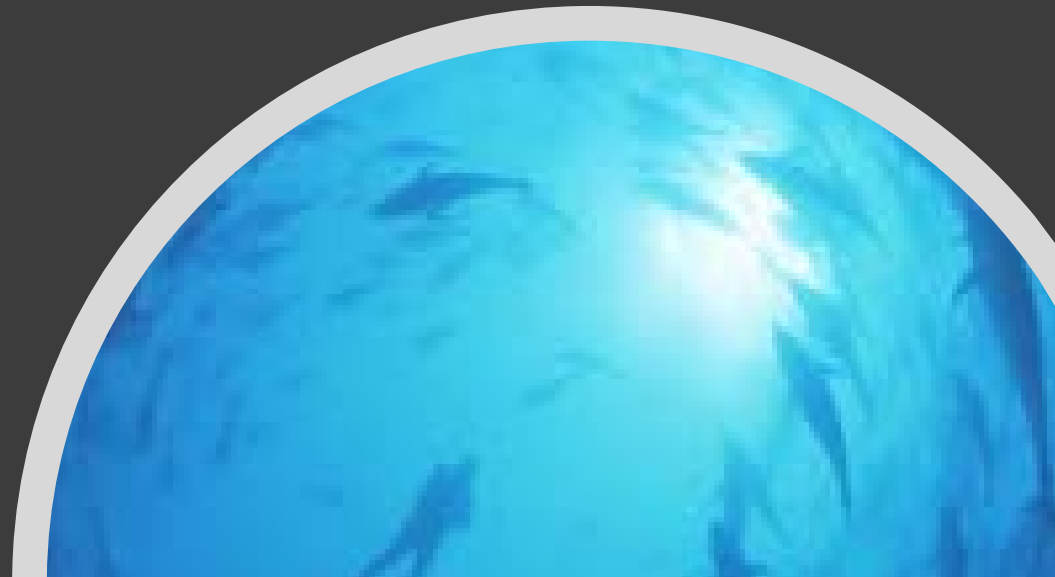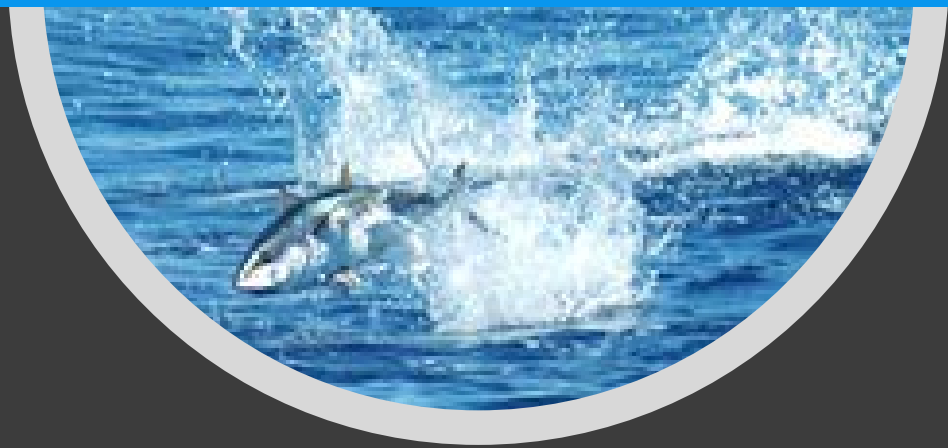ICCAT CICTA CICAA

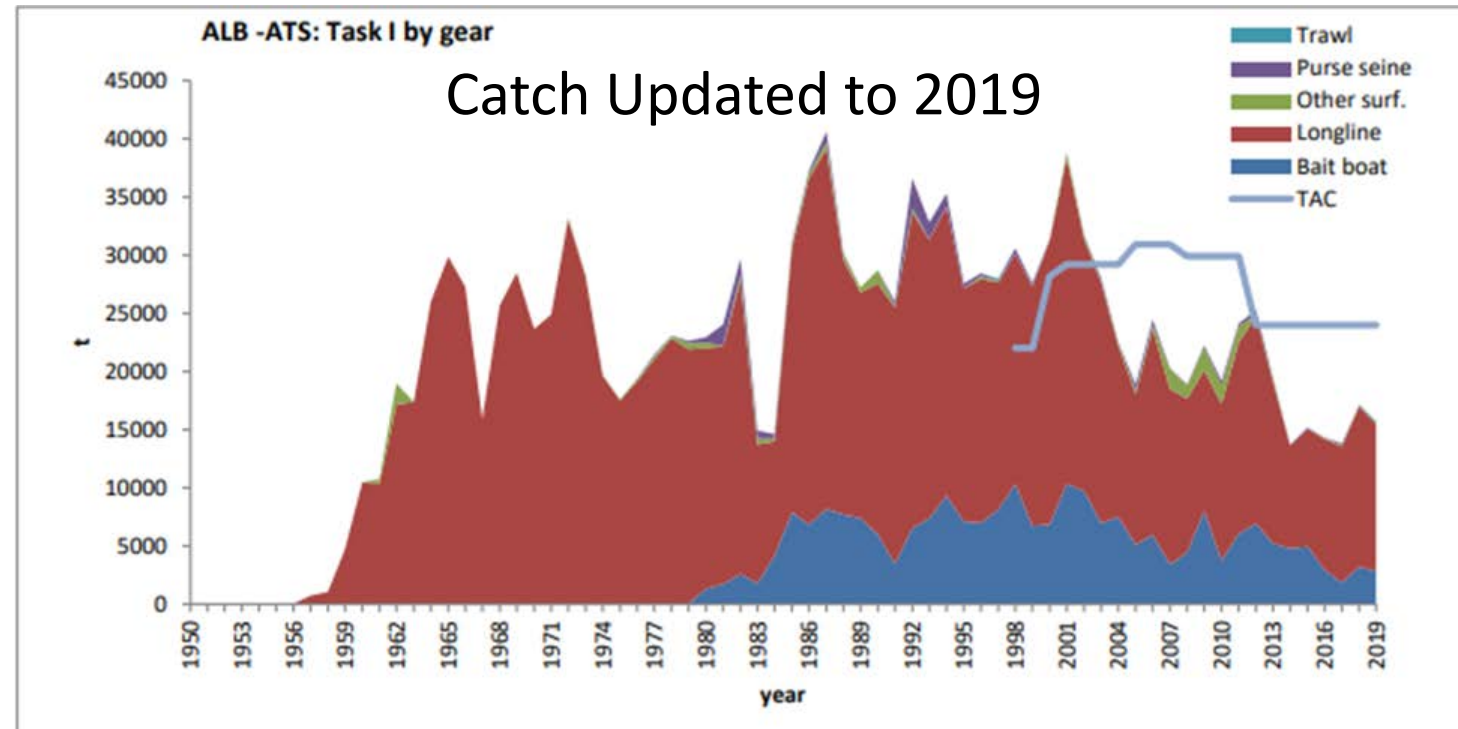# Southern Temperate Tunas

ICCAT Panel 3

South Atlantic Albacore
and
Southern Bluefin Tuna

Fishery Indicators:

- TAC 24,000t for 2017-2021

- Catches well below TAC since 2002 with the exception of 2011

- Catches in south Atlantic increased in 2018, but decreased again (15,640t) in 2019.

ALB -ATS: Task I by gear

Catch Updated to 2019

Legend:
- Trawl
- Purse seine
- Other surf.
- Longline
- Bait boat
- TAC

Fishery Indicators:
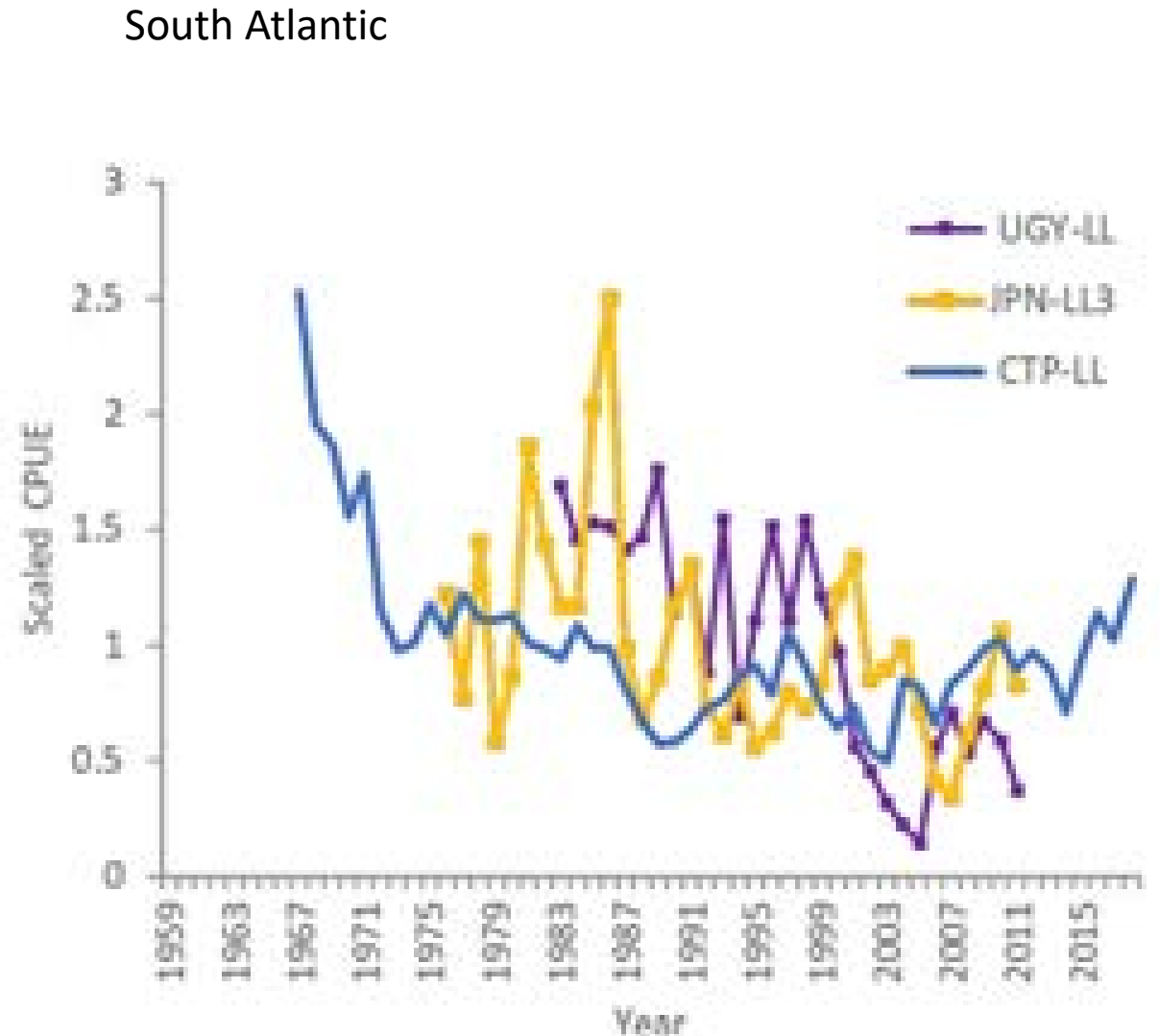
South Atlantic

- Last assessment 2020 with data up to 2018.

- Fishery indicators:
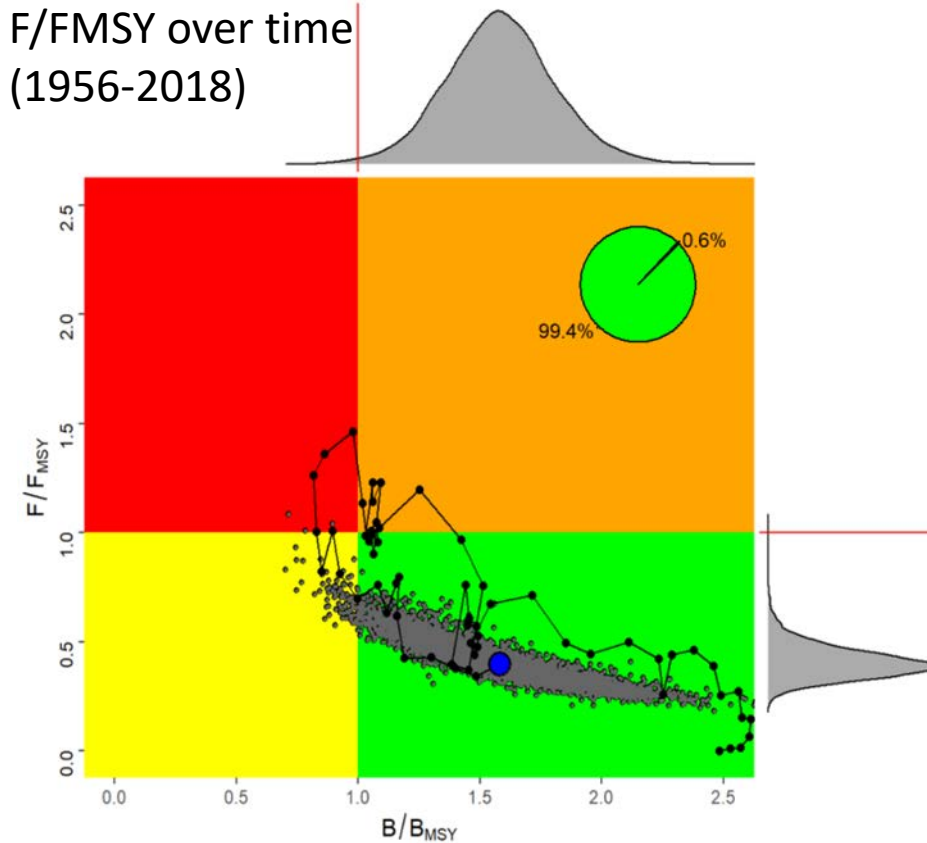 - 3 standardized CPUE indices updated to the most recent data available.

South Atlantic albacore estimated probabilities (in %) based on Bayesian surplus production model that the stock fishing mortality is below FMSY biomass is above BMSY for constant catch levels (16000 t to 34000 t)

(c) Probability of green status (B>B$_{MSY}$ and F<F$_{MSY}$).

TAC | Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
16000	100	100	100	100	100	100	100	100	100	100	100	100	100
18000	100	100	100	100	100	100	100	100	100	100	100	100	100
20000	100	100	100	100	100	100	100	100	100	100	100	100	100
21000	100	100	100	99	99	99	99	99	99	99	99	99	99
22000	100	100	100	99	99	99	99	99	99	99	99	99	99
23000	100	100	99	99	99	99	99	99	99	99	99	98	98
24000	100	99	99	99	99	99	99	98	98	98	98	98	98
25000	100	99	99	99	99	98	98	98	98	97	97	97	96
26000	99	99	99	98	98	98	97	97	96	96	95	94	94
27000	99	99	98	98	97	97	96	95	94	93	92	91	90
28000	99	98	98	97	96	95	93	92	90	89	87	85	83
29000	99	98	97	96	94	93	90	88	85	82	79	77	74
30000	98	97	96	94	91	89	85	81	78	73	69	65	61
32000	97	95	92	88	82	76	69	62	56	49	44	39	35
34000	95	91	85	77	67	57	48	40	32	27	22	19	16

South Atlantic albacore (Kobe plot) with Stock status trajectories of B/BMSY and F/FMSY over time (1956-2018)

ICCAT CICTA CICAA

South - The South Atlantic albacore stock is **not overfished** and **overfishing is not occurring**.

Catches consistent with current TAC (24,000 t) showed a 98% probabilities of being in the green quadrant of the Kobe plot by 2033.

ATLANTIC AND MEDITERRANEAN ALBACORE SUMMARY			
	North Atlantic	**South Atlantic**	**Mediterranean**
Maximum Sustainable Yield	36,816 t (35,761 - 38,039)[1]	27,264 t (23,734 - 31,567)[2]	3,419 t (2,187 - 7,842)[2]
Current (2019) Yield	34,772 t	15,640 t	2,402 t
Yield in last year of assessment (2018)	29,691 t	17,098 t	
Yield in last year of assessment (2015)			2,774 t
B_{MSY}	392,556 t (349,403 - 405,097)[1]	124,453 t (79,611-223,424)[2]	29,168 t (17,939-65,861)[2]
F_{MSY}	0.093 (0.091-0.108)[1]	0.219 (0.116-0.356)[2]	0.119 (0.072-0.192)[2]
B_{2019}[3]	508,074 t (425,273 - 602,157)[1]		
$B_{current}/B_{MSY}$	1.32 (1.13 - 1.51)[4]	1.58 (1.14 - 2.05)[5]	1.002 (0.456 - 1.760)[6]
B_{2019}/B_{LIM}[7]	3.30 (2.83 - 3.78)[1]		
$F_{current}/F_{MSY}$	0.62 (0.52 - 0.74)[8]	0.40 (0.28 - 0.59)[9]	0.830 (0.223-2.194)[10]
Stock Status	Overfished: NO Overfishing: NO	Overfished: NO Overfishing: NO	Overfished: NOT LIKELY Overfishing: NOT LIKELY
Management measures in effect:	Rec. 98-08: Limit number of vessels to 1993-1995 average. Rec. 17-04: TAC of 33,600 t for 2018-2020, according to interim HCR. Management objective is to keep the stock in (or rebuild it to) the green area of the Kobe plot with 60% probability, while maximizing catch and reducing variability of TAC.	Rec. 16-07: TAC of 24,000 t for 2017-2020	Rec. 17-05: Time closure of two months (1 October- 30 November) for longlines, aimed at protecting the Mediterranean swordfish juveniles. A list of vessels authorized to target Mediterranean albacore implemented in 2017. No increase of catch and effort until more accurate advice is delivered.
Recommended TAC for the period 2021-2023 as estimated following the HCR adopted in Rec. 17-04	37,801 t		

[1] Median and 80% CI for the base case.

South Atlantic Stock Proposed Work Plan

Common Workplan:
- To continue research activities for all the stocks and develop a comprehensive Albacore Research Programme with a focus on: biology and ecology, monitoring stock status, and management strategy evaluation, over the next 4 years. - One intersessional meeting is envisaged (5 days, scheduled within April to July)

South Atlantic Stock Workplan:
- Consolidate activities on reproductive biology (including aging of analyzed individuals, using spines) and start electronic tagging.

South Atlantic: (combine with North)

The Committee recommends continued funding of the Albacore Research Programme for North and South Atlantic stocks, as well as to start funding the research for the Mediterranean stock. Research on the North and South Albacore stocks will focus on three main research areas (biology and ecology, monitoring of stock status, and management strategy evaluation).

For 2022 the Committee recommends to continue electronic tagging and reproductive biology studies (with associated aging of samples) in the North and South Atlantic,

Albacore	2022 (€)	2023 (€)	2024 (€)
Tagging, rewards and awareness	40,000*	40,000	**20,000****
Biological studies:			
Reproduction	35,000*	25,000	
Age and growth	10,000*		
Sample collection and shipping	5,000*	5,000	
Other fisheries related studies *(including data recovery, etc.)*			
Mediterranean ALB larval index related studies	33,000	33,000	
Workshops/meetings			
Equipment			
MSE	20,000	30,000	30,000
TOTAL	**143,000**	**133,000**	**50,000**

* Funds to be evenly split between North/South stocks. In case of budget reduction, the southern stock has priority.
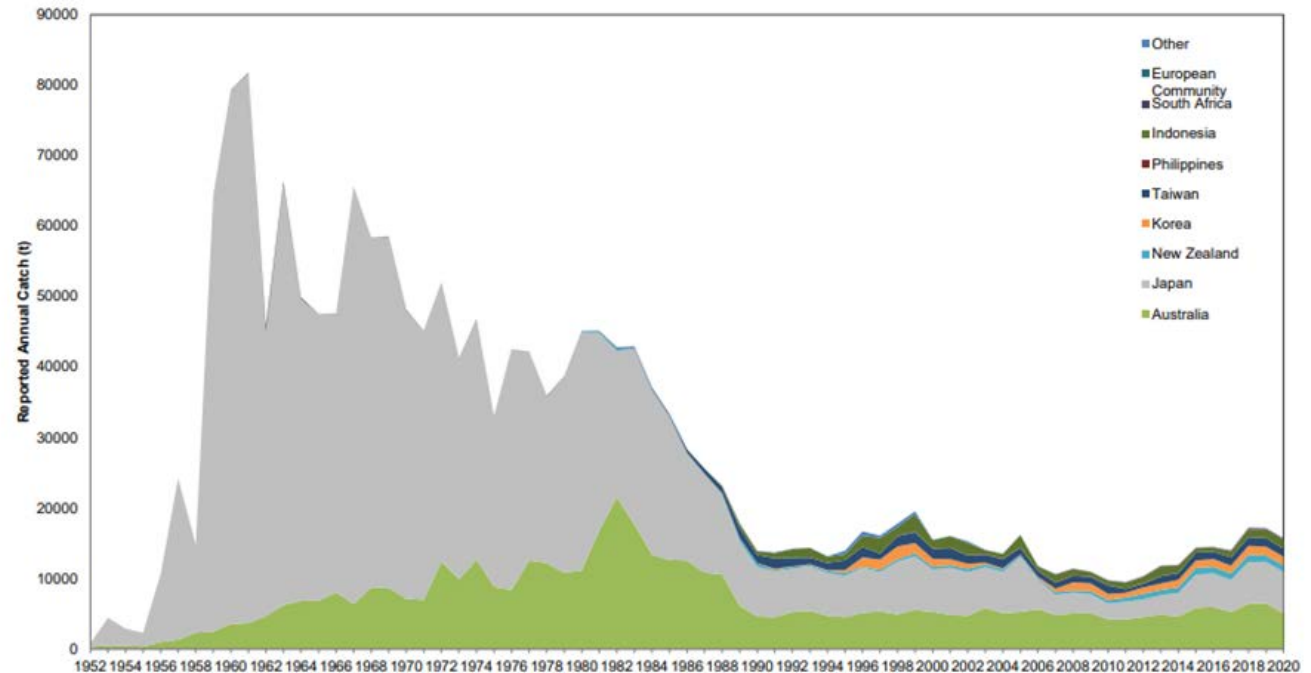** Funds only for the southern Atlantic stock.

Southern Bluefin Tuna

- The Commission for the Conservation of Southern Bluefin Tuna (CCSBT) is charged with assessing the status of southern bluefin tuna. Each year the SCRS reviews the CCSBT report in order to remain up to date on southern bluefin tuna research and the stock assessments carried out. The reports are available from the CCSBT.
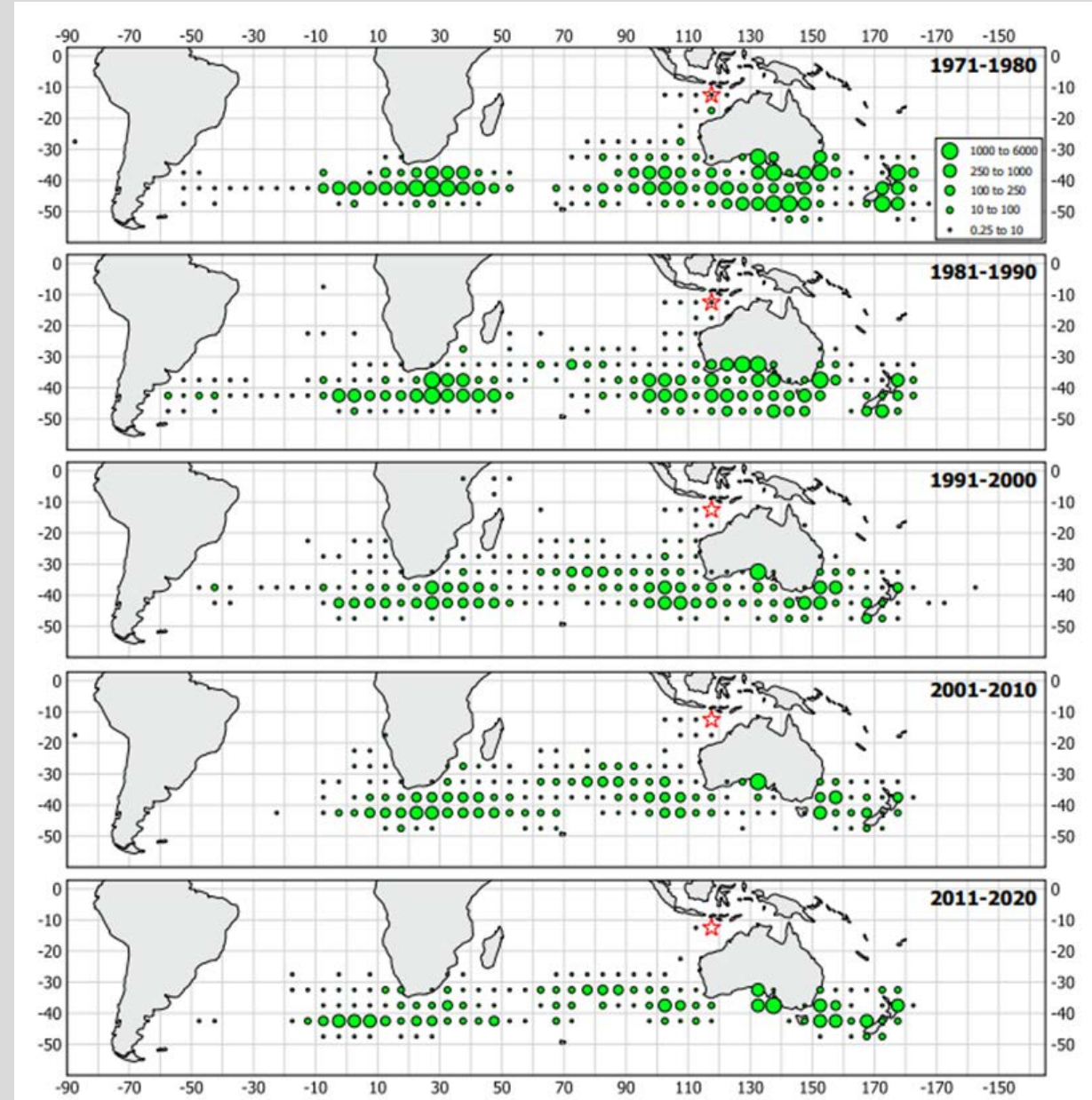
Southern Bluefin Tuna – Fishery Indicators

- Annual reported catches by country for the period 1952-2020.

- Catches decreased rapidly in the late 1980's then continued to slowly decline until about 2010.

- Catches have generally increased since 2010 to 16,441 in 2020.

Figure 3: Reported southern bluefin tuna catches by flag, 1952 to 2020. Note: a 2006 review of SBT data indicated that catches over the preceding 10 to 20 years may have been substantially under-reported.

Southern Bluefin Tuna (SBFT)

- Geographical distribution of average annual reported southern bluefin tuna catches (t) by CCSBT members and cooperating non-members over the periods 1971-1980, 1981-1990, 1991-2000, 2001-2010 and 2011-2020 per 5° block.

Southern Bluefin Tuna - Stock Status

- Exploitation rate: Moderate (Below F_{MSY})
- Exploitation state: Overexploited
- Abundance level: Low abundance
- Next stock assessment scheduled for 2023.
- Stock Status:
  - Overfishing: No
  - Overfished> Yes

SOUTHERN BLUEFIN TUNA SUMMARY FROM ESC in 2020	
(global stock)	
Maximum Sustainable Yield	33,207 t (31,471-34,564 t)
Reported (2020) Catch	16,441 t
Current (2020) biomass (B10+)	204,596 t (184,272-231,681)
Current condition relative to initial	
TRO	0.20 (0.16–0.24)
B10+	0.17 (0.14–0.21)
TRO (2020) Relative to TRO_{msy}	0.69 (0.49–1.03)
Fishing Mortality (2019) Relative to F_{msy}	0.52 (0.37–0.73)
Current Management Measures	Effective Catch Limit for Members and Cooperating Non-Members: 17,647 t per year for the years 2021-2023