

Sprat (*Sprattus sprattus*) in divisions 7.d and 7.e (English Channel)

ICES stock advice

ICES advises that when the precautionary approach is applied, catch in 2018 should be no more than 2354 tonnes.

Stock development over time

The acoustic survey declined in 2015, and decreased significantly in 2016. The harvest rate index increased in 2016 due to a drop in the biomass index, while catches remained stable.

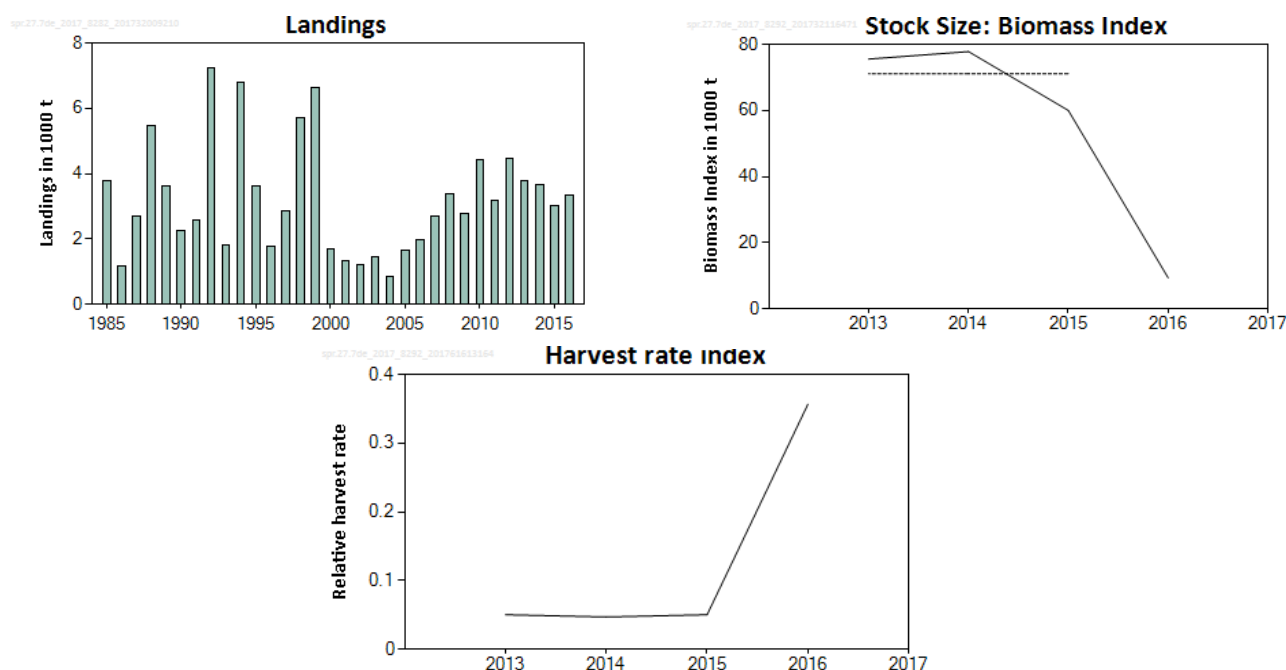


Figure 1 Sprat in divisions 7.d and 7.e. Summary of the stock assessment. Upper left, ICES estimated landings (in thousand tonnes). Discards are not shown and are considered negligible. Upper right, stock size index of acoustic biomass estimates (1000 tonnes) with dashed horizontal line that reflects the Index Ratio value. Lower left, harvest rate index (ratio between landings and PELTIC survey acoustic biomass estimate) for Division 7.e only.

Stock and exploitation status

Table 1 Sprat in divisions 7.d and 7.e. State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size				
		2014	2015	2016		2014	2015	2016		
Maximum sustainable yield	F_{MSY}	?	?	?	Undefined	$MSY_{B_{Trigger}}$?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Undefined	B_{pa}, B_{lim}	?	?	?	Undefined
Management plan	F_{MGT}	—	—	—	Not applicable	SSB_{MGT}	—	—	—	Not applicable
Qualitative evaluation	-	→	→	↗	Increasing	Qualitative evaluation	→	↘	↘	Decreasing

Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The acoustic biomass estimates were applied as the index of stock development. The advice is based on a comparison of the latest value (index A) with the three preceding values (index B), multiplied by the recent advised catch.

The biomass index is estimated to have decreased by more than 20% and thus the uncertainty cap was applied. The stock status relative to candidate reference points is unknown. The precautionary buffer was last applied in 2013. Since a decreasing trend in the biomass index is observed, the precautionary buffer was re-applied this year.

Table 2 Sprat in divisions 7.d and 7.e. The basis for the catch options.*

Index A (2016)	9362 tonnes	
Index B (2013–2015)	71 119 tonnes	
Index ratio (A/B)	0.132	
Uncertainty cap	Applied	0.8
Advised catch for 2017	3678 tonnes	
Discard rate	Negligible	
Precautionary buffer	Applied	0.8
Catch advice**	2354 tonnes	

* The figures in the table are rounded. Calculations were done with unrounded inputs and computed values may not match exactly when calculated using the rounded figures in the table.

** [(advice for 2017 × uncertainty cap) × precautionary buffer]

Basis of the advice

Table 3 Sprat in divisions 7.d and 7.e. The basis of the advice.

Advice basis	Precautionary approach
Management plan	There is no management plan for sprat in this area.

Quality of the assessment

The advice is based on biomass estimates from the acoustic survey, available for 2013–2016 (ICES, 2017b). The uncertainty associated with the estimated biomass is not currently available.

The stock structure of sprat populations in the Celtic Seas Ecoregion is unknown, and currently the acoustic survey covers only part of the potential distribution of this stock in the area (only division 7e). An extension of the survey to Division 7.d is foreseen for 2017, with the aim of investigating the issue.

Issues relevant for the advice

There is no information to present for this stock.

Reference points

No reference points have been defined for this stock.

Basis of the assessment

Table 5 Sprat in divisions 7.d and 7.e. Basis of assessment and advice.

ICES stock data category	3 (ICES, 2016)
Assessment type	Biomass trend (ICES, 2017)
Input Data	Acoustic survey biomass estimates (PELTIC) (2013–2016) and landings statistics
Discards and bycatch	Discards not included and are considered negligible.
Indicators	Harvest rate
Other information	This stock was benchmarked in WKSPRAT (ICES, 2013). The basis for the advice was changed in 2016 to include biomass index, and the LPUE was excluded.
Working group	Herring Assessment Working Group for the Area South of 62°N (HAWG)

Information from stakeholders

No additional information was available.

History of the advice, catch, and management

Table 6 Sprat in divisions 7.d and 7.e. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Predicted catch corresponding to advice	Agreed TAC	Official landings	ICES catch
1987	No advice	-	5000	2700	2700
1988	No advice	-	5000	5500	5500
1989	No advice	-	12 000	3400	3600
1990	No advice	-	12 000	2100	2200
1991	No advice	-	12 000	2600	2600
1992	No advice	-	12 000	1800	7200
1993	No advice	-	12 000	1800	1800
1994	No advice	-	12 000	3200	6800
1995	No advice	-	12 000	1500	3600
1996	No advice	-	12 000	1800	1800
1997	No advice	-	12 000	1600	2900
1998	No advice	-	12 000	2000	5700
1999	No advice	-	6300	3600	6600
2000	No advice	-	12 000	1700	1700
2001	No advice	-	12 000	1300	1300
2002	No advice	-	12 000	1200	1200
2003	No advice	-	9600	1400	1400
2004	No advice	-	9600	800	0800
2005	No advice	-	7700	1600	1600
2006	No advice	-	6100	2000	2000
2007	No advice	-	6100	1800	2700
2008	No advice	-	6100	3400	3400
2009	No advice	-	6100	2800	2800
2010	No advice	-	5500	4400	4400
2011	No advice	-	5400	3100	3100
2012	Reduce catches	-	5100	4400	4400
2013	20% reduction in catches (last 3-year average)	< 2800	5150	3800	3800
2014	Decrease catches by 4% (20% increased followed by a 20% precautionary reduction)	< 3832	5150	3700	3700
2015	Same advice as last year	< 3832	5150	3000	3000
2016	Precautionary approach (increase catches by no more than 20%)	< 4598	5150	3000	3000
2017	Precautionary approach	≤ 3678	4120	3149	3339
2018	Precautionary approach	≤ 2354			

History of the catch and landings

Table 7 Sprat in divisions 7.d and 7.e. Catch distribution by fleet in 2016 as estimated by ICES.

Catch (2017)	Landings	Discards
3339 tonnes	100 % mid-water trawl	negligible
	3339 tonnes	

Table 8 Sprat in divisions 7.d and 7.e. History of ICES catch and landings are presented for each country participating in the fishery. All weights are in tonnes.

Year	Denmark	France	Netherlands	Germany	UK (England, Wales, Northern Ireland)	UK (Scotland)	Total
1985	0	14	0	0	3771	0	3785
1986	15	0	0	0	1163	0	1178
1987	250	23	0	0	2441	0	2714
1988	2529	2	1	0	2944	0	5476
1989	2092	10	0	0	1520	0	3622
1990	608	79	0	0	1562	0	2249
1991	0	0	0	0	2567	0	2567
1992	5389	35	0	0	1791	0	7215
1993	0	3	0	0	1798	0	1801
1994	3572	1	0	0	3176	40	6789
1995	2084	0	0	0	1516	0	3600
1996	0	2	0	0	1789	0	1791
1997	1245	1	0	0	1621	0	2867
1998	3741	0	0	0	1973	0	5714
1999	3064	0	1	0	3558	0	6623
2000	0	1	1	0	1693	0	1695
2001	0	0	0	0	1349	0	1349
2002	0	0	0	0	1196	0	1196
2003	0	2	72	0	1368	0	1442
2004	0	6	0	0	836	0	842
2005	0	0	0	0	1635	0	1635
2006	0	7	0	0	1969	0	1976
2007	0	0	0	0	2706	0	2706
2008	0	0	0	0	3367	0	3367
2009	0	2	0	0	2773	0	2775
2010	0	2	0	0	4408	0	4410
2011	0	1	37	0	3138	0	3176
2012	6	2	8	0	4458	0	4474
2013	0	0	0	0	3793	0	3793
2014	45	0	275	0	3338	0	3658
2015	0	1	352	0	2659	0	3012
2016	185	7	231	49	2867	0	3339

Summary of the assessment

Table 9 Sprat in divisions 7.d and 7.e. Assessment summary. Weights are in tonnes.

Year	Biomass index	Landings	Harvest rate
1985		3785	
1986		1178	
1987		2714	
1988		5476	
1989		3622	
1990		2249	
1991		2567	
1992		7215	
1993		1801	
1994		6789	
1995		3600	
1996		1791	
1997		2867	
1998		5714	
1999		6623	
2000		1695	
2001		1349	
2002		1196	
2003		1442	
2004		842	
2005		1635	
2006		1976	
2007		2706	
2008		3367	
2009		2775	
2010		4410	
2011		3176	
2012		4474	
2013	75 546	3793	0.05
2014	77 800	3658	0.047
2015	60 011	3012	0.05
2016	9362	3339	0.357

Sources and references

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

ICES. 2013. Advice for Sprat in Divisions VII d,e. *In* Report of the ICES Advisory Committee, 2013. ICES Advice 2013, Book 5, Section 5.4.40. <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2013/2013/spr-ech.pdf>

ICES. 2016. Advice basis. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.

ICES 2017. Report of the Herring Assessment Working Group for the Area South of 62°N (HAWG) 15–22 March 2017. ICES CM 2017/ACOM:07.