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FRV *Alba na Mara*

Cruise 0908A

REPORT

5 – 19 September 2008

Personnel

Barry O'Neill	SIC	7– 16 September
Jim Hunter		5 – 16 September
Martin Burns		7 – 16 September
David Avery		9 – 16 September

Shore based

Mike Breen	6-17 September
Keith Summerbell	6-17 September
Morag Campbell	6-17 September
Jim Mair	6-17 September
Melanie Harding	8-17 September
Mhairi Alexander	10-13 September, University of Liverpool

Objectives

1. To measure the immediate physical, ecological and environmental impact of a trawl gear on coarse sediment.

2. To measure the immediate physical, ecological and environmental impact of a roller clump on coarse sediment.

Out-turn days per project: 15 days MF0759

Narrative

The *Alba na Mara* left Fraserburgh on the morning of 5 September and arrived at Campbeltown on the morning of 7 September. The divers, working with the chartered dive support RIB *Trostran*, completed work-up dives and surveyed the work site. The following day further surveying took place using the TUV and a suitable site, with long enough tows on coarse sand – fine pebbles and at diveable depth was identified along the south coast of Arran in 20 – 24m of water. During the remainder of the cruise the following operations took place at this site:

(i) Core samples were taken along a transect, the fishing gear towed across the transect and subsequently core samples were taken outside the tow path and inside the impacted areas of the tracks of the door, the sweeps and the groundgear.

(ii) The physical impact to the seabed outside the tow path and inside the impacted area in the tracks of the door, the sweeps and the groundgear was measured using the laser-camera profiler.

(iii) The large scale dimensions of the plume and the particle size of the suspended sediment using the LISST 100X were measured by divers on the TUV. Water samples were also taken from the plume behind the trawl doors.

The sediment plume samples were filtered, subsampled and stored on board the *Alba na Mara.* Analysis of the suspended solids, particle size and nutrient will take place on return to the Laboratory. The core samples were sieved over a 0.5mm mesh and stored in formaldehyde on the *Alba na Mara.* Subsequently the infaunal community will be quantified by functional type.

High resolution engineering data was collected during the cruise using the load cells fore and aft of the trawl doors, triaxial force sensors on the door shoes and accelerometers attached to the ground gears. The day grab was used to obtain sediment samples of the area trawled.

One day was lost due to weather and on another it was too rough to dive. However, on that day it was possible to run engineering trials. The impact of the roller clump was not investigated. The trials finished on the afternoon of the 16 September and diving equipment was off loaded at Campbeltown. The *Alba na Mara* then made passage for Fraserburgh and off loading took place the morning of the 19 September.

B O'Neill
25 September 2008.