

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

ICES stock advice

ICES advises that when the precautionary approach is applied, catches should be no more than 8813 tonnes for each of the years 2017 and 2018. If discard rates do not change from average of the last three years (2013–2015), this implies landings of no more than 1763 tonnes.

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 on a high level.

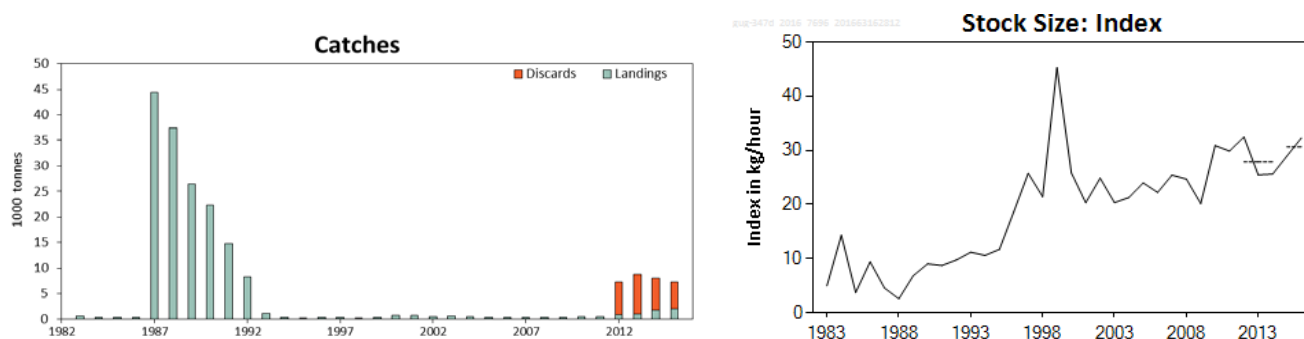


Figure 6.3.15.1 Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Summary of stock assessment. Before 2012 no reliable landings data were available, e.g. the Netherlands did not report grey gurnard before 2000 and often gurnards were reported as a gurnard mix only.

Stock and exploitation status

Table 6.3.15.1 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			
		2013	2014	2015		2014	2015	2016	
Maximum sustainable yield	F_{MSY}	?	?	?	Undefined	MSY	?	?	?
Precautionary approach	F_{pa} , F_{lim}	?	?	?	Undefined	$B_{trigger}$?	?	?
Management plan	F_{MGT}	-	-	-	Not applicable	B_{pa} , B_{lim}	?	?	?
Qualitative evaluation	-	?	?	?	Unknown	SSB_{MGT}	-	-	-
						-	→	↗	↗
									Increasing

Catch options

The ICES framework for Category 3 stocks was applied (ICES, 2012). A mature biomass index based on the IBTS was applied as the indicator of stock development. The advice is based on a comparison of the two latest index values (2015–2016) with the three preceding values (2012–2014), multiplied by the recent average catch (2013–2015).

Grey gurnard is a bycatch species in the industrial fishery for sandeel and sprat as well as in the demersal fisheries. Large effort reductions of about 60% in demersal fisheries took place in the period 2000–2012 (STECF-14-03), and the stock has increased substantially since the 1980s. Therefore, no precautionary buffer was applied.

Table 6.3.15.2 Grey gurnard in Subarea 4 and divisions 7.d and 3.a. For stocks in ICES data categories 3–6, one catch option is provided.

Index A (2015–2016)		30.62
Index B (2012–2014)		27.86
Index ratio (A/B)		1.10
Uncertainty cap	Not applied	-
Average catch (2013–2015)		8012
Discard rate (2013–2015)		0.80
Precautionary buffer	Not applied	-
Catch advice *		8813 t
Landings advice **		1763 t

* (average catch × index ratio)

**catch advice × (1 – discard rate)

Basis of the advice

Table 6.3.15.3 Grey gurnard in Subarea 4 and divisions 7.d and 3.a. The basis of the advice.

Advice basis	Precautionary approach
Management plan	There is no 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. 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.

Germany and UK (England) do not report official landings for grey gurnard separately. Therefore these landings were corrected by the average grey gurnard proportion of the overall gurnard landings (~20%) which were officially reported by the Netherlands and Belgium for the period 2012–2014.

Issues relevant for the advice

This is the first year ICES has provided catch advice for grey gurnard. There is no total allowable catch (TAC) for this species.

Grey gurnard is a bycatch species mainly in the industrial fishery for sandeel and sprat as well as in the bottom trawl fishery for roundfish and flatfish. A large proportion of the landings is taken as industrial bycatch. These landings do not occur in the official landings data. This is the main reason for a large discrepancy between official landings and ICES landings.

Grey gurnard is considered a predator on a number of commercially important demersal stocks (cod, whiting, haddock, sandeel, and Norway pout) in the North Sea. The steep increase in the abundance of grey gurnard has led to an increase in mortality in recent years, especially of North Sea cod (age-0) and whiting (ages-0 and 1). The multispecies assessment estimates that grey gurnard can be responsible for over 50% of the predation mortality on 0-group cod and whiting (ICES, 2011).

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 6.3.15.4 Grey gurnard in Subarea 4 and divisions 7.d and 3.a. The basis of the assessment.

ICES stock data category	3.2.0 (ICES, 2016b)
Assessment type	Trends-based assessment
Input data	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 2012–2015. Discards ranged between 72% and 89% of the total catch. In 2015 discard information was provided for 75% of the total landings.
Indicators	None
Other information	2011 was the first year ICES advised on grey gurnard in the Northeast Atlantic. In 2012 the advice was split into ecoregions.
Working group	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK)

Information from stakeholders

There is no available information.

History of advice, catch, and management

Table 6.3.15.5 Grey gurnard in Subarea 4 and divisions 7.d and 3.a. ICES advice and official landings. Official landings statistics are not considered reliable for this species due to problems with species identification. All weights tonnes.

Year	ICES advice	Predicted catch corresp. to advice	Official landings in 4, 3.a and 7.d	ICES landings	ICES discards	ICES catch
2009		-	285			
2010		-	388			
2011		-	442			
2012	No increase in catch	-	658	904	6358	7262
2013	No increase in catch	-	527	975	7735	8710
2014	No new advice, same as for 2013	-	500	1761	6248	8009
2015	No new advice, same as for 2013	-	777*	2026	5290	7316
2016	No new advice, same as for 2013	-				
2017	Precautionary approach	8813**				
2018	Precautionary approach	8813**				

* Preliminary.

** Advice based on ICES catches

History of catch and landings

Table 6.3.15.6 Grey gurnard in Subarea 4 (North Sea) and divisions 7.d (eastern Channel) and 3.a (Skagerrak-Kattegat). Catch distribution by fleet in 2015 as estimated by ICES.

Catch (2015)	Landings			Discards
7316 t	60% Industrial bycatch	33% demersal trawl and seines	7% others	5290 t
	2026 t			

Table 6.3.15.7 Grey gurnard in Subarea 4 (North Sea) and divisions 7.d (eastern Channel) and 3.a (Skagerrak-Kattegat). 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 6.3.15.8.

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	4	155	5	0	14	205
2008	8	24	2	104	5	3	12	158
2009	15	6	2	154	1	1	22	201
2010	14	8	10	218	1	0	13	264
2011	26	6	7	263	1	0	31	334
2012	49	3	4	467	2	0	77	602
2013	30	4	2	268	34	0	131	469
2014	35	4	3	252	56	0	128	478
2015	20	7	2	209	172	4	345	760

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	4	0	1	2	7

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
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

Summary of the assessment

Table 6.3.15.8 Grey gurnard in Subarea 4 and divisions 7.d and 3.a. Assessment summary (weights in tonnes).

Year	Official landings*	ICES landings	ICES catches	ICES discards	Discard rate	IBTS Q1 mature biomass (kg/h)
1983	589					5.00
1984	265					14.31
1985	301					3.75
1986	326					9.42
1987	44422					4.61
1988	37445					2.61
1989	26470					6.85
1990	22303					9.04
1991	14741					8.74
1992	8365					9.76
1993	1060					11.19
1994	254					10.61
1995	211					11.73
1996	301					18.71
1997	253					25.75
1998	145					21.45
1999	254					45.24
2000	661					25.83
2001	690					20.34
2002	499					24.85
2003	525					20.35
2004	452					21.29
2005	378					23.97
2006	267					22.24
2007	279					25.42
2008	273					24.68
2009	285					20.18
2010	388					30.87
2011	440					29.86
2012	632	904	7262	6358	0.88	32.47
2013	526	975	8710	7735	0.89	25.47
2014	499	1761	8009	6248	0.78	25.63
2015	777	2026	7316	5290	0.72	28.96
2016						32.29

* 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.

Sources and references

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