Not to be cited without prior reference to Marine Scotland, Marine Laboratory, Aberdeen.

MRV *Scotia*

Survey 0316S

PROGRAMME

16 February – 07 March 2016

Loading: Aberdeen, 12 February 2016
Half landing: TBA (Flexible)
Unloading: Aberdeen, 07 March 2016

In setting the survey programme and specific objectives, etc. the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the survey with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Survey Report, to I Gibb and the Survey Summary Report (old ROSCOP form) to M Geldart, within four weeks of a survey ending. In the case of the Survey Summary Report a nil return is required, if appropriate.

Personnel

J Drewery	SIC
R Gillespie-Mules	
M Kinghorn	
M Gault	
G McAllister	
P Clark	(Part 1)
I Busturia-Cerezo	(Part 1)
R Kilburn	(Part 2)
J Mills	(Part 2)
J Forbes Birnie	(Visitor, SFF)
J O'Sullivan	(Visitor, Marine Institute, Galway)
J Monhart	(Visitor, Aberdeen University, Part 2)

Out-turn days: 21 - RV1602 (20297)

Fishing Gear: GOV Trawl (BT 137) fitted with ground gear D.

Objectives

1. Demersal trawling survey of the grounds off the north and west of Scotland in ICES Subarea VIa.

2. To obtain temperature and salinity data from the surface and seabed at each trawling station.

3. Collect additional biological data in connection with the EU Data Collection Framework (DCF).

Procedures

General

Loading of the trawl gear and scientific equipment will take place on 12 February with rigging and testing being completed on the same day. Further loading may be undertaken on 15 February. *Scotia* will sail on the morning of 16 February and after vessel drills, a trial haul will be undertaken during the passage north to ensure all fishing gear/sensors are working effectively. *Scotia* will then commence fishing operations the following morning on predefined stations off the north Scottish coast and west of 4'W, with weather conditions thereafter determining the route taken on the survey.

Trawling

This is a random-stratified survey design with trawl stations being distributed within ten predefined strata covering the sampling area (Figure 1). A total of 64 primary and 45 secondary stations have been generated. The intention is for 64 trawls to be undertaken on suitable ground as near to the specified primary sampling positions (Table 1) as is practicable, and where possible within a radius of five nautical miles of the sampling position. In the event that trawling is not possible within five nm of any primary station then the nearest appropriate secondary station will be used. Hauls will be of 30 minutes duration and in the main, fishing operations will be restricted to daylight hours between 0700 hours and 1800 hours, though exact start and finish times will vary slightly according to geographical location. The Scanmar system will be used to monitor the headline height, wing spread and door spread for each haul. Bottom contact data from each trawl will also be collected using the NOAA bottom contact sensor which will be mounted on a bar in the centre of the ground-gear. In addition to the routine sampling, biological data will be collected for target species in line with the EU data regulation. All fish will be processed in accordance with standing instructions.

Hydrography

A CTD cast will be taken at each trawl station; in addition the thermosalinograph will run continuously to obtain sea surface temperature and salinity data throughout the survey area.

Normal contact will be maintained with the Marine Laboratory.

Submitted:
J Drewery
22 January 2016

Approved:
I Gibb
25 January 2016

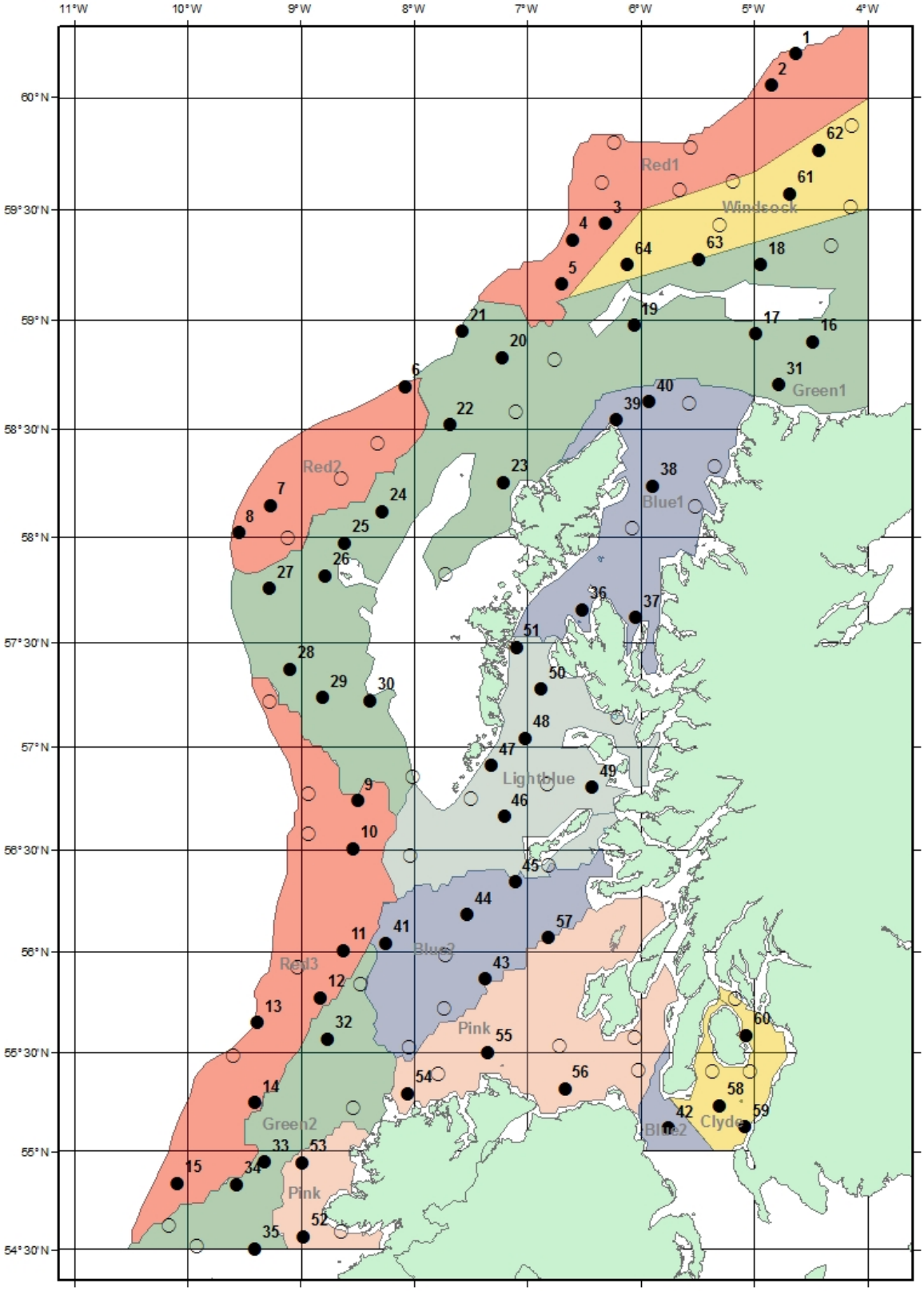

Figure 1: 0316S – 2016 ICES Subarea VIa Survey Strata showing primary (filled circles) and secondary stations (open circles).

Station	Decimal Lat	Decimal Lon	Lat	Lon	Stratum	Station	Decimal Lat	Decimal Lon	Lat	Lon	Stratum
1	60.1942	-4.6250	6011.65N	0437.50W	Red 1	33	54.9461	-9.3166	5456.77N	0919.00W	Green 2
2	60.0550	-4.8450	6003.30N	0450.70W	Red 1	34	54.8324	-9.5653	5449.94N	0933.92W	Green 2
3	59.4380	-6.3042	5926.28N	0618.25W	Red 1	35	54.5028	-9.4071	5430.17N	0924.43W	Green 2
4	59.3649	-6.6015	5921.89N	0636.09W	Red 1	36	57.6564	-6.5078	5739.38N	0630.47W	Blue 1
5	59.1657	-6.6986	5909.94N	0641.92W	Red 1	37	57.6194	-6.0371	5737.17N	0602.23W	Blue 1
6	58.6972	-8.0757	5841.83N	0804.54W	Red 2	38	58.2376	-5.8855	5814.25N	0553.13W	Blue 1
7	58.1461	-9.2619	5808.77N	0915.71W	Red 2	39	58.5451	-6.2114	5832.70N	0612.69W	Blue 1
8	58.0187	-9.5429	5801.12N	0932.57W	Red 2	40	58.6290	-5.9247	5837.74N	0555.48W	Blue 1
9	56.7405	-8.4914	5644.43N	0829.49W	Red 3	41	56.0445	-8.2496	5602.67N	0814.98W	Blue 2
10	56.5083	-8.5391	5630.49N	0832.34W	Red 3	42	55.1186	-5.7498	5507.11N	0544.99W	Blue 2
11	56.0074	-8.6206	5600.44N	0837.24W	Red 3	43	55.8648	-7.3719	5551.88N	0722.31W	Blue 2
12	55.7725	-8.8245	5546.35N	0849.47W	Red 3	44	56.1845	-7.5301	5611.07N	0731.80W	Blue 2
13	55.6499	-9.3853	5538.99N	0923.12W	Red 3	45	56.3443	-7.1050	5620.66N	0706.30W	Blue 2
14	55.2469	-9.4016	5514.81N	0924.10W	Red 3	46	56.6642	-7.2013	5639.85N	0712.08W	Light Blue
15	54.8376	-10.0919	5450.25N	1005.51W	Red 3	47	56.9127	-7.3190	5654.76N	0719.14W	Light Blue
16	58.9036	-4.4804	5854.22N	0428.82W	Green 1	48	57.0441	-7.0186	5702.65N	0701.12W	Light Blue
17	58.9391	-4.9823	5856.34N	0458.94W	Green 1	49	56.8051	-6.4221	5648.31N	0625.33W	Light Blue
18	59.2524	-4.9384	5915.14N	0456.30W	Green 1	50	57.2779	-6.8714	5716.68N	0652.28W	Light Blue
19	58.9791	-6.0555	5858.74N	0603.33W	Green 1	51	57.4777	-7.0944	5728.66N	0705.66W	Light Blue
20	58.8300	-7.2179	5849.80N	0713.08W	Green 1	52	54.5667	-8.9743	5434.00N	0858.46W	Pink
21	58.9510	-7.5704	5857.06N	0734.22W	Green 1	53	54.9430	-8.9867	5456.58N	0859.20W	Pink
22	58.5217	-7.6836	5831.30N	0741.01W	Green 1	54	55.2924	-8.0536	5517.55N	0803.22W	Pink
23	58.2532	-7.2037	5815.19N	0712.22W	Green 1	55	55.5011	-7.3499	5530.07N	0720.99W	Pink
24	58.1186	-8.2828	5807.12N	0816.97W	Green 1	56	55.3182	-6.6662	5519.09N	0639.97W	Pink
25	57.9700	-8.6055	5758.20N	0836.33W	Green 1	57	56.0710	-6.8070	5604.26N	0648.42W	Pink
26	57.8177	-8.7803	5749.06N	0846.82W	Green 1	58	55.2311	-5.2977	5513.86N	0517.86W	Clyde
27	57.7582	-9.2756	5745.49N	0916.53W	Green 1	59	55.1233	-5.0744	5507.40N	0504.46W	Clyde
28	57.3747	-9.0893	5722.48N	0905.36W	Green 1	60	55.5854	-5.0628	5535.12N	0503.77W	Clyde
29	57.2392	-8.8069	5714.35N	0848.42W	Green 1	61	59.5714	-4.6834	5934.29N	0441.01W	Windsock
30	57.2242	-8.3887	5713.45N	0823.32W	Green 1	62	59.7675	-4.4197	5946.05N	0425.18W	Windsock
31	58.7071	-4.7774	5842.42N	0446.64W	Green 1	63	59.2784	-5.4849	5916.71N	0529.09W	Windsock
32	55.5681	-8.7553	5534.09N	0845.32W	Green 2	64	59.2530	-6.1133	5915.18N	0606.80W	Windsock

Table 1: 0316S – Postions of primary sampling stations.

Not to be cited without prior reference to Marine Scotland, Marine Laboratory, Aberdeen

MRV Scotia

Survey 0316S

PROGRAMME AMENDMENT

G McAllister will not participate on this survey. J Monhart will now participate on Part 1 of the survey

I Gibb
16/02/2016