



Vessel: RV *Corystes*

Area: Irish Sea (north); ICES VIIa, g, j & VIa

Survey Type: Biological Oceanography & CSSEG Survey

B Stewart	SSO	AFBI	2 – 13 Jan 2011
R Gilmore	HSO	AFBI	2 – 13 Jan 2011
C Smyth	SO	AFBI	2 – 10 Jan 2011
P Irvine	SO	AFBI	2 – 10 Jan 2011
E Capuzzo		CEFAS	2 – 10 Jan 2011
J Foden		CEFAS	2 – 10 Jan 2011
M Service	PSO	AFBI	10 – 13 Jan 2011
G McNeill	SO	AFBI	10 – 13 Jan 2011

- i. To maintain an insitu monitoring programme in the Irish Sea.
- ii. To investigate the distribution of dissolved nutrients and phytoplankton in the water column in the Irish Sea, Celtic Sea and Celtic shelf edge.
- iii. To provide data towards the assessment of chemical and biological trends in the marine environment (CSSEG).
- iv. To conduct a nutrient survey within 1 nautical mile of the Northern Ireland coast.
- v. To assess levels of primary and secondary production in the Irish Sea, Celtic Sea and Celtic shelf edge.

<u>Circulation</u>	<input checked="" type="checkbox"/>	<u>Comments</u>
DCSO & CSO	<input checked="" type="checkbox"/>	
Ship Managers	<input checked="" type="checkbox"/>	
Fisheries Division	<input type="checkbox"/>	
ANIFPO	<input type="checkbox"/>	
NIFPO	<input type="checkbox"/>	

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.
- Primary production was measured using a ^{14}C radio isotope technique.
- An enzymatic method with chitobiase was used as an index for secondary production.

Cruise Narrative:Sunday 2 January 2011

Following a talk on ship's safety and a demonstration of personal life saving equipment, the RV Corystes departed Belfast at 2200 hrs and sailed overnight to the mooring station 38A.

Monday 3 January 2011

The vessel arrived on station 38A at 0900 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. The instrument mooring was then successfully redeployed at 1130 hrs in depth 95 metres on position $53^{\circ} 46' .736\text{N}$ $005^{\circ} 38' .032\text{W}$. Following deployment of the rosette water sampler, CTD and Day grab the Corystes sailed to sample at Irish coastal stations 37, 36 and 47D before sailing south overnight to station B8 in the Celtic Sea..

Tuesday 4 January 2011

The Corystes continued on a southerly track sampling at Celtic Sea stations B8, B7, C5 and CS01. Primary and secondary production assessments were conducted on samples taken at station C5. Overnight the ship sailed to shelf edge station CS10.

Wednesday 5 January 2011

Work continued from station CS10 along "shelf" stations CS09, CS08, CS07 and CS06 with productivity assessment conducted at CS09.

Thursday 6 January 2011

Work continued overnight sampling at stations CS05 and CS04. Productivity work was conducted at CS03 and work for the day was completed on station CS02. Overnight the vessel sailed to station B9 in the Celtic Sea.

Friday 7 January 2011

Work for the day commenced at 0630 hrs on station B9 followed by productivity work at B10. Survey work continued with sampling at station B11 and at Liverpool Bay transect stations LB05, LB04 and LB03. Overnight the ship sailed into Liverpool Bay.

Saturday 8 January 2011

Sampling continued at stations LB01 and the CEFAS Liverpool Bay mooring site where productivity work was conducted and thereafter continued with sampling the remainder of the Liverpool Bay transect stations LB06, LB07 and LB08. With winds increasing the latter two stations were sampled from the ship's clean seawater supply. Over night the ship sheltered off the Drogheda coast.

Sunday 9 January 2011

Following productivity assessment work at coastal station 47D, the survey continued at CSSEG stations 3, 4 and 5 with deployment of the rosette water sampler and Day grab before work for the day finished at 2000 hrs on station 16. The Corystes sailed to dock in Belfast at midnight.

Monday 10 January 2011

A change of scientific personnel occurred where C Smyth, P Irvine, E Capuzzo and J Foden were replaced by M Service and G McNeill before the ship departed Belfast at 2200 hrs to sail overnight towards Carlingford Lough.

Tuesday 11 January 2011

A Northern Ireland coastal nutrient survey commenced at station 89 off Carlingford at 0800 hrs and finished on station 13 near the Foyle estuary at 2300 hrs. Water samples taken at each of the 17 stations were processed and preserved for nutrient analysis. The ship's salinometer was set to record position, temperature and salinity at regular intervals along the coastal sampling track.

Wednesday 12 January 2011

Work for the day commenced at 0800 hrs with deployment of the rosette water sampler and Day grab at CSSEG station 6 off the north coast and continued with sampling at station 29 north of Rathlin Island before finishing with water and sediment sampling at CSSEG station 2 off the Larne coast at 1430 hrs. The ship sailed to dock in Belfast at 2000 hrs.

Work Completed:

Favourable weather conditions enabled a successful service of the AFBI mooring and a smooth passage during the survey to the Celtic shelf break. Productivity assessments were completed as scheduled, sampling of all CSSEG stations was completed and careful manipulation of the work programme around the weather enabled the successful completion of the Northern Ireland coastal nutrient survey.

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 any 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.

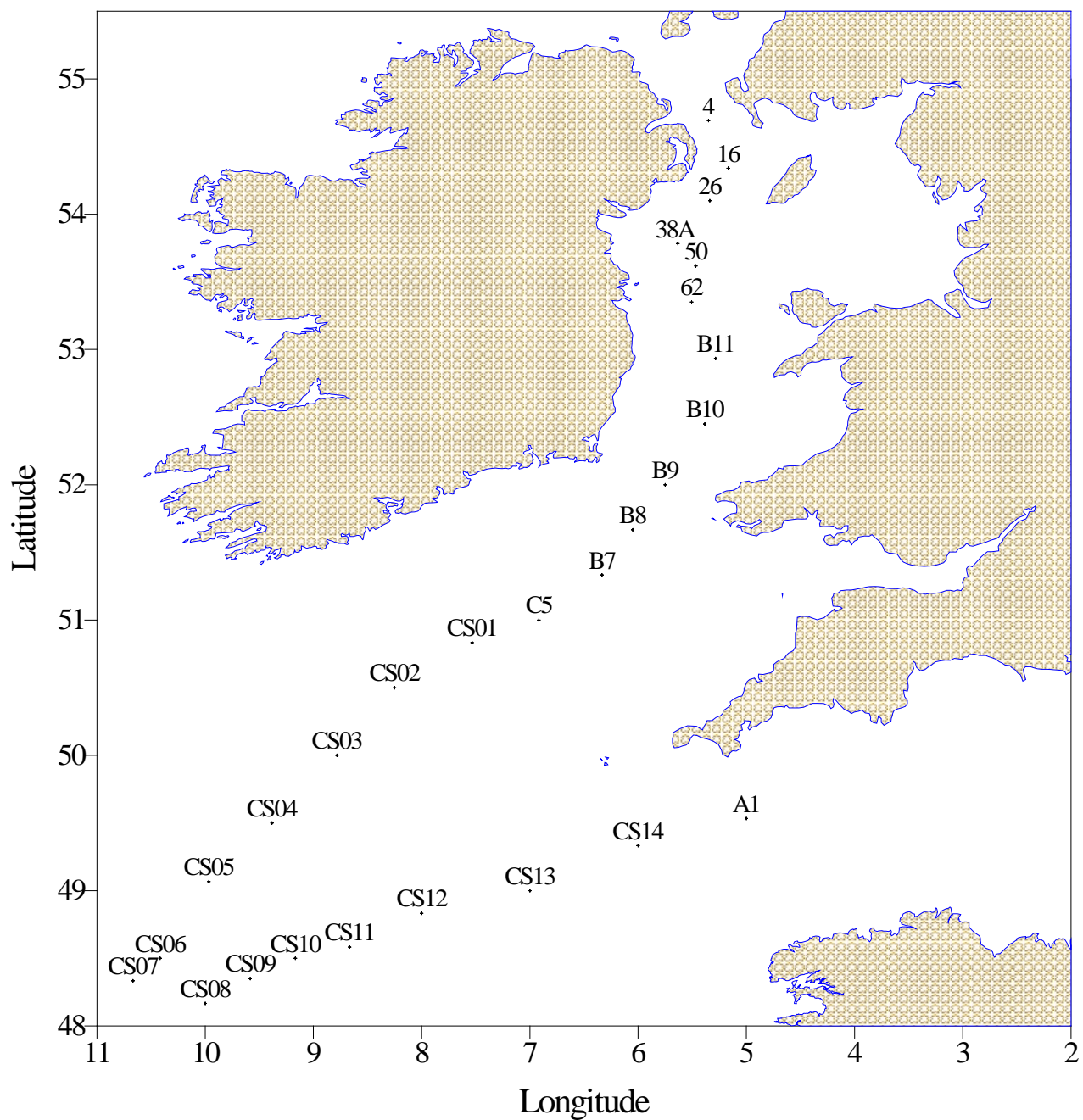
Acknowledgements:

I am indebted to 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: 23 February 2011

Not to be cited without prior reference to AFBI (Fisheries & Aquatic Ecosystems Branch)



Survey Transect CO 0111