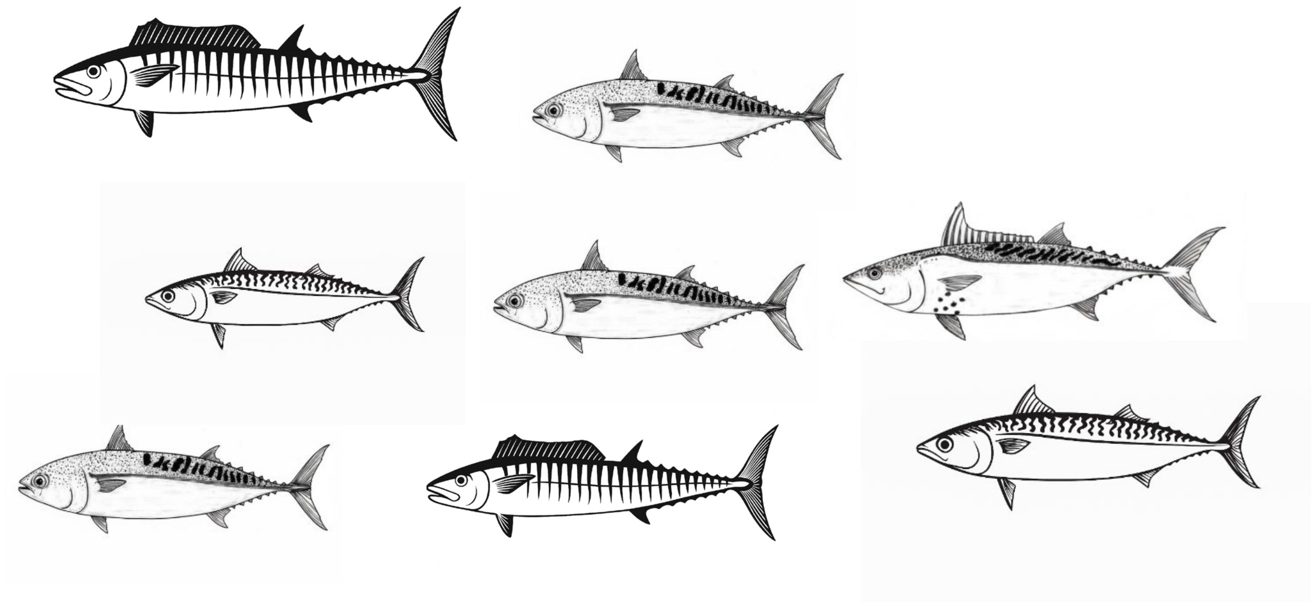
PA4 – Section 2

SMALL TUNAS (SMT)



SHARKS (SHK)

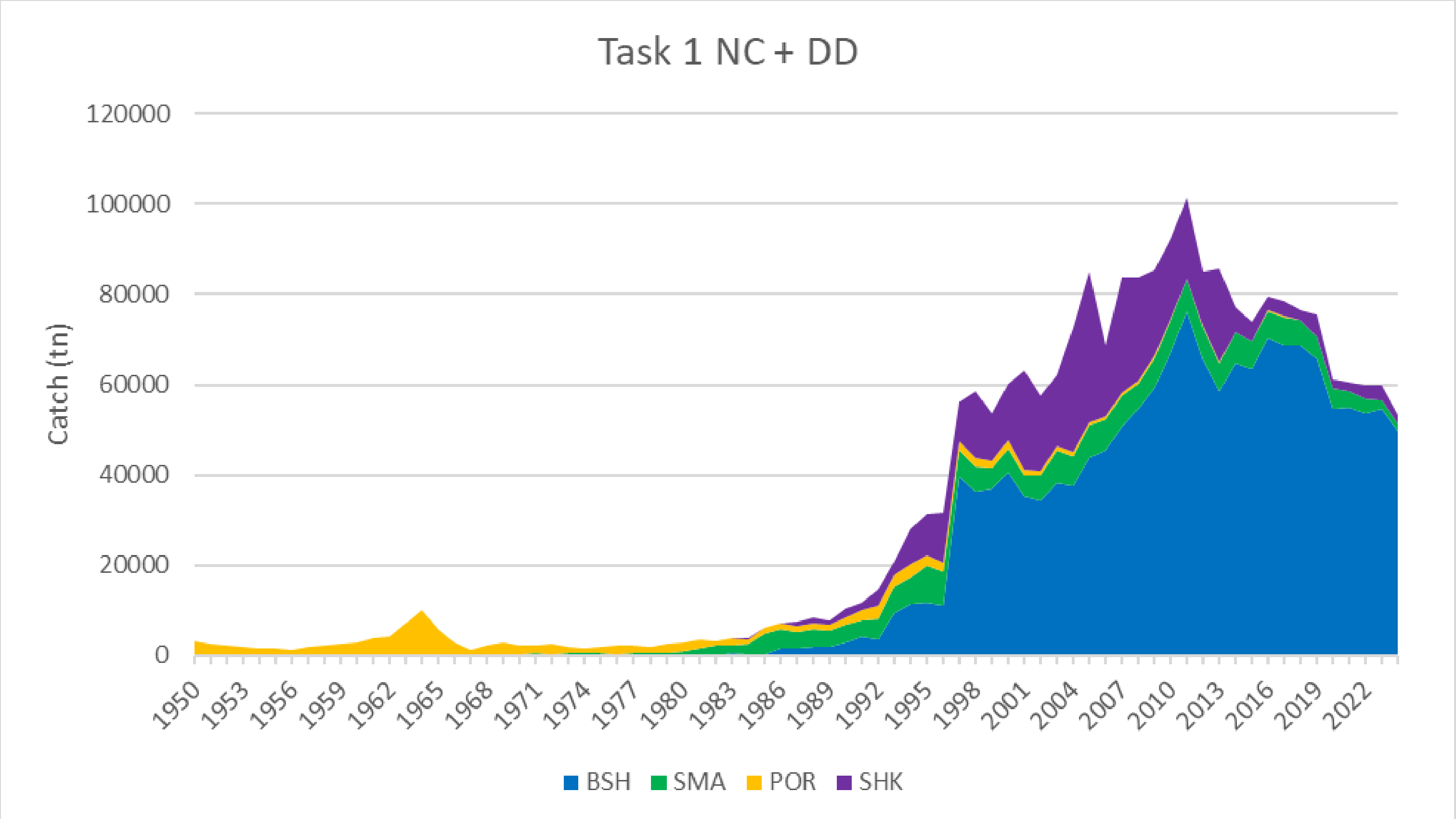
SHARK SPECIES GROUP

Presentation Index

- Review of major SHK catches and stock status.
- 2025 ICCAT Shortfin mako (SMA) Stock Assessment.
- Progress on Blue shark (BSH) MSE.
- 2026 Workplan Plan.
- Responses to the Commission.

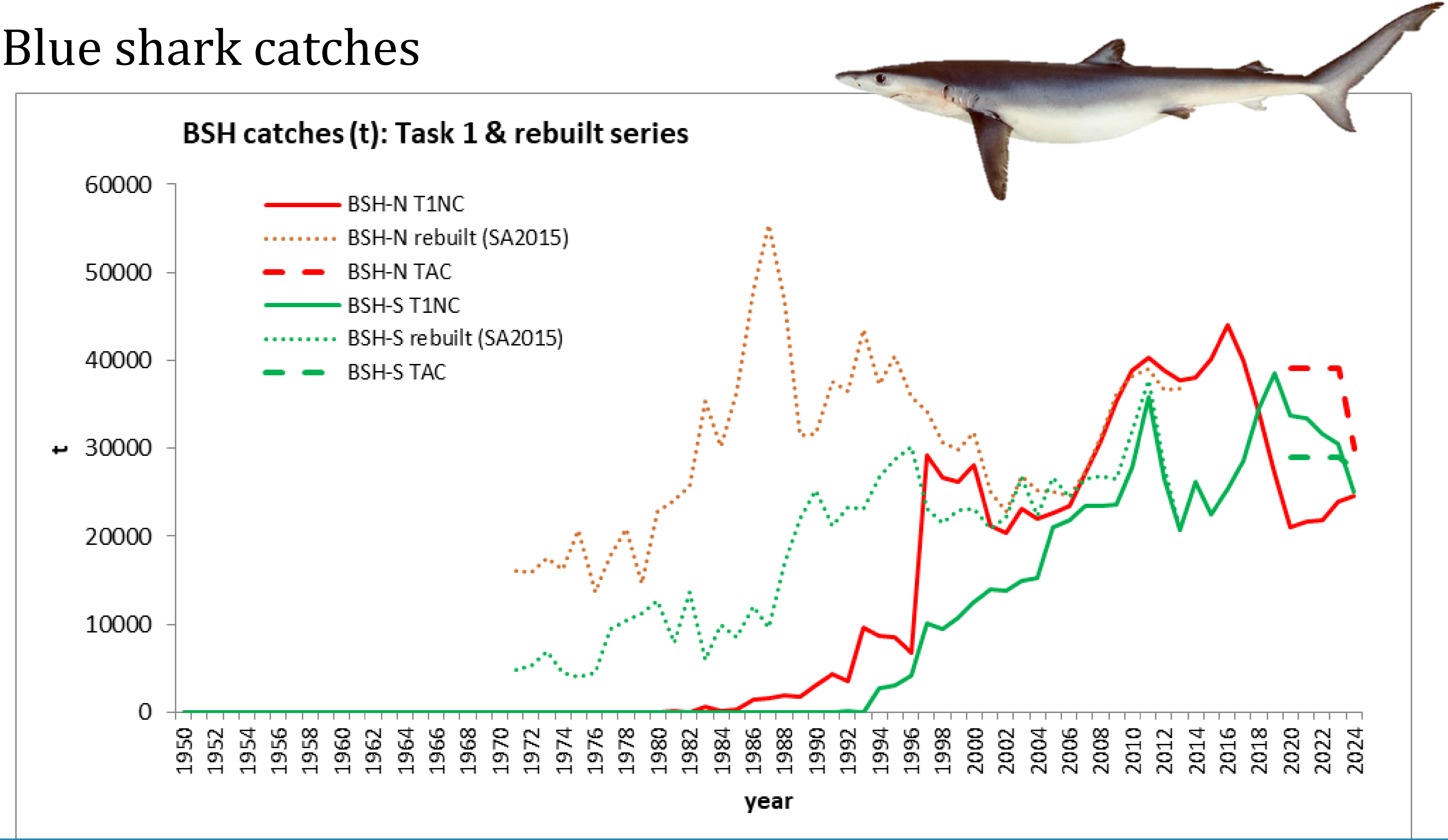
2025 Review of Major SHK catches

- Total accumulated catches (landings and dead discards, t) by groups of sharks (major, others SHK) and year (1950 – 2024).



- Total catches 2024: 53,319t
- 93% Blue shark (BSH)

Blue shark catches



North: Captures below the TAC since 2018.

2024: 24,564 t

+579 t

Rec.23-10 North TAC 30,000 t.

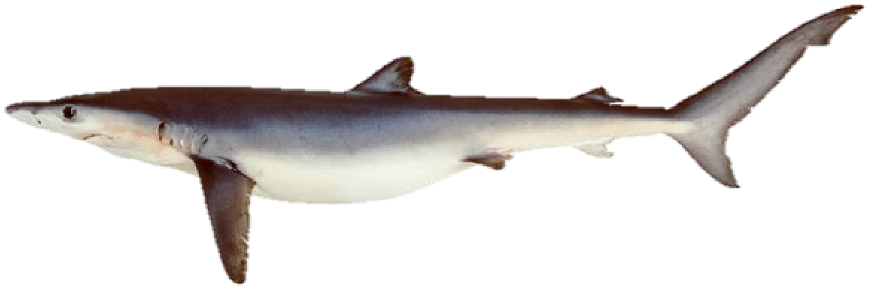
South: Captures over the TAC 2020 – 2023.

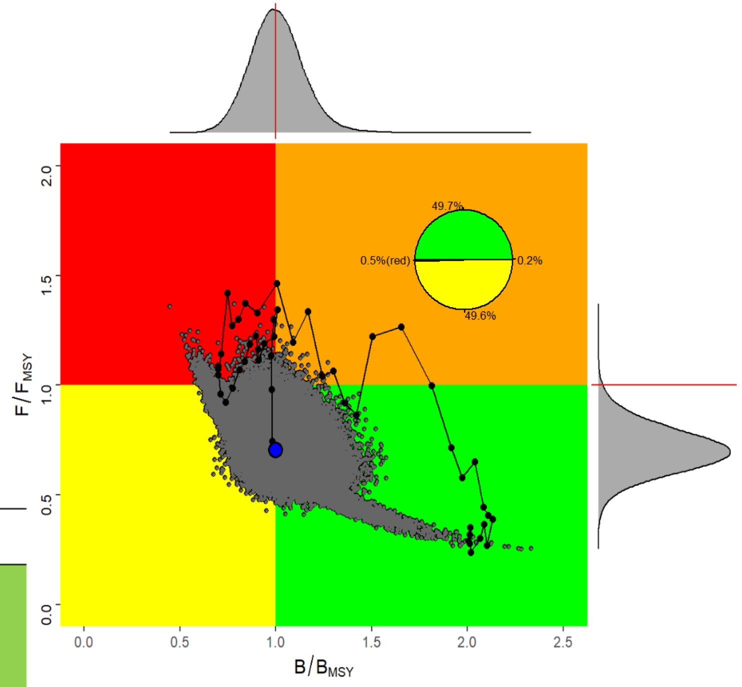
2024: 25,003 t

-5,573 t

Rec.23-11 South TAC 27,711 t.

North Atlantic Blue shark stock

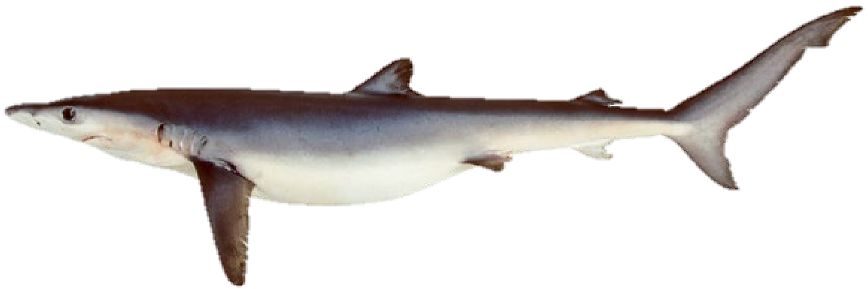




Summary table (assessed in 2023 using data through 2021)

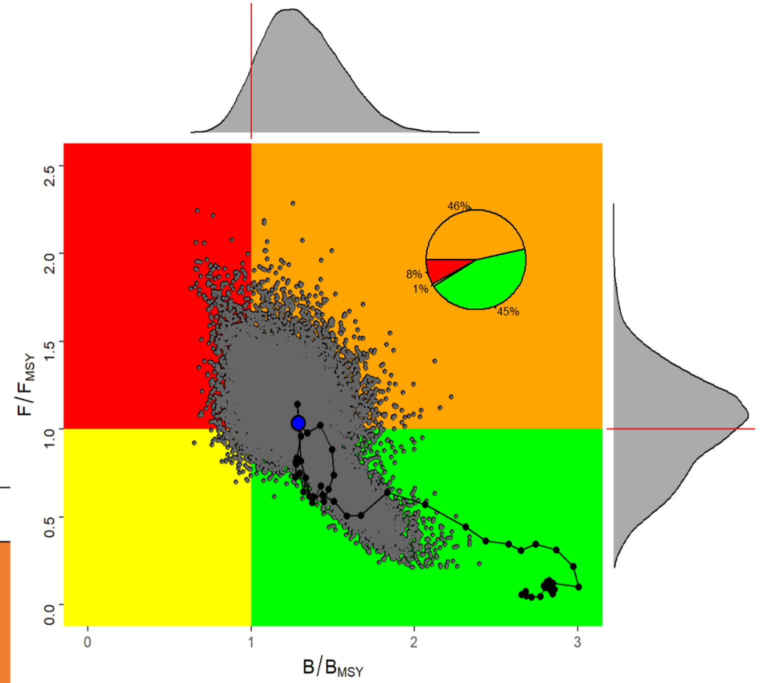
Indicator		***Stock Status***
Maximum Sustainable Yield (MSY)[1]	32,689 t (30,403 t - 36,465 t)	2021
TAC (2024)	30,000 t	
Current (2024) Yield[2]	24,564 t	
Relative Biomass (B_{2021}/B_{MSY})[3]	1.00 (0.75 - 1.31)	
Relative Fishing Mortality (F_{2021}/F_{MSY})[3]	0.70 (0.50 - 0.93)	
Stock Status	Overfished: NO (50.1% probability of being overfished)[4,5] Overfishing: NO (0.7% probability of overfishing)[4]	
Management measures in effect	Rec. 23-10, Rec. 04-10, Rec. 07-06	

South Atlantic Blue shark stock



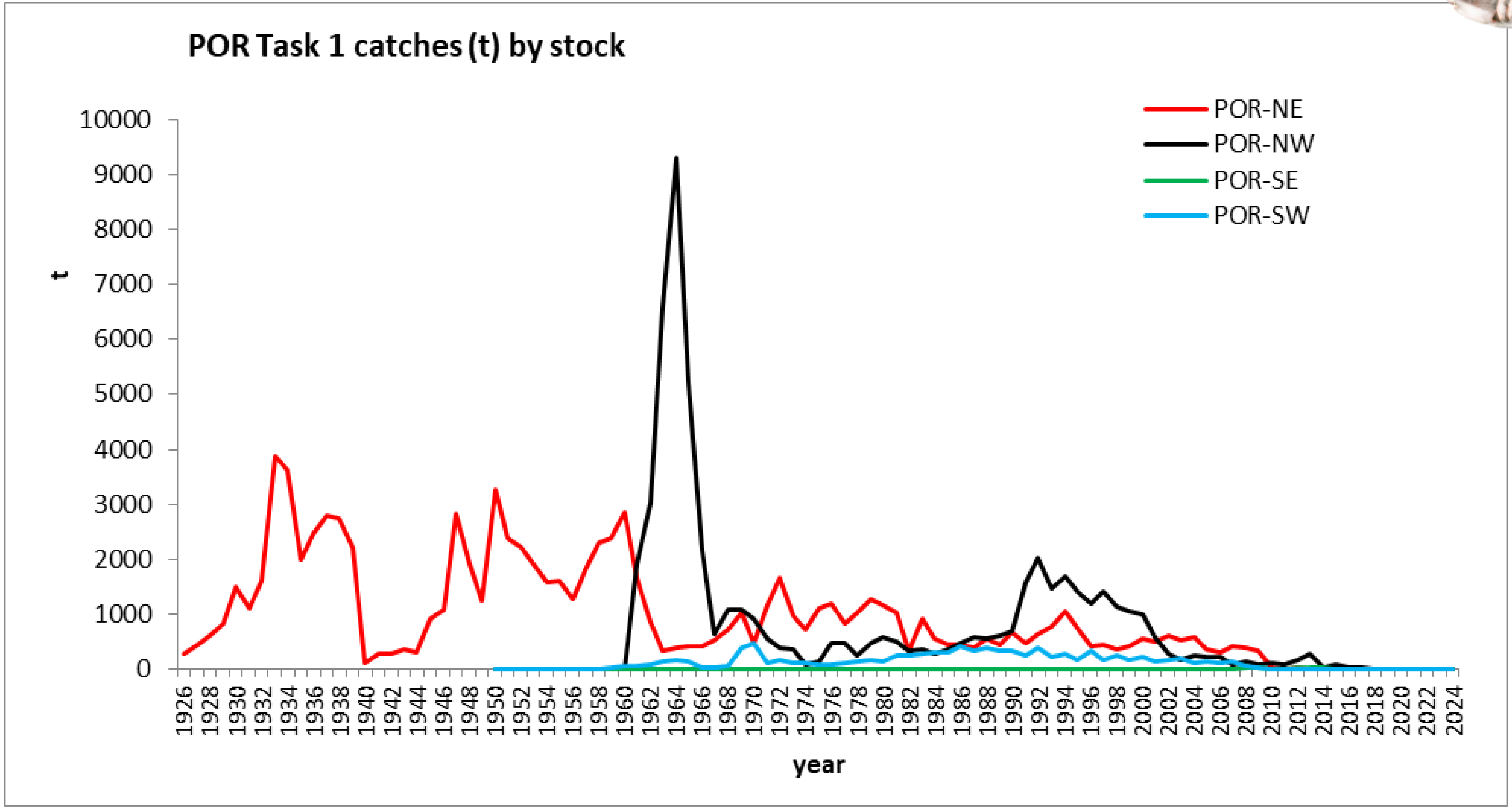
Summary table (assessed in 2023 using data through 2021)

Indicator		***Stock Status***
Maximum Sustainable Yield (MSY)[1]	27,711 t (23,128 t - 47,758 t)	2021
TAC (2024)	27,711 t	
Current (2024) Yield[2]	25,003 t	
Relative Biomass (B_{2021}/B_{MSY})[3]	1.29 (0.89 - 1.81)	
Relative Fishing Mortality (F_{2021}/F_{MSY})[3]	1.03 (0.45 - 1.55)	
Stock Status	Overfished: NO (8.78% probability of being overfished)[4] Overfishing: YES (54.52% probability of overfishing)[4]	
Management measures in effect	Rec. 23-11, Rec. 04-10, Rec. 07-06	



SCRS – SHARK SPECIES

Porbeagle shark catches



NW captures 4t Decreasing since 2017.

NE captures 15t.

SW captures are 0t since 2013.

SE captures are 0t since 2019.

Northwest Atlantic Porbeagle shark stock

Summary table (assessed in 2020 using data through 2018)

Indicator		***Stock Status***
Maximum Sustainable Yield (MSY)	Not available	
TAC (2024)	N/A	
Current (2024) Yield[1]	4 t	
Relative Biomass (B_{2018}/B_{MSY})	0.57[2]	
Relative Fishing Mortality ($F_{2010-2018}/F_{MSY}$)	0.413[3]	
Stock Status	Overfished: YES (98% probability of being overfished) Overfishing: Unknown probability of overfishing	2018
Management measures in effect	Rec. 04-10, Rec. 07-06, Rec. 15-06	

Northeast Atlantic Porbeagle shark stock

Summary table (assessed in 2022 using data through 2021)

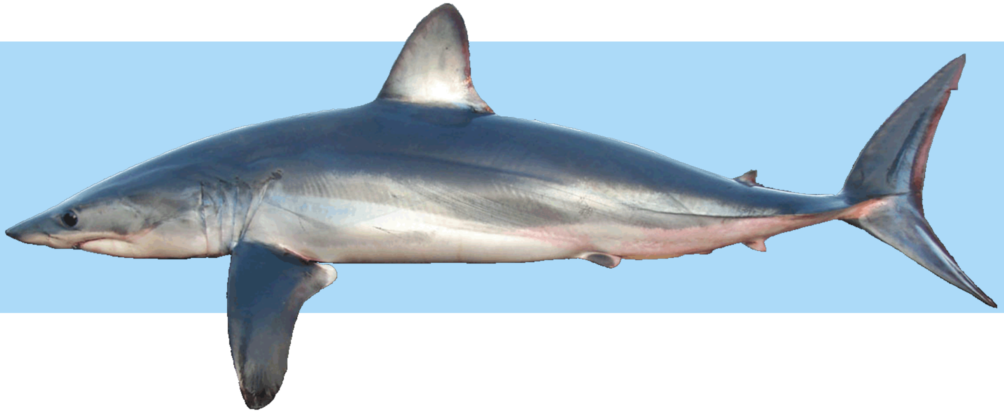
Indicator		***Stock Status***
Maximum Sustainable Yield	Not available	
TAC (2024)	N/A	
Current (2024) Yield[1]	15 t[1]	
ICES-ICCAT Yield in 2021	7.95 t[2]	
Relative Biomass (B_{2021}/B_{MSY})	0.464 (0.15-1.43)[3]	
Relative Fishing Mortality (F_{2021}/F_{MSY})	0.013 (0.0024-0.073)[3]	2021
Stock Status	Overfished: YES (unknown probability of being overfished) Overfishing: NO (unknown probability of overfishing)	
Management measures in effect	Rec. 04-10, Rec. 07-06, Rec. 15-06	

South Atlantic Porbeagle shark stocks

Summary table (assessed in 2020 using data through 2018)

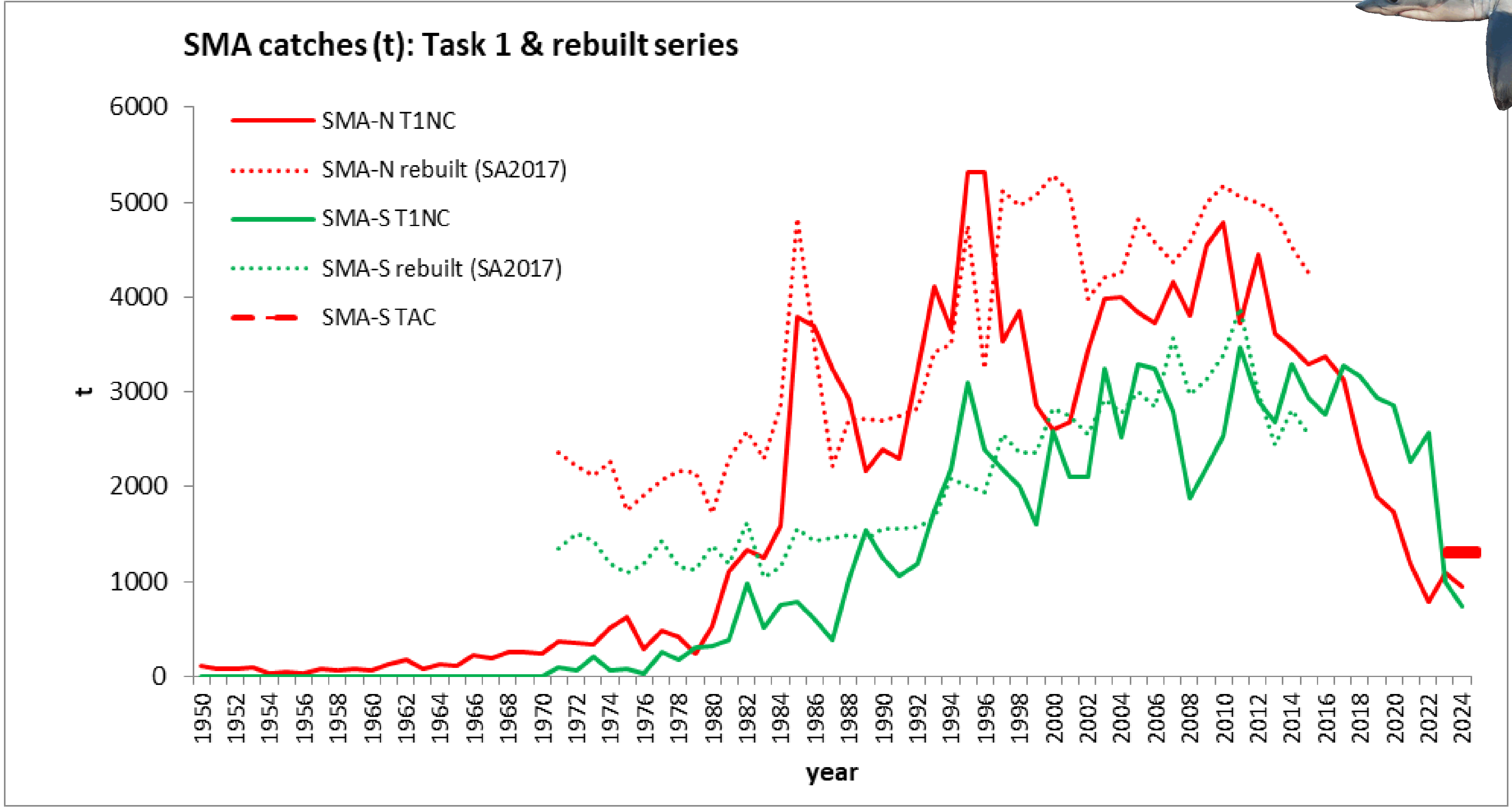
Indicator		*Stock Status*
Maximum Sustainable Yield (MSY)	N/A	
TAC (2024)	N/A	
Current (2024) Yield[1]	0.5 t[1]	
Relative Biomass (B_{2018}/B_{MSY})	Unknown	
Relative Fishing Mortality ($F_{2010\text{-}2018}/F_{MSY}$)	0.0113[2]	
Stock Status	Overfished: Undetermined (unknown probability of being overfished) Overfishing: NO (unknown probability of overfishing)	2018
Management measures in effect	Rec. 04-10, Rec. 07-06, Rec. 15-06	

2025 ICCAT Shortfin mako Stock Assessment



- Data Preparatory Meeting - March 10-14 (Málaga, hybrid)
- Stock Assessment Meeting - June 9-13 (Madrid, hybrid)

Shortfin mako catches



2024: 944 t

-152 t

2024: 736 t

-257 t

2025 SMA North Atlantic Stock Assessment

A set of factors made it impossible to finalize the North stock assessment.

- New in life history parameters.
- 2017 SS3 could not be successfully fitted to the updated data.
- Conflicting CPUE indices, contradictory data in recent years.

As a result, the SCRS could not provide advice with scientifically defensible confidence.

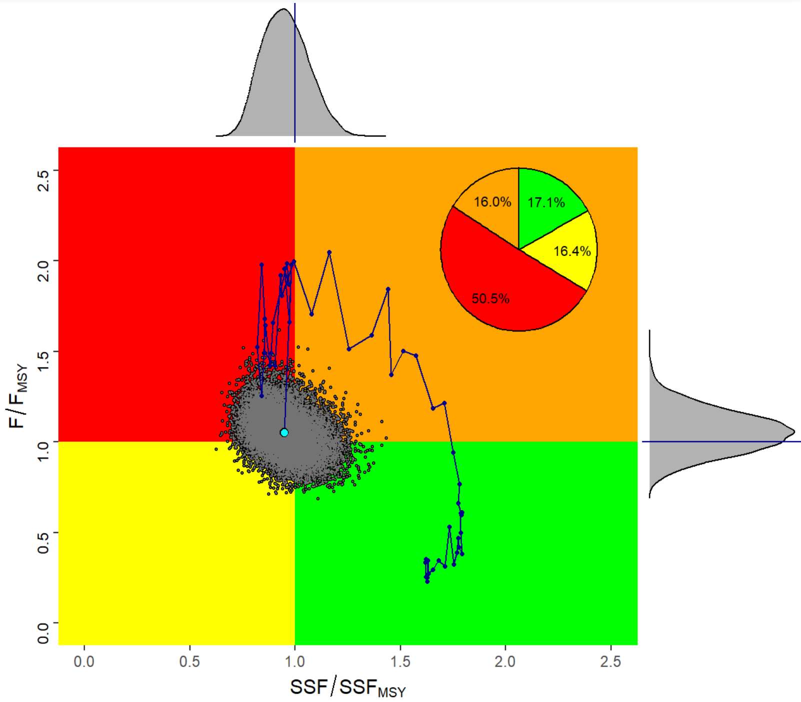
The SCRS agreed to continue with the SMA North Stock assessment in 2026.

- Produce combined CPUE index to improve model performance.

South Atlantic Shortfin mako stock

Summary table (assessed in 2025 using data through 2023)

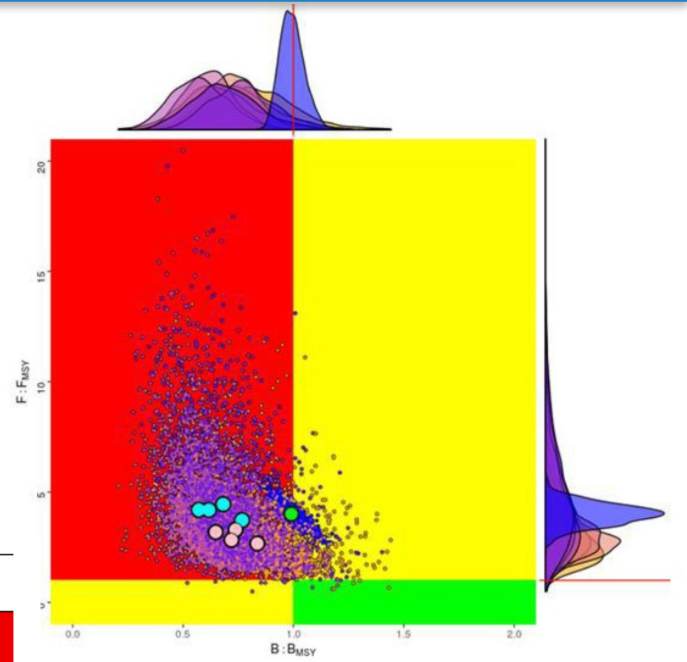
Indicator		*Stock Status*
Maximum Sustainable Yield (MSY)	1,648 t (1,519-1,795 t)	2023
TAC (2024)[3]	1,295 t	
Current (2024) Yield[1]	736 t	
Relative spawning stock fecundity (SSF_{2015}/SSF_{MSY})[2]	0.949 (0.763-1.179)	
Relative Fishing Mortality (F_{2023}/F_{MSY})[2]	1.052 (0.837-1.287)	
Stock Status	Overfished: YES (66.9% probability) Overfishing: YES (66.5% probability)	
Management measures in effect	Rec. 22-11, Rec. 04-10, Rec. 07-06	



North Atlantic Shortfin mako stock

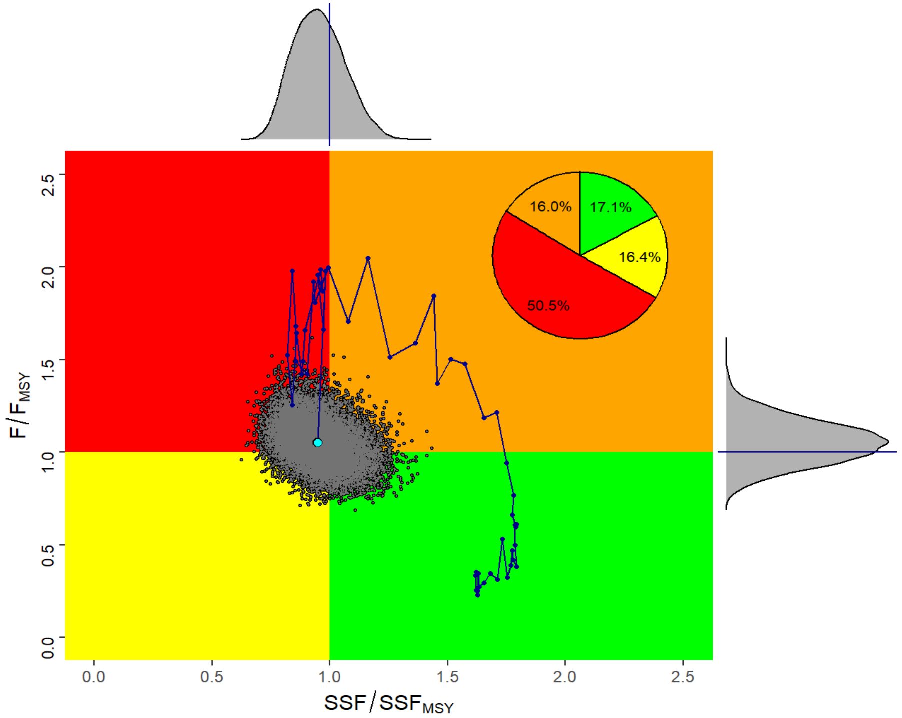
Summary table (assessed in 2017 using data through 2015)

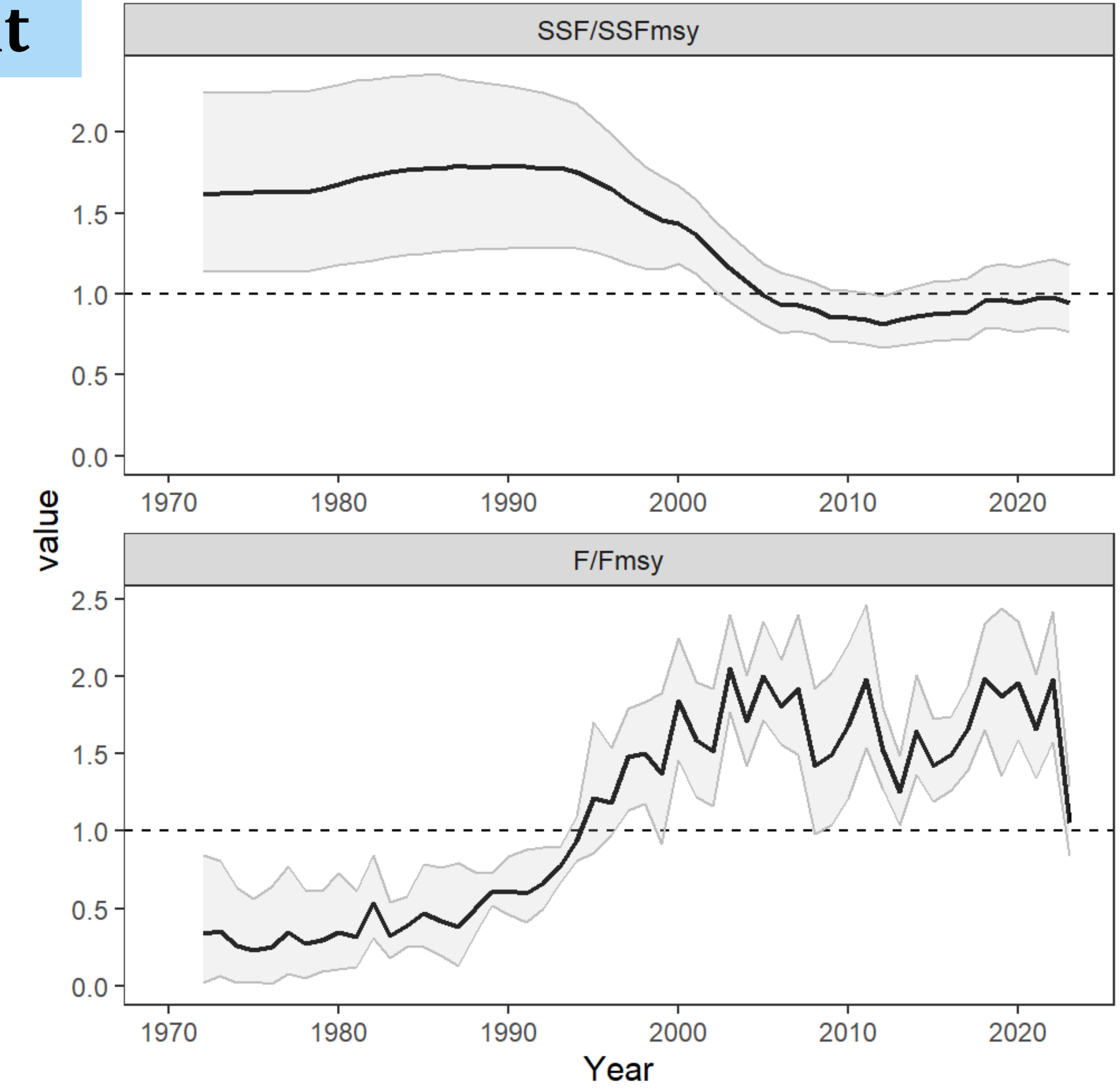
Indicator		***Stock Status***
Maximum Sustainable Yield (MSY)	undetermined	
TAC (2024)[4]	250 t	
Current (2024) Yield[1]	944 t	
Relative Biomass (B_{2015}/B_{MSY})[2]	0.57 - 0.95	
Relative Fishing Mortality (F_{2015}/F_{MSY})[3]	1.93 - 4.38	
Stock Status	Overfished: YES (probability not estimated) Overfishing: YES (probability not estimated)	2015
Management measures in effect	Rec. 21-09, Rec. 04-10 and Rec. 07-06	



2025 SMA South Atlantic Stock Assessment

- Based on the Stock Synthesis results; the stock was likely to have been overfished and overfishing occurring in 2023.





2025 SMA South Atlantic Stock Assessment

- Current TAC of 1,295 t has a probability of 66% of being in the green quadrant by 2050.
- Current total removals of 736 t (794 t considering PRM) would have a probability of being in the green quadrant of 62% by 2034 and 100% by 2050.
- Removals at MSY level would have a 15% probability of being in the green quadrant BY 2050.

Probability F<=F_{MSY} and SSF>=SSF_{MSY}

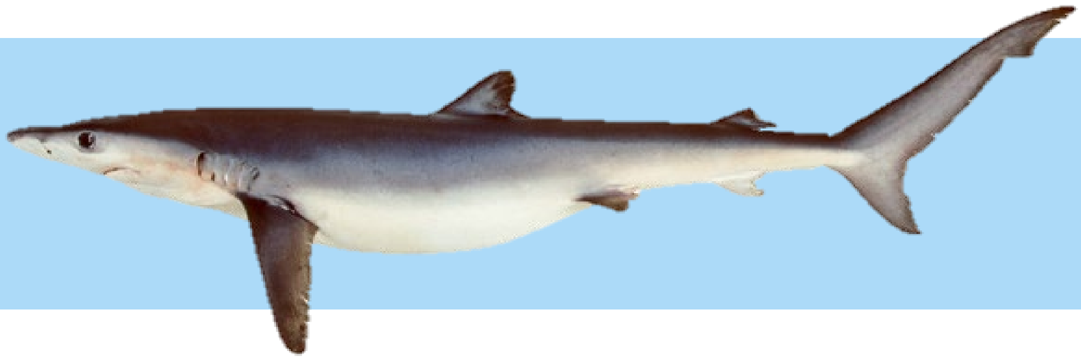
	Catch (t)	2026	2027	2028	2030	2032	2034	2036	2038	2040	2045	2050
	0	16%	16%	13%	28%	71%	94%	99%	100%	100%	100%	100%
	500	14%	14%	10%	19%	51%	76%	88%	94%	97%	100%	100%
Current Yield	750	14%	13%	9%	16%	41%	62%	75%	83%	89%	98%	100%
	1000	14%	12%	8%	12%	31%	47%	58%	64%	71%	87%	95%
TAC	1295	13%	11%	7%	9%	22%	30%	36%	40%	43%	56%	66%
	1500	11%	10%	6%	7%	14%	18%	21%	22%	24%	29%	34%
MSY	1650	7%	7%	4%	5%	7%	9%	10%	10%	11%	13%	15%
	1750	6%	4%	3%	3%	4%	5%	5%	6%	6%	7%	8%
	2000	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%
	2250	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%

2025 SMA South Atlantic Stock Assessment

Management recommendations:

- 2023 South Atlantic SMA stock status was estimated to be likely overfished and undergoing overfishing.
- The Committee indicated that total removals of 1,295 t will bring the stock to the green quadrant of the Kobe plot with at least a 66% probability by 2050.
- The Committee noted that higher total mortality rates would have very low probabilities of being in the green Kobe quadrant by 2050.

Feasibility study on BSH MSE



- A feasibility study elaborated in 2025 was presented (SCRS/2025/078).
  - Technically feasible, cost-effective, and aligned with existing ICCAT MSE practices.
  - Efficiency can be gained by implementing a joint approach for both stocks.
  - Two implementation schedules were identified:
    - (i) a two-year process.
    - (ii) a three-year process.
  - The SCRS and the SHK SG agreed that a 3-year option would be the best one.
  - In 2026 a technical team will start working on the Atlantic BSH MSE.

Sharks Workplan and Research Plan for 2026

- Continue the stock assessment for the North Atlantic shortfin mako in 2026.
- Continue preparations for the North and South Atlantic blue shark MSEs.
- Start planning the 2027 intersessional meeting of the Sharks Species Group focused on the Mediterranean.
- Continue with the activities of the SRDCP.

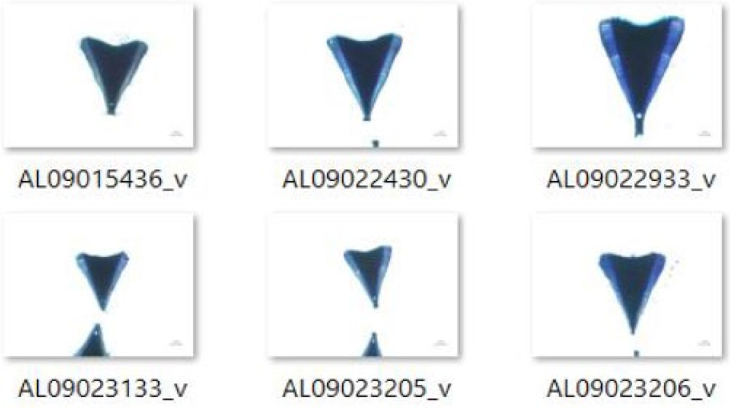
Responses to the Commission

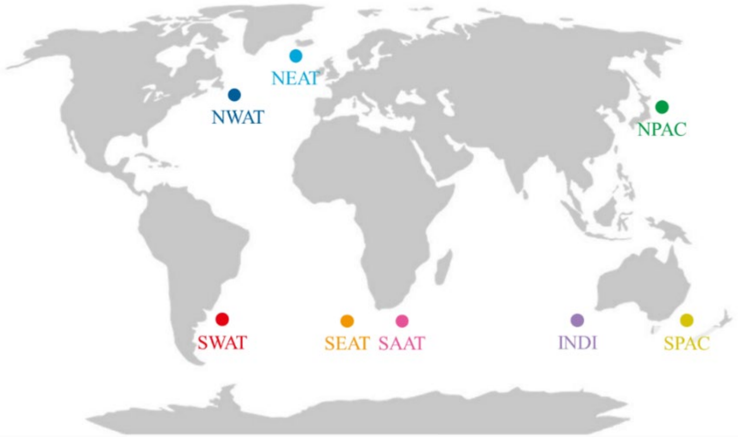
- 12 Commission requests were attended.
  - Recs. 18-06, 21-09, 22-11, 23-10, 23-11.
- A protocol for requesting the exemption of the SHK Check Sheet was developed (section 19.20 SCRS report).
- The total retention allowance of shortfin mako, north and south, was calculated for 2026.
- Advances of SRDCP were presented as part of research on shortfin mako requested by de Commission.
- Feasibility study on blue shark MSE, north and south, were presented.

Shark Research and Data Collection Programme

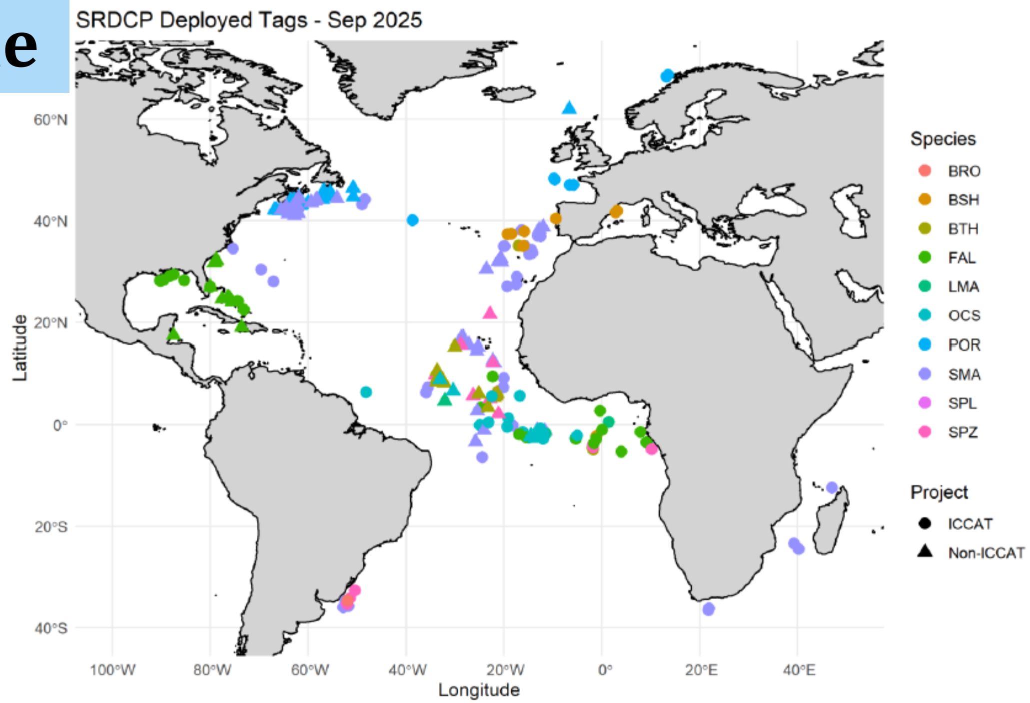
Currently:

- Age and growth of shortfin mako concluded
- Advances on age and growth other species (FAL, SPN, OCS, BTH, LMA)
- Genetic analysis of porbeagle in the Atlantic Ocean



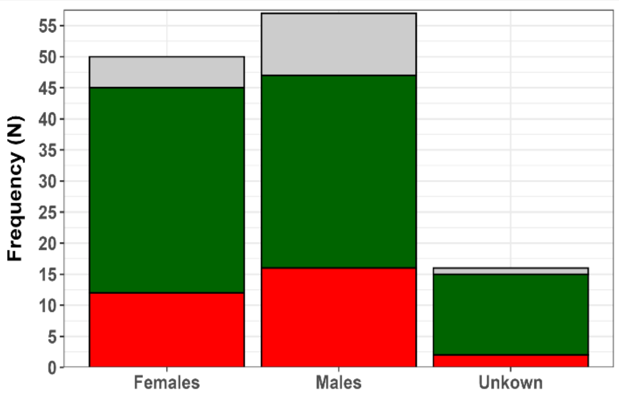


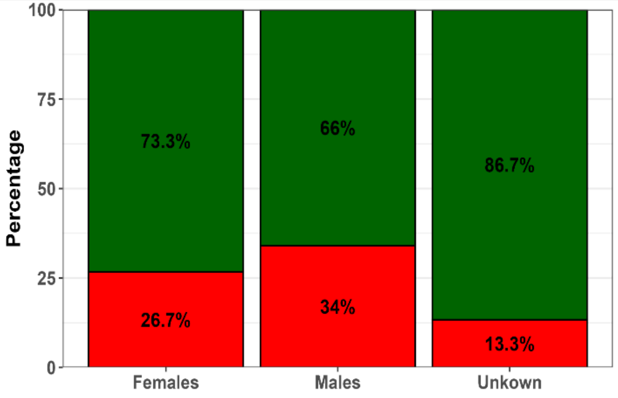
Shark Research and Data Collection Programme

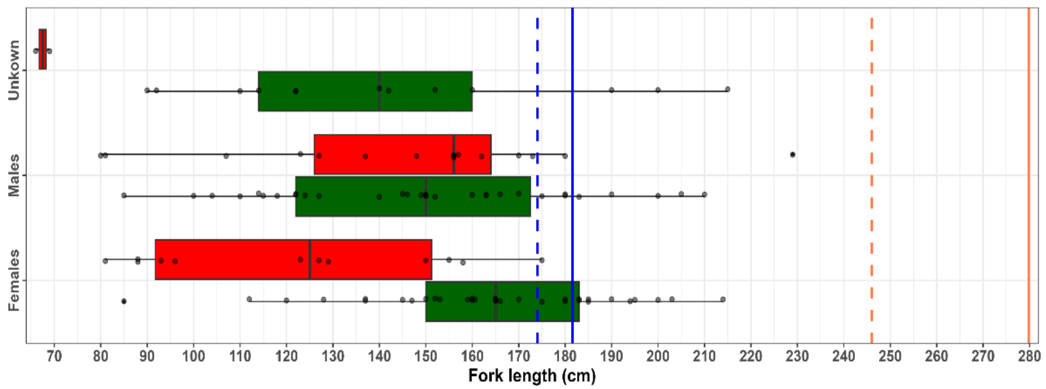


Currently:

- Satellite tagging studies of several species.
- Dedicated tagging campaigns.
- Post-release mortality of SMA.



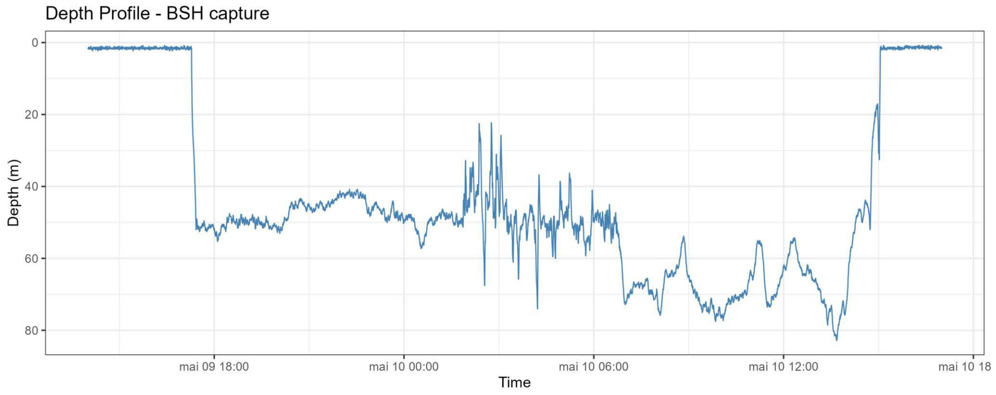




SCRS – SHARK SPECIES

Currently:

- Temperature and Depth Recorders (TDRs) successfully tested.



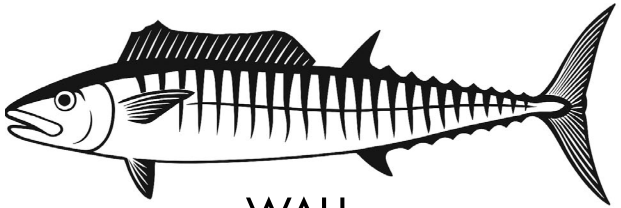
- Reproduction study on North Atlantic shortfin mako.

Collect. Vol. Sci. Pap. ICCAT, 81(9), SCRS/2024/155: 1-9 (2024)

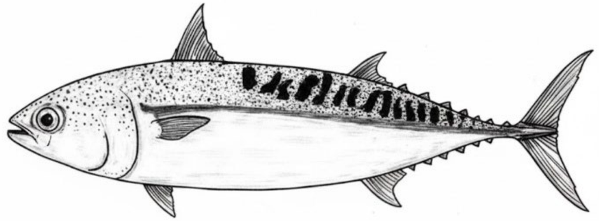
QUANTIFYING REPRODUCTIVE HORMONES IN SKELETAL MUSCLE TISSUE OF THE SHORTFIN MAKO (*ISURUS OXYRINCHUS*)

J. Sulikowski[12*], K. Kappos[1], L. Horstmyer[1], K. Ballard[1], E. Ekelund[1], M. Schlaf[1], M. Passerotti[3], E. Cortés[4], H. Bowlby[5]

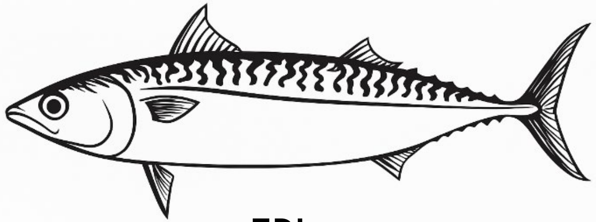
SMALL TUNAS SPECIES GROUP



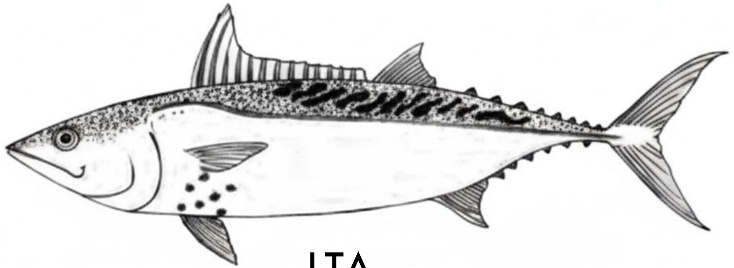
WAH



BLT

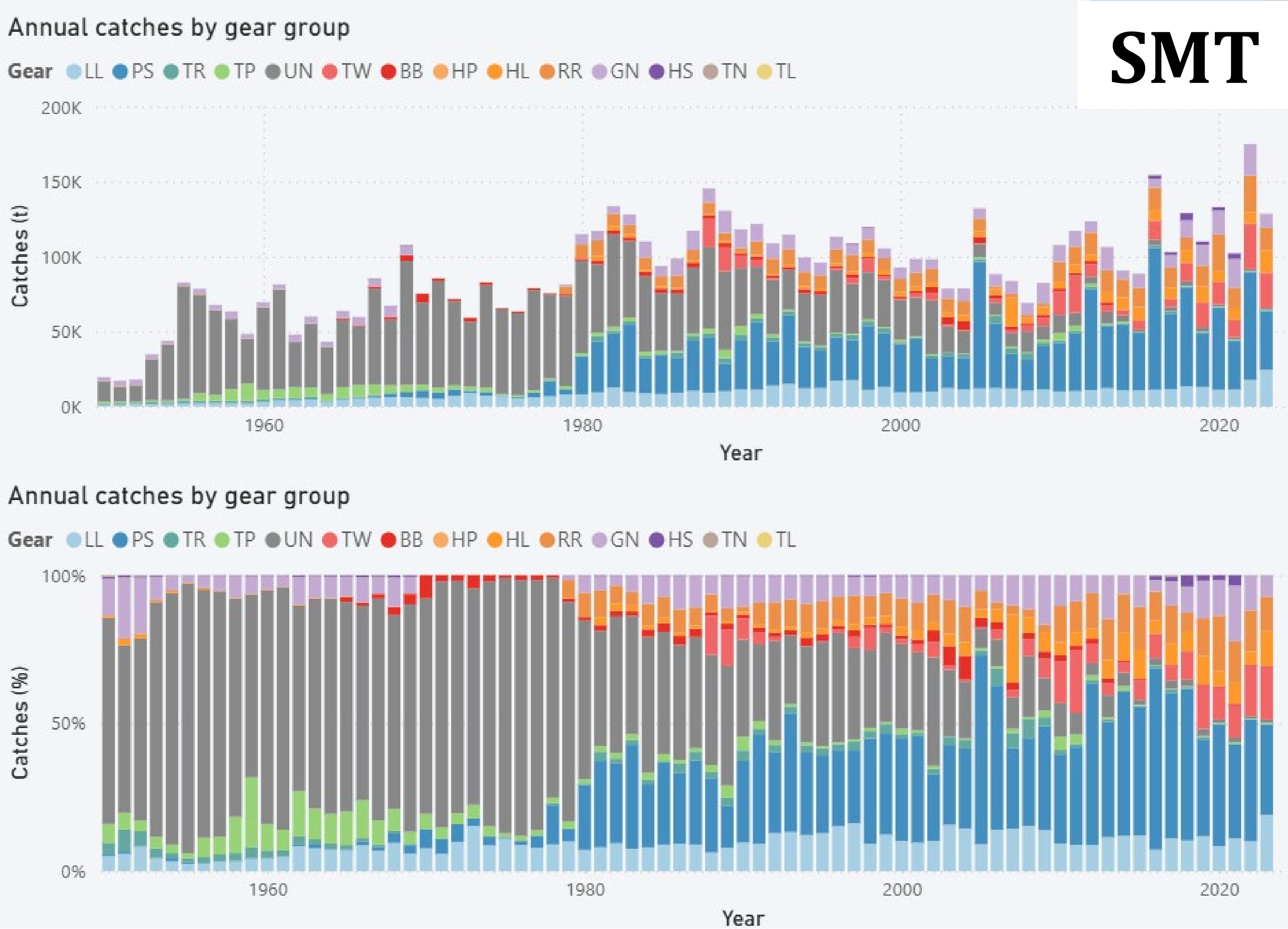


FRI



LTA

And 9 more...


SMT
Annual catches by gear group
Gear LL PS TR TP UN TW BB HP HL RR GN HS TN TL
200K
150K
100K
50K
0K
Catches (t)
1960
1980
2000
2020
Year
Annual catches by gear group
Gear LL PS TR TP UN TW BB HP HL RR GN HS TN TL
100%
50%
0%
Catches (%)
1960
1980
2000
2020
Year

I - Summary of 2025 Activities

Objectives

Intersessional Meeting

(Hybrid/Olhão, Portugal, 26-28 May 2025)

- Review data and present new life-history information and advances achieved within the Small Tunas Year Programme (SMTYP);
- Planning to assess small tunas stocks for the first time.

Technical capacity building workshop on small tuna ageing

(Olhão, Portugal , 29-31 May 2025)

- Advance of methodology calibration for age determination of LTA, BON, and WAH;
- Establish a reference set of ageing structures;
- Plan the next steps for ageing studies on BLT and FRI.

Results

- Several new age and growth parameters, but data review is still incomplete and uneven-quality fishery data;
- The group planned to start assessing the stocks in 2027 with previous work in 2026.

- Establishing reference sets for ageing structures will be finished by 2025 for BON, and LTA.
- Growth studies will continue under improved logistics conditions;

II - Workplan for 2026 and beyond

1. Conclude ongoing studies on Reproduction, Age and growth and Genetics

2. Conduct a feasibility study to identify the requirements for comparing morphometric and morphological traits of LTA from four Atl. and Med. Regions

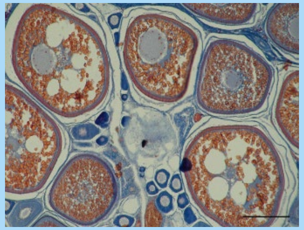
3. Continue to update the biological meta-database maintained since 2016

4. Data from the Northwest Atlantic , a contract should be issued to carry out additional data mining activities in selected countries/regions

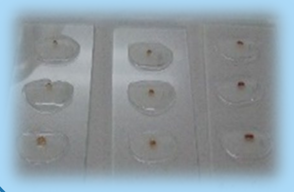
5. An expert group will perform a feasibility study in 2026. The goal is to assess at least one SMT stock by 2027

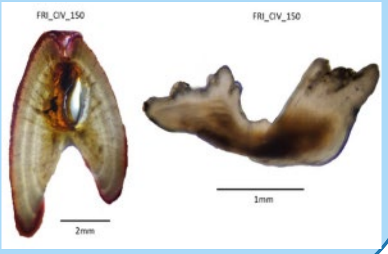
6. Intersessional Meeting of the Small Tunas Species Group in 2027

Reproductive studies



Age and growth studies





III - RECOMMENDATIONS

With Financial implications

Continuing to support to the SMTYP

Research programme activities in 2026-2029 to further improve the biological information as follows

Historical Data Mining

Data from the Northwest Atlantic is entirely absent from the minor tuna species database.

Other general recomendations

Capacity Building

Continue training CPCs in stock assessment fundamentals to enhance participation and support science-based management of data-limited small tuna stocks.

Data Improvement

Address underreporting through dedicated discussions, long-term data collection strategies, and data-mining initiatives to strengthen the accuracy of ICCAT's small tuna statistics.