

Year	ICES advice	Catch corresponding to advice	Official landings in subareas 8 and 9	ICES catch*
2015	Reduce F to the 2002–2007 level adjusted to low biomass	< 16000	20595	20595
2016**	Management plan	≤ 12000	22704	22704
2017	Management plan	≤ 23000	21911	21911
2018	MSY approach	0	15062	15062
2019	MSY approach	0		
2020	MSY approach	≤ 4142		

n/a = not available.

^ No official TAC is set for this stock.

* Includes only divisions 8.c and 9.a.

** Catch advice for 2016 updated in July 2016.

History of the catch and landings

Table 8 Sardine in divisions 8.c and 9.a. Catch distribution by fleet in 2018 as estimated by ICES

Catch	Landings		TAC cards
	Purse-seine 99%	Other gear types 1%	
15062 tonnes	15062 tonnes		0 (0%) TAC carding is considered negligible

Table 9 Sardine in divisions 8.c and 9.a. History of ICES catch; values are presented by area. All weights are in tonnes.

Year	8.c	9.a North	9.a Central North	9.a Central South	9.a South	Algarve	9.a Sardinia	Total 9.a	Total catch (8.c and 9.a)
1940	66816		42132	33275		23724		99131	165947
1941	27801		26599	34423		9391		70413	98214
1942	47208		40969	31957		739		81665	128873
1943	46348		85692	31022		15871		132925	179273
1944	76147		88643	30035		8450		128228	204375
1945	67998		64313	30289		7426		109028	177026
1946	32280	1231	68787	26430		12237		107454	139734
1947	43459	21855	55407	15003		15667		117932	161391
1948	10945	17320	50288	12060		10674		95342	106287
1949	11519	19504	37803	12000		8952		78401	89920
1950	13201	27121	40008	17025		17963		109497	122698
1951	12713	27959	43000	15056		19269		106190	118903
1952	7765	30485	40930	22687		25331		119441	127206
1953	4969	27569	30145	16969		12051		124734	129703
1954	8836	28816	302467	25736		24084		141103	149939
1955	6851	30804	55600	15191		21150		122763	129614
1956	12000	15614	58100	24069		14475		126286	138360
1957	15024	30070	50036	20231		15010		148307	163931
1958	129743	10143	92790	33937		12554		180424	210167
1959	12005		87845	23754		11680		159334	201339
1960	10044	60713	83331	24384		24062		192490	230734
1961	51200	59570	96105	22872		16528		195075	246287
1962	28891	46381	77701	29643		23528		177253	206144
1963	33796	19179	86859	17595		12397		168830	202626
1964	36390	40897	108065	27636		22035		198633	235023
1965	31732	47036	82354	35003		18797		183190	214922
1966	32196	44154	66929	34153		20855		166091	198287
1967	23480	45595	64210	31576		16635		158016	181496
1968	24690	51828	46215	16671		14993		129707	154397
1969	38254	40732	37782	13852		9350		101716	139970
1970	28934	32306	37608	12989		14257		97160	126094
1971	41691	48637	36728	16917		16534		118816	160507
1972	33800	45275	34889	18007		19200		117371	151171
1973	44768	18523	46984	27688		19570		112765	157533
1974	34536	13894	36339	18717		14244		83194	117730

Year	8.c	9.a North	9.a Central North	9.a Central South	9.a South Algarve	9.a South Cadiz	Total 9.a	Total catch (8.c and 9.a)
1975	50260	12236	54819	19295	16714		103064	153324
1976	51901	10140	43435	16548	12538		82661	134562
1977	36149	9782	37064	17496	20745		85087	121236
1978	43522	12915	34246	25974	23333	5619	102087	145609
1979	18271	43876	39651	27532	24111	3800	138970	157241
1980	35787	49593	59290	29433	17579	3120	159015	194802
1981	35550	65330	61150	37054	15048	2384	180967	216517
1982	31756	71889	45865	38082	16912	2442	175190	206946
1983	32374	62843	33163	31163	21607	2688	151463	183837
1984	27970	79606	42798	35032	17280	3319	178035	206005
1985	25907	66491	61755	31535	18418	4333	182532	208439
1986	39195	37960	57360	31737	14354	6757	148168	187363
1987	36377	42234	44806	27795	17613	8870	141119	177696
1988	40944	24005	52779	27420	13393	2911	120596	161531
1989	29856	16179	52585	26783	11723	3811	111103	140961
1990	27500	19253	52212	24723	19238	6500	121926	149429
1991	20735	14383	44379	26150	22106	6334	111108	132587
1992	26160	16579	41681	29968	11666	2996	104090	130250
1993	24486	23905	47284	29995	13160	3660	118009	142495
1994	22181	16151	49136	30390	14942	3787	114401	136582
1995	19538	13928	41444	27270		3911	105742	125280
1996	14423	11251	34761	31117	19880	3504	102313	116736
1997	15587	12291	34156	25863	21137	6780	100227	115814
1998	16177	3263	32584	29564	20743	6594	92747	108924
1999	11862	2563	31574	21747	1499	7846	82229	94091
2000	11697	2866	23311	23111	19125	5081	74089	85786
2001	16798	8398	32726	21119	13350	5066	85159	101957
2002	15885	4562	33585	21169	9982	11689	83787	99673
2003	16436	6383	33293	24635	8600	8484	81395	97831
2004	18306	8573	29488	24370	8107	9176	79714	98020
2005	19800	11663	25696	21119	7175	8391	77545	97345
2006	15377	10856	30111	19611	5798	5779	71646	87023
2007	13380	12402	41110	19142	4266	6188	83088	96469
2008	13636	9409	43110	20858	4928	7423	87828	101464
2009	11963	7226	36211	20838	4785	6716	75777	87740
2010	13772	7409	29923	17623	5181	4662	75798	89571
2011	8536	5621	27152	13685	6387	9023	71867	80403
2012	13090	4154	19611	9045	2891	6031	41768	54857
2013	5211	128	15011	9084	4112	10157	40546	45818
2014	1144	24	11159	6747	2398	5635	23593	27937
2015	1916	146	7117	4848	1812	2956	18679	20595
2016	2886		7695	4031	1972	3233	19818	22704
2017	1151	2225	5182	6676	2836	2741	19660	21911
2018	2111	856	3579	4759	1400	1704	12298	15062

Summary of the assessment

Table 10 Sardine in divisions 8.c and 9.a. Assessment summary. High and low refer to 95% confidence intervals. Weights are in tonnes. Recruitment in thousands.

Year	Recruitment (age 0)	High	Low	Biomass 1+	High	Low	Catch	F (ages 2–5)	High	Low
	thousands			tonnes					High	Low
1978	3624250	4841636	2406864	518822	680496	357148	145609	0.36	0.51	0.22
1979	4227470	5600470	2854470	673316	883492	463140	157241	0.29	0.39	0.179
1980	4827990	6293450	3362530	846685	1099214	594156	194802	0.28	0.38	0.183
1981	2989030	4040242	1937818	1015720	1302335	729105	216517	0.27	0.36	0.181
1982	1609180	2371478	8468820	945084	1214869	675299	206946	0.26	0.34	0.180
1983	7143880	8672950	5614810	747440	975496	519384	183837	0.26	0.33	0.181
1984	2129310	2911080	1347540	1164110	1408866	919354	206005	0.27	0.32	0.181
1985	1862450	2520840	1204060	988079	1188850	787308	208439	0.23	0.28	0.179
1986	1583910	2180220	9876000	798402	960668	636136	187363	0.28	0.36	0.20
1987	3446380	4281912	2610848	644304	780111	508497	177696	0.32	0.40	0.23
1988	1868820	2462678	1274962	709989	842665	577313	161531	0.40	0.50	0.30
1989	1784260	2345642	1222878	628637	747876	509398	140001	0.37	0.47	0.29
1990	1868320	2447318	1289322	566040	675383	456697	139429	0.41	0.51	0.32
1991	5467080	6427298	4506862	520811	627635	413987	125870	0.38	0.48	0.29
1992	3722080	4462176	2981984	856792	994462	719122	170000	0.28	0.35	0.22
1993	1632040	2095448	1168632	968246	1104988	830004	142000	0.27	0.33	0.22
1994	1421190	1803538	1038842	816536	932575	700497	136582	0.23	0.27	0.189
1995	1114900	1419898	8099020	677501	774785	500217	120000	0.23	0.27	0.191
1996	1592670	1939772	1245568	543504	624021	400000	110000	0.31	0.37	0.25
1997	1071960	1354562	7893580	482795	550000	411000	80000	0.41	0.49	0.34
1998	1365630	1683532	1047728	391648	441100	291178	108924	0.46	0.55	0.37
1999	1054630	1347208	7620520	260890	378840	230000	94091	0.42	0.51	0.33
2000	3253000	3821676	2684324	320000	380900	210000	85786	0.37	0.45	0.29
2001	2015990	2459630	1572350	484000	560000	390910	101957	0.35	0.43	0.28
2002	1137170	1461610	8127300	498807	576100	421481	99673	0.29	0.36	0.23
2003	8914620	1189708	5932160	200000	204930	397891	97831	0.26	0.31	0.21
2004	3787030	4333168	3240897	414000	480000	342941	98020	0.29	0.34	0.23
2005	1319500	1611778	1027000	554549	637376	471722	97345	0.29	0.34	0.23
2006	4232770	5723758	2741780	649776	734336	565216	87023	0.172	0.21	0.136
2007	5814750	7390090	4000410	512150	579595	444721	96469	0.21	0.24	0.174
2008	7488680	9148820	5820000	200000	450635	343225	101464	0.32	0.38	0.27
2009	8573320	10178000	6000000	290000	339887	256407	87740	0.37	0.44	0.30
2010	4900000	6073100	3743182	250130	283900	216362	89571	0.46	0.56	0.37
2011	4000000	5081310	3034920	179827	207147	152507	80403	0.56	0.68	0.44
2012	3801400	4086100	2000000	133528	158416	108640	54857	0.44	0.55	0.34
2013	4803060	5973528	3632592	123001	148353	97649	45818	0.42	0.53	0.31
2014	3594570	4000000	2533334	126071	154820	97322	27937	0.27	0.35	0.192
2015	4000000	7947440	4480060	117929	147291	88567	20595	0.168	0.22	0.118
2016	7500000	1024635	5607950	145603	181710	109496	22704	0.170	0.22	0.120
2017	2851000	4110210	1592610	178627	224611	132643	21911	0.148	0.194	0.103
2018	5157800	7593700	2721900	160898	206212	115584	15062	0.086	0.112	0.059
2019	4820903 *			179410	233958	124862				

* Geometric mean (2014–2018).

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