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**SCIENTIFIC COUNCIL MEETING – JUNE 2024****PORTUGUESE RESEARCH REPORT FOR 2023**

by

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**A. Status of the fisheries**

The 2023 Portuguese nominal catches in STATLANT are not available, so Table I-A is not available and Table I-B was not updated. In 2023, 8 bottom trawlers composed the Portuguese fleet that operated in the NAFO area.

Due to some constrains concerning EU Data Protection Law, Portugal has decided not to share STATLANT data to NAFO. Portugal considers that the level of aggregation of STATLANT data published on NAFO website will allow to identify single operators and, therefore, this data should not be made public. In any case, Portugal is also aware that NAFO Secretariat has already the data needed for scientific and control purposes (CESAG) and that STATLANT data is unnecessary.

**B. Portuguese Annual Sampling Program****1. Catch and effort sampling.**

Effort and CPUE data for 2023 Portuguese trawl fishery on the NAFO Regulatory Area were obtained through the revision of skipper logbooks from four trawlers, kindly supplied by its owners. All the information (round weight of the catch by species, fishing effort, positions and depths) has been recorded on a tow-by-tow basis. The vessel conversion factors were used to convert its processed landings in catches. Effort data in days was supplied by the Portuguese administration. The update for the past years was extracted from Database STATLANT 21B, on May 21, 2017 (Table II).

The daily catch and effort data from the logbooks were used to estimate the directed effort and CPUE for each of the target species/stock, as well as the main by-catch species and depth range of the different fisheries, on a monthly basis. From the data available, the majority of the fishing effort was directed towards cod, redfish, Greenland halibut and silver hake (Table III). Data regarding directed effort and catch rates of the Greenland halibut fishery are presented in Table III to IV B and Fig. 1.

The Greenland halibut CPUE series was updated with the 2023 observed CPUEs. The additive model (Ávila de Melo and Alpoim, 1995), was upgraded in 1998 (Alpoim *et al.*, 1998) and used, like in previous years, to standardize the observed CPUEs, but excluding the vessel factor because the sampling program in recent years was carried out on vessels that were not sampled before. If the vessel factor is applied, these new vessels increase a lot the noise. Because they are the only vessels sampled in the recent years, we assumed that all vessels belong to the same category what is realistic. From January 1988 till April 1995, each monthly observed CPUE of this series was previously corrected for 130mm mesh size (Ávila de Melo and Alpoim, 1996). In this



analysis, any observation corresponding to a month and a trawler with less than 10 hours of directed effort was rejected. The CPUEs are presented in Tables IV and Fig. 1, with the associated standard errors (+/- 2 standard errors in the Figures) and coefficients of variation.

## 1.1. Comments on catch and effort data (based on the vessels sampled)

### 1.1.1. Greenland halibut in Div. 3L, 3M, 3N and 3O

In Div. 3L catch rates declined prior to the boom of the deep-water fishery (Table IV-A, Fig. 1). However, it is from 1990 to 1991, i.e. from the first to the second year of this new fishery in the Regulatory Area, that CPUEs fell by half. Between 1991 and 1994 catch rates remained stable at a low level. Since then, catch rates gradually increased, reaching an upper level in 1998-2000. Catch rates declined in 2001 and remained stable at that lower level in 2002 and 2003. In 2004 the catch rates decline again, reaching the lowest value since 1994. However, after 2004, the Greenland halibut catch rates recovered continuously and, despite the high variability from 2006 to 2023, the catch rates reached, in this period, the highest values observed of the time series (0.727 tonnes/h in 2023, an average of 0.745 tonnes/h for the last five years' period).

Div. 3M catch rates, despite being noisier and falling in 2023, follow the same trend as those in Div. 3L.

For all Div. 3LMNO combined (Table IV-A, Fig. 1) the observed catch rates series follows the Div. 3L pattern, since this is the division of Sub Area 3 with the highest concentration of Greenland halibut fishing effort.

## 2. Biological Sampling

In 2023, biological sampling was obtained from four stern trawlers fishing in Div. 3L, 3M, 3N and 3O between January and August. Apart from species under moratoria, a priority to be sampled whenever they appear in the hauls, biological sampling was conducted for the two most abundant species in each haul, following the NAFO sampling recommendations.

Redfish (*S. mentella*) was sampled in Div. 3L, 3M, 3N and 3O (Tab. V), American plaice and Thorny skate where sampled in Div. 3M, 3N and 3O. Greenland halibut and redfish (*S. marinus*) where sampled in Div. 3L and 3M. Silver hake was sampled in Div. 3N and 3O. Cod was sampled in Div. 3M, roughhead grenadier in Div. 3L and white hake and witch flounder in Div. 3O.

Since 1996, all commercial information is representative of the catch as a whole, although sampling continues to be carried out by sex, with the exception of cod, white hake, Atlantic halibut, pollock, wolffish and haddock. Mean weight and mean weight in the catch are derived from the length-weight relationships calculated from the commercial sampling in 2023 and are presented in Table VI. However, for species/stock with a low sampling level in 2023, the length-weight relationships calculated in previous years were used.

### 2.1. Catch and by-catch composition of the 2023 trawl fishery (130mm codend mesh size).

The regular mesh size in the codend used by the trawlers fishing groundfish was the 130mm and, when the mesh size is not mentioned it, means that the sample refers to the 130mm mesh size.

#### 2.1.1. Cod Div. 3M

Information on length composition of the cod trawl catch in Div. 3M is available for January to April, May, July and August (Table VII, Fig. 2), from 347 m to 620 m depth.

Lengths between 48 cm and 63 cm dominated the catch, with a very modal class at 54 cm (mean length and weight of 60.3 cm and 2141 g).

#### 2.1.2. Redfish (*S. mentella*) Div. 3L

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3L is available only for July (Table VIII, Fig. 3), from 312 m to 447 m depth.

Lengths at 32 cm, 35 cm, and 40 cm dominated the catch, with a very clear modal class at 35 cm (mean length and weight of 36.6 cm and 659 g).

#### **2.1.3. Redfish (*S. mentella*) Div. 3M**

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3M is available from January to May and for August (Table IX, Fig. 4), from 170 m to 700 m depth.

Lengths between 23 cm and 26 cm dominated the catch, with a modal class at 24 cm (mean length and weight of 28.7 cm and 427 g).

#### **2.1.4. Redfish (*S. mentella*) Div. 3N**

Information on length composition of the redfish (*S. mentella*) trawl by-catch in Div. 3N is available from February to August (Table X, Fig. 5), from 154 m to 770 m depth.

Lengths between 23 cm and 30 cm dominated the catch, with no clear modal class (mean length and weight of 28.2 cm and 353 g).

#### **2.1.5. Redfish (*S. mentella*) Div. 3O**

Information on length composition of the redfish (*S. mentella*) trawl catches in Div. 3O is available from April to August (Table XI, Fig. 6), from 125 m to 470 m depth.

Lengths between 20 cm and 25 cm dominated the catches, with a very clear modal class at 23 cm (mean length and weight of 24.6 cm and 215 g).

#### **2.1.6. Redfish (*S. marinus*) Div. 3L**

Information on length composition of the redfish (*S. marinus*) trawl by-catch in Div. 3L is available only for July (Table XII, Fig. 7), from 269 m to 323 m depth.

Lengths between 22 cm and 27 cm dominated the catch, with a clear modal class at 23 cm (mean length and weight of 25.1 cm and 398 g).

#### **2.1.7. Redfish (*S. marinus*) Div. 3M**

Information on length composition of the redfish (*S. marinus*) trawl catches in Div. 3M is available for February April and July (Table XIII, Fig. 8), from 325 m to 579 m depth.

Lengths between 24 cm and 37 cm dominated the catches, with a clear modal class at 25 cm (mean length and weight of 27.3 cm and 394 g).

#### **2.1.8. American plaice Div. 3M**

Information on length composition of the American plaice by-catch in Div. 3M is available for January, February and May (Table XIV, Fig. 9), from 320 m to 571 m depth.

Despite the relatively small sampling (110 fishes measured), we can conclude that the lengths between 46 cm and 52 cm dominated the catch, with a modal class at 50 cm (mean length and weight of 48.9 cm and 1279 g).

#### **2.1.9. American plaice Div. 3N**

Information on length composition of the American plaice by-catch in Div. 3N is available for April and May (Table XV, Fig. 10), from 154 m to 384 m depth.

Lengths between 38 cm and 46 cm dominated the catch, with a modal class at 44 cm (mean length and weight of 43,0 cm and 732 g).

#### **2.1.10. American plaice Div. 3O**

Information on length composition of the American plaice by-catch in Div. 3M is available for April, May and July (Table XVI, Fig. 11), from 158 m to 405 m depth.

Lengths from 30-36 cm and 40-48 cm dominated the catch, with two modal classes at 32 cm and 44 cm (mean length and weight of 41,0 cm and 656 g).

#### **2.1.11. Greenland halibut Div. 3L**

Information on length composition of the Greenland halibut catches in Div. 3L is available from January to March, July and August (Table XVII, Fig. 12), from 864 m to 1491 m depth.

Lengths between 44 cm and 50 cm dominated the catch, with a modal class at 44-46 cm (mean length and weight of 48.1 cm and 1020 g).

#### **2.1.12. Greenland halibut Div. 3M**

Information on length composition of the Greenland halibut catches in Div. 3M is available for January and February (Table XVIII, Fig. 13), from 679 m to 1121 m depth.

Lengths at 38 cm and 52 cm dominated the catch, with two modal classes at 40 cm and 46 cm (mean length and weight of 47.4 cm and 987 g).

#### **2.1.13. Roughhead grenadier Div. 3L**

Information on length composition of the roughhead grenadier catches in Div. 3L is available only for February (Table XIX, Fig. 14), from 1245 m to 1400 m depth.

Despite the small sampling (only 1 sample, with 104 fishes measured), the data shows that lengths at 15 cm and 16 cm and between 18 cm and 21 cm dominated the catch, with two modal classes at 15 cm and 19 cm (mean length and weight of 18.6 cm and 549 g).

#### **2.1.14. Witch flounder Div. 3O**

Information on length composition of the witch flounder by-catch in Div. 3O is available only for July (Table XX), from 125 m to 160 m depth.

#### **2.1.15. White hake Div. 3O**

Information on length composition of the white hake catches in Div. 3O is available only for July (Table XXI, Fig. 15), from 125 m to 160 m depth.

Because the small sampling (1 samples, 11 fish measured) we not take any conclusion about the dominated lengths in the catch (mean length and weight of 67.2 cm and 2849 g).

#### **2.1.16. Thorny skate Div. 3M**

Information on length composition of the thorny skate catches in Div. 3M is available only for January (Table XXII, Fig. 16), from 531 m to 555 m depth.

Despite the small sampling (2 samples, only 35 fish measured) the data shows that the lengths at 38 cm, 56 cm and 58 cm dominated the catch (mean length and weight of 49.9 cm and 1345 g).

#### **2.1.17. Thorny skate Div. 3N**

Information on length composition of the thorny skate catches in Div. 3N is available for July (Table XXIII, Fig. 17), from 55 m to 86 m depth.

Despite the small sampling (2 samples, with 90 fish measured), the data show that lengths at 64 cm and between 68 cm and 72 cm dominated the catch (mean length and weight of 69.8 cm and 3025 g).

#### **2.1.18. Thorny skate Div. 3O**

Information on length composition of the thorny skate catches in Div. 3O is available for May and July (Table XXIV, Fig. 18), from 125 m to 160 m depth.

Despite the small sampling (2 samples, only 61 fish measured), the data show that lengths between 70 cm and 80 cm dominated the catch (mean length and weight of 73.4 cm and 3613 g).

#### **2.1.19. Silver hake Div. 3N**

Information on length composition of the silver hake catches in Div. 3N is available only for June (Table XXV, Fig. 19), from 121 m to 140 m depth.

Despite the small sampling (2 sample, 140 fish measured) the data shows that lengths between 26 cm and 30 cm dominated the catch (mean length and weight of 29.6 cm and 267 g).

#### **2.1.20. Silver hake Div. 3O**

Information on length composition of silver hake catches in Div. 3O is available only for July (Table XXVI, Fig. 20), from 126 m to 130 m depth.

Because the small sampling (1 samples, 11 fish measured) we not take any conclusion about the dominated lengths in the catch (mean length and weight of 35.4 cm and 442 g).

### **3. Acknowledgements**

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### **4. References**

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**TABLE I-A.** PORTUGUESE NOMINAL TRAWL CATCHES (mt) IN NAFO AREA, 2023, **not available, see text.**

**TABLE I-B.** PORTUGUESE NOMINAL TRAWL CATCHES (mt) IN NAFO DIV. 3LMNO (data extracted from NAFO Database STATLANT 21 on 27 April 2021), **not updated, see text.**

SPECIES / YEAR	2020*	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
Cod	4234	6442	4836	5473	5699	4889	5504	4814	2946	2832	1528	1003	434	255	177	105	281
Redfish	13659	12619	10412	10300	9093	8800	9509	9504	8953	9983	10541	9361	7768	7204	7805	7338	5971
American plaice	458	351	206	359	322	291	275	407	468	198	160	298	355	443	376	371	517
Yellowtail flounder	199	15	31	280	13	35	31	94	267	71	27	71	145		134	188	68
Witch flounder	209	67	118	287	206	55	186	128	108	128	71	131	221	124	141	150	591
Greenland halibut	2419	2288	2072	1920	1583	1722	1938	2124	2051	2493	2257	2075	1976	1873	2326	2256	1888
Atlantic halibut	249	229	154	296	207	200	133	96	70	46	56	469	23	32	43	20	59
Roughhead grenadier	7	35	31	27	41	90	293	88	488	251	83	266	50	34	77	262	381
Roundnose grenadier	19	25	9	1	19	13	42	10	39	48	27	198	29	37	54		
Anarhichas spp.	2	13	3	2	5	5	4	4	6	18	13	41	25	16	28	32	45
Hadocck			2	15	153	30	181	78	64	13	1	3	1	2		6	23
Pollock								1									4
White hake	31	21	28	69	109	133	109	81	19	25	17	24	55	62	102	157	1266
Red hake						2		1	1	69	1		3	2	4	18	13
Silver hake	194	77	135	149	392	266	468	30	35								6
Capelin																	
Skates	300	117	70	246	359	360	452	496	427	435	304	1045	1252	1058	1003	576	1550
Monkfish			3	12	20	10	24	7	4	1	11	3	13	35	34	6	73
Squid	334	11	10	12						1	2	29	5	2	17		11
Shrimp									5		15	332					50
Others/Unidentified	1	322	201					48	160	29	11	77	2	1	216	6	15
<b>TOTAL</b>	<b>22315</b>	<b>22632</b>	<b>18321</b>	<b>19448</b>	<b>18221</b>	<b>16901</b>	<b>19149</b>	<b>18011</b>	<b>16111</b>	<b>16641</b>	<b>15125</b>	<b>15426</b>	<b>12357</b>	<b>11180</b>	<b>12537</b>	<b>11491</b>	<b>12812</b>

\* 2020 STATLANT 21 provided by NAFO Secretariat in June 2021



**TABLE I-B.** Cont.

SPECIES / YEAR	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
Cod	602	488	361	192	325	550	1545	1316	1670	2640	3657	5986	13362	15142	24130	12963
Redfish	7804	6346	5331	5678	6082	2370	1126	2152	3297	8614	9831	6584	12165	17803	19032	19137
American plaice	748	634	636	400	718	361	389	289	170	346	323	453	1183	715	1821	1813
Yellowtail flounder	287	123	350	151	428	87					21			11	5	
Witch flounder	485	436	576	230	509	381	350	238	385	579	291	851	1980	2257	15	10
Greenland halibut	4369	4318	5027	4688	3997	3245	3347	3313	1942	5970	8811	10547	13961	11171	3616	4194
Atlantic halibut	89	47	45	28	51	29	15	9	18	45	50	79	229	96		152
Roughhead grenadier	302	508	613	397	1302	1088	765	787	1377	2224	1996	2004	4053	3211	290	911
Roundnose grenadier																
Anarhichas spp.	112	88	142	61	552	139	184	121	1358	3219	2303	1697	2842	1941		
Hadocck	141	78	22	12	11	5	42		2	10	10	165	82	17		
Pollock	114									13	41	29	424	11		
White hake	4090	1678														8
Red hake	2	1968	273	43	76	19	54	124	230	270	365	467	1010	469	104	
Silver hake																
Capelin														14		
Skates	1942	1362	883	672	2168	1105	908	796	2062	6239	7604	7019	23304	13557	652	1075
Monkfish	165	71										37	7		15	
Squid						1		4							47	
Shrimp		16	420	289	227	203	170		17							
Others/Unidentified	13	322	40	1	115	38	115	23	15	12	245	325	725	779	158	6
<b>TOTAL</b>	<b>21265</b>	<b>18483</b>	<b>14719</b>	<b>12842</b>	<b>16561</b>	<b>9621</b>	<b>9010</b>	<b>9172</b>	<b>12543</b>	<b>30181</b>	<b>35548</b>	<b>36243</b>	<b>75327</b>	<b>67194</b>	<b>49885</b>	<b>40269</b>





**TABLE II.** PORTUGUESE TRAWL EFFORT IN FISHING DAYS IN NAFO Div. 3LMNO (data extracted from NAFO. (Database STATLANT 21B on 21 May 2017).

YEAR	3L	3M	3N	3O	TOTAL
2000	519	248	297	329	1393
2001	770	477	361	262	1870
2002	607	263	532	490	1892
2003	503	257	783	753	2296
2004	435	400	406	464	1705
2005	492	407	218	359	1476
2006	408	454	106	517	1485
2007	295	359	162	421	1237
2008	307	464	179	213	1163
2009	512	727	237	188	1664
2010	495	643	214	242	1594
2011	432	770	320	233	1755
2012	235	400	337	299	1271
2013	395	681	350	258	1684
2014	454	791	194	361	1800
2015	374	570	162	336	1442
2016 (a)	346	698	132	347	1523
2017 (a)	282	564	213	278	1337
2018 (a)	302	649	222	194	1367
2019 (a)	375	775	159	206	1515
2020 (a)	367	523	273	239	1402
2021 (a)	224	435	327	320	1306
2022 (a)	210	617	305	208	1340
2023 (a)	193	707	273	97	1270

a) not extracted from Database STATLANT 21B, provisional

**Table III.** Portuguese trawl fishery cpue's and bycatch by month and division for 2023.

DIVISION	TARGET SPECIES	MONTH	DEPTH RANGE (m)		CPUE (ton/hour)	MAIN BYCATCH		WITCH FLOUNDER	TOTAL
			MIN.	MAX.		SPECIES	%	BYCATCH (%)	BYCATCH (%)
3M	COD	MAR	495	519	0.200	RED	56.1	0.0	61.8
3M	COD	APR	239	515	1.834	RED	4.0	0.0	4.4
3M	COD	MAY	214	580	0.908	RED	15.9	0.0	16.8
3M	COD	JUL	300	435	2.432	RED	29.5	0.0	29.8
3M	COD	AUG	280	478	0.865	RED	17.6	0.0	19.6
3L	GHL	JAN	725	1460	0.633	RHG	5.2	0.0	8.2
3L	GHL	FEB	728	1491	0.696	RHG	4.5	0.0	9.4
3L	GHL	MAR	760	1175	1.062	GSK	1.7	0.0	3.4
3L	GHL	APR	880	955	0.936	GSK	4.5	0.0	4.6
3L	GHL	JUL	900	1433	0.639	RHG	2.3	0.0	5.1
3L	GHL	AUG	1174	1463	0.623	RHG	2.9	0.0	6.3
3M	GHL	JAN	692	1121	0.345	GSK	3.2	0.0	7.2
3M	GHL	FEB	679	758	0.294	RNG	2.9	0.0	5.5
3M	GHL	MAR	690	696	2.674	-	0.0	0.0	0.0
3M	GHL	JUL	918	918	0.544	RNG	3.5	0.0	6.6
3M	GHL	AUG	667	700	0.303	RHG	3.2	0.0	4.8
3N	GHL	JUL	917	945	0.408	RNG	1.1	0.0	1.1
3L	RHG	JAN	916	1130	0.303	GHL	51.6	0.0	51.6
3L	RED	MAR	342	612	0.780	COD	43.5	0.0	46.7
3L	RED	JUL	268	447	3.555	HAL	1.0	0.0	1.2
3L	RED	AUG	290	361	2.924	CAT	0.6	0.0	1.3
3M	RED	JAN	364	800	1.167	COD	4.2	0.1	6.9
3M	RED	FEB	360	688	1.000	COD	3.8	0.3	6.5
3M	RED	MAR	252	774	0.932	COD	3.2	0.0	6.4
3M	RED	APR	460	827	1.711	HAL	0.7	0.2	1.2
3M	RED	MAY	398	675	3.095	COD	1.5	0.6	3.3
3M	RED	JUL	288	573	2.120	COD	5.2	0.0	7.0
3M	RED	AUG	170	603	1.171	COD	4.1	0.0	5.5
3N	RED	FEB	470	500	5.238	COD	2.1	0.0	3.9
3N	RED	MAR	400	770	2.367	PLA	6.8	0.0	11.7
3N	RED	APR	204	507	5.098	PLA	2.4	0.1	5.6
3N	RED	MAY	102	356	1.324	RJR	3.1	0.0	4.9
3N	RED	JUN	214	336	4.198	HAL	2.8	0.0	3.0
3N	RED	JUL	167	433	2.628	HAL	1.0	0.0	1.9
3N	RED	AUG	368	370	2.766	PLA	0.5	0.0	1.2
3O	RED	APR	225	229	0.365	HKS	56.6	0.0	60.0
3O	RED	MAY	94	475	0.862	HKS	6.2	0.0	12.9
3O	RED	JUN	282	328	5.518	HKS	0.5	0.0	0.6
3O	RED	JUL	253	470	2.316	HKS	0.4	0.0	1.2
3O	RED	AUG	309	380	0.810	CAT	0.5	0.0	1.0
3N	HKS	APR	112	134	0.058	-	0.0	0.0	0.0
3N	HKS	JUN	119	151	8.962	HKW	0.3	0.0	0.4
3N	HKS	JUL	104	131	0.474	-	0.0	0.0	0.0
3O	HKS	APR	136	446	1.366	RED	15.9	0.1	17.3
3O	HKS	MAY	95	340	0.248	RED	28.5	0.4	30.5
3O	HKS	JUN	122	140	7.912	HKW	0.3	0.0	0.4
3O	HKS	JUL	95	160	2.339	HKW	0.2	0.0	0.2
3O	HKS	AUG	109	171	2.029	HKW	0.2	0.0	0.2
3N	RJR	JUL	52	86	0.349	PLA	1.7	0.3	4.5
3N	RJR	AUG	76	101	0.356	PLA	2.0	0.0	3.9

**Table IV-A.** GREENLAND HALIBUT TRAWL CATCH RATES, 1988-2023: mean annual cpue's corrected for the month, division and vessel of each observation.

	3L			3M			3N			3LMNO			
	CPUE	ST.ERROR	C.V.	CPUE	ST.ERROR	C.V.	CPUE	ST.ERROR	C.V.	CPUE	ST.ERROR	C.V.	
1988	0.461	0.092	39.9							0.387	0.091	47.1	1988
1989	0.410	0.076	55.8							0.349	0.075	64.1	1989
1990	0.371	0.039	36.6	0.151			0.173			0.300	0.037	46.1	1990
1991	0.229	0.045	44.0				0.127	0.031	42.2	0.188	0.038	57.2	1991
1992	0.150	0.030	62.3				0.258	0.032	42.8	0.258	0.039	72.5	1992
1993	0.141	0.014	14.4				0.172	0.021	41.8	0.266	0.028	39.9	1993
1994	0.126	0.003	3.4				0.111	0.017	36.9	0.202	0.038	53.1	1994
1995	0.129	0.021	46.3	0.118	0.016	31.2	0.123	0.024	50.9	0.159	0.025	69.8	1995
1996	0.184	0.023	45.6	0.198	0.025	37.9	0.172	0.019	29.6	0.183	0.017	50.6	1996
1997	0.194	0.018	31.5	0.228	0.032	39.2	0.130	0.009	9.2	0.183	0.021	51.5	1997
1998	0.273	0.016	22.4	0.235	0.022	32.5	0.210	0.019	30.4	0.272	0.014	33.5	1998
1999	0.295	0.020	21.8	0.344	0.043	37.3	0.261	0.020	23.0	0.320	0.021	36.3	1999
2000	0.259	0.024	24.4	0.277	0.030	24.6	0.303	0.043	28.2	0.281	0.032	45.8	2000
2001	0.210	0.031	38.8	0.208	0.015	19.4	0.193	0.017	20.1	0.222	0.023	44.4	2001
2002	0.227	0.021	29.9	0.224	0.028	41.6	0.269	0.032	23.6	0.232	0.023	50.5	2002
2003	0.204	0.031	48.6	0.210	0.023	31.1	0.205	0.021	24.6	0.219	0.025	56.4	2003
2004	0.115	0.013	33.0	0.106	0.022	63.4	0.142	0.010	19.5	0.154	0.019	68.2	2004
2005	0.265	0.012	6.6	0.294	0.129	62.0				0.244	0.044	35.7	2005
2006	0.449	0.044	24.0	0.238	0.024	17.4				0.338	0.036	32.1	2006
2007	0.627	0.083	32.5	0.407	0.084	41.0				0.503	0.063	39.3	2007
2008	0.428	0.031	17.7	0.432	0.020	9.5				0.389	0.021	16.9	2008
2009	0.716	0.102	42.6	0.642	0.050	22.2				0.654	0.053	34.7	2009
2010	0.437	0.034	24.4	0.387	0.014	6.1	0.474			0.400	0.031	29.3	2010
2011	0.795	0.090	28.0	0.615	0.086	31.6				0.685	0.061	30.0	2011
2012	0.416	0.061	21.0	0.265						0.338	0.048	25.0	2012
2013	0.469	0.048	25.9	0.294	0.020	14.0	0.387	0.040	14.9	0.396	0.033	29.3	2013
2014	0.463	0.068	40.3	0.250	0.020	14.2	0.416	0.205	88.8	0.413	0.063	56.9	2014
2015	0.604	0.059	32.7	0.640	0.133	48.7				0.577	0.057	40.4	2015
2016	0.831	0.179	72.4	0.807						0.770	0.164	74.7	2016
2017	0.594	0.096	42.3	0.552	0.105	40.8				0.545	0.072	44.9	2017
2018	0.538	0.054	32.5	0.386	0.110	61.5				0.456	0.051	43.7	2018
2019	0.834	0.092	27.0	0.654						0.748	0.079	28.0	2019
2020	0.692	0.025	8.7	0.460	0.044	14.8				0.573	0.042	21.3	2020
2021	0.689	0.090	28.9	0.567	0.189	51.7				0.606	0.073	32.4	2021
2022	0.782	0.033	6.6	0.988						0.817	0.122	28.5	2022
2023	0.727	0.087	43.8	0.307	0.058	46.2				0.541	0.078	63.2	2023

**Table IV-B.** GREENLAND HALIBUT TRAWL CATCH RATES, 1988-2023 mean cpue's by division corrected for the year, month and vessel of each observation.

	CPUE	ST.ERROR	C.V.	
3L	0.410	0.011	42.0	3L
3M	0.325	0.009	34.0	3M
3N	0.209	0.008	38.4	3N
3LMNO	0.177	0.032	59.8	3LMNO

**Table V.** Intensity of the trawl sampling during 2023, by species, division and month.

SPECIES	DIV.	MONTH	N° OF SAMPLES	N° FISH MEASURED	SAMPLING WEIGHT(Kg)	OTOLITHS	
						N°	LENGTH RANGE (cm)
COD	3M	JAN	9	670	1035	107	30-92
COD	3M	FEB	11	571	954	101	32-113
COD	3M	APR	4	314	586	110	44-94
COD	3M	MAY	21	1780	3864	147	43-132
COD	3M	JUL	9	590	1186	254	46-88
COD	3M	AUG	9	430	1607	39	56-93
REDFISH (S. mentella)	3L	JUL	2	72	30	-	-
REDFISH (S. mentella)	3M	JAN	20	2116	638	107	15-50
REDFISH (S. mentella)	3M	FEB	8	827	336	140	18-52
REDFISH (S. mentella)	3M	MAR	12	1200	644	-	-
REDFISH (S. mentella)	3M	APR	3	400	195	-	-
REDFISH (S. mentella)	3M	MAY	9	767	376	107	22-43
REDFISH (S. mentella)	3M	AUG	9	474	619	10	31-52
REDFISH (S. mentella)	3N	FEB	1	100	45	-	-
REDFISH (S. mentella)	3N	MAR	9	900	377	-	-
REDFISH (S. mentella)	3N	APR	9	821	225	64	21-38
REDFISH (S. mentella)	3N	MAY	3	288	95	66	21-40
REDFISH (S. mentella)	3N	JUN	1	70	22	30	20-31
REDFISH (S. mentella)	3N	JUL	2	131	42	30	20-32
REDFISH (S. mentella)	3N	AUG	1	50	66	-	-
REDFISH (S. mentella)	3O	APR	2	213	34	28	15-27
REDFISH (S. mentella)	3O	MAY	5	450	96	63	19-32
REDFISH (S. mentella)	3O	JUN	1	80	22	30	20-26
REDFISH (S. mentella)	3O	JUL	25	1618	480	579	17-34
REDFISH (S. mentella)	3O	AUG	1	60	20	-	-
REDFISH (S. marinus)	3L	JUL	6	403	161	202	19-35
REDFISH (S. marinus)	3M	FEB	11	1100	499	-	-
REDFISH (S. marinus)	3M	APR	1	54	81	33	37-52
REDFISH (S. marinus)	3M	JUL	1	65	33	24	24-41
AMERICAN PLAICE	3M	JAN	1	8	10	6	37-52
AMERICAN PLAICE	3M	FEB	3	76	97	71	37-67
AMERICAN PLAICE	3M	MAY	4	26	41	24	37-61
AMERICAN PLAICE	3N	APR	2	132	90	55	31-64
AMERICAN PLAICE	3N	MAY	2	101	86	-	-
AMERICAN PLAICE	3O	APR	1	72	25	38	26-48
AMERICAN PLAICE	3O	MAY	1	39	32	-	-
AMERICAN PLAICE	3O	JUL	5	161	149	128	33-66
GREENLAND HALIBUT	3L	JAN	16	1501	1555	71	33-75
GREENLAND HALIBUT	3L	FEB	6	481	406	137	28-64
GREENLAND HALIBUT	3L	MAR	1	100	75	-	-
GREENLAND HALIBUT	3L	JUL	13	718	848	261	32-65
GREENLAND HALIBUT	3L	AUG	3	150	206	-	-
GREENLAND HALIBUT	3M	JAN	4	362	376	37	46-76
GREENLAND HALIBUT	3M	FEB	4	194	154	109	33-65
ROUGHHEAD GRENADIER	3L	FEB	1	104	58	50	14.5-38

**Table V.** cont.

SPECIES	DIV.	MONTH	N° OF SAMPLES	N° FISH MEASURED	SAMPLING WEIGHT(Kg)	OTOLITHS	
						N°	LENGTH RANGE (cm)
WITCH FLOUNDER	3O	JUL	1	2	1	-	-
WHITE HAKE	3O	JUL	1	11	45	7	59-83
THORNY SKATE	3M	JAN	2	35	45	-	-
THORNY SKATE	3N	JUL	2	90	286	-	-
THORNY SKATE	3O	MAY	1	50	187	-	-
THORNY SKATE	3O	JUL	1	11	41	-	-
SILVER HAKE	3N	JUN	2	140	38	-	-
SILVER HAKE	3O	JUL	1	11	5	-	-

**Table VI.** Length-weight relationship by species, stock and sex in 2023.

Species	Stock	Sex	a	b	n	r <sup>2</sup>	Length interval (cm)	Ref.
COD	3M	T	0.0060	3.0969	1589	0.989	30-132	
GHL	2J3KLMNO	F	0.0071	3.0554	576	0.979	28-76	
GHL	2J3KLMNO	M	0.0118	2.9054	478	0.989	33-64	
GHL	2J3KLMNO	T	0.0106	2.9559	2873	0.984	28-76	
PLA	3LNO	F	0.0073	3.0505	128	0.975	33-66	
PLA	3LNO	M	0.0065	3.0737	124	0.971	26-65	
PLA	3LNO	T	0.0051	3.1372	252	0.984	26-66	
PLA	3M	F	0.0054	3.1760	67	0.975	39-61	
PLA	3M	M	0.0038	3.2609	41	0.962	37-54	
PLA	3M	T	0.0044	3.2257	108	0.988	37-61	
RHG	3LMNO	F	0.0765	2.9991	14	0.995	15-38	
RHG	3LMNO	M	0.1164	2.8590	36	0.975	14.5-24.5	
RHG	3LMNO	T	0.0869	2.9596	50	0.992	14.5-38	
REB	3LN	F	0.0432	2.6829	1027	0.990	21-52	
REB	3LN	M	0.1100	2.4033	297	0.945	19-50	
REB	3LN	T	0.0823	2.5054	1324	0.984	19-52	
REB	3M	F	0.1806	2.2867	1572	0.968	16-53	
REB	3M	M	0.2753	2.1693	1703	0.964	14-53	
REB	3M	T	0.2731	2.1722	3525	0.967	14-53	
REG	3LN	F	0.0146	3.1563	271	0.995	20-34	
REG	3LN	M	0.0154	3.1362	128	0.992	19-35	
REG	3LN	T	0.0132	3.1885	399	0.996	19-35	
REG	3M	F	0.1545	2.3665	454	0.971	19-52	
REG	3M	M	0.2922	2.1589	737	0.947	14-48	
REG	3M	T	0.1921	2.2984	1191	0.965	14-52	
HKS	3LMNO	F	0.0508	2.5245	104	0.963	25-40	
HKS	3LMNO	M	0.0321	2.6523	40	0.981	23-47	
HKS	3LMNO	T	0.0320	2.6546	144	0.981	23-47	
RJR	3LMNO	F	0.0617	2.5413	69	0.892	16-84	
RJR	3LMNO	M	0.0058	3.1001	112	0.983	32-89	
RJR	3LMNO	T	0.0324	2.6907	181	0.923	16-89	
Length-weight relationships calculated in previous years								
REB	3O	F	0.0154	2.9618	393	0.997	20-40	SCS 23/13
REB	3O	M	0.0337	2.7218	283	0.987	19-39	SCS 23/13
REB	3O	T	0.0193	2.8949	676	0.992	19-40	SCS 23/13
WIT	3NO	F	0.0010	3.5143	24	0.969	32-50	SCS 22/13
WIT	3NO	M	0.0001	4.1114	32	0.989	28-46	SCS 22/13
WIT	3NO	T	0.0002	3.9234	56	0.985	28-50	SCS 22/13
HKW	3LMNO	T	0.0012	3.4786	520	0.993	24-70	SCS 23/13

**Table VII.** COD, DIV. 3M, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JAN	FEB	APR	MAY	JUL	AUG	1st Q.	2nd Q.	3rd Q.	YEAR	LENGTH GROUP
30	25.9	3.6					18.4			0.9	30
33	27.4	3.0					19.2			0.9	33
36	110.2	9.6	14.9				76.5	7.6		9.2	36
39	217.3		14.9				144.5	7.6		12.5	39
42	16.1	11.1	8.9	0.8			14.4	4.9		4.3	42
45	129.6	235.6	10.3	6.5	13.4		165.1	8.5	8.4	16.0	45
48	43.6	79.2	88.1	27.5	183.6		55.5	58.3	115.9	70.9	48
51	96.4	99.4	131.2	120.9	320.7		97.4	126.1	202.5	141.7	51
54	119.9	140.1	144.9	205.0	271.5	22.9	126.7	174.5	179.9	173.4	54
57	62.7	46.4	156.4	179.5	89.5	9.6	57.2	167.7	60.0	138.6	57
60	9.8	53.5	237.7	101.4	51.8	55.8	24.5	170.7	53.3	137.7	60
63	14.7	133.0	79.7	78.0	31.4	107.9	54.3	78.9	59.6	73.4	63
66	21.4	72.6	32.3	56.4	18.4	18.6	38.6	44.2	18.5	38.2	66
69	12.1	36.6	26.2	71.9	7.1	39.9	20.3	48.7	19.2	40.8	69
72	17.2	30.7	18.2	48.8	6.7	159.2	21.7	33.2	62.9	39.2	72
75	5.9	17.1	11.7	36.6		111.1	9.6	24.0	41.0	27.1	75
78	16.1	8.6	12.0	27.4	4.5	305.1	13.5	19.6	115.3	40.5	78
81	12.9	9.9	6.0	14.9		110.2	11.9	10.3	40.6	17.1	81
84	10.2	2.5	1.0	9.4		32.1	7.6	5.1	11.8	6.7	84
87	18.7		1.0	6.4	1.5	22.4	12.4	3.7	9.2	5.3	87
90	10.8	2.5	2.9	1.5			8.0	2.2		2.0	90
93	1.2	2.5	1.4	4.5		5.1	1.6	3.0	1.9	2.7	93
96				1.5				0.7		0.5	96
99				0.2				0.1		0.1	99
102				0.2				0.1		0.1	102
105				0.3				0.2		0.1	105
108											108
111		2.5					0.8			0.04	111
114											114
117											117
120											120
123											123
126											126
129											129
132				0.4				0.2		0.2	132
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	9	11	4	21	9	9	20	25	18	63	
SAMPLING WEIGHT(kg)	1035	954	586	3864	1186	1607	1989	4450	2794	9233	
No. F.MEASURED	670	571	314	1780	590	430	1241	2094	1020	4355	
MEAN LENGTH(cm)	50.5	57.0	58.5	62.1	54.8	75.1	52.7	60.3	62.3	60.3	
MEAN WEIGHT (g)	1423	1834	1894	2305	1498	3982	1561	2096	2413	2141	
DEPTH RANGE (m)	397/620	385/615	323/438	275/478	300/435	323/478	385/620	275/478	300/478	275/620	

**Table VIII.** REDFISH (*S. mentella*), DIV. 3L, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUL =YEAR	LENGTH GROUP
30	60.4	30
31		31
32	142.4	32
33		33
34	30.2	34
35	336.7	35
36	4.3	36
37	55.7	37
38	60.4	38
39	47.2	39
40	168.0	40
41	90.6	41
42	4.3	42
TOTAL	1000	
No. SAMPLES	2	
SAMPLING WEIGHT(kg)	30	
No. F.MEASURED	72	
MEAN LENGTH(cm)	36.6	
MEAN WEIGHT (g)	659	
DEPTH RANGE (m)	312/447	

**Table IX.** REDFISH (*S. mentella*), DIV. 3M, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JAN	FEB	MAR	APR	MAY	AUG	1st Q.	2nd Q.	3rd Q.	YEAR	LENGTH GROUP
14	0.4						0.2			0.2	14
15	3.9						1.8			1.5	15
16	7.4	0.5					3.6			3.0	16
17	17.6						8.0			6.7	17
18	13.1	0.8	0.2				6.3			5.3	18
19	18.9		0.5	4.5			8.7	1.7		7.5	19
20	25.2	5.5	10.8	31.2			15.1	11.8		14.1	20
21	30.7	18.8	1.3	5.5			22.3	2.1		18.9	21
22	65.4	67.8	8.3	30.5	0.7		60.1	12.0		51.8	22
23	117.0	143.6	3.9		10.4		116.0	6.5		98.1	23
24	159.9	232.3	15.3	7.6	15.6		175.3	12.6		148.5	24
25	170.7	168.3	26.8	53.9	36.9		153.7	43.3		134.1	25
26	109.4	99.3	28.9	58.7	81.3		96.1	72.8		89.4	26
27	54.6	32.4	15.8	31.7	71.8		40.7	56.6		41.0	27
28	21.8	15.5	15.2	9.1	95.5		18.3	62.8		23.0	28
29	22.3	7.1	16.3	10.9	95.3		15.0	63.4		20.3	29
30	25.7	13.0	107.6	77.6	90.4		29.2	85.6		34.9	30
31	21.9	23.2	24.2	43.1	64.8	11.3	22.7	56.6	11.3	26.3	31
32	30.5	31.0	51.2	61.0	79.8	2.2	33.0	72.7	2.2	36.6	32
33	17.3	33.9	96.1	103.7	83.3	2.2	33.2	91.0	2.2	38.9	33
34	17.3	25.4	102.6	152.6	73.0		30.3	103.1		37.9	34
35	9.4	17.6	108.6	70.5	60.0	18.3	24.0	64.0	18.3	28.6	35
36	10.9	8.2	63.9	80.4	47.0	13.7	15.6	59.6	13.7	20.8	36
37	7.6	8.9	60.6	43.5	32.3	47.1	14.0	36.5	47.1	18.1	37
38	5.3	14.2	90.8	21.9	36.3	49.9	18.6	30.8	49.9	21.4	38
39	2.5	6.3	86.1	36.4	12.2	38.7	13.4	21.4	38.7	15.4	39
40	4.4	3.7	32.9	28.7	4.4	40.3	7.3	13.6	40.3	9.4	40
41	0.8	2.0	4.4	3.5	5.9	1.3	1.7	5.0	1.3	2.1	41
42	1.3	2.6	16.6	22.6	2.1	46.2	3.5	9.9	46.2	6.0	42
43	1.3		2.6		1.1	27.1	0.9	0.7	27.1	1.9	43
44		2.0	4.4	6.0		3.3	1.3	2.3	3.3	1.5	44
45	1.7	2.0	3.3			43.4	2.0		43.4	3.4	45
46	0.7	3.0	0.5			11.7	1.7		11.7	1.9	46
47	0.7	2.0				160.7	1.2		160.7	7.5	47
48	0.3	2.6		4.9		36.3	1.3	1.8	36.3	2.8	48
49		3.5	0.2			36.3	1.5		36.3	2.8	49
50	2.0					297.0	0.9		297.0	12.8	50
51		1.5				58.1	0.7		58.1	2.9	51
52		1.5				46.4	0.7		46.4	2.4	52
53						4.5			4.5	0.2	53
54											54
55											55
56											56
57						1.3			1.3	0.1	57
58						1.3			1.3	0.1	58
59						1.3			1.3	0.1	59
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	20	8	12	3	9	9	40	12	9	61	
SAMPLING WEIGHT(kg)	638	336	644	195	376	619	1617	571	619	2808	
No. F.MEASURED	2116	827	1200	400	767	474	4143	1167	474	5784	
MEAN LENGTH(cm)	26.0	27.0	34.3	32.7	31.4	46.5	27.4	31.9	46.5	28.7	
MEAN WEIGHT (g)	336	364	602	547	495	1176	377	515	1176	427	
DEPTH RANGE (m)	400/640	392/577	490/676	600/700	352/675	170/478	392/676	352/700	170/478	170/700	

**Table X.** REDFISH (*S. mentella*), DIV. 3N, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	FEB	MAR	APR	MAY	JUN	JUL	AUG	1st Q.	2nd Q.	3rd Q.	YEAR	LENGTH GROUP
19		1.6						1.4			0.5	19
20		1.6			71.4	31.3		1.4	6.4	29.5	7.0	20
21			5.2	23.7	85.7	6.3			16.2	5.9	9.1	21
22		2.3	19.3	78.9	28.6	81.4		2.0	32.5	76.8	25.9	22
23		2.4	97.2	143.5	100.0	68.9		2.1	107.0	65.0	63.6	23
24		13.4	151.2	257.4	100.0	137.8		11.6	168.6	130.0	106.3	24
25		29.1	176.7	164.2	114.3	90.4		25.2	168.5	85.3	106.5	25
26	60.0	51.6	145.9	25.6	157.1	62.6		52.7	122.0	59.1	89.6	26
27	80.0	52.8	181.0	82.0	142.9	80.6		56.4	157.1	76.0	111.1	27
28	20.0	141.9	108.9	75.2	114.3	96.7		125.6	102.4	91.2	109.8	28
29	30.0	128.9	73.7	37.6	28.6	78.8		115.7	62.2	74.4	83.3	29
30	210.0	182.3	16.5	41.8	42.9	157.7		186.0	24.1	148.8	97.4	30
31	100.0	60.0	11.3	20.4	14.3	55.5	20.0	65.4	13.5	53.5	37.0	31
32	40.0	99.7	5.1	23.9		42.1		91.7	8.6	39.7	42.7	32
33	160.0	95.9	2.3	6.3				104.5	2.9		40.3	33
34	110.0	50.3	0.9	4.2				58.3	1.5		22.4	34
35	110.0	36.3	1.6	7.0		9.9	20.0	46.1	2.6	10.4	19.6	35
36	50.0	12.0	2.0	4.2			20.0	17.1	2.3	1.1	7.6	36
37	20.0	17.3		2.1			120.0	17.7	0.4	6.8	7.5	37
38	10.0	5.5	1.2				20.0	6.1	0.9	1.1	2.8	38
39							40.0			2.3	0.2	39
40		5.9		2.1			20.0	5.1	0.4	1.1	2.3	40
41		3.2						2.7			1.0	41
42		1.4					20.0	1.2		1.1	0.6	42
43		1.6					40.0	1.4		2.3	0.7	43
44												44
45		1.6					60.0	1.4		3.4	0.9	45
46												46
47							100.0			5.6	0.6	47
48							100.0			5.6	0.6	48
49							60.0			3.4	0.4	49
50		1.6					300.0	1.4		16.9	2.3	50
51							40.0			2.3	0.2	51
52							20.0			1.1	0.1	52
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	9	9	3	1	2	1	10	13	3	26	
SAMPLING WEIGHT(kg)	45	377	225	95	22	42	66	421	342	108	871	
No. F.MEASURED	100	900	821	288	70	131	50	1000	1179	181	2360	
MEAN LENGTH(cm)	32.1	30.8	26.5	25.9	25.6	27.1	45.9	31.0	26.3	28.2	28.2	
MEAN WEIGHT (g)	484	436	292	281	270	314	1230	443	287	365	353	
DEPTH RANGE (m)	480/497	430/770	204/488	154/352	217/291	320/392	368/370	430/770	154/488	320/392	154/770	



**Table XI.** REDFISH (*S. mentella*), DIV. 30, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	APR	MAY	JUN	JUL	AUG	2nd Q.	3rd Q.	YEAR	LENGTH GROUP
15	6.5					0.9		0.2	15
16									16
17				2.8			2.8	2.1	17
18	2.6			5.7		0.4	5.6	4.3	18
19	22.0	7.2		48.6		8.1	48.0	38.2	19
20	49.3	36.7	112.5	106.8		50.4	105.4	91.9	20
21	190.8	68.4	175.0	115.8		101.9	114.3	111.2	21
22	238.6	121.6	112.5	105.1		136.1	103.7	111.7	22
23	241.1	250.1	200.0	128.1		240.9	126.5	154.6	23
24	128.5	200.3	112.5	80.9	16.7	176.6	80.0	103.8	24
25	84.2	120.6	125.0	96.6	83.3	116.4	96.4	101.3	25
26	27.2	87.3	87.5	64.8	50.0	79.1	64.6	68.2	26
27	9.1	42.5	25.0	47.2	33.3	35.2	47.0	44.1	27
28		28.2	25.0	32.4	83.3	23.9	33.1	30.8	28
29		17.7		43.4	250.0	12.5	46.1	37.8	29
30		8.0	12.5	62.8	366.7	7.6	66.8	52.2	30
31		8.0	12.5	19.6	100.0	7.6	20.7	17.5	31
32		3.2		24.6	16.7	2.3	24.5	19.0	32
33				7.0			6.9	5.2	33
34				1.8			1.8	1.3	34
35				2.1			2.1	1.6	35
36				1.9			1.8	1.4	36
37									37
38				0.4			0.4	0.3	38
39				0.8			0.8	0.6	39
40				0.8			0.7	0.6	40
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	2	5	1	25	1	8	26	34	
SAMPLING WEIGHT(kg)	34	96	22	480	20	152	500	652	
No. F.MEASURED	213	450	80	1618	60	743	1678	2421	
MEAN LENGTH(cm)	23.0	24.4	23.7	24.7	29.4	24.1	24.7	24.6	
MEAN WEIGHT (g)	170	204	191	219	344	197	221	215	
DEPTH RANGE (m)	140/446	135/408	282/307	125/470	330/380	135/446	125/470	125/470	

**Table XII.** REDFISH (*S. marinus*), DIV. 3L, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUL =YEAR	LENGTH GROUP
19	1.2	19
20	19.2	20
21	51.2	21
22	118.6	22
23	204.5	23
24	158.8	24
25	131.4	25
26	94.3	26
27	83.1	27
28	31.2	28
29	36.2	29
30	54.6	30
31	11.3	31
32		32
33		33
34	2.2	34
35	2.1	35
TOTAL	1000	
No. SAMPLES	6	
SAMPLING WEIGHT(kg)	161	
No. F.MEASURED	403	
MEAN LENGTH(cm)	25.1	
MEAN WEIGHT (g)	398	
DEPTH RANGE (m)	269/323	

**Table XIII.** REDFISH (*S. marinus*), DIV. 3M, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	FEB	APR	JUL	1st Q.	2nd Q.	3rd Q.	YEAR	LENGTH GROUP
14	2.2			2.2			0.1	14
15								15
16	2.6			2.6			0.1	16
17	2.6			2.6			0.1	17
18	4.8			4.8			0.2	18
19	7.1			7.1			0.3	19
20	60.1			60.1			2.5	20
21	19.4			19.4			0.8	21
22	18.8		15.4	18.8		15.4	15.4	22
23	6.0		61.5	6.0		61.5	58.8	23
24	24.6		169.2	24.6		169.2	162.1	24
25	31.0		215.4	31.0		215.4	206.3	25
26	81.1		107.7	81.1		107.7	105.8	26
27	40.9		138.5	40.9		138.5	133.5	27
28	65.6		76.9	65.6		76.9	75.9	28
29	62.6		76.9	62.6		76.9	75.8	29
30	156.5		92.3	156.5		92.3	94.3	30
31	51.2		15.4	51.2		15.4	16.8	31
32	56.4			56.4			2.3	32
33	50.0			50.0			2.1	33
34	51.1		15.4	51.1		15.4	16.8	34
35	63.7			63.7			2.6	35
36	33.7			33.7			1.4	36
37	20.7	18.5		20.7	18.5		1.0	37
38	19.1	18.5		19.1	18.5		0.9	38
39	23.0			23.0			0.9	39
40	21.0	74.1		21.0	74.1		1.4	40
41	5.2	74.1	15.4	5.2	74.1	15.4	15.4	41
42	9.6	74.1		9.6	74.1		0.9	42
43		111.1			111.1		0.8	43
44	4.8	55.6		4.8	55.6		0.6	44
45	1.0	55.6		1.0	55.6		0.4	45
46	1.1	92.6		1.1	92.6		0.7	46
47		55.6			55.6		0.4	47
48	1.0	92.6		1.0	92.6		0.7	48
49		148.1			148.1		1.0	49
50	1.3	55.6		1.3	55.6		0.4	50
51		18.5			18.5		0.1	51
52		55.6			55.6		0.4	52
TOTAL	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	11	1	1	11	1	1	13	
SAMPLING WEIGHT(kg)	499	81	33	499	81	33	613	
No. F.MEASURED	1100	54	65	1100	54	65	1219	
MEAN LENGTH(cm)	30.4	45.9	27.0	30.4	45.9	27.0	27.3	
MEAN WEIGHT (g)	505	1282	383	505	1282	383	394	
DEPTH RANGE (m)	436/579	409/431	325/325	436/579	409/431	325/325	325/579	

**Table XIV.** AMERICAN PLAICE, DIV. 3M, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JAN	FEB	MAY	1st Q.	2nd Q.	YEAR	LENGTH GROUP
36	125.0	22.9	39.2	75.2	39.2	70.7	36
38	125.0	22.9		75.2		65.9	38
40		9.0		4.4		3.9	40
42		27.0	18.9	13.2	18.9	13.9	42
44		131.9	78.3	64.3	78.3	66.1	44
46	125.0	143.9	18.9	134.2	18.9	119.9	46
48		215.0	172.4	104.9	172.4	113.2	48
50	375.0	211.4	97.2	295.2	97.2	270.7	50
52	250.0	99.9	133.2	176.8	133.2	171.4	52
54		98.0	227.3	47.8	227.3	70.0	54
56		9.0	97.2	4.4	97.2	15.9	56
58			78.3		78.3	9.7	58
60			39.2		39.2	4.8	60
62							62
64							64
66		9.0		4.4		3.9	66
TOTAL	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	3	4	4	4	8	
SAMPLING WEIGHT(kg)	10	97	41	107	41	148	
No. F.MEASURED	8	76	26	84	26	110	
MEAN LENGTH(cm)	47.8	49.1	52.2	48.4	52.2	48.9	
MEAN WEIGHT (g)	1193	1282	1580	1237	1580	1279	
DEPTH RANGE (m)	487/500	393/571	320/435	393/571	320/435	320/571	

**Table XV.** AMERICAN PLAICE, DIV. 3N, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	APR	MAY	2nd Q. = YEAR	LENGTH GROUP
30	4.2		4.0	30
32	15.6		14.6	32
34	65.2	29.7	62.9	34
36	89.1	29.1	85.2	36
38	108.9	79.4	107.0	38
40	169.9	110.3	166.0	40
42	103.5	216.4	110.9	42
44	199.8	197.0	199.6	44
46	123.3	161.1	125.8	46
48	77.9	48.5	76.0	48
50	19.8	59.4	22.4	50
52	11.3	30.3	12.6	52
54		9.7	0.6	54
56		9.7	0.6	56
58		19.4	1.3	58
60				60
62				62
64	11.3		10.6	64
TOTAL	1000	1000	1000	
No. SAMPLES	2	2	4	
SAMPLING WEIGHT(kg)	90	86	176	
No. F.MEASURED	132	101	233	
MEAN LENGTH(cm)	42.8	44.7	43.0	
MEAN WEIGHT (g)	725	819	732	
DEPTH RANGE (m)	204/384	154/182	154/384	

**Table XVI.** AMERICAN PLAICE, DIV. 30, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	APR	MAY	JUL	2nd Q.	3rd Q.	YEAR	LENGTH GROUP
26	27.8			10.2		9.4	26
28	83.3			30.5		28.3	28
30	180.6			66.2		61.2	30
32	305.6		9.9	112.0	9.9	104.3	32
34	208.3	51.3	30.8	108.8	30.8	103.0	34
36	97.2	51.3	20.8	68.1	20.8	64.6	36
38		51.3	40.2	32.5	40.2	33.1	38
40	55.6	102.6	40.8	85.3	40.8	82.0	40
42	13.9	153.8	129.6	102.5	129.6	104.6	42
44		282.1	160.6	178.7	160.6	177.3	44
46	13.9	102.6	235.5	70.1	235.5	82.5	46
48	13.9	128.2	89.2	86.3	89.2	86.5	48
50		51.3	125.5	32.5	125.5	39.5	50
52			36.0		36.0	2.7	52
54			36.0		36.0	2.7	54
56		25.6	20.1	16.2	20.1	16.5	56
58							58
60			14.2		14.2	1.1	60
62							62
64			5.0		5.0	0.4	64
66			5.9		5.9	0.4	66
TOTAL	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	1	5	2	5	7	
SAMPLING WEIGHT(kg)	25	32	149	57	149	206	
No. F.MEASURED	72	39	161	111	161	272	
MEAN LENGTH(cm)	33.9	44.4	46.7	40.6	46.7	41.0	
MEAN WEIGHT (g)	348	799	929	633	929	656	
DEPTH RANGE (m)	171/278	158/195	263/405	158/278	263/405	158/405	

**Table XVII.** GREENLAND HALIBUT, DIV. 3L, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JAN	FEB	MAR	JUL	AUG	1st Q.	3rd Q.	YEAR	LENGTH GROUP
28		2.2				0.7		0.4	28
30	0.7					0.4		0.3	30
32	8.8	5.0	10.0	1.0		7.8	0.8	5.6	32
34	29.0	28.5	10.0	1.4		26.2	1.1	18.3	34
36	47.8	39.8	20.0	28.9		41.6	22.8	35.7	36
38	64.5	34.8	70.0	33.2		56.3	26.2	46.8	38
40	85.2	57.4	140.0	63.8		84.4	50.4	73.7	40
42	100.5	57.3	80.0	112.3		84.7	88.6	85.9	42
44	103.3	138.6	170.0	183.4	23.8	123.2	149.8	131.6	44
46	87.3	200.9	160.0	146.8	91.0	131.5	135.1	132.6	46
48	103.4	131.5	190.0	81.5	26.2	123.8	69.9	106.8	48
50	105.1	185.3	70.0	93.3	57.4	124.3	85.7	112.1	50
52	63.2	43.7	60.0	90.6	78.7	56.9	88.1	66.7	52
54	52.7	20.9	10.0	62.3	88.6	37.2	67.9	46.9	54
56	49.9	47.1	10.0	37.9	67.4	43.6	44.1	43.7	56
58	44.2	4.2		29.0	207.8	26.1	66.7	38.9	58
60	24.5	0.5		20.1	252.7	13.9	69.1	31.3	60
62	11.7			8.3	90.1	6.6	25.5	12.5	62
64	7.5	2.2		4.2	16.3	4.8	6.7	5.4	64
66	4.0			2.0		2.2	1.5	2.0	66
68	1.0					0.6		0.4	68
70	1.6					0.9		0.6	70
72	1.2					0.7		0.5	72
74	0.8					0.5		0.3	74
76	2.2					1.2		0.9	76
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	16	6	1	13	3	23	16	39	
SAMPLING WEIGHT(kg)	1555	406	75	848	206	2036	1054	3091	
No. F.MEASURED	1501	481	100	718	150	2082	868	2950	
MEAN LENGTH(cm)	47.8	47.0	45.7	48.0	56.9	47.3	49.9	48.1	
MEAN WEIGHT (g)	1019	923	874	998	1613	970	1127	1020	
DEPTH RANGE (m)	865/1460	1097/1491	864/900	900/1433	1184/1342	864/1491	900/1433	864/1491	

**Table XVIII.** GREENLAND HALIBUT, DIV. 3M, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JAN	FEB	1st Q. = YEAR	LENGTH GROUP
30		2.5	1.2	30
32	5.0	13.1	9.1	32
34	7.3	46.2	26.8	34
36	32.9	35.1	34.0	36
38	57.1	129.0	93.2	38
40	71.2	146.9	109.2	40
42	84.8	59.2	72.0	42
44	66.9	114.2	90.6	44
46	117.1	119.7	118.4	46
48	111.0	81.0	96.0	48
50	89.4	97.3	93.4	50
52	75.1	89.0	82.1	52
54	71.1	36.0	53.5	54
56	74.9	10.9	42.8	56
58	73.1		36.5	58
60	28.9	4.3	16.6	60
62	12.1		6.1	62
64	8.9	15.6	12.3	64
66	4.1		2.0	66
68	2.5		1.2	68
70				70
72	2.4		1.2	72
74				74
76	4.1		2.0	76
TOTAL	1000	1000	1000	
No. SAMPLES	4	4	8	
SAMPLING WEIGHT(kg)	376	154	530	
No. F.MEASURED	362	194	556	
MEAN LENGTH(cm)	49.5	45.3	47.4	
MEAN WEIGHT (g)	1136	840	987	
DEPTH RANGE (m)	700/1121	679/758	679/1121	

**Table XIX.** ROUGHHEAD GRENADIER, DIV. 3L, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	FEB = YEAR	LENGTH GROUP
14	48.1	14
15	182.7	15
16	153.8	16
17	67.3	17
18	86.5	18
19	163.5	19
20	134.6	20
21	86.5	21
22	48.1	22
23		23
24	9.6	24
25		25
26		26
27		27
28		28
29	9.6	29
30		30
31		31
32		32
33		33
34		34
35		35
36		36
37		37
38	9.6	38
TOTAL	1000	
No. SAMPLES	1	
SAMPLING WEIGHT(kg)	58	
No. F.MEASURED	104	
MEAN LENGTH(cm)	18.6	
MEAN WEIGHT (g)	549	
DEPTH RANGE (m)	1245/1400	

**Table XX.** WITCH FLOUNDER, DIV. 30, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUL = YEAR	LENGTH GROUP
32	500.0	32
34		34
36		36
38		38
40		40
42		42
44	500.0	44
TOTAL	1000	
No. SAMPLES	1	
SAMPLING WEIGHT(kg)	1	
No. F.MEASURED	2	
MEAN LENGTH(cm)	39.0	
MEAN WEIGHT (g)	411	
DEPTH RANGE (m)	125/160	



**Table XXI.** WHITE HAKE, DIV. 30, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUL = YEAR	LENGTH GROUP
58	90.9	58
60	272.7	60
62	90.9	62
64	90.9	64
66	90.9	66
68	90.9	68
70	90.9	70
72		72
74		74
76		76
78	90.9	78
80		80
82	90.9	82
TOTAL	1000	
No. SAMPLES	1	
SAMPLING WEIGHT(kg)	45	
No. F.MEASURED	11	
MEAN LENGTH(cm)	67.2	
MEAN WEIGHT (g)	2849	
DEPTH RANGE (m)	125/160	

**Table XXII.** THORNY SKATE, DIV. 3M, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JAN = YEAR	LENGTH GROUP
16	13.2	16
18		18
20		20
22		22
24		24
26		26
28		28
30		30
32	49.0	32
34	49.0	34
36	62.3	36
38	173.5	38
40	13.2	40
42	62.3	42
44	13.2	44
46		46
48	13.2	48
50		50
52	49.0	52
54	26.5	54
56	124.5	56
58	173.5	58
60	13.2	60
62	75.5	62
64	49.0	64
66	39.7	66
TOTAL	1000	
No. SAMPLES	2	
SAMPLING WEIGHT(kg)	45	
No. F.MEASURED	35	
MEAN LENGTH(cm)	49.9	
MEAN WEIGHT (g)	1345	
DEPTH RANGE (m)	531/555	

**Table XXIII.** THORNY SKATE, DIV. 3N, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUL = YEAR	LENGTH GROUP
62	22.2	62
64	110.6	64
66	55.3	66
68	233.1	68
70	434.3	70
72	111.5	72
74	32.8	74
TOTAL	1000	
No. SAMPLES	2	
SAMPLING WEIGHT(kg)	286	
No. F.MEASURED	90	
MEAN LENGTH(cm)	69.8	
MEAN WEIGHT (g)	3025	
DEPTH RANGE (m)	55/86	

**Table XXIV.** THORNY SKATE, DIV. 30, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	MAY =2nd Q.	JUL =3rd Q.	YEAR	LENGTH GROUP
40	20.0		19.7	40
42				42
44				44
46				46
48				48
50				50
52	20.0		19.7	52
54	20.0		19.7	54
56	40.0		39.3	56
58	20.0		19.7	58
60	20.0		19.7	60
62				62
64	20.0		19.7	64
66	40.0		39.3	66
68	40.0	181.8	42.3	68
70	80.0	272.7	83.1	70
72	100.0	181.8	101.3	72
74	140.0	90.9	139.2	74
76	80.0	181.8	81.7	76
78	140.0	90.9	139.2	78
80	100.0		98.4	80
82	40.0		39.3	82
84	40.0		39.3	84
86	20.0		19.7	86
88	20.0		19.7	88
TOTAL	1000	1000	1000	
No. SAMPLES	1	1	2	
SAMPLING WEIGHT(kg)	187	41	228	
No. F.MEASURED	50	11	61	
MEAN LENGTH(cm)	73.4	73.2	73.4	
MEAN WEIGHT (g)	3615	3493	3613	
DEPTH RANGE (m)	145/145	125/160	125/160	

**Table XXV.** SILVER HAKE, DIV. 3N, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUN = YEAR	LENGTH GROUP
23	9.2	23
24	9.2	24
25	33.7	25
26	170.1	26
27	169.6	27
28	124.4	28
29	148.4	29
30	93.5	30
31	51.6	31
32	21.2	32
33	39.2	33
34	54.4	34
35	21.2	35
36	15.2	36
37	21.2	37
38		38
39	6.0	39
40	12.0	40
TOTAL	1000	
No. SAMPLES	2	
SAMPLING WEIGHT(kg)	38	
No. F.MEASURED	140	
MEAN LENGTH(cm)	29.6	
MEAN WEIGHT (g)	267	
DEPTH RANGE (m)	121/140	

**Table XXVI.** SILVER HAKE, DIV. 30, 2023: length composition (0/000) of the 130mm trawl catches.

LENGTH GROUP	JUL = YEAR	LENGTH GROUP
26	90.9	26
27		27
28	90.9	28
29	90.9	29
30		30
31	90.9	31
32		32
33	181.8	33
34		34
35		35
36	90.9	36
37	90.9	37
38		38
39	90.9	39
40		40
41		41
42		42
43		43
44		44
45	90.9	45
46		46
47	90.9	47
TOTAL	1000	
No. SAMPLES	1	
SAMPLING WEIGHT(kg)	5	
No. F.MEASURED	11	
MEAN LENGTH(cm)	35.4	
MEAN WEIGHT (g)	442	
DEPTH RANGE (m)	126/130	

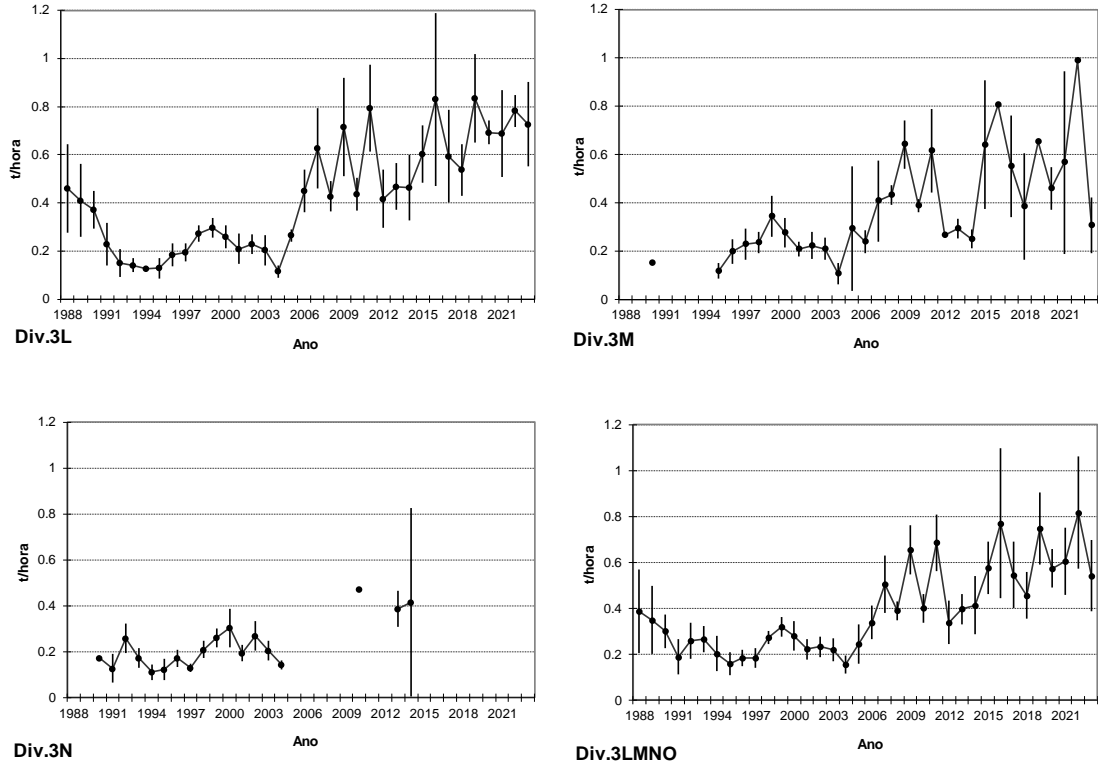


Figure 1. Greenland halibut trawl catch rates by division, 1988 – 2023.

