

9.3.21 Greater forkbeard (*Phycis blennoides*) in the Northeast Atlantic

ICES stock advice

ICES advises that when the precautionary approach is applied, landings should be no more than 1682 tonnes in each of the years 2017 and 2018*. Discards are substantial but only available for part of the fishery. ICES cannot quantify the corresponding catches.

Stock development over time

The biomass index in subareas 6 and 7 indicates a decrease in the abundance since 2012.

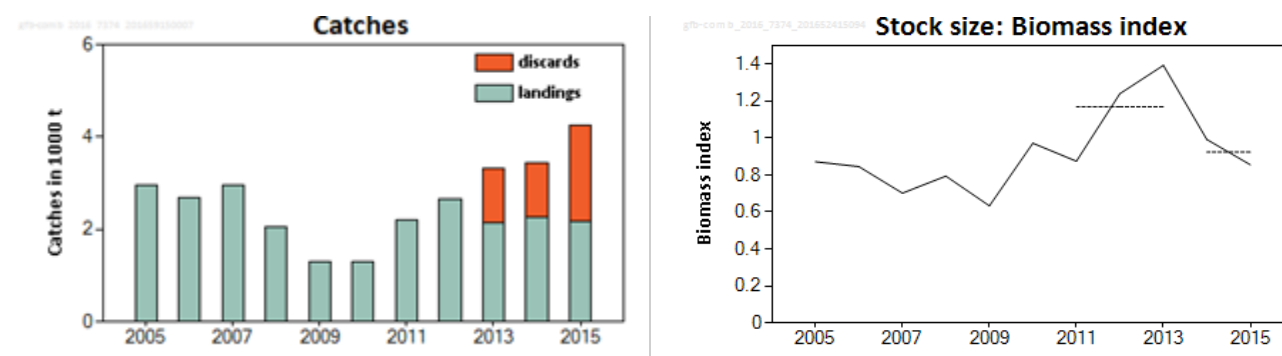


Figure 9.3.21.1 Greater forkbeard in the Northeast Atlantic. Left: Landings and partial discards. Right: Average standardized biomass indicator from six surveys (IGFS-WIBTS-Q4, EVHOE-WIBTS-Q4F, SpGFS-WIBTS-Q4, SpGFS-WIBTS-Q4, SDS, PT-CTS (UWTV (FU 28–29))). The dotted horizontal lines indicate the average biomass indicator of the respective year range (last two and preceding three years) used to calculate the advice.

Stock and exploitation status

Table 9.3.21.1 Greater forkbeard in the Northeast Atlantic. 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	?	?	?
Precautionary approach	F_{pa} , F_{lim}	?	?	?	Undefined	B_{pa} , B_{lim}	?	?	?
Management plan	F_{MGT}	-	-	-	Not applicable	SSB_{MGT}	-	-	-
Qualitative evaluation	-	?	?	?	Unknown		↗	↘	↘

Catch options

The ICES framework for category 3 stocks (ICES, 2012) was applied. An index from six surveys (IGFS-WIBTS-Q4, EVHOE-WIBTS-Q4, SpPGFS-WIBTS-Q4, SpGFS-WIBTS-Q4, SDS, PT-CTS (UWTV (FU 28–29))) was used to provide an overall indicator of stock biomass. The advice is based on a comparison of the two latest values (index A) with the three preceding values (index B), multiplied with the recent advised landings.

* Version 2: years for which the advice is applicable corrected

The index is estimated to have decreased by more than 20% and thus the uncertainty cap was applied. The stock status relative to candidate reference points is unknown. Therefore, the precautionary buffer was applied to the landings advice.

Table 9.3.21.2 Greater forkbeard in the Northeast Atlantic. For stocks in ICES categories 3–6, one catch option is provided.

Index A (2014–2015)		0.92
Index B (2011–2013)		1.17
Index ratio (A/B)		0.79
Uncertainty cap	Applied	0.8
Recent advised landings for the years 2015–2016		2628 t
Discard rate		> 5%, but cannot be quantified
Precautionary buffer	Applied	0.8
landings advice *		1682 t

* Last advice (2628 t) × uncertainty cap × precautionary buffer.

Basis of the advice

Table 9.3.21.3 Greater forkbeard in the Northeast Atlantic. The basis of the advice.

Advice basis	Precautionary approach.
Management plan	There is no management plan for greater forkbeard.

Quality of the assessment

In 2014 four groundfish surveys were used for the advice: the Irish IGFS-WIBTS-Q4, the French EVHOE-WIBTS-Q4, the Spanish Porcupine survey SpPGFS-WIBTS-Q4, and the Spanish SpGFS-WIBTS-Q4. In 2016 two additional surveys were used for the advice: the Scottish deep-water survey in Division 6.a (SDS) and the Portuguese crustacean trawl survey in the southern part of Division 9.a (PT-CTS (UWTV (FU 28–29))). These two surveys extend the coverage of the stock to the Division 9.a south and to the deep-water fishing grounds in Division 6.a. A comparison was made in 2016 of the advice calculated with four surveys against the one with six surveys. The results showed no significant changes: the survey index, whether calculated with four (0.75) or six surveys (0.79), was very similar. The historical trend of the survey final index was also very similar for either calculation.

Several shelf fisheries have a bycatch of juveniles which is currently poorly estimated. The surveys cover most of the ecoregion but discard reporting does not cover the entire distributional area of the stock, especially not in subareas 1–3. In 2015 more than 49% of catches were discarded from the fleets that report landings. Discards from other fleets are not quantified. Therefore, ICES cannot quantify catches.

Issues relevant for the advice

The landings of greater forkbeard are mainly bycatch in the demersal trawl and longline fisheries targeting species such as hake, megrim, monkfish, ling, and deep-water fish.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 9.3.21.4 Greater forkbeard in the Northeast Atlantic. The basis of the assessment.

ICES stock data category	3 (ICES, 2016a)
Assessment type	Survey trends-based assessment (ICES, 2016b)
Input data	Six surveys (IGFS-WIBTS-Q4, EVHOE-WIBTS-Q4, SpPGFS-WIBTS-Q4, SpGFS-WIBTS-Q4, SDS, PT-CTS (UWTV (FU 28–29))).
Discards and bycatch	Discarding is substantial but is not quantified.

Indicators	None
Other information	Last benchmarked in 2010 (ICES, 2010).
Working group	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources (WGDEEP)

Information from stakeholders

There is no available information.

History of the advice, catch, and management

Table 9.3.21.5 Greater forkbeard in the Northeast Atlantic. History of ICES advice, the agreed TAC, and official landings. Weights are in thousand tonnes.

Year	ICES advice	Predicted catch corresp. to advice	TAC EC Subareas 1, 2, 3, and 4	TAC EC Subareas 5, 6, and 7	TAC EC Subareas 8 and 9	TAC EC Subareas 10 and 12	Sum of TACs	ICES landings Northeast Atlantic
2003	Fisheries accompanied by programmes to collect data, and expand very slowly unless proven to be sustainable	-	-	-	-	-	-	4.3
2004	Biennial	-	-	-	-	-	-	3.5
2005	Fisheries accompanied by programmes to collect data	-	-	-	-	-	-	3.0
2006	Biennial	-	-	-	-	-	-	2.7
2007	Fishery should not be allowed to expand, unless proven to be sustainable	-	0.036	2.028	0.267	0.063	2.394	2.9
2008	Biennial	-	0.036	2.028	0.267	0.063	2.394	2.0
2009	Fishery should not be allowed to expand, unless proven to be sustainable	-	0.031	2.028	0.267	0.054	2.38	1.3
2010	Biennial	-	0.031	2.028	0.267	0.054	2.38	1.3
2011	Fishery should not be allowed to expand, and a reduction in catches should be considered	-	0.031	2.028	0.267	0.054	2.38	2.2
2012	No new advice, same as 2011	-	0.031	2.028	0.267	0.054	2.38	2.6
2013	20% reduction in catches	1.0	0.031	2.028	0.267	0.054	2.38	2.1
2014	No new advice, same as 2013	1.0	0.031	2.028	0.267	0.054	2.38	2.3
2015	20% increase in landings	< 2.628	0.037	2.434	0.320	0.650	2.856	2.2
2016	No new advice, same as 2015	< 2.628	0.037	2.434	0.320	0.650	2.856	
2017	Precautionary approach (36% decrease of the 2016 advice)	≤ 1.682*						
2018	Precautionary approach (same value as advised catches for 2017)	≤ 1.682*						

* Landings advice.

History of catch and landings

Table 9.3.21.6 Greater forkbeard in the Northeast Atlantic. Catch distribution by fleet in 2015 as estimated by ICES.

Total catch (2015)	Landings			Discards
4243 t	37% trawl	40% static gears	23% other gears	2068 t (partial)

Table 9.3.21.7 Greater forkbeard in the Northeast Atlantic. History of official landings (in tonnes) presented by each country participating in the fishery.

Year	France	Ireland	Norway	Spain	UK (EWNI)	UK (Scot)	Germany	Russia	Faroe Islands	Portugal	Iceland	Total landings	Discards	Total catch
1988	273	0	0	1658	65	0	0	0	0	58	0	2054		2054
1989	362	14	0	1584	13	0	0	0	0	84	0	2057		2057
1990	498	0	231	1590	11	1	0	0	0	100	0	2431		2431
1991	523	1	370	1061	13	5	0	0	0	136	0	2109		2109
1992	685	4	440	907	0	3	0	0	0	182	0	2221		2221
1993	594	0	104	1211	0	3	0	0	0	230	0	2142		2142
1994	469	111	0	1322	0	8	0	0	0	272	0	2182		2182
1995	499	163	0	1052	808	16	0	0	0	142	0	2680		2680
1996	555	154	10	1857	1434	61	0	0	0	90	0	4161		4161
1997	527	131	5	402	1460	186	0	0	0	60	0	2771		2771
1998	366	530	166	1186	1364	108	0	0	0	76	0	3796		3796
1999	332	686	211	1185	934	540	1	0	0	82	0	3971		3971
2000	718	743	406	1988	731	832	8	2	0	182	0	5610		5610
2001	735	663	634	1785	539	661	12	11	0	166	0	5206		5206
2002	692	481	1311	1541	426	572	11	0	0	114	0	5148		5148
2003	512	319	933	1558	245	675	3	1	0	90	0	4336		4336
2004	499	183	418	1622	290	402	0	4	0	74	0	3492		3492
2005	665	237	299	1366	179	165	0	5	0	44	0	2960		2960
2006	689	68	368	1374	151	0	0	5	6	25	0	2686		2686
2007	623	56	499	1423	117	182	0	9	9	31	1	2950		2950
2008	763	43	550	376	31	198	0	42	4	31	1	2039		2039
2009	317	7	453	268	31	190	0	15	3	25	2	1311		1311
2010	403	8	573	71	15	177	0	3	12	26	1	1289		1289
2011	422	6	576	620	27	212	0	0	310	25	2	2200		2200
2012	434	9	526	1307	1	194	0	7	145	12	7	2642		2642
2013	489	16	552	817	6	247	0	0	0	16	0	2143	1185	3328
2014	515	25	480	1085	9	138	0	0	0	15	2	2269	1166	3435
2015	495	37	497	994	26	106	0	0	0	17	3	2175	2068	4243

Table 9.3.21.8 Greater forkbeard in the Northeast Atlantic. Landings inside and outside the NEAFC Regulatory Area (RA) as estimated by ICES; landings in tonnes. Note that ICES cannot quantify catches.

Year	Inside the NEAFC RA (t)	Outside the NEAFC RA (t)	Landings (t)
2014	0	2269	2269
2015	0	2175	2175

Summary of the assessment

Table 9.3.21.9 Greater forkbeard in the Northeast Atlantic. Assessment summary. Standardized indices of biomass from trawl surveys (IGFS-WIBTS-Q4, EVHOE-WIBTS-Q4, SpPGFS-WIBTS-Q4, SpGFS-WIBTS-Q4, SDS, PT-CTS (UWTV (FU 28-29) and mean combined stock size indicator.

Year	IGFS-WIBTS-Q4	EVHOE-WIBTS-Q4	SpPGFS-WIBTS-Q4	SpGFS-WIBTS-Q4	SDS	PT-CTS (UWTV (FU 28-29)	Mean stock size indicator
2005	1.47	1.43	1	0.32	0.72	0.28	0.87
2006	1.27	1.08	0.98	0.45	1.04	0.26	0.85
2007	0.59	0.81	1.03	0.61	0.75	0.42	0.70
2008	0.74	0.53	0.99	0.77	1.23	0.5	0.79
2009	0.16	0.56	0.97	0.87	0.57	0.67	0.63
2010	1.04	0.47	0.97	1.46		0.91	0.97
2011	0.36	0.51	1.02	1.83	1.14	0.38	0.87
2012	1.88	1.13	1.04	1.28	0.87		1.24
2013	2.13	1.63	1.02	1.72	1.42	0.43	1.39
2014	0.87	1.78	0.99	0.84		0.49	0.99
2015	0.48	1.06	0.99	0.85	1.25	0.51	0.86

Sources and references

ICES. 2010. Report of the Benchmark Workshop on Deep-water Species (WKDEEP), 17–24 February 2010, Copenhagen, Denmark. ICES CM 2010/ACOM:38. 247 pp.

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ICES. 2016b. Report of the Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources (WGDEEP), 20–27 April 2016, ICES Headquarters, Copenhagen. ICES CM 2016/ACOM:17.