

Agri-Food and Biosciences Institute

Agriculture, Food and Environmental Science Division Fisheries and Aquatic Ecosystems Branch

Cruise Report: CO 0711

Vessel: RV *Corystes* **Date:** 12th – 16th February 2011 Area: Irish Sea (north); ICES VIIa

Survey Type: Biological Oceanography & Ground Truthing Survey

Personnel:

B Stewart	SSO	AFBI	12 – 15 Feb 2011
R Gilmore	HSO	AFBI	12 – 15 Feb 2011
C Smyth	SO	AFBI	12 – 15 Feb 2011
J Strong	SSO	AFBI	15 – 17 Feb 2011
M Lawson	Student	UU	15 – 17 Feb 2011
J Calvert	Student	UU	15 – 17 Feb 2011

Objectives:

- To maintain an insitu monitoring programme in the Irish Sea. i.
- To investigate the distribution of dissolved nutrients and phytoplankton in the water column ii. over a standard transect of stations in the Irish Sea.
- iii. To fulfill the ground truthing requirements for the imminent INIS Hydro project.

<u>Circulation</u>	✓	Comments
DCSO & CSO	✓	
Ship Managers	✓	
Fisheries Division		
ANIFPO		Signed Head of Branch
NIFPO		

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Methods:

- Stations were profiled using a Seabird SBE 32 water sampler and SBE 911 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.
- Seabed sediment sieved through a 1000 micron mesh and preserved with 4% formalin.

Cruise Narrative:

Saturday 12 February 2011

With strong to gale force southerly winds it was decided with the ship's master to delay sailing until early Sunday morning.

Sunday 13 February 2011

The Corystes departed Belfast at 0645 hrs and sailed to arrive on AFBI mooring station 38A at 1415 hrs. The weather was dry and bright with a light westerly wind when work commenced 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 the instruments were reprogrammed and mooring components reassembled with the addition of the "biological" water sampler. The instrument mooring was then successfully redeployed at 1615 hrs in depth 90.2 metres on position 53⁰ 47¹.060N 005⁰ 38¹.051W. Following deployment of the rosette water sampler and CTD the Corystes sailed to sample at Irish coastal stations 37, 36 and 47D before sailing overnight into Liverpool Bay.

Monday 14 February 2011

The Corystes commenced sampling the Liverpool Bay transect on station LB01 at 0800 hrs and completed the transect sampling on LB08 at 1700 hrs. Thereafter the ship sailed to dock in Belfast at midnight.

Tuesday 15 February 2011

A change of scientific personnel occurred where B Stewart, R Gilmore and C Smyth were replaced by J Strong and University of Ulster students M Lawson and J Calvert before the ship departed Belfast for the survey area off the south Down coast.

Wednesday & Thursday 16/17 February 2011

Both days were spent collecting sediment samples with the Day Grab. These samples are a vital contribution to the imminent INIS Hydro project that will see much of the south Down coastline surveyed with multibeam sonar. Due to exceptionally good weather conditions all 60 stations where sampled. Only 2 stations where too hard to sample with the Day grab and will need camera surveys. These samples fulfill all of the ground truthing requirements for the INIS Hydro project, hence allowing all of the following seabed mapping cruises to be dedicated to multibeam collection. Seabed samples will undergo particle size analysis and infaunal enumeration.

Work Completed:

Favourable weather conditions enabled a successful service of the AFBI mooring and unimpaired sampling along the standard Liverpool Bay transect of stations. Due to exceptionally good weather conditions during the second part of the survey, sediment samples were collected from all 60 stations.

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. No problems were encountered with the ship's equipment or indeed ant of the scientific equipment. The hotel and catering service was of an acceptable standard and there was a reasonable 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.

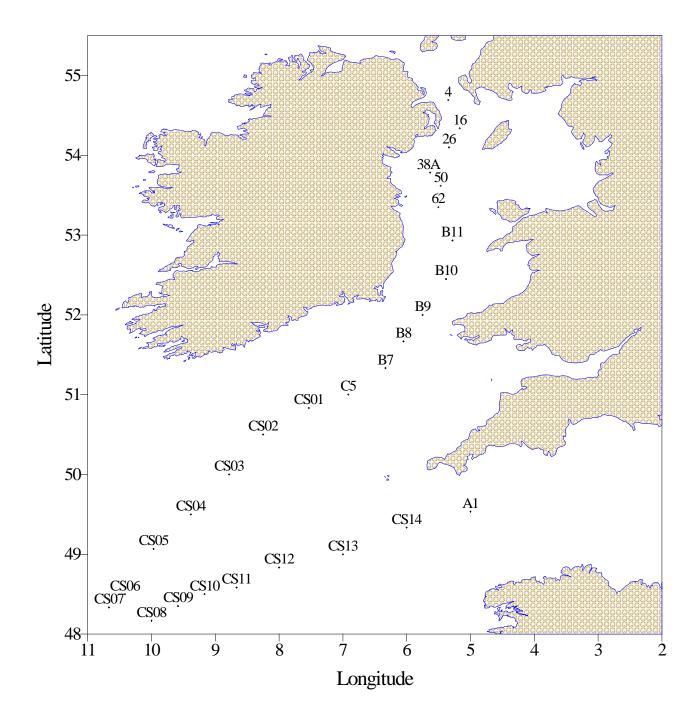
Acknowledgements:

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. During the second part of the survey particular thanks must be extended to the crew of the RV Corystes for their hardwork, good humour and enthusiasm with which they approached the long hours associated with the sediment sampling. Also, the exceptional productivity of this cruise would not have been possible without the help of Michael Lawson and Jay Calvert (University of Ulster students), who kindly volunteered to help on this cruise.

Scientist in Charge

Date: 23 February 2011

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Survey Transect CO 0711