



Serial No. N6660

NAFO SCS Doc. 17/06REV

SCIENTIFIC COUNCIL MEETING – JUNE 2017

Faroese Research Report for 2016

by

Luis Ridao Cruz

Faroe Marine Research Institute, Tórshavn, Faroe Islands

The present report represents information of Faroese fishing vessels operating in the NAFO Regulatory Area (NAFO-RA). The fishery targets mainly cod (*Gadus moruqa*) in SA 3. Other species like Greenland halibut and redfish (*Sebastes* spp.) are also caught to a lesser extent. Official catch statistics are reported to NAFO by the Fisheries Inspection authorities (stored on STATLANT database). Collection of logbooks and biological measurements (fish length) of cod are provided by NAFO observers employed by the Faroese Ministry of Fisheries. Samples of fish length and weight measurements are also taken on board fishing vessels by crew members (non NAFO-observers).

Faroese landings of cod in NAFO SA 3 since 2010 are shown in Table 1. Catches have fluctuated from 1185 t. in 2010 to 3394 t. in 2014. Recorded catches in 2016 were 3131 t. The Faroese quota of cod in 3M is 22.35%. A complete list of catches by species from 2010 to 2016 is shown at the end of the document as an Annex.

Table 1. Faroese landings (tons) of cod in SA 3 from 2010 to 2016. (Source: Statlant)

Area	2010	2011	2012	2013	2014	2015	2016
3L	0	31	4	3	25	1	1
3M	1183	2211	2045	3144	3369	3319	3124
3N	2	0	0	1	0	2	6
Total	1185	2242	2049	3147	3394	3321	3131

The number of fishing vessels operating in the NAFO area has varied between 4 and 13 from 2010 to 2016. From 2010 to 2012 most of the catch was taken by trawlers whereas the share of catches by longliners has increased substantially since 2013 (Table 2). Just 25% of the total Faroese catch was taken by trawlers in 2016.

Table 2. Share of catches (percentage) of cod in SA3 by fleet segment. Longliners (LL) and trawlers (TR) since 2010.

Gear	2010	2011	2012	2013	2014	2015	2016
LL	0%	2%	2%	92%	27%	63%	75%
TR	100%	98%	98%	8%	73%	37%	25%



The spatial distribution of the fishery in 2015 and 2016 is shown in Figure 1. A total of 68 and 258 hauls were recorded in 2015 and 2016 respectively. Mean depth of hauls by trawlers is around 360 m, whereas longliners operate at average depths of 430 m. The catch profile with respect to depth is shown in Figure 2. Trawlers are fitted with mesh sizes ranging from 135 mm to 150 mm, in cod-ends. Catches are taken in the direct fishery.

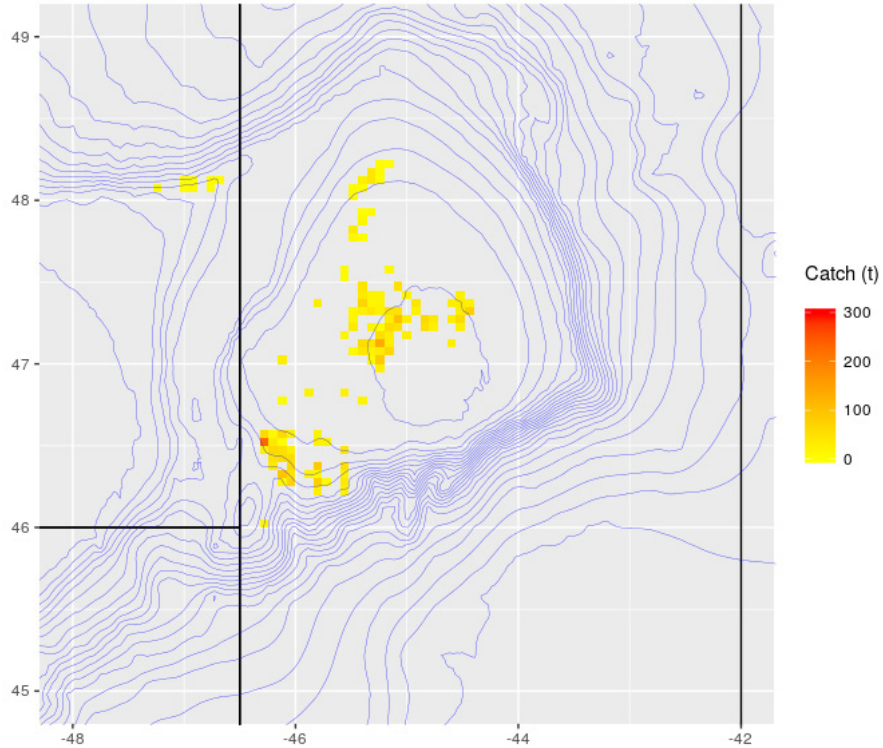


Fig. 1. Spatial distribution of Faroese fishery (trawlers and longliners) in 2015 (n=68) and 2016 (n=258).

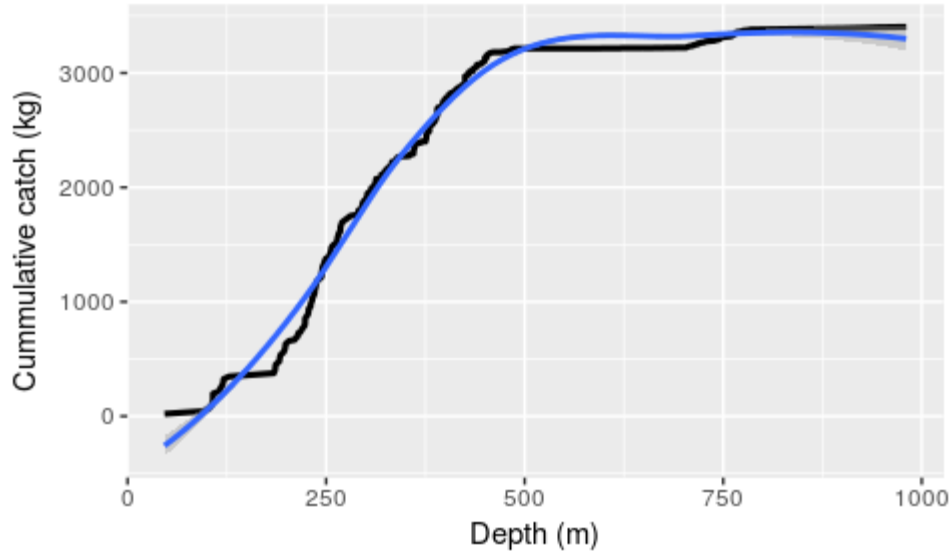


Fig. 2. Relation between cumulative catch and average depth (black line) for Faroese vessels in 2015 (n=68) and 2016 (n=258). Blue curve is a smoothed curve.

Length distributions (sampled numbers) of cod from 2014 to 2016 are presented in Table 3 and Figure 3. Average length size was estimated at 59 cm in 2014, 62 cm in 2015 and 73 cm in 2016. The number of individuals sampled was 1796, 5152 and 4794 from 2014 to 2016 respectively. The number of samples was 21 in 2014, 48 in 2015 and 47 in 2016. Samples from non-NAFO observers include individual weight measurements. Number of samples taken including weight measurements was 21 in 2014 and 5 in 2015. The relationship between length and weight is illustrated in Figure 4 and Table 4.

Table 3. Length distribution of 3M cod from 2014 to 2016. Total number of individuals sampled was 11742 and number of samples 116.

cm	2014	cm	2014	cm	2015	cm	2015	cm	2016	cm	2016
27		87	5	27	1	87	32	27		87	48
29		88	7	29	1	88	16	29		88	37
30		89	3	30	0	89	28	30	0	89	28
31	1	90	5	31	0	90	18	31	0	90	50
32	8	91	2	32	0	91	22	32	1	91	40
33		92	7	33	1	92	12	33	0	92	24
34		93	5	34	1	93	18	34	1	93	32
35		94	5	35	1	94	13	35	0	94	30
36	1	95	2	36	3	95	14	36	0	95	53
37		96	5	37	0	96	11	37	0	96	38
38	8	97	4	38	0	97	7	38	0	97	36
39	6	98	11	39	0	98	15	39	0	98	51
40	10	99	5	40	2	99	10	40	0	99	36
41	5	100	2	41	3	100	16	41	0	100	49
42	18	101	4	42	1	101	5	42	1	101	37
43	26	102	3	43	9	102	16	43	2	102	36
44	28	103	3	44	4	103	11	44	0	103	27
45	39	104	1	45	8	104	14	45	3	104	20
46	49	105	1	46	7	105	9	46	5	105	31
47	50	106		47	45	106	3	47	3	106	17
48	71	107	1	48	124	107	9	48	12	107	15
49	78	108	1	49	75	108	4	49	21	108	18
50	106	109		50	92	109	3	50	30	109	18
51	87	110	2	51	172	110	13	51	46	110	35
52	87	111		52	178	111	3	52	38	111	16
53	76	112		53	209	112	16	53	52	112	21
54	91	113	1	54	297	113	0	54	78	113	10
55	70	114		55	278	114	5	55	66	114	12
56	53	115		56	341	115	3	56	106	115	22
57	49	116		57	285	116	2	57	105	116	17
58	38	117		58	307	117	1	58	128	117	9
59	36	118		59	344	118	4	59	143	118	14
60	50	119		60	262	119	0	60	187	119	7
61	43	120		61	252	120	3	61	176	120	23
62	44	121		62	164	121	0	62	225	121	5
63	41	122	1	63	183	122	0	63	199	122	11
64	35	123		64	140	123	0	64	184	123	6
65	45	124		65	111	124	0	65	164	124	3
66	52	125		66	95	125	0	66	137	125	4
67	48	126		67	75	126	0	67	166	126	3
68	26	127		68	69	127	2	68	185	127	2
69	22	128		69	71	128	0	69	112	128	5
70	33	129		70	60	129	0	70	211	129	1
71	28	130		71	62	130	1	71	105	130	3
72	19	131		72	62	131	2	72	102	131	0
73	17	132		73	31	132		73	79	132	2
74	13	133		74	46	133		74	82	133	1
75	16	134		75	34	134		75	99	134	1
76	13	135		76	50	135		76	71	135	2
77	4	136		77	27	136		77	61	136	1
78	12	137		78	22	137		78	53	137	0
79	8	138		79	32	138		79	54	138	1
80	6	139		80	22	139		80	62	139	0
81	10	140		81	29	140		81	50	140	0
82	4			82	22			82	49		
83	4			83	17			83	36		
84	6			84	23			84	41		
85	15			85	13			85	30		
86	5			86	28			86	25		

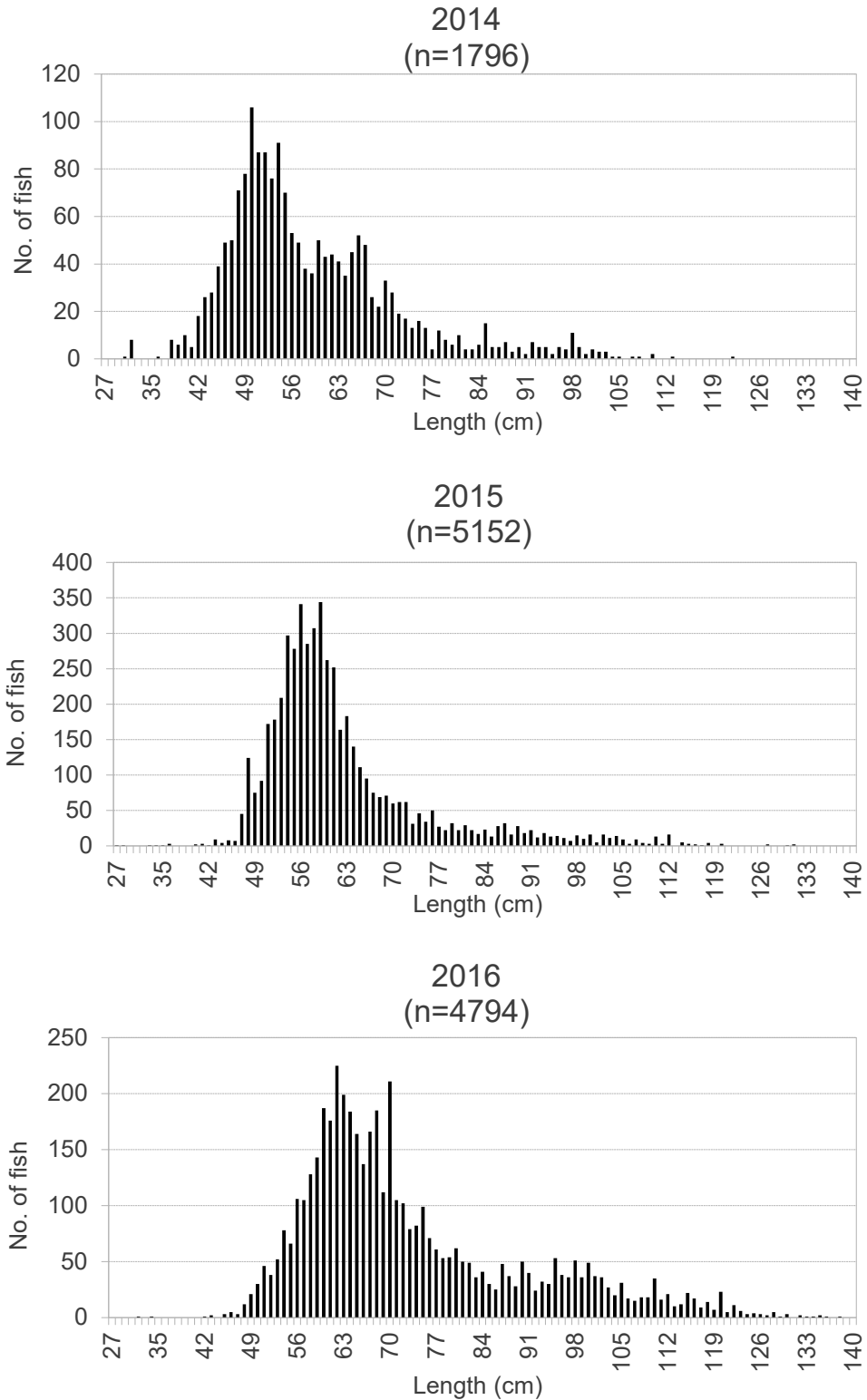


Fig. 3. Length distribution of 3M cod by Faroese vessels from 2014 to 2016.

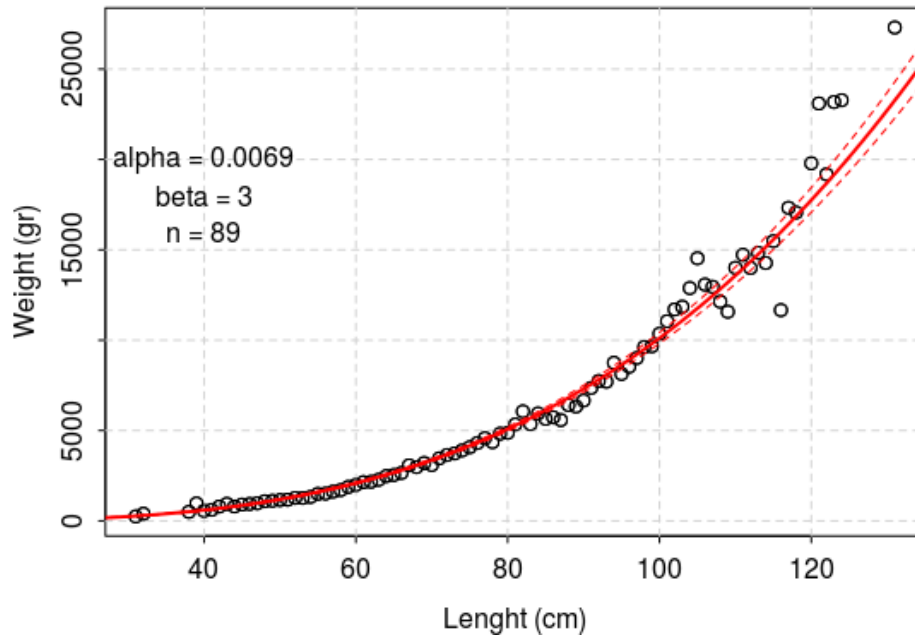


Fig. 4. Length-weight relationship of 3M cod (non-NAFO observers)

Table 4. Length and weight measurements from non-NAFO observers samples. Length (L) is measured in cm and weight (W) in gr. Total number of samples was 26.

L	W	L	W	L	W	L	W	L	W
31	250	56	1514	76	4312	96	8534	116	11665
32	400	57	1621	77	4579	97	9012	117	17326
38	500	58	1709	78	4361	98	9626	118	17068
39	971	59	1883	79	4829	99	9664	120	19790
40	556	60	1993	80	4872	100	10357	121	23100
41	615	61	2149	81	5341	101	11054	122	19180
42	796	62	2168	82	6062	102	11705	123	23180
43	947	63	2281	83	5357	103	11852	124	23280
44	804	64	2483	84	5948	104	12885	131	27300
45	906	65	2543	85	5647	105	14532		
46	940	66	2656	86	5732	106	13080		
47	978	67	3076	87	5580	107	12958		
48	1092	68	2981	88	6413	108	12136		
49	1116	69	3205	89	6329	109	11572		
50	1155	70	3094	90	6664	110	14006		
51	1174	71	3465	91	7360	111	14724		
52	1271	72	3648	92	7747	112	13993		
53	1272	73	3736	93	7703	113	14832		
54	1327	74	3902	94	8753	114	14274		
55	1500	75	4080	95	8135	115	15480		

Annex . Faroese catches (tons) in the NAFO regulatory area from 2010 to 2016. (Source: Statlant)

Year	Species	1A	1D	2G	3L	3M	3N	3O	Total
2010	Atlantic cod	0	0	0	0	1182.9	2.1	4.6	1189.6
2010	Atlantic halibut	0	0	0	0	2.3	1.2	2.8	6.3
2010	Atlantic redfishes	0	0	0	0	121.9	19.7	162.6	304.2
2010	European plaice	0	0	0	0	3.7	0	0	3.7
2010	Flatfishes	0	0	0	0	0.7	0	0	0.7
2010	Greenland halibut	126.2	152.3	0	206.1	5.7	0.2	1.1	491.6
2010	Haddock	0	0	0	0	13	0	0	13
2010	Ling	0	0	0	0	0.2	0	0	0.2
2010	Northern prawn	0	0	0	2502.7	495.3	0	0	2998
2010	Whiting	0	0	0	0	1.8	0	0	1.8
2010	Wolffishes(=Catfishes)	0	0	0	0	9.7	0	0	9.7
2011	Atlantic cod	0	0	0	30.8	2211.4	0	0	2242.2
2011	Atlantic halibut	0	0	0	0.4	0.8	0.5	0	1.7
2011	Atlantic redfishes	0	0	0	26.9	420.3	5.3	0	452.5
2011	European plaice	0	0	0	0	0.2	0	0	0.2
2011	Greenland halibut	101.8	0	0	216.9	3.8	0.1	0	322.6
2011	Ling	0	0	0	0	0	0	0	0
2011	Northern prawn	0	0	0	1447	0	0	0	1447
2011	Roundnose grenadier	0	0	0	0.4	0	0	0	0.4
2011	Wolffishes(=Catfishes)	0	0	0	0	0.5	0	0	0.5
2012	Atlantic cod	0	0	0	3.7	2045.2	0.1	4.4	2053.4
2012	Atlantic halibut	0	0	0	0.1	0.2	0.1	0.6	1
2012	Atlantic redfishes	0	0	0	28.5	148.7	2.2	101	280.4
2012	Greenland halibut	102.3	0	0	104.2	42.3	1.4	0	250.2
2012	Haddock	0	0	0	0	10.1	0	0	10.1
2012	Northern prawn	0	0	0	1036.8	0	0	0	1036.8
2012	Raja rays	0	0	0	0	0.2	0	0	0.2
2012	Roundnose grenadier	0	0	0	2.1	1.1	0	0	3.2
2013	Angler(=Monk)	0	0	0	0	0	0	0	0
2013	Atlantic cod	0	0	0	2.9	3144	0.6	8.6	3156.1
2013	Atlantic halibut	0	0	0	0.1	9.3	0.1	0.6	10.1
2013	Atlantic redfishes	0	0	0	64.5	74.1	3.6	57.9	200.1
2013	Atlantic wolffish	0	0	0	0	5.3	0	0	5.3
2013	Greenland halibut	0	102	0	194.7	4.8	0	0	301.5
2013	Haddock	0	0	0	0	0	0	0	0
2013	Northern prawn	0	0	0	592.2	0	0	0	592.2
2013	Raja rays	0	0	0	0	0.1	0	0	0.1
2013	Roundnose grenadier	0	0	0	0.7	0	0	0	0.7
2013	Tusk	0	0	0	0	0.4	0	0	0.4
2013	Wolffishes(=Catfishes)	0	0	0	0	26.4	0	0	26.4
2014	Atlantic cod	0	0	0	25	3369.1	0	0	3394.1
2014	Atlantic halibut	0	0	0	0	10.6	0	0	10.6
2014	Atlantic redfishes	0	0	0	0	5.1	0	0	5.1
2014	Atlantic wolffish	0	0	0	0	0.5	0	0	0.5
2014	Greenland halibut	0	0	0	118.4	2.4	0	0	120.8
2014	Haddock	0	0	0	0	0.1	0	0	0.1
2014	Northern prawn	0	0	0	437	0	0	0	437
2014	Roundnose grenadier	0	0	0	1	0.4	0	0	1.4
2014	Wolffishes(=Catfishes)	0	0	0	0	9.2	0	0	9.2
2015	Atlantic cod	0	0	0	1.2	3318.6	1.5	0	3321.3
2015	Atlantic halibut	0	0	0	0	7.3	0.9	0	8.2
2015	Atlantic redfishes	0	0	0	30.9	75.4	32.6	0	138.9
2015	Atlantic wolffish	0	0	0	0	0.2	0	0	0.2

2015	Black scabbardfish	0	0	8.3	0	0	0	0	8.3
2015	Blue ling	0	0	0.6	0	0	0	0	0.6
2015	Dogfish sharks	0	0	0.3	0	0	0	0	0.3
2015	Greenland halibut	101.7	0	0	44.8	156.2	0	0	302.7
2015	Haddock	0	0	0	0	0.6	0	0	0.6
2015	Roundnose grenadier	0	0	0.3	0	0	0	0	0.3
2015	Tusk	0	0	0.3	0	0.4	0	0	0.7
2015	Wolffishes(=Catfishes)	0	0	0	0	4.7	0	0	4.7
2016	Atlantic cod	0	0	0	0.6	3124.4	5.7	0	3130.7
2016	Atlantic halibut	0	0	0	0	8.4	0	0	8.4
2016	Atlantic redfishes	0	0	0	20.4	70	43	0	133.4
2016	Greenland halibut	103.4	0	0	24.1	165	0	0	292.5
2016	Haddock	0	0	0	0	0.6	0	0	0.6
2016	Roundnose grenadier	0	0	0	0	0.3	0	0	0.3
2016	Tusk	0	0	0	0	0.1	0	0	0.1
2016	Wolffishes(=Catfishes)	0	0	0	0	0.5	0	0	0.5