

**RESEARCH VESSEL PROGRAMME**

**RV CEFAS ENDEAVOUR  
Survey: C END 10 - 2021**

**STAFF:**

<b>Name</b>	<b>Role</b>	<b>Cabin</b>
<b>Jo Smith</b>	<b>SIC</b>	<b>SIC</b>
<b>Linford Mann</b>	<b>2IC</b>	<b>B1</b>
<b>Mary Brown</b>	<b>Co-Deck Master</b>	<b>B2</b>
<b>Charlotte Jennings</b>	<b>Co-Deck Master</b>	
<b>Chris Popham</b>		
<b>James Pettigrew</b>		
<b>Scott Davis</b>		
<b>Pre-sailing reserve - TBC</b>		

**DURATION: 2 July 2021 – 15 July 2021**

**LOCATION: Southern North Sea and Eastern Channel**

**AIMS: PRIMARY AIMS:**

1. To undertake a beam trawl survey in the Southern North Sea and Eastern Channel as part of an ICES co-ordinated research programme.
2. To obtain fisheries independent data on the distribution and abundance of commercial flatfish species.
3. To collect biological data, including maturity and weight at age of commercial species, to satisfy the requirements of the EU data regulations.
4. To identify the epibenthos by catch taken in the 4-metre beam trawl and to quantify 12 species as agreed at the Beam Trawl Working Group.

**SECONDARY AIMS:**

5. To collect full depth, conductivity, temperature, and depth profiles at each trawl station alongside surface and near-bottom water samples using a Niskin with ESM2 logger.
6. To continuously log sub-surface (3m) salinity, temperature, fluorometry and other environmental data using the 'FerryBox'.
7. To sample litter caught in the beam trawl on every station

8. Collection of one sample 500m from the West Gabbard Smart buoy for (Sophie Pitois, Cefas Lowestoft)
9. The collection & preparation of water samples for chlorophyll determination (Naomi Greenwood, Cefas)

#### **OPPORTUNISTIC AIMS:**

1. To tag and release specimens of various commercially exploited skates (*Rajidae*) and other selected elasmobranchs.
2. Collect specimens of selected species for ID purposes as well as length-weight measurements where still required.
3. Collect information on discard survivability of starry smooth hounds (*M. asterias*) (Jo Silva, Cefas)

#### **PLAN:**

I will join the vessel in Lowestoft a few days prior to survey commencing (covid procedures depending) to check on survey gear and discuss plans with the master. Staff will join the vessel the following day and following testing for the COVID-19 virus, staff will self-isolate in allocated cabins for the appropriate period required for this time. Following a set of negative test result, scientific staff will begin the task of preparing for the survey including gear checks and EDC set up. All staff will be required to remain on-board for this time and will stay aboard until the survey has been completed.

Cefas Endeavour will likely sail around 2<sup>nd</sup> July (as early as schedule/covid practices allow), although there is the possibility that this may be delayed (3 days max) whilst awaiting results from the tests. The survey days at sea will be a maximum of 14 days.

A shake-down tow will be carried out off the Suffolk coast to fully test all survey sampling gear, equipment, and software systems. This will be carried out on a survey station close to Southwold (Appendix I), followed by a day fishing in the same area.

The vessel will begin work the following morning fishing in the Folkstone area, proceeding to work in an easterly direction completing fishing stations, along the English coast.

Once the English sector is completed the vessel will follow the grid across the channel and begin work at the Western end of France and survey Eastwards. Following completion of the French sector the vessel will proceed to complete the North Sea stations, working in a northerly direction and if time allows stations off the Belgium coast will be fished. All stations will be fished using a warp ratio of 3.5:1 if practical.

**GEAR:** Gear list provided

Joanne Smith  
Scientist in Charge

10 May 2021

**INITIALLED:** Ian Holmes

**DISTRIBUTION:**

BODC  
Survey participants  
Cefas fisheries survey SICs/2ICs  
Cefas Trim  
J Maitland/B Salter (AWSM)  
Master/Fishing Skipper (Cefas Endeavour)  
Marine Management Organisation (MMO)  
Marine Management Organisation Licencing (MMO)  
Marine Management Organisation Conservation (MMO)  
FCO (for Belgium, Netherlands & France)  
Els Torreele, Belgium  
Sieto Verver, Netherland  
Joel Vigneau, France  
Kent and Essex, Sussex, Southern and Eastern IFCAs



**Appendix I:** Plot of stations in the 7d beam trawl survey

