

Pollack (*Pollachius pollachius*) in subareas 6–7 (Celtic Seas and the English Channel)

ICES advice on fishing opportunities

Please note: The present advice replaces the advice given in June 2017 for catches in 2019.

ICES advises that when the precautionary approach is applied, commercial catches should be no more than 3360 tonnes in 2019. ICES cannot quantify the recreational catches.

Stock development over time

The available information is insufficient to evaluate the exploitation and the trends of pollack in the Celtic Seas ecoregion. Commercial catches have declined since the late 1980s, and in 2017 are the lowest in the time-series.

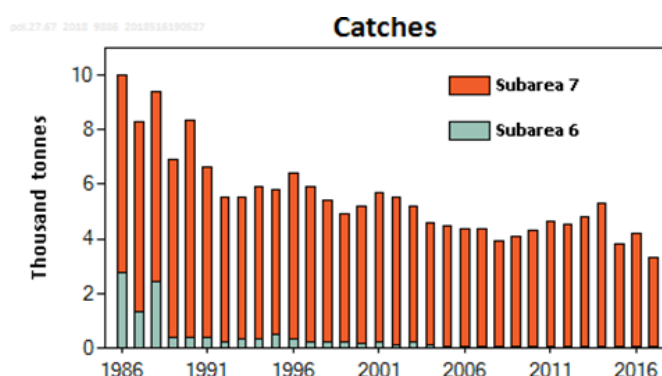


Figure 1 Pollack commercial catches (in tonnes) in subareas 6–7. Catches by subarea, as estimated by ICES.

Stock and exploitation status

The fishing mortality is thought to be below possible reference points and the stock size is unknown.

Table 1 Pollack in subareas 6 and 7. State of the stock and fishery, relative to reference points. The qualitative evaluation is based on a depletion-corrected average catch (DCAC) analysis for Subarea 7 (99% of commercial catch; Figure 2).

		Fishing pressure				Stock size				
		2015	2016	2017		2015	2016	2017		
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	B_{MGT}	—	—	—	Not applicable
Qualitative evaluation	-	✓	✓	✓	Below possible reference points	-	?	?	?	Unknown

The depletion-corrected average catch (DCAC) method has been run with commercial landings. The estimation of the DCAC (MSY proxy) given by the method is 152 tonnes (with a 95% confidence interval from 113 to 184 tonnes) for Subarea 6, and 4063 tonnes (with a 95% confidence interval from 3262 to 4671 tonnes) for Subarea 7. This is consistent with the range of DCAC values estimated when the method was previously applied.

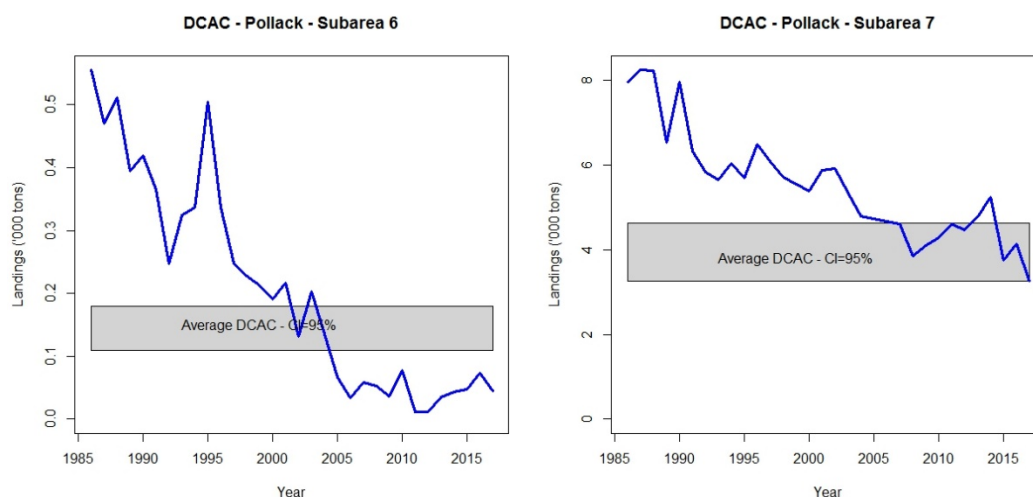


Figure 2 Pollack in subareas 6 and 7. The results of the depletion-corrected average catch (DCAC) assessment method as applied to commercial landings data since 1986. The grey box indicates the proxy for the maximum sustainable catch $\pm 95\%$ confidence intervals.

Catch scenarios

The ICES framework for category 4 stocks was applied (ICES, 2012). The depletion-corrected average catch method (DCAC, which is interpreted as an approximation of MSY) was used to provide catch advice for this stock. ICES implementation of this method advises a reduction of catch when the stock catch is above the DCAC. However, in Subarea 7, catches are declining and lpu of the main commercial fleets show a downward trend (Figure 3). This indication of decline in abundance together with an unknown stock size justifies the application of an additional precautionary buffer.

Table 2 Pollack in subareas 6–7. ICES framework for category 4 applied.

Advised commercial landings for 2018 issued in 2017	4200 tonnes	
Discard rate	< 1%	
Precautionary buffer	Applied	0.8
Commercial catches advice*	3360 tonnes	
% Advice change**	–20%	

* [Advice for 2018] $\times$ [precautionary buffer].

** Advice value for 2019 relative to advice value for 2018.

The advised catch for 2019 is lower than the previous advice, due to the application of the precautionary buffer.

Basis of the advice

Table 3 Pollack in subareas 6–7. The basis of the advice.

Advice basis	Precautionary approach
Management plan	The EU has proposed a multiannual management plan for the Western Waters, which is not yet finalized (EU, 2018).

Quality of the assessment

The main uncertainty in the catch data is that the recreational catch is unknown. In France, Levrel *et al.* (2013) indicated that recreational catch could be a large component of the total catch; 3300 tonnes of recreational fishery catches per year were estimated (2011–2013). The recreational catches are not known in other countries.

Further information on stock structure and biological parameters are needed before alternative assessment models can be applied.

Issues relevant for the advice

ICES advice applies to commercial catches only. ICES cannot quantify the entire recreational catches, but available estimates indicate that they are substantial. The overall TAC for this stock exceeds ICES advice by nearly three times. Although the overall TAC is not limiting, for some countries the quotas are limiting.

In 2017, ICES provided advice for this stock for 2018–2020. ICES has been requested by the EU to provide new advice for 2019 with the most recent information.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 4 Pollack in subareas 6–7. The basis of the assessment.

ICES stock data category	4 (ICES 2016).
Assessment type	DCAC (depletion-corrected average catch).
Input data	Commercial landings.
Discards and bycatch	Negligible (Less than 1% of catch).
Indicators	Lpue series (see summary of assessment section).
Other information	None.
Working group	Working Group for the Celtic Seas Ecoregion (WGCSE)

Information from stakeholders

There is no additional available information.

History of the advice, catch, and management

Table 5 Pollack in subareas 6–7. History of ICES advice, the agreed TAC, and ICES estimates of commercial landings. Weights are in tonnes.

Year	ICES advice	Commercial catch corresponding to advice	EU TAC Subarea 6**	EU TAC Subarea 7	Total commercial landings Subarea 6**	Total commercial landings Subarea 7	Total commercial landings
2000		-	1100	17000	191	5377	5568
2001		-	1100	17000	217	5885	6102
2002		-	1100	17000	131	5922	6053
2003		-	880	17000	203	5348	5551
2004		-	704	17000	136	4786	4922
2005		-	563	17000	67	4725	4792
2006		-	450	15300	37	4661	4698
2007		-	450	15300	58	4611	4669
2008		-	450	15300	53	3861	3914
2009		-	450	15300	37	4063	4100
2010		-	450	13770	79	4209	4288
2011		-	397	13495	46	4619	4666
2012	No increase in catch	-	397	13495	45	4469	4514
2013	Catch should be no more than 1% more than recent catch (last 3 years)	< 4200	397	13495	57	4468	4525
2014	Same advice as 2013	< 4200	397	13495	44	5359	5403
2015	Same advised values as given for 2013	< 4200*	397	13495	48	3740	3788
2016	Precautionary Approach (same advised commercial landings value as given for 2015)	≤ 4200	397	13495	74***	4131***	4205***

Year	ICES advice	Commercial catch corresponding to advice	EU TAC Subarea 6**	EU TAC Subarea 7	Total commercial landings Subarea 6**	Total commercial landings Subarea 7	Total commercial landings
2017	Precautionary approach (same advised commercial landings value as provided for 2016)	≤ 4200	397	12146	44***	3260***	3305***
2018	Precautionary approach	≤ 4200	397	12163			
2019	Precautionary approach	≤ 3360					

* Commercial landings.

** Subarea 6; European Union and international waters of Division 5.b; international waters of subareas 12 and 14.

*** Preliminary commercial landings.

History of the catch and landings

Table 6 Pollack in subareas 6–7. Commercial catch distribution by fleet in 2017 as estimated by ICES.

Total catch	Commercial landings			Commercial discards	Recreational catch
Unknown	Otter trawlers 47.5%	Static nets 22.9%	Others 29.6%	Negligible (38 tonnes)	Unknown, but thought to be significant
	3305 tonnes				

Table 7 Pollack in subareas 6 and 7. History of official commercial landings in Subarea 6 for each country. Weights in tonnes.

Year	Belgium	Denmark	France	Germany	Ireland	Netherlands	Norway	Portugal	Spain	Sweden	UK	Total Subarea 6
1950	1	-	-	-	-	-	-	-	-	-	295	296
1951	-	-	-	-	-	-	-	-	-	-	484	484
1952	-	-	-	-	-	1	-	-	-	-	503	504
1953	-	-	-	-	-	-	-	-	-	-	422	422
1954	-	-	-	-	-	-	-	-	-	-	452	452
1955	-	-	-	-	-	-	-	-	-	-	566	566
1956	-	-	-	-	-	-	-	-	-	-	528	528
1957	-	-	-	-	-	-	-	-	-	-	547	547
1958	.	-	-	23	-	-	-	-	-	-	710	733
1959	1	-	-	6	-	-	-	-	-	-	607	614
1960	15	-	-	-	-	-	-	-	-	-	441	456
1961	1	-	-	1	125	-	-	-	-	-	259	386
1962	2	-	-	8	197	-	-	-	-	-	235	442
1963	6	-	-	2	204	-	-	-	-	-	320	532
1964	1	-	-	1	130	-	-	-	-	-	368	500
1965	1	-	-	1	402	-	-	-	-	-	496	900
1966	2	-	-	-	200	-	-	-	-	-	428	630
1967	1	-	-	1	263	-	-	-	-	1106	413	1784
1968	5	-	-	2	214	-	148	-	-	1012	500	1881
1969	1	-	-	4	282	-	-	-	-	1224	667	2178
1970	2	-	-	1	398	-	-	-	-	756	447	1604
1971	1	-	-	5	75	-	-	-	-	750	256	1087
1972	1	-	-	1	127	-	-	-	-	779	317	1225
1973	2	-	-	-	-	-	-	-	-	-	503	505
1974	6	-	-	-	-	3	-	-	-	-	359	368
1975	< 0.5	-	-	1	-	1	4	-	-	-	393	399
1976	7	-	-	-	-	1	-	-	-	-	519	527
1977	-	-	196	-	-	1	2	-	-	-	493	692
1978	-	-	196	-	-	-	4	-	-	-	553	753
1979	-	-	310	-	-	-	-	-	-	-	350	660
1980	-	-	36	-	-	-	-	-	-	-	233	269
1981	-	-	342	-	-	-	-	-	55	-	185	582
1982	-	< 0.5	272	-	-	-	-	-	95	-	103	470

Year	Belgium	Denmark	France	Germany	Ireland	Netherlands	Norway	Portugal	Spain	Sweden	UK	Total Subarea 6
1983	-	-	331	-	-	-	-	-	86	-	148	565
1984	-	-	212	-	-	-	-	-	222	-	194	628
1985	< 0.5	-	224	1	-	-	-	-	283	-	328	836
1986	-	-	145	-	223	-	-	-	2217	-	187	2772
1987	-	< 0.5	108	-	103	-	-	-	860	-	259	1330
1988	-	< 0.5	128	-	163	-	-	-	1925	-	221	2437
1989	-	< 0.5	111	1	103	-	-	-	-	-	179	394
1990	-	-	76	-	150	-	1	-	-	-	192	419
1991	-	-	31	-	145	-	-	-	4	-	189	369
1992	-	< 0.5	21	-	23	-	-	-	< 0.5	-	203	247
1993	-	-	39	-	12	-	-	-	-	-	273	324
1994	-	-	34	< 0.5	26	-	< 0.5	-	-	-	276	336
1995	-	-	64	3	83	-	-	-	-	-	354	504
1996	-	< 0.5	29	< 0.5	97	-	1	-	-	-	210	337
1997	-	-	14	1	69	-	2	-	-	-	162	248
1998	-	-	21	-	60	-	-	< 0.5	< 0.5	-	147	228
1999	-	-	-	-	73	-	3	-	< 0.5	-	136	212
2000	-	-	11	2	62	-	-	-	-	-	116	191
2001	-	-	8	-	108	-	-	-	-	-	101	217
2002	-	-	9	-	26	-	-	-	-	-	96	131
2003	< 0.5	-	3	-	88	-	1	-	-	-	111	203
2004	< 0.5	-	2	-	68	-	1	-	-	-	65	136
2005	-	-	23	-	28	-	-	-	-	-	16	67
2006	-	-	3	-	25	-	< 0.5	-	4	-	5	37
2007	-	-	10	-	21	-	6	-	-	-	21	58
2008	-	-	8	-	21	-	1	-	-	-	23	53
2009	-	-	7	-	5	-	< 0.5	-	-	-	25	37
2010	-	-	6	-	34	-	< 0.5	-	-	-	38	78
2011	-	-	3	-	8	-	-	-	-	-	34	45
2012	-	-	2	-	10	-	-	-	-	-	33	45
2013	-	-	1	-	34	-	-	-	-	-	22	57
2014	-	-	1	-	25	-	-	-	-	-	18	44
2015	-	-	< 0.5	-	23	-	< 0.5	-	-	-	25	48
2016*	-	-	-	-	44	-	< 0.5	-	-	-	29	74
2017*	-	-	< 0.5	-	30	-	< 0.5	-	-	-	14	44

* Preliminary catch statistics.

Table 8 Pollack in subareas 6–7. History of official commercial landings in Subarea 7 are presented for each country. Weights in tonnes.

Year	Belgium	Denmark	France	Germany	Ireland	Netherlands	Norway	Spain	UK	Total Subarea 7
1950	93	-	-	-	-	-	-	-	375	468
1951	74	-	-	2	-	-	-	-	380	456
1952	80	-	-	10	-	-	-	-	336	426
1953	34	-	-	-	-	-	-	-	252	286
1954	17	-	-	4	-	-	-	-	365	386
1955	38	-	-	-	-	-	-	-	247	285
1956	67	-	-	1	-	-	-	-	155	223
1957	219	-	-	6	-	-	-	-	367	592
1958	342	-	-	17	-	-	-	-	233	592
1959	158	-	-	32	-	-	-	-	251	441
1960	317	-	-	-	-	-	-	-	267	584
1961	268	-	-	-	360	-	-	-	210	838
1962	367	-	-	1	369	-	-	-	170	907
1963	95	-	-	-	411	-	-	-	176	682
1964	299	-	-	-	342	-	-	-	194	835
1965	362	-	-	-	335	-	-	-	231	928
1966	456	-	-	-	438	-	-	-	175	1069

Year	Belgium	Denmark	France	Germany	Ireland	Netherlands	Norway	Spain	UK	Total Subarea 7
1967	417	-	-	-	474	-	-	-	202	1093
1968	214	-	-	-	508	-	-	-	167	889
1969	142	-	-	-	794	-	-	-	161	1097
1970	165	-	-	1	724	-	-	-	120	1010
1971	114	-	-	-	673	-	-	-	116	903
1972	142	-	-	-	1073	-	-	-	123	1338
1973	89	-	-	-	-	3	-	-	127	219
1974	299	-	-	-	-	13	-	-	223	535
1975	295	-	-	-	-	17	-	-	290	602
1976	339	-	-	-	-	4	-	-	421	764
1977	157	1	3569	-	-	1	-	-	465	4193
1978	186	21	5496	14	-	8	-	-	515	6240
1979	151	18	5119	76	-	1	-	-	696	6061
1980	237	7	5242	-	-	1	-	1	769	6257
1981	244	-	5814	-	-	3	-	23	780	6864
1982	154	-	4253	-	-	-	-	32	1022	5461
1983	167	-	6214	-	-	-	-	26	1045	7452
1984	207	-	3927	-	-	-	-	486	1100	5720
1985	269	-	3741	-	-	-	-	20	1022	5052
1986	241	-	4574	-	1335	-	-	17	1795	7962
1987	149	-	5213	-	848	-	-	19	2010	8239
1988	191	-	5211	-	1066	-	-	22	1740	8230
1989	145	-	3893	-	994	-	-	18	1487	6537
1990	133	-	4831	-	1066	-	-	26	1914	7970
1991	76	-	3211	-	1045	-	-	22	1962	6316
1992	62	-	2849	-	1014	-	-	19	1889	5833
1993	55	-	2325	-	1137	-	-	7	2135	5659
1994	94	-	2621	-	921	-	-	8	2391	6035
1995	88	2	2315	-	1107	-	-	4	2168	5684
1996	94	-	2684	-	1190	6	-	5	2519	6498
1997	99	-	2443	-	984	4	< 0.5	7	2540	6077
1998	92	-	2375	-	886	1	-	11	2347	5712
1999	86	-	-	-	976	-	3	19	1703	2787
2000	71	-	2422	-	1069	-	-	5	1810	5377
2001	100	-	2515	-	1274	-	-	9	1987	5885
2002	117	-	2481	-	1308	-	-	17	1999	5922
2003	113	-	2284	-	1151	-	-	12	1788	5348
2004	104	-	1914	-	1049	1	-	13	1705	4786
2005	98	-	2198	-	728	1	-	16	1684	4725
2006	79	-	2213	-	809	1	-	28	1513	4643
2007	91	-	1970	-	782	3	-	1	1764	4611
2008	76	-	1579	-	738	1	-	14	1453	3861
2009	42	-	1670	-	828	4	-	3	1545	4092
2010	35	-	1846	-	942	2	-	3	1459	4284
2011	28	-	1415	-	912	1	-	-	1716	4072
2012	43	-	1421	-	1165	1	-	3	1835	4468
2013	39	-	1790	-	1249	1	-	11	1838	4928
2014	84	-	2042	-	1096	1	-	14	2122	5359
2015	32	-	1154	-	1070	1	-	13	1469	3739
2016*	41	-	1247	-	934	-	-	16	1893	4131
2017*	19	-	959	-	891	< 0.5	-	14	1377	3260

* Preliminary catch statistics.

Summary of the assessment

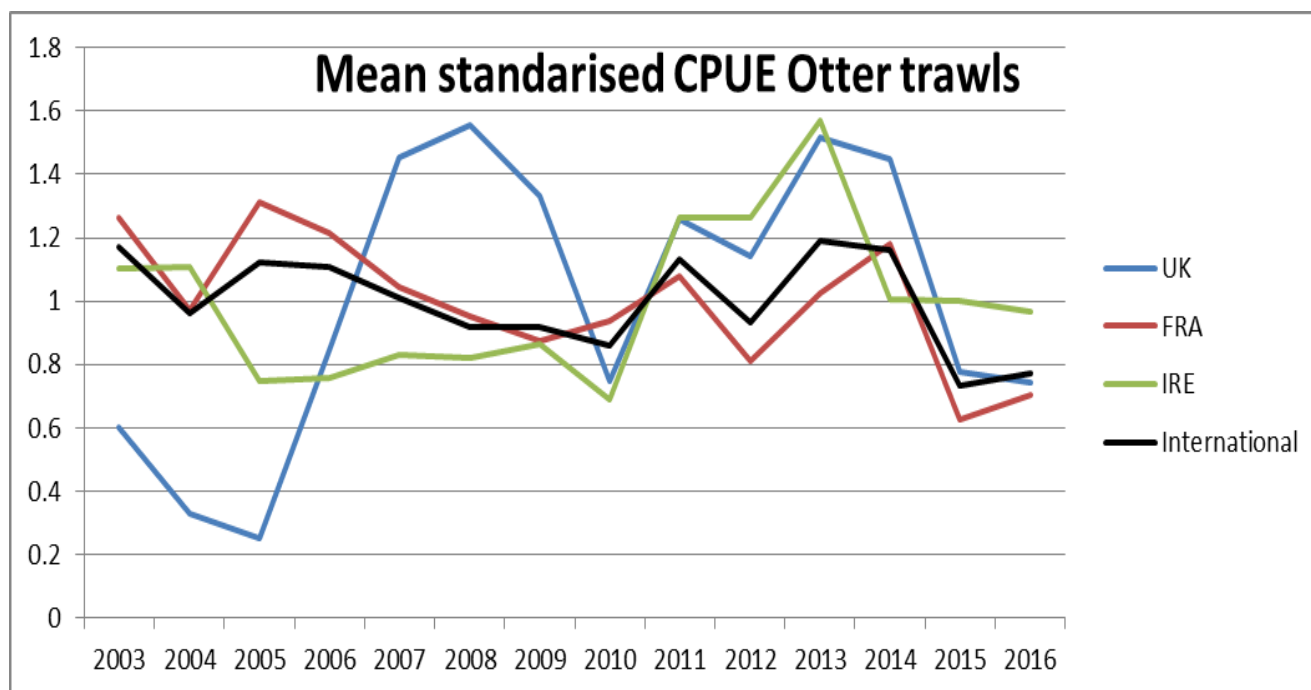


Figure 3 Pollack in subareas 6–7. Mean standardized cpue otter trawls for Subarea 7 (ICES, 2018).

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