

Clean Seas Environmental Monitoring Programme (CSEMP)

RV ENDEAVOUR CRUISE REPORT: 14TH JUNE – 28TH JUNE 2012 Cend9_12.

DURATION: 14th June – 26th June 2012

Embark: Portland 14th June

Small boat transfer scientific staff Fleetwood 19th June (Paul Whormersley disembarks, Joanna Murray embarks)

Disembark Portland 26th June

LOCATION: Western English Channel, Celtic Sea, Irish Sea.

Staff list

Brett Lyons (SIC)

Paul Whomersley

Joanna Murray

Paul McIlwaine

Tim Bean

Kelly Bateman

Matt Green

Jordan Ely

John Bignell

Freya Goodsir

Jon Barbar

Ruth Wortham

Manuel Nicolaus

Jessica Poole (Essex University)

AIMS:

1. To collect samples of fish for chemical analysis from the Irish Sea, Celtic Sea and Western English Channel in support of the Clean Seas Environmental Monitoring Programme (CSEMP). **Marine Strategy Framework Directive (MSFD) descriptor 8 and 9.**
2. To collect fish at CSEMP sites for fish disease assessments and sampling of tissues for biochemical marker analysis. **MSFD descriptor 8.**
3. To sample representative CSEMP stations using Day Grab for trace metal contaminants, sediment particle size analysis, PAHs and benthic fauna. **MSFD descriptor 1, 4 & 8.**
4. To conduct marine litter surveys to identify quantities of marine litter (including micro-plastics) in the coastal and marine environment. **MSFD descriptor 10.**
5. In support of potential biodiversity descriptor requirements sample Irish Sea Benthos stations.

Policy drivers

Information generated under this integrated cruise will provide data supporting descriptors (1, 4, 8, 9 and 10) of Good Environmental Status under the MFSD. In addition, the data will be used to meet the UK's obligations for reporting chemical contaminant data to MERMAN and the ICES database and subsequent assessments for future Charting Progress and OSPAR quality status reports.

Overview

RV Cefas Endeavour sailed from Portland on the afternoon of 14th June and proceeded into the Western English Channel. Sediment was collected at CSEMP stations Lyme Bay (CSEMP534) and Eddystone (CSEMP584). However, deteriorating weather excluded the collection of fish and the decision was made to steam around the Lizard Peninsular and into the Celtic Sea. On arrival at the West Lundy (CSEMP 604) sampling station the sea conditions were still too severe to fish so the Cefas Endeavour continued steaming around and into the shelter of Cardigan Bay. The sea state had improved and on the 16th – 17th June sampling was undertaken at the Cardigan Bay fishing stns (CSEMP 654 and 649). Over night on the 17th June the ship sampled a series of benthic stations (Irish Sea Benthos IBS, see Annex 3) as she steamed around to fish Red Wharf Bay (CSEMP 776). Fishing continued throughout the 18th of June taking in additional fishing stations at Liverpool Bay (CSEMP 715) and the nearby chemistry trend site.

To facilitate a scientific staff transfer the Cefas Endeavour proceeded overnight to Morcecambe Bay (CSEMP 796) where fishing commenced on the morning of the 19th June. After a small boat transfer at Fleetwood the ship then proceeded south to fish at Burbo Bight (CSEMP 706). Additional sediment samples were collected at Burbo Bight for the analysis of brominated diphenyl ethers (BDE's) and flatfish liver samples were collected for EROD AQC. The Endeavour then steamed overnight to sample the South East Isle of Man station (CSEMP 805) on the morning of the 20th June. A series of IBS stations were also sampled before anchoring overnight at St Bees. Fishing at St Bees (CSEMP 769) was completed the following morning and a transit south planned via the West coast of the Isle of Man to incorporate additional ISB stations. However, poor weather caused a cancellation of grabbing early on the morning of the 22nd June. Work could not start again until the Cefas Endeavour had reached Carmarthen Bay (CSEMP 616) on the evening of the same day. The Cefas Endeavour then moved onto the West Lundy (CSEMP 604) and Celtic Deep (CSEMP 605) stations to undertake additional biota and sediment sampling.

The Cefas Endeavour worked through the night collecting a series of IBS stations in the Celtic sea. This work continued through the 24th June as she steamed south and then east back towards Portland. On route fish samples

were collected at Eddystone (CSEMP 584) and Lyme Bay (CSEMP 534). The Cefas Endeavour arrived late on the 25th June and anchored in Weymouth Bay before docking on the morning 26th to disembark scientific crew and equipment.

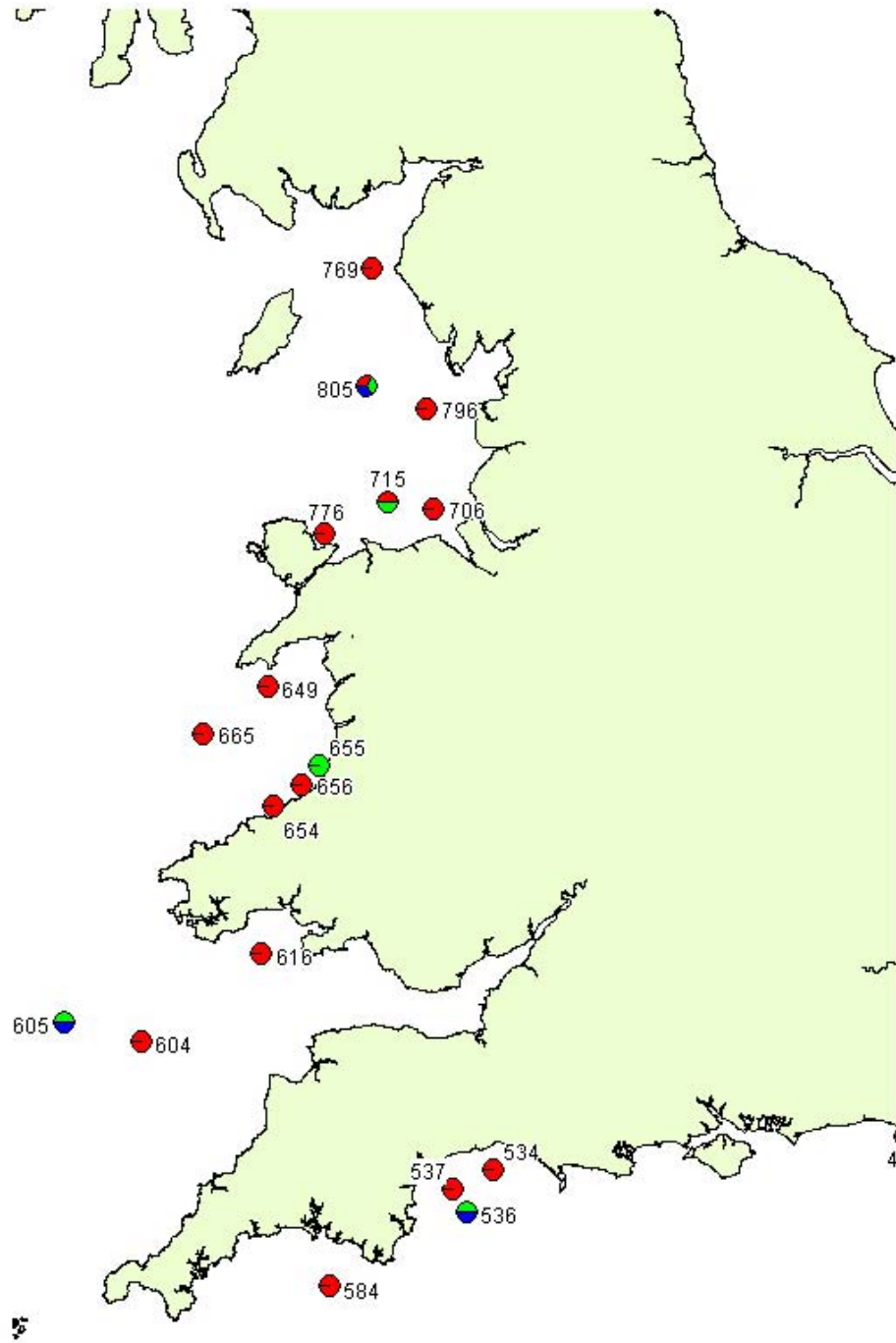
Additional outputs:

Cefas blog: [http://www.cefas.defra.gov.uk/news/survey-blogs/clean-seas-environmental-monitoring-programme-2012-\(csemp\)/cleaning-up-our-seas.aspx](http://www.cefas.defra.gov.uk/news/survey-blogs/clean-seas-environmental-monitoring-programme-2012-(csemp)/cleaning-up-our-seas.aspx)

Appendix 1: **CSEMP FISHING STATIONS**

CSEMP Number	Location	Mid tow Lat. Long.
New	Off Eddystone	50 06.44 N 04 06.06 W
New	West Lundy	51 09.79 N 05 26.67 W
605	Celtic Deep	51 10.29 N 05 43.75 W
616	Carmarthen Bay	51 32.82 N 04 35.13 W
649	North Cardigan Bay	52 42.44 N 04 32.29 W
654	South Cardigan Bay	52 10.90 N 04 29.87 W
656	Inner Cardigan Bay	52 18.00 N 04 16.35 W
665	Outer Cardigan Bay	52 23.76 N 04 53.72 W
706	Burbo Bight	53 28.24 N 03 20.47 W
715	Liverpool Bay	53 28.32 N 03 41.91 W
769	St Bees Head	54 30.71 N 03 47.63 W
776	Red Wharf Bay	53 22.46 N 04 12.84 W
796	Morecambe Bay	53 55.31 N 03 23.23 W
805	SE Isle of Man	54 03.36 N 03 52.47 W

APPENDIX 2: MAP SHOWING LOCATION OF CSEMP STATIONS



APPENDIX 3: MAP SHOWING LOCATION OF PROPOSED IRISH SEA BENTHIC STATIONS

