



**Methods:**

- Stations were sampled using a Seabird 911 water sampler and Falmouth Scientific CTD.
- Vertical zooplankton net hauls were taken using a 200 micron mesh bongo net with a 500mm diameter inlet.
- Seabed sediment was sampled using a Day grab

**Cruise Narrative:**Thursday 3 January 2008

Following a talk on ship's safety and a demonstration of personal life saving equipment, the RV Corystes departed Belfast at 1200 hrs and sailed to sample at four stations along the Beaufort Dyke in the North Channel. The vessel then sailed overnight to the mooring station 38A.

Friday 4 January 2008

The vessel arrived on station 38A at 0630 hrs. The weather was dry and bright with a light westerly wind when work commenced at 0800hrs with recovery of the instrument mooring to ship deck. Data from thermistors, CTD and water sampler were down loaded; samples were removed from the water sampler; and following a detailed inspection of mooring components instruments were reprogrammed and mooring components reassembled. The instrument mooring was then successfully redeployed at 1020 hrs in depth 92 meters on position  $53^{\circ} 46^{\prime} .966\text{N}$   $005^{\circ} 38^{\prime} .121\text{W}$ . Following deployment of the rosette water sampler and CTD, weather conditions quickly deteriorated and the vessel sailed to shelter overnight off the Irish coast.

Saturday 5 January 2008

In westerly gales, inshore stations 47D and 36 were sampled. Following this the vessel returned to shelter off the Irish coast. In the late afternoon the winds moderated and the vessel was able to sample offshore at station 37 and NMMP station 6 where work for the day finished at 2100 hrs.

Sunday 6 January 2008

Work for the day commenced at 0800 hrs when water and sediment samples were taken at NMMP station 4. Early problems with the stern gantry were overcome by moving the Day grab deployment to the hydrographic winch. The survey continued with sampling at NMMP stations 3 and 5, and finished as winds increased on station NMMP 6 at 2000 hrs. In gale force winds the vessel returned to shelter overnight off the Irish coast.

Monday 7 January 2008

In strong southerly gales the vessel remained at shelter until late afternoon. With gales forecast for next 24 hours and a poor weather outlook it was decided to abandon the survey and return to dock in Belfast.

Tuesday 8 January 2008

The vessel sailed slowly overnight to dock in Belfast at 0845 hrs.

**Work Completed:**

With exceptionally poor weather conditions survey work in the Celtic Sea region was not attempted. However short periods of relatively calm weather enabled a successful mooring service operation together with sampling at NMMP stations 3, 4, 5 & 6, coastal stations 36, 37 & 47D, and at standard stations along the Beaufort Dyke. Unfortunately owing to weather conditions work along the Liverpool Bay and IOM transects had to be abandoned.

**Results:**

At the time of mooring service, the water column at station 38A was vertically mixed with salinity 33.34 and mean temperature 10.38 °C, approximately one degree lower than recorded in mid December. Other stations sampled were vertically mixed and typical of temperature and salinity recorded at the mooring site. Concentrations of phosphate, total oxidized nitrogen and silicate, at all stations sampled, were typical for the time of year; at mooring station 38A phosphate ranged 0.53 to 0.59 µM, total oxidised nitrogen 5.96 to 6.66 µM and silicate 6.31 to 6.47µM. The three nutrients were uniformly distributed throughout which reflects the vertically mixed nature of the water column one would expect at this time of year. Chlorophyll concentrations were baseline and typically  $\leq 0.3 \mu\text{g l}^{-1}$ .

**Operational Aspects of the Ship:**

During the cruise the A-frame, main trawl winches, both hydrographic winches and the ship's clean seawater supply were used. Minor problems were encountered with the stern gantry but were overcome by moving deployment operations to the starboard side hydrographic gantry. No other problems were encountered with ship's equipment nor indeed with any of the scientific equipment. The hotel and catering service was of the usual high standard and there was a good working relationship between the scientists and the ship's crew. Prior to the ship departing Belfast a comprehensive and detailed safety briefing was delivered to the scientific crew.

**Acknowledgements:**

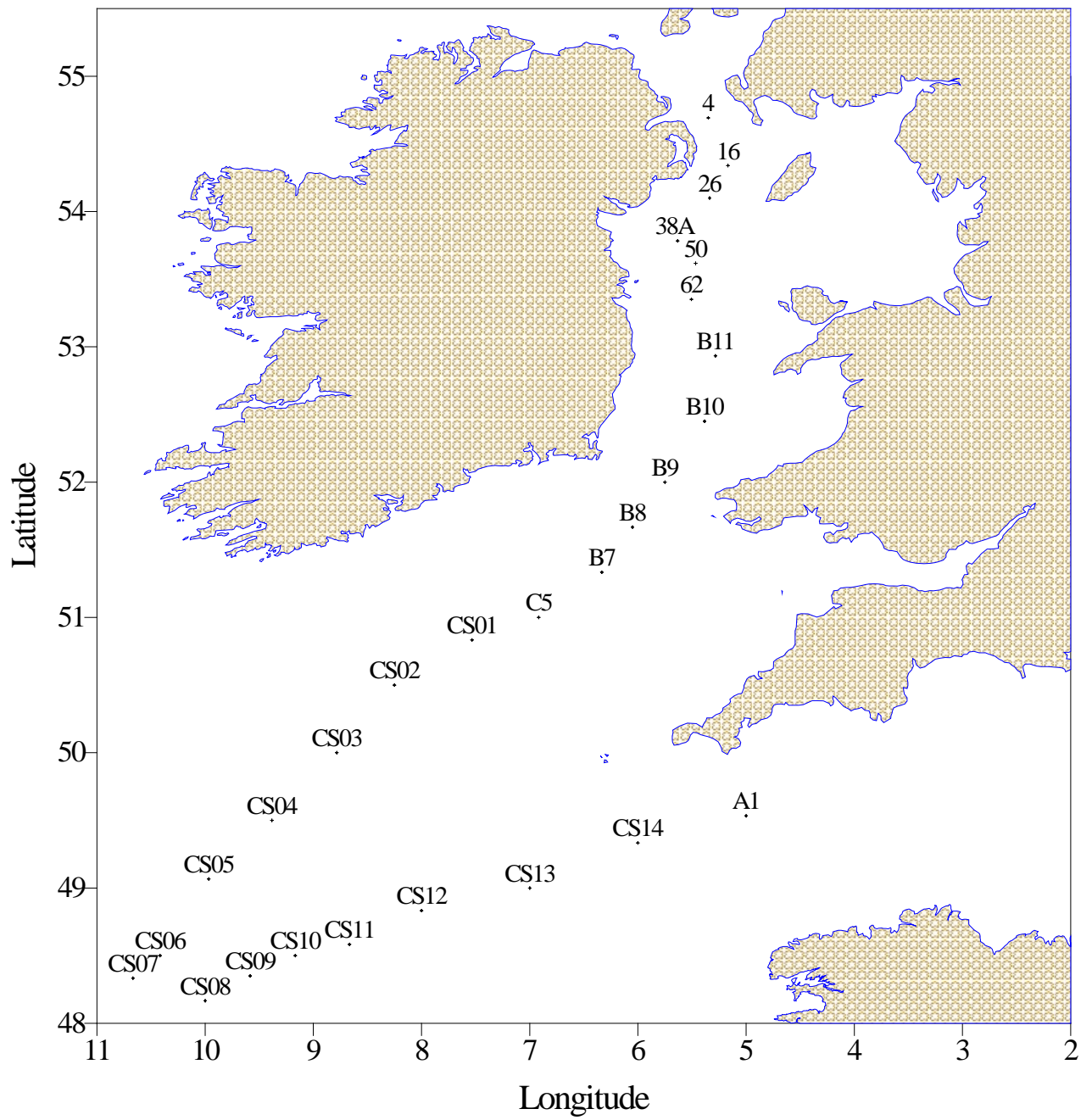
I am indebted the deck crew of the RV Corystes for their co-operation and assistance during the mooring recovery and deployment operation. The ship's master, officers, engineers and catering staff are also thanked for their co-operation during this cruise.

*Scientist in Charge*

Date: 1 February 2008

*Master (seen in draft)*

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**Survey Transect CO 0108**