QC report for fat/kbg/15/[redacted]

January 11, 2016

Introduction

QC report version 1, June 2013, developed by Hans Gerritsen. The following checks are performed:

Database consistency: Duplicate trips; Trips without hauls; Hauls with missing trips; Duplicate hauls; Hauls with success code 1 or 5 and no samples; Hauls with success code 1 or 5 and no catch or landings; Samples with missing hauls; Landings with missing hauls; Duplicate samples; Sample headers without samples; Species that do not exist in the species table; Missing success code; Measured landings that do not exist in the BULk table.

Raising factors: Unexpected sample weights; High raisingfactors; Missing raising factors; Negative discards; Sample weight larger than total discards; High proportion of discards; Low catch rate or landings rate; High catch rate or landings rate; Weight of measured discard fish larger than sample weight; Unexpected proportions of NFD.

Tow data: Excessive tow length or fishing speed; Zero tow length; Impossible or unexpected shoot or haul positions; Short tow duration; Negative tow duration; Missing tow duration; Long tow duration; Tow shot before previous tow was hauled; Tow year doesn't match year in cruise code; Tow dates outside cruise dates.

Length data: Any fish that are larger than the 99th percentile * 1.5 or smaller than 1st percentile * 0.5, are identified as outliers.

Trip notes

Observer: [redacted] data entered by: [redacted]

After two days fishing the vessel had to return ashore, as one of the winch motors failed. As soon as a replaced arrived, it was fitted and the vessel returned to the porcupine again. Fishing was slack the first few days, with the vessel concentrating its efforts on the nothwest corner of the box. Nephrop were noticeably smaller this year in this area compared with last year. The ground nothwest of the box is very poor, the vessel had several foul hauls. Tearing, sticking and fouling up the gear was a daily occurrence. The vessel's scanmar sensors were not working correctly, and this heightened the gear problems experienced. No 0-5 grade present in this area, any odd one was put into the 5-10 grade. The crew were also tailing any females less than 20-30 grade. Thus no female grades of 30-40, 40-50 or smaller. After the 7th Haul - the vessel was hit by misfortune again, this time water had found its way into a circuit box in the engine room and 12 brakers were badly damaged. The vessel had to head for the shore again. From our position it 24 hours to get ashore, it took a full day to fix the problem, then the vessel steamed out to the porcupine again to commence where it had left off. The weather and fishing improved towards the end of the trip. Please see cruise report for more details.

Haul notes

Haul 0: Aged Data
Haul 1: Measured catch and landing graded samples of Nephrop this haul.
Haul 3: Foul Haul - 2 huge stones restricted the nets

Haul 5: No sampling, very poor weather.
Haul 6: Measured catch and landing graded samples of Nephrop this haul.
Haul 10: Measured Nephrop this haul
Haul 11: Foul Haul - gear foul, when shooting - absolutely nothing in the cod-ends
Haul 12: Measured catch and landing graded samples of Nephrop this haul.
Haul 13: Foul Haul - huge rock closed the port net.
Haul 14: Badly tore both nets - had to change gear, a lot of damage. Caught on something very sharp
Haul 17: Starboard Net tore badly
Haul 18: Measured catch and landing graded samples of Nephrop this haul.
Haul 19: Large stone in the port net, got it at the end of the tow - so ok to sample
Haul 20: Stuck gear on obstruction and tore after only towing 2 hours, helped crew and measured Neph.
Haul 22: Only towing the nets, just over 4 hours. Stuck again and tore.
Haul 24: Measured catch and landing graded samples of Nephrop this haul.
Haul 25: Measured bulk -catch sample and landing graded samples of Nephrop this haul.
Haul 26: Vessel only had one very long tow today, as the weather was very poor. Hauling and shooting very dangerous, so skipper wanted to minimise effects of this.
Haul 27: Measured Nephrop this haul
Haul 28: Weather got very poor - after this haul, so the vessel stopped fishing operations for 24 hrs
Haul 29: First good weather haul in the newly opened box
Haul 33: Mudded up and closed the gear, thus restricting the nets - very little bulk catch, Foul haul
Haul 34: Weather very poor - so this was certainly reflected in catches, very slack haul.
Haul 36: Measured Nephrop this haul
Haul 39: Measured Nephrop this haul
Haul 41: Mudding up for 3 hours, closed the gear and stopped. Had to move from this ground - foul haul.
Haul 45: Measured Nephrop bulk catch sample this haul
Haul 46: Stuck and broke middle wire after towing only two hours.
Haul 47: Help crew, measured last of the neph and washed all equipment

Database consistency

No problems found

Raising factors

Haul 2: Proportion NFD is lower than expected for a prawn trip (0.08)
Haul 7: Proportion NFD is lower than expected for a prawn trip (0.16)
Haul 8: Proportion NFD is lower than expected for a prawn trip (0.28)
Haul 9: Proportion NFD is lower than expected for a prawn trip (0.28)
Haul 19: Proportion NFD is lower than expected for a prawn trip (0.27)
Haul 21: Proportion NFD is lower than expected for a prawn trip (0.2)
Haul 23: Proportion NFD is lower than expected for a prawn trip (0.25)
Haul 29: Proportion NFD is lower than expected for a prawn trip (0.19)
Haul 30: Proportion NFD is lower than expected for a prawn trip (0.17)
Haul 31: Proportion NFD is lower than expected for a prawn trip (0.16)
Haul 32: Proportion NFD is lower than expected for a prawn trip (0.15)
Haul 34: Proportion NFD is lower than expected for a prawn trip (0.15)
Haul 35: Proportion NFD is lower than expected for a prawn trip (0.17)
Haul 37: Proportion NFD is lower than expected for a prawn trip (0.18)
Haul 38: Proportion NFD is lower than expected for a prawn trip (0.19)
Haul 42: Proportion NFD is lower than expected for a prawn trip (0.22)
Haul 43: Proportion NFD is lower than expected for a prawn trip (0.14)
Haul 44: Proportion NFD is lower than expected for a prawn trip (0.16)

Tow data

Haul 26: Tow duration is high (9.1h)

Length data

No problems found

Table 1: [redacted] Raising factor data. SC = Success code; Hrs = Haul duration; Catch and Landings = Live weight (kg); CU = Catch weight units; PDis = Proportion of discards; DT = Data type; SamWt = Sample weight (kg); NFD = Non-fish discards; FishWt= weight of measured fish in the discard sample; N = Number of discard samples; SU = Sample weight unit; RF = Raising factor.

Haul	SC	Hrs	Catch	Land	Dis	CU	PDis	DT	SamWt	NFD	FishWt	N	SU	RF
0						1			0.0					
1	3	4.08	200	91	109	1	0.54		0.0					
2	1	5.77	508	355	153	1	0.30	0	36.7	0.08	22.7	1	1	4.17
3	4	5.78	240	154	86	1	0.36		0.0					
4	1	6.73	750	492	258	1	0.34	0	42.0	0.05	27.0	1	1	6.13
5	3	4.58	400	255	145	1	0.36		0.0					
6	1	5.73	400	276	124	1	0.31	0	28.0	0.33	17.6	1	1	4.45
7	1	7.75	650	395	255	1	0.39	0	31.0	0.16	22.5	1	1	8.23
8	1	4.23	460	324	136	1	0.29	0	42.0	0.28	29.3	1	1	3.23
9	1	6.60	700	465	235	1	0.34	0	35.0	0.28	21.6	1	1	6.71
10	3	6.53	640	478	162	1	0.25		0.0					
11	4	2.55	0			1			0.0					
12	1	5.20	500	287	213	1	0.43	0	38.0	0.31	26.7	1	1	5.61
13	4	7.00	650	470	180	1	0.28		0.0					
14	4	7.32	300	212	88	1	0.29		0.0					
15	1	5.10	220	167	53	1	0.24	0	36.0	0.30	28.7	1	1	1.47
16	1	8.67	900	610	290	1	0.32	0	38.5	0.27	20.9	1	1	7.53
17	4	5.20	450	250	200	1	0.44		0.0					
18	3	5.65	400	295	105	1	0.26		0.0					
19	1	7.65	530	378	152	1	0.29	0	34.5	0.27	25.0	1	1	4.41
20	4	2.40	250	198	52	1	0.21		0.0					
21	1	6.57	700	508	192	1	0.27	0	37.5	0.20	28.7	1	1	5.11
22	4	4.55	400	256	144	1	0.36		0.0					
23	1	6.20	600	323	277	1	0.46	0	37.3	0.25	27.5	1	1	7.42
24	5	8.10	400	254	146	1	0.36	1	73.5		81.5	6	1	1.00
25	1	5.88	650	410	240	1	0.37	0	39.0	0.30	25.2	1	1	6.15
26	5	9.12	850	538	312	1	0.37	1	69.7		76.9	7	1	1.00
27	3	6.37	450	242	208	1	0.46		0.0					
28	1	4.73	250	150	100	1	0.40	0	44.5	0.26	32.3	1	1	2.24
29	1	5.32	700	548	152	1	0.22	0	38.8	0.19	29.3	1	1	3.90
30	1	5.32	670	439	231	1	0.34	0	33.3	0.17	25.9	1	1	6.93
31	1	5.08	470	290	180	1	0.38	0	39.0	0.16	28.4	1	1	4.61
32	1	6.48	650	391	259	1	0.40	0	37.8	0.15	31.1	1	1	6.84
33	4	4.07	250	90	160	1	0.64		0.0					
34	1	4.63	150	49	101	1	0.67	0	41.4	0.15	32.3	1	1	2.43
35	1	6.87	700	406	294	1	0.42	0	37.7	0.17	27.6	1	1	7.79
36	3	8.23	870	774	96	1	0.11		0.0					
37	1	4.35	750	572	178	1	0.24	0	34.5	0.18	26.5	1	1	5.16
38	1	4.43	950	644	306	1	0.32	0	35.3	0.19	29.6	1	1	8.67
39	3	6.15	1000	603	397	1	0.40		0.0					
40	1	5.35	800	500	300	1	0.37	0	39.0	0.41	22.7	1	1	7.69
41	4	2.92	950	507	443	1	0.47		0.0					
42	1	7.05	760	444	316	1	0.42	0	33.4	0.22	24.4	1	1	9.45
43	1	4.22	500	284	216	1	0.43	0	37.1	0.14	30.6	1	1	5.84
44	1	6.15	1400	775	625	1	0.45	0	38.6	0.16	30.2	1	1	16.19
45	3	5.12	900	563	337	1	0.37		0.0					
46	4	1.93	250	93	157	1	0.63		0.0					

47	3	5.23	1400	740	660	1	0.47		0.0

Table 2: [redacted] Haul data. Gear = Gear code; DateTime-Tow = start and end time and date of the tow, +1 indicates the difference between start and end date; Hrs = Haul duration; Lat1, Lat2, Lon1 Lon2 = Shoot and haul latitude and longitude (degrees, decimal minutes.)

Haul	Gear	DateTimeTow	Hrs	Lat1	Lon1	Lat2	Lon2
1	OTT	2015-05-17 01:48 - 05:53	4.08	51 46.142	14 12.521	51 56.624	14 4.213
2	OTT	2015-05-17 07:05 - 12:51	5.77	51 55.807	14 4.323	51 40.476	14 16.026
3	OTT	2015-05-17 16:15 - 22:02	5.78	51 47.864	14 16.456	52 2.533	14 7.828
4	OTT	2015-05-18 06:05 - 12:49	6.73	52 4.176	14 3.468	52 17.871	13 51.122
5	OTT	2015-05-18 13:32 - 18:07	4.58	52 16.481	13 51.687	52 14.664	13 52.317
6	OTT	2015-05-21 07:35 - 13:19	5.73	52 19.878	13 44.111	52 15.047	13 54.490
7	OTT	2015-05-21 13:41 - 21:26	7.75	52 14.768	13 55.144	51 56.834	14 11.481
8	OTT	2015-05-25 01:05 - 05:19	4.23	52 19.608	13 44.001	52 10.970	13 57.632
9	OTT	2015-05-25 06:18 - 12:54	6.60	52 11.155	13 57.339	52 16.281	13 52.376
10	OTT	2015-05-25 13:12 - 19:44	6.53	52 16.107	13 52.191	52 15.093	13 51.225
11	OTT	2015-05-25 20:08 - 22:41	2.55	52 14.783	13 51.716	52 9.995	13 57.600
12	OTT	2015-05-26 07:06 - 12:18	5.20	52 14.186	13 53.098	52 15.658	13 52.363
13	OTT	2015-05-26 13:20 - 20:20	7.00	52 17.984	13 49.789	52 9.498	14 0.599
14	OTT	2015-05-26 20:57 - 04:16+1	7.32	52 8.314	14 2.319	52 19.780	13 44.733
15	OTT	2015-05-27 06:46 - 11:52	5.10	52 18.209	13 46.306	52 9.592	14 1.184
16	OTT	2015-05-27 12:16 - 20:56	8.67	52 8.962	14 1.831	52 16.013	13 52.495
17	OTT	2015-05-27 21:28 - 02:40+1	5.20	52 16.263	13 52.537	52 18.435	13 54.031
18	OTT	2015-05-28 06:41 - 12:20	5.65	52 18.840	13 44.859	52 6.514	13 58.549
19	OTT	2015-05-28 12:57 - 20:36	7.65	52 5.588	13 59.066	52 22.988	13 42.585
20	OTT	2015-05-29 08:25 - 10:49	2.40	52 18.672	13 50.535	52 13.907	13 55.742
21	OTT	2015-05-29 11:14 - 17:48	6.57	52 13.450	13 55.559	52 13.270	13 59.338
22	OTT	2015-05-29 18:12 - 22:45	4.55	52 14.012	13 58.473	52 23.260	13 44.750
23	OTT	2015-05-30 07:17 - 13:29	6.20	52 16.681	13 53.311	52 7.887	14 3.740
24	OTT	2015-05-30 13:48 - 21:54	8.10	52 7.910	14 3.796	52 18.546	13 44.777
25	OTT	2015-05-31 06:47 - 12:40	5.88	52 21.573	13 45.750	52 9.265	14 1.433
26	OTT	2015-05-31 13:13 - 22:20	9.12	52 9.555	14 0.552	52 18.782	13 53.162
27	OTT	2015-06-01 06:43 - 13:05	6.37	52 15.963	13 44.577	52 14.522	13 43.259
28	OTT	2015-06-01 16:33 - 21:17	4.73	52 18.340	13 53.581	52 21.870	13 38.037
29	OTT	2015-06-03 06:14 - 11:33	5.32	52 22.144	13 30.972	52 14.134	13 50.219
30	OTT	2015-06-03 11:50 - 17:09	5.32	52 14.158	13 50.198	52 1.024	13 59.038
31	OTT	2015-06-03 17:42 - 22:47	5.08	51 59.673	13 59.428	51 45.305	14 4.124
32	OTT	2015-06-04 06:29 - 12:58	6.48	51 44.785	14 4.213	52 1.620	13 56.805
33	OTT	2015-06-04 13:42 - 17:46	4.07	52 1.060	13 56.371	52 9.147	13 52.112
34	OTT	2015-06-04 18:13 - 22:51	4.63	52 10.170	13 53.241	52 18.848	13 44.293
35	OTT	2015-06-05 06:07 - 12:59	6.87	52 22.697	13 29.131	52 11.164	13 53.757
36	OTT	2015-06-05 13:49 - 22:03	8.23	52 11.389	13 50.693	52 20.114	13 38.604
37	OTT	2015-06-06 06:32 - 10:53	4.35	52 11.447	13 51.261	52 18.871	13 33.436
38	OTT	2015-06-06 11:34 - 16:00	4.43	52 18.857	13 33.460	52 11.650	13 49.968
39	OTT	2015-06-06 16:21 - 22:30	6.15	52 12.105	13 49.436	52 20.276	13 26.582
40	OTT	2015-06-07 06:25 - 11:46	5.35	52 20.139	13 27.763	52 11.754	13 48.473
41	OTT	2015-06-07 12:24 - 15:19	2.92	52 11.631	13 48.563	52 12.155	13 53.479
42	OTT	2015-06-07 15:23 - 22:26	7.05	52 11.902	13 53.668	52 9.835	13 55.144
43	OTT	2015-06-08 06:31 - 10:44	4.22	52 3.975	13 58.504	52 11.360	13 50.426
44	OTT	2015-06-08 11:11 - 17:20	6.15	52 11.966	13 50.057	52 21.315	13 32.488
45	OTT	2015-06-08 17:45 - 22:52	5.12	52 20.858	13 33.773	52 10.896	13 54.011
46	OTT	2015-06-09 06:20 - 08:16	1.93	52 12.421	13 50.578	52 17.103	13 42.742
47	OTT	2015-06-09 10:33 - 15:47	5.23	52 17.528	13 41.391	52 19.430	13 18.964

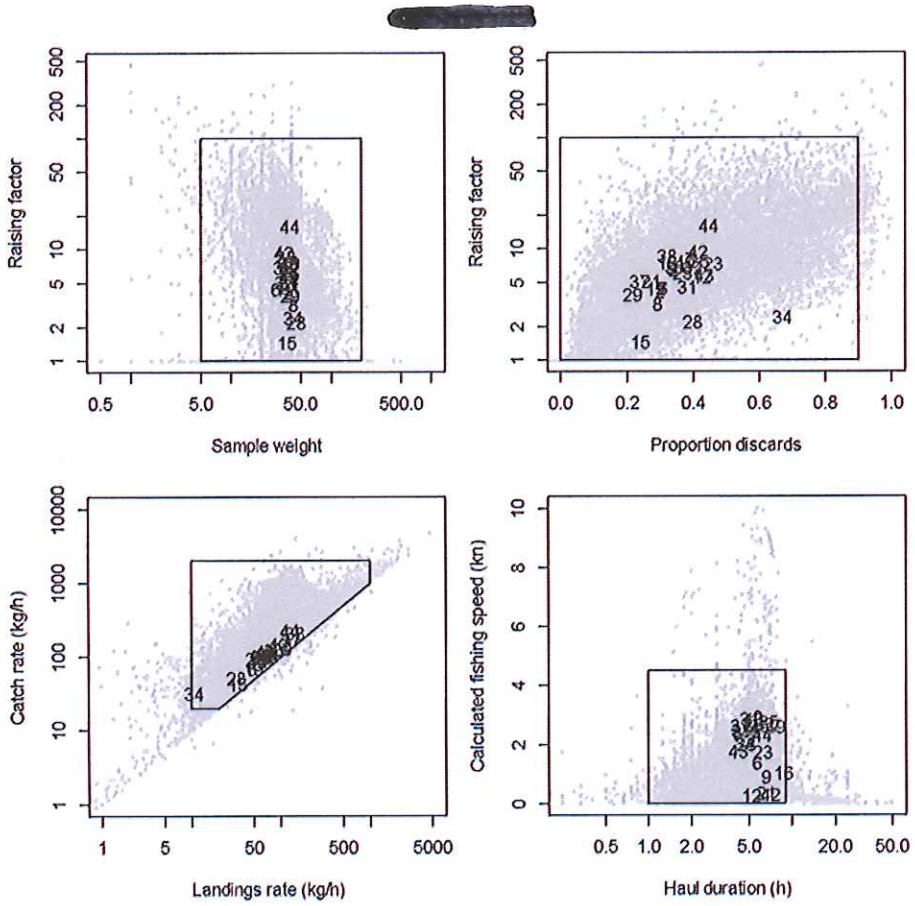

Figure 1: The numbers in the plots correspond to the haul number; any points outside the box are considered outliers; the grey points represent all hauls in the database.

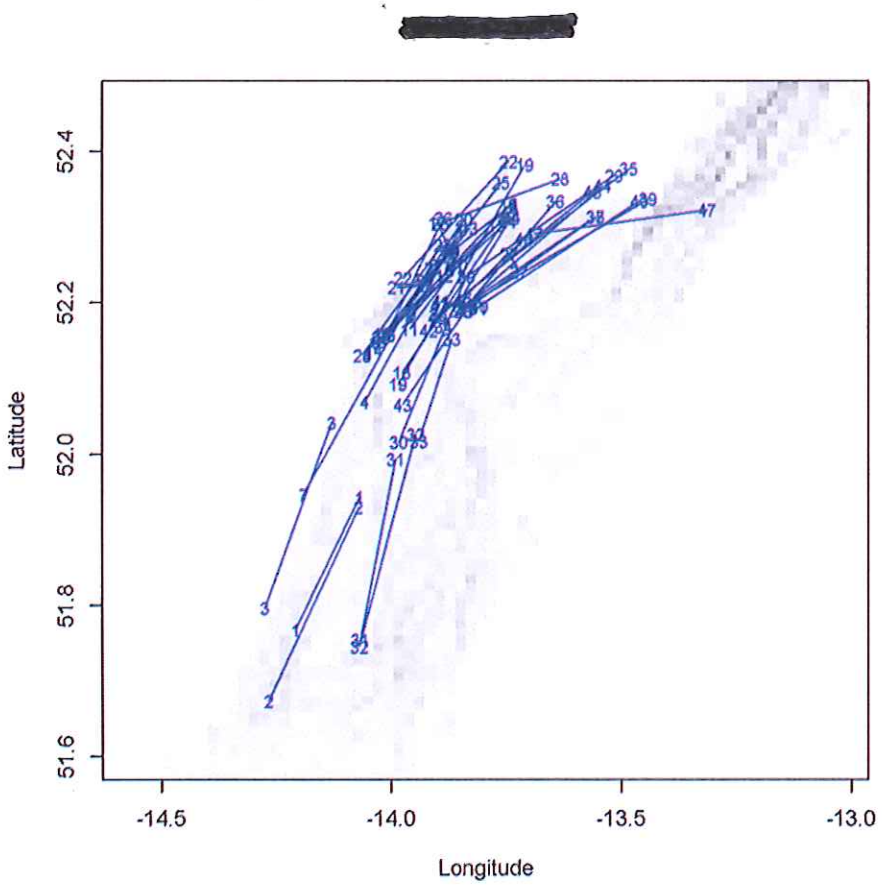

Figure 2: The blue lines are the hauls from the current cruise; the start and end position of any outliers will be shown in red; VMS effort (all demersal gears) is shown in the background.