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International Council for the Exploration of the Sea
Conseil International pour l'Exploration de la Mer

H.C. Andersens Boulevard 44-46
DK-1553 Copenhagen V
Denmark
Telephone (+45) 33 38 67 00
Telefax (+45) 33 93 42 15
www.ices.dk
info@ices.dk

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Editors

Cristina Silva • Maria Ching Villanueva

Authors

Esther Abad • Santiago Cerviño López • Mickael Drogou • Spyros Fifas • Dorleta Garcia • Hans Gerritsen Isabel González Herraiz • Maria Grazia Pennino • Ane Iriondo • Francisco Izquierdo Tarín • Eoghan Kelly Jean-Baptiste Lecomte • Catarina Maia • Teresa Moura • Lisa Readdy • Paz Sampedro Pastor • Bárbara Serra-Pereira • Cristina Silva • Agurtzane Urtizberea Ijurco • Youen Vermard • Yolanda Vila Gordillo Maria Ching Villanueva • Mathieu Woillez

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Section contents

17 Pollack in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)

Pollachius pollachius – pol.27.89a

Type of assessment: no analytical assessment

The Bay of Biscay and Atlantic Iberian waters pollack, *Pollachius pollachius*, is considered a data-limited stock (DLS) and classified as a category 5.2 stock (ICES, 2012; ICES, 2021a). The stock was benchmarked in early 2021 (ICES, 2021b). However, the assessment was not approved and will therefore remain a category 5.2 stock.

Advice basis: precautionary approach

The advice for this stock is biennial.

Data revision

Landings for the years 1979 to 1984 were included with information available from the ICES historical database[1]. Time-series of landings, effort, and LPUE of the abundance index from the FR-GNS90-8a-2s commercial fleet was updated.

17.1 General

17.1.1 Stock identity and fishery description

See Stock Annex.

17.1.2 Summary of ICES advice for 2020 and 2021 and management for 2019 and 2020

17.1.2.1 ICES advice for 2020 and 2021

In 2019 ICES advised that when the precautionary approach is applied, commercial catches should be no more than 1131 t in each of the years 2020 and 2021.

17.1.2.2 Management applicable for 2019 and 2020

Pollack is managed under a TAC that was set at 1944 t for 2020 and 1851 t for 2021. The TAC for this stock was set separately for ICES divisions 8.a, 8.b, 8.d, 8.e, ICES Division 8.c, and subareas 9 and 10 (and Union waters of CECAF 34.1.1), and is provided in Table 17.1.

The reported landings for this stock in 2020 were 79% of the established TAC. The minimum landing size (MLS) for pollack is set at 30 cm by the European Member States (EU, 1998).

[1] http://www.ices.dk/marine-data/Documents/CatchStats/ICES1903-49.zip

17.2 Fisheries data

17.2.1 Commercial landings

Pollack is mainly exploited by France and Spain, with a minor contribution to landings from UK and Portugal. In the last ten years, France was responsible for 77% of commercial landings of the stock and Spain for 18% (Figure 17.1). The commercial landing statistics are given in Table 17.2. A detailed description of the fishery and biology of the species is provided in the Stock Annex.

The landings by gear submitted to the Working Group (WG) are given in Table 17.3. Note that these are not the landings figures used in the advice issued in 2015 and 2017 because there were many gaps in the data. A new series of French landings by *métier* from 2000 to 2014 was available from the ROMELIGO project (WD 05; ICES, 2018), and these data were used to update the pollack landings for these years. Data from this project have been used to complete the official information available for this stock.

Annual commercial landings have fluctuated between 1479 t and 2313 t since 2000, without a clear trend. Pollack landings slightly increased from 1481 t in 2017 to 1535 t in 2020, which is an increase of 4%. The TAC for 2020 was 1944 t, which means that commercial landings have not exceeded the total allowable catches.

Recreational removals might be considerable but have not been quantified.

17.2.2 Commercial discards

Discard estimates are available since 2003 for French fleets and the last five years for all other relevant fleets (Table 17.4). Discard information from 2003 to 2014 were compiled from data provided by the ROMELIGO project to the WG (*personal communication*). Most fleets did not report pollack in discards and for Spanish netters, discards are considered negligible (less than 0.5% of catch). In 2020, French netters and liners discarded about 1.2% and 0.1% of their catches, respectively.

17.2.3 Length composition

A recent time-series of commercial landings-at-length data for 2010–2020 (Figure 17.2). Length composition sampled were compiled from InterCatch (years > 2015) and the ROMELIGO project. From 2010 to 2015 the length composition information is only available for French *métiers*, from 2015 onwards Spain provides length information for its *métiers* through InterCatch, and from 2019 Portugal also uploads length information. The raising procedure used to obtain an aggregated-weighted length composition of landings follows the following strata: country, area, gear type, and year. The average percentage of the volume of sampled catches was 31%, with the highest values in 2019 (41%) and 2020 (58%).

17.2.4 Commercial landing-effort data

A commercial abundance index for pollack is available for the French gillnet fleet in Division 8.a. The index includes information for fishing sequences performed with gillnets of mesh size > 90 mm and fishing during the second semester of the year (FR-GNS >90mm-8a-2s). This index was identified as a task of the ROMELIGO project and it is described in the working document (WD) by Léauté *et al*. (2018) in a previous WGBIE report (ICES, 2018). A new methodology, based on a conditional decision tree, has been developed to select the information from fleet FR-GNS>90mm-8a-2s from logbook records (Caill-Milly *et al*., 2020 in ICES, 2020). This methodology

was used to update the abundance index last year. The updated time-series of landings, effort and LPUE were provided to the WG this year (*personal communication*) (Table 17.5). The FR-GNS >90mm-8a-2s index is available from 2005 to 2020 and represents an average of 7.5% of the stock's total landings. Landings of this fleet have fluctuated between 52 and 172 t recorded in 2006 and 2014, respectively (Figure 17.3). Since 2014, landings began decreasing reaching the lowest value of 110 t (2018) of the whole series. A slight increase to 154 t was observed in 2020. The effort unit is estimated using the fishing sequence, a combination of vessel, gear, statistical rectangle, and day of FR-GNS>90mm-8a-2s. Effort showed an increasing trend between 2011 and 2016 then decreased in 2017 and 2018, which was followed by an increase in the last two years. The LPUE showed a decreasing trend from 2011 to 2018, declining from 218 in 2011 to 101 kg/Fs in 2018.

17.3 Application of advice rule

Advices are based from 2014 on the previous three year's (2011–2013) average of the landings, with the precautionary buffer applied regularly. The latest advice was released in 2019 (ICES, 2019). ICES advised that commercial landings should be no more than 1131 t in each of the years 2020 and 2021.

The framework for category 5 stocks (ICES, 2021a) was followed to provide the advice for 2022 and 2023. The landings statistics for pollack do not show any remarkable changes since 2017, with an interannual variation on landings between −2% and 3%. The available scientific data for the stock are not sufficient to evaluate both the stock's abundance and exploitation status.

The precautionary buffer was last applied in 2017 and is, therefore, applied again this year. The two exceptions for the application of the precautionary approach buffer were evaluated using the available LPUE index (FR-GNS>90mm-8a-2s) and based on the evaluation, the conditions for the exception the buffer's application were not fulfilled:

- No consistent increase in stock size was observed.
- The stock size index ratio, following the 2-over-3 rule, was estimated as 1.15, below the target value of 1.5.

In this case, the proposed advice resulting from the application of the precautionary buffer (reduction of 20%) on the latest advice (1132 t), is 905 t for each of the years 2022 and 2023.

17.4 Biological reference points

No biological reference points are defined for this stock.

17.5 Management plans

No management plan is known for this stock in the area.

17.6 Current assessment and advice

There is no analytical assessment for this stock. The advice for this stock is biennial. In 2019, the stock was subjected to advice and is, thus provided again this year. In this WG, the stock catch data were updated. COVID-19 has not affected the quality of data on which the advice is based.

17.7 Recommendations for next benchmark

This stock was benchmarked during the WKMSYSPiCT in early 2021 (ICES, 2021b). Due to the short time-series of the abundance index and to the contrasting gaps in the input data, it was not possible to fit the information available to provide an acceptable assessment model using SPiCT (Pedersen and Berg, 2017). Hence, the stock remains as an ICES category 5 stock.

During the WKMSYSPiCT (ICES, 2021b), the following steps were recommended for a future benchmark:

- Standardize the abundance index FR-GNS >90mm-8a-2s with a statistical model as GAM or GLMM.
- Develop an integrated assessment model, e.g. stock synthesis (SS; Methot and Wetzel, 2013), for the stock. The model would integrate the biological information provided by the ROMELIGO project and the landings length composition estimated by the WG.

Other recommendations for the next benchmark include:

- Estimate the recreational removals which are supposed to be relevant and include these data in the assessment model.
- Review the stock's structure in the Northeast Atlantic based on literature and new evidence from ongoing studies.

Once sufficient progress has been achieved considering all the points enumerated above, the WG will push for a new benchmark for the stock.

17.8 References

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17.9 Tables and figures

Table 17.1. TAC for pollack for the two ICES divisions (8a, 8.b, 8.d, 8.e and 8.c) and two subareas (9 and 10) in 2021.

Species:	Pollack *Pollachius pollachius*	**Zone:**	8a, 8b, 8d and 8e (POL/8ABDE.)
Spain	252	Precautionary TAC	
France	1 230		
Union	1 482		
TAC	1 482		

Species:	Pollack *Pollachius pollachius*	**Zone:**	8c (POL/08C.)
Spain	187	Precautionary TAC	
France	21		
Union	208		
TAC	208		

Species:	Pollack *Pollachius pollachius*	**Zone:**	9 and 10; Union waters of CECAF 34.1.1 (POL/9/3411)
Spain	246 (1)	Precautionary TAC	
Portugal	8 (1) (2)		
Union	254 (1)		
TAC	254 (1)		

Table 17.2. Pollack in Subarea 8 and Division 9.a. Commercial landings (tonnes) by country as estimated by Working Group. Shaded values (in light gray) are from ICES/FAO* historical databases and the ROMELIGO project. Values from 2015 to 2020 were derived from the InterCatch database.

	Bay of Biscay (Subarea 8)				Atlantic Iberian waters (Division 9.a)				
Year	Belgium	Spain	France	UK	Spain	Portugal	Total	Unallocated	ICES estimates
1979	0	1021	2221	0	0	0	3242	0	3242
1980	1	1576	2158	0	0	0	3735	0	3735
1981	1	902	2326	0	0	0	3229	0	3229
1982	2	85	2185	2	32	0	2306	0	2306
1983	0	581	2652	0	203	0	3436	0	3436
1984	0	1606	2351	1	642	0	4600	0	4600
1985	0	2304	2769	23	636	0	5732	0	5732
1986	0	437	2127	5	237	0	2806	0	2806
1987	0	584	2022	1	308	3	2918	0	2918
1988	3	476	1761	6	329	7	2582	0	2582
1989	13	214	1682	4	57	3	1973	0	1973
1990	14	194	1662	2	27	1	1900	0	1900
1991	1	221	1867	1	76	2	2168	0	2168
1992	2	154	1735	0	65	2	1958	0	1958
1993	3	135	1327	0	47	1	1513	0	1513
1994	3	157	1764	0	28	3	1955	0	1955
1995	6	153	1457	2	59	2	1679	0	1679
1996	8	137	1164	0	43	2	1354	0	1354
1997	2	152	1167	1	54	2	1378	0	1378
1998	1	152	956	0	55	1	1165	0	1165
1999	0	120	n/a	0	36	1	157	0	157
2000	0	121	1294	0	49	15	1479	0	1479
2001	0	346	1278	0	81	41	1746	0	1746
2002	0	170	1722	0	35	45	1972	0	1972
2003	0	142	1450	1	39	31	1663	0	1663
2004	0	211	1343	0	90	12	1656	70	1726
2005	0	306	1552	0	132	0	1990	-4	1986
2006	0	251	1596	171	102	0	2120	6	2126
2007	0	198	1375	62	103	5	1743	104	1847
2008	0	265	1732	64	128	31	2220	93	2313
2009	0	218	1371	41	68	3	1701	111	1812
2010	0	265	1170	44	91	2	1572	110	1682
2011	0	322	1475	27	104	2	1930	102	2032
2012	0	159	1131	2	139	2	1433	87	1520
2013	0	251	1346	8	110	3	1718	93	1811
2014	0	185	1612	19	93	1	1910	49	1959
2015	0	195	1244	37	78	18	1573	37	1610
2016	0	186	1292	25	111	28	1642	19	1661
2017	0	128	1219	0	95	38	1480	1	1481
2018	0	135	1220	0	124	33	1513	0	1513
2019	0	174	1189	0	143	57	1562	0	1562
2020	0	171	1174	0	136	54	1535	0	1535

Table 17.3. Pollack in Subarea 8 and Division 9.a. Landings (tonnes) from France, Spain, and Portugal by country and gear as submitted to the Working Group. Shaded values come from ICES/FAO historical database and ROMELIGO project. Non-shaded figures, from 2015 to 2020, were derived from the InterCatch database.

	France				Spain			Portugal	
Year	Nets	Trawl	Lines	Others	Lines	Nets	Others	Others	Trawl
2000	671	353	176	94	-	-	-	-	-
2001	794	271	133	80	31	53	169	-	-
2002	1151	321	170	79	26	28	134	-	-
2003	990	215	182	64	31	35	146	-	-
2004	679	298	292	73	47	36	222	16.5	0.1
2005	801	364	326	62	90	36	161	7.8	0.6
2006	882	395	245	74	48	29	243	6.7	0.3
2007	797	301	228	49	72	51	210	4.5	0.4
2008	1055	267	351	59	147	95	163	33.3	0
2009	829	185	328	30	101	76	97	2.4	0.5
2010	719	128	249	74	167	162	93	1.7	0.1
2011	850	180	357	88	207	199	20	1.2	0.3
2012	631	148	305	46	123	122	53	-	-
2013	756	210	327	52	-	-	-	-	-
2014	925	288	345	55	110	147	103	1	0
2015	766	178	258	42	145	114	14	18	0.2
2016	735	128	399	30	185	87	26	28	0
2017	596	100	486	37	123	91	9	38	0
2018	684	78	405	54	134	120	6	32	0.8
2019	683	76	387	43	152	162	3	55	1.8
2020	670	71	409	24	168	133	7	49	5

Table 17.4. Pollack in Subarea 8 and Division 9.a. Annual discards estimates (tonnes) from France, Spain, and Portugal by gear as submitted to the Working Group. Shaded values (in light gray) are from the ROMELIGO project. Values from 2015 to 2020 were derived from the InterCatch database.

	France			Spain			Portugal
Year	Nets	Trawl	Lines	Lines	Nets	Trawl	Trawl
2003	0	0	-	-	-	-	-
2004	0	0.2	-	-	-	-	-
2005	11	0	-	-	-	-	-
2006	1.4	13.9	-	-	-	-	-
2007	5.7	0	-	-	-	-	-
2008	35.5	0	0	-	-	-	-
2009	3.2	0	1.5	-	-	-	-
2010	9	0	0	-	-	-	-
2011	2.9	0	6.2	-	-	-	-
2012	13	0	1.2	-	-	-	-
2013	19.4	0.3	6.8	-	-	-	-
2014	63.6	0	1.1	-	-	-	-
2015	28.1	0	0	0	3.5	0	0
2016	83.1	5.4	4.3	0	0.4	0	0
2017	18.6	0	0	0	0	0	0
2018	38.7	0	0	0	0	2.8	0
2019	8.2	0	6.1	0	0	0	0
2020	8.5	0	0.6	0	0	0	0

Table 17.5. Pollack in Subarea 8 and Division 9.a. Data for commercial index FR-GNS>90mm-8a-2s as submitted to the Working Group in 2021. The representativeness of the index related to the total annual stock landings (in %) is indicated in the last column.

Year	Landings (kg)	Effort (fishing sequence)	LPUE (kg/fs)	% Stock
2005	97484	829	117.6	4.9
2006	51794	669	77.4	2.4
2007	120701	895	134.9	6.5
2008	139003	1036	134.2	6.0
2009	104658	810	129.2	5.8
2010	81178	721	112.6	4.8
2011	142528	654	217.9	7.0
2012	149691	746	200.7	9.8
2013	148872	876	169.9	8.2
2014	171901	1045	164.5	8.8
2015	168819	1051	160.6	10.5
2016	149391	1335	111.9	9.0
2017	133548	1204	110.9	9.0
2018	110553	1095	101.0	7.3
2019	155317	1163	133.5	9.9
2020	154148	1348	114.4	10.0

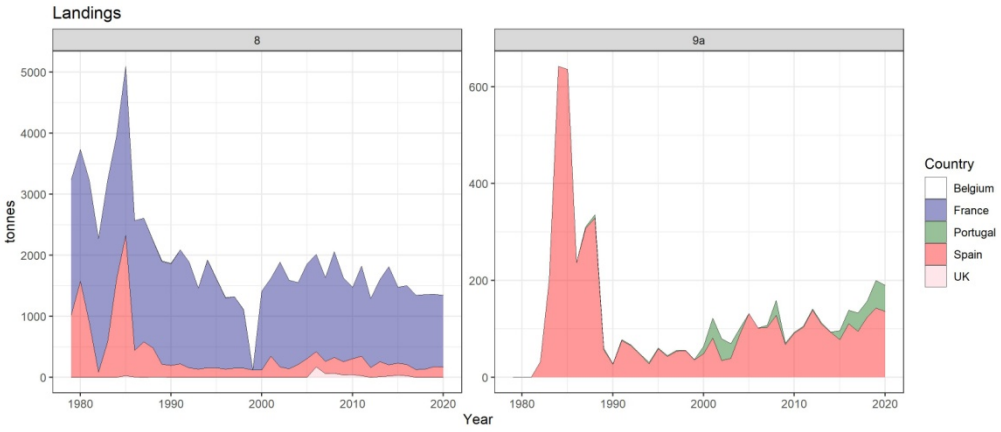

Figure 17.1. Pollack in Subarea 8 and Division 9.a. Commercial landings by country. French data are missing for 1999.

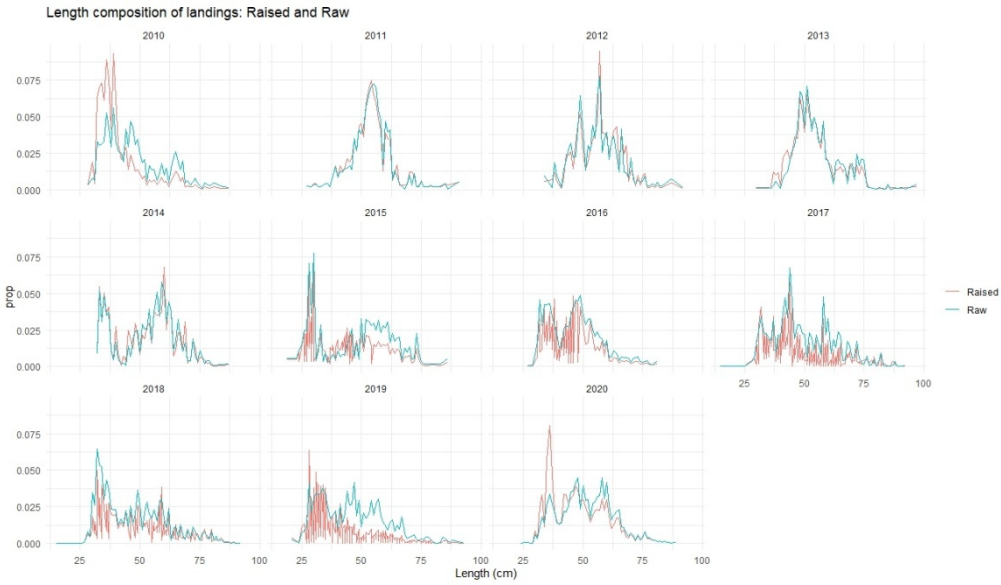

Figure 17.2. Pollack in Subarea 8 and Division 9.a. Length composition of landings (in proportion) showing the raw data (blue) and raised (red) values for the period 2010–2020.

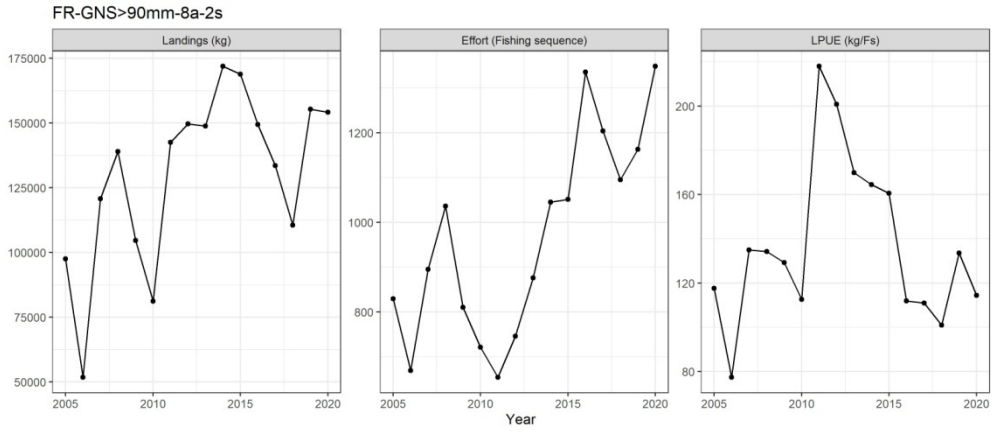

Figure 17.3. Pollack in Subarea 8 and Division 9.a. Landings, effort, and LPUE were estimated from FR-GNS>90mm-8a-2s commercial fleet.