

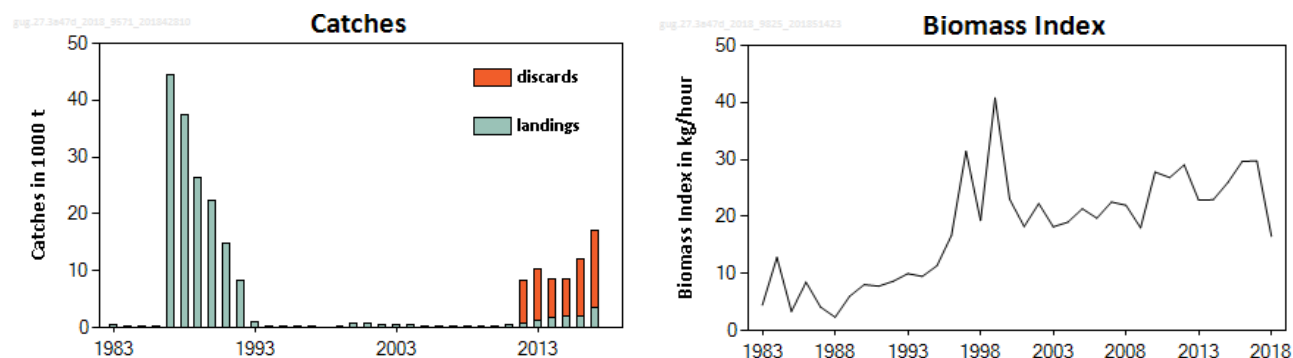
## Grey gurnard (*Eutrigla gurnardus*) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)

### ICES advice on fishing opportunities

ICES has not been requested to provide advice on fishing opportunities for this stock.

### Stock development over time

The time-series of mature biomass index of grey gurnard from the International Bottom Trawl Survey quarter 1 (IBTS-Q1) shows a strong increase from the beginning of 1990s and has since fluctuated at a high level.



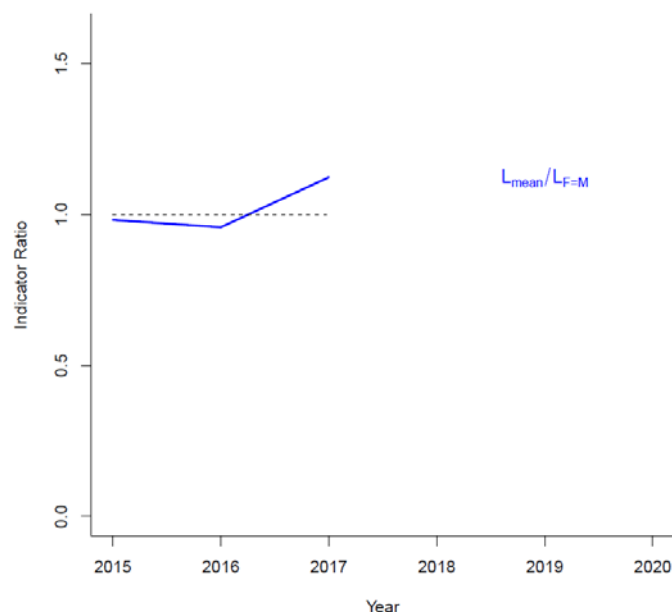
**Figure 1** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Summary of stock assessment. Before 2012 only official landings data were available which are not reliable, e.g. the Netherlands did not report grey gurnard before 2000 and often gurnards were reported as a gurnard mix only. Since 2012 landings and discards are based on InterCatch data.

### Stock and exploitation status

ICES assesses that fishing pressure on the stock is below  $F_{MSY}$ ; no reference points for stock size have been defined for this stock.

**Table 1** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. State of the stock and fishery relative to reference points.

Grey gurnard in Subarea 4 and divisions 7.D and 3.A: State of the stock and fishery relative to reference points.											
		Fishing pressure				Stock size					
		2015	2016	2017			2016	2017	2018		
Maximum sustainable yield	$F_{MSY}$ proxy	✗	✗	✓	Below		MSY $B_{trigger}$	?	?	?	Undefined
Precautionary approach	$F_{pa}$ , $F_{lim}$	?	?	✓	Below possible reference points		$B_{pa}$ , $B_{lim}$	?	?	?	Undefined
Management plan	$F_{MGT}$	—	—	—	Not applicable		$B_{MGT}$	—	—	—	Not applicable
Qualitative evaluation	-	—	—	—			-	↗	→	↘	Decreasing



**Figure 2** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. The index ratio  $L_{\text{mean}}/L_{F=M}$  from the length-based indicator (LBI; ICES, 2017b) method is used for the evaluation of the exploitation status. The exploitation status is below the  $F_{\text{MSY}}$  proxy when the ratio value is higher than 1.

### Catch scenarios

ICES has not been requested to provide advice on fishing opportunities for this stock.

### Basis of the advice

ICES has not been requested to provide advice on fishing opportunities for this stock.

**Table 2** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. The basis of the advice.

Advice basis	ICES has not been requested to provide advice on fishing opportunities for this stock
Management plan	ICES is not aware of any agreed precautionary management plan for grey gurnard in this area

### Quality of the assessment

Species misidentification and reporting of gurnard groups continues to be a problem in estimating the landings and discards of grey gurnard. Discard estimates are only available to ICES since 2012. In addition, discarding is estimated to be high. Sampling under the Data Collection Framework (DCF) regulation is the main source of information for estimating the total catch of grey gurnard. The 2017 length data are considered to be more representative of catches than the preceding two years because of a more complete data submission, and therefore the exploitation status in 2017 is likely to be more robust.

### Issues relevant for the advice

There is no total allowable catch (TAC) for this species.

Grey gurnard is mainly discarded in the bottom trawl fishery for roundfish and flatfish and taken as bycatch species in the industrial fishery for sandeel and sprat.

## Reference points

**Table 3** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Reference points, values, and their technical basis.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger\_proxy}$	Not defined		
	$F_{MSY\_proxy}$	22.0 cm (2015–2017)	Expected mean length of catch above $L_c$ when $F = M$ , assuming $M/K = 1.5$	ICES (2018)
Precautionary approach	$B_{lim}$	Not defined		
	$B_{pa}$	Not defined		
	$F_{lim}$	Not defined		
	$F_{pa}$	Not defined		
Management plan	$SSB_{mgt}$	Not defined		
	$F_{mgt}$	Not defined		

## Basis of the assessment

**Table 4** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Basis of assessment and advice.

ICES stock data category	3 (ICES, 2016)
Assessment type	Trends-based assessment (ICES, 2018); Length based indicator
Input data	Length distribution of the catches; One survey index (IBTS-Q1), with maturity and length-weight relationship
Discards and bycatch	Discards only occur in the human consumption fisheries, and have been quantified for the period 2012–2017. Discards ranged between 75% and 92% of the total catch. In 2017 discard information was provided for 15% of the total landings.
Indicators	None
Other information	None
Working group	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK)

## Information from stakeholders

There is no additional available information.

## History of the advice, catch, and management

**Table 5** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. ICES advice, official landings, and ICES catch estimates. Official landings statistics are not considered reliable for this species due to problems with species identification. All weights in tonnes.

Year	ICES advice	Catch corresponding to advice	Official landings in 4, 3.a, and 7.d	ICES landings	ICES discards	ICES catch
2009		-	285			
2010		-	390			
2011		-	442			
2012	No increase in catch	-	658	689	7656	8345
2013	No increase in catch	-	528	1180	9050	10230
2014	No new advice, same as for 2013	-	500	1892	6704	8596
2015	No new advice, same as for 2013	-	2028	2141	6310	8451
2016	No new advice, same as for 2013	-	682*	2156	9973	12129
2017	Precautionary approach	8813**	3203*	3451	13670	17121
2018	Precautionary approach	8813**				
2019	No catch advice requested	-				
2020	No catch advice requested	-				

\* Preliminary.

\*\* Advice based on ICES catches

## History of the catch and landings

**Table 6** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Catch distribution by fleet in 2017 as estimated by ICES.

Catch (2017)	Landings			Discards
17121 t	67% Industrial bycatch	32% demersal trawl and seines	1% others	13670 t
	3451 t			

**Table 7** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. History of commercial official landings presented by area for each country participating in the fishery. All weights in tonnes. Official landings are incomplete, estimated ICES landings are presented in Table 9.

Grey gurnard in Subarea 4								
Year	Belgium	Denmark	France	Netherlands	Norway	Sweden	UK	Total
1980	0	0	43	0	0	0	0	43
1981	0	0	0	0	0	0	0	0
1982	0	0	100	0	0	0	0	100
1983	0	0	64	0	0	0	0	64
1984	0	0	71	0	0	0	0	71
1985	88	0	85	0	0	0	0	173
1986	0	27	66	0	0	0	0	93
1987	63	44205	56	0	0	0	0	44324
1988	72	36887	43	0	0	0	22	37024
1989	73	26230	45	0	0	0	0	26348
1990	85	22041	42	0	0	0	0	22168
1991	70	14514	28	0	0	0	0	14612
1992	98	8113	21	0	0	0	10	8242
1993	106	822	27	0	0	0	24	979
1994	63	87	21	0	0	0	22	193
1995	43	63	26	0	0	0	21	153
1996	108	52	18	0	0	0	54	232
1997	49	23	22	0	0	0	57	151
1998	33	29	13	0	0	0	0	75
1999	35	63	0	0	0	127	0	225
2000	28	63	5	452	0	0	0	548
2001	22	258	20	277	0	1	33	611
2002	23	45	10	285	0	1	29	393
2003	16	60	5	307	0	6	26	420
2004	21	59	6	264	0	3	23	376
2005	16	52	5	213	0	8	22	316
2006	10	46	2	133	2	0	7	200
2007	11	16	3	155	5	0	14	204
2008	8	24	2	104	5	3	12	158
2009	15	6	2	154	1	1	22	201
2010	14	8	10	218	2	0	14	266
2011	26	6	7	263	1	0	31	334
2012	49	3	4	467	2	0	77	602
2013	30	5	2	268	33	1	131	470
2014	35	4	3	252	56	0	128	478
2015	22	1220	2	229	172	5	354	2004
2016	31	7	6	232	83	5	297	661
2017	24	2067	4	320	172	8	314	2909

Grey gurnard in Division 3.a						
Year	Belgium	Denmark	Netherlands	Norway	Sweden	Total
1980	0	0	0	0	36	36
1981	0	0	0	0	46	46
1982	0	86	0	0	43	129
1983	0	29	0	0	7	36
1984	0	62	0	0	6	68
1985	0	3	0	0	9	12
1986	0	6	0	0	10	16
1987	1	13	0	0	6	20
1988	0	59	0	0	2	61
1989	0	19	0	0	4	23
1990	0	34	0	0	3	37
1991	0	25	0	0	5	30
1992	0	22	0	0	10	32
1993	0	18	0	0	9	27
1994	0	12	0	0	12	24
1995	0	10	0	0	5	15
1996	0	18	0	0	3	21
1997	0	13	0	0	5	18
1998	0	27	0	0	8	35
1999	0	23	0	0	5	28
2000	0	32	0	0	5	37
2001	0	30	0	0	3	33
2002	0	18	0	0	1	19
2003	0	32	0	0	1	33
2004	0	24	2	0	2	28
2005	0	21	4	0	1	26
2006	0	19	0	0	2	21
2007	0	21	1	0	3	25
2008	0	24	0	0	5	29
2009	0	15	0	0	3	18
2010	0	10	1	0	2	13
2011	0	5	0	0	1	6
2012	0	5	0	0	1	6
2013	0	5	0	0	1	6
2014	0	3	0	0	1	4
2015	0	10	1	1	2	14
2016	0	9	1	0	2	12
2017	0	256	6	4	3	269

Grey gurnard in Division 7.d					
Year	Belgium	France	Netherlands	UK	Total
1980	0	950	0	0	950
1981	0	0	0	0	0
1982	0	380	0	0	380
1983	0	489	0	0	489
1984	0	126	0	0	126
1985	14	102	0	0	116
1986	0	217	0	0	217
1987	12	66	0	0	78
1988	14	346	0	0	360
1989	9	90	0	0	99
1990	6	92	0	0	98
1991	5	94	0	0	99
1992	6	85	0	0	91
1993	7	47	0	0	54
1994	4	33	0	0	37
1995	7	36	0	0	43

Grey gurnard in Division 7.d					
Year	Belgium	France	Netherlands	UK	Total
1996	4	44	0	0	48
1997	3	81	0	0	84
1998	1	34	0	0	35
1999	1	0	0	0	1
2000	9	67	0	0	76
2001	6	40	0	0	46
2002	32	54	1	0	87
2003	18	42	12	0	72
2004	14	3	31	0	48
2005	13	2	21	0	36
2006	8	2	22	14	46
2007	3	1	9	36	49
2008	1	3	16	66	86
2009	1	1	3	61	66
2010	6	2	39	64	111
2011	11	5	53	33	102
2012	11	5	11	23	50
2013	23	4	11	14	52
2014	7	5	4	2	18
2015	2	6	2	0	10
2016	1	6	2	0	9
2017	1	8	4	12	25

### Summary of the assessment

**Table 8** Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Assessment summary (weights in tonnes).

Year	Biomass Index kg / hour	Landings* tonnes	Discards tonnes	$L_{\text{mean}}/L_{F=M}^{**}$
1983	4	589		
1984	13	265		
1985	3	301		
1986	8	326		
1987	4	44422		
1988	2	37445		
1989	6	26470		
1990	8	22303		
1991	8	14741		
1992	9	8365		
1993	10	1060		
1994	10	254		
1995	11	211		
1996	17	301		
1997	31	253		
1998	19	145		
1999	41	254		
2000	23	661		
2001	18	690		
2002	22	499		
2003	18	525		
2004	19	452		
2005	21	378		
2006	20	267		
2007	23	279		
2008	22	273		
2009	18	285		
2010	28	388		

Year	Biomass Index kg / hour	Landings* tonnes	Discards tonnes	$L_{\text{mean}}/L_{F=M}$ **
2011	27	442		
2012	29	689	7656	
2013	23	1180	9050	
2014	23	1892	6704	
2015	26	2141	6310	0.98
2016	30	2156	9973	0.96
2017	30	3451	13670	1.12

\* Landings data are not reliable before 2012, e.g. Netherlands did not report grey gurnard before 2000 and often gurnards were only reported as a gurnard mix including several gurnard species.

\*\* The exploitation status is below the  $F_{\text{MSY}}$  proxy when the ratio values is higher than 1.

## Sources and references

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