



The NOC Association

The Blue Planet is under pressure – seven billion humans depend on the ocean for a life-sustaining climate, a source of energy, food, medicine, transport for global trade, even the air we breathe. Crucial to national competitiveness in an emerging global green economy, the ocean secures sustainable economic growth and enhances society's well-being.



Addressing the Grand Challenges

Green growth in a blue world – developing integrated information products and services to enhance quality of life, prosperity and jobs.

Enhancing food security – informing sustainable fishing practices and the development of aquaculture to underpin global food security.

Harnessing energy from the marine environment – developing sustainable, economical and reliable means of obtaining energy from the ocean.

Understanding natural hazards – mitigating risks and increasing the resilience of infrastructure and society to marine hazards such as storm surges and tsunamis.

Sustaining natural resources – improving understanding of biodiversity and informing the development of policy that helps protect vulnerable marine resources.

Managing impacts of climate change – improving models to forecast future oceanic circulation and sea level and better predict future climate scenarios to inform policy decisions and protocols.

How?

Advancing knowledge and sharing data – enabling society to be a better custodian.

Enabling cost effective observation and monitoring – developing and operationalizing new technologies to advance the exploration of the oceans and improve the efficiency of long term observation programmes.

Communicating impacts and discovery – enhancing understanding of the importance and excitement of the oceans to maintain engagement with and support from society.

The National Oceanography Centre (NOC) Association is a network of NERC-funded universities and research institutions that support wider engagement with the marine science community in an open and impartial way. Working with international colleagues, the NOC Association is delivering world-class research and technology – developing new forecasting tools to inform public policy and business, improving management of anthropogenic environmental impacts, better quantifying the risks of environmental change, developing technologies with industry to enhance ocean observation and monitoring, and communicating discoveries to an enthusiastic public. By working together, the UK marine science community is addressing the grand challenges facing society.

For further information:

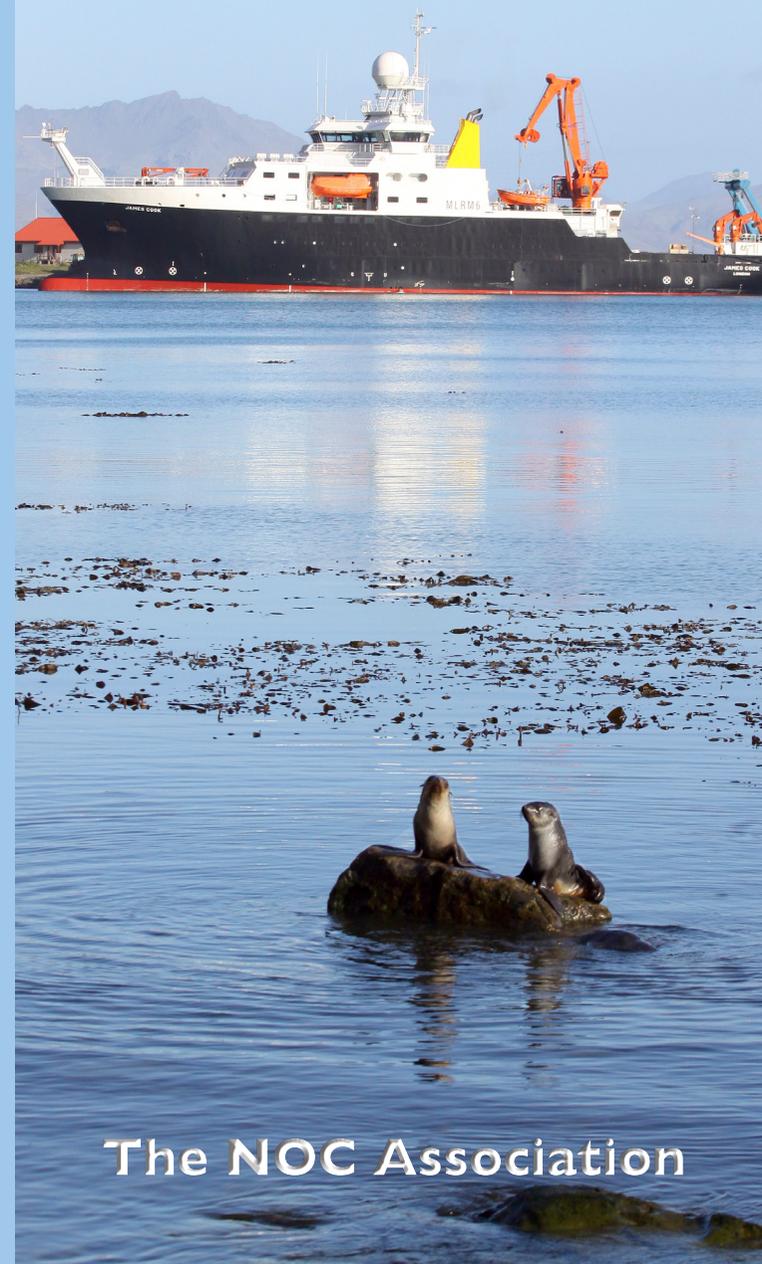
<http://noc.ac.uk/noc-association>

Members: NOC, PML, SAMS, SMRU, BAS, BGS, Universities of Aberdeen, Bangor, Cambridge, Cardiff, Dundee, Durham, East Anglia, Edinburgh, Essex, Glasgow, Heriot-Watt, Hull, Imperial College (Grantham Institute), Leeds, Leicester, Liverpool, Newcastle, Nottingham, Oxford, Plymouth, Portsmouth, Queen's University Belfast, Reading, Sheffield, Southampton, St Andrews, Stirling, Strathclyde, Swansea, University College London, University Marine Biological Station Millport, MBA, NCEO, SAHFOS, MASTS

*Images: Leighton Rolley; NERC; Autosub Team; Phil Williamson
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Addressing the Grand Challenges

The Marine Environment in the 21st Century



The NOC Association

How the UK marine community is addressing the Grand Challenges

Resources



Pelamis Wave Power

Harnessing energy

Hazards



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Forecasting threats

Environmental change



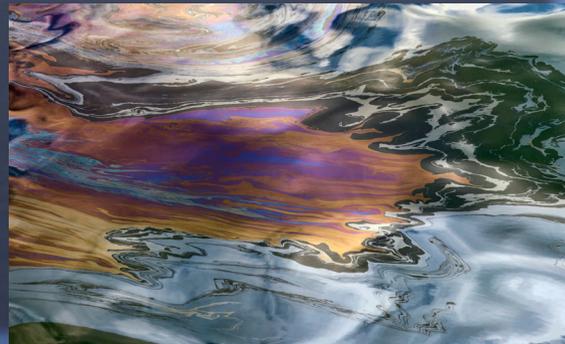
Ken Collins

Predicting impacts



Morain Taylor

Enhancing food security



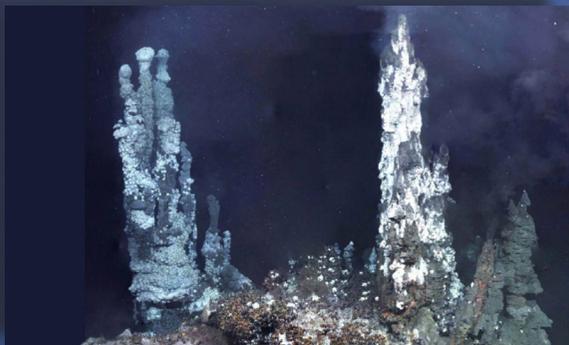
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Responding to emergencies



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Sustaining natural resources



UK CHESo Consortium

Ensuring responsible use



Steve Hall

Protecting infrastructure



Sven Thorge

Monitoring ecosystem change