

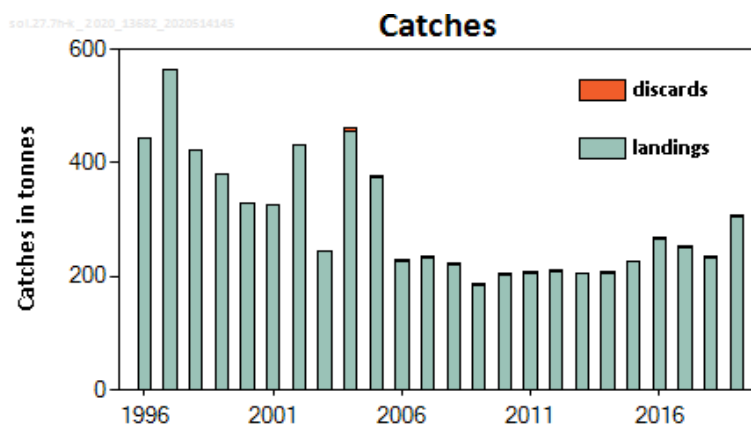
## Sole (*Solea solea*) in divisions 7.h–k (Celtic Sea South, southwest of Ireland)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, catches in 2021 should be no more than 213 tonnes.

### Stock development over time

The state of the stock is unknown. Catches have been stable since 2006.



**Figure 1** Sole in divisions 7.h–k. ICES estimated catches. Discard estimates are available from 2004.

### Stock and exploitation status

ICES cannot assess the stock and the exploitation status relative to maximum sustainable yield (MSY) and precautionary approach (PA) reference points, because the reference points are undefined.

**Table 1** Sole in divisions 7.h–k. State of the stock and the fishery relative to reference points.

		Fishing pressure				Stock size			
		2017	2018	2019		2017	2018	2019	
Maximum sustainable yield	$F_{MSY}$	?	?	?	Unknown	$MSY B_{trigger}$	?	?	?
Precautionary approach	$F_{pa} \cdot F_{lim}$	?	?	?	Unknown	$B_{pa} \cdot B_{lim}$	?	?	?
Management plan	$F_{MGT}$	?	?	?	Unknown	$B_{MGT}$	?	?	?

### Catch scenarios

The ICES framework for category 5 stocks was applied (ICES, 2012). For stocks without information on abundance or exploitation, ICES considers that a precautionary reduction of catches should be implemented where there is no ancillary information clearly indicating that the current level of exploitation is appropriate for the stock. The precautionary buffer was applied in 2019 and has been applied again as the stock was downgraded after a benchmark in 2020 (ICES, 2020a). Discarding is considered negligible.

**Table 2** Sole in divisions 7.h–k. The basis for the catch options.

Average catch (2017–2019)			266 tonnes
Discard rate			< 1%
Precautionary buffer	Applied		0.8
Catch advice *			213 tonnes

\* [Average catch (2017–2019)] × [precautionary buffer].

## Basis of the advice

**Table 3** Sole in divisions 7.h–k. The basis of the advice.

Advice basis	Precautionary approach
Management plan	The European Parliament and the Council have published a multiannual management plan (MAP) for Western Waters (EU, 2019). This plan applies to demersal stocks, including sole in ICES Division 7.h–k. The MAP stipulates that when the $F_{MSY}$ ranges are not available, the precautionary approach should be applied.

## Quality of the assessment

This stock was benchmarked in 2020 to address the inclusion of available new landings-at-age data for the Division 7.h component, fishery-independent indices, and to consider stock identity (ICES, 2020a). The benchmark concluded that there was no appropriate method for evaluating the stock status and trends, as the sampling only covers a small part of the total fishery, which is not considered to be representative of the whole area. Therefore, the benchmark concluded that a category 5 approach should be used to provide advice for this stock.

Misreporting is considered to be an issue for this stock; however, it remains difficult to fully quantify. In the past, deviations between official catch statistics and ICES estimates of landings may have been caused by misreporting, driven by restrictive TACs in area (divisions 7.h–k) and in adjoining areas (Division 7.e). In addition, data submitted to ICES may have been incomplete. There have been fewer such deviations since 2004, due to an improvement in the quality of the data submitted to ICES after the introduction of the EU Data Collection Regulation (EU, 2001).

There is uncertainty in stock identity.

## Issues relevant for the advice

There are no issues relevant for the advice.

## Reference points

No reference points are defined for this stock.

## Basis of the assessment

**Table 4** Sole in divisions 7.h–k. Basis of the assessment and advice.

ICES stock data category	5 ( <a href="#">ICES, 2019</a> )
Assessment type	No assessment.
Input data	ICES estimated catch.
Discards and bycatch	Considered negligible.
Indicators	None.
Other information	Last benchmark in 2020 (ICES, 2020a).
Working group	Working Group for the Celtic Seas Ecoregion ( <a href="#">WGCSE</a> ).

## Information from stakeholders

There is no additional available information.

## History of the advice, catch, and management

**Table 5** Sole in divisions 7.h–k. History of ICES advice, agreed TAC, official landings, and ICES estimated landings and discards. All weights are in tonnes.

Year	ICES advice	Catch corresponding to advice	Agreed TAC	Official landings	ICES landings	ICES discards
1996	No advice	-	-	825	443	
1997	No advice	-	-	742	564	
1998	No advice	-	-	759	423	
1999	No advice	-	-	406	381	
2000	No advice	-	-	302	329	
2001	No advice	-	650	347	325	
2002	No advice	-	650	515	430	
2003	Reduce TAC to recent landings	330	390	486	245	
2004	Reduce TAC to recent average (2000–2002)	360	390	449	454	7
2005	Reduce TAC to recent average (2001–2003)	335	650	392	375	1
2006	Reduce TAC to recent average (2002–2004)	380	650	288	230	1
2007	Reduce TAC to recent average (2003–2005)	287	650	278	232	2
2008	Reduce TAC to recent average (2004–2006)	300	650	220	221	1
2009	Same advice as last year	300	553	208	188	0
2010	No advice	-	498	228	206	0
2011	No increase in catches	-	423	224	208	0
2012	No increase in catches	-	423	234	212	1
2013	Decrease catches by 8% (15% increase, followed by 20% PA reduction)	< 200	402	213	204	0
2014	Increase catches by 11%	< 252	382	242	207	0
2015	Average catch (2011–2013)	< 225	382	244	226	0
2016	Precautionary approach (decrease recent advised value by no more than 9%)	≤ 205	382	330	269	1
2017	Precautionary approach (increase recent advised value by no more than 9%)	≤ 223	382	281	250	4
2018	Precautionary approach (increase recent advised value by no more than 20%)	≤ 268	382	282 *	235	1
2019	Precautionary approach (decrease recent advised value by no more than 32%)	≤ 311	382	288 *	308	1
2020	Precautionary approach	≤ 213	329			
2021	Precautionary approach	≤ 213				

\* Preliminary.

## History of the catch and landings

**Table 6** Sole in divisions 7.h–k. Catch distribution by fleet in 2019 as estimated by ICES.

Catch	Landings			Discards
309 tonnes	Otter trawl 60%	Beam trawl 39%	Other 1%	1 tonne
	308 tonnes			

**Table 7** Sole in divisions 7.h–k. History of official landings by country, ICES unallocated and estimated values. All weights are in tonnes.

Year	Official landings						Unallocated	ICES landings
	Belgium	France	UK	Ireland	Other countries	Total		
1951	21	150	91	56	0	318		
1952	37	220	88	44	0	389		
1953	23	227	100	54	0	404		
1954	13	317	167	75	0	572		
1955	125	634	174	65	0	998		
1956	251	511	98	64	0	924		
1957	454	359	86	67	0	966		
1958	397	605	72	88	0	1162		
1959	241	576	61	101	0	979		
1960	0	506	48	96	0	650		
1961	197	525	61	110	0	893		
1962	144	397	31	123	0	695		
1963	149	502	25	127	0	803		
1964	310	578	34	118	0	1040		
1965	335	1128	15	123	0	1601		
1966	123	0	36	118	0	277		
1967	168	474	20	123	0	785		
1968	113	474	29	116	0	732		
1969	175	633	23	120	0	951		
1970	436	537	19	122	0	1114		
1971	394	1382	4	93	0	1873		
1972	203	1011	11	131	7	1363		
1973	406	390	6	108	4	914		
1974	369	143	5	116	15	648		
1975	210	207	24	97	2	540		
1976	638	19	11	152	33	853		
1977	519	103	12	126	140	900		
1978	290	23	11	73	60	457		
1979	384	29	18	109	0	540		
1980	522	27	42	162	0	753		
1981	576	107	83	195	0	961		
1982	471	104	108	172	0	855		
1983	411	176	129	176	51	943		
1984	474	120	151	156	194	1095		
1985	318	25	200	201	280	1024		
1986	442	38	261	188	3	932		
1987	271	44	193	168	0	676		
1988	254	53	166	182	0	655		
1989	252	84	177	206	0	719		
1990	353	66	144	266	0	829		
1991	358	55	234	306	0	953		
1992	312	43	217	255	0	827		
1993	317	44	214	237	0	812		
1994	338	42	174	184	0	738		
1995	433	47	192	243	0	915		
1996	375	50	148	182	70	825	–382	443
1997	368	58	113	203	0	742	–178	564
1998	346	74	111	221	7	759	–336	423
1999	101	0	97	207	1	406	–25	381
2000	8	78	95	111	10	302	27	329
2001	13	99	111	124	0	347	–22	325
2002	154	108	124	129	0	515	–85	430
2003	170	133	78	105	0	486	–241	245
2004	157	102	79	111	0	449	5	454
2005	90	93	112	97	0	392	–17	375

Year	Official landings						Unallocated	ICES landings
	Belgium	France	UK	Ireland	Other countries	Total		
2006	36	99	88	63	1	288	-58	230
2007	31	79	91	77	0	278	-46	232
2008	10	58	80	72	0	220	1	221
2009	11	79	58	61	0	208	-20	188
2010	20	87	51	71	0	228	-22	206
2011	10	95	54	65	0	224	-16	208
2012	18	85	46	85	0	234	-22	212
2013	4	76	47	85	0	213	-9	204
2014	42	61	54	85	0	242	-35	207
2015	40	74	53	77	0	244	-18	226
2016	91	77	63	99	0	330	-61	269
2017	75	81	39	86	0	281	-31	250
2018 *	96	91	33	61	1	282	-47	235
2019 *	75	88	48	70	8	288	20	308

\* Preliminary.

### Summary of the assessment

There is no assessment for sole in this area.

### Sources and references

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