

Brill (*Scophthalmus rhombus*) in subdivisions 22–32 (Baltic Sea)

ICES stock advice

ICES advises that when the precautionary approach is applied, catches in each of the years 2018 and 2019 should be no more than 11.5 tonnes. If discard rates do not change from last year (2016), this implies landings of no more than 11.4 tonnes.

Stock development over time

The survey index was highest in 2011, declined in 2012, and has remained stable since then.

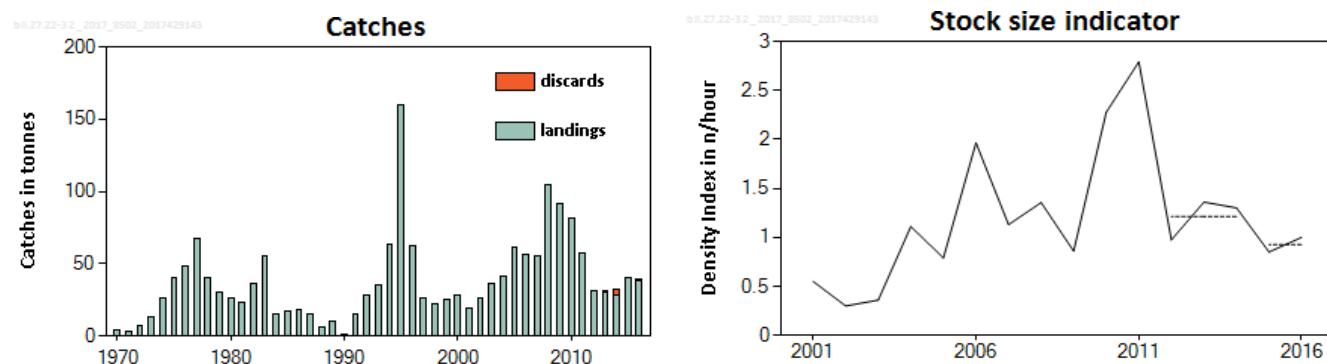


Figure 1 Brill in subdivisions 22–32. Left: landings and discards (weights in tonnes; discard data available for 2012–2016). Right: Combined abundance index (number per hour) of brill equal to or larger than 20 cm, from the Baltic International Trawl Survey (BITS – Q1 and Q4) in subdivisions 22, 23, and 24. Dashed lines denote the average cpue of the respective year range.

Stock and exploitation status

Table 1 Brill in subdivisions 22–32. 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}	?	?	?	MSY	?	?
Precautionary approach	F_{pa} F_{lim}	?	?	?	B_{pa} , B_{lim}	?	?
Management plan	F_{MGT}	-	-	-	SSB_{MGT}	-	-
Qualitative evaluation	-	→	→	→	-	→	→
				Undefined			Undefined
				Undefined			Undefined
				Not applicable			Not applicable
				Stable			Stable

Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The Baltic International Trawl Survey (BITS–Q1+Q4) cpue (number per hour) is used as the index of stock development. The advice is based on a comparison of the two latest index values (index A) with the three preceding values (index B), multiplied by the recent advised catch.

The index is estimated to have decreased by more than 20% and thus the uncertainty cap was applied in estimating the catch advice. The stock status relative to candidate reference points is unknown. The precautionary buffer was last applied in 2013. Because there is no information on stock size or fishing pressure, the precautionary buffer was applied again in 2017.

Table 2 Brill in subdivisions 22–32. For stocks in ICES data categories 3–6, one catch option is provided.*

Index A (2015, 2016)		0.9
Index B (2012, 2013, 2014)		1.2
Index ratio (A/B)		0.77
Uncertainty cap	Applied	0.80
Advised catch for 2017		18 t
Discard rate (2016)		1%
Precautionary buffer	Applied	0.8
Catch advice**		11.5 t
Landings corresponding to the advised catch***		11.4 t

* 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.

*** catch advice × (1 – discard ratio).

Basis of the advice

Table 3 Brill in subdivisions 22–32. The basis of the advice.

Advice basis	Precautionary approach
Management plan	Bycatch of this species is considered in an EU multiannual plan for Baltic Sea stocks (EU, 2016).

Quality of the assessment

The advice is based on a combined abundance index from two surveys, used as an indicator of stock size. The index is considered uncertain due to the low catch rate in the surveys.

Issues relevant for the advice

Catches are mainly taken as bycatch, and this stock is currently not regulated by a TAC. Fishing effort of active and passive gears of Denmark and Germany has been stable in later years.

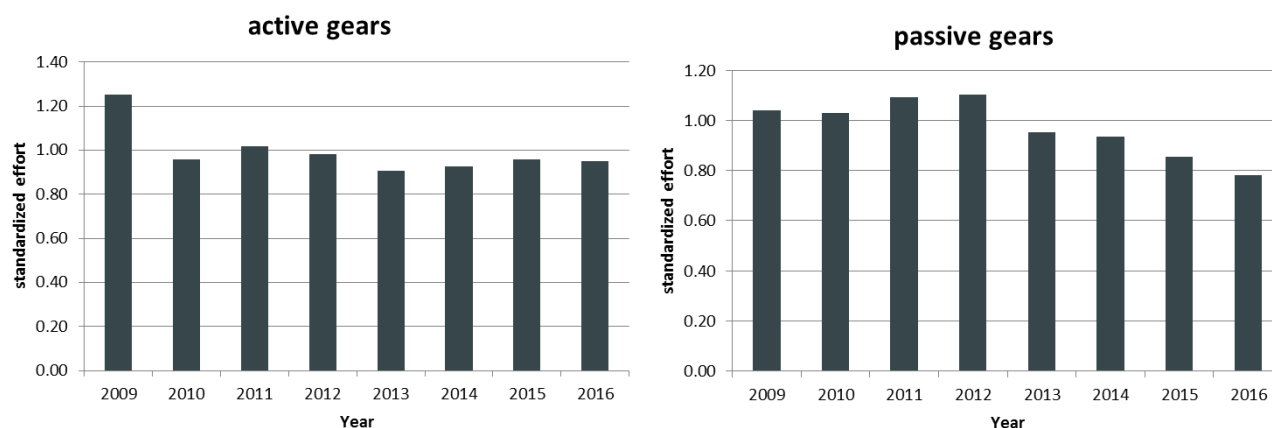


Figure 2 Brill in subdivisions 22–32. Reported effort (days at sea) of Denmark and Germany in subdivisions 22 and 24.

Reference points

No reference points are defined for this stock. An attempt was made this year to calculate MSY proxy reference points for this stock. However, there were concerns on the quality of the input parameters for the analysis and further investigation is needed (ICES, 2017).

Basis of the assessment

Table 4 Brill in subdivisions 22–32. Basis of the assessment and advice.

ICES stock data category	3 (ICES, 2016)
Assessment type	Survey trends (ICES, 2017).
Input data	Commercial catches and survey data from the Baltic International Trawl Survey (BITS–Q1+Q4).
Discards and bycatch	Discard data from 2012 and forward are included in the assessment.
Indicators	Commercial effort
Other information	None
Working group	Baltic Fisheries Assessment Working Group (WGBFAS)

Information from stakeholders

There is no available information.

History of the advice, catch, and management

Table 5 Brill in subdivisions 22–32. ICES advice and official landings. All weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	Agreed TAC	Landings (ICES estimates)	Catches (ICES estimates)
2000	No advice	-	-	28	
2001	No advice	-	-	19	
2002	No advice	-	-	27	
2003	No advice	-	-	36	
2004	No advice	-	-	41	
2005	No advice	-	-	62	
2006	No advice	-	-	56	
2007	No advice	-	-	56	
2008	No advice	-	-	105	
2009	No advice	-	-	92	
2010	No advice	-	-	82	
2011	No advice	-	-	57	
2012	Catches should not be increased	-		30	31
2013	No more than 20% catch increase	< 68		31	32*
2014	Decrease catches by 4% (20% increase, followed by 20% PA reduction)	< 29		28	32*
2015	Same advice as last year	< 29		40	40
2016	Precautionary approach (20% decrease in previous advised catch)	≤ 23		39	39*
2017	Precautionary approach (20% decrease in previous advised catch)	≤ 18			
2018	Precautionary approach (36% decrease relative to the advised catch for 2017)	≤ 11.5			
2019	Precautionary approach (36% decrease relative to the advised catch for 2017)	≤ 11.5			

* Version 2: Value corrected.

History of the catch and landings

Table 6 Brill in subdivisions 22–32. Catch distribution by fleet in 2016 as estimated by ICES.

Total catch (2016)	Landings	Discards
39 t	bycatch in trawl and gillnet fisheries	0.4 t
	38.6 t	

Table 7 Brill in subdivisions 22–32. History of commercial catch and landings; both the official and ICES estimated values are presented by area for each country participating in the fishery. All weights are in tonnes.

Year	Denmark landings			Germany (FRG) landings	Sweden landings			Total landings			ICES discards	Total catch
	SD 22	SD 23	SDs 24–28	SD 22	SD 23	SDs 24–28	SD 22	SD 23	SDs 24–28	SDs 22–28	SDs 22–28	SDs 22–28
1970	4						4	0	0			4
1971	3						3	0	0			3
1972	7						7	0	0			7
1973	11		2				11	0	2			13
1974	25		1				25	0	1			26
1975	38		1	1			39	0	1			40
1976	45		1	2			47	0	1			48
1977	60		2	5			65	0	2			67
1978	37			3			40	0	0			40
1979	30						30	0	0			30
1980	26						26	0	0			26
1981	22			1			23	0	0			23
1982	19					17	19	0	17			36
1983	13					42	13	0	42			55
1984	12					3	12	0	3			15
1985	16					1	16	0	1			17
1986	15					3	15	0	3			18
1987	12					3	12	0	3			15
1988	5					1	5	0	1			6
1989	9					1	9	0	1			10
1990						1	0	0	1			1
1991	15						15	0	0			15
1992	28						28	0	0			28
1993	29	5	1				29	5	1			35
1994	57	4	1			1	57	4	2			63
1995	134	12	1		5	8	134	17	9			160
1996	56	6					56	6	0			62
1997	25				1		25	1	0			26
1998	21				1		21	1	0			22
1999	24				1		24	1	0			25
2000	27				1		27	1	0			28
2001	19						19	0	0			19
2002	25		0		1		25	1	0			27*
2003	35		1		0		35	0	1			36
2004	39		1		1	0	39	1	1			41
2005	50	9	3		0	0	50	9	3			62
2006	42	9	2	3	0	0	45	9	2			56
2007	50			5	0	0	55	0	0			56
2008	81	9	3	11	1	1	92	10	3			105
2009	70	7	2	11	1	0	82	8	3			92*
2010	65	4	1	10	0	0	76	5	1			82
2011	46	5	1	4	1	0	50	6	1			57
2012	24	4	0	2	1	0	26	4	0	0**		31*
2013	24	6	0	1	1	0	25	7	0	0**		31*
2014	19	5	0	2	1	0	21	6	0	4		32*
2015	29	7	0	3	1	0	32	8	0	0		40
2016	28	8	0	2	1	0	29	9	1	0.4		39

* Discrepancies between total catches (subdivisions 22–28) and catches per subdivision result from rounding.

** Discard estimates were less than 1% in 2012 and 2013.

Summary of the assessment

Table 8 Brill in subdivisions 22–32. Combined abundance index of brill equal to or larger than 20 cm, from the Baltic International Trawl Survey (BITS – Q1 and Q4) in subdivisions 22, 23, and 24. The individual indices are weighted averages per depth stratum area and the two indices are combined using the arithmetic mean.

Year	cpue, SDs 22–24
2001	0.5
2002	0.3
2003	0.4
2004	1.1
2005	0.8
2006	2.0
2007	1.1
2008	1.4
2009	0.9
2010	2.3
2011	2.8
2012	1.0
2013	1.36
2014	1.27
2015	0.85
2016	1.01

Sources and references

EU. 2016. REGULATION (EU) 2016/1139 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007. Official Journal of the European Union, L 191/1. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&rid=1>.

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