

5.3.64 Whiting (*Merlangius merlangus*) in Division VIIa (Irish Sea)

ICES stock advice

ICES advises that when the precautionary approach is applied, there should be no directed fisheries and all catches should be minimized in 2016.

Stock development over time

Historical yield and catch composition indicate that the present stock size is extremely low and likely to be well below possible reference points. Landings have been declining since the early 1980s, reaching lowest levels in the 2000s. The survey results indicate a decline in relative spawning stock biomass (SSB).

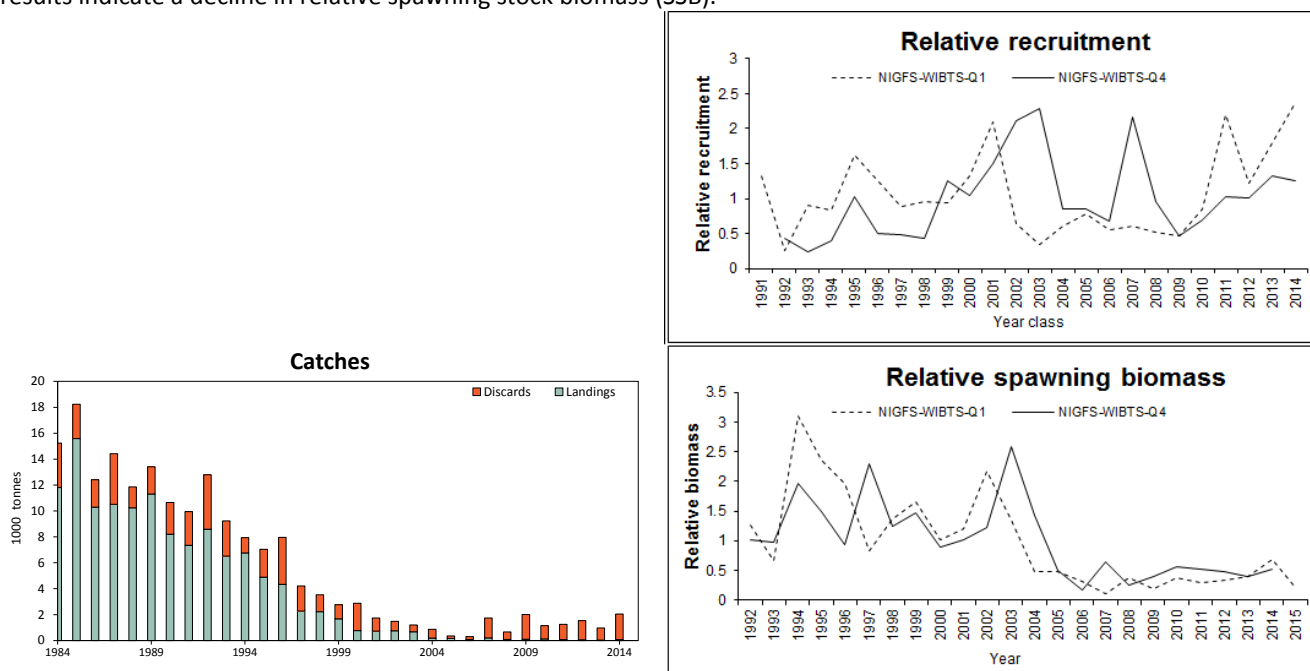


Figure 5.3.64.1 Whiting in Division VIIa. Catch reported to the WG (in thousand tonnes, 1991–2002 estimates include sampled-based estimates of landings at a number of Irish Sea ports), and mean standardized: SSB, and recruitment estimates, from single fleet SURBA analysis.

Stock and exploitation status

Table 5.3.64.1 Whiting in Division VIIa. State of the stock and fishery, relative to reference points.

		Fishing pressure				Stock size			
		2012	2013	2014		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	-	✗	✗	✗
									Below possible reference points

Catch options

The ICES framework for category 3 stocks is applied (ICES, 2012). The perception of the stock has not changed; therefore, the advice given in the recent years is still applicable this year.

Discarding is estimated to be 97% of the catch in weight (average 2012–2014).

Table 5.3.64.4 Whiting in Division VIIa. For stocks in ICES data categories 3, one catch option is provide.

Recent advised catches	0 tonnes
Discard rate	97%
Catch advice*	0 tonnes

* [recent advised catch]

Basis of the advice

Table 5.3.64.5 Whiting in Division VIIa. The basis of the advice.

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

Quality of the assessment

Discard sampling coverage has improved after a period of incomplete discard information between 2003 and 2006. Discards in recent years have been high and variable relative to landings; mainly between 1000–2000 t with landings generally less than 100 t. Survey and catch data are consistent with a high total mortality and low stock size since the early 2000s.

Issues relevant for the advice

The majority of whiting caught are discards in the *Nephrops* fishery and are below the minimum landings size. Given the continued high discards and low TAC this stock could become a major ‘choke species’ for the VIIa *Nephrops* fishery in the context of the landing obligation.

Table 5.3.64.6 Whiting in Division VIIa. ICES landings and indicative estimates of discards and catches by gear grouping for 2012–2014 as reported to ICES (in tonnes). The discard values are indicative because their accuracy and precision is dependent on sampling intensity and coverage by gear group.

Gear Grouping	2012			2013			2014		
	Discards	Landings	Catch	Discards	Landings	Catch	Discards	Landings	Catch
<i>Nephrops</i> Otter Trawls (TR2)	1581	5	1586	911	18	929	1975	10	1985
Fin-fish Otter Trawls (TR1)	0	0	0	8	12	20	0	6	6
Beam Trawls (BT2)	27	3	30	18	2	20	0	1	1
Other Gears	1	51	56	19	1	22	0	5	5
Total	1609	60	1672	956	33	992	1975	23	1998

Reference points

The previous defined reference points are no longer appropriate and no new reference points are defined.

Basis of the assessment

Table 5.3.64.7 Whiting in Division VIIa. The basis of the assessment.

ICES stock data category	3* (ICES 2015b).
Assessment type	Analytical survey-based assessment considered to be indicative of trends only.
Input data	Survey indices (NIGFS-WIBTS-Q1 and NIGFS-WIBTS-Q4); fixed maturity ogive from surveys; constant natural mortality assumed.
Discards and bycatch	Not needed to be included in the current assessment. Discard estimates are available for the main fleets (in 2014 covering >95% of the landings).
Indicators	None.
Other information	Commercial catches. This stock is planned to be benchmarked in 2016.
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE).

*Version 2: ICES stock category corrected.

Information from stakeholders

There is no available information.

History of advice, catch and management

Table 5.3.64.8 Whiting in Division VIIa. History of ICES advice, the agreed TAC, and ICES estimates of landings. Weights in thousand tonnes.

Year	ICES Advice	Predicted catch corresp. to advice	Agreed TAC	Official landings	ICES landings***	33E2&E3	Disc.**	ICES catch
1987	Reduce F	16.0	18.2	11.7	-		-	-
1988	No increase in F enforce mesh regulations	12.0	18.2	11.5	10.24		1.90	12.14
1989	F = F _{high} ; enforce mesh regulations	11.0	18.2	11.3	11.30		2.00	13.30
1990	No increase in F; TAC	8.3*	15.0	8.2	8.21		2.70	10.91
1991	Increase SSB to SSB(89)	6.4*	10.0	7.4	7.35		2.70	10.05
1992	80% of F(90)	9.7*	10.0	7.1	8.59		4.30	12.89
1993	70% of F(91) ~ 6 500 t	6.5	8.5	6.0	6.52		2.70	9.22
1994	Within safe biological limits	-	9.9	5.6	6.76		1.20	7.96
1995	No increase in F	8.3*	8.0	5.5	4.89		2.20	7.09
1996	No increase in F	9.8*	9.0	5.6	4.33		3.50	7.83
1997	No advice given	-	7.5	4.5	2.28		1.90	4.18
1998	20% reduction in F	3.8 [#]	5.0	3.4	2.23		1.30	3.53
1999	Reduce F below F _{pa}	3.5 [#]	4.41	2.0	1.67		1.10	2.77
2000	Reduce F below F _{pa}	<1.6 [#]	2.64	1.1	0.76		2.10	2.86
2001	Lowest possible F	~0	1.39	1.1	0.73		1.00	1.73
2002	Lowest possible F	~0	1.00	0.7	0.75		0.70	1.45
2003	Lowest possible F	~0	0.50	0.5	0.68		n.a.	-
2004	zero catch	0	0.514	0.2	0.18		n.a.	-
2005	zero catch	0	0.514	0.2	0.16		n.a.	-
2006	lowest possible catch	0	0.437	0.08	0.09		n.a.	-
2007	lowest possible catch	0	0.371	0.2	0.20		n.a.	-
2008	lowest possible catch	0	0.278	0.08	0.08		1.91	1.68
2009	Same advice as last year	0	0.290	0.1	0.10		1.03	2.01

2010	Same advice as last year	0	0.157	0.12	0.12		1.03	1.15
2011	See scenarios	-	0.118	0.11	0.07		1.17	1.25
2012	Lowest possible catch and improve selectivity	0	0.089	0.07	0.06	0.032	1.47	1.53
2013	Lowest possible catch and improve selectivity	0	0.084	0.07	0.03	0.034	0.94	0.97
2014	Same advice as for 2013	0	0.080	0.07	0.02	0.049	1.98	2.00
2015	Same advice as for 2013	0	0.080					
2016	Precautionary approach (minimize all catches)	0						

* Not including discards from the *Nephrops* fishery.

** From the *Nephrops* fishery from 1987 to 2002.

*** Including estimates of misreporting between 1992–2002 and since 2012 landings from statistical rectangles 33E2, and 33E3 reallocated to Divisions VIIe–k whiting landings.

Landings only, no discards included.

n.a. = not available.

History of catch and landings

Table 5.3.64.9 Whiting in Division VIIa. Catch distribution by fleet in 2014 as estimated by ICES.

Catch (2014)	Landings	Discards
1998 t	23 t (99% of catch and discards is by trawl)	1975 t (almost all trawl)

Table 5.3.64.10 Whiting in Division VIIa. History of commercial catch, and landings, both official and ICES estimated values are presented by area for each country participating in the fishery. The discard values in this table should be treated as indicative rather than precise estimates; some differences were detected with Table 5.3.64.6 are due to different reporting systems and will be addressed by ICES in the future.

Country	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Belgium	90	92	142	53	78	50	80	92	80	47	52
France	1063	533	528	611	509	255	163	169	78	86	81
Ireland	4394	3871	2000	2200	2100	1440	1418	1840	1773	1119	1260
Netherlands	-	-	-	-	-	-	-	-	17	14	7
UK(Engl. & Wales)*	1202	6652	5202	4250	4089	3859	3724	3125	3557	3152	1900
Spain	-	-	-	-	-	-	-	-	-	-	-
UK (Isle of Man)	15	26	75	74	44	55	44	41	28	24	33
UK (N. Ireland)	4621	-	-	-	-	-	-	-	-	-	-
UK (Scotland)	107	154	236	223	274	318	208	198	48	30	22
UK	-	-	-	-	-	-	-	-	-	-	-
Total human consumption	11492	11328	8183	7411	7094	5977	5637	5465	5581	4472	3355
Estimated <i>Nephrops</i> fishery discards used by ICES**	1611	2103	2444	2598	4203	2707	1173	2151	3631	1928	1304
Estimated Discards from IR-OTB fleet***	-	-	-	-	-	-	-	-	-	-	-
Estimated Discards from NI <i>Nephrops</i> fishery^	-	-	-	-	-	-	-	-	-	-	-
ICES Estimate of Landings	10245	11305	8212	7348	8588	6523	6763	4893	4335	2277	2229
ICES Estimates	11856	13408	10656	9946	12791	9230	7936	7044	7966	4205	3533

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Belgium	46	30	27	22	13	11	10	4.2	3	2	2
France	150	59	25	33	29	8	13	3.7	3	2	-
Ireland	509	353	482	347	265	96	94	55.3	187	68	78
Netherlands	6	1	-	-	-	-	-	-	-	-	-
UK(Engl. & Wales)*	1229	670	506	284	130	82	47	21.7	3	11	20
Spain	-	-	-	-	85	-	-	-	-	-	-
UK (Isle of Man)	5	2	1	1	1	1	-	-	1	1	-
UK (N.Ireland)	-	-	-	-	-	-	-	-	-	-	-
UK (Scotland)	44	15	25	27	31	6	<0.5	<0.5	<0.5	-	-
UK	-	-	-	-	-	-	-	-	-	-	-
Total human consumption	1989	1130	1066	714	554	204	164	84.9	197	84	100
Estimated Nephrops fishery discards used by ICES	1092	2118	1012	740	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Estimated Discards from IR-OTB fleetc	-	-	-	-	524	680	201	223	1545	585	892
Estimated Discards from NI Nephrops fishery^	-	-	-	-	-	-	-	-	-	-	1019
ICES Estimate of Landings	1670	762	733	747	676	184	158	86	196	81	102
ICES Estimates	2762	2880	1745	1487	1200	864	359	309	1740	666	2013

Country	2010	2011	2012	2013	2014*
Belgium	5	4	5	2	2
France	3	3	1	<0.5	<0.5
Ireland	97	95	58	44	59
Netherlands	-	-	-	-	-
UK(Engl. & Wales)*	16	16	10	-	11
Spain	-	-	-	-	-
UK (Isle of Man)	<0.5	<0.5	-	<0.1	<0.1
UK (N.Ireland)	-	-	-	-	-
UK (Scotland)	-	-	1	2	-
UK	-	-	11	20	-
Total human consumption	121	120	86	68	72
Estimated Nephrops fishery discards used by ICES**	-	-	-	-	-
Estimated Discards from IR-OTB fleet***, ^^	330	269	531	85	288
Estimated Discards from NI Nephrops fishery^	704	903	922	832	1645
Estimated Discards from Belgium fleet	-	-	17	18	15
Estimated Discards from UK (E&W) fleet	-	-	1	3	28
ICES Estimate of Landings	121	74	60	33	23
ICES Estimates	1154	1246	1531	970	1998

* 1989-onwards Northern Ireland included with England and Wales.

** Based on UK (N. Ireland) and Ireland data.

*** Based on data from Ireland.

^ Based on data from Northern Ireland.

^^ Preliminary (and rounded).

Summary of the assessment

Table 5.3.64.11 Whiting in Division VIIa. SSB and recruitment from NIGFS-WIBTS-Q1 and Q4 survey relative to the mean of the time series.

Year	Relative spawning biomass		Relative recruitment	
	NIGFS-WIBTS-Q1	NIGFS-WIBTS-Q4	NIGFS-WIBTS-Q1	NIGFS-WIBTS-Q4
1992	1.27	1.02	1.32	0.44
1993	0.66	0.98	0.25	0.25
1994	3.10	1.96	0.91	0.39
1995	2.35	1.50	0.83	1.02
1996	1.97	0.94	1.63	0.50
1997	0.82	2.30	1.26	0.48
1998	1.37	1.24	0.89	0.43
1999	1.65	1.48	0.96	1.25
2000	1.02	0.90	0.94	1.05
2001	1.20	1.02	1.33	1.51
2002	2.18	1.22	2.09	2.11
2003	1.34	2.58	0.64	2.29
2004	0.47	1.42	0.35	0.84
2005	0.48	0.51	0.61	0.86
2006	0.33	0.16	0.78	0.68
2007	0.11	0.64	0.56	2.16
2008	0.39	0.26	0.61	0.96
2009	0.19	0.40	0.52	0.47
2010	0.39	0.57	0.46	0.70
2011	0.30	0.52	0.85	1.02
2012	0.34	0.48	2.21	1.02
2013	0.41	0.39	1.22	1.33
2014	0.69	0.52	1.79	1.26
2015	0.21		2.38	

Sources and references

ICES. 2015a. Report of the Working Group for the Celtic Seas Ecoregion (WGCSE), 12–21 May 2015, ICES Headquarters, Copenhagen, Denmark. ICES CM 2015/ACOM:12.

ICES. 2015b. Advice basis. *In* Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 1, Section 1.2. In preparation.