



# REPORT OF THE 2023 STANDING COMMITTEE OF RESEARCH AND STATISTICS (SCRS) TO THE ICCAT PLENARY





## General Activities:

- SCRS Accomplishments and Challenges
- Secretariat activities in research and statistics
- Summary of Intersessional SCRS meetings
- Overview Research Programs.
- Interpretation at SCRS meetings



## Specific Activities:

- Executive Summaries (Details provided in Panel)
- Management Strategy Evaluation (MSE)
- Recommendations to Commission



## SCRS CHALLENGES FOR 2023:



- **Continuously increasing workloads for SCRS members and the Secretariat**
- **Still catching up on meetings, workshops and research activities postponed due to the COVID-19 pandemic**
- **Ongoing reduction in the time available for presentation and review of scientific papers**
- **Continued or expanded work on the development of Candidate Management Procedures through MSE and Exceptional Circumstances Protocols for BFT, N-SWO, N-ALB, and tropical tunas (W-SKJ and YFT/BET/E-SKJ)**

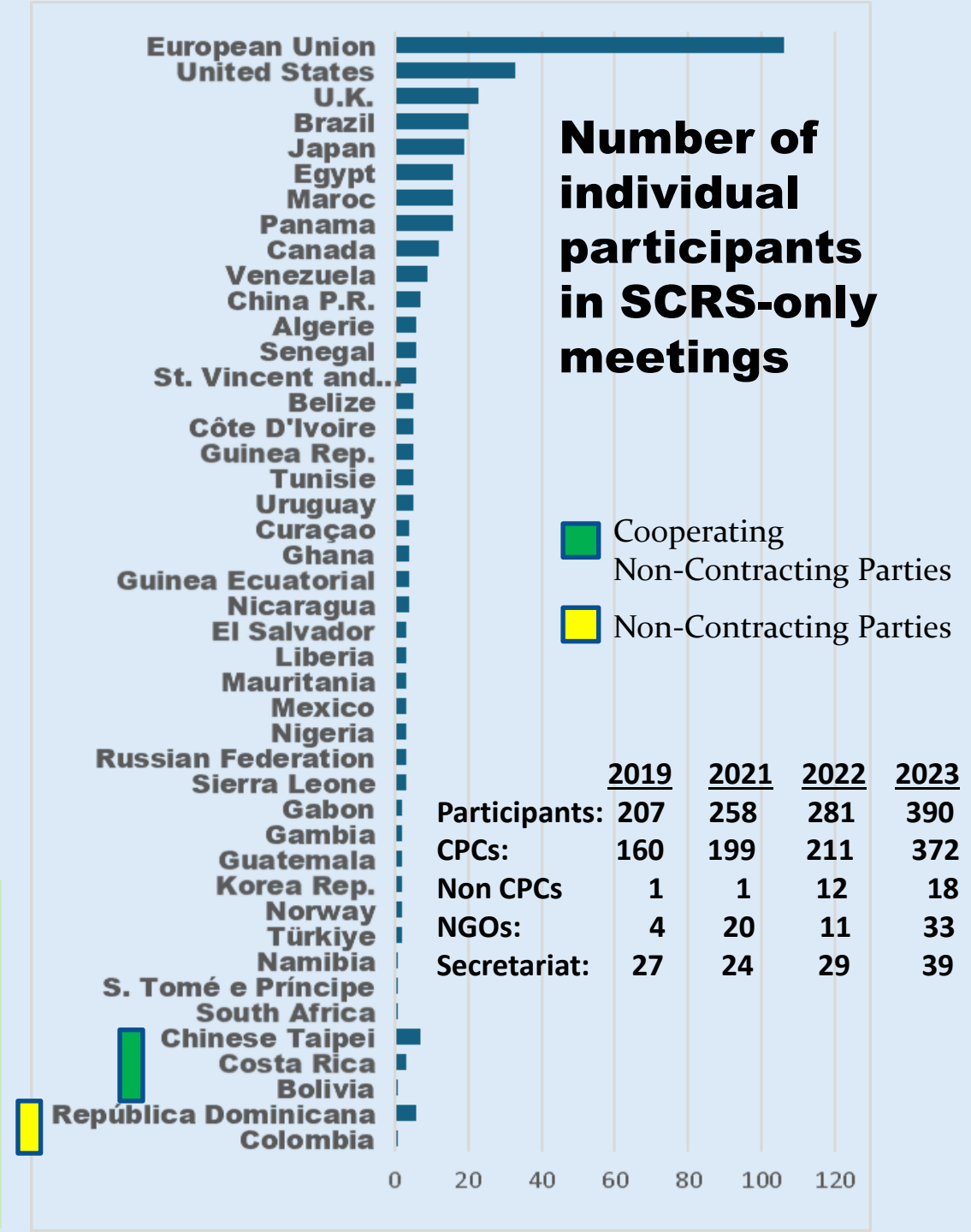
# 2023 SCRS Accomplishments

**Extremely Demanding workload for all involved with the SCRs:**

- **Five Stock Assessments:** East and West SAI, North and South BSH, and N-ALB
- **Seventeen Intersessional SCRS or Com/SCRS Meetings:** SWO, SAI, ALB, BSH, SMT, ECO, WGSAM, Panel 1, Panel 2, and Climate Change
- **Eleven workshops, including 3 Ambassador meetings on MSE**
- **Numerous ad hoc online meetings to deal with WG specific issues**
  - This includes many online MSE related meetings associated with BFT, ALB, Tropical Tunas and SWO.

## In 2023 SCRS Intersessional/Species Working Group/Plenary Meetings:

- 390 participants from 44 CPCs
- 179 SCRS Papers submitted through Sept. 2023
- 109 Presentations
- 38 responses to the Commission



# SECRETARIAT ACTIVITIES IN SUPPORT OF THE SCRS

The ICCAT Secretariat provides critical technical and logistical support to the SCRS in all the aspects of the Standing Committee's work. This includes:

- coordination of meetings and multiple research programs,
- conducting scientific analyses or collaborating with CPC scientists to carry out scientific work (22 SCRS documents and 7 SCRS presentations include Secretariat staff as authors),
- database management of fishery data reported to ICCAT,
- coordination of the publication of SCRS meeting reports and documents,
- Contracting (24+ contracts in 2023) – working with the SCRS to develop Terms of Reference/Calls for Tender, review and selection of proposals, oversight of contracts,
- capacity building initiatives and training,
- administration of funds to support travel for participation in meetings

Without this support much of the work accomplished by the SCRS would be impossible.

In addition to the normal activities on statistics, publications, data, funds management and other duties, the Secretariat has been involved in many other things, including:

- a lot of work in the preparation of and attendance to 34 official ICCAT meetings (online and Hybrid) - 13 SCRS, 16 COM and 5 COM/SCRS official meetings, as well as 11 workshops and 2 MSE Ambassador Webinars.
- This includes participation in five stock assessments, three of which had associated data prep meetings.
- Highlighted the effort being made on the development of the ICCAT Integrated Online Management System (IOMS)
- Updated and expanded Chapter 2 of the ICCAT Manual, including translation and publication
- International cooperation. : UN Marine Biodiversity of Areas Beyond National Jurisdiction (**BBNJ**) process, FAO Committee of Fisheries (**COFI**), FAO Coordinating Working Group on Fishery Statistics (**CWP**), General Fisheries Commission for the Mediterranean (**GFCM**), International Council for the Exploration of the Sea (**ICES**), Western Central Atlantic Fishery Commission (**WECAFC**), Mediterranean Advisory Council (**MEDAC**), Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**), EU Regional Coordination Group Large Pelagics (**RCG LP**) and Regional Fishery Body Secretariats' Network (**RSN**)

# SCRS SCORECARD ON TASK 1/2 DATA AVAILABILITY FOR ALL THE MAJOR ICCAT SPECIES BY STOCK/REGION

Table 6 in the  
2023 Secretariat Report on Research and Statistics

SCORECARD on Task 1/2 availability for the main ICCAT fisheries (terminal year: 2022)											
FisheryID	Spc. Group	Species	Species/stock	SCORES (by time series)			N. flag fisheries ranked			Change (%) against 1992-21 (30 years)	
				30 years (1993-22)	20 years (2003-22)	10 years (2013-22)	30 years (1993-22)	20 years (2003-22)	10 years (2013-22)		
1	Temperate tunas	ALB	ALB-N stock	7.23	8.26	7.85	12	12	10	0%	
2			ALB-S stock	6.01	6.20	6.61	10	10	8	0%	
3			ALB-M stock	2.62	4.47	5.89	12	9	7	4%	
4			BFT	BFT-E stock (ATE region)	6.14	7.37	8.61	11	9	10	4%
5				BFT-E stock (MED region)	3.90	5.02	6.07	26	20	16	2%
6				BFT-W stock	8.67	9.23	9.40	9	7	6	0%
7	Tropical tunas	BET	BET-A stock (AT + MD)	6.54	7.34	7.45	30	28	29	-1%	
8			YFT	YFT-E region	6.61	7.65	7.52	23	18	16	-1%
9				YFT-W region	4.85	5.27	5.40	25	24	22	1%
10			SKJ	SKJ-E stock	7.01	7.60	7.41	18	16	15	0%
11				SKJ-W stock	4.44	4.00	3.87	5	5	5	11%
12	SWO & billfish	SWO	SWO-N stock	8.08	8.61	8.36	11	11	11	0%	
13			SWO-S stock	7.15	7.21	7.13	9	9	7	-1%	
14			SWO-M stock	4.92	5.68	7.60	10	10	7	1%	
15		BUM	BUM-A stock (AT + MD)	3.91	3.81	3.40	33	32	34	0%	
16			WHM	WHM-A stock (AT + MD)	5.31	5.31	4.40	17	17	14	-1%
17		SAI	SAI-E stock	3.08	3.51	3.01	15	13	12	1%	
18			SAI-W stock	3.86	4.09	4.44	18	15	11	-2%	
19		SPF	SPF-E stock	4.33	4.88	3.83	4	3	2	3%	
20			SPF-W stock	3.29	3.71	2.33	6	6	5	2%	
21		Major shark species	BSH	BSH-N region	4.56	5.72	6.55	6	5	4	5%
22	BSH-S region			5.57	7.07	6.93	6	6	6	4%	
23	POR		POR-ANE stock	0.49	0.89	0.92	9	13	8	3%	
24			POR-ANW stock	3.34	2.94	2.05	5	7	7	5%	
25			POR-ASE stock	0.70	1.13	1.67	4	3	2	0%	
26	SMA		POR-ASW stock	0.48	0.85	0.50	6	4	1	9%	
27			SMA-N region	4.44	5.72	6.32	6	7	7	3%	
28			SMA-S region	5.45	7.38	7.05	7	7	6	9%	
29	Small tuna species	BLF	ATL	3.02	3.67	3.78	15	10	9	-4%	
30			BLT	ATL	1.64	1.94	1.74	7	7	8	8%
31		BON	MED	0.74	1.24	2.52	18	16	13	5%	
32			ATL	2.30	2.68	2.72	30	24	17	6%	
33			MED	0.70	1.12	1.14	9	9	8	-15%	
34		BOP	ATL	1.03	1.33	0.42	4	4	3	3%	
35			MED	0.00	0.00	0.00	5	3	2	0%	
36		BRS	ATL	0.92	1.83	0.67	3	2	2	0%	
37		CER	ATL	0.00	0.67	0.80	1	5	4	0%	
38		COM	MED	0.00	0.00	0.00	2	2	2	0%	
39		FRI	ATL	4.86	5.45	5.44	25	22	19	4%	
40		KGM	ATL	1.01	1.46	1.47	7	6	5	4%	
41		LTA	ATL	4.01	4.91	4.70	30	22	19	1%	
42		MAW	MED	0.81	1.36	1.47	17	14	10	5%	
43			ATL	1.17	1.26	0.86	16	11	9	-8%	
44			SSM	ATL	0.00	0.00	0.00	4	3	2	0%
45	WAH	ATL	0.98	1.37	1.41	35	24	16	3%		

## REPORT OF INTERSESSIONAL SCRS MEETINGS

*Brief summary of Intersessional meetings held in 2023. Details of each meeting are available in the meeting reports (links can be found in Section 8 of the SCRS Report).*

### **Atlantic Swordfish:**

**First Intersessional Meeting of the North Atlantic Swordfish MSE Technical Sub-group (online, 25-26 January 2023)**

The Sub-group reviewed recent updates to the operating model (**OM**) grid and discussed progress on candidate management procedure (**CMP**) development, decision items for consideration at Panel 4, MSE communications plans, and the MSE workplan for the remainder of 2023. The Sub-group agreed to the latest revisions to the OM grid and the core set of reference OMs, expressing flexibility on modifications and additions to the robustness OMs. An initial set of model based CMPs were presented and the Group discussed a process for development and culling of CMPs. The Sub-group agreed on key decisions needed from Panel 4, in particular: additions to the robustness OM set; the approach to providing advice on minimum size limit effectiveness; performance metric criteria; CMP specifications; and approaches for communicating results to managers and stakeholders.





## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Atlantic Swordfish (continued):**

Intersessional Meeting of the Swordfish Species Group [including MSE ] (hybrid, 22–26 May 2023, St. Andrews, New Brunswick, Canada)

The Swordfish Species Group agreed on the feedback needed from Panel 4 on priority graphical outputs and communications materials to support future SCRS-PA4 interactions. A strategy and timeline for evaluating robustness scenarios was developed, with work on these tests continuing into 2024. It also reviewed the swordfish biology program, catch data, preliminary work on discarding analysis in the Mediterranean, ageing, maturity and reproduction as well as new information and analyses that support stock differentiation. Following from the review of these topics, the Group noted the importance of using tagging and genetics work in conjunction to support stock boundary identification; the need to refine ageing procedures and validation for epigenetic analysis; as well as the need for additional biological sampling. It encouraged ICCAT CPCs and Swordfish Year Program partner groups to continue to add biological samples to the program from some major fishing fleets and areas.

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Atlantic Swordfish:**

Second Intersessional Meeting of the North Atlantic Swordfish MSE Technical Sub-group (online, 4-5 September 2023)

The objectives of the meeting were to review recent work on the SWO MSE framework and prepare materials for consideration by the SCRS and Panel 4. This included: CMP results, robustness testing including climate-change impacts, methods for updating the northern swordfish combined index of abundance, plans for communication of the results, the general MSE structure, and an overview of requests that Panel 4 made of the SCRS. The Sub-group reviewed CMP results using an interactive application (**Shiny App**) that illustrated CMP performance for several performance metrics. Finally, the Sub-Group developed an MSE workplan for the remainder of 2023 and discussed timelines for the development of additional robustness tests in 2024. An exceptional circumstances protocol will also be developed in 2024, requiring additional interactions with Panel 4. The meeting report was reviewed and adopted during the meeting.

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **North Atlantic Albacore:**

North Atlantic Albacore Data Preparatory Meeting (hybrid, 20-23 March 2023, San Sebastian/Pasaia, Spain)

The Albacore Species Group reviewed the new data on fisheries, biology and tagging. Natural mortality assumptions were revised and the Group agreed on new hypotheses of M-at-age be considered for the assessment that covers the uncertainty on estimates. Catch, size and relative abundance indices were updated to 2021 and the Group discussed and made several decisions on which datasets to include in the new SS3 model. The fleet structure for the SS3 model was also discussed and slightly modified. The preliminary SS3 model was also reviewed, and different modelling options were discussed, although several options were left open to the modelling team to evaluate in preparation for the assessment meeting. The Group considered that, according to the available new information (on CPUEs and biology) presented in the meeting, there was no evidence of exceptional circumstances, although additional indicators needed to be reviewed after results from the assessment.

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **North Atlantic Albacore (continued):**

#### North Atlantic Albacore Stock Assessment Meeting (hybrid, 26-29 June)

The meeting focused on the Albacore Species Group's main objectives for 2023: implementing the adopted management procedure (**MP**) to provide TAC advice for 2024-2026, including the exceptional circumstances evaluation; conducting an N-ALB stock assessment; starting a new N-ALB MSE; and advancing research for all ALB stocks as described in the Albacore Year Program. The Group evaluated a new N-ALB Stock Synthesis (SS3) assessment model, with the objectives of an exceptional circumstances evaluation in the application of the MP, and as a basis for developing operating models for a new N-ALB MSE. SS3 was not intended for use in providing TAC advice (to be provided by the MP). A surplus production model was also considered during assessment. The results of both were generally consistent, and the Group agreed to use SS3 to characterize current stock status and a basis for developing MSE Operating Models. The Group also evaluated other indicators of the Exceptional Circumstances Protocol and found no concerns in applying the TAC dictated by the MP for the next management period (2024-2026).

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Blue Shark:**

#### Blue Shark Data Preparatory Meeting (hybrid, 17-21 April 2023, Olhão, Portugal)

The main meeting objective was to review all available data (catch, effort, size and tagging) and to determine the inputs for the 2023 North and South Atlantic BSH stock assessments. The Group reviewed several documents on BSH biology, including updates on stock structure inferred from tagging and genetics information, life history, movements, and overlap with longline fishing gear. Indices of abundance resulting from CPUE analyses for both stocks were presented. The Group discussed strengths and weaknesses of these indices, then identified those for potential inclusion in the stock assessment. The Group provided guidance to the modelers carrying out the intersessional assessment work (Bayesian surplus production models and Stock Synthesis), including proposing a cluster analysis approach for grouping abundance indices with similar trends, to evaluate alternative abundance trend hypotheses. The Group also agreed to produce separate Executive Summaries for the three main Shark species (BSH, SMA, POR).

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Blue Shark (continued):**

#### **Blue Shark Stock Assessment Meeting (hybrid, 17-21 June)**

In addition to its primary focus on the assessment of both the North Atlantic and South Atlantic stocks, the Group also reviewed the results of the Shark Research and Data Collection Program (SRDCP) workshop and advanced work on recommendations and responses to the Commission. With respect to the available assessment data, some CPCs had updated their data after the deadline established at the Data Preparatory Meeting, but the difference between the updated Task I (including those late reports) and the data used intersessionally for initial assessment modeling was less than 0.5%. Therefore, catch data used for modeling were not updated to include these revisions. Both stocks were assessed using JABBA and SS3 platforms. Reference cases were developed for both JABBA and SS3 models for both the North and South Atlantic stocks and the joint distributions of model results from both models were used to develop management advice for each stock.

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Sailfish:**

#### **Sailfish Data Preparatory and Stock Assessment Meeting (online, 5-10 June)**

Biological, catch, size, and indices of abundance were reviewed for inclusion in the assessment models. Although new genetic information suggests a single panmictic stock in the Atlantic, the Group decided to conduct the assessment under the existing working hypothesis of two stock units for SAI, East and West, while recommending priority research to address stock structure. A Bayesian surplus production model (JABBA) and a catch integrated statistical model (Stock synthesis) were used to evaluate the stock status and provide projections for the formulation of management advice. E-SAI assessment results indicated the stock is not overfished nor subject to overfishing and projections indicated that current catches will maintain the stock in healthy status. For W-SAI, combined assessment results indicate that the stock is overfished but without current overfishing. The Group indicated caution with the interpretation of results due to the lack of some indices of abundance from small-scale fisheries (E-SAI), and the uncertainty in catches for the last year of data (2021, W-SAI). Close monitoring of these stocks in upcoming years was recommended.

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Tropical Tunas:**

#### Intersessional Meeting of the Tropical Tunas Species Group (hybrid, 27 February – 3 March 2023)

The meeting's objectives included: a review of the fisheries statistics, catch-effort, size, FAD deployments and tagging data; a review of updated relative indices of abundance for YFT and BET stocks; a review of updated information on the biology of the tropical tuna stocks; and the establishment of a Tropical Tunas Research and Data Collection Programme (TTRDCP) with the identification of research priorities. In addition, the Group considered the technical review of the Western Skipjack MSE and provided proposed performance statistics to be considered by Panel I. Finally, the Group discussed the ToRs and work plan for the MSE training workshops to be conducted in 2023 and the Responses to the Commission.

Interpretation in all three ICCAT official languages was provided, as funded by the Commission, with interpretation also during the September Species Group meeting.



## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Small Tunas:**

#### **Intersessional Meeting of the Small Tunas Species Group (hybrid, 27 February – 3 March 2023)**

The ICCAT Secretariat presented fisheries statistics and tagging data from 1992-2021. All 13 small tuna species can now be classified into five major regions. The Group also reviewed new available biological information. Several studies estimating growth and length-weight relationship for other small tunas were presented. The Group reviewed reports of data-limited assessments for 3 Brazilian stocks and recognized the importance of building capacity for such approaches. The Group reviewed the Small Tunas Year Program (SMTYP)'s achievements and planned 2023 activities, identifying the main size sampling gaps. The Group discussed problems shipping scientific samples; a proposed solution to overcome prohibitions on shipping samples in ethanol was to soak them for at least 24 hours before draining them just prior to shipping. The Group also discussed the need to collect and store otoliths when collecting tissues, noting that they can serve multiple purposes. Brazil's Federal University of the Semi-Arid Region team assumed responsibility for processing hard structures (otoliths and spines). Finally, the Group developed its recommendations.

Interpretation in all three ICCAT official languages was provided, as funded by the Commission, with interpretation also during the September Species Group meeting.

## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Sub-Committee on Ecosystems and Bycatch:**

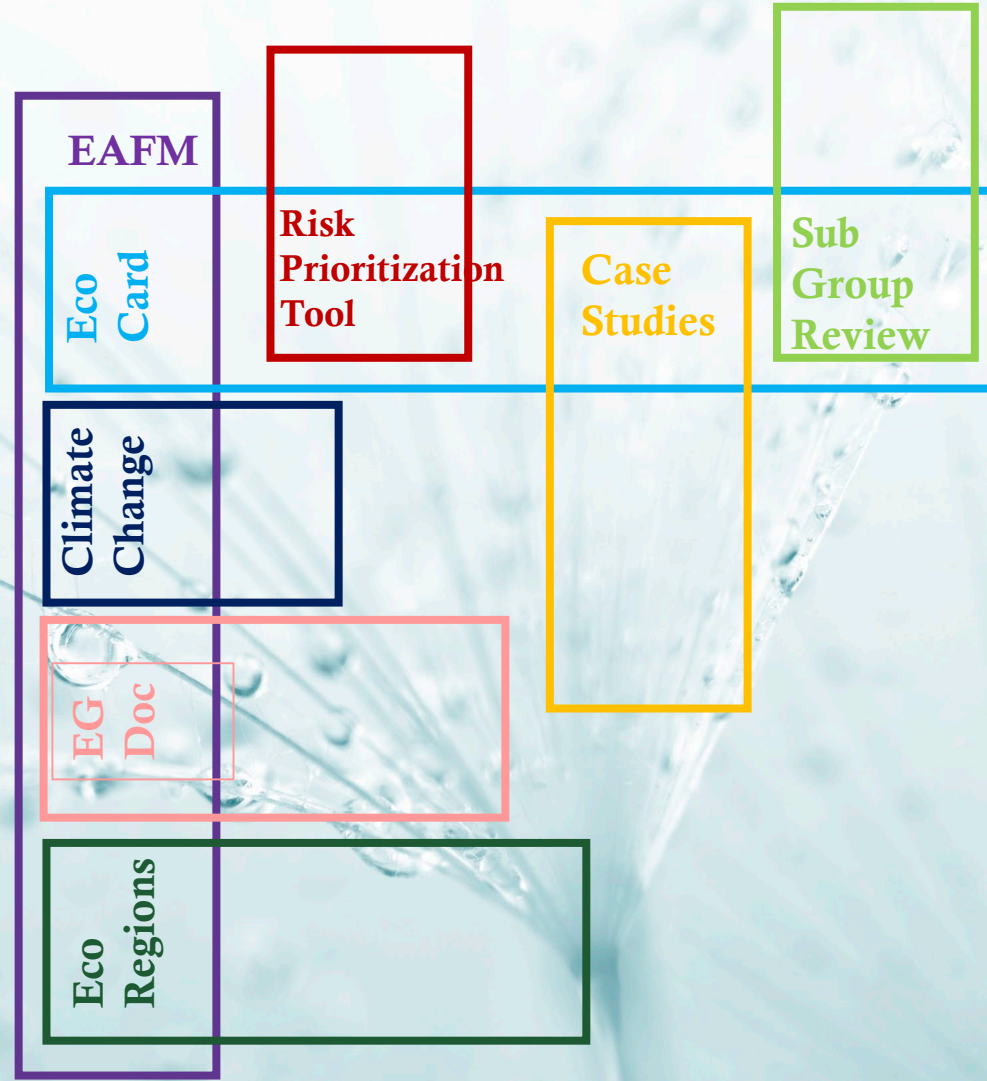
#### [Meeting of the Sub-Committee on Ecosystems and Bycatch \(hybrid, 8-12 May 2023\)](#)

Regarding ecosystems, the Sub-Committee reviewed ToRs for its case studies and several EU funded projects that support Ecosystem Report Card development. Among other things, updates were provided on a risk prioritization tool. The Sub-Committee's work to support decision making was advanced by identifying 2 responses to the Commission where ecosystem considerations can be included and how such considerations can be put in executive summaries.

Regarding bycatch, the Sub-Committee reviewed the collaborative assessment's final conclusions of ICCAT fisheries' impact on Atlantic Ocean sea turtles and the process initiated for the Mediterranean Sea. A proposal to review Rec. 11-09's seabird measures was reviewed and included in the work plan. The new ST-12 form was discussed; it will not be available when Rec. 22-12 enters into force. A response was given to Rec. 22-12's request for the latitudinal limit of sea turtles. The Sub-Committee requested financial support to continue the collaborative work on Mediterranean Sea turtles. The Sub-Committee agreed to continue working in the Technical Subgroup on gear technical changes and to continue reviewing and refining the by-catch species list.

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SC-ECO  
ECOSYSTEMS  
OVERVIEW



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## SC-ECO ECOSYSTEM HIGHLIGHTS

- Case studies have clearly defined how they will support the EAFM objectives of the SC-ECO
  - A new tool will identify fish species potentially impacted by ICCAT fisheries
  - A new tool for assessing multi species impacts of fishing is now available
  - Ecoregions have been defined and their functionality is being evaluated
  - Establishing partnerships for modeling climate change impacts on Atlantic tuna and fisheries (SEAPODYM models)
  - Ecotest project to provide simulation tested indicators for EcoCard
  - Providing *Climate Change and Ecosystem Considerations* into SCRS report and Executive summaries
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## SC-ECO BYCATCH HIGHLIGHTS

- Reviewed progress on collaborative work on sea turtles and presentation of the next steps
  - Advanced the secondary objectives of the collaborative work on sea turtles (Mediterranean sea)
  - Reviewed the draft ST12 form
  - Effect of the mitigation measures: intra and inter taxa
  - Update about seabirds and their interaction with fisheries
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## SC-ECO: Recommendations with Financial Implications

- Recognizing that environmental variability affects stock dynamics and stock status and that it should be taken into consideration when providing scientific advice, the Sub-Committee requests support to conduct a trial of a risk equivalent management approach for a target species in order to demonstrate how to implement climate conditioned advice in an ICCAT assessment context A total of €20,000 was requested
  - The Sub-Committee recommends holding a workshop to continue the collaborative work that assesses the impact of ICCAT fisheries on sea turtles in the Mediterranean and request funds to support the attendance of invited experts and the Secretariat. A total of €25,000 was requested.
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## REPORT OF INTERSESSIONAL SCRS MEETINGS

### **Working Group on Stock Assessment Methods:**

#### Meeting of the Working Group on Stock Assessment Methods (hybrid, 15 -18 May 2023)

The agenda for the meeting included general topics on management strategy evaluations (MSE), stock assessment good practices, bycatch estimation and Catch per Unit Effort (CPUE) standardization and diagnostics. The relevant Species Group Rapporteurs presented to the Group their ICCAT MSE efforts and a brief summary of progress and challenges recently faced. The most recent developments of the Bycatch Estimator were discussed, and the Group acknowledged that this development is on schedule and that there are plans for a capacity building workshop on the use of the software. The Group also established a list of minimum requirements that each CPUE paper should include so as to improve the ability of the Species Groups to make informed decisions on whether the index was suitable for inclusion in the stock assessment. It was also decided to include the stock assessment modeling platform “stochastic surplus production model in continuous time (SPiCT)” in the ICCAT software catalogue.



## REPORT OF THE SUB-COMMITTEE ON STATISTICS

- The Secretariat provided an overview of the 2023 detailed Secretariat Report on Research and Statistics. Noting that there was an increase in the number of ICCAT CPCs submitting information in old reporting forms, the Subcommittee reminds CPCs that only the latest version of the electronic forms is valid to submit new and historical data as they incorporate the latest changes approved by the SCRS.
- During the week of the Species Group meetings, several ICCAT CPCs reported new or revised data for 2022 and prior years. This late reporting considerably hampered the ability of the Secretariat and the SCRS to conduct their work.
- The most common deficiencies in the reporting of Task 1 and 2 data continue to be incompleteness of the header and detailed sections of the electronic forms, empty sub-forms (e.g., ST01B for small scale vessels; ST02B for “0” catches), use of non-ICCAT codes, and the use of old form versions. The Subcommittee reiterated the need for the ICCAT CPCs to pay special attention to these four deficiency types in future submission.





## REPORT OF THE SUB-COMMITTEE ON STATISTICS

- The T1NC dashboard is now fully operational and has been published on the ICCAT website. The Subcommittee recommended that the Secretariat continue the development and maintenance of T1NC dashboards as an important means to properly disseminate T1NC information.
- The number of flag CPCs submitting observer data using the ST09 has shown an increase from 24 to 29 in 2023.
- The Subcommittee reviewed five SCRS documents, including the Report of the 2023 ICCAT Regional Workshop in West Africa for the Improvement of Statistical Data Collection and Reporting on Small-scale (Artisanal) Fisheries. Subcommittee stated the importance these workshops and recommended their expansion to ICCAT CPC regions other than Africa.
- The Committee informs the Commission that the work carried out regarding the Minimum Standards for Electronic Monitoring Systems onboard Longliners described in document SCRS/2022/165 and onboard purse seiners targeting tropical tunas described in document SCRS/2023/151, has been finalized.

*Details of the Secretariat activities are contained in Appendix 11 of the SCRS report*

- Upgrade all the ICCAT-DB system from MS-SQL server 2016 to MS-SQL server 2022
- Replace the stand-alone MS-ACCESS Task 2 databases on the web by SQLite equivalent ones
- Improve the “client applications” that manage the databases of the ICCAT-DB system
- Continue the development of the statistical/tagging dashboards (dynamic querying)
- Continue the tagging database development for both conventional and electronic tagging
- Continue the Biological Sampling database development (includes data recovery/integration)
- Continue the standardization of the electronic forms (TG: tagging forms, CP: compliance forms)
- Extend the automatic data integration tools for the standardized electronic forms
- Continue the development of the GIS project (create a PostGIS server and geo-reference for all the ICCAT data available in ICCAT-DB)
- The adaptation/migration of all the databases of the ICCAT-DB system to the new ICCAT IOMS system



- The Subcommittee recommends that the reporting of Task 2 catch-at-size (Form ST05-T2CS) for YFT, BET, SKJ, SWO, BFT, and ALB be optional instead of mandatory, however CPCs are still required to report Task 2 Sizes Samples (Form ST04-T2SZ). As an alternative to the mandatory reporting of CAS, species groups can request that CPCs submit CAS on a case by case basis when such estimates are needed to conduct specific analyses. The updates of the CAS must be requested at least 6 months in advance of the deadline. Those Working Groups which anticipate the need for catch-at-size estimates in the next year, or which have a recurring need for such estimates, should include the specific catch-at-size data requirements in their workplan
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- The observed CPCs late reporting (or close to the deadline) of Fishery statistics and biological data, combined with the overloaded calendars of recent years and the advancement of the SCRS annual meeting by one week, does not allow the Secretariat to have sufficient time to validate, process, store and prepare it in time for the SCRS annual meeting. In consequence, the Subcommittee recommends that the deadline for submission of all statistical data be changed to **15 July** each year, allowing the Secretariat to validate and prepare in time the data for the SCRS annual meeting. The requested corrections must be submitted before **30 July** (15 days after).



# 2023 Overview of the Status of ICCAT Stocks

## 2023 Summary of the Status of ICCAT Stocks

- 24 assessed stocks
- Median Stock Status estimates in the last year of data considered in the most recent assessment of each stock

No Overfishing ( $F > F_{MSY}$ ) and Not Overfished ( $B > B_{MSY}$ )	Overfishing ( $F > F_{MSY}$ ) but Not Overfished ( $B > B_{MSY}$ )	No Overfishing ( $F < F_{MSY}$ ) but Overfished ( $B < B_{MSY}$ )	Overfishing ( $F > F_{MSY}$ ) and Overfished ( $B < B_{MSY}$ )	Overfishing and/or Overfished Status not fully determined
10	1	6	4	3

Note: additional information for assessed stocks to be presented during the Panel meetings.



# 2023 Overview of the Status of ICCAT Stocks

No Overfishing and not Overfished

Stock	Overfishing	Overfished	Data year	Assessment Year	Projections	TAC Advice
SKJ_E	No	No	2020	2022	Yes	Yes
SKJ_W	No	No	2020	2022	Yes	Yes
YFT	No	No	2018	2019	Yes	Yes
ALB_N	No	No	2021	2023	No*	From MP*
ALB_S	No	No	2018	2020	Yes	Yes
SAI_E	No	No	2021	2023	Yes	Yes
SWO_N	No	No	2020	2022	Yes	Yes
BSH_N	No	No	2021	2023	Yes	Yes
BFT_E	No	**	2020	2022	No	No
BFT_W	No	Unknown**	2020	2021	Short Term	Yes

Stocks Assessed in 2023

• TAC derived from current MP, projections not used to develop management advice

\*\* BFT are included in this table despite the absence of an overfished status estimate because prior to the MP BFT stock were managed relative to F0.1



# 2023 Overview of the Status of ICCAT Stocks

**Overfishing  
but not  
Overfished**

Stock	Overfishing	Overfished	Data Year	Assessment Year	Projections	TAC Advice
BSH_S	Yes	No	2021	2023	Yes	Yes

**Stocks Assessed in 2023**



# 2023 Overview of the Status of ICCAT Stocks

**No  
Overfishing  
but  
Overfished**

	Overfishing	Overfished	Data Year	Assessment Year	Projections	TAC Advice
BET	No	Yes	2019	2021	Yes	Yes
WHM	No	Yes	2017	2019	Yes	Yes
SAI_W	No	Yes	2021	2023	Yes	Yes
SWO_Med	No	Yes	2018	2020	Yes	Yes
SMA_N	Yes	Yes	2015	2017	Yes	No
POR_NE	No	Yes	2020	2022	No	No

**Stocks Assessed in 2023**



# 2023 Overview of the Status of ICCAT Stocks

**Overfishing  
and  
Overfished**

Stock	Overfishing	Overfished	Data Year	Assessment Year	Projections	TAC
ALB Med	Yes	Yes	2018	2020	Yes	Yes
BUM	Yes	Yes	2016	2018	Yes	Yes
SWO_S	Yes	Yes	2020	2022	Yes	Yes
SMA_N	Yes	Yes	2015	2017	Yes	No

**Stocks Assessed in 2023**





# 2023 Overview of the Status of ICCAT Stocks

Overfishing and/or Overfished Status not fully determined

Stock	Overfishing	Overfished	Data Year	Assessment Year	Projections	TAC Advice
SMA_S	Possibly	Possibly	2015	2017	No	No
POR_NW	Not Likely	Yes	2018	2020	No	Yes
POR_SW	Not Likely	Undetermined	2018	2020	No	No

Progress!

In 2022, 6 stocks would have appeared in this table

In 2021, 8 stocks would have appeared in this table

Stocks Assessed in 2023



## 2023 Overview of the Status of ICCAT Stocks

However, there remain a number of stocks for which data quantity and/or quality is insufficient to conduct conventional quantitative stock assessments, including

Stock	Overfishing	Overfished	Data Year	Assessment Year	Projections	TAC Advice
All SMT	Unknown	Unknown	n/a	n/a	No	No
All Other SHK	Unknown	Unknown	n/a	n/a	No	No

Other approaches have been undertaken to characterize status or vulnerability, such as an Ecological Risk Assessment for sharks, and efforts are ongoing for capacity building with respect to Data-Poor assessment methods. (see previous SCRS Reports)



# Overview of SCRS 2022 Research Programs and Outputs

## Key SCRS Research Programs (Section 10)

- Atlantic-Wide Research Programme for Bluefin Tuna (GBYP) - Largest
- Small Tunas Year Programme (SMTYP)
- Shark Research and Data Collection Programme (SRDCP)
- Enhanced Billfish Research Programme (EBRP)
- Albacore Year Programme (ALBYP)
- Swordfish Year Programme (SWOYP)
- Other Research Programs (on tropical tunas)
  - Atlantic Ocean Tropical tuna Tagging Programme (AOTTP) - Finished 2021.
- Proposed new program: Tropical Tunas Research and Data Collection Programme (TTRDCP)



## Overview of GBYP Program – Major contributor to BFT research for more than a decade.

### Program Started in October 2009.

- Phase 12 started on 24 March 2022 with an initial duration of 12 months, which was later extended until 23 July 2023. The extension allowed for the organization of some hybrid workshops that had been postponed due to the COVID-19 pandemic and the development of a pilot study on epigenetic ageing requested by the SCRS after the initial proposal for Phase 12 had been presented.
- Phase 13 started on 1 May 2023, with an initial duration of 12 months.

### General objectives:

- Improving basic data collection
- Improving understanding of key biological and ecological processes
- Improving assessment models and provision of scientific advice on stock status

### Annual budget

- Voluntary contribution of CPCs and other entities (80% European Union; 20% others)

## Key activities Oct 2022 to Sept 2023

### **1. Data mining, recovery and management:**

- Design and implementation of new information systems on data from biological and electronic tagging studies, aiming at facilitating broad joint studies that are able to improve the parameterization of the models used for stock management.
- Creation of structures to facilitate biological data sharing between different CPCs' research teams and ICCAT science programmes and for a proper data warehouse of both the biological data and the results from the analyses carried out on these samples.
- Design of the ICCAT Electronic Tags Management System (ETAGS) database, which is able to manage both the metadata on electronic tagging operations and the raw data generated within all ICCAT or CPC etagging studies, has been completed.

### **2. Aerial survey on bluefin tuna spawning aggregations:**

- Review of the GBYP aerial survey programme was carried out by external experts with a pilot survey in 2021 producing an updated aerial survey time series, using both design based and model-based approaches.

## Key activities Oct 2022 to Sept 2023

### 2. Fishery independent indices: GBYP aerial surveys and larval indices:

- Aerial surveys resumed in the western and central Mediterranean core spawning areas in 2022 and 2023. The GBYP aerial index currently used within management strategy evaluation (MSE) management has been updated until 2022. A model-based approach was undertaken that has considered a wide set of environmental variables, aiming at developing a habitat model accounting for interannual environmental variability potentially affecting the spatial-temporal distribution of the spawners.
- Directly supported the improvement of larval indices based on surveys developed by ICCAT CPCs by organizing an ad hoc workshop aiming at identifying potential sources of uncertainty or inaccuracy, agreeing on a standard survey methodology and exploring the possibilities for expanding BFT larval index surveys to other spawning areas.

### **3. Tagging:**

- **Eleven MoUs have been or will be signed shortly to deploy 75 new GBYP-owned pop-up satellite archival tags (PSAT). The data obtained both from these GBYP-owned tags and from the tags pertaining to each of the awarded teams, deployed within the surveys covered by the signed MoUs, will be incorporated into the ICCAT ETAGS database.**
- **Development of the GBYP etagging programme has further enhanced knowledge of bluefin tuna behaviour and has helped to address several previous hypotheses on BFT stock structure and spatial patterns. The data on BFT spatial patterns from GBYP etags have contributed to the elaboration of the movement matrix used within the framework of the BFT MSE process. GBYP organized a workshop on BFT electronic tagging that was attended by more than 60 scientists from 12 CPCs. During the workshop, multiple subjects were discussed and a list of priorities for future tagging campaigns were identified.**

## **4.0 Biological studies**

Biological sampling activities, including sampling of larvae, have continued in Phase 12, aiming at providing samples to better determine the population structure and mixing and improve the accuracy of the age length key used for the stock assessments. Some examples are:

Stable isotopes studies confirm that individuals originated both in the Gulf of Mexico (GOM) and Mediterranean (MED) cross the 45°W management boundary, mixing with the other population in feeding aggregates of the Atlantic Ocean at variable annual rates, with the proportion of GOM-origin fish found to cross to the East being smaller than the proportion of MED-origin fish found to cross to the West.

Genetic analyses showed a gene flow from the Mediterranean into the Slope Sea.

A workshop on Close-Kin Mark Recapture and biological sampling coordination was organized, focusing on the analysis of relevant factors for the implementation of the approach in the eastern BFT stock, with the goal of presenting a complete feasibility study to the SCRS in 2024. The workshop was attended by more than 50 scientists from eight CPCs.



## 5. Modelling:

- Major progress was made on the MSE and sufficiently developed to provide TAC advice for 2023 on both eastern and western BFT stocks, assuming Comm adopt.
- Primarily focus on CMP development, Management Objective decisions and Communication with stakeholders (e.g., Ambassador Sessions) in 2022.
- An external MSE code review concluded that the M3 model and BFT MSE code base were correctly implemented at every level.
- An eastern Atlantic and Mediterranean bluefin tuna stock assessment with an external reviewer was undertaken in 2022 (BFT Exec Summary).
- A review concluded that the results indicate that abundance levels have improved from low values and likely to continue improving given recent patterns of fishing mortality (effort). However, the projection and ability to provide advice on levels of change in TAC is limited.

## Small Tunas Year Programme (SMTYP) (10.2)

After earlier work beginning in 2018 collecting biological samples aimed at growth, maturity and stock structure studies on LTA, BON, and WAH, in 2023 a new consortium involving 13 entities from 10 CPCs was contracted to collect biological samples in order to: i) fill specific size gaps for estimating the growth and maturity parameters for BON, LTA and WAH; ii) expand stock structure studies for frigate tuna (FRI) and bullet tuna (BLT) in the Atlantic Ocean and the Mediterranean Sea; iii) determine the growth and reproduction parameters for BON, LTA, and WAH; iv) refine the stock structure analysis for WAH, BON, and LTA and determinate the stock structure analysis for FRI and BLT; and, v) investigate genetic species differentiation between FRI and BLT.

A number of documents and presentations were provided during 2023 meeting of the Small Tunas Species Group on results of the research conducted in the previous years within SMTYP. In addition, the Group identified the priorities in terms of the species and areas to be sampled and revised the biological data to be collected under the SMTYP biological collection contract in 2023-2024. These priorities are presented in the Small Tunas Workplan for 2024, which also contains details on other relevant research activities to be developed throughout 2023-2024 including: updating the biological meta-database, estimation of length-weight relationships representative at the stocks/regional level, calibration and adopting internationally agreed maturity scales and, further investigating and applying of data limited methods to be used for the provision of management advice for these stocks.

# Shark Research and Data Collection Programme (SRDCP)

Intended to improve shark data collection and research, and reduce the uncertainty of the scientific advice on sharks provided to the Commission. Focused on shortfin mako (until 2017), porbeagle, silky shark, oceanic whitetip shark, and hammerheads in the Atlantic Ocean. 2023 Research Activities include:

- Continued work on Age and growth of shortfin mako.
- Data available from 35 of the 43 shortfin mako tagged with electronic tags revealed a 22.9% rate of post-release mortality. These results will be updated to incorporate data from the latest tag deployment in advance of the 2024 SMA stock assessment.
- Genetic analysis of porbeagle showed differentiation between North and South Atlantic, but not between East and West regions in the North Atlantic Ocean (based 96 individual collected in 2022). Next steps will include samples from the SW Atlantic.
- Movements, stock boundaries and habitat use of shortfin mako, Porbeagle, silky, oceanic whitetip, longfin mako, and hammerhead sharks in the Atlantic Ocean are being investigated through electronic tagging.

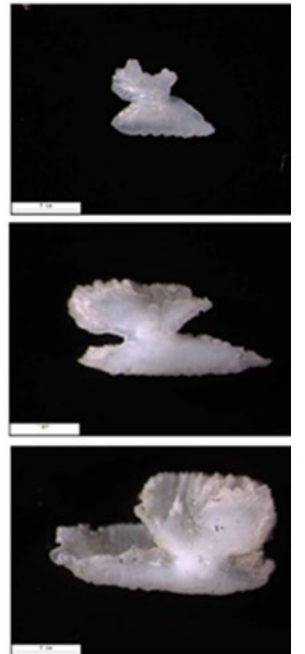
In 2023 a workshop on the Shark Research and Data Collection Programme (SRDCP) was held (hybrid, 13 to 15 July, Madrid, Spain). The aim of the workshop was to review the 10 years of the SRDCP, present and discuss the results obtained and the ongoing activities, and to discuss plans for next steps.

## Enhanced Billfish Research Programme (EBRP)

**Objectives:** To obtain detailed catch and effort statistics for billfishes, to implement a tagging program, and to undertake studies on age and growth. Program further expanded in 2021 to evaluate adult habitat use, study spawning patterns, and billfish population genetics.

### 2023 Activities:

- A new contract was signed in July 2023 to resume biological sampling of BUM, WHM and SAI. By August, an additional 48 samples had been collected to reach a total of 525 samples that have now been collected from those three species.
- A joint workshop on age reading was held in Instituto Português do Mar e da Atmosfera (IPMA, Portugal) (13-18 February 2023, Olhão, Portugal). The major objectives were to enhance expertise among ICCAT scientists for these species by: i) sharing knowledge between experts; ii) standardize methodologies; and iii) review work already completed and progress plans for next steps in swordfish, billfishes and small tunas research programmes regarding ageing.

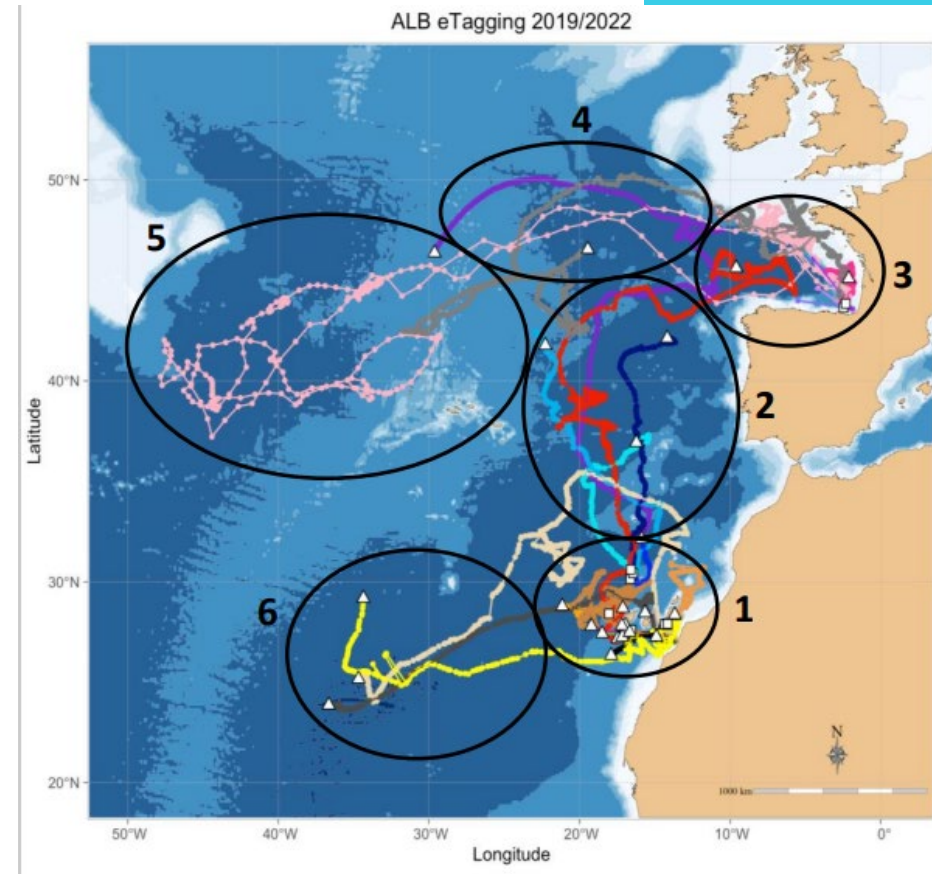


# Albacore Year Programme (ALBYP)

**Objective:** to address key uncertainties that will improve scientific advice for management of northern and southern stocks of Atlantic albacore. The research will focus on biology and ecology, movement and habitat usage, monitoring stock status and management strategy.

## 2023 Actives include

- Continued work on albacore reproduction for the north and south stocks.
- Biological sampling in the South Atlantic off Brazil, Uruguay and South Africa)
- Research on movements and habitat use of Atlantic albacore.
- Short-term contract issued for technical tasks required to follow the Albacore MSE schedule after MP adoption in 2021 and to check for exceptional circumstances on a yearly basis.
- Prep for 2023 benchmark stock assessment for North Atlantic using SS3 stock assessment model.

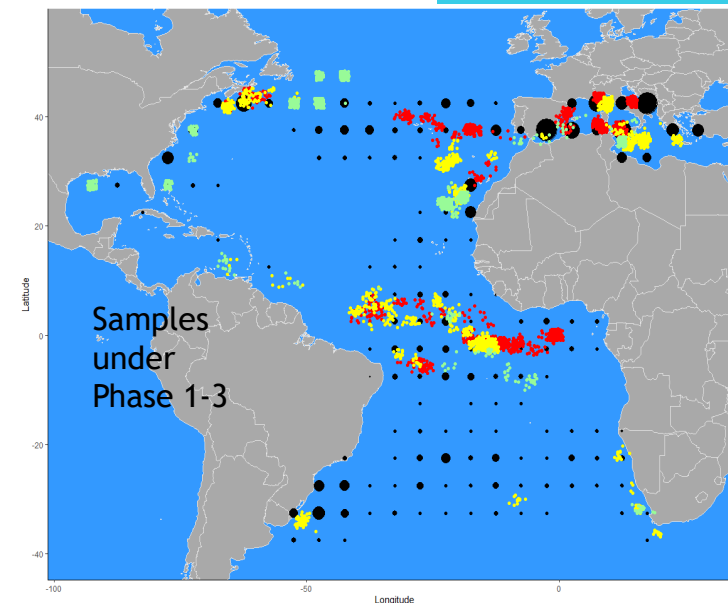


Details Appendix 11

# Swordfish Year Programme (SWOYP)

**Objective: to address key uncertainties important for improving the scientific advice for management of the stocks focusing ageing and growth, reproductive biology, genetics as well as movement and habitat utilization.**

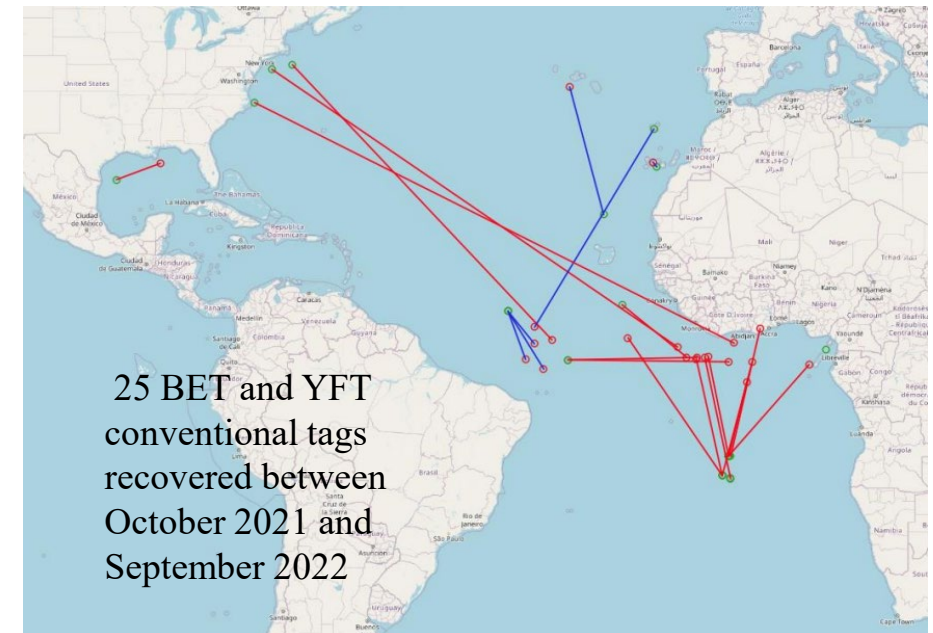
- In 2023, SWOYP project leaders shifted their focus toward processing and analysis of a backlog of samples obtained in earlier project phases. This work has led the Committee to reach significant project milestones.
- Age readers and external experts refined swordfish ageing protocols and made significant progress on an age reading calibration exercise.
- A bomb radiocarbon analysis was applied for age validation, with preliminary results indicating that overcounting for early growth rings.
- Reproduction and maturity analysis continues to progress, with 289 gonad samples being prepared for histological analysis in the current phase. Additional samples are needed from hypothesized spawning areas in the Sargasso Sea and Gulf of Guinea.



Multi-institutional Program with members from 20 institutes representing 14 ICCAT CPCs/Non-Contracting Parties on both sides of the Atlantic

## The Atlantic Ocean Tropical tuna Tagging Programme (AOTTP)

- The 5-year project officially began in June 2015 and ended in early 2021.
- **Ongoing activities associated with the AOTTP activities**
  - tag recovery and rewarding;
  - tag seeding experiments;
  - Additional tagging in Senegal and Côte d'Ivoire
  - ageing study; and
  - tagging in the north-western Atlantic
- **Special Issue of Fisheries Research Journal nearly complete with 1 paper still outstanding.**





## **Proposal for a Tropical Tuna Research and Data Collection Programme**

The SCRS proposes to pursue a coordinated, comprehensive multi-year research programme on Atlantic tropical tuna to advance knowledge of yellowfin tuna, bigeye tuna and skipjack stocks and be able to provide more accurate scientific advice to the Commission.

This proposal's main objective is to improve the current knowledge on the bio-ecology and fisheries for Atlantic tropical tunas stocks, providing important information and more accurate scientific advice to the Commission and building on research undertaken during the Atlantic Ocean Tropical Tuna Tagging Programme (AOTTP).

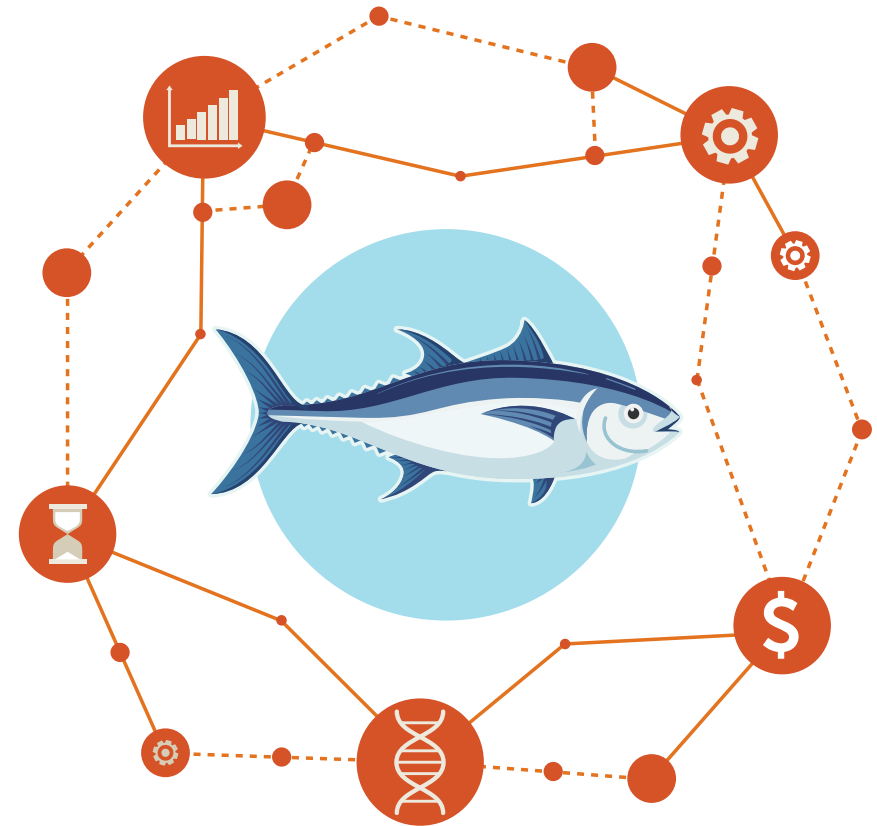
The research component of the Programme will be focused on a number of themes which will include biology, ecology and monitoring stock status, with planning developed for a 6-year period (initially 2024-2029). This plan will be reviewed annually to ensure that research items and priorities are kept up to date based on the latest stock assessments, management strategy evaluation (MSE) roadmap and any climate change work plan.

The table is provided in the SCRS Report summarizing the identified research themes, topics, and items by Species including initial prioritization.





# 2023 Management Strategy Evaluations (MSE) Update





- **MSE began in 2015 with frameworks proposed for *Northern Albacore, Tropical tunas, Bluefin tuna and northern swordfish* to management advice.**
- **Early development was slow for several reasons: inexperience, technical challenges, and limited resources and the need to continue with multiple assessments to provide advice until the MSE process was completed.**
- **In 2018 the Commission recommended a focus on one or two species without guidance on priorities.**
- **In 2019 the SCRS focused on BFT and SWO\_N, with limited work on ALB\_N, and even less on tropical tuna MSE.**
- **However, in 2020 the SCRS initiated a concerted effort to move forward with MSE on all 4 species, albeit the level of effort varied from species to species. Main activities are described in the MSE Road Map.**



**Timeline:** Adoption of a final management procedure with HCR for northern albacore in 2021, and adoption management procedures for bluefin tuna in 2022, and northern swordfish and West Atlantic Skipjack in 2023 and tropical tunas perhaps as soon as 2024, contingent on funding, prioritization, and other work of the Commission and SCRS. Significant Progress made on all MSE frameworks. Specifically:

### **Highlights for 2023: Northern Albacore**

- A new stock assessment using Stock Synthesis was conducted, which will serve as a basis for developing new operating models within a new MSE framework.
- The results of the assessment were also used in the evaluation of the existence of exceptional circumstances.
- No exceptional circumstances were identified in 2023.



## Highlights for 2023: Bluefin Tuna

- The ICCAT Bluefin Tuna Species Group did not meet intersessionally and only met during three days at the SCRS Species Groups meeting where one of the primary tasks was to provide advice on the scientific aspects of exceptional circumstances (EC) protocols.
- However, substantial work was conducted intersessionally on the MSE by the BFT MSE Technical Sub-Group, including an online meeting, additional work by the MSE contractor to inform quantitative measures for exceptional circumstances protocols, communication with the Panel 2 Chair, and collaboration through correspondence.
- Based on the outcomes of this intersessional work, the BFT Species Group approved draft EC protocols that addressed the scientific aspects, to serve as guidance for the Commission.
- This advice was endorsed by the SCRS.



## Highlights for 2023: Northern Swordfish

The SCRS worked with Panel 4 to better define management objectives, acceptable probability values for those management objectives, and time spans over which those probabilities should be calculated.

A variety of model based and empirical CMPs were developed, tuned, and then evaluated for performance. Interactive tools were developed to show trade-offs for among CMPs.

A series of Panel 4 engagements, as well as ambassador communications sessions laid the groundwork for managers and stakeholders to understand MSE uncertainties and then provide guidance to the SCRS on management priorities as well as priorities for robustness testing.

Based on guidance from Panel 4, in September of 2023, the SCRS created a shortlist of CMPs for the Panel to consider for adoption.



## Highlights for 2023: Northern Swordfish (continued)

The SCRS noted that although the core technical work had been thoroughly reviewed, a limited set of analyses would require additional effort after the closure of the 2023 SCRS Plenary. The SCRS gave approval for the SWO MSE Technical Sub-Group to complete this work intersessionally, in order to support Commission adoption of an MP in 2023. This work was expected to consist of the following items:

- 1) a data update to the North Atlantic combined index – data which became available during the SCRS plenary week. The CPUE model was previously reviewed and accepted by the SCRS;
- 2) analyses as requested from Panel 4 at the 10-11 October 2023 meeting. The SWO MSE Technical Sub-Group would address minor analysis requests, such as: testing of caps/no caps for TAC change between management cycles for CMPs; alternative management cycle lengths; alterations to figures, tables, and the interactive results website.



## Highlights for 2023: Tropical Tunas (Western Skipjack)

- In 2023, effort focused on assessing various candidate Management Procedures (cMPs), focusing on key performance metrics related to the safety, stock status, yield, and stability of the western Atlantic Skipjack tuna stock.
- Initial findings, primarily derived from implementing constant catch and empirical management procedures (MPs), were presented to Panel 1 in May 2023. Panel 1 provided valuable feedback, which the SCRS carefully incorporated into its ongoing cMPs development efforts, including the development of model-based cMPs.
- These latest results have been detailed in SCRS/2023/169, a summary of the tables and figures are included in section 19.37 of the SCRS Report.
- The model-based cMPs, particularly those founded on surplus production models, demonstrated consistent and stable trends. The model-based management procedures emerge as promising options for effectively managing the western Atlantic Skipjack tuna stock, and may be considered by the Commission in 2023, aligning with the MSE roadmap.



## Highlights for 2023: Tropical Tunas (multi-stock)

- Alternative multi-stock management objectives were proposed and discussed during the meeting of the Tropical Tuna Species Group. The multi-stock operating models (OM) were presented to the Group, with a description of how the different fishery definitions have been used to aggregate a new multi-stock fishery structure.
- The OMs are conditioned from the model ensembles of the last Stock Synthesis stock assessments (yellowfin, 2019; bigeye, 2021; and skipjack, 2022).
- Incorporating additional sources of uncertainty, such as those related to climate change, could be considered.
- A newly developed Observation Error Model (OEM) was presented, and it was considered adequate for the MSE.
- The next tasks to be completed include:
  - develop additional OMs as recommended by the Tropical Tuna Species Group,
  - to propose and discuss alternative multi-stock management procedures (MPs), and
  - To evaluate MPs using the MSE simulation tool



# 2023 MSE Road Map: Changes proposed the SCRS in 2023 are underlined>

**Complete Table (2015-2025) shown in Appendix 15 of the SCRS Report**

		<i>Northern Albacore</i>	<i>Bluefin Tuna</i>	<i>Northern Swordfish</i>	<i>Tropical Tunas (BET, YFT, Eastern SKJ)</i>	<i>Western Skipjack</i>
<b>2023*</b>	<b>Commission intersessionally</b>		<p>COMM (PA2) to develop an exceptional circumstances protocol through an iterative consultation process with the SCRS that provides, inter alia, guidance on range of appropriate management responses should exceptional circumstances be found to occur.</p>	<p>COMM (PA4) to meet intersessionally (March, June, October), with SCRS participation, to:</p> <ul style="list-style-type: none"> <li>- discuss CMPs, operational management objectives, and performance indicators</li> <li>- refine CMP(s)</li> <li>- recommend final operational management objectives and identify performance indicators</li> </ul> <p>Ambassadors' meetings to be held.</p>	<p>COMM (PA1) dialogue with SCRS on management objectives and performance indicators to be used for tropical tunas MSE.</p>	<p>COMM (PA1) to meet intersessionally (October). SCRS to participate and provide an update on the progress of SCRS work.</p>

# 2023 MSE Road Map: Changes proposed the SCRS in 2023 are underlined

		<i>Northern Albacore</i>	<i>Bluefin Tuna</i>	<i>Northern Swordfish</i>	<i>Tropical Tunas (BET, YFT, Eastern SKJ)</i>	<i>Western Skipjack</i>
2023*	SCRS development	SCRS to initiate independent peer review of MSE process				
		<p><u>New SS3 reference case developed for future conditioning of OMs.</u></p> <p><u>Reference and Robustness grid of OMs reconsidered.</u></p> <p>SCRS will finalize a grid of reference and robustness OMs based on Stock Synthesis as part of a new MSE, after reconsidering the main axes of uncertainty.</p>	<p>SCRS to provide final advice to COMM (PA2) on criteria for determining exceptional circumstances and inclusion in the exceptional circumstances protocol to be developed by Panel 2 in consultation with the SCRS.</p>	<p>SCRS to finalize MSE results, incorporating feedback from COMM through PA4.</p>	<p>SCRS to list major sources of uncertainty to be considered in the MSE for multi-stock tropical tuna MSEs.</p> <p><u>Developing operating and observational error models. Capacity building workshops.</u></p>	<p>SCRS to complete MSE, incorporating feedback from COMM through PA1.</p>
	SCRS implementation	<p>SCRS conducted assessment to ensure that the conditions considered in MP testing are still applicable to the stock.</p> <p>SCRS to evaluate existence of exceptional circumstances.</p>	<p>SCRS to evaluate existence of exceptional circumstances and advise on any necessary actions taking into account, to the extent possible, the latest draft of the exceptional circumstances protocol provided to the SCRS by 1 September 2023.</p>			

## 2023 MSE Road Map: Changes proposed the SCRS in 2023 are underlined

		<i>Northern Albacore</i>	<i>Bluefin Tuna</i>	<i>Northern Swordfish</i>	<i>Tropical Tunas (BET, YFT, Eastern SKJ)</i>	<i>Western Skipjack</i>
<b>2023*</b>	Commission at Annual Meeting	<p>COMM to continue use of the MP to set 2024-2026 TAC at the Annual Meeting, on the predetermined timescale for MP setting.</p> <p>Per <a href="#">Rec. 21-04</a>, COMM to review the MP, taking SCRS analyses into account.</p>	<p>COMM to adopt exceptional circumstances protocol as new Annex in MP (<a href="#">Rec. 22-09</a>)</p>	<p>COMM to adopt an MP, including the TAC.</p>		[...]

# Interseasonal meetings proposed for 2024

	MON LUN	TUE MAR	WED MER	THU JEU	FRI VEN	SAT SAM	SUN DIM	MON LUN	TUE MAR	WED MER	THU JEU	FRI VEN	SAT SAM	SUN DIM	MON LUN	TUE MAR	WED MER	THU JEU	FRI VEN	SAT SAM	SUN DIM	MON LUN	TUE MAR	WED MER	THU JEU	FRI VEN	SAT SAM	SUN DIM	MON LUN	TUE MAR	WED MER	THU JEU	FRI VEN	SAT SAM	SUN DIM	MON LUN	TUE MAR			
January Janvier Enero	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31									
February Février Febrero				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29								
March Mars Marzo					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
April Avril Abril	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
May Mai Mayo			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
June Jun Junio					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
July Jillet Julio	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31									
August Août Agosto			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
September Septembre Septiembre						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
October Octobre Octubre	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31									
November Novembre Noviembre				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
December Décembre Diciembre						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				

Free day in ICCAT  
Jour libre à l'ICCAT  
Día libre en ICCAT

Meeting of technical nature  
Réunion à caractère technique  
Reunión de carácter técnico

Secretariat meeting preparation/holidays  
Préparation des réunions du Secrétariat/vacances  
Preparación de las reuniones de la Secretaría/vacaciones

Workshop  
Atelier  
Taller

## **Prioritizing stock assessments**

Given the current resources of the Secretariat and existing levels of support from CPCs in terms of scientist participation, the Committee only has the capacity to carry out three stock assessment processes during a year. In its calendar above, the Committee has taken into account requests from the Commission for specific stock assessments to be carried out in 2024, as follows:

- 1) Tropical tunas: yellowfin tuna (last assessed in 2019), to be followed by bigeye tuna in 2025;
- 2) Billfish: blue marlin (last assessed in 2018) to be followed by white marlin in 2025;
- 3) Sharks: North and South Atlantic shortfin mako (last assessed in 2019); and
- 4) Mediterranean albacore tuna (last assessed in 2021).

While the Committee notes the relatively recent assessment of the Mediterranean albacore tuna, there has been considerable work to improve data on ALB-MD, including the development of new indices. It is not clear, however, how impactful these improvements will be for a new assessment.

The Committee recognizes that the Commission may take into account many factors in requesting a stock assessment, but if the Commission maintains its request for a Med-ALB stock assessment to be carried out in 2024, it should be aware that there will be just three new years of data since the last assessment, including data from only one year of the rebuilding plan (2022).

Additionally, should ALB-MD be assessed in 2024, it will require the postponement of either YFT (with the resulting postponement of the planned BET assessment from 2025 to 2026) or BUM (with the resulting postponement of the planned WHM assessment from 2025 to 2026). Although the Committee considers that both YFT and BUM should be assessed soon, of these two the higher priority is YFT to be assessed in 2024.

**Note: Species working group recommendations with financial implications will be presented in the appropriate panel.**

**Stock assessment methods (WGSAM): 2024 Budget (€75,000)**

- Workshop on the use of the Bycatch Estimator Tool in 2024 (€40,000)
- Unification of Shiny and Slick MSE tools in 2024, in order to have a common visualization tool across ICCAT  
MSE efforts (€5,000)
- Other studies (to be determined at the 2024 meeting of WGSAM (€35,000))

**Sub-committee on Ecosystems and By-catch : 2024 Budget(€45,000)**

- support to trial a risk equivalent management approach for a target species in order to demonstrate how to implement climate conditioned advice in an ICCAT assessment context. (€20,000)
- The Committee recommends holding a workshop to continue the collaborative work that assesses the impact of ICCAT fisheries on sea turtles in the Mediterranean and request funds to support the attendance of invited experts and the Secretariat. (€25,000)

**The Sub-committee on Statistics : 2024 Budget (€0)**

- The Subcommittee on Statistics had no recommendations with financial implications for 2024, nor 2025.



# Interpretation Priorities and Costs for SCRS intersessional meetings



- Last year the Commission agreed to the SCRS proposal to increase the interpretation at official SCRS meetings beyond the traditional SCRS Plenary.
- The purpose was to increase the understanding and active participation of non-English speaking members. It was a great success, and the participants of those meetings with interpretation were very appreciative.
- Based on the ranking criteria established in 2022, and taking into consideration the tentative SCRS Calendar for 2024, the SCRS adopted a table summarizing its request for interpretation support of official intersessional meetings in 2024
- The proposal will be discussed further during StacFad.

# SCRS request for interpretation at 2024 intersessional meetings

<i>Requested meetings</i>	<i>Duration (No. days)</i>	<i>Category 1</i>	<i>Category 2</i>	<i>Category 3</i>	<i>Category 4</i>	<i>Category 5</i>
<i>Tropical tunas Species Group*</i>	13	€83,850	-	-	-	-
<i>Shark Species Group**</i>	12	-	€77,400	-	-	-
<i>Subcommittee on Statistics</i>	2	-	-	€12,900	-	-
<i>Small Tunas Species Group</i>	2	-	-	-	€12,900	-
<i>Subcommittee on Ecosystems and Bycatch</i>	5	-	-	-	-	€32,250
<b>Accumulative cost</b>		<b>€83,850</b>	<b>€161,250</b>	<b>€174,150</b>	<b>€187,050</b>	<b>€219,300</b>

\* Including a data preparatory meeting, a stock assessment meeting and a 3-day Species Group meeting.

\*\* Including a data preparatory meeting, a stock assessment meeting and a 2-day Species Group meeting.

However, noting that the maximum number of meetings days with interpretation services during the September Species Group meetings is six, the total amount being requested to the Commission for this purpose is of €199,950.





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# **Proposal to develop a mechanism to track the status of Commission Requests of the SCRS, and SCRS Responses**