

2025 Report of the SCRS to the ICCAT Panel 2: Bluefin Tuna and Albacore Tuna

MSE, Responses,
and Research

29th Regular Meeting of the Commission
17-24 November 2025
Seville, Spain



BFT



ALB

Bluefin Tuna





Table 1a. Eastern Atlantic and Mediterranean Sea bluefin tuna summary table.

<i>Indicator</i>		<i>Stock Status</i>
Maximum Sustainable Yield (MSY)	Unknown	2020
TAC (2024)	40,570 t	
Current (2024) Yield	39,426 t ¹	
Relative Fishing Mortality ($F_{\text{CURRENT}}/F_{0.1}^2$)	0.81 (0.48-1.62) ³	
Stock Status ³	Overfishing: NO	
Management measures in effect	Rec. 24-05 and Rec. 23-07	
Managed according to a Management Procedure: Recommended TAC for the period 2023-2025 of 40,570 t		

¹ As of 26 September 2025.

² F_{CURRENT} refers to the geometric mean of the estimates (a proxy for recent F levels) for 2017-2020 for VPA, and for 2018-2020 for ASAP and SS. For the VPA and ASAP, F is measured as apical F , for SS F is exploitation rate in biomass.

³ Mean and approximate 95% CI from integrating across the uncertainty for each model.



Table 1b. Western Atlantic bluefin tuna summary table.

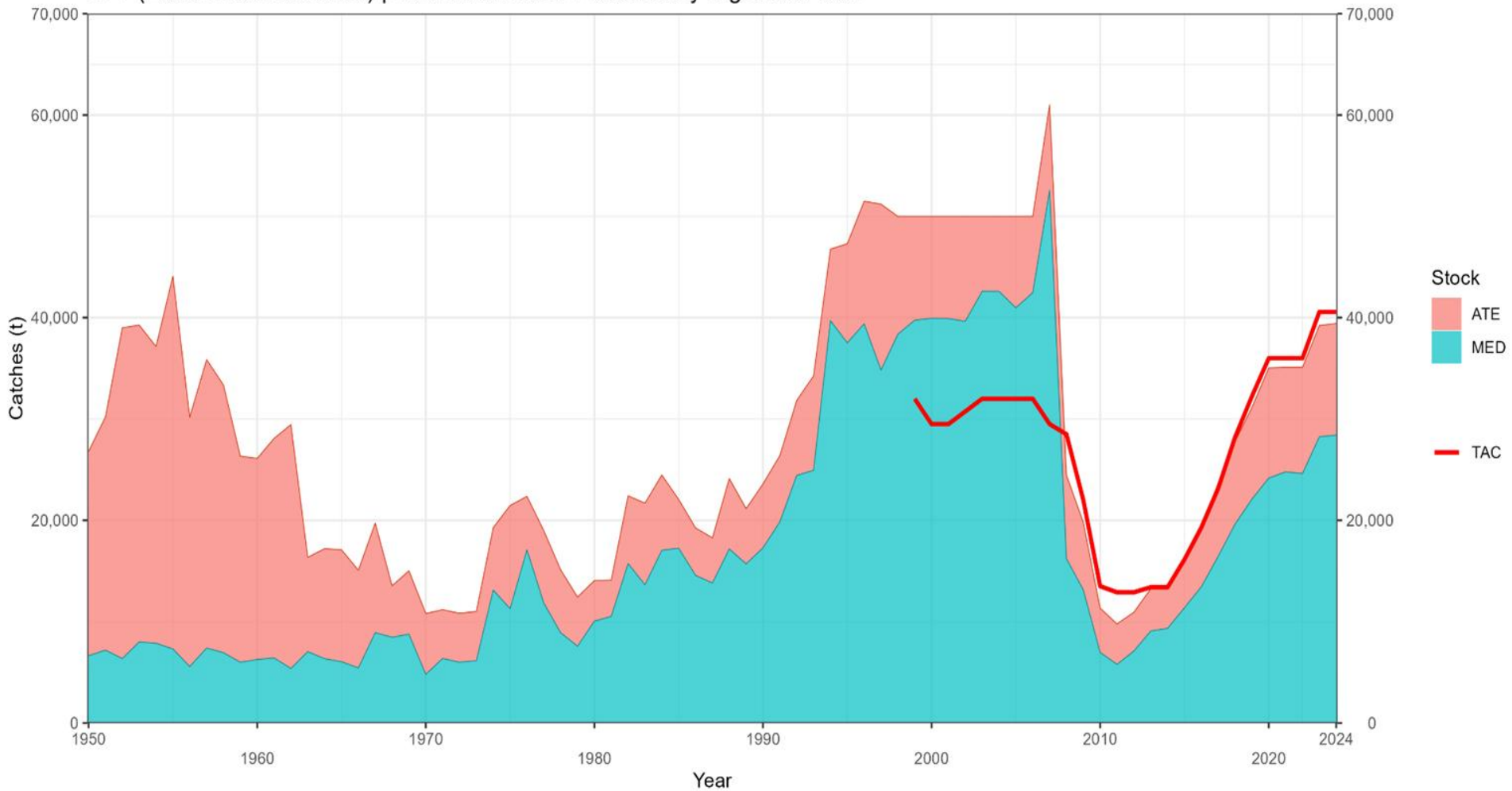
<i>Indicator</i>		<i>Stock Status</i>
Maximum Sustainable Yield (MSY)	Unknown	2020
TAC (2024)	2,726 t	
Current (2024) Yield	2,961 t ¹	
Relative Fishing Mortality ($F_{2018-2020}/F_{0.1}$)	0.53 (0.49-0.58) ²	
Stock Status	Overfishing: NO (=<1% probability of overfishing) ³	
Management measures in effect	Rec. 22-10 and Rec. 23-07	
Managed according to a Management Procedure: Recommended TAC for the period 2023-2025 of 2,726 t.		

¹ As of 26 September 2025.

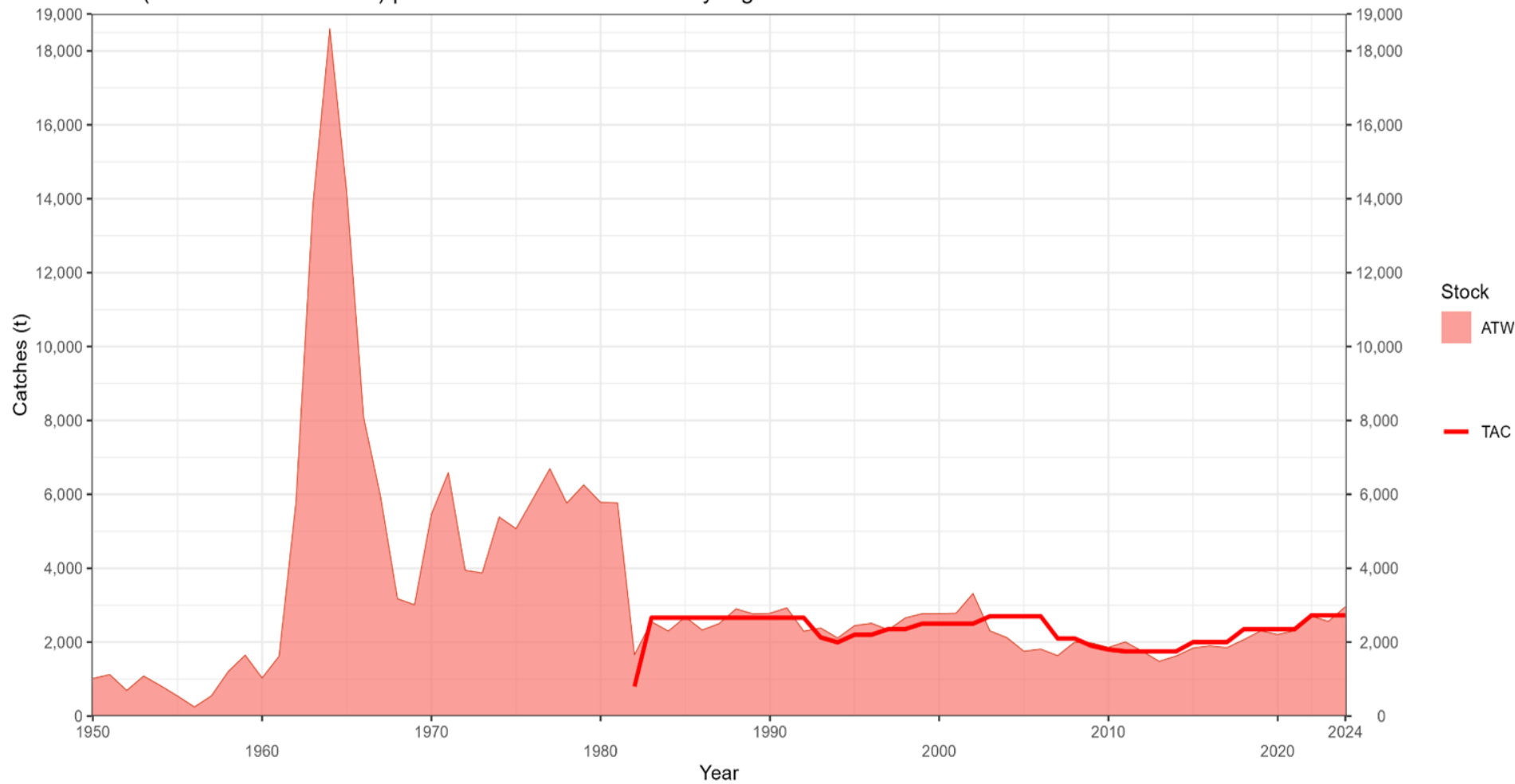
² Mean and approximate 80% confidence interval from the multivariate lognormal approximation approach from the assessment.

³ Biomass reference points to determine stock status were not estimated in the 2021 BFT-W Stock Assessment due to uncertainty in recruitment potential.

BFT (Eastern atlantic stock) | Cumulative Task 1 catches by region vs. TAC



BFT (Western atlantic stock) | Cumulative Task 1 catches by region vs. TAC



A new estimate of BFT-W biomass from Close Kin Mark Recapture

CKMR is a genetic method used in fisheries science to estimate the absolute abundance of a fish stock by analyzing the frequency of close-kin pairs (like parent-offspring or full siblings) sampled from the wild population over different years. A multi-year CKMR project has now provided a direct estimate for BFT-W biomass.

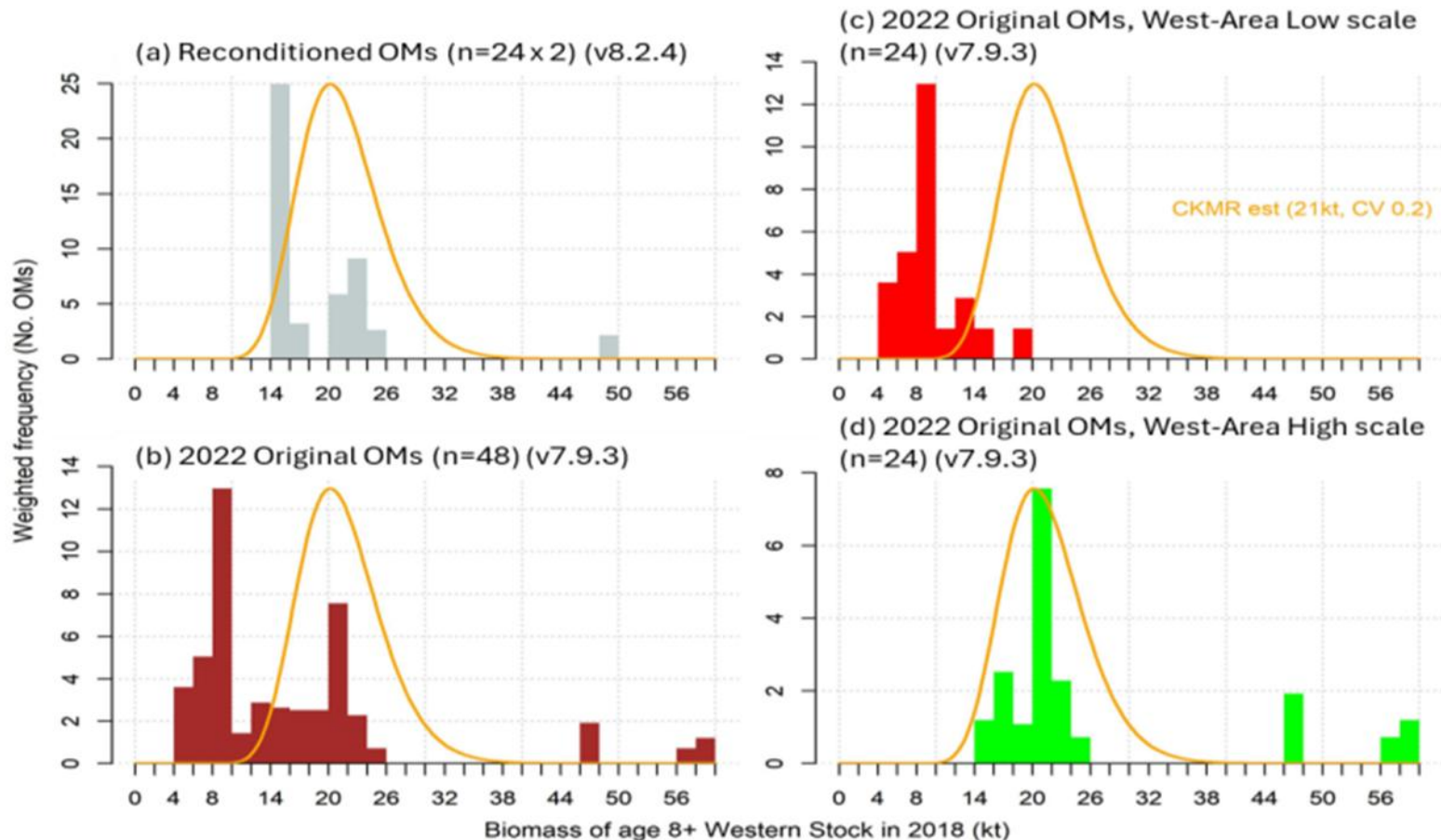
The SCRS believes that the newly available BFT-W CKMR information is a breakthrough in the BFT stock assessment. The Committee evaluated the effect of incorporating the CKMR estimate into the MSE through reconditioning.

A new estimate of BFT-W biomass from Close Kin Mark Recapture (continued)

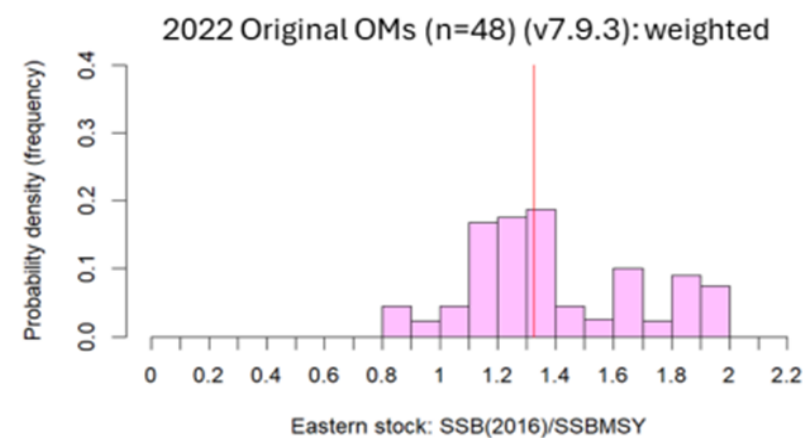
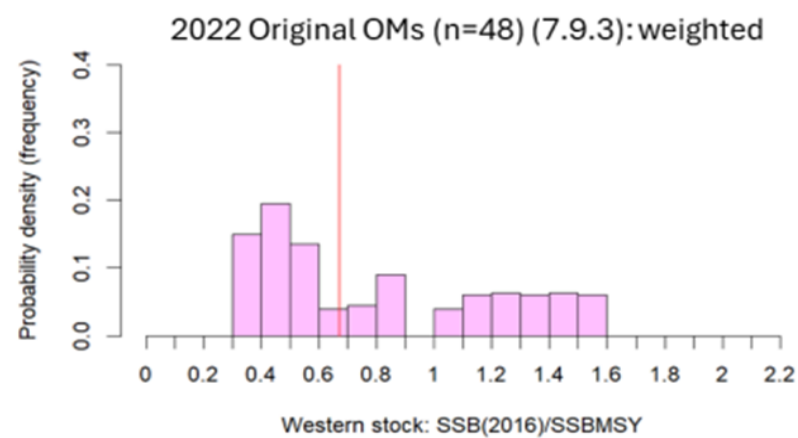
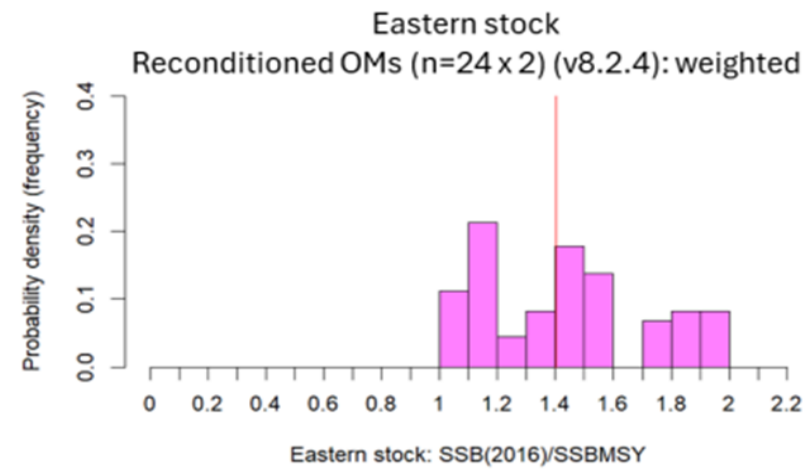
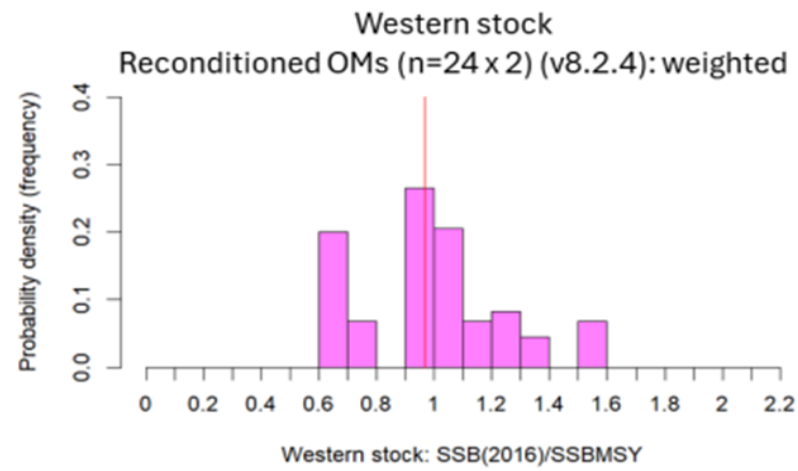
Incorporating the CKMR results into the OMs resulted in **higher biomass and more positive relative status OMs for the western stock**, than used in the adopted MSE

(e.g., median western stock status in 2016 is about $1.0 B_{MSY}$ after reconditioning v.s. about $0.7 B_{MSY}$ before reconditioning).

2018 Western BFT Biomass age 8+ between CKMR and OMs



2016 East and West Stock BFT status as estimated in the MSE



Exceptional Circumstances (SCRS response 19.11, page 167)

The Committee evaluated EC in accordance with the ECP outlined in Rec. 23-07, but was unable to achieve consensus on if the CKMR results warranted the triggering of EC

Why was there no consensus on the existence of exceptional circumstances?

No EC: The new CKMR results do not provide “*evidence that the stock and/or fishery dynamics are in states not previously considered to be plausible in the context of the MSE*”, as the wording of the Exceptional Circumstances Protocol indicates.

Yes EC: The new scientific evidence from the CKMR results is a great improvement in the knowledge on western stock scale and substantially changes our understanding of the western stock status. This new understanding was consequential for how the OMs used in the MSE should be conditioned, and meaningfully impacted the performance of the adopted MP in achieving management objectives.

TAC advice

This lack of consensus resulted in two options of TAC for 2026-2028 being provided, one based on the adopted MP (BR) and another (BR*) on an updated tuning of the adopted MP which incorporates the WBFT CKMR results.

	<i>East TAC (2026-2028)</i>	<i>West TAC (2026-2028)</i>
BR - adopted MP ¹	48,403 t	2,568 t
BR* - CKMR retuned MP ²	45,191 t	2,963 t

¹ [Rec. 23-07](#)

² Section 19.10 of this report and BRn9 in document Walter *et al.* (2025) (SCRS/2025/239).

Responses and recommendations

18.2.5. SCRS Recommendation (page 158)

Determinations of **stock status, exceptional circumstances and TAC advice** require accurate estimates of the biomass of fish destined for farms **at the time they are captured from the wild.**

Measuring fish as close as possible to capture **eliminates back calculation of growth in farms.** Recent advances in Artificial Intelligence (AI) now make this possible. To achieve this objective the Committee recommends that:

- **100% of the original, unedited, stereo video footage be provided to a secure electronic server** hosted by the Secretariat. This server would use **validated AI algorithms to obtain independent and objective size estimates**, available to each farm in **near-real time.**
- Stereo-video measurements to be made at the time of transfer from the purse seine to the transport cage or, if at-sea conditions make this impractical, when transferred into the farm. These measurements would be provided to the server as soon as possible.

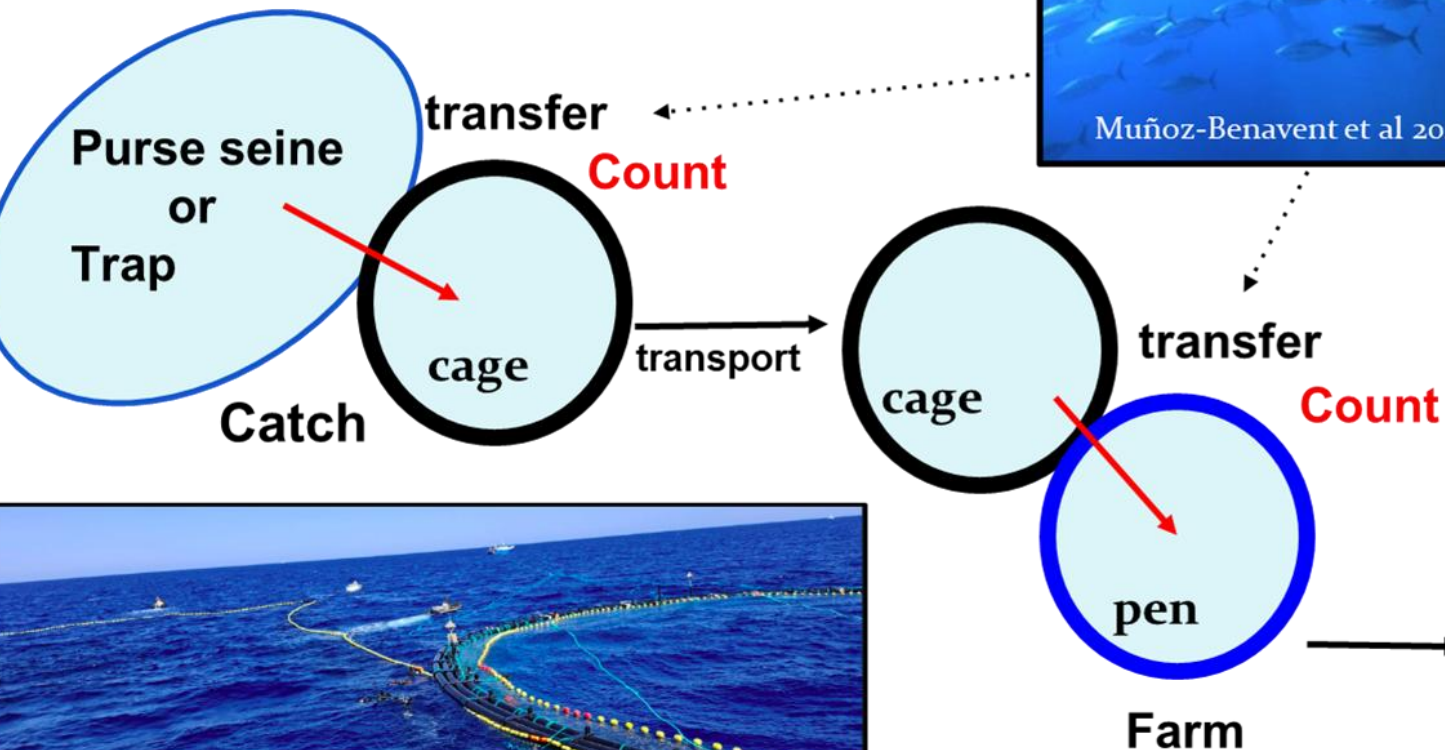


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Secretariat
Server + AI



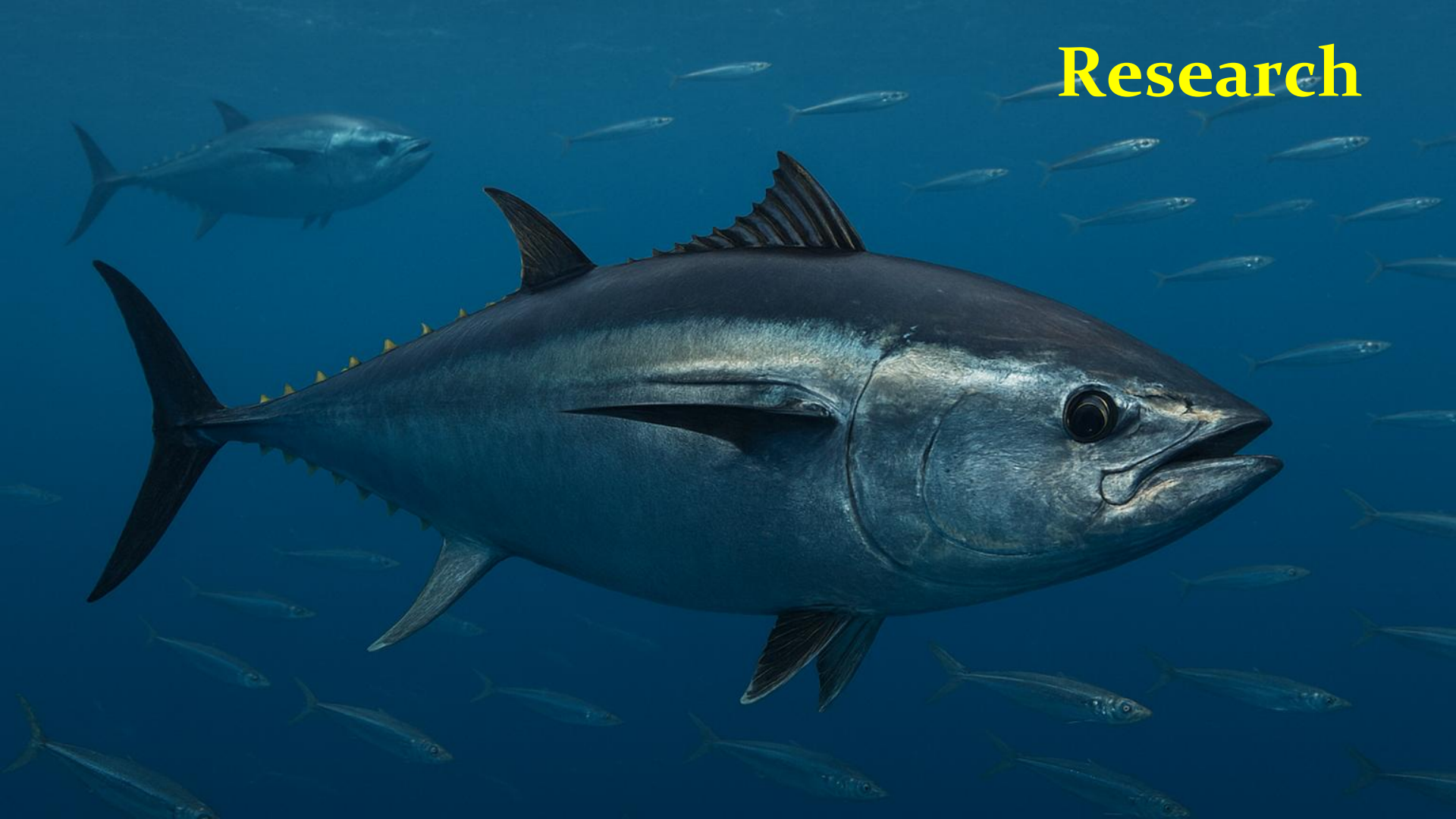
**Biomass
Estimate**



Responses to the Commission

- **Growth in Farms Table 19.12.1 (page 172):** “As the Committee understands that the growth table is also used for compliance purposes to identify growth rates that are unlikely to be achieved the Committee recommended using the upper 75% confidence interval, corresponding to the 87.5th percentile”
- **Eastern TAC Carryover provisions (19.14, p 176)**
“The SCRS tested 20% as a reasonable upper limit to carryover in the Eastern area and found that it makes a negligible difference in conservation performance for both the Eastern and Western Stocks.”

Research



18.1.5 Bluefin tuna

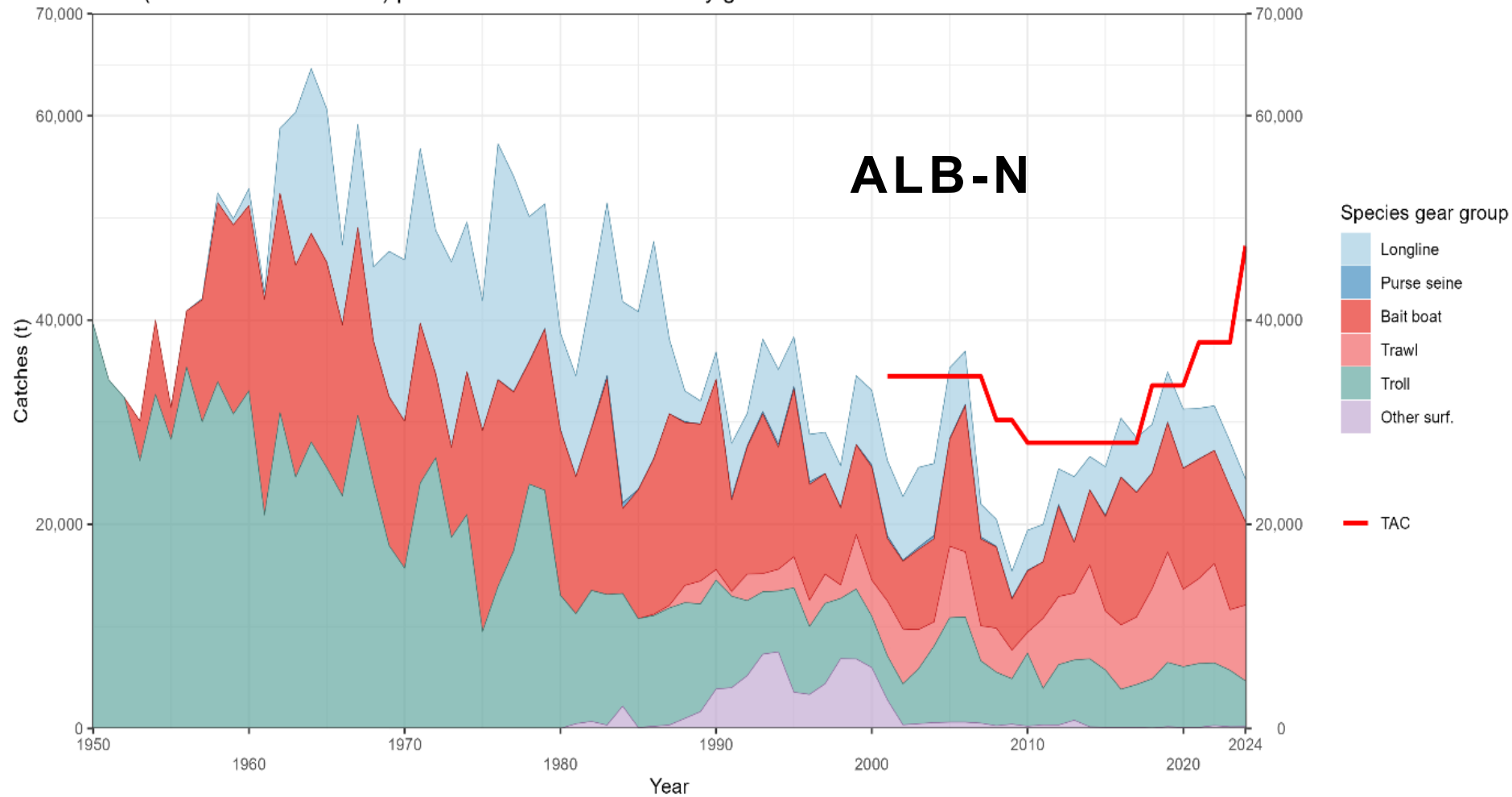
The Committee recommended continued funding of the Atlantic-Wide Bluefin Tuna Research Program (ICCAT GBYP). For the next year, research will be focused on the following areas by order of priority:

- Contract experts to support and carry out the status assessment (modelling)
- Contract experts to support BFT MSE
- Standardisation of aerial survey index to account for environmental variability (modelling)
- Conduct GBYP aerial survey in 2026 in the Balearic region (only) and update the annual GBYP survey index
- Collection of biological samples for biological studies required for stock assessment
- Contribute to tagging research including electronic database development

Albacore



ALB (Northern atlantic stock) | Cumulative Task 1 catches by gear vs. TAC



ALB North

Last assessed
in 2023

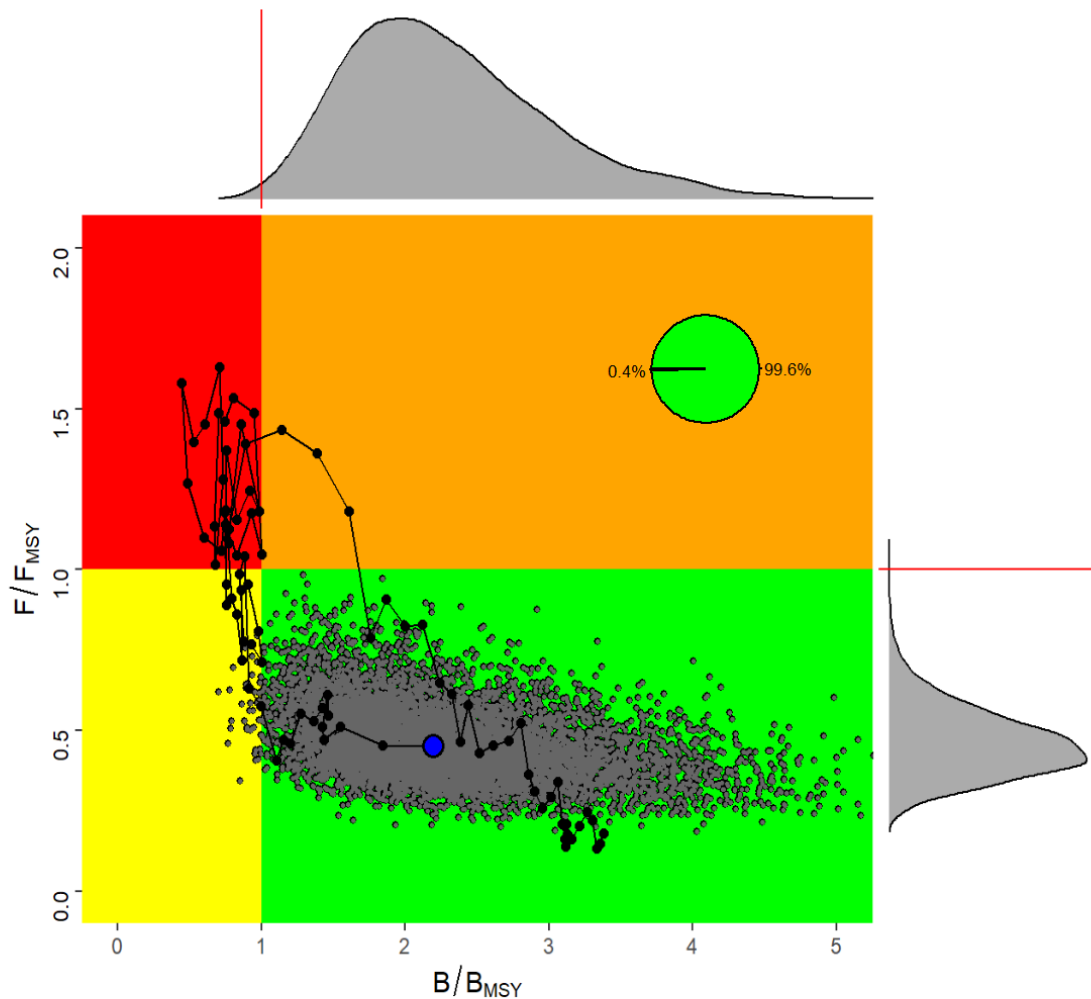
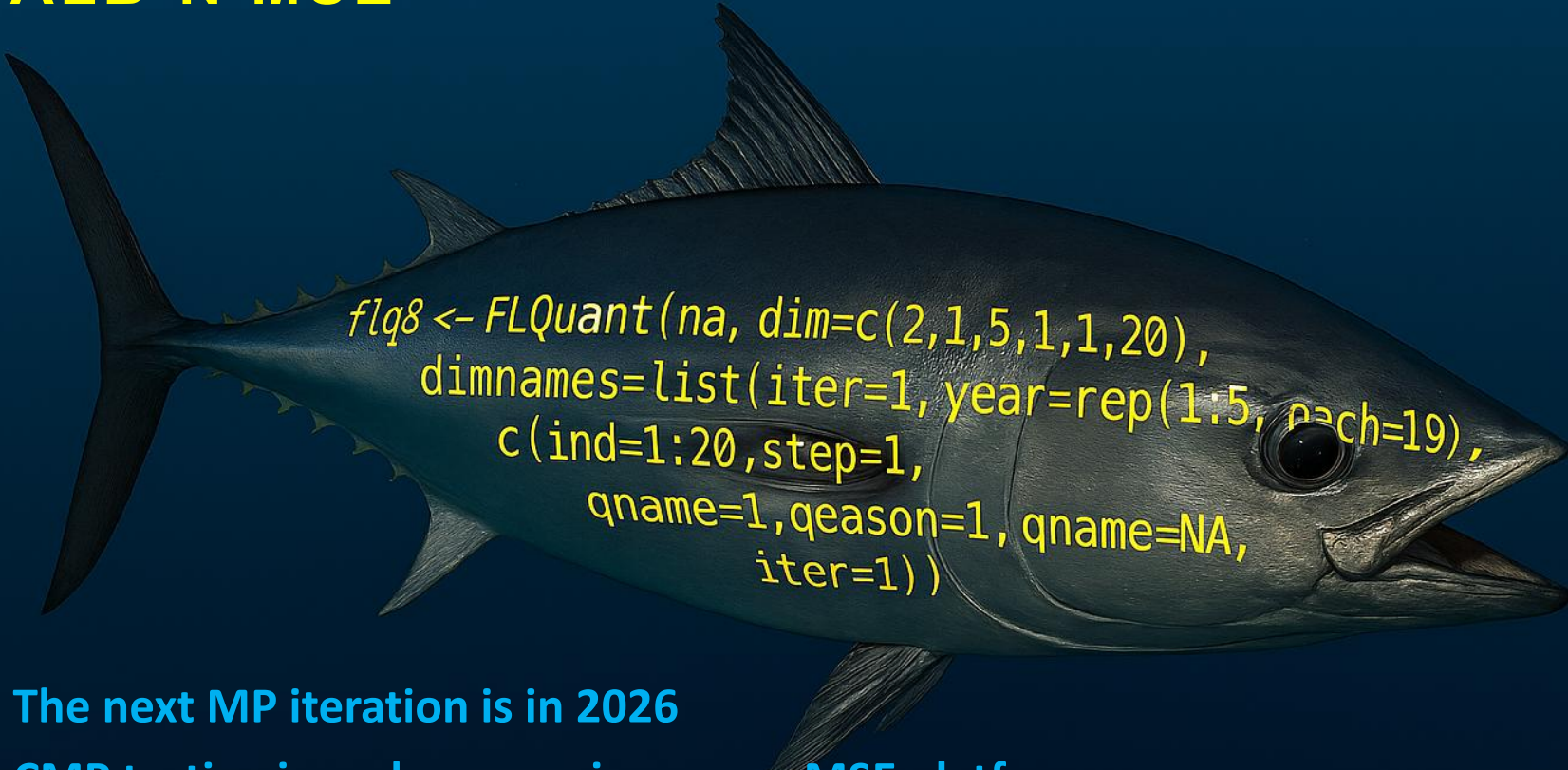


Table 1a. North Atlantic albacore summary.

<i>Indicator</i>		<i>Stock Status</i>
Maximum Sustainable Yield (MSY)	41,995 t (38,860-45,130) ¹	2021
TAC (2024)	47,251 t	
Current (2024) Yield	24,420 t ²	
Relative Spawning Biomass (SSB ₂₀₂₁ /SSB _{MSY})	2.19 (1.21 - 4.01) ¹	
Relative Fishing Mortality (F ₂₀₂₁ /F _{MSY})	0.45 (0.29 - 0.71) ¹	
Stock Status	Overfished: NO (0.4% probability of being overfished) ³ Overfishing: NO (<1% probability of overfishing) ³	2021
Management measures in effect	Rec. 98-08, Rec. 21-04 and Rec. 23-05	
Recommended TAC for the period 2024-2026, as estimated following the MP adopted in Rec. 21-04 ⁴	47,251 t	

ALB-N MSE



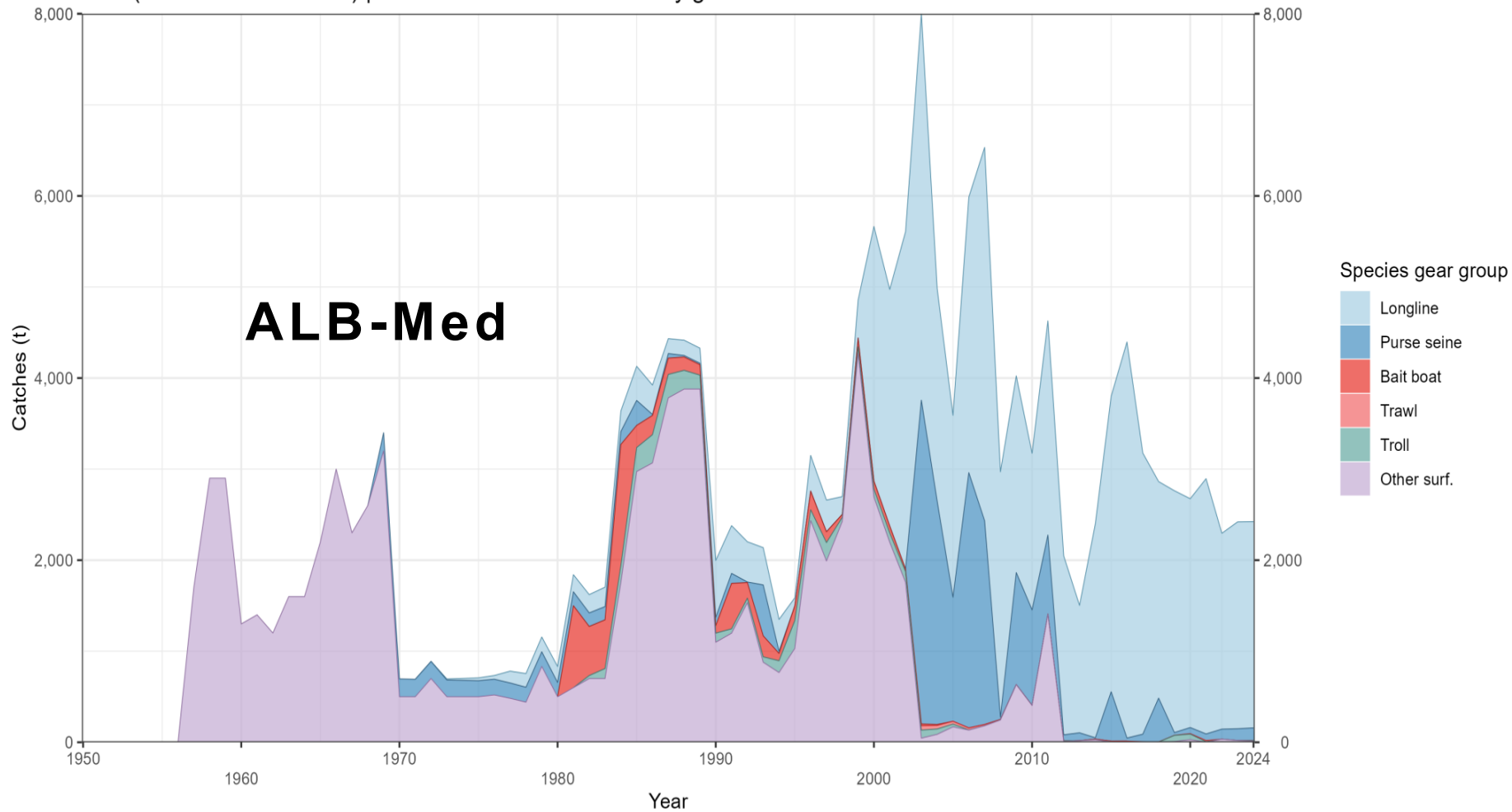
```
flq8 <- FLQuant(na, dim=c(2,1,5,1,1,20),  
  dimnames=list(iter=1, year=rep(1:5, each=19),  
    c(ind=1:20, step=1,  
      qname=1, qseason=1, qname=NA,  
        iter=1))
```

The next MP iteration is in 2026

CMP testing is underway using a new MSE platform

The SCRS is seeking a dialogue with Panel 2 in 2026

ALB (Mediterranean stock) | Cumulative Task 1 catches by gear



ALB-Med

Last assessed
in 2024

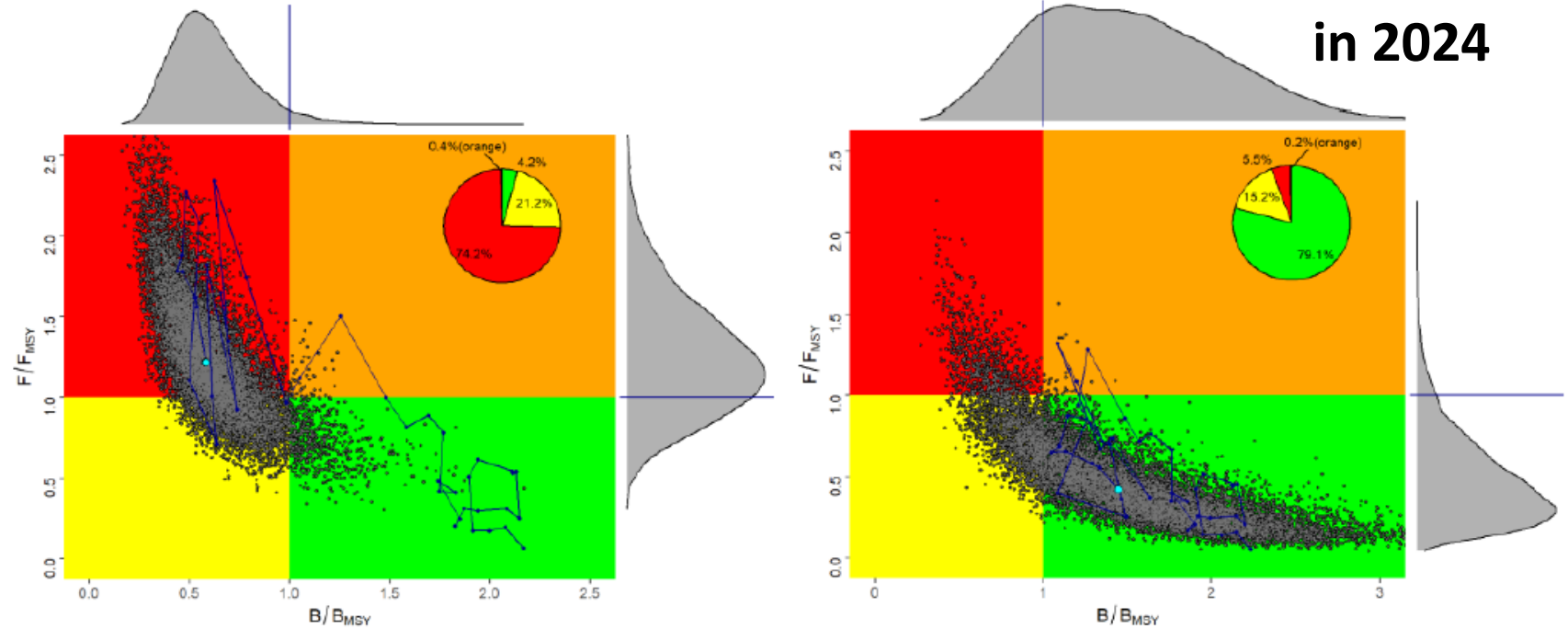


Figure 1. Mediterranean albacore stock status trajectories of B/B_{MSY} and F/F_{MSY} over time (1980-2022) with uncertainty around the current estimate (Kobe plots) for Bayesian surplus production model. The inserted pie indicates the probability of the stock being within each Kobe color quadrant, for scenarios 1 (left) and 2 (right). The probability distributions shown in each axis represent uncertainty around current B/B_{MSY} and F/F_{MSY} .

Table 1. Mediterranean albacore summary table.**ALB-Med**

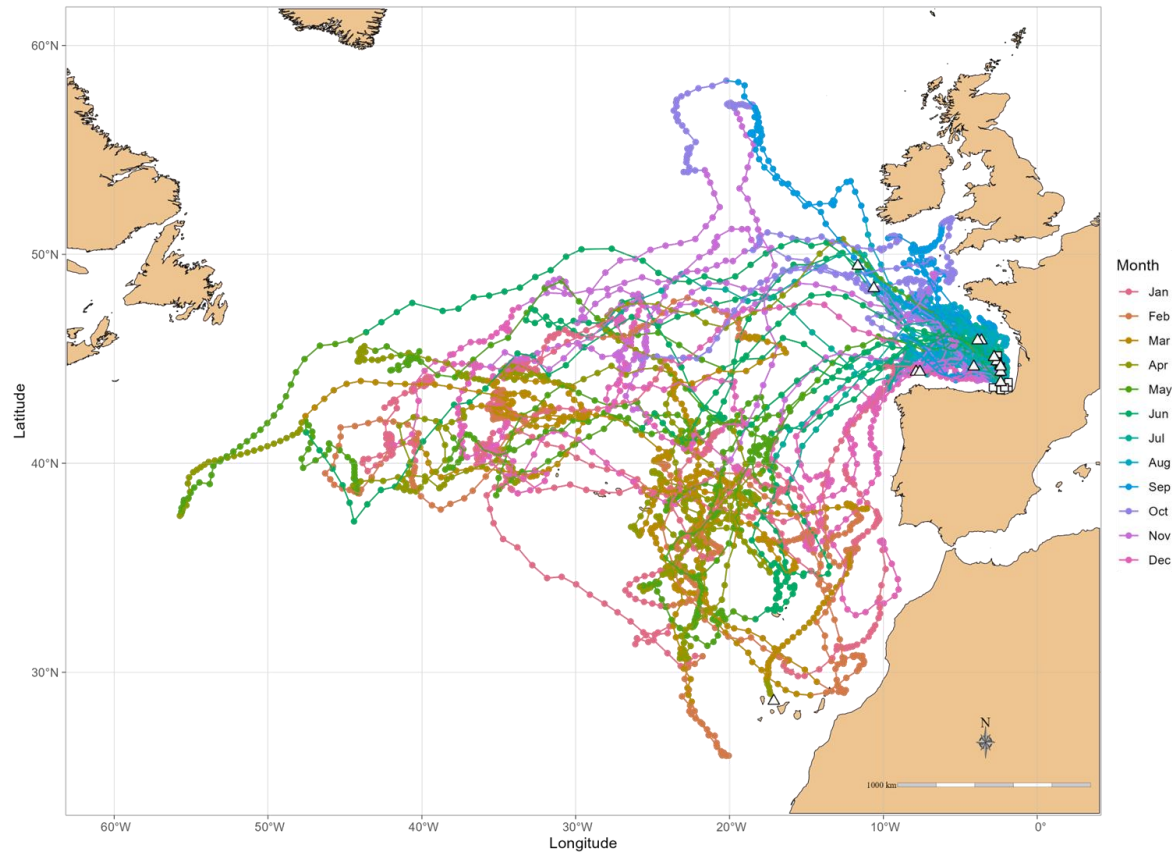
<i>Indicator</i>		<i>Stock Status</i>
Maximum Sustainable Yield (MSY)	Scenario 1: 3,564 t (2,584 t - 4,663 t) Scenario 2: 4,174 t (2,831 t - 7,936 t) ¹	2022
TAC (2024)	2,500 t	
Current (2024) Yield	2,423 t ²	
Relative Biomass (B_{2022}/B_{MSY})	Scenario 1: 0.58 (0.31-1.10) Scenario 2: 1.44 (0.59-2.64) ¹	
Relative Fishing Mortality (F_{2022}/F_{MSY})	Scenario 1: 1.22 (0.66-2.10) ¹ Scenario 2: 0.42 (0.13-1.17) ¹	
Stock Status	Overfished: Scenario 1 – YES; Scenario 2 - NO Overfishing: Scenario 1 – YES; Scenario 2 - NO	
Management measures in effect	Rec. 22-05; Rec. 24-08: TAC for years 2025-2026: 2,500 t.	

ALB Research Program

Results

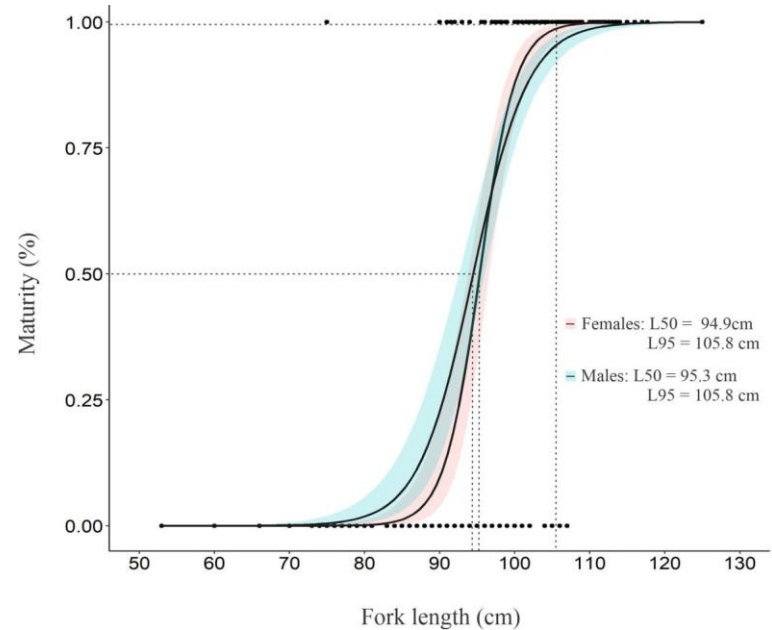
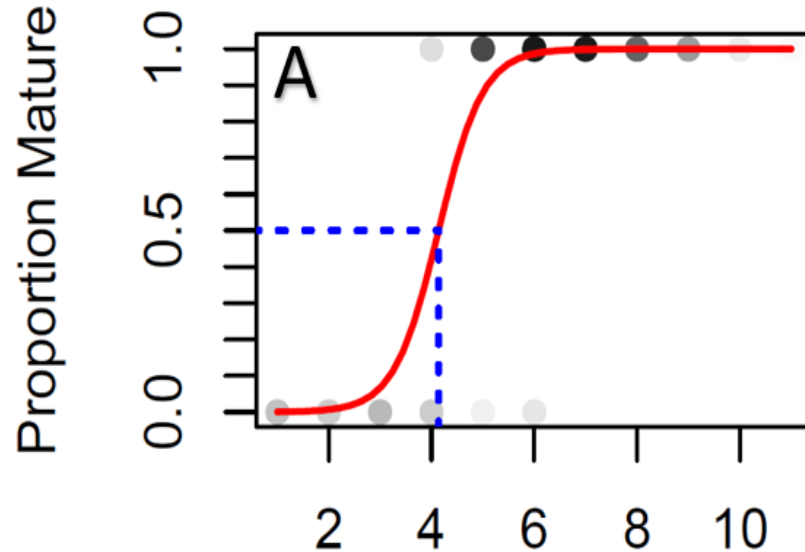
e-tagging (north)

- Successful experiments on a challenging species
- New information on distribution and habitat use
- High fidelity to the Bay of Biscay
- Need to continue and expand to other areas, and recoveries in LL fisheries, to clarify stock structure assumptions



Results

Reproductive biology



- New maturity results for North and South stocks, but we need additional samples to finalize the study and verify reproductive biology assumptions

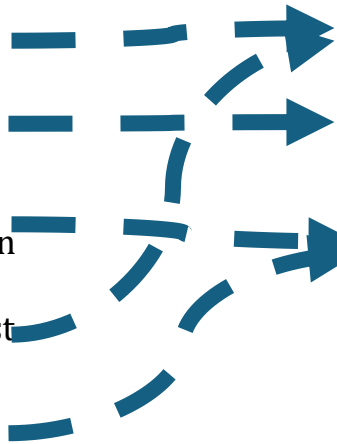
ALB Work Plan 2026-2029

TASKS

- MSE development (North and South)
- Mediterranean larval survey calibration
- Biological studies (finalize reproductive and aging studies in North and South).
- Development of a Joint Northeast Atlantic juvenile index
- E-tagging (North)
- E-tagging (South)

OBJECTIVES

- MPs for TAC advice
- Improve assessment of Med stock
- Verify biological assumptions in assessments/MSE



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



Images of tropical tunas in natural settings within this presentation were created by Craig Brown for the use of ICCAT, using AI (Gemini, Copilot, ChatGPT) n