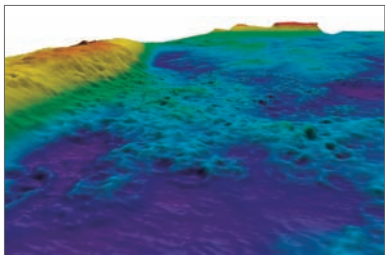


# Marine habitat mapping



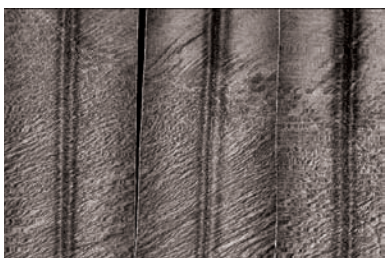
## Marine maps

Marine habitat maps provide fundamental information for the sustainable management of offshore resources. The ability to visualise a virtual seabed has led to an increased interest in the use of habitat maps for nature conservation, economic development and resolving conflicts of multiple impacts on the seafloor. Cefas can provide high-resolution habitat maps in a cost-effective manner using acoustic technology.



## Acoustic technology

Recent developments in acoustic technologies, in combination with traditional survey techniques, offer insights and opportunities to explore and map the seafloor at high-resolution. Acoustic techniques provide a means to conduct wide scale reconnaissance surveys required for regional spatial planning and environmental management.



## Expertise and facilities

Our research vessel, Cefas Endeavour, has excellent acoustic capabilities (sidescan and multibeam sonar), and a wide range of ground truthing techniques: optical methods (drop down video camera, video sledge and sediment profile camera); quantitative methods (Hamon, Shipek and Day grabs); qualitative methods (beam trawls).

Cefas has a multi-disciplinary research team of scientists experienced in the analysis and interpretation of multiple data layers within GIS (Geographical Information Systems), enabling the geo-spatial data to be presented as maps. These maps can be interrogated for multiple uses to provide information on seabed status. As leaders in habitat mapping we have been developing our capability over many years through a number of key programmes involving a wide range of partners:

- Mapping of gravel biotopes and an examination of the factors controlling the distribution, type and diversity of their biological communities.
- The delivery of the first regional-scale, high-resolution benthic habitat maps in the U.K.
- Best methods for identifying, mapping and evaluating nature conservation habitats.
- Mapping European Seabed Habitats (MESH).
- The role of seabed mapping techniques in environmental monitoring and management.

- 1 Multibeam imagery
- 2 Cefas Research Vessel Endeavour
- 3 Sidescan sonar image

## Guidelines

Cefas has been actively involved in critically evaluating an array of 'state-of-the-art' seabed mapping techniques. Our involvement in a wide range of mapping projects has allowed us to produce guidelines to advise on the cost-effectiveness and application of tools for environmental management, monitoring and advisory work.

## Contact us

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## About us

Cefas is a multidisciplinary scientific research and consultancy centre providing a comprehensive range of services in fisheries management, environmental monitoring and assessment, and aquaculture to a large number of clients worldwide. We have more than 500 staff based in 3 laboratories, our own ocean going research vessel, and over 100 years of fisheries experience. We have a long and successful track record in delivering high quality services to clients in a confidential and impartial manner. ([www.cefas.co.uk](http://www.cefas.co.uk))

Cefas Technology Limited (CTL) is a wholly owned subsidiary of Cefas specialising in the application of Cefas technology to specific customer needs in a cost effective and focussed manner. CTL systems are developed by teams that are experienced in fisheries and environmental management and of working closely with clients to ensure that their needs are fully met. ([www.cefastechnology.co.uk](http://www.cefastechnology.co.uk))

## Customer focus

With our unique facilities and breadth of expertise in environmental and fisheries management, we can rapidly put together a multi-disciplinary team of experienced specialists, fully supported by our comprehensive in-house resources.

Our existing customers are drawn from a broad spectrum with wide ranging interests. Clients include:

- international and UK government departments
- the European Commission
- the World Bank
- United Nations Food and Agriculture Organisation (UNFAO)
- oil, water, chemical, pharmaceutical, agro-chemical, aggregate and marine industries
- non-governmental and environmental organisations
- regulators and enforcement agencies
- local authorities and other public bodies

We also work successfully in partnership with other organisations, operate in international consortia and have several joint ventures commercialising our intellectual property.

4 Brittlestar beds in the eastern English Channel

5 *Crossaster paposus*

6 *Echinus esculentus*