

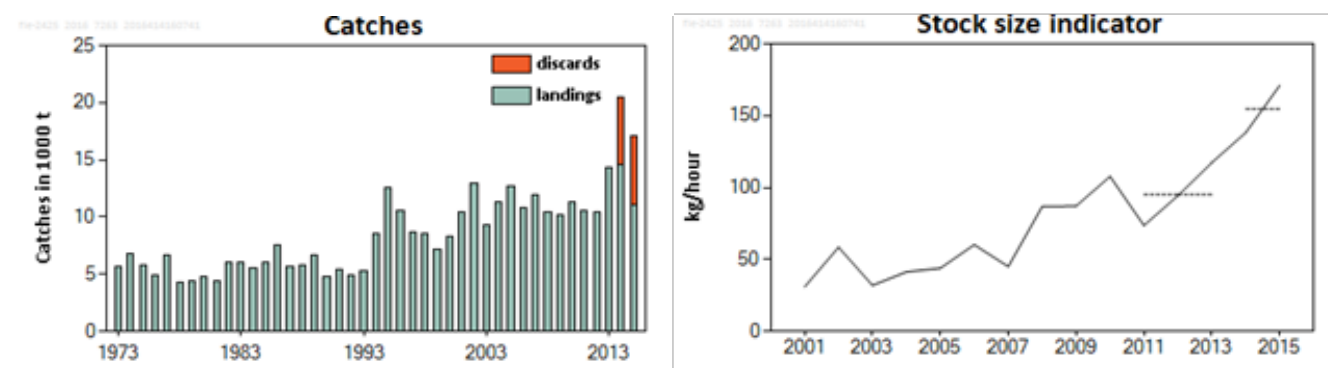
### 8.3.8 Flounder (*Platichthys flesus*) in subdivisions 24 and 25 (west of Bornholm and southwestern central Baltic)

#### ICES stock advice

ICES advises that when the precautionary approach is applied, catches in 2017 should be no more than 34 690 tonnes. If the discard rate does not change from 2015, this implies landings of no more than 22 548 tonnes.

#### Stock development over time

The biomass index from surveys has been increasing over the time-series.



**Figure 8.3.8.1** Flounder in subdivisions 24 and 25. Left panel: Catches (ICES estimates) in subdivisions (SDs) 24–25. Discard data have only been included since 2014. Right panel: Combined biomass index from the 1st and 4th quarters ( $\text{kg hr}^{-1}$ ; weighted average per depth stratum area) of fish equal to or larger than 20 cm, from the Baltic International Trawl Survey (BITS–Q1+Q4) in SDs 24–25. The dashed lines indicate the average biomass index of the respective year range.

#### Stock and exploitation status

**Table 8.3.8.1** Flounder in subdivisions 24 and 25. State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size			
		2013	2014	2015		2013	2014	2015	
Maximum sustainable yield	$F_{MSY}$	?	?	?	Undefined	$MSY B_{trigger}$	?	?	?
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	Undefined	$B_{pa}, B_{lim}$	?	?	?
Management plan	$F_{MGT}$	-	-	-	Not applicable	$SSB_{MGT}$	-	-	-
Qualitative evaluation	-	➡	➡	➡	Decreasing	-	➡	➡	➡
									Increasing

#### Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The Baltic International Trawl Survey (BITS–Q1+Q4) in SDs 24–25 was 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 increased by more than 20% and thus the uncertainty cap was applied to calculate the catch advice. The stock status relative to candidate reference points is unknown. There has been an increasing trend in the stock size indicator and the exploitation on the stock seems stable (Figure 8.3.8.2); therefore, no additional precautionary buffer was applied. Discarding is known to take place and discard rate estimates have been included since 2014.

**Table 8.3.8.2** Flounder in subdivisions 24 and 25. For stocks in ICES data categories 3–6, one catch option is provided.

Index A (2014, 2015)		155
Index B (2011, 2012, 2013)		95
Index ratio (A/B)		1.63
Uncertainty cap	Applied	1.2
Recent advised catch for 2016		28 908 t
Discard rate (2015)		0.35
Precautionary buffer	Not applied	-
Catch advice*		34 690 t
Landings corresponding to the catch advice		22 548 t

\*(Recent advised catch) × cap.

### Basis of the advice

**Table 8.3.8.3** Flounder in subdivisions 24 and 25. The basis of the advice.

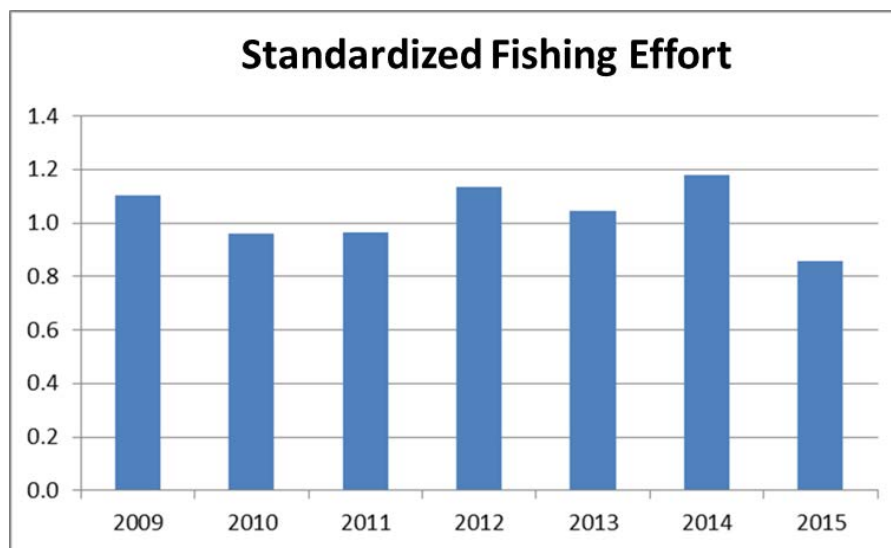
Advice basis	Precautionary approach
Management plan	There is no management plan for flounder in this area. There is a proposed EU management plan for the Baltic Sea where bycatch of this species is considered. The plan has not been formally implemented.

### Quality of the assessment

The discard ratio in both subdivisions varies between countries, gear types, and quarters. Discarding practices are controlled by factors such as market price and cod catches. Discard estimates for 2015 were used in this year's advice.

### Issues relevant for the advice

Catches are mainly taken as bycatch, and this stock is currently not regulated by a TAC.

**Figure 8.3.8.2** Flounder in subdivisions 24 and 25. Standardized fishing effort (days at sea standardized within each country and weighted by the national demersal fish landings from SDs 24–25).

### Reference points

No reference points are defined for this stock.

## Basis of the assessment

**Table 8.3.8.4** Flounder in subdivisions 24 and 25. The basis of the assessment.

ICES stock data category	3 ( <a href="#">ICES, 2016a</a> )
Assessment type	Survey trends (ICES, 2016b).
Input data	Commercial landings and survey data from the Baltic International Trawl Survey (BITS–Q1+Q4).
Discards and bycatch	Discards are used in the advice.
Indicators	Commercial effort (ICES, 2016b).
Other information	This stock was benchmarked in 2014 (WKBALFLAT; ICES, 2014).
Working group	Baltic Fisheries Assessment Working Group ( <a href="#">WGBFAS</a> )

## Information from stakeholders

There is no available information.

## History of the advice, catch, and management

**Table 8.3.8.5** Flounder in subdivisions 24 and 25. History of ICES advice, agreed TAC, and ICES landings and catches. Weights in thousand tonnes.

Year	ICES advice*	Predicted landings corresp. to advice*	Agreed TAC	Landings (ICES estimates) SDs 22–32	Landings (ICES estimates) SDs 24–25	Catches (ICES estimates) SDs 24–25
2000	No advice	-	-	14.5	8.3	
2001	No advice	-	-	17.6	10.5	
2002	No advice	-	-	19.4	13.0	
2003	No advice	-	-	15.2	9.4	
2004	No advice	-	-	18.2	11.4	
2005	No advice	-	-	20.1	12.7	
2006	No advice	-	-	17.2	10.9	
2007	No advice	-	-	19.3	11.9	
2008	No advice	-	-	16.8	10.4	
2009	No advice	-	-	15.1	10.2	
2010	No advice	-	-	16.2	11.3	
2011	No advice	-	-	15.2	10.6	
2012	No advice	-	-	15.8	10.4	
2013	Catches should be reduced by 5%	< 15.1	-	21.1	14.3	
2014	Landings should be reduced by 15%	< 13.5	-	20.6	14.6	20.5
2015	Landings should not increase more than 20%	< 17.182	-	16.8	11.1	17.1
2016	Precautionary approach (≤ 20% increase)	≤ 28.908**	-			
2017	Precautionary approach (≤ 20% increase)	≤ 34.690**				

\*Advice prior to 2015 was for flounder in subdivisions 22–32.

\*\*Catch advice.

## History of catch and landings

**Table 8.3.8.6** Flounder in subdivisions 24 and 25. Catch distribution by fleet in 2015 as estimated by ICES.

Table 2: Total catch and discards by gear type and species, 2015			
Total catch (2015)	Landings		Discards
	Trawls (83%)	Passive gears (17%)	
	11 090 t		

**Table 8.3.8.7** Flounder in subdivisions 24 and 25. Historical landings (ICES estimates) are presented by area for each country participating in the fishery. Weights in tonnes.

Year	Denmark			Estonia			Finland			Germany			Latvia			Lithuania			Poland			Sweden			Total
	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SDs 24–25
1973			386									3144									1580			502	5612
1974			2578									2139									1635			470	6822
1975			1678									1876									1871			400	5825
1976			482									2459									1549			400	4890
1977			389									3808									2071			416	6684
1978			415									2573									996			346	4330
1979			405									2512									1230			315	4462
1980			286									2776									1613			62	4737
1981			548									2596									1151			51	4346
1982			257									3203									2484			55	5999
1983			450									3573									1828			180	6031
1984			306									2720									2471			45	5542
1985			649									3257									2063			40	6009
1986			1558									2848									3030			51	7487
1987			1007									2107									2530			43	5687
1988			990									2986									1728			58	5762
1989			1062									3618									1896			56	6632
1990			1389									1632									1617			120	4758
1991			1497									1814									2008			55	5374
1992			975									1972									1877			129	4953
1993			635									1230									3276			90	5231
1994			1016									4262									3177			38	8493
1995			2110			8						2825									7437			214	12594
1996			2306						1			1322									6069			819	10517
1997			2452			15			1			1982									3877			370	8697
1998			2393			10			2			1729			2						4215			236	8587
1999			1206			8						1825									4015			111	7165
2000	825	923	1748				14	4	18	1809	171	1979							605	3765	4370	49	123	172	8288
2001	1026	1976	3002				9	68	77	1468	299	1766							531	4962	5493	30	95	125	10464
2002	995	1877	2872				5	34	39	1910	154	2064							1288	6577	7865	30	111	141	12982
2003	750	1052	1802				2	7	8	1165	389	1553							758	5087	5845	45	106	152	9360
2004	1114	1753	2866							1307	275	1582	1	6	7				1177	5633	6810	19	86	105	11370
2005	853	1445	2298				1	2	3	881	43	924	2		2				2194	7192	9386	26	58	84	12696

Year	Denmark			Estonia			Finland			Germany			Latvia			Lithuania			Poland			Sweden			Total
	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SD 24	SD 25	SDs 24–25	SDs 24–25
2006	513	1518	2031				2	3	5	973	7	979		11	11				1782	5959	7741	23	61	84	10852
2007	620	623	1243				2	8	10	1455	215	1670	8	7	15		11	11	3016	5840	8856	27	59	86	11891
2008	422	313	736							1601	238	1840		74	74		4	4	2094	5569	7663	29	66	95	10410
2009	325	199	524				41		41	1175	29	1204		155	155		31	31	2378	5802	8180	27	65	92	10227
2010	333	368	701		16	16	13	2	16	953	31	983		31	31		19	19	1833	7665	9498	21	64	85	11348
2011	310	226	536		20	20	3	2	5	1529	147	1676		39	39		15	15	1567	6666	8233	26	60	86	10610
2012	290	250	540		19	19	20	17	36	904	151	1055		8	8		24	24	1331	7325	8657	23	67	90	10430
2013	572	1889	2460		10	10	1	9	10	771	332	1103	4	76	80		54	54	2104	8118	10222	35	344	379	14318
2014	349	1324	1673		83	83		0	0	751	212	963	3	288	291		74	74	1537	9821	11358	22	146	168	14610
2015	169	1614	1783		39	39	1	4	4	635	181	815	2	6	8		7	7	1122	7247	8370	24	40	64	11090

## Summary of the assessment

**Table 8.3.8.8** Flounder in subdivisions 24 and 25. Biomass index (kg hr<sup>-1</sup>; weighted average per depth stratum area) of fish equal to or larger than 20 cm, from BITS 1st and 4th quarters and combined (geometric mean).

Year	Biomass index 1st quarter	Biomass index 4th quarter	Combined index
2001	45	21	31
2002	59	58	58
2003	51	20	32
2004	49	35	41
2005	77	25	44
2006	67	54	60
2007	73	28	45
2008	125	60	87
2009	93	82	87
2010	126	92	108
2011	59	93	74
2012	128	70	94
2013	94	147	117
2014	99	192	138
2015	133	220	171

## Sources and references

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