

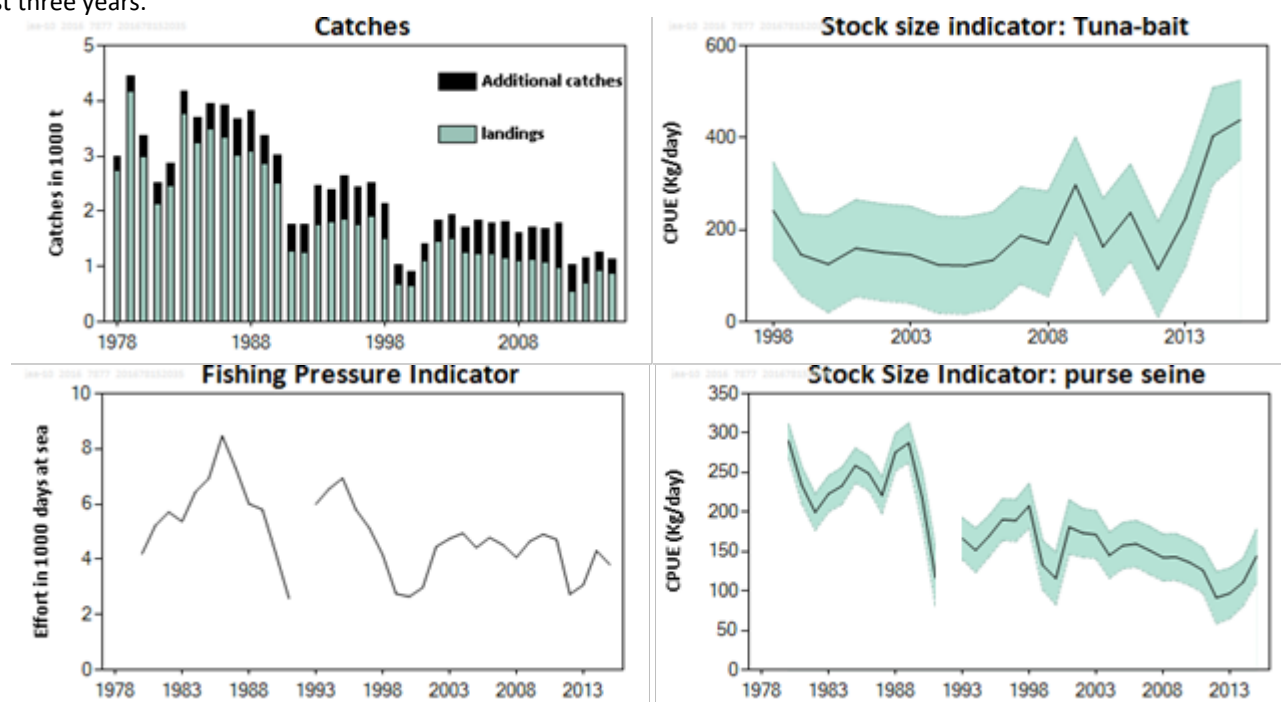
### 7.3.5 Blue jack mackerel (*Trachurus picturatus*) in Subdivision 10.a.2 (Azores)

#### ICES stock advice

ICES advises that when the precautionary approach is applied, catches should be no more than 1098 tonnes in each of the years 2017 and 2018.

#### Stock development over time

Abundance indices are available from two purse seine fisheries and refer mainly to juvenile fish. The indicator from the tuna bait fishery has been stable over the time-series but shows an increase in the last two years. The indicator series from the artisanal purse seine fishery, available from 1980, shows an overall decreasing trend, although with a minor increase in the last three years.



**Figure 7.3.5.1** Blue jack mackerel in Subdivision 10.a.2. Top left: official landings (artisanal purse seine fishery and hooks and lines) and ICES estimates of additional catches (longline bait, tuna live bait, withdrawn landings at port, and recreational). Bottom left: Total effort (thousand days at sea) for the artisanal purse seine fleet. Top right: catch per unit effort (CPUE, kg/day) from the tuna bait fishery with 95% confidence intervals. Bottom right: catch per unit effort (CPUE, kg/day) artisanal purse seiners on juveniles with 95% confidence intervals.

#### Stock and exploitation status

**Table 7.3.5.1** Blue jack mackerel in Subdivision 10.a.2. State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size				
		2013	2014	2015		2013	2014	2015		
Maximum sustainable yield	F <sub>MSY</sub>	?	?	?	Undefined	MSY	?	?	?	Undefined
Precautionary approach	F <sub>pa</sub> , F <sub>lim</sub>	?	?	?	Undefined	B <sub>trigger</sub>	?	?	?	Undefined
Management plan	F <sub>MGT</sub>	-	-	-		B <sub>pa</sub> , B <sub>lim</sub>	?	?	?	Undefined
Qualitative evaluation	-	→	→	→	Stable	SSB <sub>MGT</sub>	-	-	-	Not applicable
							→	→	→	Stable*

\*Although the two available CPUE indices have increased in the last two years they refer only to juveniles, and the information does not change the overall perception of the stock.

## Catch options

The ICES framework for Category 3 stocks is applied (ICES, 2012a). Considering the two CPUE indices available for the stock, which provide different signals in recent years, neither of which is considered to be fully representative of the trend in the overall stock (juvenile and adults), the overall perception of the stock has not changed. Therefore, the advice given for the two most recent years is still applicable for 2017 and 2018.

Discarding is considered to be negligible.

**Table 7.3.5.2** Blue jack mackerel in Subdivision 10.a.2. For stocks in ICES data categories 3–6, one catch option is provided.

Recent advised catch for 2016	1098 t	
Discard rate	Negligible	
Precautionary buffer	Not applied	-
Catch advice*	1098 t	

\* Recent advised catch

## Basis of the advice

**Table 7.3.5.3** Blue jack mackerel in Subdivision 10.a.2. The basis of the advice.

Advice basis	Precautionary approach
Management plan	There is no management plan for blue jack mackerel in this area.

## Quality of the assessment

The lack of an updated adult biomass index is of concern.

The observed increase in the juvenile indices maybe affected by catch limit per day for the artisanal purse seiners and by tuna availability and demand for jack mackerel bait.

Official landings do not take into account live and dead bait catches, withdrawn landings at port, or recreational catches.

## Issues relevant for the advice

The bulk of the catch comes from juvenile fisheries.

Recreational fisheries in last three years have amounted to about 10% of the total catches. The ICES advice pertains to the total stock catch.

## Reference points

No reference points are defined for this stock.

## Basis of the assessment

**Table 7.3.5.4** Jack mackerel (*Trachurus picturatus*) in Subdivision 10.a.2. The basis of the assessment.

ICES stock data category	3 ( <a href="#">ICES, 2016a</a> )
Assessment type	Trends based assessment
Input data	Catch statistics, effort and CPUE indices
Discards and bycatch	Negligible
Indicators	None
Other information	
Working group	Working Group on Southern Horse Mackerel, Anchovy, and Sardine ( <a href="#">WGHANSA</a> )

### Information from stakeholders

There is no available information.

### History of advice, catch, and management

**Table 7.3.5.5** Blue jack mackerel in Subdivision 10.a.2. History of ICES advice, the agreed TAC, official landings and ICES estimates of total catches. Weights in tonnes.

Year	ICES advice	Predicted catches corresp. to advice	Agreed TAC in 10*	Official landings 10.a.2	ICES catches
2000			5000	655	910
2001		-	5000	1101	1415
2002		-	4000	1450	1837
2003		-	3200	1502	1941
2004		-	3200	1246	1709
2005		-	3200	1231	1834
2006		-	3200	1241	1781
2007		-	3200	1154	1812
2008		-	3200	1119	1620
2009		-	3200	1121	1697
2010		-	3072	1078	1696
2011		-	3072	982	1794
2012	No increase in catch	-	3072	561	1043
2013	No increase in catch (last 3 years average)	<1800	3072	715	1153
2014	No increase in catch (last 3 years average)	< 1800	3072	942	1199
2015	No increase in catch (last 2 years average)	< 1098	3072	874	1136
2016	No new advice, same as for 2015	< 1098	3072		
2017	Precautionary approach (Same catch value as advised for 2016)	≤ 1098			
2018	Precautionary approach (Same catch value as advised for 2016)	≤ 1098			

\*EU TAC for *Trachurus spp.* in Subarea 10: EU waters adjacent to the Azores

### History of catch and landings

**Table 7.3.5.6** Jack mackerel (*Trachurus picturatus*) in Subdivision 10.a.2. Catch distribution by fleet in 2015 as estimated by ICES.

Total catch (2015)	Official landings		Long-liners bait	Tuna bait	Recreational	Discards
1136 t	18% hooks and lines	82% purse seiners	67 t	92 t	103 t	Considered to be negligible.
	160 t	714 t				

**Table 7.3.5.7** Jack mackerel (*Trachurus picturatus*) in Subdivision 10.a.2. History of catches (in tonnes).

Year	Tuna bait	Recreational	Discards/Bait (longline)	Withdrawn (purse seine)	Official landings		Total
					Purse seine	Longline + hand line	
1978	115	129	15	0	2657	78	2995
1979	118	130	15	0	4114	61	4439
1980	210	132	22	0	2920	70	3354
1981	229	135	9	0	2104	39	2516
1982	239	142	10	0	2429	43	2862
1983	231	142	21	0	3711	67	4172
1984	295	135	17	0	3180	62	3689
1985	303	136	11	0	3442	60	3952
1986	433	135	9	0	3282	58	3918
1987	491	139	8	0	2974	53	3666
1988	586	143	8	0	3032	55	3824
1989	352	138	9	0	2824	50	3373
1990	345	117	11	27	2472	48	3021
1991	242	115	6	127	1247	33	1770
1992	249	121	6	126	1226	35	1762
1993	375	130	22	173	1684	70	2454
1994	264	125	18	179	1745	59	2390
1995	474	119	24	182	1769	79	2648
1996	351	110	38	173	1642	123	2437
1997	259	110	31	192	1849	72	2513
1998	308	111	52	151	1387	120	2129
1999	141	119	37	35	609	84	1024
2000	83	117	23	32	602	53	910
2001	59	121	24	110	1046	55	1415
2002	82	132	28	145	1387	63	1837
2003	140	128	21	150	1455	47	1941
2004	208	111	19	125	1148	98	1709
2005	124	120	236	123	1111	120	1834
2006	264	111	40	124	1145	96	1781
2007	370	115	58	115	1032	122	1812
2008	205	110	75	111	980	139	1620
2009	230	119	115	112	1023	98	1697
2010	313	114	75	116	1021	57	1696
2011	510	118	79	105	920	62	1794
2012	399	42	41	N/A	467	94	1043
2013	237	147	54	N/A	592	123	1153
2014	96	112	49	52	852	91	1252
2015	92	103	67	N/A	714	160	1136

N/A- Not available

# Summary of the assessment

**Table 7.3.5.8** Jack mackerel (*Trachurus picturatus*) in Subdivision 10.a.2. Assessment summary. Catches, tuna bait boat CPUE, fishing mortality indicator; high and low refer to 95% confidence intervals. The catches are shown separately for official landings (artisanal purse seine fishery and hooks and lines) and ICES estimates of additional catches (longline bait, tuna live bait, withdrawn landings at port, and recreational); the values of these components are shown in Table 7.3.5.7.

Year	Stock size indicator: tuna-bait (kg/day)	High	Low	Stock size indicator: purse seine (kg/day)	High	Low	Effort (days at sea)	Official landings (tonnes)	Additional catches (tonnes)
1978								2735	260
1979								4175	264
1980				290.069	268.599	311.539	4198	2990	365
1981				233.796	210.486	257.107	5222	2143	373
1982				199.581	176.638	222.524	5710	2472	391
1983				222.966	199.974	245.957	5371	3778	395
1984				232.959	209.582	256.336	6440	3242	447
1985				258.768	236.689	280.846	6927	3502	450
1986				248.907	227.501	270.313	8465	3340	577
1987				221.011	197.705	244.317	7311	3027	638
1988				275.6	251.828	299.372	6009	3087	737
1989				287.507	262.424	312.589	5805	2874	499
1990				218.161	184.571	251.751	4230	2520	501
1991				116.787	80.5826	152.991	2585	1280	490
1992								1261	501
1993				166.626	140.424	192.828	5997	1754	700
1994				151.439	123.383	179.496	6552	1804	586
1995				169.435	143.358	195.512	6935	1848	800
1996				190.415	164.069	216.762	5800	1765	672
1997				189.131	162.654	215.607	5137	1921	592
1998	241	347	136	207.869	179.489	236.248	4168	1507	622
1999	146	235	58	132.842	101.666	164.019	2756	693	331
2000	125	231	20	115.787	82.5365	149.038	2651	655	255
2001	160	265	55	180.951	146.545	215.357	2978	1101	314
2002	151	256	45	173.449	142.704	204.195	4457	1450	387
2003	146	251	41	171.332	141.075	201.589	4749	1502	439
2004	124	229	19	145.056	115.987	174.125	4946	1246	463
2005	122	227	17	157.405	128.271	186.539	4423	1231	603
2006	134	239	29	159.638	130.199	189.077	4790	1241	540
2007	187	293	82	151.506	121.133	181.878	4527	1154	658
2008	169	283	55	142.361	112.839	171.884	4067	1119	501
2009	297	402	193	142.758	113.345	172.171	4651	1121	576
2010	163	268	58	136.247	107.249	165.246	4904	1078	618
2011	237	342	132	126.129	97.5115	154.746	4723	982	812
2012	114	218	9	91.3684	58.3869	124.35	2739	561	482
2013	225	330	120	96.9236	65.0413	128.806	3074	715	438
2014	403	508	298	110.838	80.8764	140.8	4311	943	309
2015	439	524	353	144.118	110.158	178.079	3806	874	262
Average	199	303	96	179	207	151	4898	1860	496

## Sources and references

ICES. 2011. Report of the Benchmark Workshop on Flatfish (WKFLAT), 1–8 February 2011, Copenhagen, Denmark. ICES CM 2011/ACOM:39. 257 pp.

ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM 68. 42 pp.

ICES. 2015. Report of the Working Group for the Celtic Seas Ecoregion (WGCSE), 12–21 May 2015, Copenhagen, Denmark. ICES CM 2015/ACOM:12.

ICES. 2016. Working Group on Southern Horse Mackerel, Anchovy and Sardine (WGHANSA), 24–29 June 2016, Lorient, France. ICES CM 2016/ACOM:17.

ICES. 2016a. General context of ICES advice. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.