

RESEARCH VESSEL PROGRAMME

**RV CEFAS ENDEAVOUR
Survey: CEND 15 - 2020**

STAFF:

Name	Role	Name	Role
Stephen Shaw	SIC	Briony Silburn	Sampler
Sarah Walmsley	ZIC	Matthew Green	Sampler
Freya Goodsir	CSEMP Leader	Charlotte Reeve	Sampler
Manuel Nicolaus	CSEMP Leader	Ruth Hicks	Sampler
Georgina Eastly	Deckmaster	Christopher Popham	Sampler
Nicola Hampton	Deckmaster	Paul Nelson	Sampler
Caroline Daumich	Histology	Gary Thomas	Sampler
John Bignell	Histology		

DURATION: 5th September to 5th October 2020
(29 days, dates might change due to Covid testing)

LOCATION: Lyme Bay (VIIe), Irish Sea (VIIa), Bristol Channel, Celtic Sea (VIIfg) & Dogger Bank (IVb)

AIMS: Beam Trawl Survey Aims:

1. To carry out a 4m beam-trawl survey of groundfish (Figure 1) to i) obtain fisheries independent data on the distribution and abundance of commercial flatfish species, and ii) derive age compositions of sole, plaice, cod and whiting for use in stock assessments.
2. To collect biological data including maturity and weight at age of sole, plaice, lemon sole and other commercially important finfish species as part of CEFAS' requirements under the EU Data Collection Framework.
3. To determine the distribution and relative abundance of juvenile and adult sole and plaice.
4. To collect surface & bottom temperature/salinity data using CTD and Niskin Bottle.
5. To quantify epibenthos and using 4m beam trawl by-catch.
6. Collect length/weight & maturity information using individual fish measurements, in support of the EU Data Collection Framework.

7. To collect surface sea-water samples for processing on return to Lowestoft for the analysis of tritium and caesium (AE001) (K Leonard - Cefas).
8. To collect fish samples in support of Cefas and non-Cefas projects and training courses.
9. Retain any dead specimens of diadromous fish for the DiadES Interreg project (T Basic - Cefas, Lowestoft).
10. Collect chlorophyll samples to test for nutrients from the surface water for the ASMIAC project. (N Greenwood – Cefas, Lowestoft).
11. Collect plankton sample at the Gabbard smart buoy site. (S Pitois – Cefas, Lowestoft).

CSEMP Aims:

1. To collect samples of demersal fish for chemical analysis from the Irish Sea, Celtic Sea and Western English Channel (Figure 1) in support of the Clean Seas Environmental Monitoring Programme (CSEMP) (OSPAR Common indicator and UK specific Indicator (assessments)).
2. To collect fish samples at CSEMP sites for fish disease biochemical markers (e.g. EROD and bile metabolites analysis and AChE) (UK specific Indicator Assessments).
3. To sample representative CSEMP stations (Figure 1) using day grab, for polycyclic aromatic hydrocarbons (PAHs), trace metal contaminants, organic contaminants (PCBs, PBDEs and HBCD), sediment particle size analysis (PSA) and marine litter (OSPAR Common indicator and UK specific Indicator assessments).
4. To conduct marine litter surveys (OSPAR Common indicator and UK specific Indicator assessments) by collecting benthic litter information from the trawls and collecting sediment samples for litter analysis.
5. To conduct surveys of marine animals (birds and cetaceans) and as part of the Sea Watch programme.
6. To collect water conductivity, temperature and depth information, and Plankton community information to provide additional knowledge on Eutrophication levels (OSPAR Common indicator and UK specific Indicator assessments).
7. To collect additional fish for the EA and NRW for a comparison study of whole fish, and fish muscle and liver in the quantity of contaminants). EA require 9 fish from stations 534, 584, 706, 715, 769, 796 and Liverpool Bay trend. NRW require up to 9 Dab from Welsh stations 616, 649, 654 and 776.

Dogger Bank Aims

1. To collect samples of Scallops to ascertain their spawning condition on the Dogger bank. Samples will be collected using 8 dredges (4 a side) at 14 sites, with repeat tows if fewer than 10 individuals are caught.

PLAN:

RV Cefas Endeavour will sail from Lowestoft around the 5th September and will head directly to the priority sampling location in Lyme Bay. Upon completion of the Lyme Bay stations, RV Cefas Endeavour will then head north fishing stations en-route to the other priority sampling grids in the Bristol Channel, Irish Sea south and north sectors (BCI/ISS/ISN). Once completed, the remaining survey grids of Irish Sea West (ISW), St. Georges Channel (SGC) and Bristol Channel outer (BCO) will be fished.

At the first and last fishing stations of each working day, a CTD profile and associated surface and bottom salinity samples will be collected. At the end of the Beam Trawl and CSEMP work, RV Cefas Endeavour will transit to the Dogger Bank to carry out a Scallop dredging survey for the final 4 days. RV Cefas Endeavour will dock in Lowestoft around the 5th October and unloading of equipment will be carried out the next day.

GEAR:

Gear list distributed separately.

S M Shaw
Scientist in Charge
3rd August 2020
Update -
26th August 2020

DISTRIBUTION:

BODC
AWSM

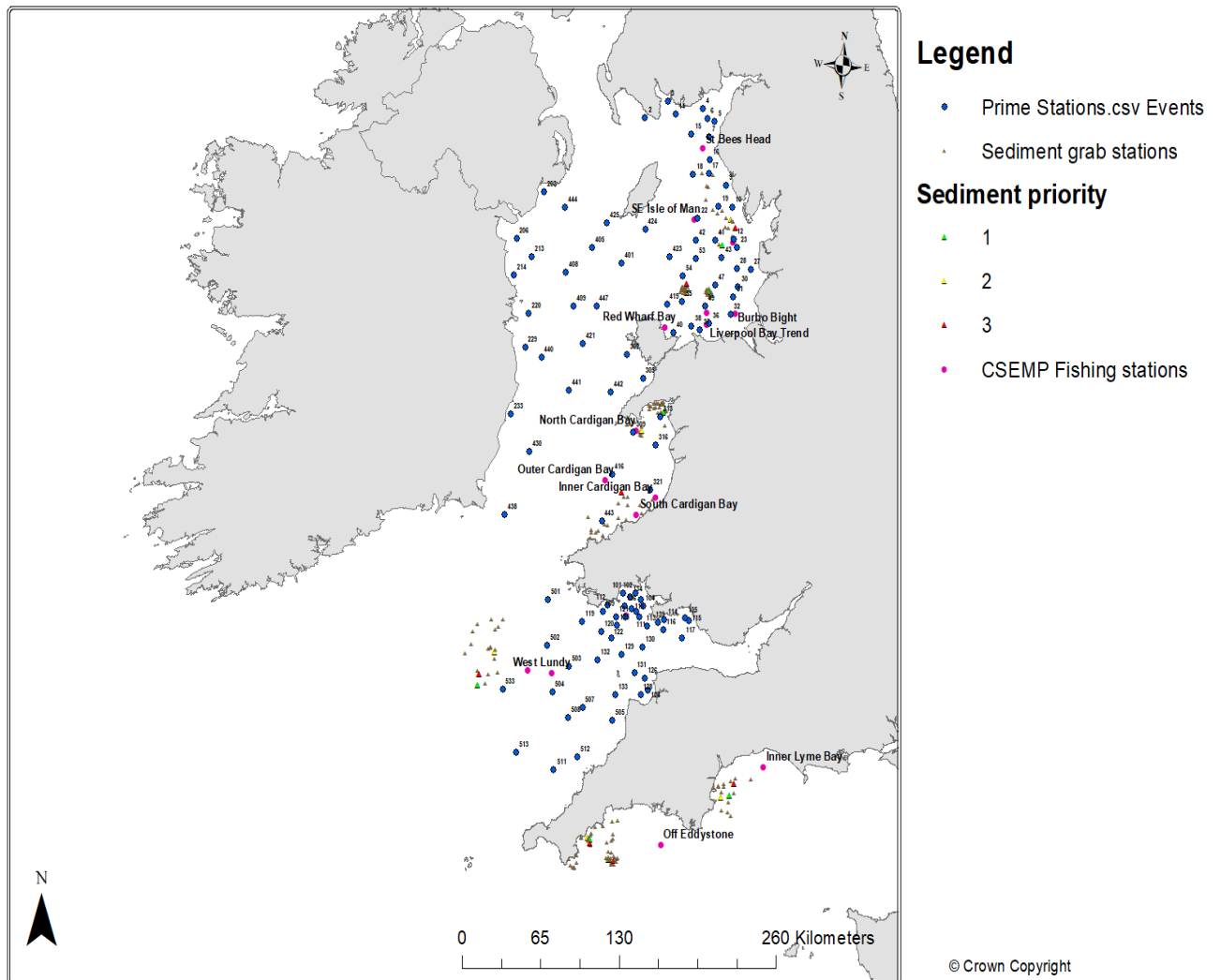


Figure 1: Combined map of IBTS and CSEMP stations.