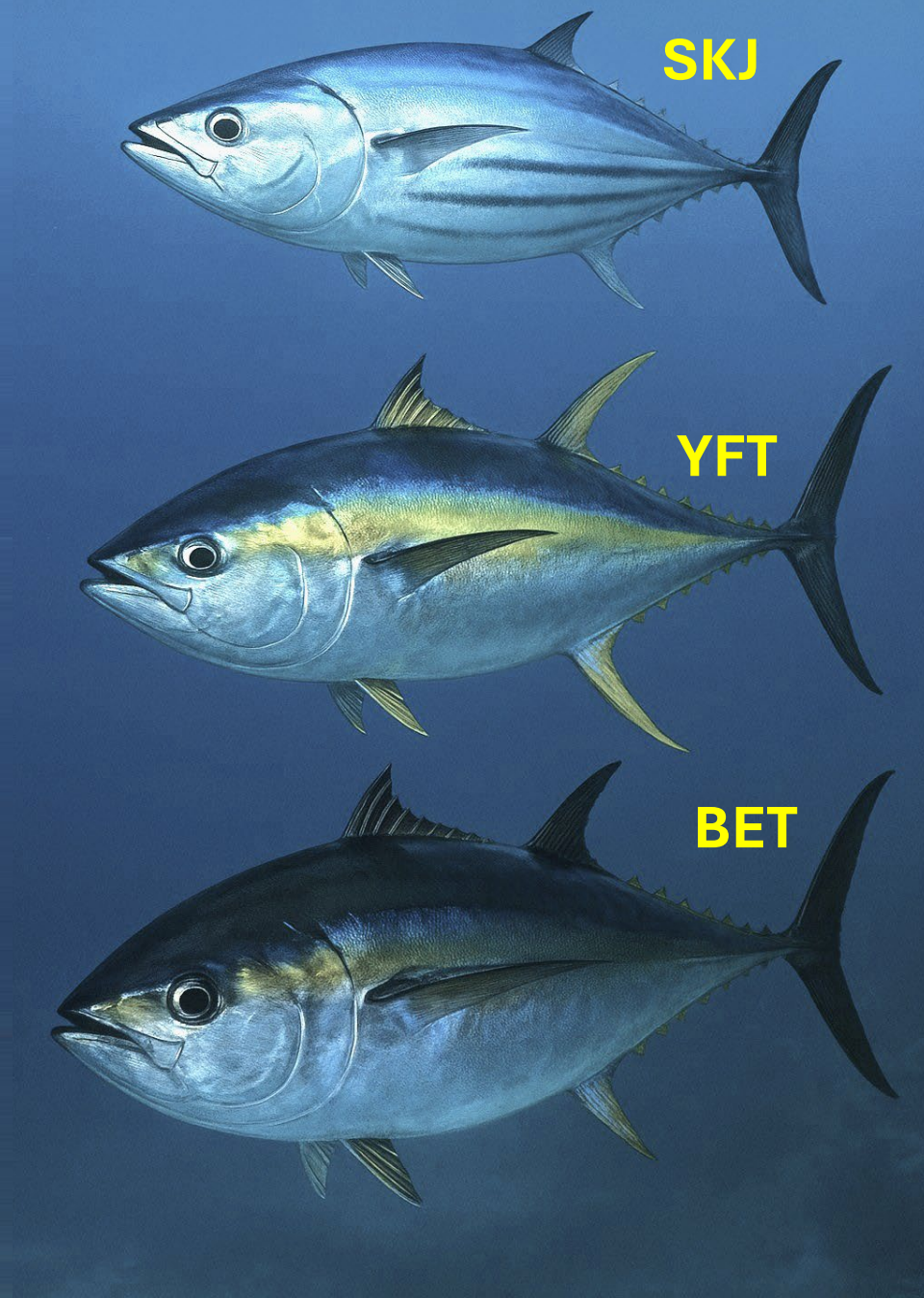
2026 Report of the SCRS to the ICCAT Panel 1: Tropical Tuna

Stock status, Responses, MSE, and Research



25th Special Meeting of the Commission
Vilamoura, Portugal
16 - 23 November 2026

Presentation Overview: Tropical Tunas Scientific Advice

Agenda & Key Scientific Deliverables

STRUCTURE OF THE 2026 SCRS REPORT TO PANEL 1

1. Executive Summaries & Stock Status:

Stock status, Kobe matrices, and management advice for Western Skipjack (SKJ-W), Eastern Skipjack (SKJ-E), Yellowfin (YFT), and Bigeye (BET).

2. Purse-Seine FAD Catch Trends & Selectivity:

Marked drop in bigeye contribution to FAD sets (18% to 5%), persistent juvenile yellowfin dominance (>90%), and the resulting decline in dynamic MSY.

3. Management Strategy Evaluation (MSE):

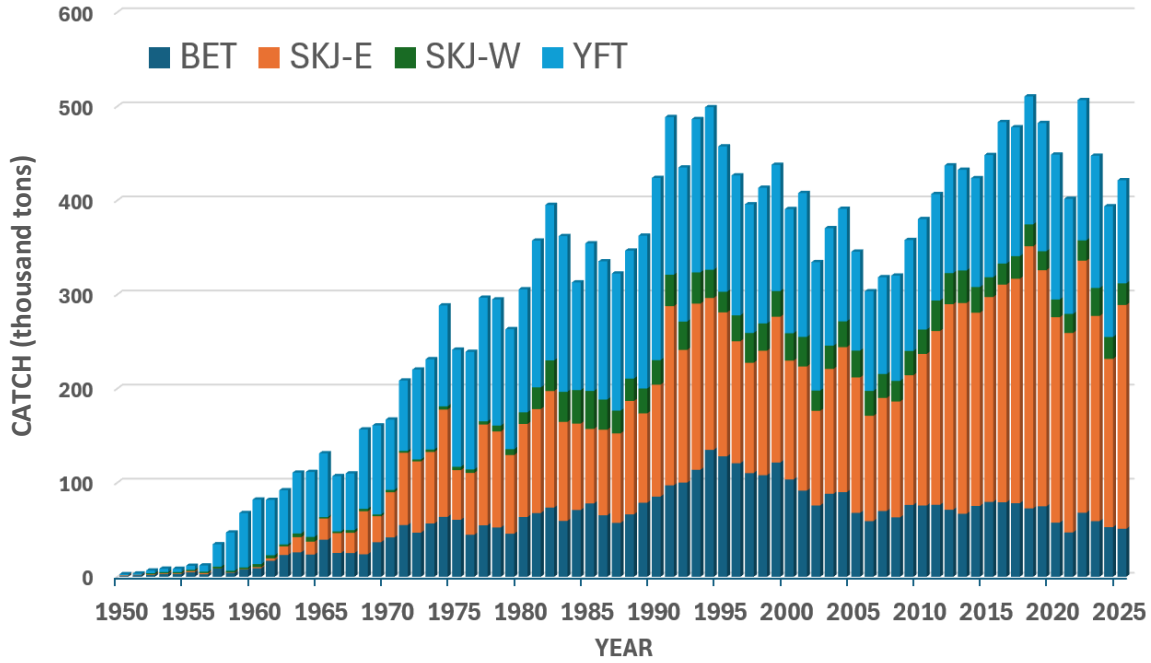
Adoption of Western Skipjack Exceptional Circumstances Protocol (ECP; trial check: no ECs) and technical reconditioning of Multi-Stock MSE to 2028.

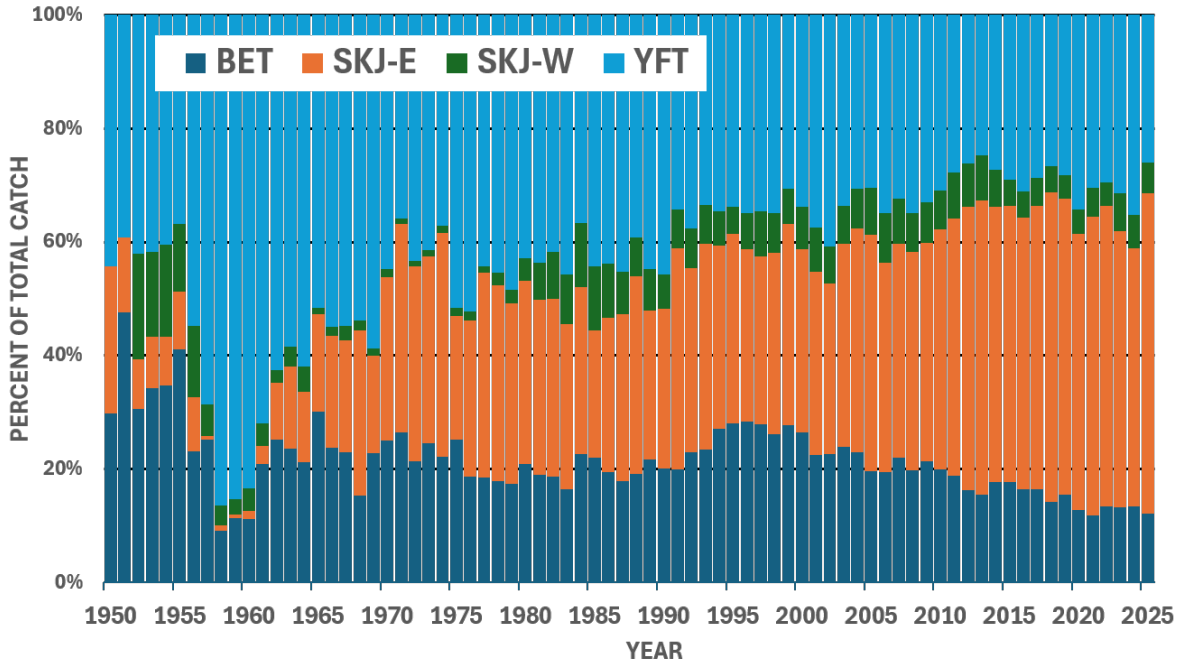
4. Responses to Commission Requests:

Targeted evaluations on support vessels (19.34), full fishery closures (19.38), fishing capacity and AIS usage (19.39), and shifting MSY baselines (19.41).

5. Research Programs & 2027 Science Workplan:

TTRaD biological research (age, growth, genetics) and scheduling of the 2027 SKJ-E benchmark stock assessment.



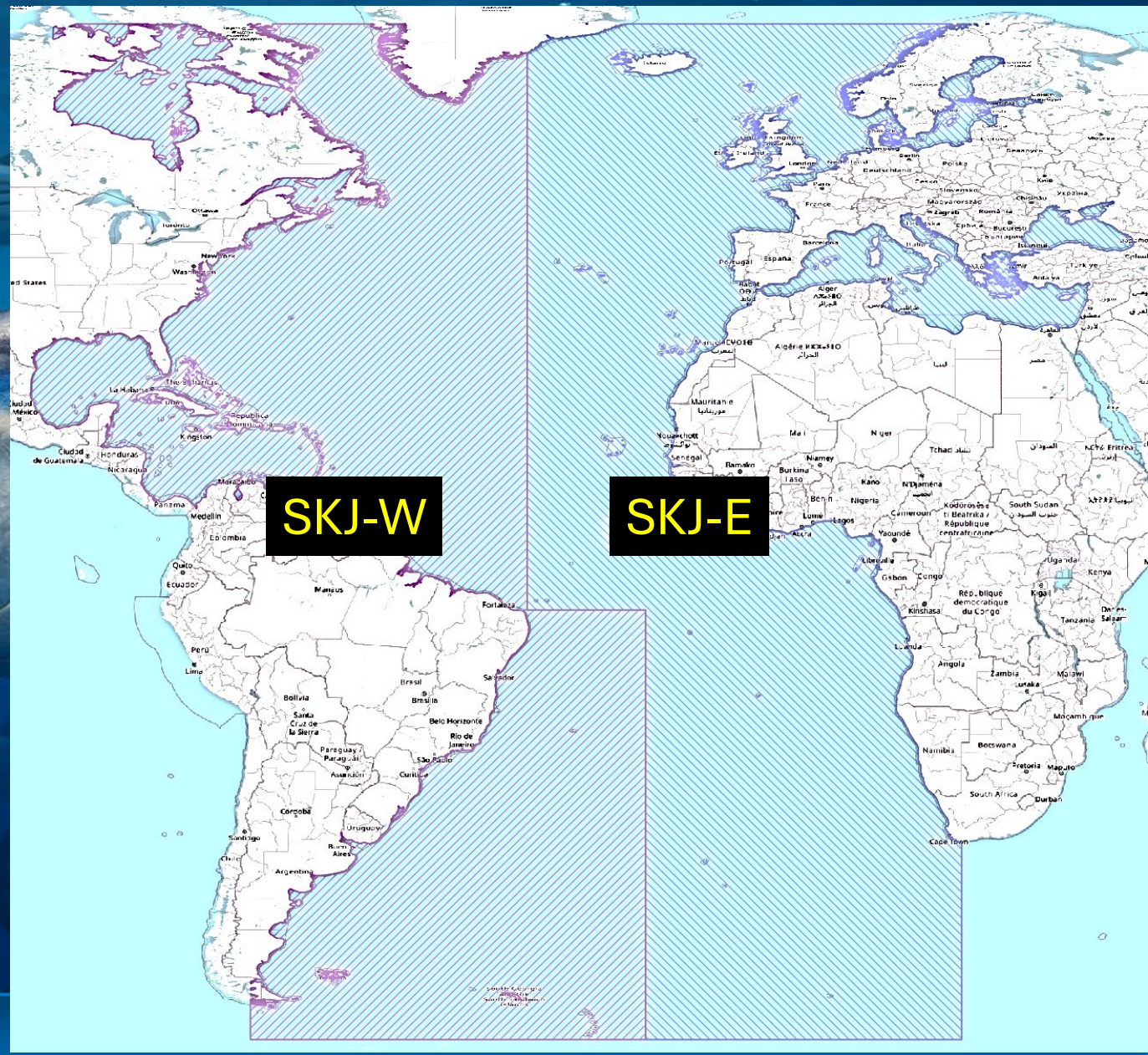


Skipjack

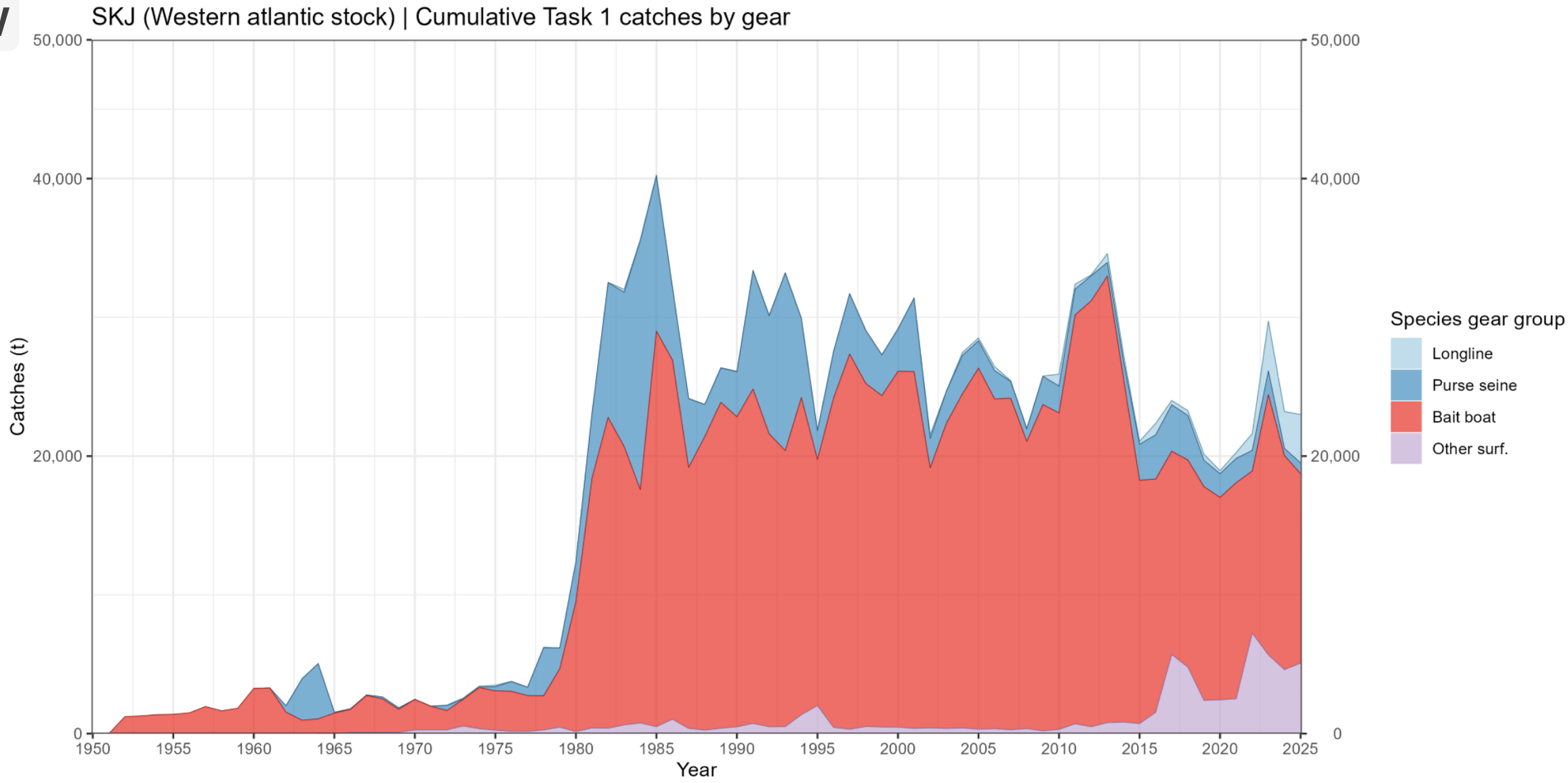


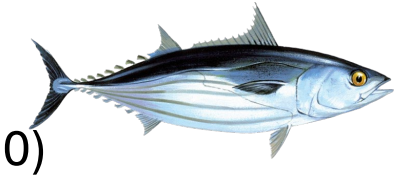
Last assessed in 2022

Skipjack



SKJ-W


SKJ (Western atlantic stock) | Cumulative Task 1 catches by gear
Catches (t)
50,000
40,000
20,000
0
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
Year
Species gear group
Longline
Purse seine
Bait boat
Other surf.



West Atlantic Skipjack summary table (assessed in 2022 using data through 2020)

SKJ-W

Western Atlantic skipjack		
Indicator		***Stock Status***
Maximum Sustainable Yield (MSY)	35,277 t (28,444 – 46,340 t)[1]	2020
Current (2025) TAC	None	
Current (2024) Yield	23,207 t[2]	
Relative Biomass (B_{2020}/B_{MSY})	1.60 (0.90 – 2.87)[3]	
Relative Fishing Mortality (F_{2020}/F_{MSY})	0.41 (0.19 – 0.89)[3]	
Stock Status	Overfished: NO (9% probability of being overfished)	
	Overfishing: NO (3% probability of overfishing)	
Management Measures in effect	Rec. 24-01[4]	

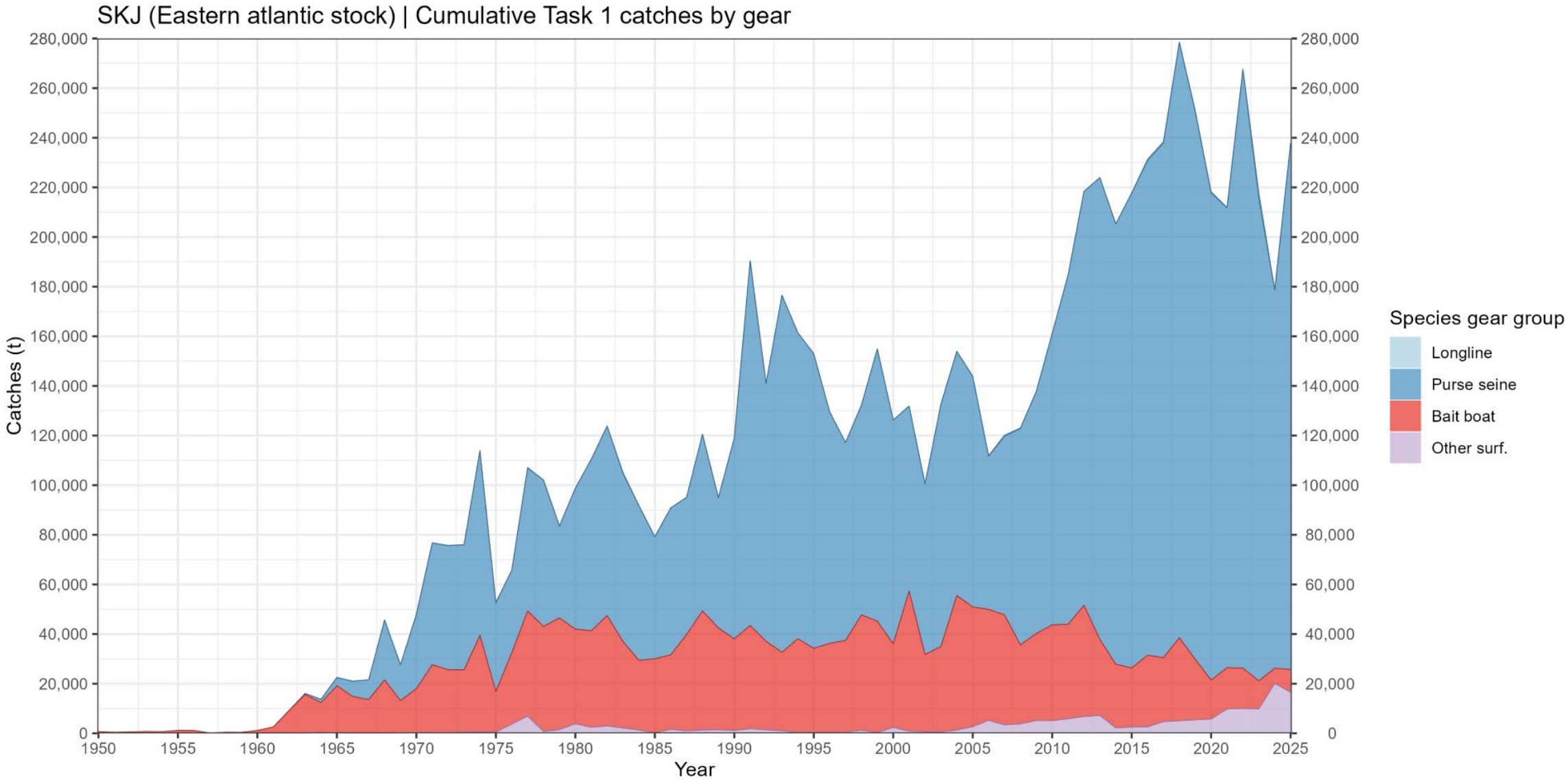
[1] Median and 95% confidence interval estimated from the joint uncertainty grid.
[2] Provisional and subject to revision.
[3] Median and 95% confidence interval based on 90,000 iterations of the multivariate lognormal (MVLN) approximation for Stock Synthesis and 90,000 Markov chain Monte Carlo (MCMC) iterations for JABBA.
[4] Rec. 24-01 only entered in force in June 2025, but other previous Recommendations (Rec. 23-01, Rec. 22-01 and Rec. 21-01) also applied to the western stock. No fleets were targeting western skipjack using FADs, so the impact of those Recommendations on the western stock and fisheries was likely to be minimal.

SKJ-W

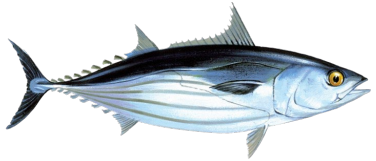
- Assessed in 2022 (data until 2020)
- Catch advice for 2026-2028 was generated by a management procedure (MP) adopted in 2025
- The index used to inform the MP is a Combined Index which integrates the annual abundance indices provided by Brazil, United States of America and Venezuela.
- The index was updated to include data to 2025 and used in an interim evaluation of exceptional circumstances



SKJ-E


SKJ (Eastern atlantic stock) | Cumulative Task 1 catches by gear
Catches (t)
280,000
260,000
240,000
220,000
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
Year
Species gear group
Longline
Purse seine
Bait boat
Other surf.

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SKJ-E

Table 1a. Eastern Atlantic skipjack summary table. (assessed in 2022 using data through 2020)

Indicator		*Stock Status*
Maximum Sustainable Yield (MSY)	216,617 t (172,735 – 284,658 t)[1]	2020
TAC (2025)	None	
Current (2025) Yield	237,859 t[2]	
Relative Biomass (B_{2020}/B_{MSY})	1.60 (0.50 – 5.79)[3]	
Relative Fishing Mortality (F_{2020}/F_{MSY})	0.63 (0.18 – 2.35)[3]	
Stock Status	Overfished: NO (18% probability of being overfished) Overfishing: NO (21% probability of overfishing)	
Management measure in effect	Rec. 24-01[4]	

[1] Median and 95% confidence interval estimated from the joint uncertainty grid.

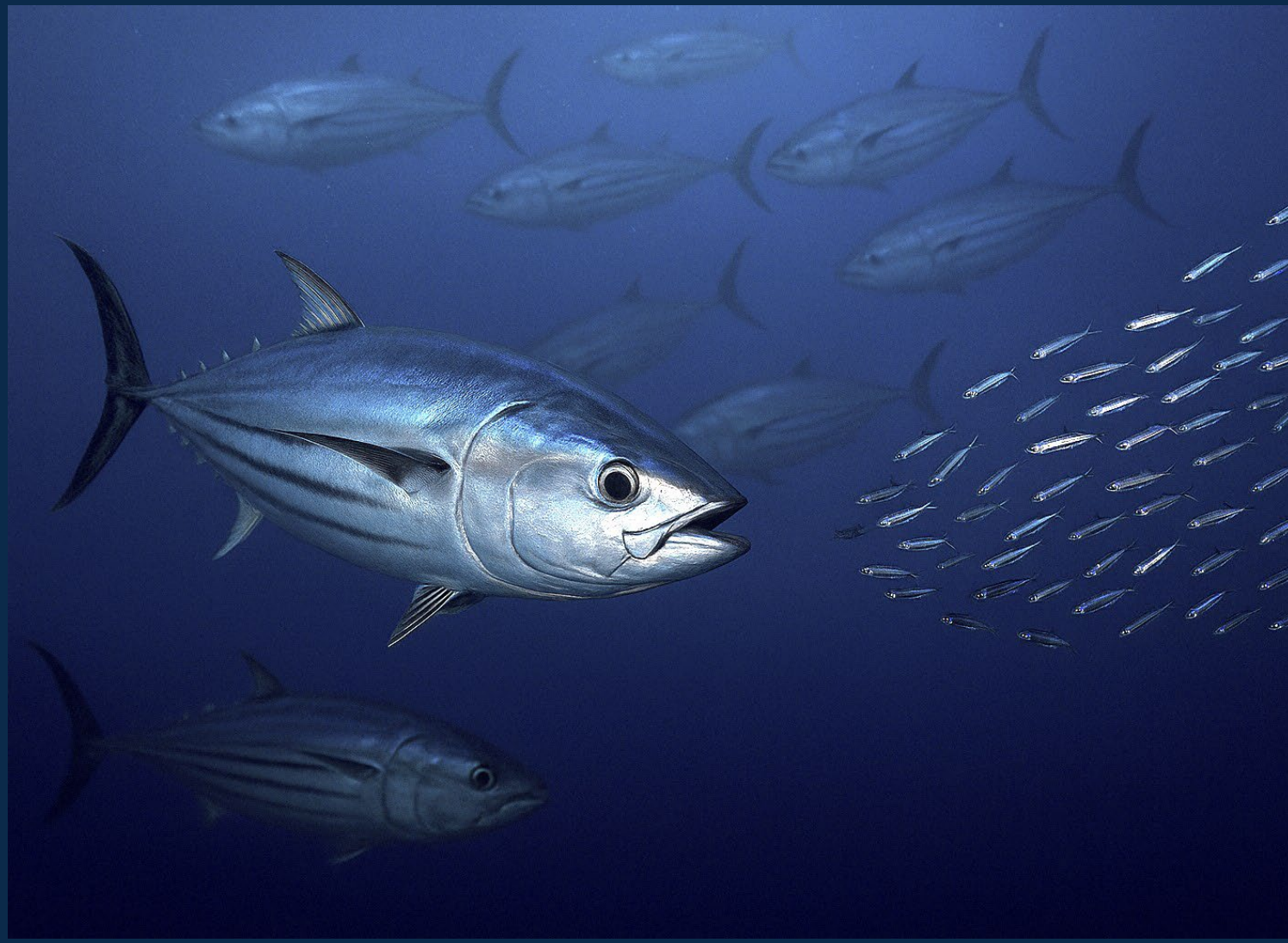
[2] Provisional and subject to revision.

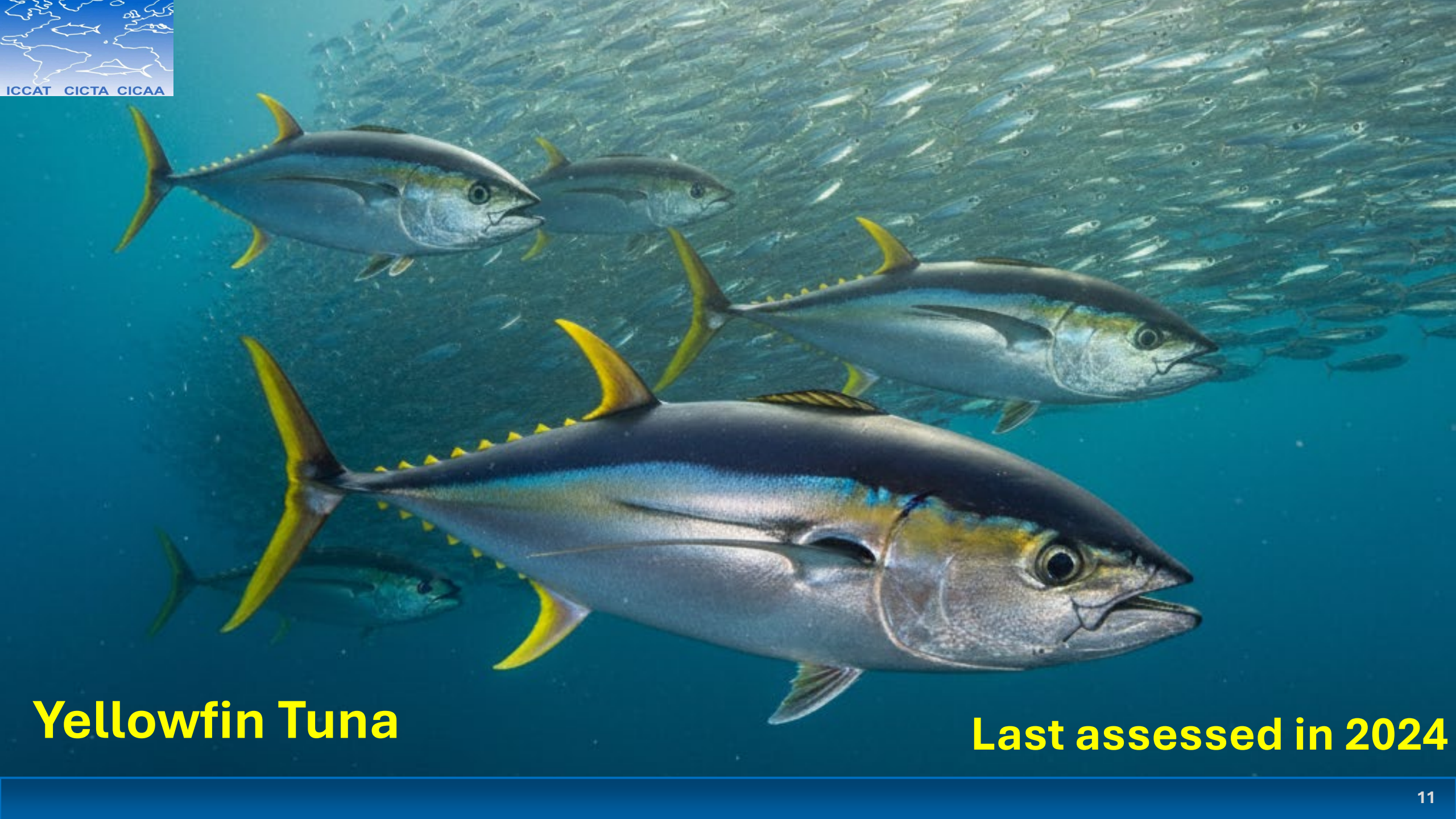
[3] Median and 95% confidence interval based on 90,000 iterations of the multivariate lognormal (MVLN) approximation for Stock Synthesis and 90,000 Markov chain Monte Carlo (MCMC) iterations for JABBA.

[4] Rec. 24-01 only entered in force in June 2025, but other previous Recommendation (Rec. 23-01, Rec. 22-01 and Rec. 21-01) included several measures that impacted fishing for the eastern stock (e.g. temporal closure on fishing for schools associated with FADs, limits to the number of FADs, changes in FAD design, etc.).

SKJ-E

- Assessed in 2022 (data until 2020)
- Catches at MSY (216,617t) had an estimated 55% probability of maintaining the stock in the green through 2028.
- Catches in 2022, 2023, and 2025 (Table 2) have been higher than the MSY estimated in the last stock assessment.
- A SKJ-E stock assessment is proposed for 2027





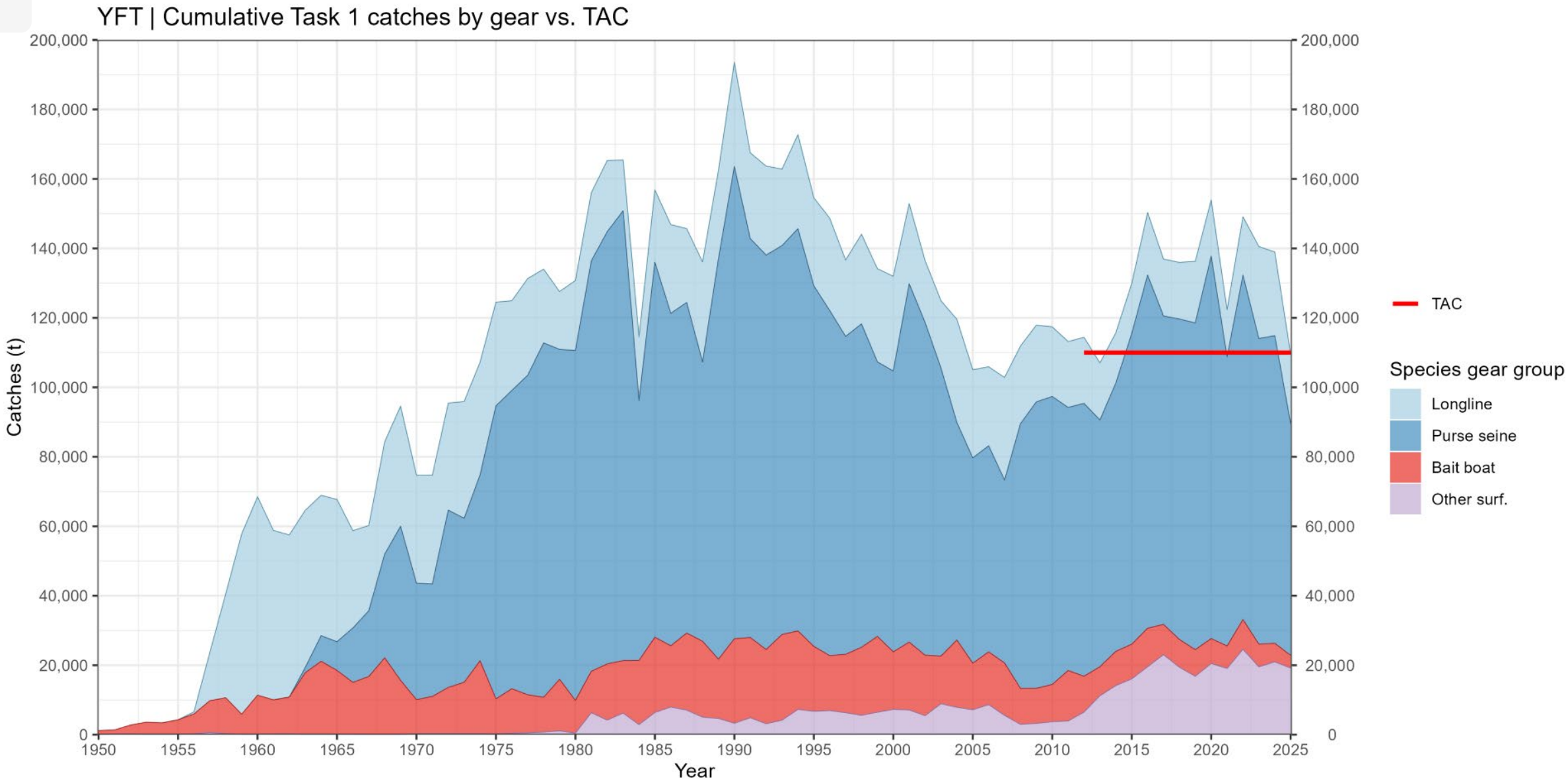
Yellowfin Tuna

Last assessed in 2024

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YFT





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YFT



Table 1. Atlantic yellowfin tuna summary table. (assessed in 2024 using data through 2022)

Indicator		*Stock Status*
Maximum Sustainable Yield (MSY)[1]	121,661 t (107,485 t - 188,456 t)[3]	2022
TAC (2025)	110,000 t	
Current (2025) Yield[2]	109,526 t	
Relative Spawning Biomass (SSB_{2022}/SSB_{MSY})[1]	1.37 (0.91-2.15)[3]	
Relative Fishing Mortality (F_{2022}/F_{MSY})[1]	0.89 (0.40-1.46)[3]	
Stock Status	Overfished: NO (19% probability of being overfished)[4] Overfishing: NO (42% probability of overfishing)[4]	
Management measures in effect	Rec. 24-01[5] TAC (2026) 110,000 t	

[1] Median of 4,000 Monte Carlo iterations of the Stock Synthesis base case.

[2] Provisional and subject to revision as of 18 September 2026.

[3] Median and 80% confidence intervals are shown.

[4] As estimated from the Kobe plot probability in each quadrant.

[5] Rec. 24-01 only entered in force in June 2025, but other previous Recommendations (Rec. 22-01 and Rec. 17-01) also applied to YFT stock.

YFT

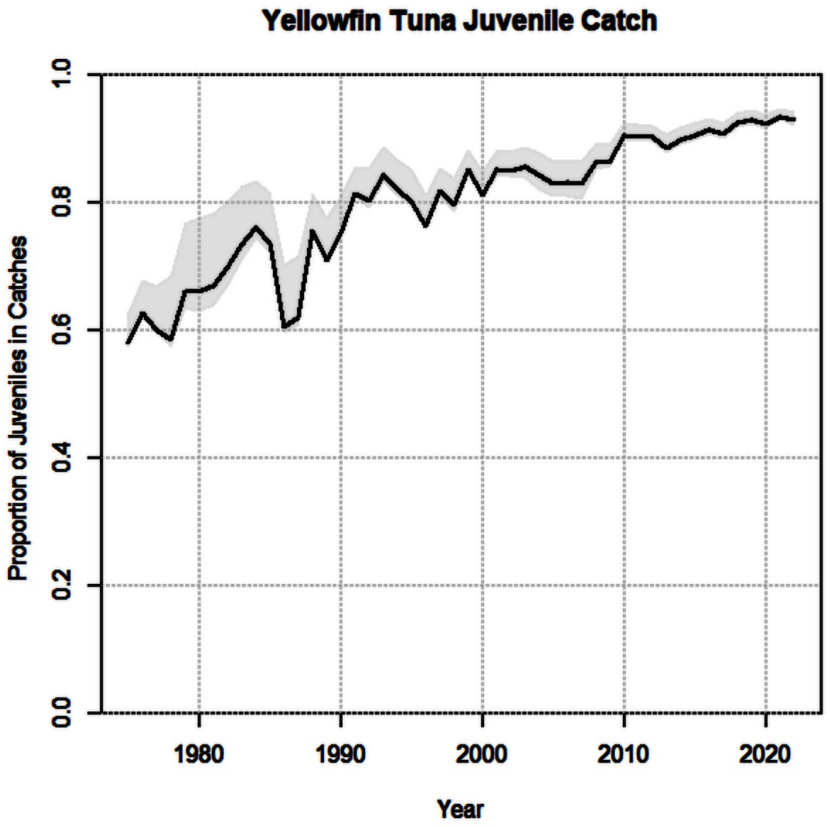
- The Committee noted that increased harvests of juveniles could have negative consequences for yellowfin tuna long term MSY.
- Should the Commission wish to increase long-term sustainable yield, the Committee continues to recommend that effective measures be found to limit catches associated with floating objects (FOBs) and other fishing mortality of small yellowfin tuna.

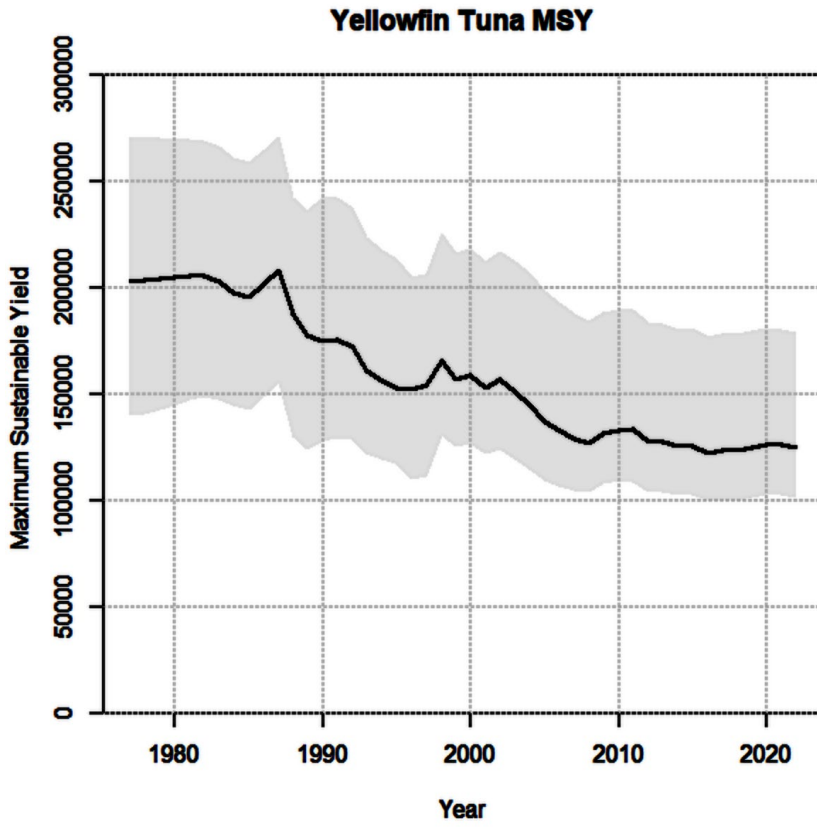
c) Probability that $F \leq F_{MSY}$ and $B \geq B_{MSY}$

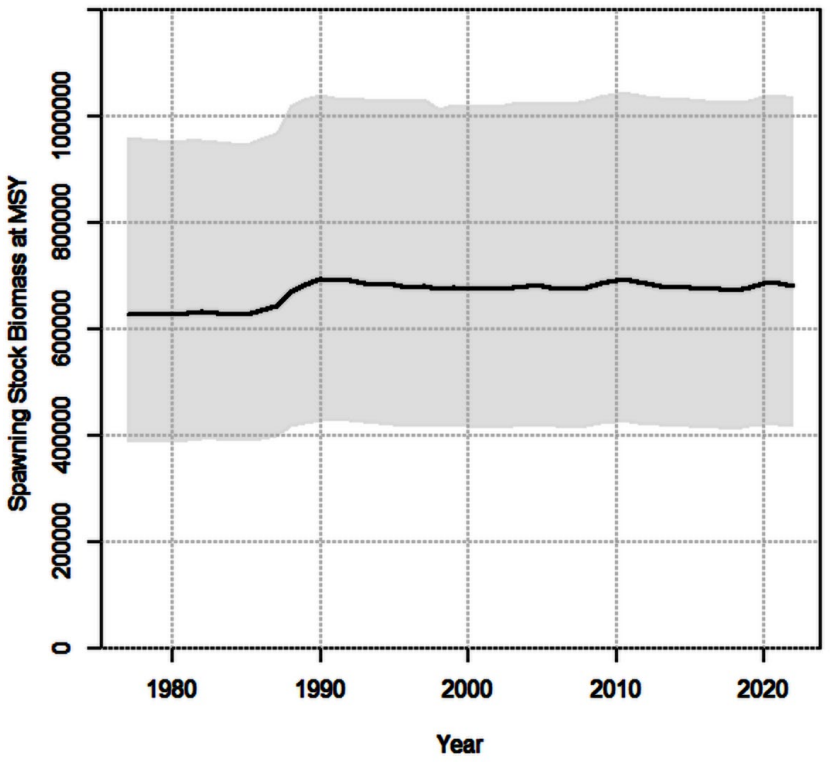
Catch	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
0kt	93%	94%	97%	99%	100%	100%	100%	100%	100%	100%
100kt	90%	87%	86%	85%	85%	85%	85%	85%	84%	84%
105kt	89%	87%	85%	84%	83%	82%	81%	81%	80%	80%
110kt	88%	86%	84%	82%	80%	79%	78%	76%	75%	74%
115kt	86%	83%	81%	79%	76%	74%	72%	70%	68%	66%
120kt	83%	80%	77%	74%	71%	67%	65%	63%	62%	61%
125kt	81%	77%	73%	69%	65%	62%	60%	58%	56%	55%
130kt	78%	74%	68%	64%	60%	57%	55%	53%	51%	49%
135kt	75%	70%	64%	60%	56%	53%	50%	48%	46%	44%
140kt	71%	66%	61%	56%	51%	48%	45%	44%	42%	41%
145kt	68%	63%	57%	52%	48%	44%	42%	41%	39%	38%
150kt	65%	60%	54%	48%	44%	42%	39%	38%	36%	35%
155kt	62%	56%	51%	45%	42%	39%	37%	35%	34%	33%
160kt	60%	54%	47%	43%	39%	36%	34%	33%	31%	30%

YFT

The proportion of the yellowfin tuna catches which are estimated to be juvenile fish has been increasing since the 1970s. This increasing proportion has had impacts on the estimated MSY for the stock







(Shaded area represents the 80% confidence intervals of the uncertainty grid assessment model.)

YFT



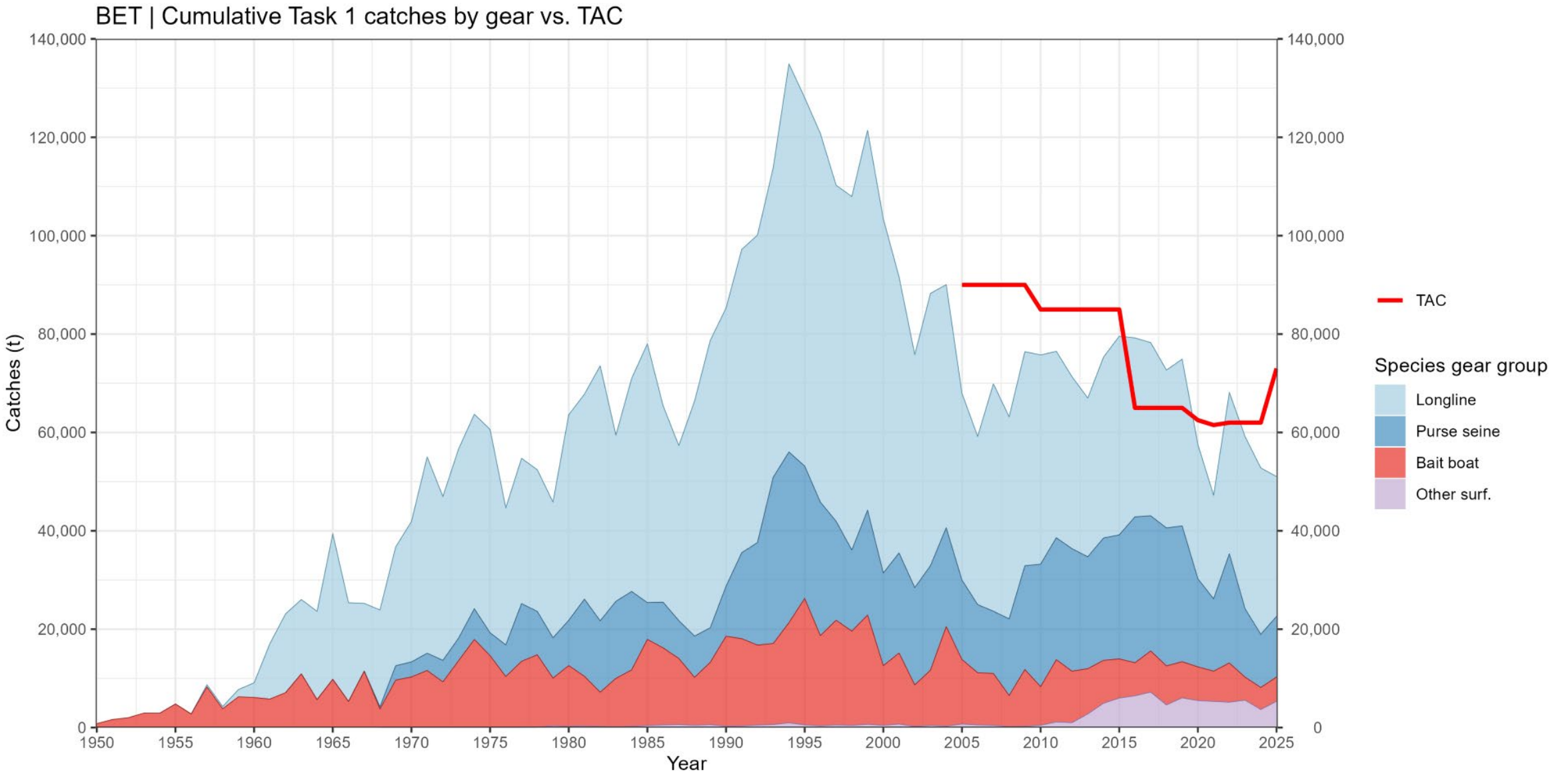
- Catch at levels seen in 2018-2022, averaging about **141,000 t over the 5 year period**, are expected to result in overfishing and lead to an overfished status if they continue. (Catches for 2023-2025 have been 140,515, 138,978, and 109,526 t, respectively).
- Existing conservation and management measures appear to be **insufficient** to limit harvest (Commission should establish a mechanism to ensure that the catches of YFT do not exceed any adopted TAC).

Bigeye Tuna

Assessed in 2025



BET


BET | Cumulative Task 1 catches by gear vs. TAC
Catches (t)
Year
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
TAC
Species gear group
Longline
Purse seine
Bait boat
Other surf.

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BET

Atlantic bigeye tuna summary table (assessed in 2025 using data through 2023)



Indicator		*Stock Status*
Maximum Sustainable Yield (MSY)[1]	86,030 t (79,702 t - 114,311 t)[3]	2023
TAC (2025)	73,011 t	
Current (2025) Yield[2]	51,042 t	
Relative Spawning Biomass (SSB_{2023}/SSB_{MSY})[1]	1.23 (0.81-1.85)[3]	
Relative Fishing Mortality (F_{2023}/F_{MSY})[1]	0.59 (0.36-0.98)[3]	
Stock Status	Overfished: NO (26.2% probability of being overfished)[4] Overfishing: NO (9.1% probability of overfishing)[4]	
Management measure in effect	Rec. 24-01[5] TAC (2025) 73,011 t	

[1] Combined result of 18 stock synthesis model runs using data from 1950-2023.
[2] Provisional and subject to revision as of 18 September 2026.
[3] Point estimate, 80% bias corrected confidence intervals are shown.
[4] As estimated from the Kobe plot probability in each quadrant.
[5] Rec. 24-01 only entered in force in June 2025, but other previous Recommendations (Rec. 21-01, Rec. 22-01 and Rec. 23-01) also applied to the BET stock.

BET



- **Projections** assumed that recent (2021-2023) **fleet catchability, selectivity and the relative catch between fleets**, would continue and recruitment would follow the estimated spawner/recruitment relationship.
- Future constant catch of 73,011 t has a high probability (91%) of maintaining the stock in the green quadrant of the Kobe plot in 2034

Probability $F<=F_{MSY}$ and $SSB>=SSB_{MSY}$

Catch (t)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
50000	86%	91%	94%	97%	98%	99%	100%	100%	100%	100%	100%	100%	100%
52500	86%	90%	94%	96%	98%	99%	100%	100%	100%	100%	100%	100%	100%
55000	85%	90%	93%	96%	97%	99%	99%	100%	100%	100%	100%	100%	100%
57500	85%	89%	92%	95%	97%	98%	99%	99%	100%	100%	100%	100%	100%
60000	84%	88%	91%	94%	96%	97%	98%	99%	99%	100%	100%	100%	100%
62500	84%	88%	91%	93%	95%	96%	97%	98%	99%	99%	99%	100%	100%
65000	84%	87%	90%	92%	94%	95%	96%	97%	98%	98%	99%	99%	99%
67500	83%	86%	89%	90%	92%	93%	95%	96%	96%	97%	98%	98%	98%
70000	83%	85%	87%	89%	90%	92%	93%	94%	94%	95%	96%	96%	97%
72500	83%	85%	86%	87%	88%	89%	90%	91%	92%	93%	93%	94%	94%
73011	83%	84%	86%	87%	88%	89%	90%	90%	91%	92%	92%	93%	94%
75000	82%	83%	84%	85%	86%	87%	87%	88%	88%	89%	90%	90%	91%
77500	81%	82%	83%	83%	83%	84%	84%	85%	85%	85%	85%	86%	86%
80000	79%	80%	80%	80%	80%	81%	81%	81%	81%	81%	81%	81%	81%
82500	77%	78%	78%	77%	77%	77%	77%	76%	76%	76%	75%	75%	75%
85000	76%	75%	75%	74%	74%	73%	72%	71%	71%	70%	70%	69%	68%
87500	73%	72%	72%	71%	70%	69%	68%	67%	65%	64%	64%	62%	62%
90000	71%	70%	69%	67%	66%	64%	63%	61%	60%	59%	58%	57%	55%
92500	68%	67%	66%	64%	62%	60%	58%	56%	55%	54%	52%	51%	50%
95000	66%	64%	62%	60%	58%	56%	54%	52%	50%	48%	47%	46%	45%
97500	63%	61%	59%	56%	54%	51%	49%	47%	46%	44%	43%	42%	42%
100000	60%	59%	56%	53%	50%	47%	45%	43%	41%	40%	40%	39%	39%



BET

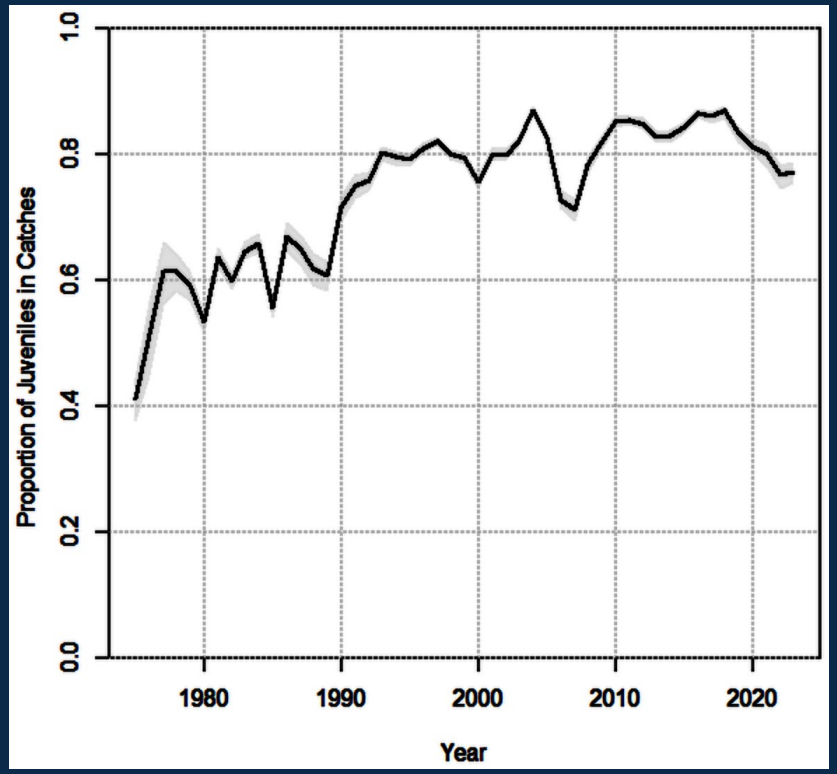


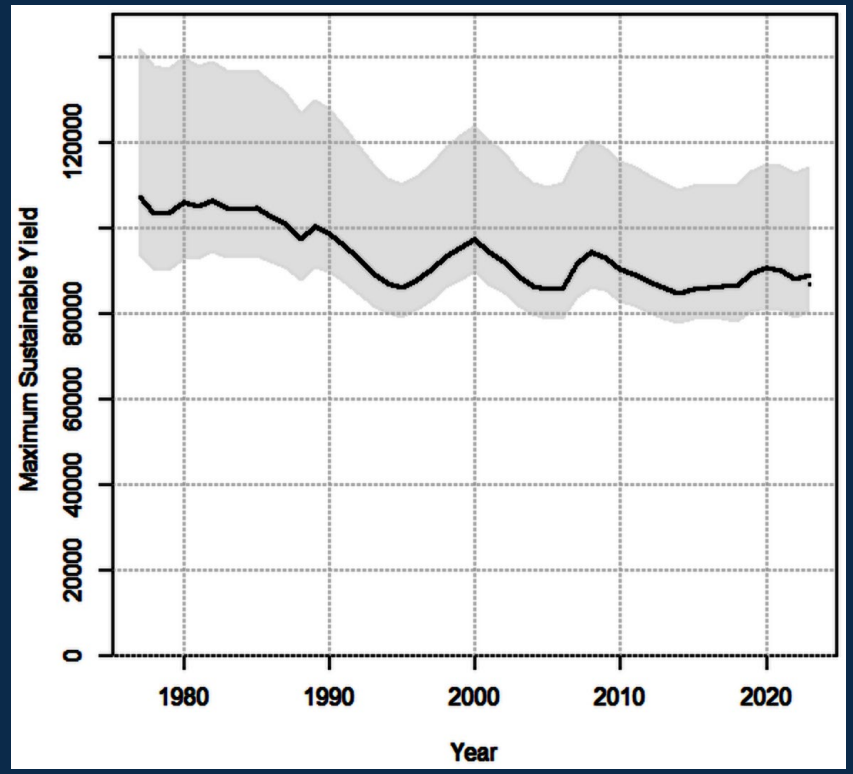
- **Increases in the proportion of small fishes in the harvests** has had a consequence for the total production of bigeye tuna fisheries (i.e. **reduced yield at MSY**)
- The Committee noted that **fishing mortality has decreased in recent years** and that F on age 1 has decreased by the greatest proportion (*Response 19.30 in 2025 SCRS Report*)

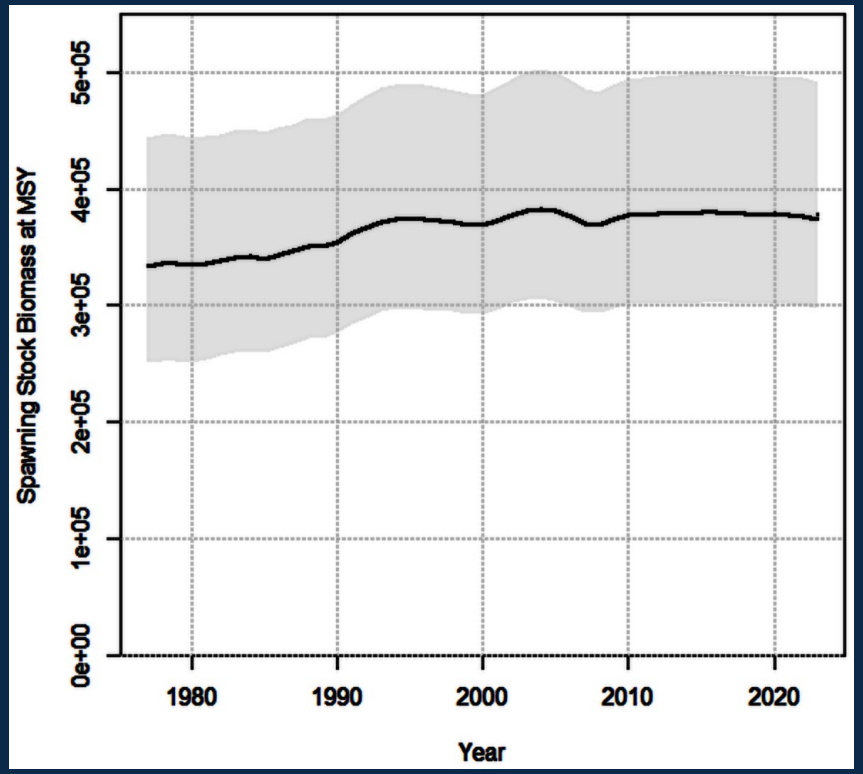


BET




Proportion of Juveniles in Catches
0.0
0.2
0.4
0.6
0.8
1.0
1980
1990
2000
2010
2020
Year


Maximum Sustainable Yield
0
20000
40000
60000
80000
120000
1980
1990
2000
2010
2020
Year


Spawning Stock Biomass at MSY
0e+00
1e+05
2e+05
3e+05
4e+05
5e+05
1980
1990
2000
2010
2020
Year

Changes in the proportion of BET in PS catches on FADS

During the 2026 Intersessional Meeting of the Tropical Tunas Species Group, an apparent decline in the proportion of BET in FAD-associated purse-seine catches was identified.

Substantial, Long-Term Decline in BET:

The relative share of bigeye tuna in FAD catches (PBET) dropped from 16–18% in the 1990s and early 2000s to 8% in 2015–2019, reaching just 5% in 2020–2024.

Contrasting Trends in Associated Species:

Skipjack (SKJ) remains dominant (>70–80% of FAD catch). Yellowfin (YFT) FAD catches and juvenile proportions (>90% in number) have expanded since the late 2000s.

Fleet-Level Heterogeneity:

The decline is apparent across major fleets with long series (EU-Spain, EU-France, Ghana, Panama), but other fleets exhibit stable trends, gaps, or discontinuities.

Key Observation: Bigeye contribution to FAD sets has declined by more than two-thirds, while skipjack and juvenile yellowfin catches remain high.

Annual FAD Catch Composition (1991–2024)

PROPORTIONS OF BET, YFT, AND SKJ IN FAD SETS

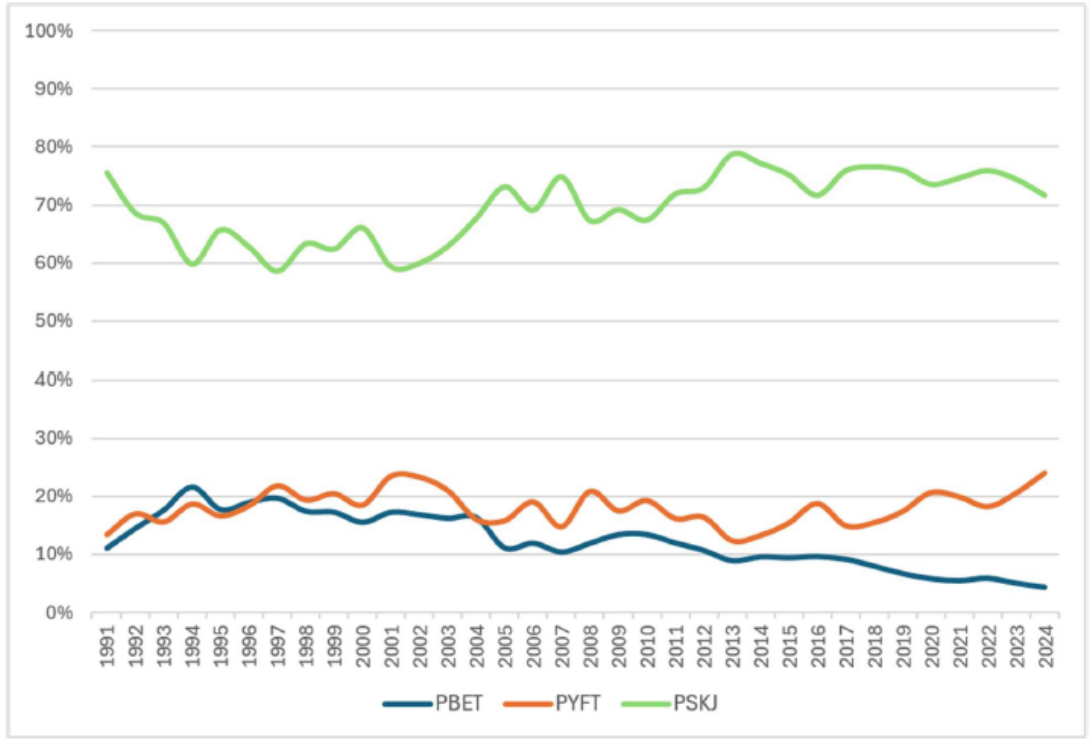


Figure 1. Annual species composition of CATDIS FAD-associated tropical tuna purse-seine catches, 1991–2024. Lines represent the annual proportions of BET, YFT, and SKJ relative to the total catch of the three species (TROP = BET + YFT + SKJ).

Source: SCRS/2026/226 (ICCAT Secretariat). Proportions based on Task 1 nominal catch distributed by Task 2 catch & effort (CATDIS).

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Why is the proportion of BET in PS-FAD catches declining?



Disentangling Potential Explanations

SCRS EVALUATION ACROSS MULTIPLE WORKING PAPERS

Three Competing Hypotheses:

1. Biological / Abundance Changes: Decreasing catches may reflect declining recruitment/abundance, but sustained lower juvenile mortality could enhance survival to spawning ages and support recovery.

2. Operational & Avoidance Tactics: Fleets actively avoiding bigeye sets (e.g., using echo-sounder buoys, adjusting set times, shifting areas) to avoid exceeding strict bigeye quotas.

3. Statistical & Sampling Artifacts: Changes in port-sampling protocols, species correction algorithms (ETRO), or misidentification of juvenile BET/YFT in mixed sets.

Spatial Analysis Findings:

Differences in BET proportions persist among fleets operating In substantially overlapping 5°x5° areas. Shifts in broad fishing grounds alone cannot explain the trend.

MSE Relevance: Understanding whether fleets can selectively avoid BET without reducing YFT/SKJ is critical for the Multi-Stock MSE.

Ad Hoc Subgroup & 2027 Action Plan

TASKS FOR SCRS & NATIONAL SCIENTISTS

Establishment of Ad Hoc Subgroup:

Formed within the Tropical Tunas Species Group to review species composition and historical statistics across all purse-seine fleets.

Historical Data Audit (1991 Onwards):

Important differences exist in the continuity and consistency of historical Task 1 (T1NC) and Task 2 (T2CE) series across fleets, limiting direct interpretation of some national trends.

Urgent Recommendation for CPCs (2027 Workplan):

- National Scientists' Action: CPC scientists must examine their national logbooks, observer data, and port-sampling streams to determine why this is occurring in their fisheries.
- Statistical Quality: CPCs must review and resolve discontinuities in T1NC and T2CE before changes are attributed solely to biology or fleet tactics.

Call to Action: CPCs should audit their purse-seine data streams in 2027 to assist the ad hoc subgroup in distinguishing real fishery shifts from reporting artifacts.

MULTI-STOCK MSE FOR TROPICAL TUNAS



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Tropical Tunas Multi-Stock MSE: 2026 Review & Revised Roadmap

Operating Model Reconditioning & Diagnostics

TECHNICAL DELIBERATIONS: TTMSE TSG & TROPICAL TUNAS SPECIES GROUP

Reconditioning to Latest Stock Assessments:

Agreed that multi-stock MSE operating models (OMs) must be reconditioned to the latest benchmark assessments across all three tropical tuna stocks (BET, YFT, and SKJ) before testing CMPs.

Critical Issue Identified in the use of 2022 SKJ-E Assessment to condition OMs:

2026 stock projections revealed that models based on the adopted Stock Synthesis model for SKJ-E could not sustain catch levels even well below estimated MSY, making it unsuitable as a foundation for MSE OMs.

Rigorous Stock-Specific OM Validation:

Subgroup prioritized thorough validation of stock-specific OM dynamics and parameterizations (e.g. natural mortality, uncertainty grids, recruitment assumptions) to ensure robustness.

Key Technical Finding: The 2022 SKJ-E model structure is unviable for projection testing, necessitating a new benchmark assessment to condition OMs.

Workplan & Roadmap Adjustment to 2028

STRATEGIC ALIGNMENT: 2027 BENCHMARK & MULTI-STOCK PROCESS

2027 Eastern Skipjack Stock Assessment:

Conducting a new SKJ-E benchmark assessment in 2027 (hybrid data prep and assessment) with data through 2025 to provide updated advice and calibrated models for MSE reconditioning.

Parallel Progress on Bigeye & Yellowfin:

Work continues intersessionally on YFT and BET MSE components (reconditioning to 2025 BET assessment, OM validation, and mixed-fisheries interaction modeling), reviewed during 2027 meetings.

Roadmap Completion Deferred to 2028:

Because the multi-stock framework hinges on validated OMs across all three stocks, completion of technical MSE evaluations and MP adoption is rescheduled from 2026 to not earlier than 2028.

Roadmap Recommendation: Formally update the ICCAT Tropical Tuna MSE Roadmap to target technical completion and MP consideration in 2028.

Responses for Tropical Tuna
(highlighted responses are covered in this presentation)

Selected Response	Selected Response -MSE focused

19.34	**Max proportion of support vessels**
19.35	Effect of support vessels on juvenile catch
19.36	Recommendations on additional dFAD management options (REC 24-01 para 51)
19.37	**Refine the MSE process in line with the roadmap**
19.38	**Explore efficacy of full fishery closures (REC 24-01 para 79a)**
19.39	**Estimate capacity in the Convention area (REC 24-01 para 79b)**
19.40	Advise on final LRPs for BET, YFT and SKJ-E (RES 24-02 para 2)
19.41	**Evaluate differential impacts of fishing operations on the whole range of the stock (RES 24-02 para 4)**
19.42	Recommendations on management objectives for Multi-stock MSE (RES 24-02 para 6)
19.43	**Assess occurrence of EC for W SKJ (REC 25-02 para 8)**
19.44	Report on implementation of port sampling programme by CPC (REC 24-01 para 73)

Response 19.34 – Max proportion of support vessels

The ICCAT Secretariat shall compile this information and prepare a report for the Commission to be able to consider the type of limitation that support vessels shall be subject to in the future, including a phasing-out plan, where required.

- As indicated in previous responses to this request, the Committee cannot correlate the activity of a given support vessel with the catch, effort or overall catch rates of the vessels receiving the support activities, as no link with associated total catch or effort (Task 2 CE ETRO) by support vessel is provided by CPCs
- The Committee is not in a position to recommend a given number of support vessels or a proxy for an estimation of "limited support activity".
- The Committee noted that the number of support vessels reported by CPC has decreased
- The Committee requests that the Commission provide a clearer and more precise definition of the type of analysis being required.

Table 19.34.1 – Number of support vessels and total fishing vessels supported by them as reported by Flag CPC (form ST07) during the reporting period (Appendix 5 of Secretariat Report on Statistics and Research (PLE-SCRS_07/2026).

	PartyName	FlagName	2013	2014	2016	2019	2020	2021	2022	2023	2024	2025
Number of support Vessels	BELIZE	Belize			1	4	3	2	1	1		1
	CURAÇAO	Curaçao	1	1		2	2	1	3	2	2	2
	EL SALVADOR	El Salvador					1	1	1	1	2	2
	EUROPEAN UNION	EU-España				4		3	2	2	1	1
	PANAMA	Panama				4	1	3	2	2		
	SENEGAL	Senegal				1						
	Total		1	1	1	15	7	10	9	8	5	6
Number of fishing Vessels supported	BELIZE	Belize			1	4	8	2	3	4		1
	CURAÇAO	Curaçao	1	1		6	2	1	5	3	2	3
	EL SALVADOR	El Salvador					1	1	5	5	8	6
	EUROPEAN UNION	EU-España				8		7	5	5	3	3
	PANAMA	Panama				14	1	10	7	7		
	SENEGAL	Senegal				1						
	Total		1	1	1	33	12	21	25	24	13	13

Response 19.37 – MSE Roadmap

The SCRS shall refine the MSE process in line with the roadmap adopted by the Commission.

W SKJ:

- The MSE was concluded in 2025 with the adoption of the MP at the Commission's annual meeting and the setting of the TAC for the 2026-2028 triennium
- SCRS has completed its planned tasks for 2026, with developing the technical monitoring criteria to support the ECP, scheduled for adoption by the Commission at the 2026 annual meeting, and conducting the annual EC check according to the proposed technical ECP criteria

Multi-stock:

- The workplan for the tropical tuna Multi-Stocks MSE process has been revised following the Committee's recognition that several key elements of the MSE framework require further development before candidate management procedures (CMPs) can be submitted for consideration by the Commission
- A central component of this work is the **stock assessment for eastern Atlantic skipjack tuna**

  (SKJ-E), the results of which are required to recondition the operating models (OMs) for this stock.
- Work on the YFT and BET components of the Multi-Stock MSE will continue to advance in 2027, with progress reviewed at the intersessional meetings.
- The Committee now anticipates the completion of the technical work of multi-stock MSE **not earlier than 2028**.

Response 19.38 – Efficacy of full closure

The SCRS shall explore the efficacy that full fishery closures along the lines of those proposed in PA1 505A/20191 might have to reduce the catches of tropical tunas to the agreed levels; and the potential of such scheme to reduce the catches of juvenile bigeye and yellowfin tunas, in line with recommendations from the SCRS.

- SCRS/2026/185 updated the 2024 study (SCRS/2024/135) using the latest stock assessment models for bigeye, yellowfin, and eastern skipjack. Consistent with the earlier study, they concluded that a closure's effectiveness could be jeopardized if catches are redistributed.

- FAD fishing effort, measured by the number of sets, decreased in the first quarter but remained relatively stable annually throughout the period analysed

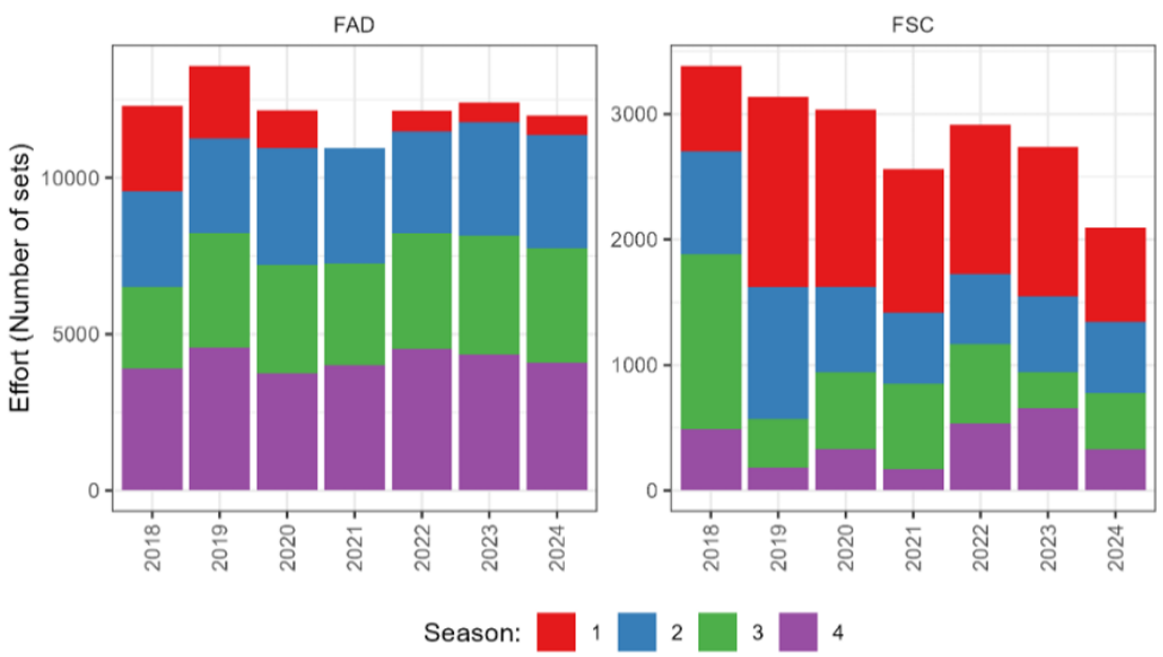
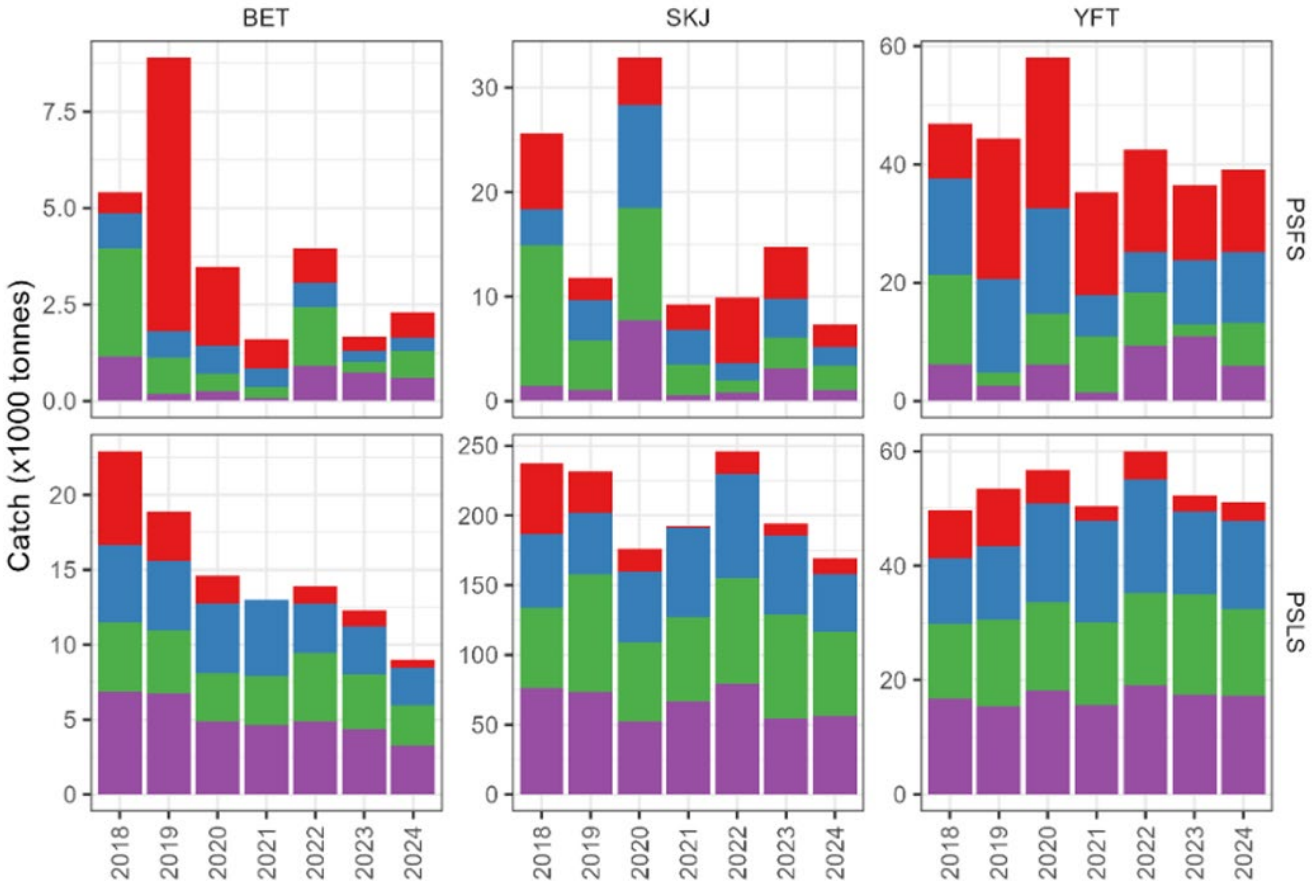


Figure 19.38.1 Recent trends in effort per season for the purse seine fishery operating on free schools (PSFS) and floating objects (PSLS).

Response 19.38 – Efficacy of full closure (continued)

- Trends in annual catches differed among stocks: annual catches declined notably for bigeye, which was subject to catch limits after 2020 but remained relatively stable for yellowfin and skipjack.
- The effect of the closures on catches is not conclusive, and the Committee recommends further analysis of catch and effort data to continue exploring the overall effectiveness of the closure.



Response 19.39 – Estimate capacity

An estimate of capacity in the Convention area, to include at least all the fishing units that are large-scale or operate outside the EEZ of the CPC they are registered in

- An updated estimation of the 2025 fishing capacity for tropical tunas focused again on large-scale vessels (20 meters or larger in length overall) used data primarily submitted via form ST01-T1FC.
- Automatic identification system (AIS) data was also used to infer fishing activity, which is seen as complementary to CPC reports.
- While VMS remains the most reliable and accurate source of positioning information for fishing vessels, AIS data could be a complement in support of CPCs efforts in tracking and studying vessel activity.
- However, there are potential limitations of AIS (e.g. not tamper-proof, manual data entry, etc.) that require careful consideration in its use.

	2024		2025	
Gear	Vessels	GT	Vessels	GT
BB	26	4721	191	39514
HL	39	8387	3	232
LL	342	115557	370	121393
PS	54	74594	64	84647
RR	-	-	6	837
UN	22	2612	37	4779
Total	**483**	**205871**	**671**	**251401**

AIS data provide a valuable independent check where CPC reporting is absent, but cannot replace official VMS records due to coverage and tampering limitations.

Tropical Tunas Group: Continuous Static AIS Broadcasting (≥20 m)

Recommendation to the Commission on AIS Reporting

The Committee recommended that:

> **"The Commission may wish to consider how authorized fishing vessels ≥20 m could improve reporting their activity by continuously broadcasting accurate and complete static AIS data, including the IMO number (where assigned), MMSI, IRCS, and registered vessel name, in addition to the CPCs' VMS reporting."**

*This recommendation builds upon capacity analysis in the Convention area, noting that while VMS remains the primary positioning source, continuous AIS provides essential complementary verification of active large-scale fishing vessels.

Response 19.41 – Impacts of fishing operations

The Commission requested the SCRS to provide advice to the Commission on the maximum number of FAD sets per vessel or per CPC in the Convention area in 2025, with historical Task 2 CE data for FAD sets to be submitted by 1 August 2025.

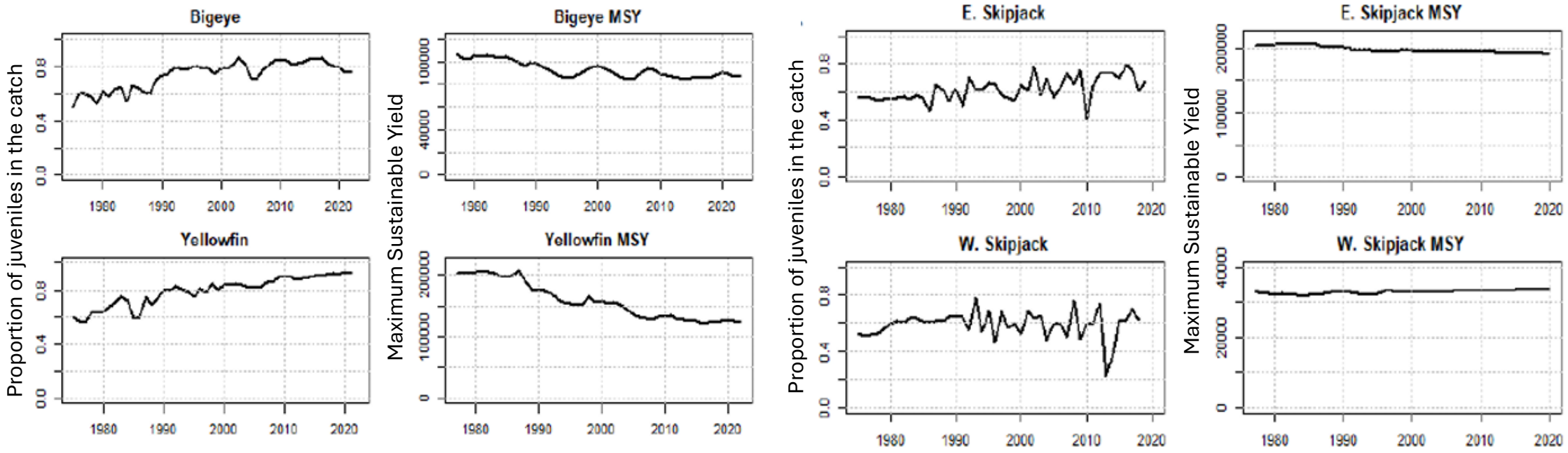
- The Committee recognised that often all three species are taken together in surface fisheries, and bigeye and yellowfin tuna are commonly taken together in longline fisheries. Further, it was recognised that there are other species which are of concern to the Commission taken as bycatch in these fisheries. Measures considered for one species could have impacts on other species, including socio-economic impacts. This emphasizes the importance of considering both the single and multispecies impacts of fishing operations.
- Lauretta et al., (in press) (SCRS/2026/239) evaluated the historical trends in MSY for seven Atlantic tuna stocks, including the four tropical tunas, based on the adopted stock assessments for each species. The analysis revealed long-term declines in MSY for bigeye and yellowfin tunas (Table 19.41.1), associated with increased proportion of juveniles in numbers on catches.

Table 19.41.1. Atlantic tuna stocks MSY summary statistics, estimated for the period 1975 to terminal year of the most recent reference case stock assessments.

Stock	Current Yield (t)	MSY Current (t)	MSY Minimum (t)	Year Min	MSY Maximum (t)	Year Max	Max MSY - Min MSY (t)	Current MSY: Max MSY (%)
BET	51,052	88,889	84,684	2014	107,385	1977	22,701	83%
YFT	109,526	124,274	122,029	2016	208,298	1987	86,269	60%
SKJE	237,859	192,319	192,319	2020	207,712	1984	15,393	93%
SKJW	23,005	33,497	31,695	1984	33,730	2017	2,035	99%
ALBN	28,471	42,270	42,188	2016	42,687	1984	499	99%

Response 19.41 – Impacts of fishing operations

- Notably, juveniles comprised over 90% of yellowfin catches in number of fish in the recent years, resulting in a current MSY that is at a near-historic low, approximately 60% of the peak MSY estimate (figure below).
- Results showed that MSY is a shifting baseline that may be greatly reduced or increased over time, depending on the changes in fleet selectivity and overall age composition of the catches. It also indicated that current sustainable catch levels may be significantly different than historical averages.



Response 19.43 – Assess occurrence of EC for W SKJ



Purpose

Define a transparent annual check to identify whether evidence is sufficiently consequential to warrant advice outside the adopted MP pathway.

Three EC signals

1. Stock & fishery dynamics

Observed stock or fishery states fall outside the range tested in the MSE operating models.

2. MP data availability

Required data to apply the MP are unavailable, insufficient, or no longer appropriate.

3. TAC implementation

Total catch is meaningfully above the TAC set using the MP.

Update indicators
index, catch, plausibility

→

Evaluate triggers
annual SCRS check

→

Assess severity
if evidence exists

→

Advise Commission
response or continue MP

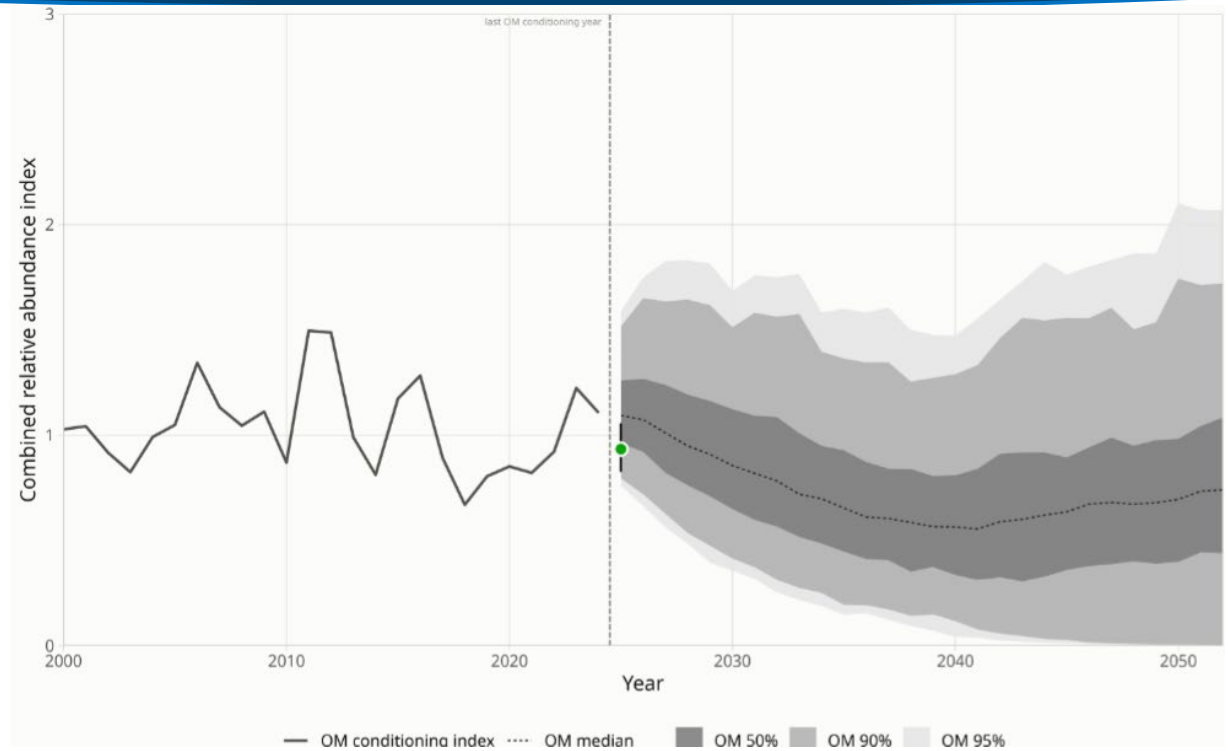
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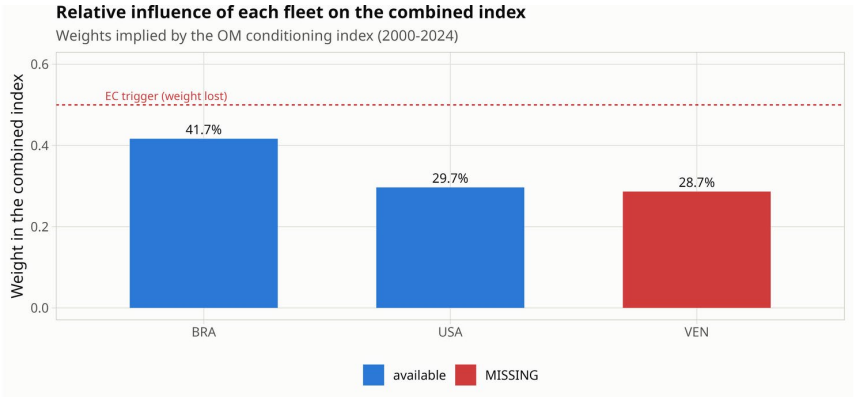
MP pathway
TAC remains valid unless changed

Key message: triggering an EC is a scientific review signal, not an automatic rescinding of TAC advice.

Draft ECP to support annual SCRS determination under Rec. 25-02, para. 8

Response 19.43 – Assess occurence of EC for W SKJ





Draft criteria applied to the first annual check of the SKJ-W MP

Determination:

No ECs indicated

- **Stock dynamics:** the 2025 combined index remains within the 2.5–97.5% OM reference envelope.
- **Data availability:** 2025 index used Brazil + U.S. data; the missing Venezuela point alone does not meet the EC data trigger.
- **TAC implementation:** no SKJ-W TAC existed in 2025; landings were below the 2026–2028 MP-based TAC.
- **Next check:** catch levels will be evaluated relative to the TAC in 2026-2028.

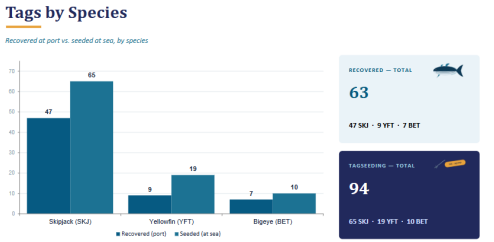


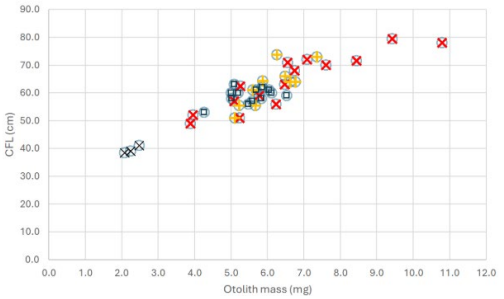
Tropical Tuna Research and Funding

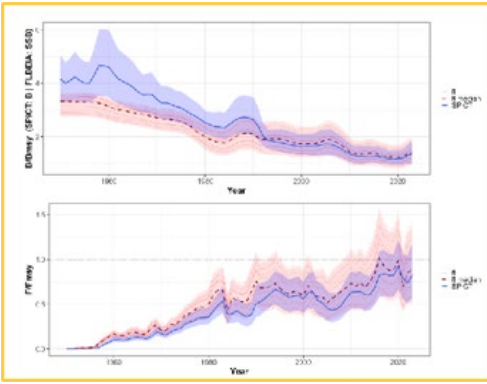
Research undertaken in 2026

- **Continuation of funds for tag recovery and maintenance of AOTTP databases**
- **Sample collection for age and growth**
- **ITUNNES/ICCAT workshop** (supporting the identification of gaps and methods to help update age/growth/reproduction in the coming years
- **MSE developments**
  - *SKJ-W – ECP technical aspects developed:*
    - Establish conceptual basis of the protocol (which defines 3 detection principals)
    - Define the methods & conduct a simulation based evaluation of indicator behaviour to determine technical aspects of the ECP
  - *Multi-stock*
    - The work in 2026 shifted from discussing the evaluation of CMPs carried out over the previous bigeye OM toward a staged intersessional diagnosis of the framework: first validating the OMs of the three stocks, then conducting single-stock tests and finally investigating the multi-stock interactions.









2027 Research Priorities (In Order)

- **MSE developments:** SKJ-W and multi-stock MSE processes (€62,000).
- **Tag seeding & awareness:** Final year of tag seeding and rewards (€5,000).
- **Age and growth:** Sample collection and analysis (€30,000).
- **SKJ age validation:** Continue validation studies (€30,000).
- **Biological parameters:** Skipjack and bigeye update (€10,000).
- **Genetics:** CKMR feasibility (€40,000) & epigenetics (€15,000).
- **Maturity:** Non-invasive assessment feasibility (€20,000).

TTRaD Budget Summary

Activity Component	2027 (€)	2028 (€)	2029 (€)
Tagging & Tag Offices	**€5,000**	---	€50,000
Reproduction & Maturity	**€30,000**	€20,000	€10,000
Age & Growth & SKJ Validation	**€60,000**	€30,000	€30,000
Genetics (CKMR & Epigenetics)	**€55,000**	€50,000	€50,000
Environmental Habitat Definition	**---**	€50,000	€100,000
MSE (SKJ-W, Multi-stock, Review)	**€62,000**	€92,000	€32,000
Workshops (Age/Growth & Tagging)	**---**	€60,000	---
Science Coordination Share	**€11,844**	€16,339	€17,216
TOTAL TTRaD Requested	**€223,844**	**€318,339**	**€289,216**

I would like to thank the SCRS Tropical Tuna officers for their contributions throughout the year and for this presentation:

Coordinator: Serena Wright (United Kingdom)
Yellowfin tuna Rapporteur: Matthew Lauretta (USA)
Skipjack Rapporteurs:
Eastern Atlantic - Davy Angueko (Gabon)
Western Atlantic - Rodrigo Sant'Ana (Brazil)



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Questions?

