

## 10 Haddock in 5.a

Because of the Covid-19 outbreak the Ministry of Industries and Innovation in Iceland does not require advice from ICES for Icelandic haddock for 2021. This is done to reduce travelling of Icelandic experts and the workload of both MRFI and ICES (see letter to ICES dated March 12, 2020 in the Introduction chapter).

The assessment of Icelandic summer spawning herring was therefore not presented and discussed during the NWWG in April. Data input tables in the report were updated but not text and figures.

**Table 10.1: Haddock in division 5a. Landings by nation.**

Year	Belgium	Faroe Islands	Germany	Greenland	Iceland	Norway	Russia	UK
1979	1010	2161			52152	11		
1980	1144	2029			47916	23		
1981	673	1839			61033	15		
1982	377	1982			66998	28		
1983	268	1783			63815	3		
1984	359	707			47167	3		
1985	391	987			49573	0		2
1986	257	1289			47335			
1987	238	1043			39751	1		
1988	352	797			52999	0		
1989	483	606			61715			
1990	595	603			65897			
1991	485	733			53491			
1992	361	757			46067			
1993	458	754			46231			
1994	271	915	1046	2	58677	13	492	173
1995		968	0		60424		2	57
1996		764			56317	4	17	0
1997		340			43717			
1998		513			40882			
1999		885			44523	18		0

2000	5				41229	4		1
Year	Belgium	Faroe Islands	Germany	Greenland	Iceland	Norway	Russia	UK
2001	690				39101	56		
2002	847				49602	8		
2003	968				59991	1		51
2004	1125				83801	1		
2005	1515				95878	3		44
2006	1588				96130	4		
2007	1686			2	108181	11		
2008	1197				101680	11		
2009	824				81439	5		
2010	360				63869	8		
2011	214				49232	3		
2012	325				45711	13		
2013	654				43370	23		
2014	1626				33048	22		
2015	2337				38393	26		
2016	2858				36648	14		
2017	2515				35695	22		
2018	2209				47677	30		
2019	1774				57075	1		

**Table 10.2: Haddock in 5a. Number of Icelandic boats and catches by fleet segment participating in the haddock fishery in 5a.**

Year	Bottom trawl	Danish seine	Longlines	Bottom trawl	Danish seine	Longlines	Other	Total catch
1993	223	79	130	31192	1308	3832	4068	40400
1994	186	90	163	42057	2861	3833	4743	53494
1995	159	97	140	43851	3766	3965	3543	55125
1996	145	107	146	41049	4887	4767	2410	53113
1997	139	93	157	28545	4706	4848	1770	39869
1998	133	77	200	24820	3162	6451	1595	36028
1999	130	68	222	26314	2213	9130	1041	38698
2000	118	63	223	23000	2533	7576	866	33975
2001	109	63	222	21858	2473	7031	921	32283
2002	101	63	238	29820	3026	9157	1295	43298
2003	101	77	259	36005	4002	12421	1142	53570
2004	104	74	290	50940	7167	16880	1274	76261
2005	103	72	307	52927	9821	23567	1561	87876
2006	91	77	308	46716	11904	28512	760	87892
2007	94	66	283	57009	11875	29814	1204	99902
2008	83	65	266	50572	15554	26064	551	92741
2009	79	65	228	38476	14418	20160	300	73354
2010	68	56	206	28551	9582	17528	872	56533
2011	64	52	203	20443	6337	15365	250	42395
2012	68	48	195	19988	5583	13227	459	39257
2013	69	47	198	18454	4440	13501	201	36596
2014	62	44	207	13043	3304	11489	202	28038
2015	62	41	199	16926	3851	12680	243	33700
2016	62	40	182	16735	3961	11754	87	32537
2017	63	41	164	16081	3982	11536	169	31768
2018	64	39	157	26316	4960	12639	175	44090
2019	61	41	142	35583	5829	12337	267	54016

**Table 10.3: Haddock in 5.a. Number of available length measurements and samples from Icelandic commercial catches.**

Year	Bottom Trawl	Danish Seine	Gillnets	Long Line	Other
2000	62409/326	3114/21	1353/11	12854/77	356/2
2001	69392/346	3900/24	3023/18	26610/151	3864/19
2002	83052/453	7644/47	2063/17	29578/196	1392/12
2003	70828/419	7066/47	2965/26	30259/203	1713/20
2004	82474/503	10201/74	1705/16	35405/252	785/12
2005	94529/514	14880/102	2426/25	53472/375	1778/18
2006	74451/416	29743/172	3395/35	75069/480	685/5
2007	101635/599	34293/196	3721/30	87705/499	1572/11
2008	82671/524	29062/177	3542/30	88912/570	378/4
2009	55862/347	34904/202	831/7	63816/406	658/6
2010	59118/330	19504/116	827/10	56533/343	229/4
2011	53239/278	8304/53	1350/9	43198/237	325/2
2012	41074/223	10084/59	1508/10	60838/302	3/1
2013	34131/198	2498/23	176/1	43132/237	560/4
2014	13529/79	3128/22	289/6	37035/217	
2015	25969/154	2742/18	125/1	41593/221	
2016	21303/129	2425/17	333/3	37490/202	849/6
2017	23123/144	6305/39	375/2	42360/232	1367/7
2018	21780/134	5611/94	414/29	35621/231	558/3
2019	50698/295	3254/30	431/4	25692/187	567/3

**Table 10.4: Haddock in 5.a. Number of available age measurements and samples from Icelandic commercial catches.**

Year	Bottom Trawl	Danish Seine	Gillnets	Long Line	Other
2000	62409/326	3114/21	1353/11	12854/77	356/2
2001	69392/346	3900/24	3023/18	26610/151	3864/19
2002	83052/453	7644/47	2063/17	29578/196	1392/12
2003	70828/419	7066/47	2965/26	30259/203	1713/20
2004	82474/503	10201/74	1705/16	35405/252	785/12
2005	94529/514	14880/102	2426/25	53472/375	1778/18
2006	74451/416	29743/172	3395/35	75069/480	685/5
2007	101635/599	34293/196	3721/30	87705/499	1572/11
2008	82671/524	29062/177	3542/30	88912/570	378/4
2009	55862/347	34904/202	831/7	63816/406	658/6
2010	59118/330	19504/116	827/10	56533/343	229/4
2011	53239/278	8304/53	1350/9	43198/237	325/2
2012	41074/223	10084/59	1508/10	60838/302	3/1
2013	34131/198	2498/23	176/1	43132/237	560/4
2014	13529/79	3128/22	289/6	37035/217	
2015	25969/154	2742/18	125/1	41593/221	
2016	21303/129	2425/17	333/3	37490/202	849/6
2017	23123/144	6305/39	375/2	42360/232	1367/7
2018	21780/134	5611/94	414/29	35621/231	558/3
2019	50698/295	3254/30	431/4	25692/187	567/3

**Table 10.5: Haddock in 5.a. Catch at age from the commercial fishery in Icelandic waters.**

Year	2	3	4	5	6	7	8	9	10
1979	0.149	1.908	3.762	6.057	9.022	1.743	0.438	0.056	0.112
1980	0.595	1.385	11.481	4.298	3.798	3.732	0.544	0.091	0.037
1981	0.010	0.514	4.911	16.9	5.999	2.825	1.803	0.168	0.057
1982	0.107	0.245	3.149	10.851	14.049	2.068	1.00	0.725	0.201
1983	0.034	1.010	1.589	4.596	9.850	8.839	0.766	0.207	0.280
1984	0.241	1.069	4.946	1.341	4.772	3.742	4.076	0.238	0.080
1985	1.320	1.728	4.562	6.796	0.855	1.682	1.914	1.903	0.296
1986	1.012	4.223	4.068	4.686	5.139	0.494	0.796	0.897	0.400
1987	1.939	8.308	6.965	2.728	2.042	1.094	0.132	0.165	0.339
1988	0.237	9.831	15.164	5.824	1.304	1.084	0.609	0.066	0.213
1989	0.188	2.474	22.560	9.571	3.196	0.513	0.556	0.144	0.141
1990	1.857	2.415	8.628	23.611	6.331	0.816	0.150	0.067	0.074
1991	8.617	2.145	5.397	7.342	14.103	2.648	0.338	0.040	0.027
1992	5.405	10.693	5.721	4.610	3.691	5.209	0.999	0.120	0.016
1993	0.769	12.333	12.815	2.968	1.722	1.425	2.239	0.343	0.038
1994	3.198	3.343	28.258	10.682	1.469	0.726	0.358	0.647	0.108
1995	4.015	7.323	5.744	23.927	5.769	0.615	0.290	0.187	0.331
1996	3.090	10.552	7.639	4.468	12.896	2.346	0.208	0.079	0.125
1997	1.364	3.939	10.915	4.895	2.610	5.035	0.719	0.064	0.069
1998	0.279	8.257	5.667	7.856	2.418	1.422	1.897	0.261	0.045
1999	1.434	1.550	17.243	4.516	4.837	0.915	0.620	0.481	0.064
2000	2.659	6.317	2.352	13.615	1.945	1.706	0.324	0.222	0.192
2001	2.515	11.098	6.954	1.446	6.262	0.675	0.478	0.105	0.094
2002	1.082	10.434	15.998	5.099	1.131	3.149	0.262	0.169	0.100
2003	0.401	6.352	16.265	12.548	2.968	0.748	1.236	0.091	0.070
2004	1.597	4.063	17.652	19.358	8.871	1.940	0.471	0.489	0.155
2005	2.405	9.450	6.929	25.421	13.778	4.584	0.809	0.251	0.237
2006	0.241	10.038	21.246	6.646	18.840	7.6	2.180	0.323	0.202
2007	0.782	3.884	42.224	22.239	3.354	9.952	2.740	0.519	0.181

Year	2	3	4	5	6	7	8	9	10
2008	2.316	4.508	9.706	53.022	11.014	1.717	3.033	0.815	0.192
2009	1.066	3.185	4.886	8.892	35.011	5.733	0.726	1.381	0.509
2010	0.121	6.032	7.061	4.806	6.766	17.503	1.874	0.354	0.528
2011	0.253	1.584	11.797	5.080	2.853	3.983	6.220	0.494	0.183
2012	0.196	1.322	3.421	13.107	2.223	1.231	2.480	2.662	0.370
2013	0.250	1.042	2.865	4.008	9.222	1.206	0.668	1.248	1.599
2014	0.238	1.478	1.751	2.725	2.737	4.742	0.447	0.387	1.403
2015	0.232	1.532	4.155	2.317	2.916	2.623	2.715	0.226	0.823
2016	0.481	1.773	3.437	4.130	1.727	1.953	1.420	1.293	0.455
2017	0.573	3.680	3.079	3.013	3.135	1.097	1.182	0.751	0.940
2018	0.353	3.570	10.356	2.908	3.063	2.419	0.964	0.622	1.066
2019	0.387	2.42112	6.437	13.909	1.870	1.366	1.469	0.552	1.108

**Table 10.6: Haddock in 5a. Catch weights from the commercial fishery in Icelandic waters.**

Year	2	3	4	5	6	7	8	9	10
1979	620	960	1410	2030	2910	3800	4560	4720	5956
1980	837	831	1306	2207	2738	3188	3843	4506	4982.84
1981	584	693	1081	1656	2283	3214	3409	4046	5261.02
1982	289	959	1455	1674	2351	3031	3481	3874	4122.51
1983	320	1006	1496	1921	2371	2873	3678	4265	4501.74
1984	691	1007	1544	2120	2514	3027	2940	3906	4033.31
1985	652	1125	1811	2260	2924	3547	3733	4039	4658.72
1986	336	1227	1780	2431	2771	3689	3820	4258	4455.68
1987	452	1064	1692	2408	3000	3565	4215	4502	4024.82
1988	362	780	1474	2217	2931	3529	3781	4467	4418.39
1989	323	857	1185	1996	2893	4066	3866	4734	4989.60
1990	269	700	1054	1562	2364	3414	4134	4946	4451.01
1991	288	699	979	1412	1887	2674	3135	4341	4956.93
1992	313	806	1167	1524	1950	2357	3075	4053	4703.25
1993	303	705	1333	1875	2386	2996	3059	3363	4408.79
1994	337	668	1019	1717	2391	2717	3280	3156	3277.94
1995	351	746	1096	1318	2044	2893	3049	3675	3136.79
1996	311	787	1187	1560	1849	2670	3510	3567	3731.34
1997	379	764	1163	1649	1943	2342	3020	3337	3235.90
1998	445	724	1147	1683	2250	2475	2834	3333	3596.42
1999	555	908	1101	1658	2216	2659	2928	3209	3512.52
2000	495	978	1333	1481	2119	2696	3307	3597	3756.94
2001	541	945	1456	1731	1832	2243	3020	3328	4235.94
2002	564	928	1253	1737	2219	2230	2911	3365	4387.08
2003	498	922	1283	1704	2274	2744	2635	2819	3741.91
2004	559	1006	1258	1579	2044	2809	3123	2945	3759.31
2005	339	886	1265	1506	1916	2323	3028	3211	2890.52
2006	402	749	1093	1495	1758	2163	2555	3054	3589.48
2007	510	748	988	1346	1840	2062	2350	2525	3142.71



Year	2	3	4	5	6	7	8	9	10
2008	383	636	857	1125	1575	2149	2417	2802	2600.47
2009	452	841	960	1131	1352	1757	2364	2497	3073.67
2010	447	756	1092	1294	1448	1685	2188	2366	2645.85
2011	588	905	1122	1455	1688	1914	2094	2455	2985.68
2012	668	978	1222	1492	1903	2164	2366	2704	2939.96
2013	678	1084	1358	1675	2036	2400	2554	3097	3097.31
2014	536	1080	1433	1793	2121	2504	2624	3178	3349.39
2015	573	1084	1486	2011	2332	2823	3306	3258	3768.15
2016	513	1071	1590	2035	2607	2952	3616	3734	4096.66
2017	643	997	1587	2032	2546	3016	3518	3839	3915.67
2018	627	1070	1383	2007	2536	2919	3377	3671	4026.36
2019	541.285	1005.15	1457.86	1820.85	2702.88	3091.86	3352.01	3694.17	4015.07

**Table 10.7: Haddock in 5a. Stock weights from the March survey in Icelandic waters.**

Year	1	2	3	4	5	6	7	8	9	10
1979	37	185	481	910	1409	1968	2496	3077	3300	5956.00
1980	37	185	481	910	1409	1968	2496	3077	3300	4982.84
1981	37	185	481	910	1409	1968	2496	3077	3300	5261.02
1982	37	185	481	910	1409	1968	2496	3077	3300	4122.51
1983	37	185	481	910	1409	1968	2496	3077	3300	4501.74
1984	37	185	481	910	1409	1968	2496	3077	3300	4033.31
1985	35	241	562	1195	1690	2418	2814	3245	3369	3901.80
1986	34	240	671	1134	1963	2425	3236	2964	3767	3824.29
1987	31	163	514	1219	1758	2605	3024	3524	3896	3773.70
1988	37	176	456	973	1851	2711	3118	3485	3277	4986.42
1989	27	181	438	888	1514	2372	2905	3509	3255	3748.60
1990	29	183	454	842	1232	1985	2714	3067	3337	4042.05
1991	31	176	496	1004	1417	1890	2510	3833	3719	4545.56
1992	29	157	497	893	1381	1866	2325	3009	3732	4753.75
1993	40	167	381	878	1488	1786	2581	2576	3277	4000.00
1994	33	179	402	704	1267	1721	1866	2628	2050	1844.64
1995	37	163	444	759	1062	1855	2664	5319	1313	4000.00
1996	40	174	447	816	1053	1452	2149	2365	4830	3133.12
1997	51	173	422	815	1223	1422	1883	2373	3771	2877.68
1998	41	201	400	737	1221	1677	1991	2338	3091	4000.00
1999	34	205	481	715	1191	1932	2387	2724	2933	2581.52
2000	29	179	553	897	1152	1694	2601	2910	3162	3370.46
2001	36	188	484	1048	1425	1501	2179	2803	4000	3958.89
2002	63	172	473	892	1467	1957	2017	1962	3756	4357.30
2003	40	231	412	800	1259	1869	3153	2314	3303	3945.97
2004	34	177	557	807	1280	1685	2444	2920	2927	3333.11
2005	41	153	448	921	1188	1564	2103	2792	2548	3633.75
2006	33	135	333	736	1134	1510	1927	2227	3270	3528.55
2007	48	170	350	615	1053	1493	1781	2067	2157	3801.33

Year	1	2	3	4	5	6	7	8	9	10
2008	27	178	383	593	868	1295	1831	2204	2286	2924.73
2009	29	139	442	687	883	1137	1491	1905	2548	2937.31
2010	32	150	392	777	936	1181	1462	1784	2037	2719.15
2011	35	175	443	759	1131	1307	1585	1867	2044	2956.30
2012	28	202	482	801	1145	1480	1908	2072	2352	2520.06
2013	33	202	589	967	1313	1709	2001	2264	2746	2658.79
2014	36	223	573	1005	1373	1751	2141	2299	2653	3134.85
2015	32	254	614	1073	1638	1924	2451	2772	3186	3388.15
2016	29	162	642	1101	1565	2094	2296	3067	3441	3486.42
2017	34	197	459	1258	1657	2162	2768	3200	3558	3675.10
2018	30	195	544	924	1836	2342	2660	2968	3204	3585.57
2019	29	166	505	962	1341	2472	2814	3035	3477	3532.69

**Table 10.8: Haddock in 5.a. Sexual maturity-at-age in the stock (from the March survey). The numbers for age 10 only apply to the spawning stock.**

Year	1	2	3	4	5	6	7	8	9	10
1979	0.000	0.080	0.301	0.539	0.722	0.821	0.868	0.904	0.963	1.000
1980	0.000	0.080	0.301	0.539	0.722	0.821	0.868	0.904	0.963	1.000
1981	0.000	0.080	0.301	0.539	0.722	0.821	0.868	0.904	0.963	1.000
1982	0.000	0.080	0.301	0.539	0.722	0.821	0.868	0.904	0.963	1.000
1983	0.000	0.080	0.301	0.539	0.722	0.821	0.868	0.904	0.963	1.000
1984	0.000	0.080	0.301	0.539	0.722	0.821	0.868	0.904	0.963	1.000
1985	0.000	0.016	0.149	0.541	0.577	0.767	0.764	0.962	0.933	0.984
1986	0.000	0.022	0.203	0.410	0.672	0.842	0.884	0.956	0.986	0.991
1987	0.000	0.020	0.146	0.487	0.597	0.879	0.900	1.000	0.988	0.968
1988	0.000	0.013	0.215	0.392	0.767	0.791	0.927	0.913	1.000	0.971
1989	0.000	0.040	0.199	0.530	0.723	0.802	1.000	1.000	1.000	1.000
1990	0.000	0.115	0.327	0.632	0.816	0.843	0.918	0.897	1.000	1.000
1991	0.000	0.066	0.219	0.587	0.738	0.818	0.893	0.505	1.000	1.000
1992	0.000	0.050	0.223	0.416	0.801	0.905	0.902	0.859	1.000	1.000
1993	0.005	0.123	0.362	0.484	0.667	0.905	0.977	0.910	0.868	1.000
1994	0.035	0.238	0.325	0.611	0.791	0.865	1.000	0.908	1.000	1.000
1995	0.000	0.130	0.481	0.389	0.757	0.754	0.619	0.986	1.000	1.000
1996	0.000	0.197	0.379	0.606	0.643	0.790	0.745	0.946	0.897	1.000
1997	0.016	0.092	0.432	0.585	0.682	0.751	0.787	0.874	1.000	1.000
1998	0.000	0.030	0.494	0.686	0.778	0.754	0.855	0.901	1.000	1.000
1999	0.000	0.048	0.384	0.679	0.725	0.756	0.896	0.773	0.920	1.000
2000	0.000	0.103	0.247	0.619	0.808	0.875	0.875	1.000	0.781	0.960
2001	0.002	0.097	0.372	0.515	0.752	0.897	0.918	0.915	1.000	1.000
2002	0.000	0.045	0.278	0.629	0.800	0.935	0.933	1.000	1.000	1.000
2003	0.005	0.062	0.347	0.688	0.869	0.923	0.948	0.984	1.000	1.000
2004	0.000	0.038	0.363	0.571	0.831	0.913	1.000	1.000	1.000	1.000
2005	0.000	0.024	0.231	0.564	0.751	0.923	0.937	0.968	1.000	1.000
2006	0.000	0.028	0.118	0.467	0.618	0.741	0.920	1.000	1.000	1.000

Year	1	2	3	4	5	6	7	8	9	10
2007	0.000	0.078	0.207	0.417	0.681	0.760	0.876	0.960	1.000	1.000
2008	0.000	0.027	0.262	0.415	0.621	0.829	0.870	0.904	0.974	1.000
2009	0.000	0.017	0.299	0.469	0.581	0.848	0.890	1.000	0.967	1.000
2010	0.010	0.030	0.183	0.615	0.780	0.789	0.887	0.935	1.000	0.966
2011	0.000	0.046	0.176	0.425	0.822	0.816	0.838	0.898	0.976	1.000
2012	0.000	0.107	0.168	0.446	0.627	0.820	0.903	0.853	0.911	0.973
2013	0.000	0.047	0.225	0.382	0.716	0.795	0.921	0.986	0.974	0.989
2014	0.000	0.108	0.192	0.390	0.567	0.676	0.736	0.925	0.906	0.951
2015	0.000	0.138	0.283	0.444	0.670	0.795	0.773	0.892	1.000	0.961
2016	0.000	0.008	0.360	0.485	0.594	0.779	0.787	0.882	0.902	0.971
2017	0.000	0.073	0.131	0.591	0.664	0.741	0.911	0.939	1.000	0.970
2018	0.000	0.035	0.235	0.395	0.824	0.856	0.892	0.881	0.974	1.000
2019	0.009	0.036	0.335	0.591	0.669	0.890	0.938	0.960	1.000	0.964

**Table 10.9: Haddock in division 5.a. Age disaggregated survey indices from the groundfish survey in March.**

Year	1	2	3	4	5	6	7	8	9	10
1985	29.91	32.25	17.67	23.26	26.30	3.73	11.01	4.87	5.68	0.63
1986	122.05	109.77	61.10	13.39	16.84	13.57	1.00	3.17	1.27	2.43
1987	21.50	324.64	148.07	44.69	7.77	7.53	4.77	0.40	0.62	1.28
1988	15.71	39.99	184.56	90.07	23.12	1.37	2.23	1.81	0.17	0.26
1989	10.45	23.09	40.59	145.63	45.09	12.92	0.79	0.81	0.42	0.41
1990	72.10	31.55	26.67	38.57	92.00	30.73	3.43	0.88	0.23	0.00
1991	88.43	147.01	42.92	17.86	20.17	32.71	7.64	0.31	0.10	0.09
1992	17.21	211.29	139.98	35.42	16.63	13.63	16.15	2.25	0.18	0.05
1993	30.58	38.93	252.31	88.40	11.35	3.89	1.68	4.51	0.89	0.00
1994	58.68	61.57	40.90	147.33	40.55	5.47	2.82	1.37	3.67	0.22
1995	37.07	84.74	47.12	19.82	69.91	7.71	1.31	0.12	0.34	0.00
1996	96.53	67.19	121.31	36.89	19.78	41.00	5.84	0.60	0.13	0.13
1997	8.41	122.61	51.08	53.11	10.80	7.28	10.85	1.34	0.07	0.09
1998	23.17	18.73	110.23	28.45	23.27	4.89	3.48	4.52	0.34	0.00
1999	80.92	86.14	25.79	98.86	12.99	9.88	1.43	1.78	1.04	0.09
2000	60.41	88.73	43.92	8.33	24.82	3.12	1.58	0.40	0.15	0.56
2001	81.03	153.29	116.21	21.70	4.03	10.45	0.89	0.55	0.00	0.10
2002	20.68	304.47	198.83	110.43	22.88	3.45	7.39	0.30	0.34	0.21
2003	112.29	97.95	283.72	247.05	115.11	18.26	2.60	4.57	0.49	0.91
2004	325.12	291.10	70.86	208.82	110.08	34.24	6.82	1.26	0.83	0.16
2005	57.55	693.57	288.64	44.58	157.39	57.69	15.78	3.36	0.32	0.28
2006	39.87	78.50	575.82	181.71	19.34	63.24	16.54	6.80	0.70	0.29
2007	34.23	65.13	89.00	437.40	85.58	7.84	21.32	4.67	2.13	0.07
2008	88.07	67.69	71.12	75.02	220.74	29.75	3.51	7.42	1.63	0.27
2009	10.87	112.24	53.00	40.53	41.31	104.80	12.76	2.19	3.04	0.65
2010	15.25	27.69	137.03	29.60	18.10	20.48	31.38	2.90	0.46	0.80
2011	8.76	27.46	24.33	76.71	13.95	5.88	9.40	14.89	1.28	0.54
2012	12.33	14.76	31.18	27.15	58.16	5.22	2.92	5.28	6.85	1.05

Year	1	2	3	4	5	6	7	8	9	10
2013	13.93	23.05	19.56	22.61	22.25	41.48	4.76	2.49	3.82	5.16
2014	14.15	24.53	30.15	17.69	16.40	14.76	16.39	1.33	1.04	3.14
2015	62.08	19.53	26.50	34.10	12.62	11.11	9.57	9.85	1.16	1.70
2016	29.85	162.26	23.51	22.09	22.24	7.17	7.27	5.05	4.25	1.39
2017	26.66	66.57	140.89	23.02	20.29	22.05	6.47	5.05	3.53	2.21
2018	64.07	70.39	73.53	118.35	13.70	11.54	10.06	3.41	3.29	2.11
2019	7.14	85.21	47.89	40.85	67.31	4.13	3.80	3.08	1.61	0.86
2020	111.97	13.95	97.24	35.18	27.72	42.48	2.86	1.87	2.17	1.79

**Table 10.10: Haddock in 5.a. Age disaggregated survey indices from the groundfish survey in October.**

Year	1	2	3	4	5	6	7	8	9	10
1985	29.91	32.25	17.67	23.26	26.30	3.73	11.01	4.87	5.68	0.63
1986	122.05	109.77	61.10	13.39	16.84	13.57	1.00	3.17	1.27	2.43
1987	21.50	324.64	148.07	44.69	7.77	7.53	4.77	0.40	0.62	1.28
1988	15.71	39.99	184.56	90.07	23.12	1.37	2.23	1.81	0.17	0.26
1989	10.45	23.09	40.59	145.63	45.09	12.92	0.79	0.81	0.42	0.41
1990	72.10	31.55	26.67	38.57	92.00	30.73	3.43	0.88	0.23	0.00
1991	88.43	147.01	42.92	17.86	20.17	32.71	7.64	0.31	0.10	0.09
1992	17.21	211.29	139.98	35.42	16.63	13.63	16.15	2.25	0.18	0.05
1993	30.58	38.93	252.31	88.40	11.35	3.89	1.68	4.51	0.89	0.00
1994	58.68	61.57	40.90	147.33	40.55	5.47	2.82	1.37	3.67	0.22
1995	37.07	84.74	47.12	19.82	69.91	7.71	1.31	0.12	0.34	0.00
1996	96.53	67.19	121.31	36.89	19.78	41.00	5.84	0.60	0.13	0.13
1997	8.41	122.61	51.08	53.11	10.80	7.28	10.85	1.34	0.07	0.09
1998	23.17	18.73	110.23	28.45	23.27	4.89	3.48	4.52	0.34	0.00
1999	80.92	86.14	25.79	98.86	12.99	9.88	1.43	1.78	1.04	0.09
2000	60.41	88.73	43.92	8.33	24.82	3.12	1.58	0.40	0.15	0.56
2001	81.03	153.29	116.21	21.70	4.03	10.45	0.89	0.55	0.00	0.10
2002	20.68	304.47	198.83	110.43	22.88	3.45	7.39	0.30	0.34	0.21
2003	112.29	97.95	283.72	247.05	115.11	18.26	2.60	4.57	0.49	0.91
2004	325.12	291.10	70.86	208.82	110.08	34.24	6.82	1.26	0.83	0.16
2005	57.55	693.57	288.64	44.58	157.39	57.69	15.78	3.36	0.32	0.28
2006	39.87	78.50	575.82	181.71	19.34	63.24	16.54	6.80	0.70	0.29
2007	34.23	65.13	89.00	437.40	85.58	7.84	21.32	4.67	2.13	0.07
2008	88.07	67.69	71.12	75.02	220.74	29.75	3.51	7.42	1.63	0.27
2009	10.87	112.24	53.00	40.53	41.31	104.80	12.76	2.19	3.04	0.65
2010	15.25	27.69	137.03	29.60	18.10	20.48	31.38	2.90	0.46	0.80
2011	8.76	27.46	24.33	76.71	13.95	5.88	9.40	14.89	1.28	0.54
2012	12.33	14.76	31.18	27.15	58.16	5.22	2.92	5.28	6.85	1.05
2013	13.93	23.05	19.56	22.61	22.25	41.48	4.76	2.49	3.82	5.16



Year	1	2	3	4	5	6	7	8	9	10
2014	14.15	24.53	30.15	17.69	16.40	14.76	16.39	1.33	1.04	3.14
2015	62.08	19.53	26.50	34.10	12.62	11.11	9.57	9.85	1.16	1.70
2016	29.85	162.26	23.51	22.09	22.24	7.17	7.27	5.05	4.25	1.39
2017	26.66	66.57	140.89	23.02	20.29	22.05	6.47	5.05	3.53	2.21
2018	64.07	70.39	73.53	118.35	13.70	11.54	10.06	3.41	3.29	2.11
2019	7.14	85.21	47.89	40.85	67.31	4.13	3.80	3.08	1.61	0.86
2020	111.97	13.95	97.24	35.18	27.72	42.48	2.86	1.87	2.17	1.79

**Table 10.11: Haddock in 5.a. ICES advice and official landings. All weights are in tonnes. \* Calendar year. \*\* January to August.**

Year	ICES advice	Predicted catch corresp. to advice	Agreed TAC	ICES landings for the fishing year	ICES landings for the calendar year
1987*	National advice	< 50000	60000		40760
1988*	National advice	< 60000	65000		54204
1989*	National advice	< 60000	65000		62885
1990*	National advice	< 60000	65000		67198
1991**	National advice	< 38000	48000		54692
1991/1992	National advice	< 50000	50000	48123	47121
1992/1993	National advice	< 60000	65000	47255	48123
1993/1994	National advice	< 65000	65000	58443	59502
1994/1995	National advice	< 65000	65000	60829	60884
1995/1996	National advice	< 55000	60000	53972	56890
1996/1997	National advice	< 40000	45000	49764	43764
1997/1998	National advice	< 40000	45000	37811	41192
1998/1999	National advice	< 35000	35000	45146	45411
1999/2000	F reduced below $F_{med}$	< 35000	35000	41150	42105
2000/2001	F reduced below pro- visional $F_{pa}$	< 31000	30000	39143	39654
2001/2002	F reduced below pro- visional $F_{pa}$	< 30000	41000	41069	50498
2002/2003	F reduced below pro- visional $F_{pa}$	< 55000	55000	55269	60883
2003/2004	F reduced below pro- visional $F_{pa}$	< 75000	75000	77916	84828
2004/2005	F reduced below pro- visional $F_{pa}$	< 97000	90000	96617	97225
2005/2006	F reduced below pro- visional $F_{pa}$	< 110000	105000	99926	97614
2006/2007	F reduced below pro- visional $F_{pa}$	< 112000	105000	99763	109966
2007/2008	F reduced below pro- visional $F_{pa}$	< 120000	100000	109810	102872
2008/2009	F reduced below 0.35	< 83000	93000	88617	82045
2009/2010	F reduced below 0.35	< 57000	63000	67579	64169

2010/2011	F reduced below 0.35	< 51000	50000	50042	49433
2011/2012	F reduced below 0.35	< 42000	45000	49179	46208
2012/2013	F reduced below 0.35	< 32000	36000	40512	44097
2013/2014	TAC 0.4 × B45+cm,2014	< 38000	38000	39628	33900
2014/2015	TAC 0.4 × B45+cm,2015	< 30400	30400	36656	39646
2015/2016	TAC 0.4 × B45+cm,2016	< 36400	36400	40117	38109
2016/2017	TAC 0.4 × B45+cm,2017	< 34600	34600	36340	37062
2017/2018	TAC 0.4 × B45+cm,2018	< 41390	41390	44905	49993
2018/2019	TAC 0.4 × B45+cm,2019	< 57982	57982	59382	58850
2019/2020	TAC 0.35 × B45+cm,2020	< 41823	41823		