Working with us

National Oceanography Centre

WORLD CLASS MARINE SCIENCE AND TECHNOLOGY FOR YOUR BUSINESS

National Oceanography Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL

NERC SCIENCE OF THE ENVIRONMENT

The National Oceanography Centre (NOC) is the UK's leading institute for integrated ocean research and technology development from the coast to the deep ocean. Working with our partners we provide large scale, long-term, marine science capability including: major facilities, sustained ocean observing and modelling, mapping and survey, data management, and scientific advice.

We are working in collaboration with the hydrocarbon, minerals and marine renewable energy industries to promote and enable the sustainable use of natural resources from the sea.

Our science is increasing the understanding of marine-related risks and hazards, reducing the risks of deep ocean drilling and providing data into the insurance industry. This work also underpins seasonal and climate forecasts of the UK Met Office.

Our persistent presence in the oceans, alongside our world-class data modelling capabilities, provide monitoring of, and predicting variability and changes in, the natural environment.

All of this work is underpinned by our commitment to developing and working with advanced technologies for conducting ocean measurement and science.

Hydrocarbons

The NOC is working in collaboration with the hydrocarbon industry to:

- promote and enable sustainable use of natural resources from the sea

- increase the understanding of marine related hazards and risks

- provide monitoring of, and predicting variability and changes in, the natural environment

- develop and work with advanced technologies for conducting ocean measurement and science.


Marine Renewables

The NOC's science underpins environmental impact assessments for marine renewable energy installations and their energy resource assessment.

The NOC:

- is developing models used to map the UK tidal energy resource and tidal studies to assess the feasibility of a tidal barrage across the Mersey Estuary

- created innovative marine radar and satellite altimetry applications for wave energy resource assessment, used to investigate impacts of interactions between offshore wind farms and waves

- is developing and working with advanced technologies for conducting ocean measurement and science.

To discuss how the NOC can work with you please email nocbusiness@noc.ac.uk
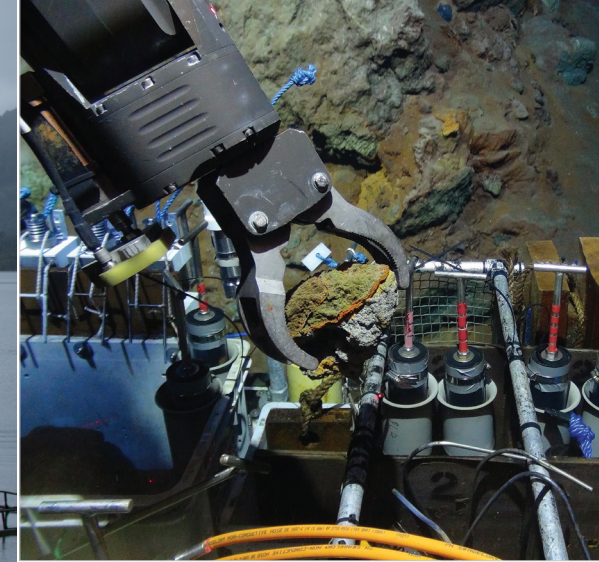
Aquaculture

The NOC can work with the aquaculture industry to:

- remotely sense harmful algal blooms

- utilise marine autonomous systems and moored sensors to verify remotely sensed harmful algal bloom alerts

- offer advanced expertise in molecular biology, plankton ecology, ecotoxicology, modelling and benthic system functioning to address challenges of sustainable aquaculture.

Defence

The NOC is working in collaboration with the defence industry to:

- develop new technologies to enable greater autonomy and remote sensing

- educate users on capabilities and utilisation of marine autonomous systems

- understand how to gain operational advantages through greater understanding of the marine and coastal environment.

Deep Sea Mining

The NOC is working in collaboration with the deep sea mining industry to:

- promote and enable sustainable use of natural resources from the sea

- understand the mineral deposit formation process

- develop new exploration techniques and strategies to identify and characterise ocean resources

- provide deep water environmental impact assessment and monitoring strategies

- interface between legal and technical aspects of marine policy making and implementation.

Shipping

The NOC is working in collaboration with the shipping industry to:

- collect critical scientific data to better understand, for example, the carbon dioxide exchange at the ocean – atmosphere interface

- inform policy and guidance at international, national and industry levels relating to:

  o global ocean circulation

  o predicted climate change

  o oil spill modelling

o ship navigation

o ice melting

o the Arctic and Antartica

o enhance ship energy efficiency through the development of navigational tools incorporating our coastal and global ocean circulation models

o develop automated sensors for ballast water monitoring.

Supporting your R&D

The National Oceanography Centre engages with both individual, and groups of, organisations for collaborative research and development, leveraging supporting grant funding wherever possible from a variety of sources.

Organisations can:

- work in collaboration with the NOC on funded collaborative research projects

- access leading scientific and technical knowledge

- gain access to the NOC's world-class people and facilities to support collaborative and commissioned research.

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NOC Facilities

Liverpool Institute for Sustainable Coasts and Oceans (LISCO)

A strategic partnership between the NOC, the University of Liverpool, and Liverpool John Moores University. LISCO uses innovative marine science and technology to develop systems and strategies to protect assets along the UK coastline and mitigate risk from storm-surge and climate change.

British Ocean Sediment Core Research Facility (BOSCORF)

BOSCORF provides specialist non-destructive logging facilities, measuring physical property and high-resolution geo-chemical data from cores. The repository is a national resource offering access to the most comprehensive suite of scanning, logging, data management and visualisation facilities in the UK.

British Oceanographic Data Centre (BODC)

BODC is a national facility for looking after and distributing data concerning the marine environment. BODC maintains an extensive database of biological, chemical, physical and geophysical data, containing measurements in excess of 25,000 variables. BODC manages marine data collections and, through the development of information technology, ensures that data are documented, stored and accessible to both public organisations and commercial companies.

Marine Robotics Innovation Centre

The Centre provides additional resource and capability for working collaboratively with innovative companies which are developing technology for marine autonomous systems. The Centre also provides information about regulation and legislation, risk and reliability, communication, and control relating to marine autonomous systems.

Rock Physics Laboratory

The Laboratory measures seismic and electrical properties on rock or sediment samples, saturated with different pore fluids, under simulated *in-situ* conditions of pressure and temperature. Measuring capabilities include seismic velocities, attenuations and electrical resistivities, which can then be related to other rock and sediment properties such as mineralogy, porosity, permeability, oil-gas-water saturation and hydrate content.

Marine Data Products

Powerful user-friendly marine information products and a comprehensive service to help clients understand, interpret and apply marine information.