

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

FRV *Scotia*

Cruise 0312S

PROGRAMME

19 February –11 March 2012

Loading: Aberdeen, 15/16 February 2012

Half landing: Oban, Greenock or Killybegs (Flexible)

Unloading: Aberdeen, 11 March 2012

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 (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

F Burns	(SIC)
R Kynoch	(Deck)
J Drewery	
M Gault	
G Jones	(Part 1)
L Morley	(Part 1)
L Allan	(Part 2)
P Clark	(Part 2)
S Kinnear	(G7)
C Pinto	(Visitor - Aberdeen University)
C Dolan	(Visitor) (MI – Observer)

Out-turn days: 22 - RV1202

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

Plankton Sampling Gear: Gulf 7, ichthyoplankton sampler.

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).

4. Opportunistic sampling using the Gulf 7 to determine densities of mackerel eggs within the area covered by the trawl survey.

Procedures

General

Loading of the trawl gear will take place on 15 February with rigging and testing being completed on the same day. Loading of the scientific gear will take place on 16 February. *Scotia* will then sail on the morning of Sunday 19 February. A training haul will be undertaken during the passage north to ensure all fishing gear/sensors are working effectively. *Scotia* will then proceed north and commence fishing operations the next 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

The survey is conducted using a random-stratified design with trawl locations being distributed within 10 predefined sampling strata (See fig.1.). The intention is for trawls to be undertaken on suitable ground as near to the specified sampling position (See table 1.) as is practicable and where possible within a radius of 5 nautical miles of the sampling position. In the event that suitable ground cannot be sourced at a particular sample location (or within 5nm of) the nearest 'secondary' or additional trawl station will be used. Hauls will be of 30 minutes duration and in the main fishing operations will be restricted to daylight hours between 07:00 and 18:00 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 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

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

Gulf 7 sampling

Oblique tows will be carried out opportunistically during the hours of darkness using the Gulf 7 sampler. The intention will be to collect, where possible, one sample within each half statistical rectangle bisected vertically (eg 45E1W/45E1E). The daily sampling plan will be discussed and then decided after consultation with the Captain and Fishing Master.

Normal contact will be maintained with the Marine Laboratory.

Submitted:
F Burns
26 January 2012

Approved:
I Gibb
30 January 2012

Figure 1: 0312S - 2012 ICES Subarea VIa Survey Strata and sampling positions

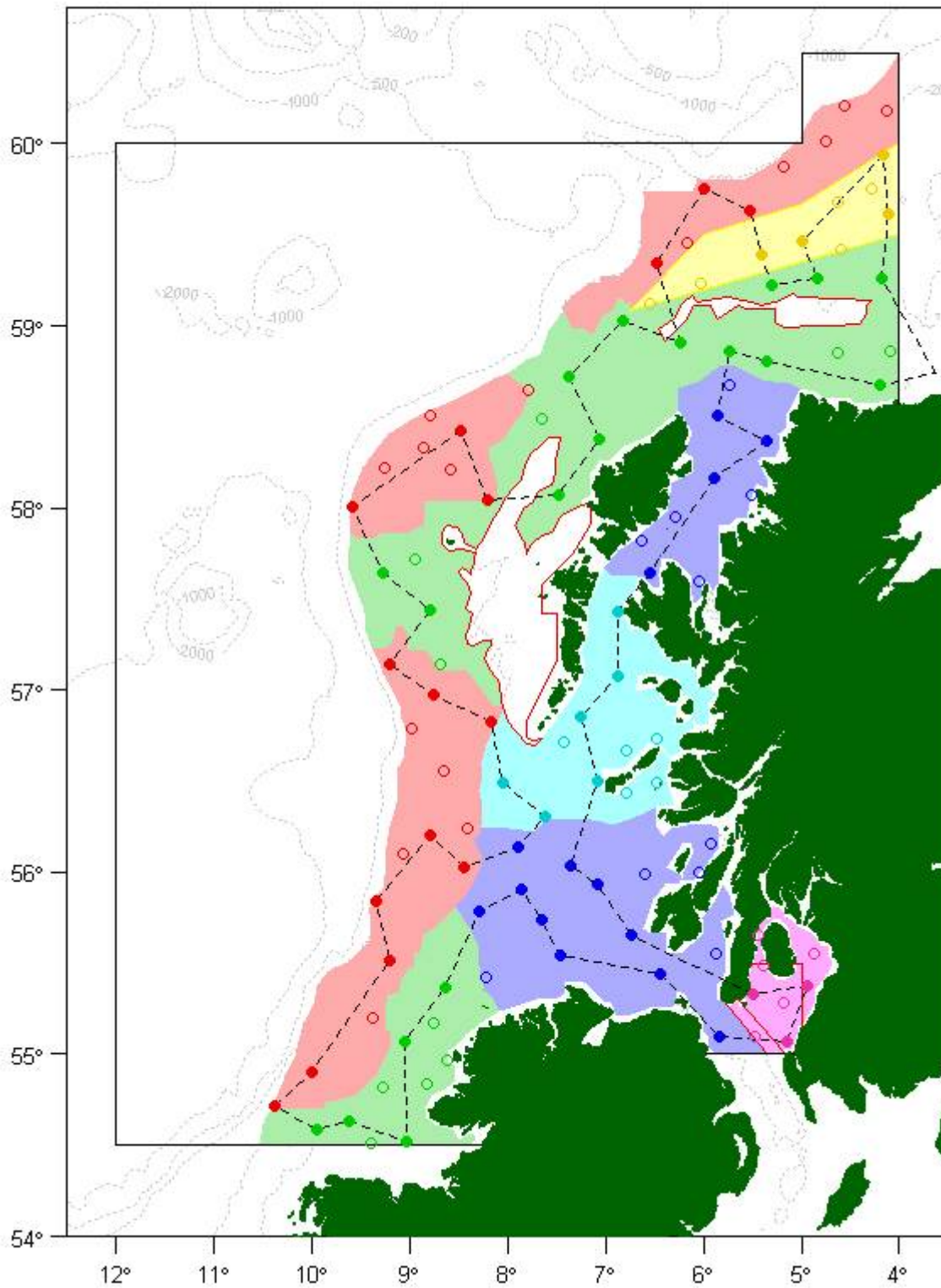


Table 1: 0312S - Sampling positions

No	lat	lon	deglat	deglon	stratum	No	lat	lon	deglat	deglon	stratum
1	59.2586	-4.17488	5915.52N	0410.49W	green1	31	54.90071	-10.0089	5454.04N	1000.54W	red3
2	59.60939	-4.10792	5936.56N	0406.48W	windsock	32	54.72062	-10.3748	5443.24N	1022.49W	red3
3	59.93997	-4.16645	5956.40N	0409.99W	windsock	33	54.58557	-9.94936	5435.13N	0956.96W	green2
4	59.4688	-4.98413	5928.13N	0459.05W	windsock	34	54.62993	-9.61734	5437.80N	0937.04W	green2
5	59.26111	-4.83696	5915.67N	0450.22W	green1	35	54.5174	-9.04287	5431.04N	0902.57W	green2
6	59.21985	-5.2978	5913.19N	0517.87W	green1	36	55.0695	-9.05375	5504.17N	0903.23W	green2
7	59.39005	-5.40789	5923.40N	0524.47W	windsock	37	55.36807	-8.64393	5522.08N	0838.64W	green2
8	59.63153	-5.52937	5937.89N	0531.76W	red1	38	55.78357	-8.28604	5547.01N	0817.16W	blue2
9	59.75301	-5.99073	5945.18N	0559.44W	red1	39	55.90391	-7.86514	5554.23N	0751.91W	blue2
10	59.34039	-6.48173	5920.42N	0628.90W	red1	40	55.73809	-7.66076	5544.29N	0739.65W	blue2
11	58.91182	-6.24339	5854.71N	0614.60W	green1	41	55.54278	-7.46477	5532.57N	0727.89W	blue2
12	59.02866	-6.82836	5901.72N	0649.70W	green1	42	55.43827	-6.44584	5526.30N	0626.75W	blue2
13	58.72176	-7.37678	5843.31N	0722.61W	green1	43	55.1012	-5.83394	5506.07N	0550.04W	blue2
14	58.37745	-7.0728	5822.65N	0704.37W	green1	44	55.06888	-5.14542	5504.13N	0508.72W	clyde
15	58.0676	-7.47518	5804.06N	0728.51W	green1	45	55.38049	-4.93467	5522.83N	0456.08W	clyde
16	58.04396	-8.20096	5802.64N	0812.06W	red2	46	55.3275	-5.48832	5519.65N	0529.30W	clyde
17	58.42226	-8.48468	5825.34N	0829.08W	red2	47	55.65176	-6.73898	5539.11N	0644.34W	blue2
18	58.00357	-9.58443	5800.21N	0935.07W	red2	48	55.93779	-7.08452	5556.27N	0705.07W	blue2
19	57.64787	-9.28482	5738.87N	0917.09W	green1	49	56.03222	-7.36121	5601.93N	0721.67W	blue2
20	57.43679	-8.79146	5726.21N	0847.49W	green1	50	56.49749	-7.07646	5629.85N	0704.59W	lightblue
21	57.13804	-9.20079	5708.28N	0912.05W	red3	51	56.85639	-7.24828	5651.38N	0714.90W	lightblue
22	56.97065	-8.75129	5658.24N	0845.08W	red3	52	57.08099	-6.87414	5704.86N	0652.45W	lightblue
23	56.82309	-8.17592	5649.39N	0810.55W	red3	53	57.42863	-6.88197	5725.72N	0652.92W	lightblue
24	56.49398	-8.05208	5629.64N	0803.12W	lightblue	54	57.64336	-6.55253	5738.60N	0633.15W	blue1
25	56.30597	-7.62552	5618.36N	0737.53W	lightblue	55	58.15998	-5.89478	5809.60N	0553.69W	blue1
26	56.14263	-7.88627	5608.56N	0753.18W	blue2	56	58.36508	-5.3608	5821.90N	0521.65W	blue1
27	56.02258	-8.45553	5601.35N	0827.33W	red3	57	58.50692	-5.85225	5830.41N	0551.14W	blue1
28	56.20334	-8.79842	5612.20N	0847.91W	red3	58	58.85903	-5.73432	5851.54N	0544.06W	green1
29	55.8453	-9.33914	5550.72N	0920.35W	red3	59	58.80285	-5.35696	5848.17N	0521.42W	green1
30	55.52007	-9.20687	5531.20N	0912.41W	red3	60	58.67863	-4.20204	5840.72N	0412.12W	green1