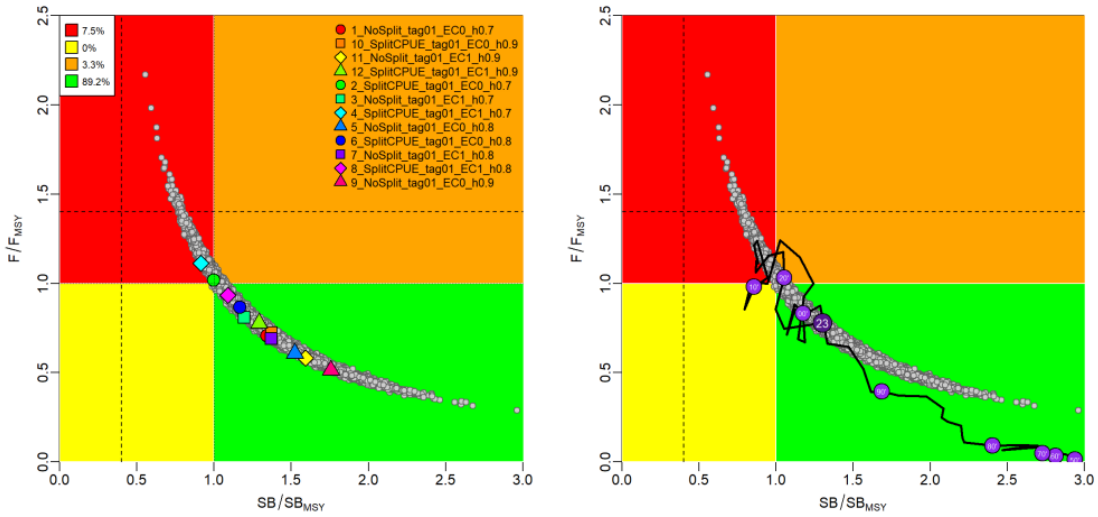

Figure 4. Yellowfin tuna: SS3 Indian Ocean assessment Kobe plot: (left): current (2023) stock status, relative to SBMSY (x-axis) and FMSY (y-axis) reference points for the final model options. Coloured symbols represent Maximum posterior density (MPD) estimates from individual models. Grey dots represent the statistical uncertainty from individual models (20,000 replicates from each). The dashed lines represent limit reference points for IO yellowfin tuna (SBlim = 0.4 SBMSY and Flim = 1.4 FMSY); (right) mean stock trajectory from the model grid (IOTC, 2025a).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met

References

IOTC 2025a. APPENDIX 4. EXECUTIVE SUMMARY: YELLOWFIN TUNA (2025). https://iotc.org/sites/default/files/content/Stock_status/2025/English/IOTC-2025-SC28-ES04_YFTE.pdf

Species name		Bigeye tuna (*Thunnus obesus*)	
Fishing area and stock		FAO Areas 34, 41 and 47 (Atlantic bigeye tuna)	
C 1	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.

A stock assessment for bigeye tuna was conducted by the ICCAT in 2021. That assessment was conducted using similar assessment models to those used in 2018, updating the data until 2019, including catch data (Figure 5Figure 5).

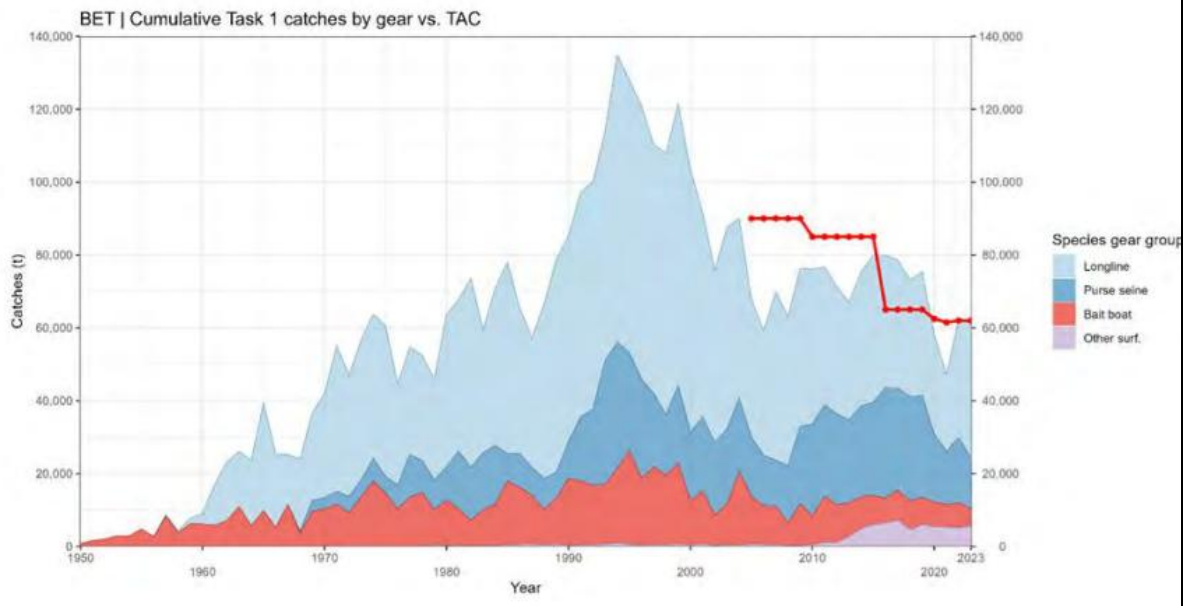

Figure 5. Bigeye tuna estimated and reported catches for all the Atlantic stock (t). the red dotted line indicates the TAC (ICCAT, 2025a).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, C1.1 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 age structured model (SS3) was the primary source of information used to evaluate this stock and shows a substantially more optimistic stock status than estimated in 2018 due to improving longline abundance indices and incorporating new mortality-at-age vectors (Medley & Gascoigne 2024). The results of the assessment, based on the median of the entire uncertainty grid shows that in 2019 the Atlantic bigeye tuna stock was overfished (median SSB2019/SSBMSY = 0.94 and 80% confidence interval (CI) of 0.71 and 1.37) and was not undergoing overfishing (median F2019/FMSY=1.00 and 80% CI of 0.63 and 1.35) (Figure 6). The average of MSY was estimated as 86,833 t with (80% CI of 72,210 t and 106,440 t) from the uncertainty grid deterministic runs (ICCAT 2025a). Based on that information it seems that the stock is close to the target point and therefore over any potential limit point.

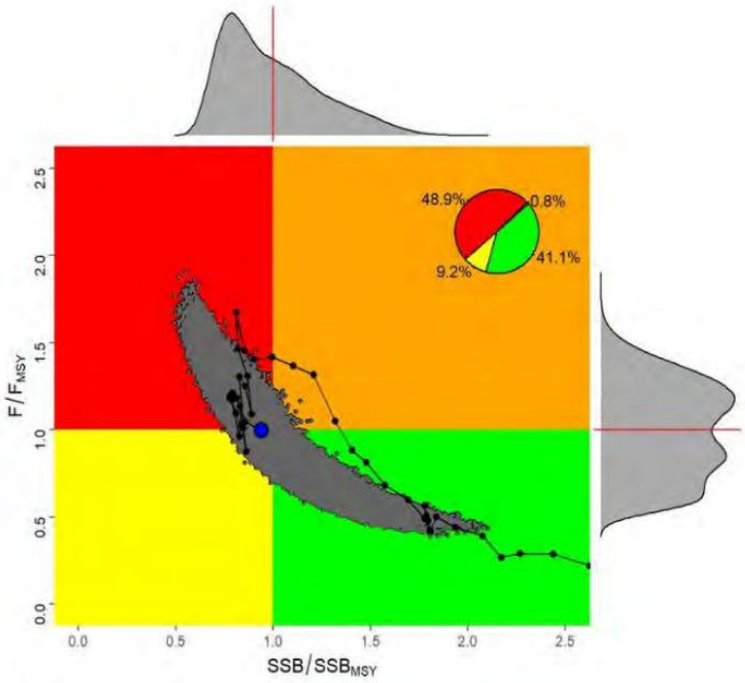

Figure 6. Stock synthesis: Kobe plot of SSB/SSBMSY and F/FMSY for stock status of Atlantic bigeye tuna in 2019 based on the log multivariate normal approximation across the 27 uncertainty grid model runs of stock synthesis with an insert pie chart showing the probability of being in the red quadrant (48.9%), green quadrant (41.1 %), orange (0.8%) and in yellow (9.2 %). Blue circle is the median and marginal histograms represent distribution of either SSB/SSBMSY OR F/FMSY (ICCAT, 2025a).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

ICCAT. 2025a. BIGEYE TUNA. EXECUTIVE SUMMARY. https://www.iccat.int/Documents/SCRS/ExecSum/BET_ENG.pdf

Medley, P.A.H. & Gascoigne, J. (2024). An Evaluation of the Sustainability of Global Tuna Stocks Relative to Marine Stewardship Council Criteria (Version 11). ISSF Technical Report 2024-06. International Seafood Sustainability Foundation, Pittsburgh, PA, USA.

Species name	Bigeye tuna (*Thunnus obesus*)	
Fishing area and stock	FAO 51 (Indian Ocean bigeye tuna)	
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.

Bigeye tuna in the Indian Ocean is subject to regular stock assessment by the Indian Ocean Tuna Commission (IOTC). A new stock assessment for bigeye tuna was completed in 2025 using the SS3 framework to support scientific advice. This assessment retained the structural basis of the 2022 model, while incorporating updated estimates of growth and natural mortality. The model was calibrated using regional combined longline CPUE indices together with the European Union (EU) purse seine CPUE index. The reported stock status relies on a set of 36 alternative model configurations, developed to account for uncertainties related to the stock–recruitment relationship, longline selectivity patterns, natural mortality, and catchability dynamics (Figure 7) (IOTC 2025b).

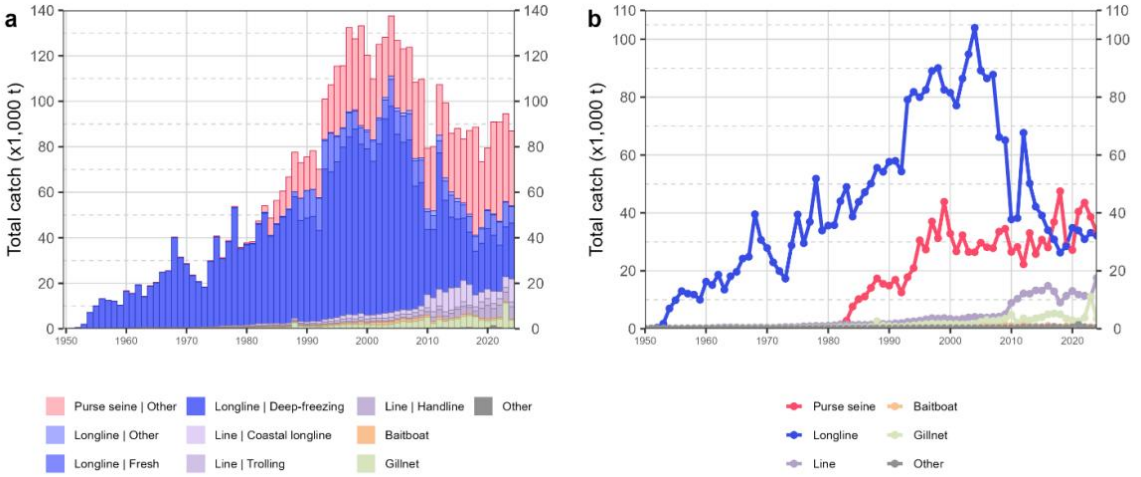

Figure 7. Annual time series of (a) cumulative nominal catches (metric tonnes; t) by fishery and (b)individual nominal catches (metric tonnes; t) by fishery group for bigeye tuna during 1950-2024 (IOTC 2025b).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, C1.1 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.

In general, the assessment findings indicate that bigeye tuna biomass has almost reached the target spawning biomass associated with MSY (Figure 8). There is a 54% likelihood that spawning biomass in 2024 remains below SBMSY, with median spawning biomass in 2024 estimated at 0.98 (0.71-1.25) times the level that can support MSY. There is a 62% probability that F2024 is below FMSY, with median fishing mortality (in 2024) estimated at 0.94 (0.69-1.18) times the FMSY level. Based on the overall body of evidence available in 2025, the bigeye tuna stock is classified as overfished, although it is not currently experiencing overfishing. Based on that information it seems that the stock is closed to the target point and therefore over any potential limit reference point.

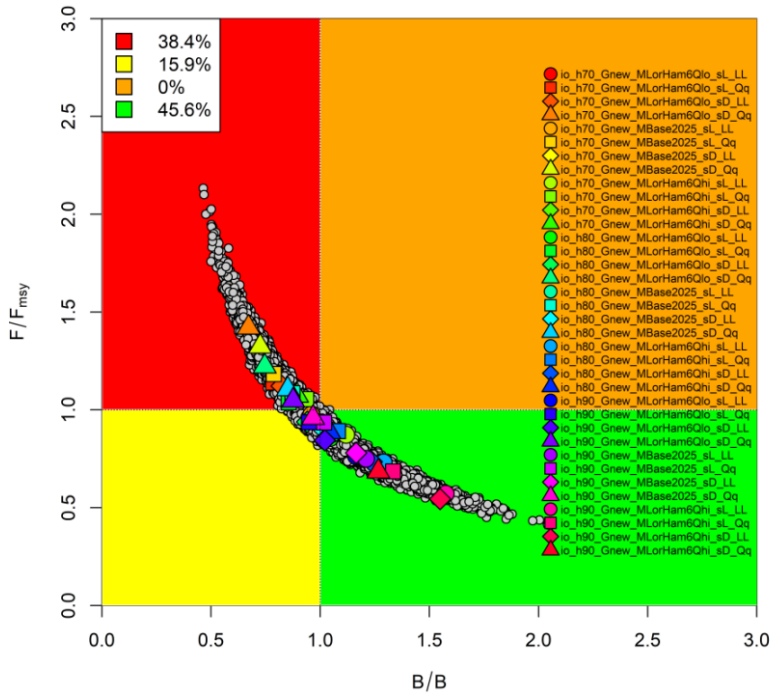

Figure 8. Bigeye tuna: SS3 Aggregated Indian Ocean assessment Kobe plot. The coloured points represent stock status estimates from the 36 model options. Coloured symbols represent Maximum Posterior Density (MPD) estimates from individual models which varied in terms of steepness (h), natural mortality (M), selectivity on the LL2+LL3 fleets (sL vs sD), and gear creep applied to the LL CPUE indices (LL vs Qq, where Qq represents 0.5% of effort creep ajustment on the indices). (IOTC, 2025b).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

IOTC. 2025b. APPENDIX 2. EXECUTIVE SUMMARY: BIGEYE TUNA (2025). https://iotc.org/sites/default/files/content/Stock_status/2025/English/IOTC-2025-SC28-ES02_BETE.pdf

Species name		Skipjack tuna (*Katsuwonus pelamis*)	
Fishing area and stock		FAO 34,41,47 (Eastern and Western Atlantic 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

There are two skipjack stocks in the Atlantic (eastern and western stock) (Figure 9). Both are considered in the sections below.

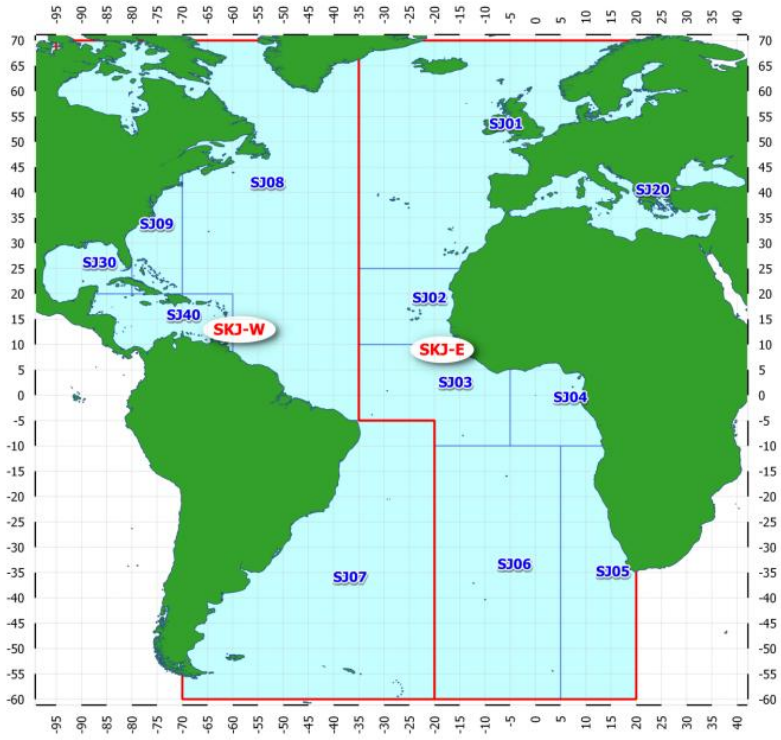

Figure 9. ICCAT Convention Area for the Atlantic eastern (SKJ-E) and western (SKJ-E) skipjack stock (ICCAT, 2016).

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.

a) Eastern Skipjack Tuna

The last stock assessment of the eastern skipjack stock was performed in 2022 and concluded the stock was in a healthy condition. The stock assessment applied non-equilibrium and Bayesian state-

space production models to integrated statistical assessment models using the available catch data from 1950 to 2023 (Figure 10) (ICCAT, 2022a).

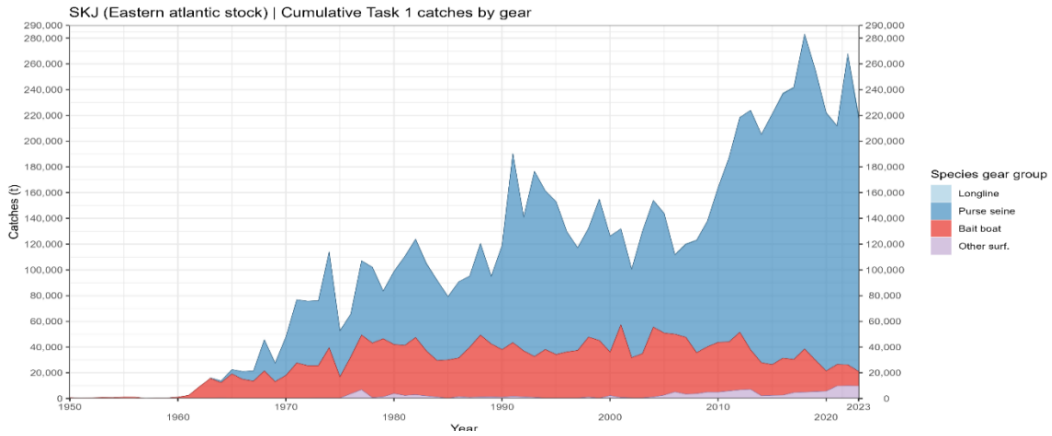

Figure 10. Skipjack catches in the eastern Atlantic, by gear (1950-2023). The values for 2023 are preliminary (ICCAT, 2022a).

a) Western skipjack Tuna

The last stock assessment of the eastern skipjack stock was performed in 2022 and concluded the stock was in a healthy condition. The stock assessment applied non-equilibrium and Bayesian state-space production models to integrated statistical assessment models using the available catch data from 1952 to 2023 (Figure 11) (ICCAT, 2022a).

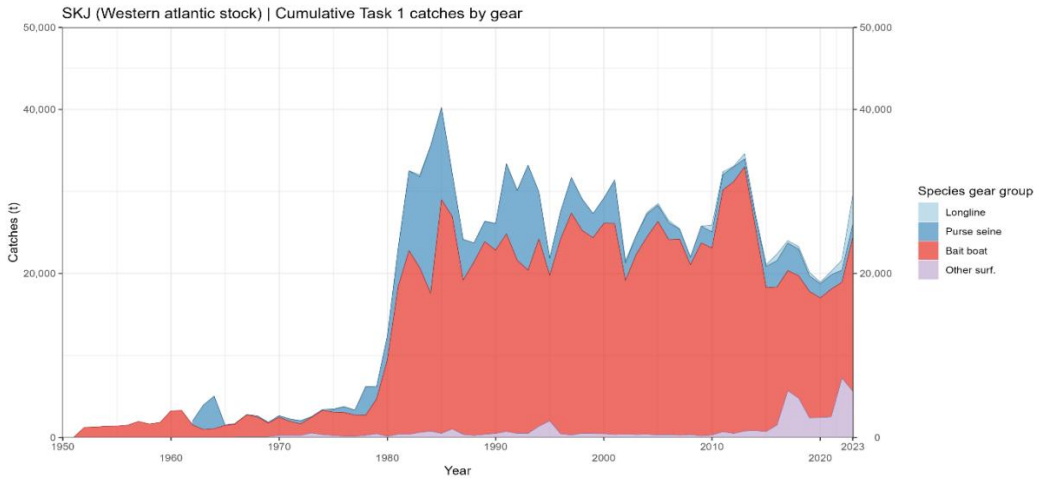

Figure 11. Skipjack catches in the western Atlantic, by gear (1950-2023). The values for 2023 are preliminary (ICCAT, 2022a).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, C1.1 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.

a) Eastern Skipjack Tuna

The stock was last assessed in 2022, using data up to 2020 and two different model platforms. The combined results of both assessment models, based on the median of an uncertainty grid with 18 scenarios in each model, show that:

1. The ratio of Fcurrent/FMSY is estimated to be 0.63 (95% C.I.: 0.18-2.35), indicating that overfishing is not occurring.

2. The ratio of spawning biomass SSBcurrent/SSBMSY is estimated to be 1.60 (95% C.I.: 0.50-5.79) , indicating that the stock is not in an overfished state.

3. The estimate of MSY is 216,617 t (95% C.I.: 172,735-284,658 t) (Figure 12).

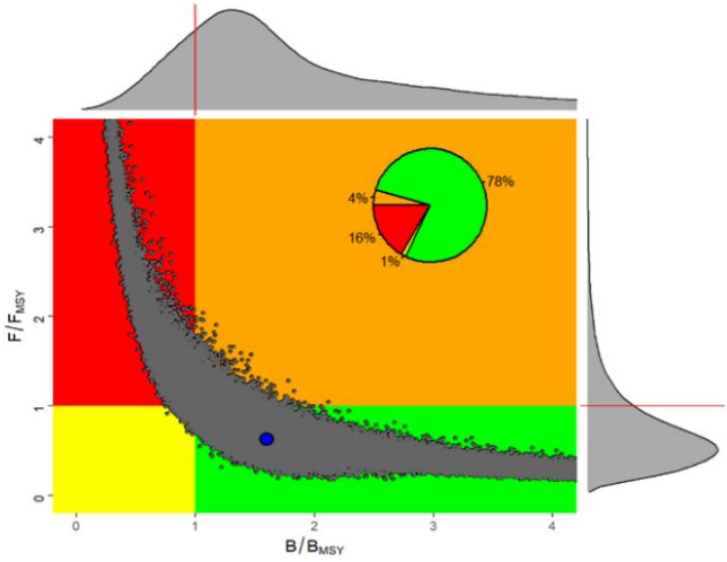

Figure 12. Joint Kobe phase plot for the 18 Stock Synthesis uncertainty grid runs and 18 JABBA uncertainty grid runs for the eastern Atlantic skipjack stock. For each run the benchmarks are calculated from the year-specific selectivity and fleet allocations, and based on 90,000 MVLN iterations for Stock Synthesis and 90,000 MCMC iterations for JABBA. The blue point shows the median of 180,000 iterations for SSB2020/SSBMSY or B2020/BMSY and F2020/FMSY for the entire set of runs in the grid. Grey points represent the 2020 estimates of relative fishing mortality and relative spawning stock biomass for 2020 for each of the 180,000 iterations. The upper graph represents the smoothed frequency distribution of SSB2020/SSBMSY or B2020/BMSY estimates for 2020. The right graph represents the smoothed frequency distribution of F2020/FMSY estimates for 2020. The inserted pie graph represents the percentage of each 2020 estimate that fall in each quadrant of the Kobe plot. All SSB for Stock Synthesis showed the values at the end of years (ICCAT, 2022a).

b) Western Skipjack Tuna

The stock was assessed by SCRS in 2022, using data up to 2020. Stock status was estimated by combining the results of the 9 scenarios in the uncertainty grid. The SCRS concluded that:

1. The ratio of Fcurrent/FMSY is around 0.41 (95% C.I.: 0.19-0.89), indicating that overfishing is not occurring.
2. The ratio of spawning biomass SSBcurrent/SSBMSY is 1.60 (95% C.I.: 0.90-2.87), indicating that the stock is not overfished.
3. The value of MSY is estimated as 35,277 tonnes (95% C.I.: 28,444-46,340 t) (Figure 13).

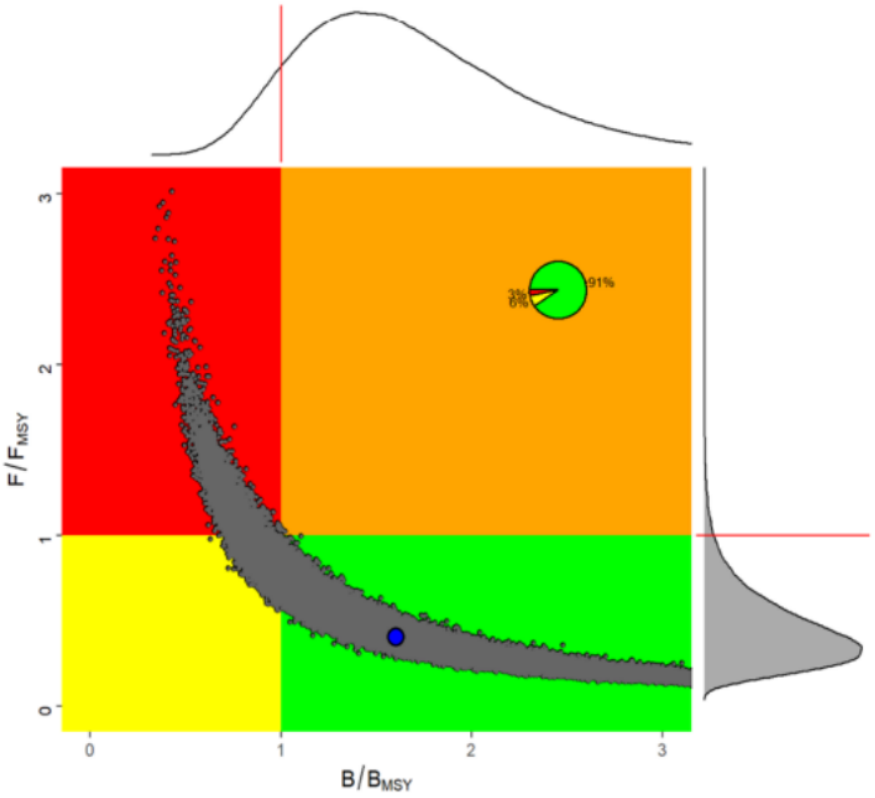

Figure 13. Kobe phase plot for the 9 Stock Synthesis uncertainty grid runs for the western Atlantic skipjack stock. For each run the benchmarks are calculated from the year-specific selectivity and fleet allocations and based on 200,000 MVLN iterations. The blue point shows the median of 200,000 iterations for SSB2020/SSBMSY and F2020/FMSY for the entire set of runs in the grid. Black line with black symbols represents the historical evolution of the median of all runs. Grey points represent the 2020 estimates of relative fishing mortality and relative spawning stock biomass for 2020 for each of the 200,000 iterations. The upper graph represents the smoothed frequency distribution of SSB/SSBMSY estimates for 2020. The right graph represents the smoothed frequency distribution of F/FMSY estimates for 2020. The inserted pie graph represents the percentage of each 2020 estimate that fall in each quadrant of the Kobe plot. All SSB showed the values at the end of years (ICCA, 2022a).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met

References

ICCAT. 2016. ICCAT geographical definitions. https://www.iccat.int/Data/ICCAT_maps.pdf

ICCAT. 2022a. EXECUTIVE SUMMARY. 9.3 SKJ – Skipjack. https://www.iccat.int/Documents/SCRS/ExecSum/SKJ_ENG.pdf

Species name	Skipjack tuna (*Katsuwonus pelamis)*	
Fishing area and stock	FAO 51 (Indian Ocean bigeye tuna)	
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.

No new stock assessment was carried out for skipjack tuna in 2025 and so the advice is based on the 2023 assessment using Stock Synthesis with data up to 2022. The stock assessment conducted by IOTC takes all fishery removals into account (Figure 14).

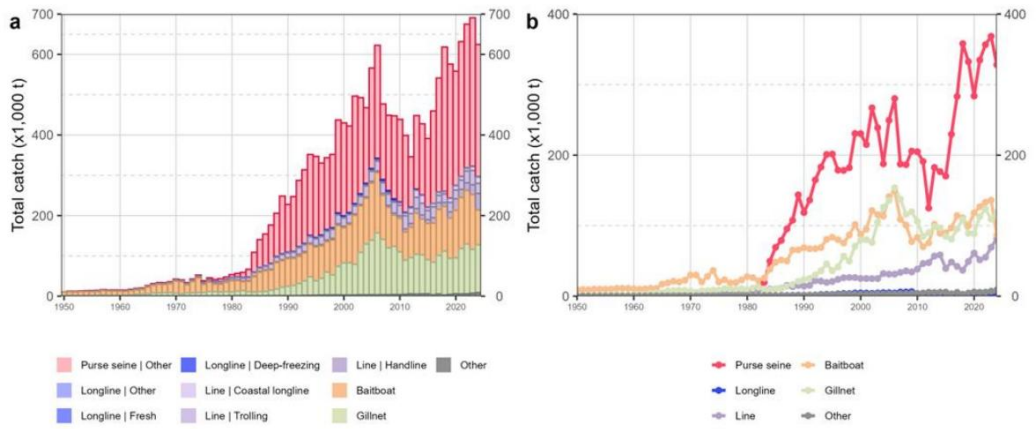

Figure 14. Annual time series of (a) cumulative nominal catches (metric tonnes; t) by fishery group and (b) individual nominal catches (metric tonnes; t) by fishery group for skipjack tuna during 1950-2023 (IOTC, 2025c).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, C1.1 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.

Current spawning biomass was considered to be above the target reference point of 40% of SB0, and above the limit reference point of 0.2*SB0 as per Resolution 16/02. Current spawning biomass relative to unexploited levels is estimated at 53%. Over the history of the fishery, biomass has been well above the adopted limit reference point. Current exploitation rate is below the target

exploitation rate with the probability of 70% and the fishing mortality remains below FMSY with a probability of 98.4 %. Subsequently, based on the weight-of-evidence available in 2023, the skipjack tuna stock is determined to be not overfished and not subject to overfishing (Figure 15)(IOTC, 2025c).

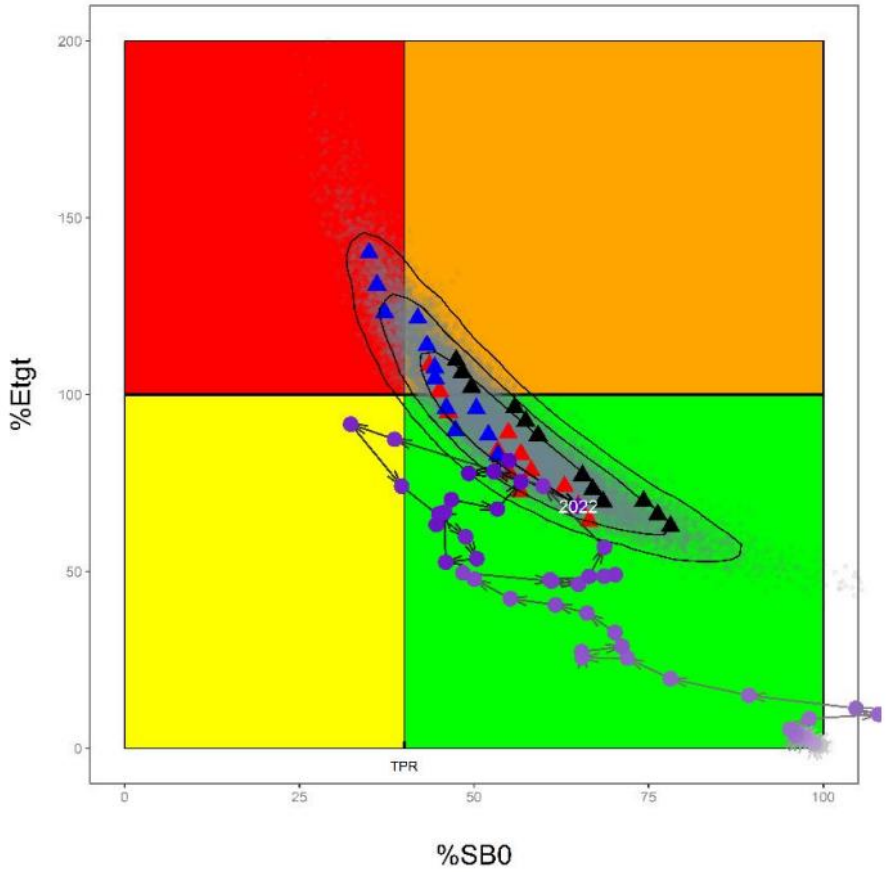

Figure 15. Skipjack tuna: SS3 Aggregated Indian Ocean assessment Kobe plot of the 2023 uncertainty grid: current stock status, relative to SB0 and F (x-axis) and F40%B0 (y-axis) reference points for the final model grid. The middle vertical line indicates 40% B0. The middle horizontal line indicates the 100% of the target fishing mortality. Triangles represent Maximum Posterior Density estimates from individual models (black, models based on pole-and-line (PL) index; red, models based on floating object associated purse seine fishery (PSLS) index; blue, models based on and both PSLS and ABBI index). Grey dots represent uncertainty from individual models. The arrowed line represents time series of historical stock trajectory for model PSLS. Contours represent 50, 80, and 90% confidence region (IOTC, 2025c).

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference points (or proxy), C1.2 is met.

References

IOTC. 2025c. APPENDIX 3. EXECUTIVE SUMMARY: SKIPJACK TUNA (2025). https://iotc.org/sites/default/files/content/Stock_status/2025/English/IOTC-2025-SC28-ES03_SKJE.pdf

Traceability information

Information provided for Step 3 Path 1 or Path 2

Species name		Yellowfin tuna (*Thunnus albacares*)		
Path 1		Yes ☐ No ☒		
Confirm all KDEs are provided		Yes ☐ No ☒		
Path 2	Yes ☒ No ☐			
Path 2 outcome	**Flag country**	**Coastal score**	**Port score**	**Risk outcome**
	Ghana, Bahamas, Lithuania, France, Italy, Mauritius, Seychelles, Spain	Ghana, Spain, France, Mauritius, Belize, Seychelles, Kenya, Italy **MEDIUM RISK**	Ghana, Senegal, Abidjan, and Seychelles **MEDIUM RISK**	Downgraded to medium risk

Species name		Bigeye tuna (*Thunnus obesus*)		
Path 1		Yes ☐ No ☒		
Confirm all KDEs are provided		Yes ☐ No ☒		
Path 2	Yes ☒ No ☐			
Path 2 outcome	**Flag country**	**Coastal score**	**Port score**	**Risk outcome**
	Ghana, Bahamas, Lithuania, France, Italy, Mauritius, Seychelles, Spain	Ghana, Spain, France, Mauritius, Belize, Seychelles, Kenya, Italy **MEDIUM RISK**	Ghana, Senegal, Abidjan, and Seychelles **MEDIUM RISK**	Downgraded to medium risk

Species name	Skipjack tuna (*Katsuwonus pelamis*)			
Path 1	Yes ☐ No ☒			
Confirm all KDEs are provided	Yes ☐ No ☒			
Path 2	Yes ☒ No ☐			
Path 2 outcome	**Flag country**	**Coastal score**	**Port score**	**Risk outcome**
	Ghana, Bahamas, Lithuania, France, Italy, Mauritius, Seychelles, Spain	Ghana, Spain, France, Mauritius, Belize, Seychelles, Kenya, Italy **MEDIUM RISK**	Ghana, Senegal, Abidjan, and Seychelles **MEDIUM RISK**	Downgraded to medium risk

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.