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FRV *Clupea*

Cruise 0707C

REPORT

21 May – 29 May

Loading: Fraseburgh

Unloading: Fraseburgh

Personnel

Barry O'Neill

Keith Summerbell

Alistair McIntosh

Lynnete Ritchie

Jim Hunter

Colin Stewart

Gear

Benthic sledge

Scanmar height unit

LISST 100X

Flowmeter

Load cells

Acoustic releases

Sledge blades, modified trawl door and weights

Day grab (including table)

Objectives

1. to collect samples of the sediment plumes behind objects towed over the sea bed using a towed sledge.
2. to test the high resolution load cell data logger.

Narrative

Fifty tows were carried out using the benthic sledge at sites between Sandend and Cullen and between Burghead and Nairn in the period 21-28 May. A number of gear elements were fitted ahead of the sledge. These were a segment of rock hopper ground gear; a segment of small disc ground gear; a length of chain and a trawl door. To obtain baseline readings tows were also carried out using the sledge alone at both locations.

The sediment plumes were sampled (i) by water samplers mounted on the sledge and triggered by acoustic releases, (ii) by small plankton nets and (iii) by the LISST 100X instrument. Towing speed was measured using a self-recording flowmeter and a self recording camera recorded the triggering of the water samplers. Sediment samples were taken at each site using the day grab. The sediment plume samples were filtered, subsampled and stored on board the *Clupea*.

Analysis of the suspended solids, particle size and nutrient will take place at the Laboratory and comparisons will be made between the sampler bottle data, the day grab data and the LISST 100X data.

Barry O'Neill
2 November 2007