

Challenger Wave

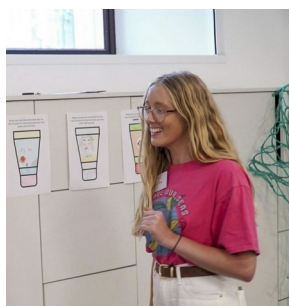


Monthly newsletter of the Challenger Society for Marine Science (CSMS)

NEWS

PhD researcher Anneliese Hodge begins parliamentary fellowship

Anneliese Hodge, PhD researcher at the Plymouth Marine Laboratory (PML) and the University of Plymouth, has started a three month fellowship with the Parliamentary Office for Science and Technology (POST, UK Parliament). POST plays a crucial role in bringing the latest research evidence into parliament, and ensures that legislators and policymakers can access good, reliable information. POST publishes impartial, peer-reviewed briefings on complex issues and maintains a UK-wide network of academics and experts to support legislative scrutiny and policy development in parliament.



Anneliese Hodge, who is in the 2nd year of her PhD that aims to provide a food-chain analysis of UV filters derived from sunscreens, started at POST to research and produce a POSTNote on 'Barriers to Digital Transformation in Government'. POSTNotes are impartial and peer-reviewed briefings, which bring cutting-edge scientific research to Parliament. They cover areas such as biology, health, energy, environment, physical and social sciences.

Anneliese said: "It is such an honour to be selected for a POST Fellowship. I look forward to the challenge of delving into the topic of digital transformation; the subject is most certainly outside my main research area, but it will be a highly valuable experience to apply my research expertise to new subject matter and produce a briefing aimed at parliamentarians and policymakers. I am also keen to learn about the

processes and dynamics of Parliament first hand."

PML scientist announced as new Chair of intergovernmental working group

Dr Sevrine Sailley, Ecosystem Modeller at Plymouth Marine Laboratory (PML), has been appointed Chair for the [International Council for the Exploration of the Sea \(ICES\)](#) Working Group on Integrative, Physical-biological and Ecosystem Modelling (WGIPEM).



The International Council for the Exploration of the Sea (ICES) is the world's oldest intergovernmental science organization, providing impartial evidence on the state and sustainable use of our seas and oceans. ICES represents a network of nearly 6000 scientists from over 700 marine institutes in 20 member countries and beyond.

Sevrine joined PML in 2013, following her Post-doctoral studies at Woods Hole Oceanographic Institute (USA) and her PhD hosted by Alfred Wegener Institute (Germany) and the University of East Anglia (UK), which focused on microzooplankton grazing and growth rate, and their representation in global ecosystem models. Since joining PML, Sevrine's work has continued to focus on the representation of zooplankton in

ecosystem models, as well as estimating future fish biomass under a changing climate, marine food web dynamics and polar science.

The ICES appointment is for 3 years and Sevrine will join the three existing Working Group Chairs tasked with coordinating the 100+ members of WGIPEM. This was set up to advance coupled physical-biological and ecosystem modelling. The Working Group carries out its modelling work by sharing and discussing simulation results, identifying gaps in knowledge in these modelling activities, and recommending and performing activities to improve model performance. An important part of the work is the continued development of end-to-end ecosystem models that incorporate ecological, economic, and social science. The group forms an important link between the biophysical modelling community, that produces estimates of ecosystem components, and the managers charged with giving advice on the status of those systems and their resources.

Dr Saille commented on the appointment: "I'm thrilled to take on this position and carry on the work that goes on in the WGIPEM. This group is focusing on ongoing and new development and uses of ecosystem models, with great members. The group meeting is always a nice event, and I hope to do justice to what the past chairs have achieved."

FMRI funding to boost marine robotics research capabilities

The UK's National Oceanography Centre (NOC) has been awarded £4 million to bring next-generation sensing capabilities to its marine autonomous systems fleet for use in advancing sustainable ocean science. The funding, from the Natural Environment Research Council's (NERC's) Future Marine Research Infrastructure (FMRI) programme, will support three projects by leading scientists and engineers at NOC to develop advanced sensors targeting 10 different biogeochemical essential ocean variables, from physics to nutrients and carbon. These will then be integrated on to autonomous underwater vehicles such as gliders and NOC's Autosub Long Range (ALR).

These advances will then be made available to the UK marine science community through the UK's National Marine Equipment Pool, the largest centralised marine scientific equipment

pool in Europe, as part of the National Marine Facilities, managed by NOC.

"This investment underscores NOC's position as a global leader in marine technology capability and innovation, accelerating the development and uptake of sensors with the capacity to transform marine science through the deep expertise in our Ocean Technology & Engineering group," says Julie Robidart, who leads the group. "By translating our innovation into science-ready autonomous capabilities, we're supporting FMRI's vision for a modern, versatile and sustainable marine research infrastructure."

"By accelerating the adoption of sensor innovation, this investment will help to position the UK at the cutting-edge of marine research capabilities," says Kristian Thaller, FMRI Programme Director. "It will ensure that UK marine science can meet society's urgent need to observe, understand and predict changes in the ocean." The funding from NERC's FMRI programme supports its Accelerating Adoption of Sensor Innovation (AASI) initiative, which aims to show how innovation in marine sensor technology can be translated into deployable autonomous research capabilities.

The funding will support three cutting-edge sensor development projects, the integration of these sensors into autonomous platforms, enhancing data management systems and targeting comprehensive validation trials by summer 2026. The three sensor projects are:

- Autonomous Sensors for fast In-situ Measurements of nutrient Ocean Variables (ASIMOV), led by Dr Allison Schaap, will increase performance, speed, and reliability of nitrate and phosphate lab-on-chip sensors for use on Teledyne Slocum gliders.
- Marine Sensors for Carbon Observations (MaSCOt), led by Dr Socratis Loucaides, is a project to advance and optimise for use on gliders high-accuracy and precision lab-on-chip sensors for the marine carbonate system.
- SixSense, led by Dr Andrew Morris, and as previously announced, will create a miniature multi-parameter sensor capable of measuring six key parameters covering biogeochemical, physical and environmental measurements (conductivity,

temperature, dissolved oxygen, pressure, pH and Eh), to be integrated onto ALRs, gliders and other platforms, such as submersibles and profiling floats.



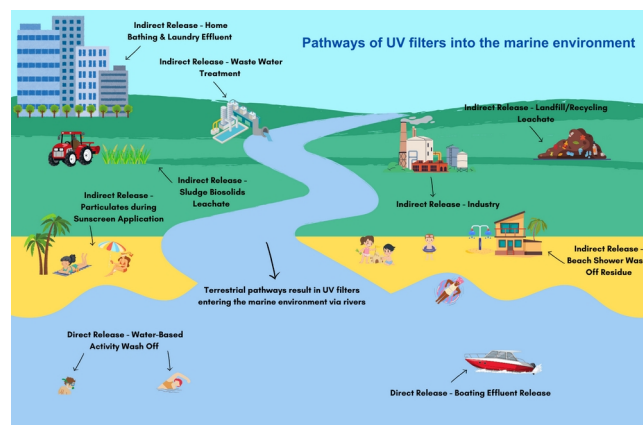
Sensor development at NOC. Credit NOC.

The FMRI programme mission is to revolutionise marine research infrastructure to deliver cutting-edge marine research capabilities so that science can serve society's need to observe, understand and predict change in the ocean.

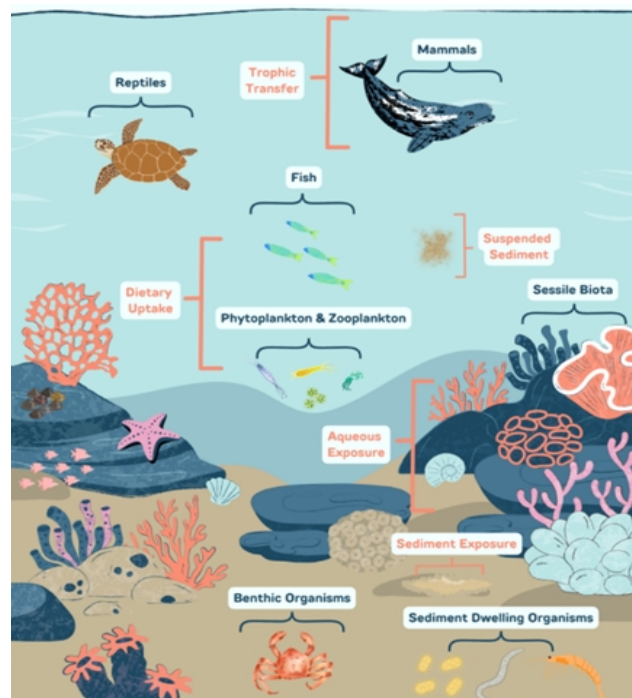
Sunscreen's potential impact on marine life needs urgent investigation, new study reveals

A new [research literature review](#) has highlighted the significant gaps in understanding of how sunscreens might affect marine ecosystems. With the prospect of sunnier weather ahead, it is a prime time to highlight this escalating environmental issue especially as consumers look to purchase sunscreens for the months ahead. The UV filters in sunscreen can enter the marine environment directly through swimming or other water-based recreational activities but also by washing towels that have been used to dry sunscreen-coated skin, washing off residue during showering and even in urine. At least 25% of sunscreen products wash off during sea

bathing and a single beach with 1,000 visitors can be subject to more than 35kg of sunscreen deposits per day.



Lead author [Anneliese Hodge](#), PhD researcher at Plymouth Marine Laboratory and the University of Plymouth said: "This review indicates that current research has only scratched the surface of understanding how these chemicals can affect marine life. What's particularly concerning is that these compounds are considered 'pseudo-persistent pollutants' due to their continuous introduction into marine environments as well as an overall lack of understanding of how these chemicals then interact with others in the sea."



Summary of the basic exposure pathways (orange labels) of UV filters to different groups of marine organisms (dark blue labels)

“That’s why it’s so important for us to be researching the effects of these compounds on marine life from all geographical regions temperate and tropical, including the work we are conducting here at PML and the University of Plymouth on UK marine organisms. We really need to understand how these chemicals interact in the marine environment and if they have the potential to bioaccumulate within the food-chain. With coastal urbanisation and tourism expected to increase, understanding the full impact of these compounds on marine life is crucial for developing effective environmental protection strategies”.



And it’s not just sunscreens that contain the protective ingredients that filter out the sun’s UV rays. UV filters are also added to personal care products (e.g. shampoos, moisturisers, lipsticks, shower gels) and various other commercial products including plastics, rubber, paint and cement, to enhance light resistance and prevent photodegradation.

Co-author [Dr Frances Hopkins](#), PhD supervisor and Marine Biogeochemist at Plymouth Marine Laboratory, said: “This review highlights the mindboggling range of sunscreen-derived chemicals that we know are released into coastal



marine environments, and demonstrates that our understanding of the effects of these toxic compounds on marine organisms is surprisingly limited. Such environments face a range of human-induced stressors,

from marine heatwaves and eutrophication to longer term ocean warming and acidification, so it is vital we understand the additional impact of this pervasive chemical pollution on these already stressed ecosystems”.

Scientists to examine Greenland and North Atlantic tipping points

Researchers and research groups from across the UK have been selected for funding from The [Advanced Research + Invention Agency](#) (ARIA) to help improve our understanding of climate tipping points. These tipping points are critical thresholds in the climate system that, if crossed,

could lead to drastic and irreversible changes, such as widespread flooding, biodiversity loss, and threats to food security in the Arctic and North Atlantic. The funding is part of [ARIA’s Forecasting Tipping Points programme](#), which aims to develop an early warning system for these climate shifts. This five-year initiative, backed by £81 million, brings together 27 international research teams to detect early warning signs of tipping points.

Climate tipping points have the potential to impact billions of people worldwide. If, for example, the Greenland Ice Sheet reaches a tipping point and collapses, it could significantly alter ocean currents and increase sea levels, leading to more frequent and severe flooding events. Currently, even our most advanced climate models struggle to predict exactly when such tipping points will occur or what their full consequences will be.

To address this challenge, the programme will focus on three key areas:

- Developing sensing systems to monitor the ocean and frozen regions (cryosphere).
- Deploying these systems in critical locations, including the Greenland Ice Sheet and North Atlantic.
- Improving computational models to better predict tipping points and their consequences.



SAMS researchers will use marine robotics to help assess ice melt and ocean currents in Greenland. Photo: Lewis Drysdale/SAMS

Among the funded projects, a major initiative called GRAIL (GREENland ice sheet to Atlantic tipping points from Ice-sheet Loss), which involves SAMS (Scottish Association for Marine

Science) researchers and is led by the British Antarctic Survey (BAS). It aims to understand how the melting of Greenland's glaciers releases freshwater to the North Atlantic, affecting ocean circulation and the global climate. Researchers will use advanced sensors and AI-driven models and robotics to track ice melting and iceberg production, providing never-before seen data for early warning systems.

GRAIL project scientist Dr Alison Cook of SAMS said: "Greenland is of particular interest to environmental science as it is losing ice mass faster than anywhere else on the planet. In order

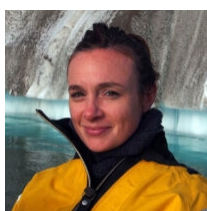


to anticipate how this will affect our climate, we need to have better forecasts of ice melt and a clearer understanding of the wider impacts. SAMS has a multi-faceted contribution to the project through autonomous

underwater vehicles and drones, as well as specialisms in oceanographic modelling and photogrammetry. We will use state-of-the-art technology, underpinned by the knowledge and experience gained from our long history of Arctic observations, to investigate these crucial ice-ocean interactions."

Dr Kelly Hogan, a marine geophysicist at BAS and R+D Creator on the GRAIL project, explained the importance of this work: Greenland is the fastest melting place on Earth, but this ice loss has knock-on effects for both North Atlantic ocean currents and fisheries.

This crucial research will help us to understand how much freshwater the ice sheet is releasing, and what the subsequent effects will be on the ocean currents that bring warm waters and weather to the UK. This is now urgent work for us to do so policymakers can understand what will happen in the North Atlantic and set out appropriate adaptation and mitigation plans. Some computer models predict that large changes in the Atlantic Ocean could happen as soon as the 2040s so this is a key moment for us to investigate this Greenland Ice Sheet tipping point."



Scientists at the UK's National Oceanography Centre (NOC) are to lead critical research into forecasting another major climate tipping point,

the potential collapse of the Atlantic Subpolar Gyre. Through more than £11 million in funding, from ARIA, NOC will lead the development of novel and innovative new ways to detect early warning signs of a change in the Atlantic Subpolar Gyre.

Sitting just south of Greenland and Iceland, the Atlantic Subpolar Gyre is a key component of the global ocean's circulation system, transporting heat around the planet, helping to regulate temperatures in Europe and North America. Its collapse could have a major global impact on our weather, food and security, but existing climate models and ocean observations are too limited to accurately forecast a tipping point which could signal its collapse. The funding covers eight projects in total, three of which are being led by NOC's research scientists and are worth more than £7 million.

One is an ambitious project exploring the use of novel earth observation platforms, such as airships or high-altitude pseudo-satellites, while a second will unlock the potential of existing international undersea communications cables to become a vast sensor network, starting in the North Atlantic. The third project will use artificial intelligence (AI) and models to push the limits of existing ocean observations and to transform our ability to detect the early warning signs of Subpolar Gyre collapse, including identifying gaps and uncertainty in data.

NOC is supporting a further five Subpolar Gyre focused projects, led by other organisations and institutes, with more than £4 million funding. NOC Chief Scientist Professor Penny Holliday says, "This transformative funding from ARIA comes at a critical moment for ocean and climate science, helping to fulfil an urgent need to address gaps in our understanding of Subpolar North Atlantic tipping points. NOC will be at the forefront of this ambitious programme developing pioneering innovative approaches, from AI-driven modelling to revolutionary ocean observation technologies, to bridge those knowledge gaps. By harnessing our world-leading science and pioneering technology, we will lead and collaborate on multiple projects to enhance our ability to detect early warning signs and better understand the future of our changing ocean."

The NOC-led projects, which, like all the projects, are subject to final contract negotiation, are Full

Ocean Fibre, Aerial Experimental Remote sensing of Ocean Salinity, heat, Advection and Thermohaline Shifts (AEROSTATS) and Subpolar gyre Observations, models and artificial intelligence to Resolve Tipping points and provide Early warning Detection (SORTED).

Full Ocean Fibre, with partner National Physical Laboratory, will target the use of undersea cables used for telecommunications and forming the backbone of the internet to seafloor sensors across thousands of kilometres. “Full Ocean Fibre will develop the acoustic and fingerprinting techniques needed to identify ocean processes and provide an unprecedented view of the deep North Atlantic from existing cables,” says project lead Dr Carl Spingys. “This project sets the scene for a next-generation ocean and climate observing network enabled by the global network of subsea cables.”

AEROSTATS is an ambitious airborne earth observation project focused on observing fine-scale interactions between air, ocean and ice in the Greenland sea ice margins. This will include exploring the use of airborne platforms such as airships or high-altitude pseudo-satellites to create cost-effective, long-term monitoring capabilities, with partners NOVELTIS, Radarmetrics and Pixalytics. “This is a truly bold airborne earth observation project,” says project lead Professor Christine Gommenginger. “Our vision is cost-effective, long-term monitoring capabilities that support early warning of a potential Subpolar Gyre shutdown. With partners across diverse sectors, we’re a cross-disciplinary group bridging technology, climate science and a commitment to tackling climate challenges through innovation.”

SORTED will transform the ability to detect and monitor the early warning signs of Subpolar Gyre collapse by pushing the spatiotemporal capabilities of existing observational records using a novel combination of AI and tipping point knowledge from models. It will also identify critical gaps and uncertainties in ocean datasets and make recommendations on the observations still needed to build robust early warning systems for a potential Subpolar Gyre collapse, with partners University of Southampton and University of Bordeaux. “Circulation in the Atlantic Subpolar Gyre is thought to be moving towards a collapse but, climate models and ocean observations are too limited to accurately

forecast these tipping points,” says Dr Alejandra Sanchez-Franks. “We will be using a novel combination of AI and tipping point knowledge from models to push the spatiotemporal limitations of existing observational records and to underpin the robust early warning systems needed for a potential Subpolar Gyre collapse.”



Left to right, NOC-led ARIA project leads Professor Christine Gommenginger, Dr Alejandra Sanchez-Franks and Dr Carl Spingys

Scientists from NOC are also involved in the five further projects, also focusing on the Atlantic Subpolar Gyre. These are POLEMIX, led by the University of Southampton, TIMBER, led by the University of East Anglia, PROMOTE, led by the University of Reading, VERIFY, led by the University of Leeds and GRAIL, discussed earlier, led by British Antarctic Survey. These projects cover a wide range of innovation and collaboration, from a new proof-of-concept observing system using autonomous profiling floats to predicting tipping points in marine ecosystems and their consequences and opportunities for the UK, especially for the fishing industry. They will also involve improving earth system models, creating digital twins to test early warning systems and using robotics to gather data in Antarctic regions.

PML's Prof. Nicola Beaumont appointed to government advisory council

Plymouth Marine Laboratory's Professor Nicola Beaumont, has been appointed to the Science Advisory Council for the Department for Environment, Food And Rural Affairs (Defra). Defra are responsible for improving and protecting the environment, aiming to grow a green economy and sustain thriving rural communities. They also support the UK's food, farming and fishing industries. Defra's Science Advisory Council (SAC) is an advisory non-

departmental public body, providing expert independent advice on science policy and strategy to Defra.

Prof. Beaumont, who is Head of Science for Sea and Society at PML, and the SAC's latest member, with the appointment commencing 10th February 2025, said: "It is a deep honour to be invited to join Defra's Science Advisory Council, alongside the existing membership of such eminent scientists. I thoroughly enjoyed my time



on the advisory committee for Defra's Marine Natural Capital and Ecosystem Assessment programme and hope the experience and lessons gained there will start me off with a good footing in the SAC. I look forward to contributing to the evaluation of evidence used

by Defra to help support the UK's natural environment, as well as the businesses and people who rely on it."

Forthcoming CSMS History SIG talk; From Swallow Floats to Argo

The next talk of the Challenger Society Special Interest Group on the History of Oceanography will be at 5pm UK time on Wednesday 19th March. It will be given by John Gould of the National Oceanography Centre and will be called "From Swallow Floats to Argo, 50 years of Technology Development". Each month the Argo programme delivers approximately 12,000 temperature/salinity profiles from the ice-free global ocean and the programme's data are freely available online. How did this amazing project come about? It's a long story that John Gould will describe in this talk.

You can join the talk by using the link below (the link might be different for each talk in this series so watch out for email updates) and feel free to send this message to colleagues:

<https://noc-ac-uk.zoom.us/j/88920939442?pwd=34imZL1lsn1zX1unOIYxb2cCw2bLDo.1>

Townhall on the UK Arctic Ocean contribution to the International Polar Year 32/33

Save the date, 12:00 11th June – 16:00 12th June 2025, NOC Southampton. The Arctic is one of the most rapidly-changing regions on our planet, with impacts on global sea-level rise,

changes to our climate and weather patterns, and threats to our shared biodiversity and ecosystem services. With the international community rapidly mobilising towards the International Polar Year 32/33, and with new international programmes and initiatives now being shaped, it is timely for the UK Ocean Science community to come together and articulate what its unique offerings could be to Arctic research and technology.

This hybrid 2-day meeting, to be held at the National Oceanography Centre (NOC) Southampton, is intended to start this process. Recognising the Arctic Ocean role in global Earth and Human systems, anticipated outcomes include a high-level shaping of what the UK Arctic Ocean community would like to achieve over the course of the IPY, stimulation of new collaborations and proposals for grand Arctic challenges and a baseline from which wider integration with terrestrial, atmospheric and cryosphere communities, both in the UK and overseas, can be built. Discussions will continue in diverse forums, including the UK Arctic Science Meeting in September and at Challenger 2026.

This action is supported by the UK Arctic Office and UK Arctic and Antarctic Partnership. Further details and meeting registration link will be circulated in April together with a questionnaire to help shape the agenda and discussion. In the meantime, please save the date.

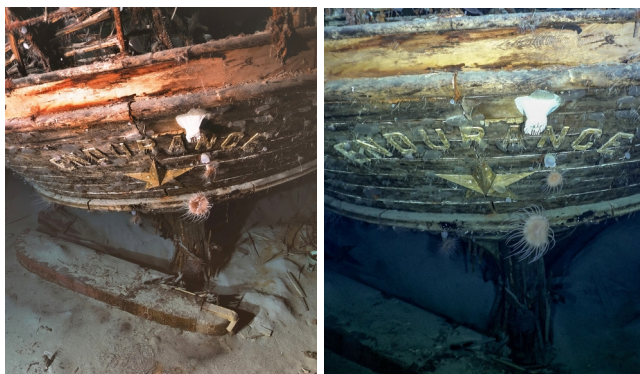
IEWS

Unveiling a New Perspective: Exclusive True-Colour Image of Endurance Shipwreck Released

The Falklands Maritime Heritage Trust and Voyis Imaging proudly present an exclusive new image of the historic Endurance shipwreck. Captured using the cutting-edge Voyis Observer Imaging System, this latest image provides an unparalleled view of the vessel and the seabed, revealing intricate details with clarity never seen before.

Building on a previously released image of Endurance, this new capture showcases the ship's preserved structure with remarkable precision, made possible through Voyis' True

Colour technology. Unlike traditional underwater imaging, which can suffer from colour distortion and reduced visibility, the Voyis Observer Imaging System accurately restores the shipwreck's natural hues and textures, offering a more authentic representation of how Endurance appears in its final resting place beneath the Weddell Sea.



Since red wavelengths are absorbed more rapidly by water, the perceived colour of underwater objects is significantly altered. Standard cameras do not compensate for this underwater colour shift, as their colour formation models neglect the strong wavelength dependency of light in a submerged environment. As a result, shipwrecks and subsea assets often appear with unnatural blue or green tints. Voyis' True Colour technology addresses this challenge by leveraging machine learning to efficiently train a Colour Correction Model for the current survey location. This survey-grade imaging solution corrects the distortions caused by underwater light absorption, producing images that represent colours as they would be perceived in air. This advancement allows explorers to visualize the true colour of subsea assets, uncovering fine details that standard cameras fail to capture.

"This new image is a testament to the evolution of underwater exploration technology," said Elena Lewendon, COO at the Falklands Maritime Heritage Trust. "The level of detail we can now see allows us to deepen our understanding of Endurance's condition and better appreciate the remarkable state of preservation of this legendary vessel."

Voyis' Observer Imaging System was designed to overcome the challenges of deep-sea imaging by delivering high-resolution optical data with true colour fidelity. By eliminating artificial lighting

inconsistencies and improving image sharpness, this system sets a new benchmark for underwater archaeology and heritage preservation.

"Voyis is honoured to have contributed to the exploration of Endurance," said Luke Richardson, VP Sales & Marketing at Voyis. "Our Observer Pro Imaging System, with true colour correction, allows us to see the wreck as it truly is, preserving its legacy with the highest level of accuracy possible." This latest image serves as a powerful reminder of Endurance's enduring story, a tale of resilience, exploration, and the boundless capabilities of modern technology in uncovering the past.

The UK's National Oceanography Centre (NOC) is pleased to announce the appointment of three new trustees.

Dr Hosein Khajeh-Hosseiny, John Clarke and Professor Lisa Collins will bring a wealth of diverse expertise in research, technology, innovation, and governance, enhancing strategic decision-making and digital transformation capabilities to support NOC's mission of making sense of our changing ocean. The three new trustees are joining NOC's board between January and May this year, as the tenures of existing trustees Dan Hook, Dr Ruth Boumphrey and Dr Sarah McMath come to an end.

Sir Jeremy Darroch, Chairman of Trustees, expressed his enthusiasm: "We are delighted to welcome Hosein, John and Lisa to our board of trustees. Their diverse backgrounds and expertise will be a great contribution to NOC's ambitious plans in ocean science and innovation. We also thank the contributions of our three outgoing trustees, Dan, Ruth and Sarah, who have provided an invaluable contribution to the board during their tenures. We thank them for their efforts in guiding NOC's strategic direction and ensuring its continued success in marine science leadership."

Dr. John Siddorn, Chief Executive of NOC, added: "The addition of these exceptional individuals to our board strengthens our capabilities as a charitable organisation to address critical challenges in ocean research and to deliver impactful solutions for a sustainable future."

Hosein became a NOC trustee and Chair of NOC Innovations in January. John Clarke will become

SALTS

The Ocean Census GoSouth: Searching for New Species in the South Sandwich Islands

GoSouth is a 33-day research mission (20th February - 26th March 2025) that brings together Schmidt Ocean Institute (SOI), The Nippon Foundation-Nekton Ocean Census, GoSouth (University of Plymouth, British Antarctic Survey, and GEOMAR), and the Government of South Georgia and the South Sandwich Islands (GSGSSI).

The expedition, led by Dr Michelle Taylor (University of Essex), President of the Deep-Sea Biology Society and Senior Lecturer at the University of Essex, aims to map deep-sea habitats and document new species from this rarely visited region of the Southern Ocean. Concurrently, Dr Jenny Gales leads the GoSouth initiative, a collaboration between the University of Plymouth, GEOMAR, and the British Antarctic Survey. This team will survey volcanic flanks to assess the influence of volcanic and earthquake activity on marine ecosystems. Their research will also investigate submarine geohazards, including landslides, tsunamis, and underwater eruptions.



Situated between South America's Cape Horn and the Antarctic Peninsula lies the Scotia Tectonic Plate, a region shaped by powerful tectonic forces. These forces have created an array of geological features, including hadal zone trenches, underwater volcanoes, and spreading centres. To the far east of this dynamic seascape are the South Georgia and South Sandwich Islands, two of the most remote island chains on

a NOC trustee and Deputy Chair of NOC Innovations at the end of April. Professor Lisa Collins will become a trustee of NOC in May.



Left to right: John Clarke, Professor Lisa Collins and Hosein Khaljeh-Hosseiny

Hosein is the founder and chairman of Trinity Natural Capital Group. He currently also holds several trustee positions including at the Royal Agricultural Society of England and the Royal Society of for the Encouragement of Arts, Manufactures and Commerce. He brings expertise in U.S. and European venture capital and private equity investing, technology innovation, and social entrepreneurship, while his experience at McKinsey & Company advising global corporations bring strengths in growth, strategic decision-making and governance.

John is an experienced chair, non-executive, and former business technology and innovation executive. His multi-sector career has involved creating new business and operating models to maximise the use of data, disruptive innovation, partnerships and technology. This includes leading an award-winning AI company and introducing new ways of working and cutting-edge technology in well-known companies. He is chair of Companies House and UKSBS, non-executive at Xoserve and Defence Business Services, and a former non-executive director of Ordnance Survey.

Lisa is Pro Vice Chancellor for Research and Innovation at the University of Surrey and is a member of the Defra Science Advisory Council and the Scottish Government's Environment and Forestry Directorate Research Portfolio Scientific Advisory Board. She was previously a Board member for the Sustainable Aquaculture Innovation Centre. She brings extensive leadership experience, expertise in research and innovation, strategic advisory skills, as well as a multidisciplinary approach, public communication skills and involvement in national and international committees.

Earth; “For much of the expedition, the nearest humans to [the GoSouth] team will be aboard the International Space Station, orbiting 400 kilometres above [them]”. The islands’ seamounts, hydrothermal vents, and deep-sea trenches are home to exceptionally high levels of endemism, supporting species found nowhere else on the globe.

The joint mission aims to map subsea areas and document and sample new marine species using the state-of-the-art science-class ROV SuBastian, capable of reaching depths of 4,500 metres. This advanced tool allows the team to collect biological samples and capture high-resolution imagery of deep-sea ecosystems. Follow the mission and the latest news [online](#).

CALENDAR

25th-27th March 2025: The 4th Ocean Visions Biennial Summit.

Vancouver, Canada

We’re thrilled to announce that the 4th [Ocean Visions Biennial Summit 2025](#) will be held in March in Vancouver, Canada. This action-oriented event will bring together scientists, policymakers, innovators, funders, students, and others to explore solutions and strengthen partnerships to help restore our ocean and stabilize the climate. We invite you to [be part of the movement](#). Join a multidisciplinary community focused on advancing solutions to the ocean’s most pressing challenge, climate disruption.

Programming will be highly interactive and include ample opportunities for collaboration. Participants can look forward to:

- **Sharing & Learning:** Gain insights from inspiring keynote speakers and panel discussions on the forefront of ocean-climate research and innovation.
- **Workshops:** Dive deeper with fellow attendees on challenges and issues of mutual concern.
- **Networking:** Connect with leading experts, industry pioneers, and decision-makers shaping the future of ocean-climate health through time devoted to building and strengthening relationships.
- **Collaborating:** Forge partnerships and collaborations to accelerate the impact of

your work in ocean-based climate solutions through interactive, action-oriented sessions and activities.

We’re excited to announce that registration for the Ocean Visions Biennial Summit 2025 is now open. The Summit is designed to be highly interactive. A diverse set of session types and events will engage scientists, policymakers, innovators, funders, students, and others around innovative approaches and solutions to restore our ocean and stabilize the climate. The Summit will also help build and strengthen the multisector partnerships that are needed to make complex solutions real. [Register Now](#) and contribute to the [Program](#).

The Summit is designed to welcome and engage a multidisciplinary community. The event will feature a mix of session types as well as ample opportunities to collaborate. Summit participants will share and discuss cutting-edge advancements in ocean sciences, engineering, policy, governance, and economics, and coordinate action on key priorities to advance innovative solutions for ocean-climate restoration. We invite you to be [part of the movement](#). Help us advance solutions to the ocean’s most pressing challenge, climate disruption.

8th-10th April 2025: Ocean Business 2025.

Southampton, UK

Countdown for Ocean Business as [registration opens](#). The global ocean technology community will gather again at the National Oceanography Centre in Southampton. Over 5,000 visitors are expected from around the world for the must attend Ocean Business 2025. Discover the newest innovations in marine autonomous systems and find solutions to transform your business in 2025. Connect with thousands of the industry’s brightest minds and share ideas to help define the future of ocean technology. Explore the full [Exhibitor List](#) and start planning what stands you don’t want to miss.

The Ocean Business [Training & Demonstration programme](#) has launched. This year’s line up is bigger than ever. Experience 180-plus hours of new technologies demonstrated in the dockside waters, onboard vessels, in a purpose built test tank, and in the classroom.

- Observe cutting edge sensor technology close up

- Meet the top industry innovators displaying the latest in underwater monitoring
- Discover the next generation ROVs in action
- See ground-breaking advances in navigation technology

The Ocean Business [full conference programme](#) launched at the end of last month.

27th April - 2nd May 2025: European Geophysical Union General Assembly.
Vienna, Austria

The EGU General Assembly 2025 brings together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary, and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience.

The [Provisional Programme](#) is online. Prepare your calendar with all the EGU25 important dates by checking our [Deadlines and Milestones](#) page. Curious about who organizes the EGU25 General Assembly? Meet the [Programme Committee](#).

13th-16th May 2025: IMBeR future Oceans 3
Shanghai, China

IMBeR (Integrated Marine Biosphere Research) approaches the conclusion of its transformative journey (2016–2025) and is excited to host the IMBeR Synthesis and Future Planning Conference (Future Oceans3, FO3). This pivotal event will bring together IMBeR's diverse science teams, representatives from international organizations, policymakers, and early career researchers to reflect on the past decade-long achievements, share rich collaborative experiences, and shape the future of marine biosphere research.

IMBeR organizes the FO3 around three major themes:

- Looking Inward: Reflecting on IMBeR's scientific achievements over the past decade (2016-2025).
- Looking Outward: Reviewing IMBeR's interactions with relevant scientific projects, programs, organizations, and initiatives.
- Looking Forward: Envisioning the future of marine biosphere research post-IMBeR.



IMBeR Synthesis and Future Planning Conference (Future Oceans 3) is an endorsed [United Nations Decade of Ocean Science for Sustainable Development](#) activity. IMBeR invites prospective participants to submit abstracts for the following sessions. The organizing committee will select submissions for oral or poster presentations within the available time and space. Plenary sessions and poster presentations will enable participants to engage with broader themes and network with colleagues beyond your selected session. [Visit the web site, choose a session and submit an abstract by 20th March 2025.](#)

28th-29th May 2025: The MARTECH Workshop 2025
Pasaia, Spain

The Martech Workshop 2025 is an excellent platform for showcasing innovations and collaborating with marine technology experts. MARTECH 2025 is organized by the Marine Technologies team of AZTI located at the Pasaia AZTI Headquarters and the Universitat Politècnica de Catalunya (UPC – SARTI). Further details about the workshop are available on their website: <http://www.martech-workshop.org/>.

4th-6th June 2025: The One Ocean Science Congress
Nice, France

The One Ocean Science Congress will feature a mix of plenary sessions, including opening and keynote speeches, alongside parallel oral and poster presentations. The One Ocean Science Congress is organised by CNRS and IFREMER and it is a special event of the 3rd United Nations Conference on the Ocean Endorsed by the United Nations Decade of Ocean Science for Sustainable Development. Please see more

information on their website: <https://one-ocean-science-2025.org/home.html>

11th-12th June 2025: Townhall on the UK Arctic Ocean contribution to the International Polar Year 32/33

Southampton, UK

The Arctic is one of the most rapidly-changing regions on our planet, with impacts on global sea-level rise, changes to our climate and weather patterns, and threats to our shared biodiversity and ecosystem services. With the international community rapidly mobilising towards the International Polar Year 32/33, and with new international programmes and initiatives now being shaped, it is timely for the UK Ocean Science community to come together and articulate what its unique offerings could be to Arctic research and technology.

This hybrid 2-day meeting, to be held at the National Oceanography Centre (NOC) Southampton, is intended to start this process. Recognising the Arctic Ocean role in global Earth and Human systems, anticipated outcomes include a high-level shaping of what the UK Arctic Ocean community would like to achieve over the course of the IPY, stimulation of new collaborations and proposals for grand Arctic challenges and a baseline from which wider integration with terrestrial, atmospheric and cryosphere communities, both in the UK and overseas, can be built.

Discussions will continue in diverse forums, including the UK Arctic Science Meeting in September and at Challenger 2026. This action is supported by the UK Arctic Office and UK Arctic and Antarctic Partnership. Further details and meeting registration link will be circulated in April together with a questionnaire to help shape the agenda and discussion. In the meantime, please save the date.

23rd-24th June 2025: AMBIO 2025 conference

Edinburgh, UK

The Advances in Marine Biogeochemistry (AMBIO) conference will be held at the Edinburgh Climate Change Institute <https://edinburghcentre.org/>. Further details regarding the programme, registration and abstract submission will follow soon.

23rd-25th June 2025: Turbulence Grey Zone Workshop

Exeter, UK

Highlighting the opportunity to attend or participate in a workshop about advances in turbulence modelling/parametrisations, which is taking place at the University of Exeter next summer. Turbulence parametrisation is a common challenge in the modelling of fluids, including Earth's ocean and atmosphere, so the conference aims to take an interdisciplinary approach.

24th-25th June 2025: Machine Learning for Ocean Modelling workshop

Reading, UK

Announcing a new workshop taking place at the University of Reading; this will be an in-person event with the option to attend remotely for some of the sessions. The workshop, organised by colleagues from NCAS, NOC, BAS, and the Met Office, will take place over two full days. There will be keynote talks, short talks, and posters presented across some important themes, such as hybrid modelling and benchmarking.

As many of you will be aware, the space surrounding machine learning is fast evolving, so it is important that we come together as a community to identify current challenges and opportunities, particularly within the UK. For now, please save the date in your calendar if you are interested in taking part in this new workshop. We will be in touch soon to provide more concrete details and open the registration.

30th June 2025: Wind Waves Special Interest Group meeting

Liverpool, UK

The 2025 meeting of the Challenger Society Special Interest Group (SIG) on Wind Waves will take place at the National Oceanography Centre in Liverpool. The SIG aims to promote research in ocean surface waves and of their interactions with oceanographic, atmospheric and climatic processes. We provide a forum for cross-disciplinary exchange of information, and to encourage early-career researchers in this field by providing an informal platform for presentations and interactions. If you want to receive information about future events, please contact Dr Lucy Bricheno (luic@noc.ac.uk) to be added to the mailing list.

More details of our special interest group here: <https://projects.noc.ac.uk/windwavesSIG/>, and details of previous meetings can be found here: <https://projects.noc.ac.uk/windwavesSIG/meetings>.

1st-3rd July 2025: 2nd UK Coastal Research Conference

Liverpool, UK

Coastal zones are of high ecological and societal value, but as the dynamic interface between land, sea, and air, they are heavily impacted by a combination of climate-driven environmental change and human interventions. Approaches to sustainably manage the coastal zone increasingly seek to provide co-benefits such as risk mitigation, climate regulation, biodiversity gain, and supporting coastal community resilience. These require working across sectors and disciplines to better manage the UK coast in a changing climate.

The second UK Coastal Research Conference welcomes all those with an interest in UK coastal science, including academia, policy makers, practitioners and industry professionals. Our aim is for the conference to promote conversations around national coastal research strategies and coastal knowledge, connecting researchers with those involved in managing our coasts, and thereby inform sustainable future management of our coast.

Following on the first UK Coastal Research Conference, the programme will include one day with optional site visit / training course / workshops and two days for the conference including keynote, oral and poster presentations. Social activities are planned to include an icebreaker drink reception and a conference dinner. Abstract submission now open. For further information and submission form click [HERE](#).

15th-16th July 2025: Deep-Sea Ecosystems Special Interest Group meeting

Newcastle, UK

The 2025 meeting of the Deep-Sea Ecosystems SIG will be hosted by Will Reid at Dove Marine Lab on the outskirts of Newcastle. This year, the SIG is pleased to announce they've been given some funds from the Challenger Soc. This is going to be split to cover some of the food and

drink, and to provide a travel bursary for an ECR to attend the meeting.

The [registration link](#) for the 2025 DSE-SIG meeting is now live. Registration closes on the 9th of May. As with previous years, we will look to provide remote attendance for people who are unable to attend in person.

15th-18th September 2025: The ICES 2025 Annual Science Conference

Klaipeda, Lithuania

The ICES (International Council for the Exploration of the Sea) have released a call for abstracts for their [2025 Annual Science Conference \(ASC\)](#) taking place at Klaipeda University in Lithuania. The ASC will bring together marine scientists from around the world to share innovative research, ideas, and build lasting collaborations. The conference will feature a dynamic programme, covering key areas of ICES Science, including ecosystem science, human impacts, emerging technologies, and conservation. [The call for abstracts](#) closes on 17th March 2025 and is accepting oral, poster, and pre-recorded presentations.

9th October 2025: 6th Maritime Transport Efficiency Conference (MTE Conference)

Geneva, Switzerland

To take place at the Hotel President Wilson, Geneva. Held annually, the [MTE Conference](#) uniquely bridges the maritime and commodity trading sectors, addressing the shared challenges and opportunities of decarbonising the global shipping industry. Focusing on the commercial and operational aspects of decarbonisation and offering actionable strategies to reduce emissions across the maritime value chain, the event caters to shipowners, cargo owners, charterers, operators, fuel suppliers, regulatory bodies, and technology innovators.

This diverse mix of stakeholders ensures comprehensive discussions on navigating the evolving regulatory landscape, adopting sustainable procurement practices, and embracing emerging technologies, while promoting cross-industry collaborative efforts to decarbonise. Take advantage of the Early-Bird rate, register by April 1st and save 300 CHF.

16th-18th October 2025: Arctic Circle Assembly 2025

Reykjavik, Iceland

The [Arctic Circle Assembly](#) will be held in the Harpa Concert Hall and Conference Centre, and registration will open in early June. The annual Arctic Circle Assembly brings together governments, organizations, corporations, universities, think tanks, environmental associations, Indigenous communities, citizens and others for a comprehensive and democratic Arctic dialogue. The Assembly is the largest gathering on Arctic affairs. It is a place for international engagement, cooperation, and celebration.

Governments, universities, companies, research institutions, organizations, associations and others are invited to submit Session proposals for the 2025 Arctic Circle Assembly. The deadline for [submitting proposals](#) is 23:59 on May 1st, 2025, Alaska Standard Time (AKST).

The [Polar Dialogue](#) will return in October. It consists of a series of sessions, consultative meetings, workshops and high-level Plenary Sessions taking place during the Assembly. The initiative aims to facilitate science and research cooperation in the Arctic, Antarctic and Himalaya-Third Pole region, as well as other ice-covered areas of the world. Chaired by H.E. Katrín Jakobsdóttir, Prime Minister of Iceland 2017-2024, the Polar Dialogue unites global

experts and policymakers to address scientific challenges and foster collaboration.

The [Business Forum](#) will take place again during the 2025 Assembly at the Reykjavik Edition Hotel (located within the Assembly Area). It consists of a series of Sessions, consultative meetings, workshops and high-level Plenary Sessions. The Business Forum will delve further into areas of interest including tourism, the blue economy, infrastructure, innovation and more. Additionally, the assembly program has Business Forum Sessions that are open to all participants.

In addition, the [Frederik Paulsen Arctic Academic Action Awards](#) will be awarded for the fifth time at the 2025 Arctic Circle Assembly.

8th-10th September 2026: Challenger Society for Marine Science Conference

Bangor, UK

Save the dates for the next biennial Challenger conference, which will be in Bangor, 42 years on from the first modern Challenger conference which was also held in Bangor; then organised by John Simpson, Paul Linden, Steve Thorpe and Roy Chester, and run by amongst others a very junior Ed Hill and Bill Turrell.

The CSMS email address is challenger.society@gmail.com. Contributions for next month's edition of Challenger Wave should be sent to: john@myocean.co.uk by the 31st March.

JOBS and OPPORTUNITIES

Lecturer in Marine Sciences at UEA and Cefas

The University of East Anglia invites applications for a Lectureship in Marine Science based in the School of Environmental Sciences. You will have developed strong expertise in an area of marine science research and will be excited by the opportunity to develop your research interests in the rich interdisciplinary environment the School offers.

This joint post is part of a strategic alliance between the University of East Anglia and the Centre for Environment, Fisheries and Aquaculture Science (Cefas; <https://www.cefas.co.uk/>), the primary research agency responsible for advising government on marine environmental and fisheries management. The post will involve developing research and teaching in the area of marine and/or coastal ecosystem services, plus enhancing the UEA-Cefas link through an active participation in the Collaborative Centre for Sustainable Use of the Seas (CCSUS; <https://www.uea.ac.uk/ccsus/home>).

You will be based at UEA in Norwich, but will be expected to spend part of your time at the Cefas laboratory in Lowestoft (Suffolk), where you will have access to key facilities (including the research vessel Cefas Endeavour), and benefit from interactions with teams of government scientists. You must have a PhD in Marine Science (or equivalent qualification) or a related discipline and will be able to fulfil all essential elements of the person specification. This full-time post is available from 1 August 2025 on an indefinite basis. UEA offers a variety of flexible working options and although this role is advertised on a full-time basis, we encourage applications from individuals who would prefer a flexible working pattern including annualised hours, compressed working hours, part time, job share, term-time only and/or hybrid working. Details of preferred hours should be stated in the personal statement and will be discussed further at interview. We strongly encourage applicants from women and all those from Black, Asian or other minority ethnic backgrounds and welcome applications from all protected groups as defined by the Equality Act 2010. Appointment will be made on merit. Closing date: **2 May 2025**

<https://vacancies.uea.ac.uk/vacancies/1122/lecturer-in-marine-science-atr1697.html>

There are jobs in the MASTS newsletter

[New vacancies:](#)

[Visit our Vacancy Webpage to find all the positions listed below.](#)

- ✓ Senior PDRA in Marine Social Science - SAMS - deadline extended to 28/3/25
 - ✓ Chair, Marine Management Organisation - closing 24/3/25
 - ✓ Ecological Statisticians (2 vacancies) - BIOSS - closing 27/3/25
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There are jobs in IMBeR's IMECaN newsletter

Part-time research assistant on AI and environmental DNI at the Stanford Center for Ocean Solutions. More information [here](#). Open position until filled.

PhD-FishPeoplePlace Lab - Barriers to new/young entrants to Great Lakes commercial fisheries - Dalhousie University - Deadline March 31st - Access [here](#).

Open applications for **EU4Ocean Summer School 2025 on Ocean Literacy and Collaboration**. 5 intensive days of training! From June 29 to July 4 in Venice, Italy. More details [here](#).

imber@ecnu.edu.cn
