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FRV *Clupea*

Cruise 1307C

PROGRAMME

14 -27 September 2007

Loading: Fraserburgh
Unloading: Fraserburgh

Personnel

Barry O'Neill (In charge)
Mike Breen
Keith Summerbell
Morag Campbell
Jim Mair
Martin Burns

Gear

benthic sledge
Divers TUV (net drum and towing wire)
Day grab.
Quad of Nitrox.
Scallop dredges (commercial) (one beam modified to tow benthic sledge)
laser-camera profiler
diving equipment and divers hand held camera
high resolution load cell and accelerometer
LISST 100X
80 litres petrol

Objectives

(i) to quantify the amount of sediment put into suspension in the wake of a scallop dredge;

(ii) to measure the large scale dimensions of the plume and to measure the particle size of the suspended sediment at a number of points behind the plume;

(iii) to assess the removal of and the damage to infaunal macrobenthic species.

Procedure

The trials will take place in waters north east of Colonsay. The Clupea will leave Fraserburgh Friday morning and steam to Colonsay (eta Saturday evening). The scientists will drive to Oban and take the RIB to Colonsay by ferry. They will stay on Colonsay Friday and Saturday night and spend Saturday carrying out work-up dives, surveying the site and testing the laser-camera profiler.

They will join the Clupea on Sunday and spend the day rigging and trialling the TUV and the benthic sledge.

Over the course of the cruise a number of different operations will take place. These will include:

(i) Towing a single scallop dredge and the benthic sledge with LISST 100X attached from the same beam.

(ii) Towing a single scallop dredge from a single beam and divers measuring the large scale dimensions of the plume from the TUV and the particle size of suspended sediment using the LISST 100X.

(iii) Towing three scallop dredges from a single beam and divers measuring the large scale dimensions of the plume from the TUV and the particle size of suspended sediment using the LISST 100X.

(iv) Taking core samples in an area, towing three scallop dredges through that area and subsequently taking core samples inside and outside the tow path and measuring the physical impact to the seabed using the laser-camera profiler.

High resolution engineering data will be collected during the cruise using the load cells and accelerometers. Operations will finish either Monday or Tuesday (24 or 25 September). On consideration of ferry times and the time it will take Clupea to return to Fraserburgh. The scientists will take the RIB back to Aberdeen via the Oban ferry.

J A Morrison
31 August 2007