



**Recent Findings on Stock Status:
Eastern Atlantic and Mediterranean
Bluefin tuna, Mediterranean
Swordfish and Albacore**

Working Group (WG2) on pelagic fishes -ICCAT

ICCAT Secretariat

(11 October 2018)

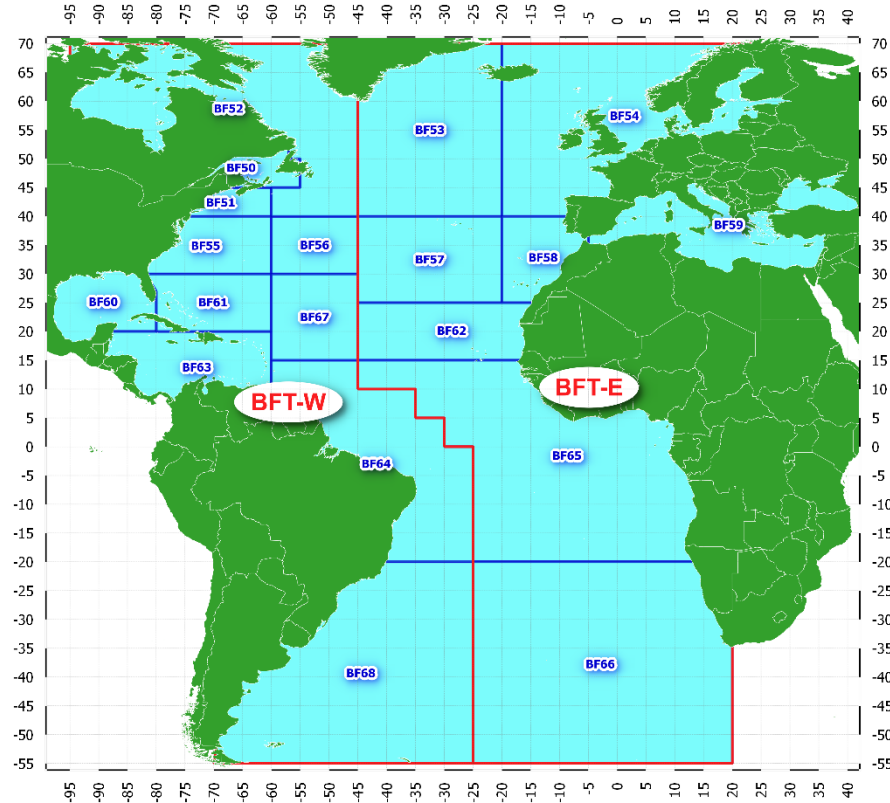
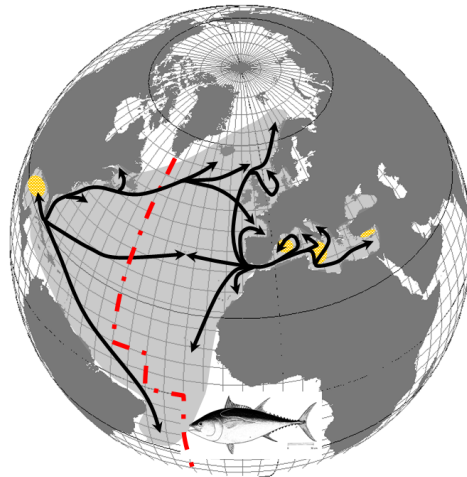
ICCAT CICTA CICAA



Bluefin tuna: Background information

Managed by International Commission for the Conservation of Atlantic Tunas (ICCAT):

- Two stocks (mixing occurring, but extent not know)
- Last assessment in September 2017 (projections provided in 2022)
- Management through input control measures (e.g. vessel list, minimum size/weight, fisheries closures, TAC, etc.)



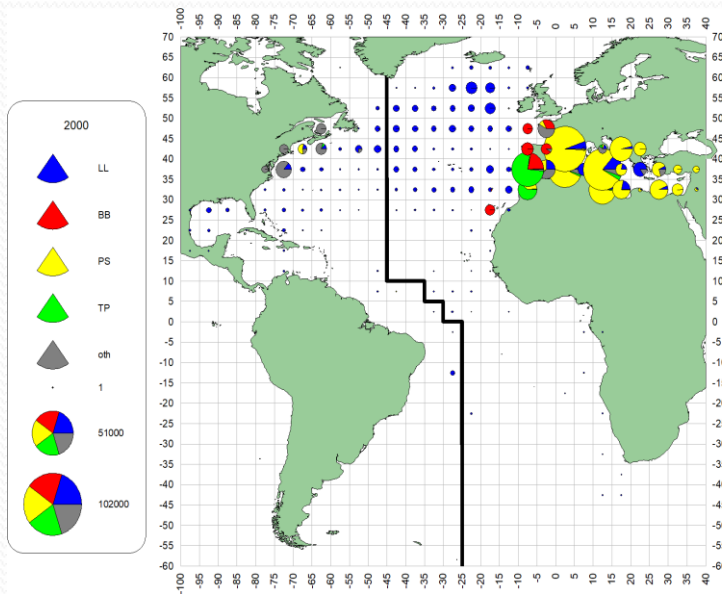
Objective:

- Maintain the stocks at level which will permit maximum sustainable catch for food and other purposes

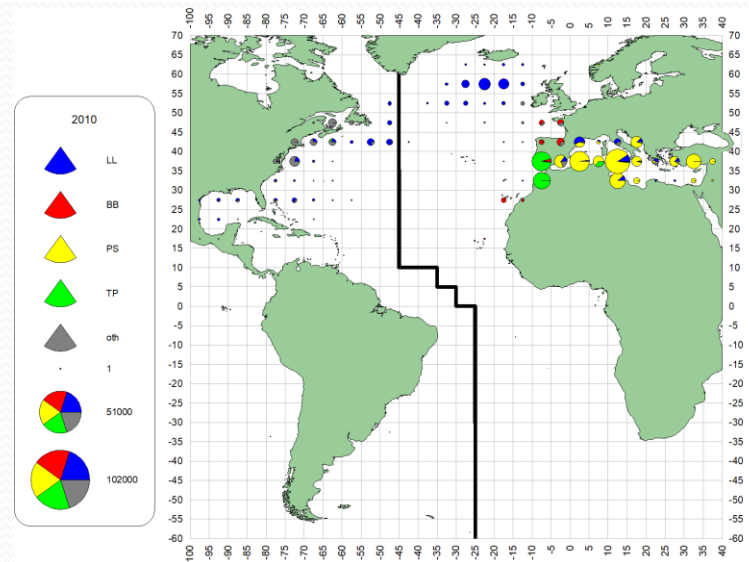


Fisheries

- Main gears:
 - East-Atlantic -Traps, longlines and baitboats
 - Mediterranean – Purse-seine, longlines and Sport (HL+RR)



e. BFT (2000-09)



f. BFT (2010-16)

Geographic distribution of bluefin tuna catches per 5x5 degrees and per main gears from 1990 to 2016.

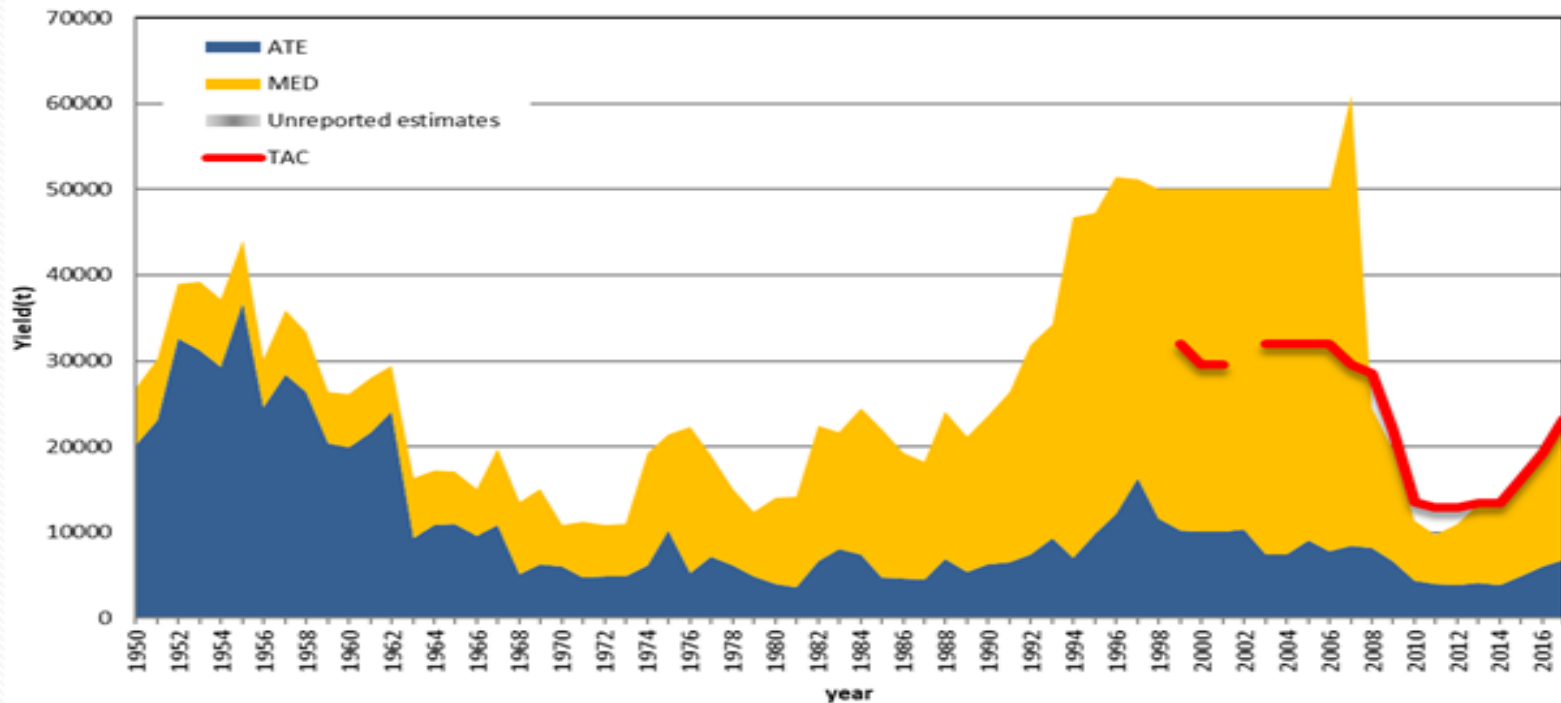


Fisheries

- Production:

- a peak of 62,638 t in 2007, average of 52,714 t period 1996-2006
- 25,467 t in 2017, of which 16,401t in the Mediterranean

3FT-East Atlantic stock (Task-I) by region

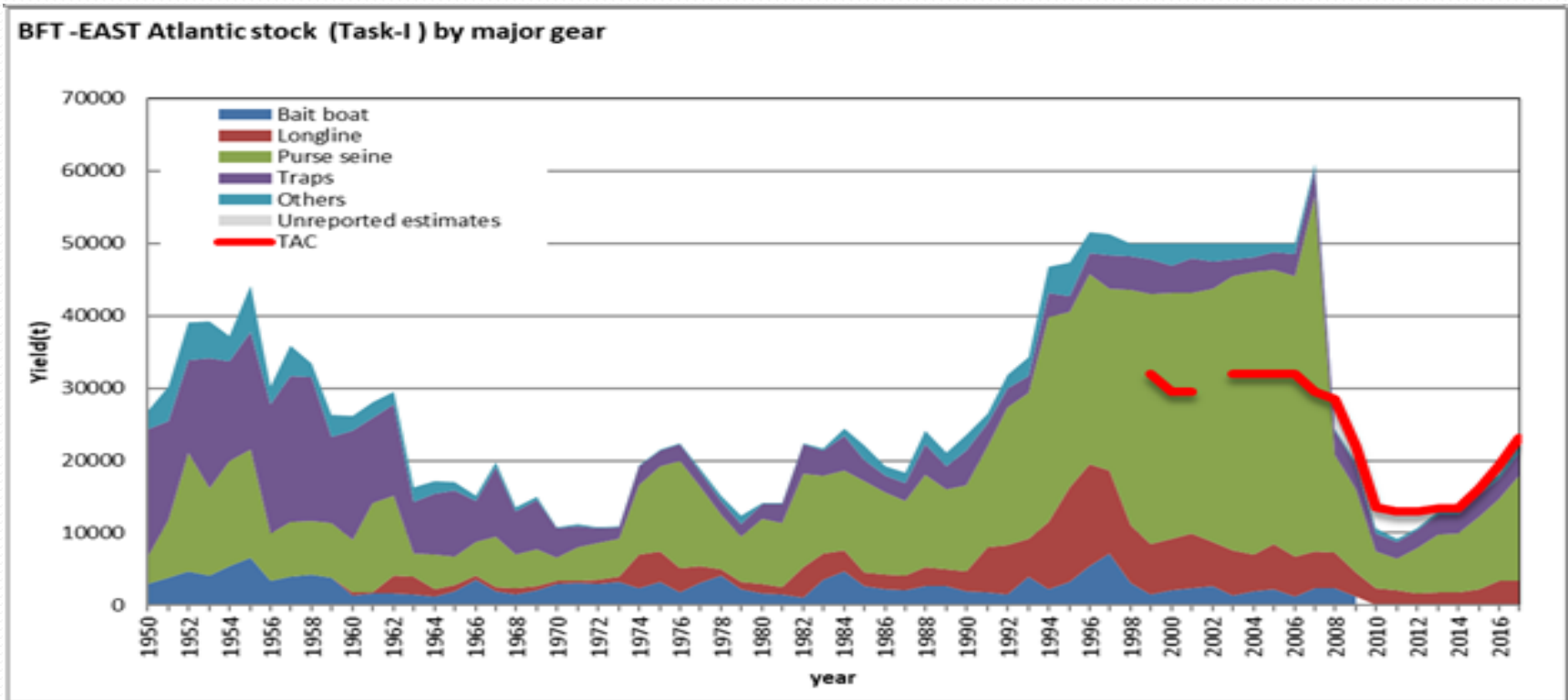




Fisheries

Major fisheries:

- **East & Med 2017:** Spain (17.8%), France (17.0%) Italy (13.5%), Morocco (9.1%), Tunisia (7.4%)
- **Mediterranean 2017:** France (22.3%), Italy (19.5%), Spain and Tunisia (10.5%), Libya (9.9%) and Turkey (9.2%)





Fisheries Catalog E-BFT Med

Table 5. BFT-E stock (MED region)

Table 5. BFT-E stock (MED region)																	5									
														T1 Total	6959	5790	7100	9080	9343	11360	13163	16373				Ok
																								79167		
Speci	Std	Stat	FlagName	GearG	DS	2010	2011	2012	2013	2014	2015	2016	2017	Rank	%	%cum	Σ(2010-17)									
BFT	MED	CP	EU.France	PS	t1	1546	678	678	1940	1944	2299	2763	3320	1	19.2%	19%	15166									
BFT	MED	CP	EU.France	PS	t2	abc	ab	ab	abc	abc	b	ab	ac	1												
BFT	MED	CP	EU.Italy	PS	t1	2	752	1374	1474	1539	1678	2050	2409	2	14.2%	33%	11279									
BFT	MED	CP	EU.Italy	PS	t2	-1	abc	-1	-1	b	b	ab	-1	2												
BFT	MED	CP	Tunisie	PS	t1	1042	852	1017	1057	1057	1248	1461	1755	3	12.0%	45%	9488									
BFT	MED	CP	Tunisie	PS	t2	ab	ab	abc	ab	ab	b	abc	ab	3												
BFT	MED	CP	EU.España	PS	t1	804	877	1034	917	1122	1169	952	1523	4	10.6%	56%	8397									
BFT	MED	CP	EU.España	PS	t2	ab	ab	b	ab	ab	ab	ab	-1	4												
BFT	MED	CP	Libya	PS	t1	645		763	933	933	1153	1368	1631	5	9.4%	65%	7425									
BFT	MED	CP	Libya	PS	t2	-1		ab	ab	b	ab	ab	-1	5												
BFT	MED	CP	Turkey	PS	t1	409	528	536	551	544	1091	1324	1515	6	8.2%	74%	6498									
BFT	MED	CP	Turkey	PS	t2	ab	ab	ab	ab	abc	abc	bc	a	6												
BFT	MED	CP	EU.Croatia	PS	t1	370	366	367	380	378	438	436	587	7	4.2%	78%	3321									
BFT	MED	CP	EU.Croatia	PS	t2	ab	ab	a	a	ab	abc	abc	abc	7												
BFT	MED	CP	EU.Italy	LL	t1	521	670	256	180	115	312	434	411	8	3.7%	81%	2900									
BFT	MED	CP	EU.Italy	LL	t2	abc	abc	abc	abc	ac	abc	abc	abc	8												
BFT	MED	CP	Algerie	PS	t1			69	244	244	370	448	1038	9	3.0%	84%	2413									
BFT	MED	CP	Algerie	PS	t2			ab	abc	ab	ab	b	b	9												
BFT	MED	CP	EU.France	LL	t1	184	112	112	232	234	238	259	289	10	2.1%	87%	1661									
BFT	MED	CP	EU.France	LL	t2	a	a	a	a	a	b	ab	ab	10												
BFT	MED	CP	EU.Italy	TP	t1	281	165	125	222	231	192		272	11	1.9%	88%	1487									
BFT	MED	CP	EU.Italy	TP	t2	ab	abc	ac	-1	-1	-1		-1	11												
BFT	MED	CP	Maroc	PS	t1	98	103	103	170	176	184	210	254	12	1.6%	90%	1298									
BFT	MED	CP	Maroc	PS	t2	-1	-1	a	a	-1	-1	-1	-1	12												
BFT	MED	CP	EU.España	LL	t1	240	58	26	24	34	57	490	126	13	1.3%	91%	1055									
BFT	MED	CP	EU.España	LL	t2	abc	abc	abc	abc	abc	abc	abc	abc	13												
BFT	MED	CP	Maroc	HL	t1		78	120	130	134	138	140	185	14	1.2%	93%	925									
BFT	MED	CP	Maroc	HL	t2		abc	abc	abc	abc	abc	ab	abc	14												
BFT	MED	CP	EU.Malta	LL	t1	136	92	137	89	91	49	97	115	15	1.0%	94%	806									
BFT	MED	CP	EU.Malta	LL	t2	ab	ab	abc	abc	abc	abc	abc	abc	15												
BFT	MED	CP	EU.Greece	LL	t1	52	19	35	51	83	105	183	191	16	0.9%	95%	719									
BFT	MED	CP	EU.Greece	LL	t2	a	a	a	ab	a	a	a	a	16												
BFT	MED	CP	Egypt	PS	t1			64	77	77	155	99	124	17	0.8%	95%	596									
BFT	MED	CP	Egypt	PS	t2			ab	-1	-1	-1	ab	-1	17												



Indices of abundance

Fisheries dependent (standardized CPUE):

- Combined Morocco Spanish traps (1981- 2011)
- Combined Morocco Portuguese traps (2012-2015)
- Jap. LL in the NE. Atl 1 (1990-2009)
- Jap. LL in the NE. Atl 2 (2010-2015)
- Jap. LL in the Med+NE.40° to 60°N (1975-2009)
- Spanish BB1 (1952-2006)
- Spanish BB2, Spanish and French combined (2007-2014)

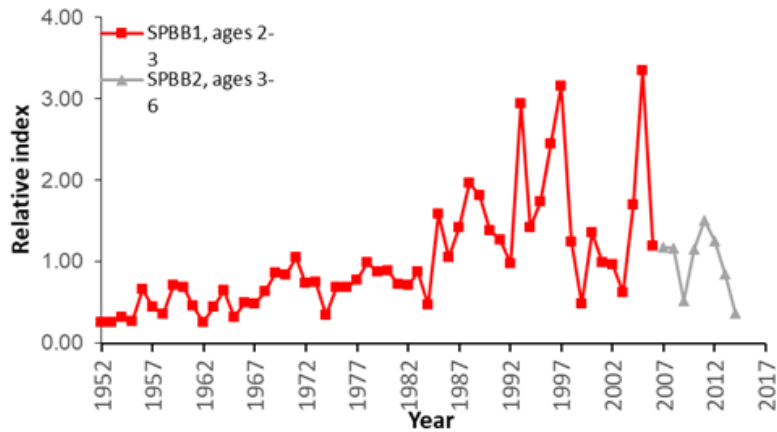
Fisheries independent (surveys):

- French aerial survey (2000 to 2003 / 2009 to 2012 and 2014-2015)
- Western MED Larval survey (2001-2005 and 2012 to 2015)
- GBYP aerial survey

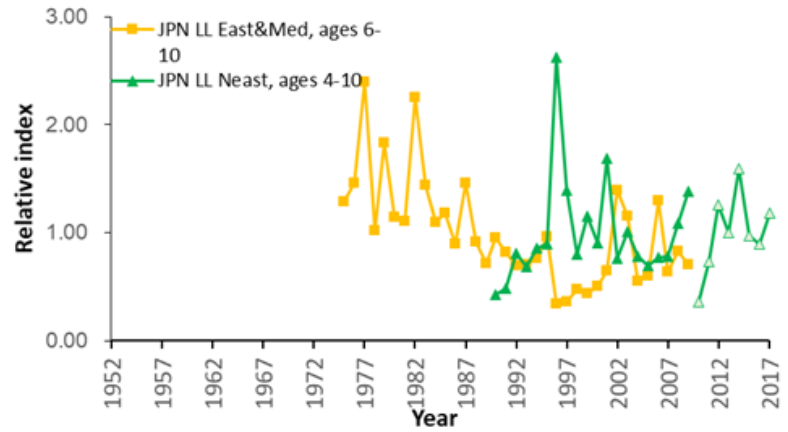


Fisheries dependent and independent indicators

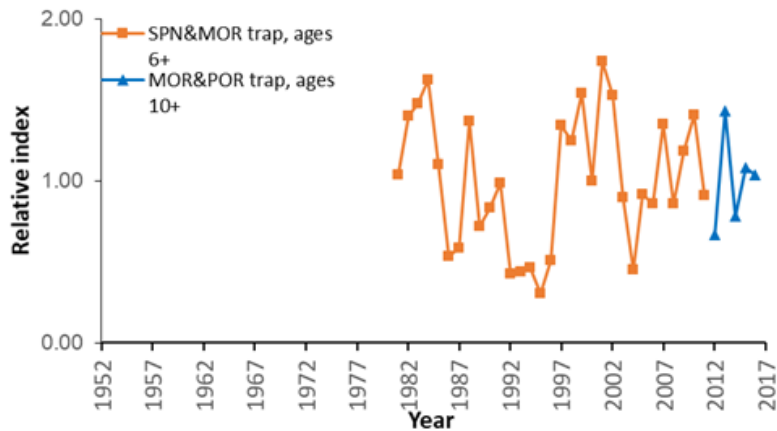
Spanish Bait boat in the Bay of Biscay



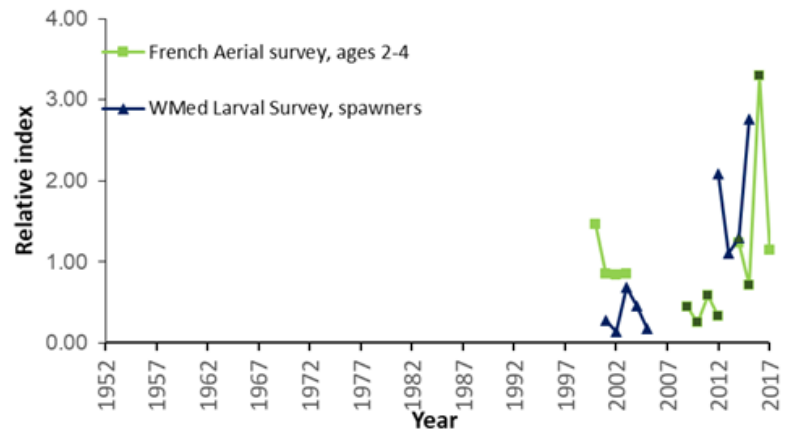
Japanese Longline



Spanish, Moroccan, and Portuguese Traps

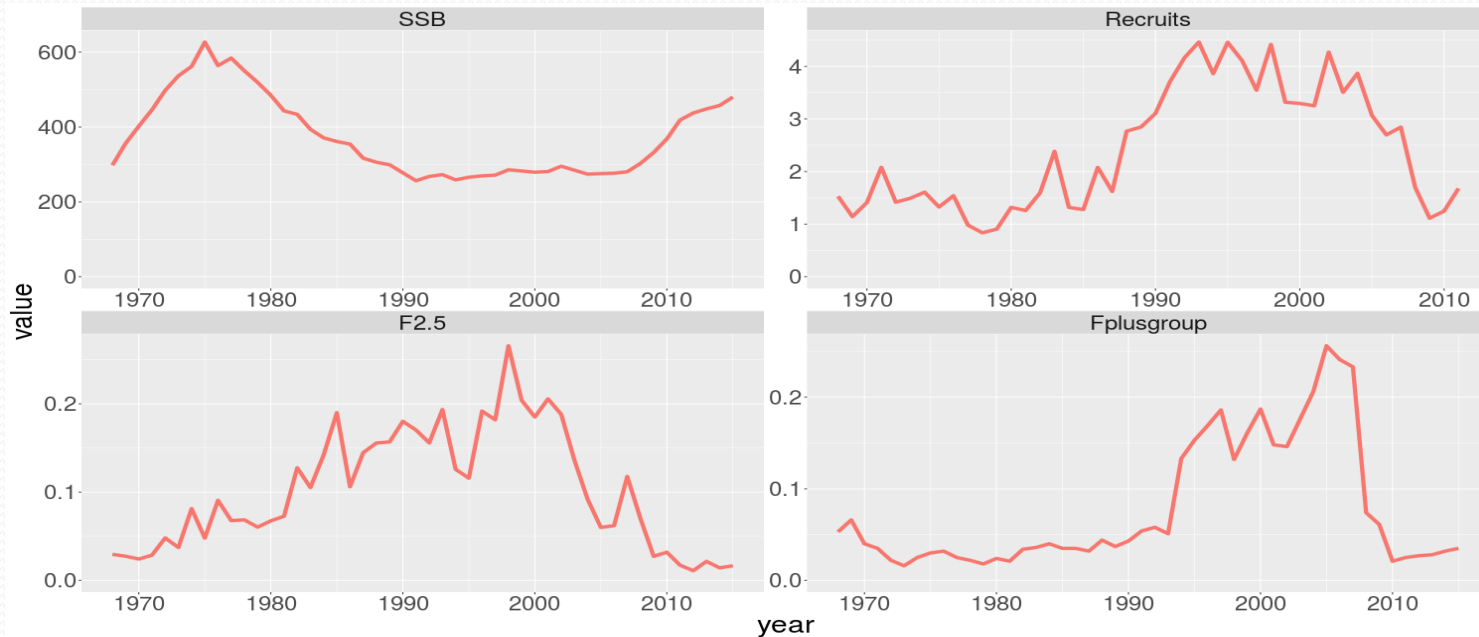


Survey





SA in 2017: Biomass, Recruitment and Fishing mortality

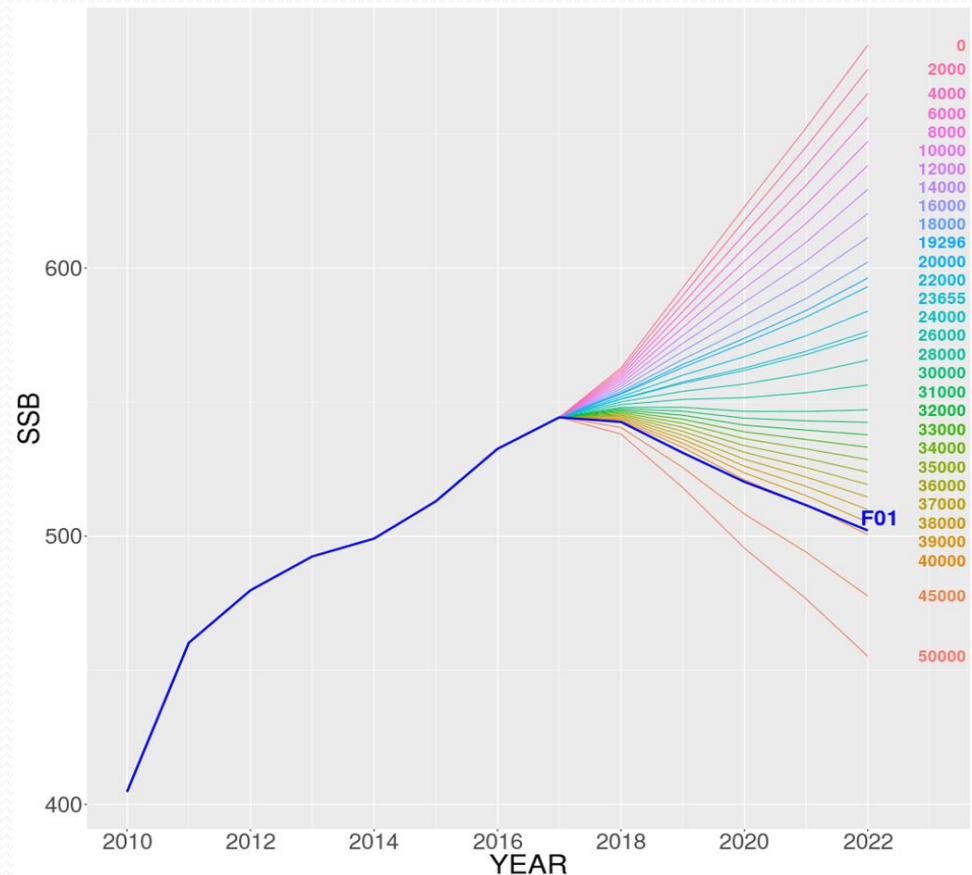


- Spawning Stock Biomass (SSB) peaked in mid-1970's, declined thereafter until 1991 and exhibited significant increase since late 2000's
- Recruitment (Recruits) were high 1993-2002, declines until 2009 followed by an increase in 2011 (poorly estimated thereafter)
- Fishing mortality over juveniles ($F_{2.5}$) increased until late 1990's and then a sharp decline
- Fishing mortality over older fishes ($F_{plusGroup}$) increased continuously until 2007, showing a rapid decrease thereafter



SA in 2017: projections

- $F_{0.1}$ was considered a reasonable proxy for F_{MSY}
- $F_{0.1}$ can be higher or lower than F_{MSY} depending on the stock recruitment relationship, which in this case is poorly determined



If an $F_{0.1}$ strategy were to continue to be applied, **over the longer term (2022)** the resource would fluctuate around (the true, but unknown) **value of $B_{0.1}$** whatever the future recruitment level



Projections: Kobe matrix

Kobe II Strategy matrix showing probabilities (%) of $F < F_{0.1}$ for TACs from 18,000 to 50,000 t from 2018 through 2022 under the recent 6 years (2006-2011) recruitment scenario.

Constant catches up to 36,000 t have higher than 60% probability of maintaining F below $F_{0.1}$ throughout 2022

Catch (t)	2018	2019	2020	2021	2022
18,000	100	100	100	100	100
20,000	99	99	99	99	99
22,000	99	99	98	98	98
23,655	98	98	98	98	98
24,000	98	98	97	98	97
26,000	97	96	96	96	96
28,000	95	94	94	94	94
30,000	93	92	92	90	89
31,000	90	90	89	89	88
32,000	89	88	87	86	83
33,000	86	85	83	81	80
34,000	82	81	79	78	75
35,000	79	77	76	72	70
36,000	75	73	70	68	64
37,000	70	68	65	62	59
38,000	65	63	60	57	54
39,000	59	57	54	52	49
40,000	56	52	49	46	44
45,000	36	35	34	30	28
50,000	24	22	20	18	18



Synthesis

- Catches up to 38,000 t or 36,000 t have a greater than a 60% probability of maintaining F below $F_{0.1}$ in 2020 or 2022, respectively
- Catches of 28,000 t or less have a higher than 50% the probability of allowing a continue increase in the stock
- Kobe strategy matrix cannot integrate some important sources of uncertainties that currently remain unquantified.
- Several sensitivity runs of the VPA and preliminary results of other assessment models suggest catches at $F_{0.1}$ that are notably lower than given by the base VPA



East Atlantic and Mediterranean Bluefin tuna summary in 2018

Current reported yield (2017)	23,616 t*
$F_{0.1}$	0.107(0.103-0.120) ¹
$F_{2012-2014}/F_{0.1}$ ²	0.339 (0.254-0.438) ¹
Stock Status	Overfishing: No
[Rec. 17-07] TAC in 2018-2020	28,200 t – 32,240 t - 36,000 t

- 1) Median and approximate 80% confidence interval from bootstrapping from the assessment.
- 2) $F_{2012-2014}$ refers to the geometric mean of the estimates for 2012-2014 (a proxy for recent F levels).
- 3) Biomass reference points to determine stock status were not estimated in the 2017 assessment due to uncertainty in recruitment potential

* As of 28 September 2018.



SCRS management recommendation 2018

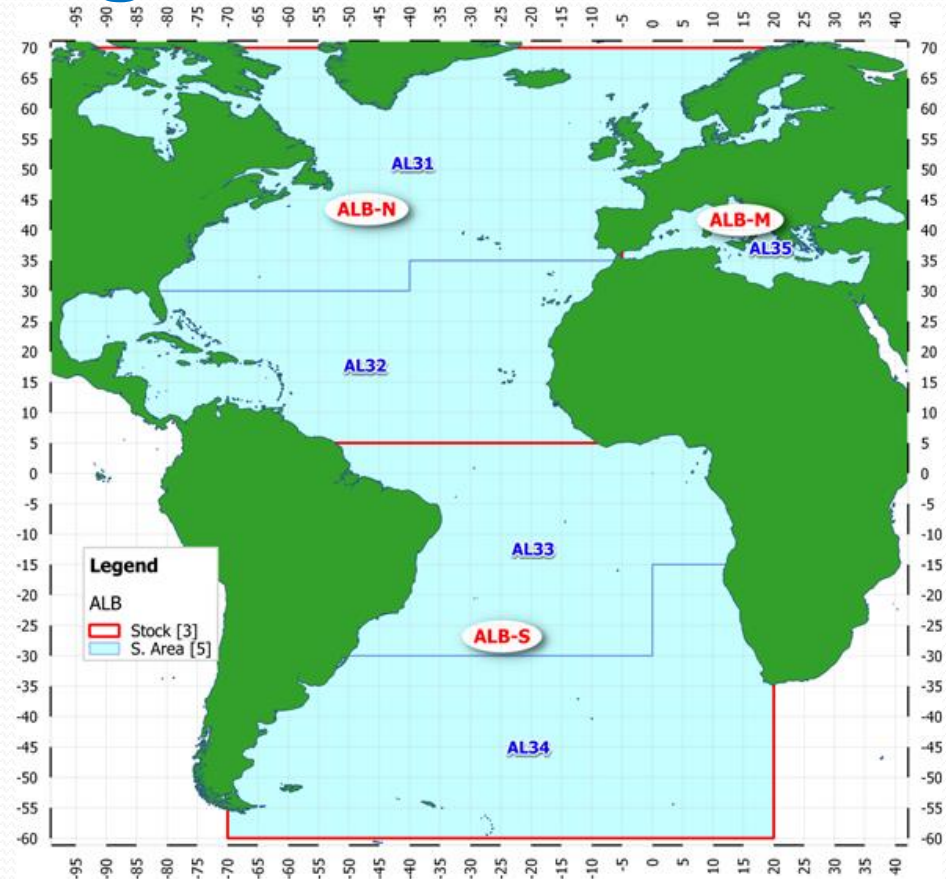
- The 2017 advice included a recommendation to evaluate indices annually to advise on the continuation of the stepped increase. The indices which have been updated up to 2017 did not clearly indicate any change in the stock abundance. Consequently, the Committee is of the view that the stepped increase for 2019 from Rec 17-07 can be maintained.
- Given the abundance increase reported in 2017 assessment, the Committee advises that the Commission should consider moving from the current rebuilding plan to a management plan, while not weakening the current monitoring and control measures. The indices that have been updated through 2017 provided no clear indication to deviate from this advice.



MED Albacore tuna: Background information

Managed by International Commission for the Conservation of Atlantic Tunas (ICCAT):

- Three stocks (mixing occurring and sub-population within in stock, but extent not know)
- Last assessment in June 2017
- Management through input control measures (e.g. vessel list, temporal fisheries closures)



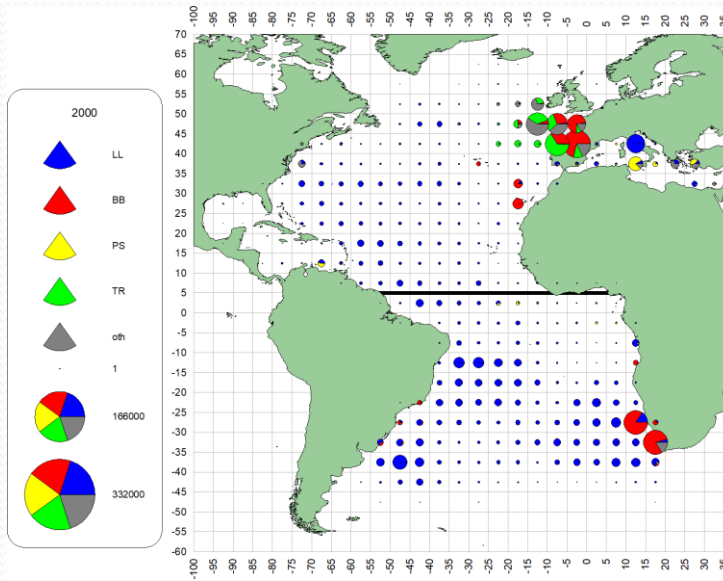
Objective:

- Maintain the stocks at level which will permit maximum sustainable catch for food and other purposes

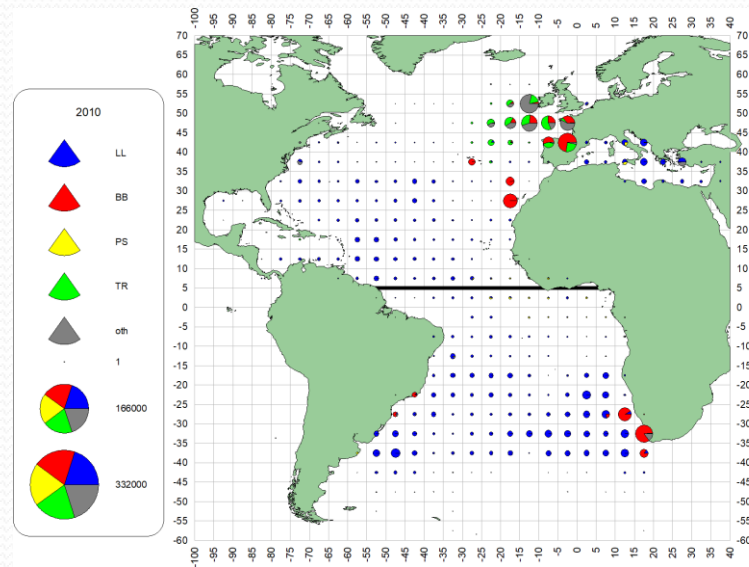


Fisheries

- Main gears:
 - East-Atlantic - longlines (surface, mesopelagic) and baitboats
 - Mediterranean – Almost exclusively longlines



e. ALB (2000-09)



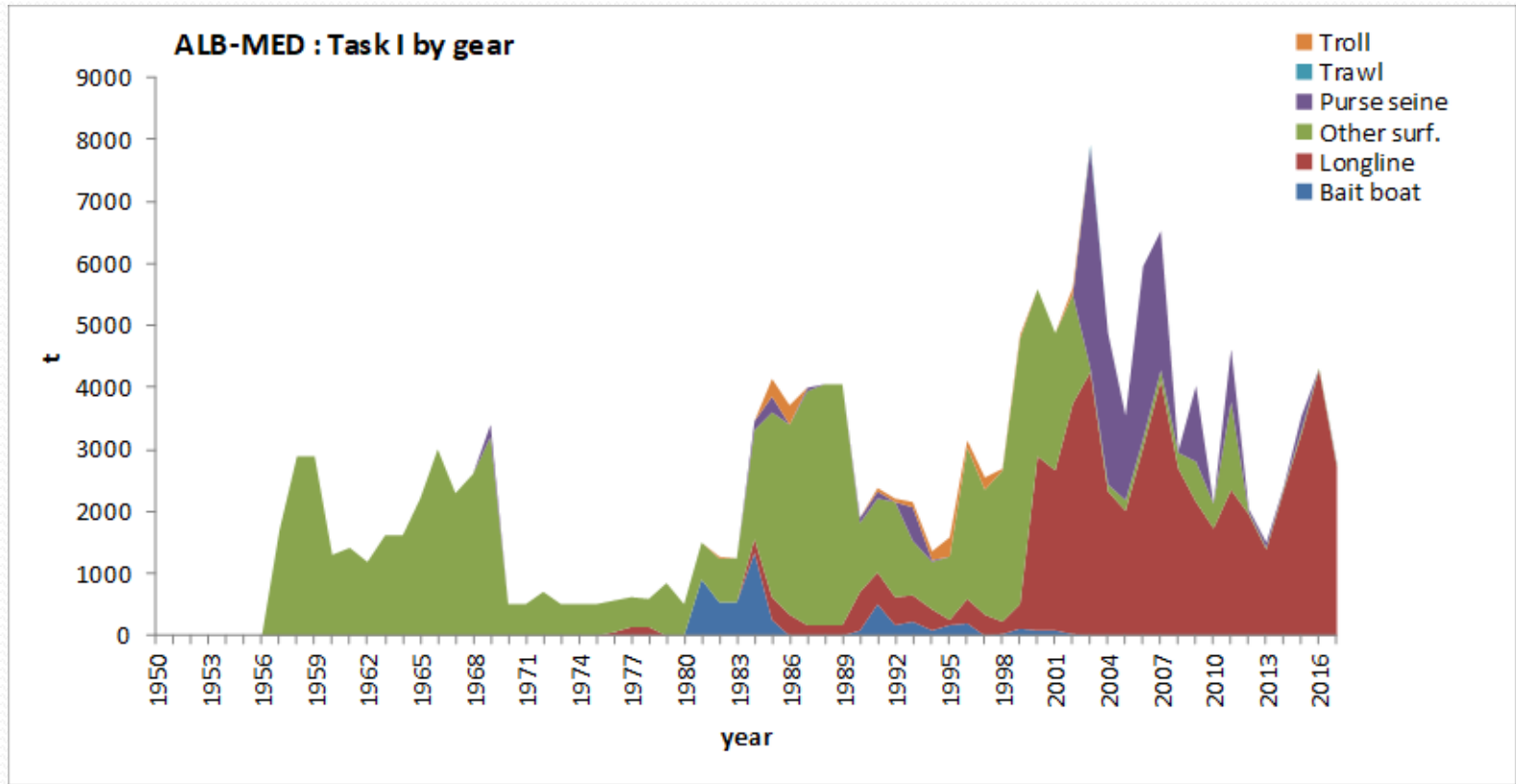
f. ALB (2010-16)

Geographic distribution of Albacore catches per 5x5 degrees and per main gears from 1990 to 2016.



Fisheries

- Production in the Mediterranean:
 - a peak of 7,898t in 2003, average of 2,919 t period 2010-2017
 - 4,319 t in 2016 and 2,780 t in 2017





Fisheries Med ALB catalog 2000-2017

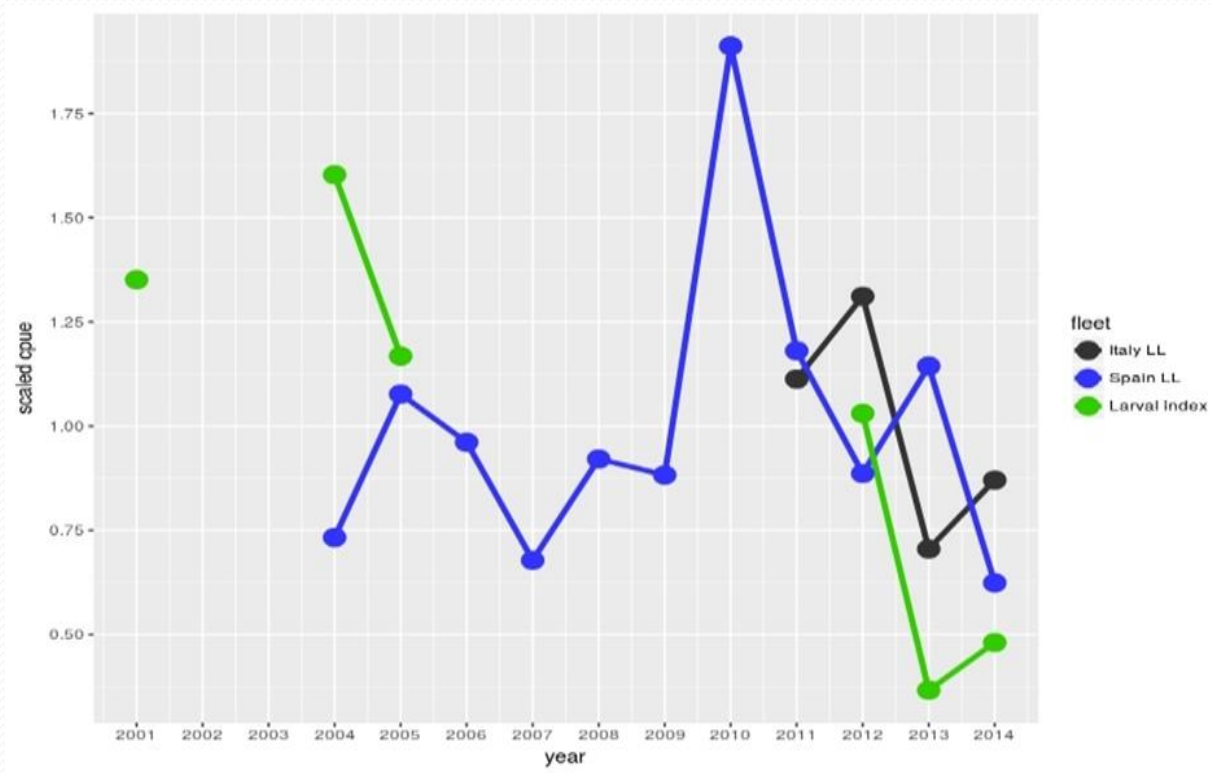
Table3. ALB-M stock

						T1 Total	5577	4870	5608	7898	4874	3529	5965	6520	2970	4024	2124	4628	2047	1503	2400	3554	4319	2780			
Specie	Std	Stat	FlagName	GearG	DS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Rank	%	%cum	
ALB	MED	CP	EU.Italy	LL	t1	2712	2445	3631	3786	1555	1189	1995	2721	2083	1497	1109	1634	1117	605	1342	1356	1480	1322	1	34.5%	35%	
ALB	MED	CP	EU.Italy	LL	t2	ab	b	-1	b	b	b	b	b	bc	abc	abc	abc	abc	abc	abc	abc	abc	abc	1			
ALB	MED	CP	EU.Italy	GN	t1	916	379	397																2	11.9%	46%	
ALB	MED	CP	EU.Italy	GN	t2	ab	b	-1	b		b													2			
ALB	MED	CP	EU.Italy	PS	t1				3079	2100	1046	2589	1249	15	1230			866		10	9	244	4	26	3	11.5%	58%
ALB	MED	CP	EU.Italy	PS	t2				-1	-1	-1	b	-1	-1	-1			-1	-1	-1	-1	-1	abc	3			
ALB	MED	CP	EU.Greece	UN	t1	1735	1786	1304																4	11.2%	69%	
ALB	MED	CP	EU.Greece	UN	t2	-1	-1	-1																4			
ALB	MED	CP	EU.Italy	UN	t1					15	11				0					0				5	6.0%	75%	
ALB	MED	CP	EU.Italy	UN	t2				b	b	b	b		-1					-1					5			
ALB	MED	CP	EU.Greece	LL	t1	33	40	36	445	427	323	242	257	191	116	125	126	126	165	287	541	1332	608	6	5.0%	80%	
ALB	MED	CP	EU.Greece	LL	t2	-1	-1	-1	a	a	ab	ab	-1	a	a	-1	-1	-1	b	b	a	-1	a	6			
ALB	MED	CP	EU.Cyprus	LL	t1				17	243	337	451	695	204	220	206	247	321	357	385	505	558	568	7	4.9%	85%	
ALB	MED	CP	EU.Cyprus	LL	t2				a	a	a	ab	abc	abc	abc	abc	abc	ab	a	abc	abc	abc	-1	7			
ALB	MED	CP	EU.España	LL	t1	51	112	37	1	109	148	322	421	208	204	277	338	385	238	270	52	48	206	8	3.5%	89%	
ALB	MED	CP	EU.España	LL	t2	ab	ac	ac	-1	-1	a	a	a	abc	abc	abc	a	abc	ab	abc	abc	abc	abc	8			
ALB	MED	CP	Turkey	GN	t1										208	631	402	1396						9	2.4%	91%	
ALB	MED	CP	Turkey	GN	t2									a	a	ab	ab							9			
ALB	MED	CP	EU.España	BB	t1	88	77	29			0		0											10	1.6%	93%	
ALB	MED	CP	EU.España	BB	t2	a	-1	ac		-1		a												10			
ALB	MED	CP	Libya	LL	t1																750	800		11	1.4%	94%	
ALB	MED	CP	Libya	LL	t2																-1	-1		11			
ALB	MED	CP	EU.Greece	PS	t1				478	326	287	141	123											12	1.3%	95%	
ALB	MED	CP	EU.Greece	PS	t2				-1	-1	-1	-1	-1											12			
ALB	MED	CP	EU.España	TR	t1			117																13	1.1%	97%	
ALB	MED	CP	EU.España	TR	t2			abc										a						13			

-1	No data
a	t2ce only
b	t2sz only
c	t2cs only
bc	t2sz + t2cs
ab	t2ce + t2sz
ac	t2ce + t2cs
abc	all



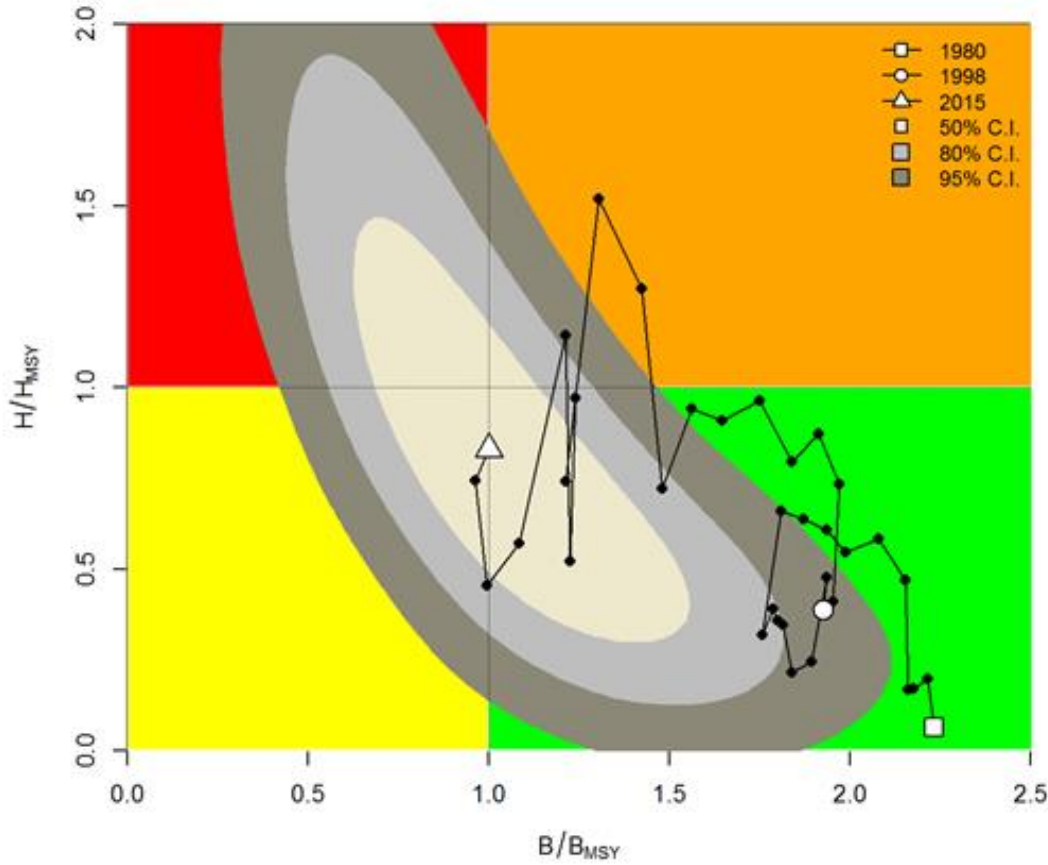
Fisheries dependent and independent indicators



Set of abundance indices used in the 2017 assessment of the Mediterranean albacore stock.



Kobe plot – Stock status



Stock status trajectories of B/B_{MSY} and F/F_{MSY} as well as uncertainty around the current estimate (Kobe plots) for the base case JABBA mode.

- Limited quantitative information is available to conduct a robust quantitative characterization on biomass status relative to MSY (Convention objectives).
- Despite the high uncertainty, the results seem to indicate that recent albacore median biomass levels are at about B_{MSY} , and median fishing mortality levels are below F_{MSY}



Probability of being overfished and overfishing (red, 36%), of being neither overfished nor overfishing (green, 48%), and of being overfished or overfishing, but not both (yellow, 16%).



Mediterranean Albacore summary in 2017

Maximum Sustainable Yield	3,419 t (2,187-7,842)⁴
Current (2017) Yield	2,780 t
Yield in last year of assessment (2015)	2,774 t
B_{MSY}	29,168 t (17,939-65,861)⁴
F_{MSY}	0.119 (0.072-0.192)⁴
B₂₀₁₅/B_{MSY}	1.002 (0.456-1.760)⁴
F₂₀₁₅/F_{MSY}	0.830 (0.223-2.194)
Stock Status	Overfished: NOT LIKELY Overfishing: NOT LIKELY
Management measures in effect:	<ul style="list-style-type: none"> • [Rec. 17-05]: Time closure of two months (1 Oct- 30 Nov) for longlines, protect Med 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.

⁴ Median and 95% CI for the base case.



Management recommendations

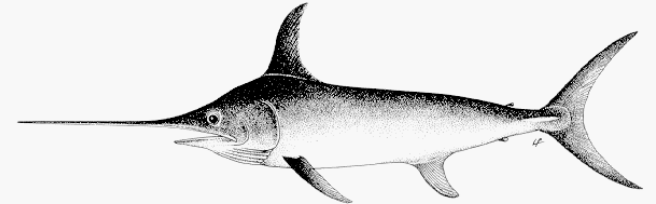
- Commission should institute management measures designed to avoid increases in catch and effort directed at Mediterranean albacore.
- The analyses suggest that catch levels as high as those in the years 2006-2007 (beyond 5,900 t) proved to be clearly unsustainable.
- Considering the high uncertainty regarding the most recent abundance trends, the Committee recommends to maintain catches below MSY at least until the abundance trends are updated. Level of catch depend on the level of risk the Commission is willing to take.



Swordfish: Background information

Managed by International Commission for the Conservation of Atlantic Tunas (ICCAT):

- Unique stock (limited mixing with the N. Atlantic one)
- Last assessment in July 2016
- Management through input control measures (e.g. TAC, vessel list, min. size/weight, fisheries closures)



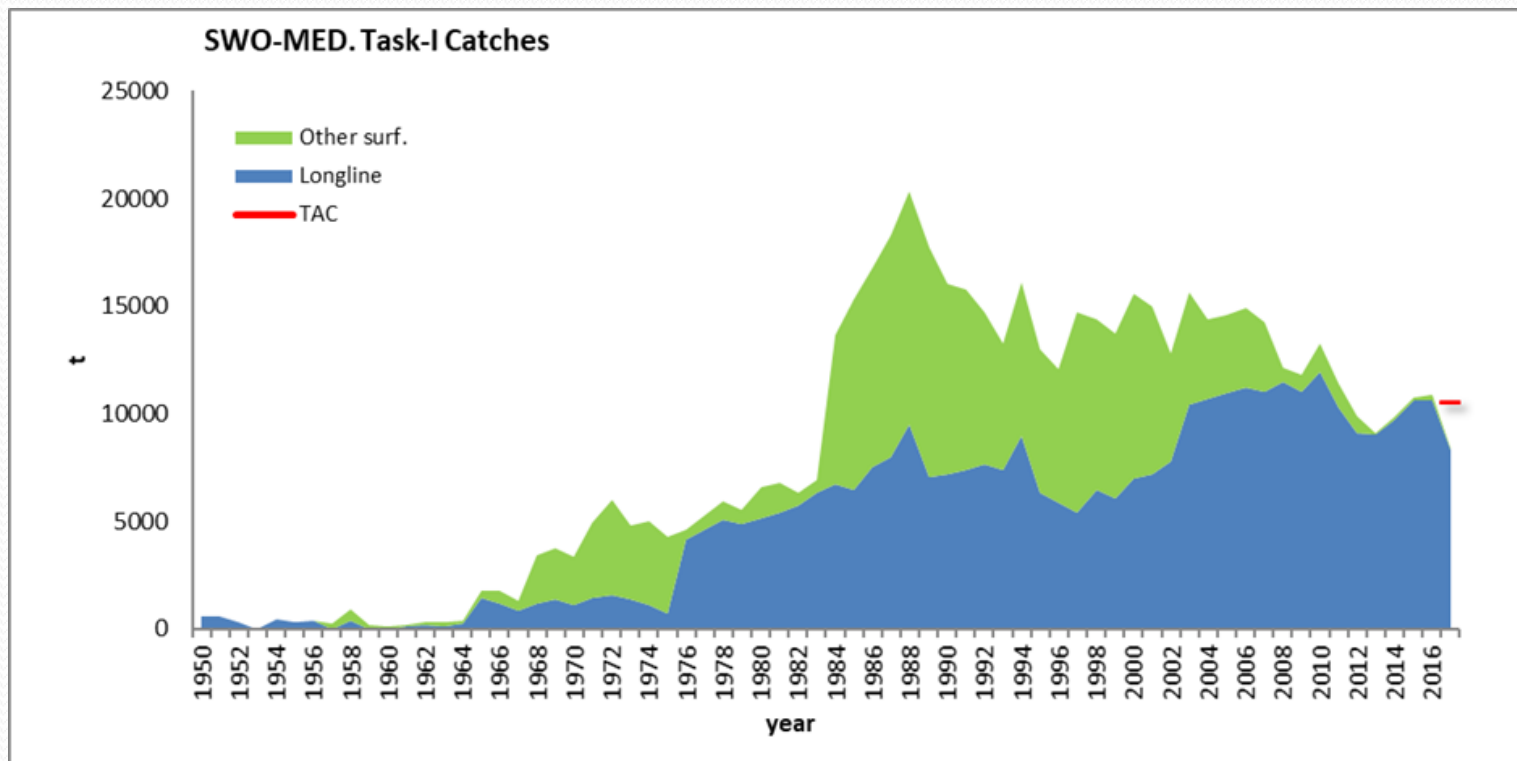
Objective:

- Maintain the stocks at level which will permit maximum sustainable catch for food and other purposes



Fisheries

- Main gears: Longlines (surface, mesopelagic) and Gillnets (prohibited since 2012)
- Production around 10,000 t in the recent years, with a peak of 20,365 t in 1988
- Major fisheries (2003-2017): Italy (38%), Spain (20%), Greece (11%), Morocco and Tunisia (8%)



Task I swordfish catches (t) in the Mediterranean by major gear types, for the period 1950-2017. Non-reporting may occur in the earlier period (up to the middle 1980s).



Fisheries

Table 14. SWO-M stock

		T1 Total																									
		15569	15006	12814	15674	14405	14600	14895	14227	12164	11840	13265	11450	9913	9096	9801	10751	10921	7853	Rank	%	%cum					
Speci	Stc	Stat	FlagName	GearG	DS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017				
SWO	MED	CP	EU.Italy	LL	t1	2639	2236	1841	5844	5452	5560	5253	4564	4521	4687	5101	4579	3856	2848	3384	4213	3917	2974	1	26.7%	27%	
SWO	MED	CP	EU.Italy	LL	t2	ab	b	b	b	b	b	b	b	bc	abc	abc	abc	abc	abc	abc	abc	abc	abc	1			
SWO	MED	CP	EU.Italy	GN	t1	4863						2373	1948									0		2	12.3%	39%	
SWO	MED	CP	EU.Italy	GN	t2	ab	b		b	b	b	b		-1								-1		2			
SWO	MED	CP	EU.España	LL	t1	1396	1402	1421	1165	930	860	1405	1648	2063	1994	1785	1730	1580	1605	2019	2289	1732	1487	3	10.7%	50%	
SWO	MED	CP	EU.España	LL	t2	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc	3			
SWO	MED	CP	EU.Greece	LL	t1	1960	1730	1680	1230	1129	1424	1374	1907	989	1132	1494	1306	877	1731	1344	761	761	392	4	9.9%	60%	
SWO	MED	CP	EU.Greece	LL	t2	ab	ab	b	a	a	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	ab	-1	ab	4		
SWO	MED	CP	Maroc	GN	t1	2503	2266	2230	1629	1299	722	603	615	587	477	410	387								5	9.0%	69%
SWO	MED	CP	Maroc	GN	t2	abc	abc	b	b	b	b	b	b	abc	-1	abc	abc								5		
SWO	MED	CP	EU.Italy	UN	t1	3	4152	1698	2540	1483	1891			5	329		694	718			3	32			6	8.5%	77%
SWO	MED	CP	EU.Italy	UN	t2	-1	-1	-1	b	-1	b			-1	-1		-1	-1		bc		-1		6			
SWO	MED	CP	Maroc	LL	t1	205	754	1149	1670	1954	1801	1455	1107	1370	1110	1200	640	802	770	770	480	900	1000	7	5.7%	83%	
SWO	MED	CP	Maroc	LL	t2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	bc	abc	abc	abc	abc	abc	7			
SWO	MED	CP	Tunisie	LL	t1	483	567	1138	285	791	791	949	1024	1011	1012	1016	1040	1038	1036	1030	1034	1007	1003	8	4.8%	88%	
SWO	MED	CP	Tunisie	LL	t2	a	a	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	8		
SWO	MED	CP	Algerie	LL	t1		133	99		52	93	496	492	802	468	459	192	356	384	549	558	666	1	9	2.6%	90%	
SWO	MED	CP	Algerie	LL	t2		-1	-1		-1	-1	-1	a	a	-1	-1	ab	ab	ab	ac	ab	ab	-1	-1	9		
SWO	MED	CP	EU.Malta	LL	t1	175	102	257	163	195	362	239	213	260	266	423	532	503	460	376	489	410	330	10	1.8%	92%	
SWO	MED	CP	EU.Malta	LL	t2	ac	ac	-1	-1	-1	abc	bc	ab	abc	ab	ab	ab	abc	ab	abc	abc	abc	abc	10			
SWO	MED	CP	Turkey	GN	t1	370	360	300	350	386	425	410	423											11	1.7%	94%	
SWO	MED	CP	Turkey	GN	t2	-1	-1	-1	-1	-1	-1	-1	-1	-1	ac	ac	ac	ac	c					11			
SWO	MED	CP	Algerie	UN	t1	166	306	248	665	122														12	1.4%	95%	
SWO	MED	CP	Algerie	UN	t2	-1	-1	-1	-1	-1														12			
SWO	MED	NCO	NEI (MED)	LL	t1																			13	0.9%	96%	
SWO	MED	NCO	NEI (MED)	LL	t2																			13			
SWO	MED	CP	Algerie	GN	t1	599	642	467		233	311	87	108											14	0.9%	97%	
SWO	MED	CP	Algerie	GN	t2	-1	-1	-1		-1	-1	-1	-1											14			
SWO	MED	CP	EU.Cyprus	LL	t1	82	135	104	47	49	53	43	67	67	38	31	35	35	51	59	45	43	50	15	0.6%	97%	
SWO	MED	CP	EU.Cyprus	LL	t2	a	-1	a	a	a	a	ab	abc	abc	abc	abc	abc	ab	abc	abc	abc	abc	abc	-1	15		



Mediterranean Swordfish summary in 2018

Maximum Sustainable Yield	19,683 t
Current (2017) Yield	8,402 t
SSB_{MSY}	63,426 t
F_{MSY}	0.25
Relative Spawning Biomass (SSB_{2015}/SSB_{MSY})	0.12
Relative Fishing Mortality	
F_{2015}/F_{MSY}	1.85
$F_{2015}/F_{0.1}$	2.64
Stock Status (2015)	Overfished: Yes Overfishing: Yes
Management Measures in Effect:	
<ul style="list-style-type: none"> • Driftnet ban [Rec. 03-04] • Three month fishery closure, gear specifications, minimum catching size, list of authorized vessels, fishing capacity restrictions [Rec. 16-05] • TAC 10,500 t in 2017 [Rec. 16-05] 	



SWO-Med Management recommendations

- Last 25 years biomass levels appear to be rather stable at low levels. This situation has remained the same since the previous assessment of 2014.
- However, fishing mortality levels have shown a declining trend since 2010.
- Assessment of stock status and reference points were done under the assumption that recruitment levels can come back up to the levels seen in the past (1980s and 1990s).
- Under such assumption the **stock is currently overfished and suffering overfishing**.
- In order for rebuilding to start taking place there will be a need for substantial reductions in harvest (**SWO-MED-Tables 2-3**).
- **Current TACs correspond to fishing mortality levels that are higher than F_{MSY}** .
- Increase monitoring of landings and discards, also taking into account that since the establishment of minimum catching sizes, the discard levels of undersized swordfish may have increased.



Mediterranean Swordfish Recovery Plan Rec 16-05

Rec. [16-05] Multi annual Recovery plan 2017 – 2031

TAC 10,500 t 2017

- Reduction of TAC 2018-2022 by 3% each year
- Capacity reduction and limitation
- Closed fishing season(s) Jan 1st – Mar 31st / Oct 1st – Nov 30th
- Gear restrictions hook size/ length LL
- Sport – recreational fisheries restrictions.

	<i>CPC TAC allocation (%)</i>	<i>2017 Quota per CPC (t)</i>
Algeria	5.238	550.000
European Union	70.756	7410.480
Morocco	9.952	1045.000
Tunisia	9.597	1007.694
Turkey	4.200	441.000
Reserve Other CPCs	0.436	45.826
Total	100	10,500



Visit also the ICCAT 2018 meeting webpage
(Report of the Meeting of the Standing Committee on Research and Statistics, SCRS)

<https://www.iccat.int/en/assess.html>

Thanks for your attention