

8.3.5 Flounder (*Platichthys flesus*) in Subdivisions 22 and 23 (Belt Sea and Sound)

ICES stock advice

ICES advises that when the precautionary approach is applied, catches in 2016 should be no more than 3042 tonnes.

Stock development over time

The stock size indicator from surveys (biomass index) has increased manifold at a steady rate since 2005.

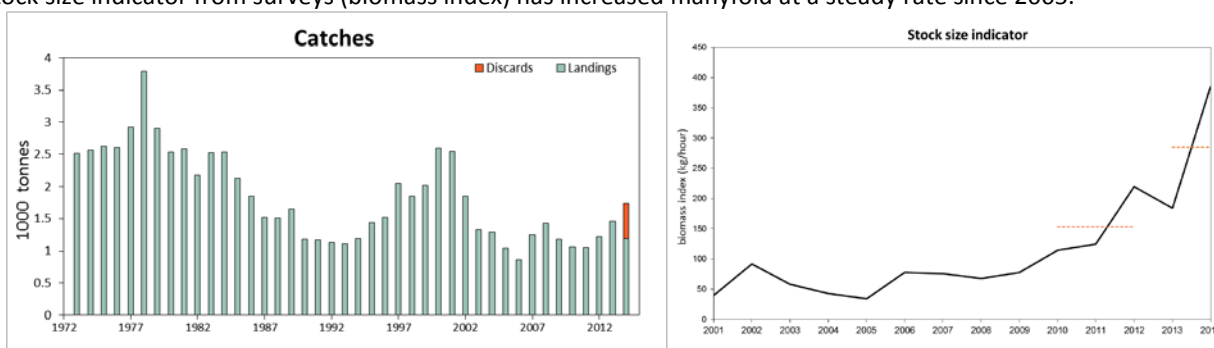


Figure 8.3.5.1 Flounder in Subdivisions 22 and 23. Left: Official landings in thousand tonnes. Right: 1st and 4th quarters combined biomass index (kg hour^{-1} ; weighted average per depth stratum area) of fish equal to or larger than 20 cm, from the Baltic International Trawl Survey (BITS–Q1+Q4). Dashed lines denote the average cpue of the respective year range.

Stock and exploitation status

Table 8.3.5.1 Flounder in Subdivisions 22 and 23. State of the stock and fishery, relative to reference points.

		Fishing pressure			Stock size					
		2012	2013	2014	2012	2013	2014			
Maximum Sustainable Yield	F_{MSY}	?	?	?	Unknown	MSY	?	?	?	Unknown
Precautionary approach	F_{pa} , F_{lim}	?	?	?	Unknown	B_{pa} , B_{lim}	?	?	?	Unknown
Management Plan	F_{MGT}	-	-	-	Not applicable	SSB_{MGT}	-	-	-	Not applicable
Qualitative evaluation	-	→	→	→	Stable	-	↗	→	↗	Increasing

Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The Baltic International Trawl Survey (BITS–Q1+Q4) 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 landings.

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. The stock size indicator has recently increased by more than 50% and the exploitation on the stock is considered to be stable (Figure 8.3.5.2); therefore, no additional precautionary buffer was applied. Discarding is known to take place and the discard rate has been estimated for 2014.

Table 8.3.5.2 Flounder in Subdivisions 22 and 23. For stocks in ICES data categories 3–6, one catch option is provided.

Index A (2013, 2014)		285
Index B (2010, 2011, 2012)		153
Index ratio (A/B)		1.86
Uncertainty cap	Applied	1.2
Recent advised landings for 2015		1 745 t
Discard rate (2014)		0.31
Precautionary buffer	Not applied	-
Catch advice*		3 042 t

*(recent advised landings × cap)/(1 – discard rate).

Basis of the advice

Table 8.3.5.3 Flounder in Subdivisions 22 and 23. The basis of the advice.

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

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. Despite the high variability in discard ratios, discard estimates for only 2014 were used in this year's advice because sampling coverage increased compared to the previous years.

Issues relevant for the advice

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

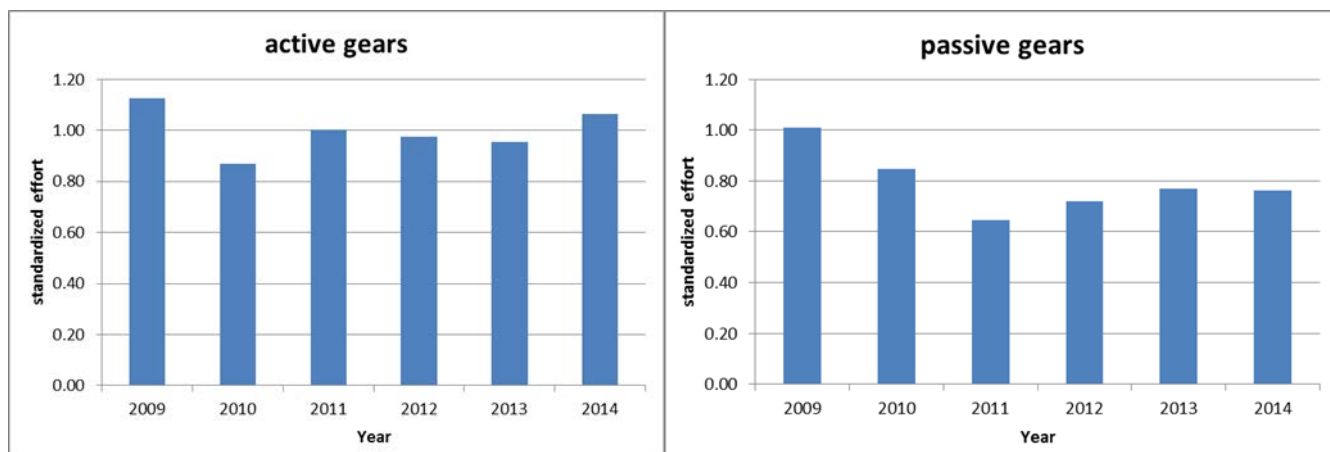


Figure 8.3.5.2 Flounder in Subdivisions 22 and 23 (Belts and Sound). Standardized effort for active and passive fleets in Subdivisions 22 and 23 (Belts and Sound). Standard catches (effort per strata and country divided by average effort per country) were weighted by the mean of cod landings by country.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 8.3.5.4 Flounder in Subdivisions 22 and 23. The basis of the assessment.

ICES stock data category	3.2.0. (ICES, 2015a).
Assessment type	Survey trends (ICES, 2015b).
Input data	Commercial landings and survey data from Baltic bottom trawl survey (BITS-Q1 and Q4).
Discards and bycatch	Flounder in the Belts and Sound is mostly a bycatch species in cod fisheries and mixed flatfish fisheries. Discards are included in the advice.
Indicators	Fishing effort.
Other information	This stock was benchmarked in 2014 (WKBALFLAT; ICES, 2014).
Working group	Baltic Fisheries Assessment Working Group (WGBFAS).

Information from stakeholders

There is no available information.

History of advice, catch, and management

Table 8.3.5.5 Flounder in Subdivisions 22 and 23. History of ICES advice, the agreed TAC, and official landings. Weights in thousand tonnes.

Year	ICES Advice	Predicted landings corresp. to advice*	Agreed TAC	Official landings (SDs 22–32)	Official landings (SDs 22–23)
2000	No advice	-	-	15.0	2.60
2001	No advice	-	-	18.1	2.54
2002	No advice	-	-	19.4	1.85
2003	No advice	-	-	15.1	1.34
2004	No advice	-	-	17.4	1.30
2005	No advice	-	-	19.6	1.04
2006	No advice	-	-	16.6	0.87
2007	No advice	-	-	19.3	1.25
2008	No advice	-	-	16.9	1.43
2009	No advice	-	-	15.7	1.18
2010	No advice	-	-	16.6	1.05
2011	No advice	-	-	15.3	1.04
2012	No advice	-	-	15.9	1.22
2013	No advice	-	-	21.1	1.45
2014	No more than 20% landings increase	≤ 1.5	-	20.6	1.19
2015	No more than 20% landings increase	≤ 1.745	-		
2016	Precautionary approach (≤ 20% increase)	≤ 3.042 **			

*Before 2014 the advice was for Subdivisions 22–32.

**2016 advice corresponds to total catch and not landings only.

History of catch and landings

Table 8.3.5.6 Flounder in Subdivisions 22 and 23. Catch distribution by fleet in 2014 as estimated by ICES.

Total catch (2014)	Landings		Discards
1 733 t	trawls 60%	others 40%	540 t
	1 193 t		

Table 8.3.5.7 Flounder in Subdivisions 22 and 23. History of official landings by area and country. Weights in tonnes.

Year/SD	Denmark		Germ. Dem. Rep.	Germany FRG	Sweden		Total by subdivision		Total SDs 22–23
	22	23	22	22	22	23	22	23	
1973	1 983		181	349			2 513		2 513
1974	2 097		165	304			2 566		2 566
1975	1 992		163	469			2 624		2 624
1976	2 038		174	392			2 604		2 604
1977	1 974		555	393			2 922		2 922
1978	2 965		348	477			3 790		3 790
1979	2 451		189	259			2 899		2 899
1980	2 185		138	212			2 535		2 535
1981	1 964		271	351			2 586		2 586
1982	1 563	104	263	248			2 074	104	2 178
1983	1 714	115	280	418			2 412	115	2 527
1984	1 733	85	349	371			2 453	85	2 538
1985	1 561	130	236	199			1 996	130	2 126
1986	1 525	65	127	125			1 777	65	1 842
1987	1 208	122	71	114			1 393	122	1 515
1988	1 162	125	92	133			1 387	125	1 512
1989	1 321	83	126	122			1 569	83	1 652
1990	941		52	183			1 176		1 176
1991	925			246			1 171		1 171
1992	713	185		227			940	185	1 125
1993	649	194		235		26	884	220	1 104
1994	882	181		44		84	926	265	1 191
1995	859	231		286		58	1 145	289	1 434
1996	1 041	227		189	2	58	1 232	285	1 517
1997	1 356			655		42	2 011	42	2 053
1998	1 372			411		61	1 783	61	1 844
1999	1 473			510		37	1 983	37	2 020
2000	1 896			660		41	2 556	41	2 597
2001	2 030			458		52	2 488	52	2 540
2002	1 490			317		42	1 807	42	1 849
2003	1 063			241		33	1 304	33	1 337
2004	952			315		31	1 267	31	1 298
2005	725	184		94		38	819	222	1 041
2006	620	182		34		30	654	212	866
2007	585	233		406		26	991	259	1 250
2008	554	199		627		47	1 181	246	1 427
2009	505	113		521		37	1 026	150	1 176
2010	557	91		376		29	933	120	1 053
2011	441	78		497	0.2	28	938	106	1 044
2012	530	98		569		22	1 099	120	1 219
2013	639	83		713		19	1 352	102	1 454
2014	513	68		589		23	1 102	91	1 193

Summary of the assessment

Table 8.3.5.8 Flounder in Subdivisions 22 and 23. Total landings (tonnes) and biomass index (weighted average per depth stratum area, kg hour⁻¹) of fish equal to or larger than 20 cm from BITS for the 1st quarter, 4th quarter, and combined (geometric mean).

Year	Landings	BITS Q1	BITS Q4	Combined survey index
2001	2 540	53.3	26.42	39.84
2002	1 849	61.81	122.32	92.06
2003	1 337	64.11	51.94	58.02
2004	1 298	57.63	28.69	43.16
2005	1 041	61.44	7.43	34.44
2006	866	80.05	75.19	77.62
2007	1 250	82.23	69.13	75.68
2008	1 427	67.4	68.14	67.77
2009	1 176	45.94	109.99	77.97
2010	1 053	118.17	110.8	114.49
2011	1 044	144.57	104.8	124.69
2012	1 219	189.04	250.57	219.8
2013	1 454	241.68	127.21	184.45
2014	1 193	404.91	365.36	385.13

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. 2014. Report of the Benchmark Workshop on Baltic Flatfish Stocks (WKBALFLAT), 27–31 January 2014, Copenhagen, Denmark. ICES CM 2014/ACOM:39.
- ICES. 2015a. Advice basis. *In* Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 1. In preparation.
- ICES. 2015b. Report of the Baltic Fisheries Assessment Working Group (WGBFAS), 14–21 April 2015, ICES Headquarters, Copenhagen, Denmark. ICES CM 2015/ACOM:10.