

Challenger Wave



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

NEWS

Dr Tillys Petit to receive EGU Outstanding Early Career Scientist Award

The National Oceanography Centre (NOC)'s Dr Tillys Petit has been named the European Geosciences Union (EGU)'s 2026 Outstanding Early Career Scientist Award in the Ocean Sciences Division. The awards, which will be presented during the EGU General Assembly in May 2026, celebrate the important work and contributions being made to earth, planetary and space sciences. Tillys has been recognised for her contribution to research into the Atlantic Meridional Overturning Circulation (AMOC), which has played an important role in changing understanding of the formation and variability of the subpolar AMOC.

Her work in recognising the importance of the eastern subpolar gyre as the key location of the dense water formation that sustains the AMOC has been cited more than 100 times since its publication in 2020. Her ongoing contributions to this research led to her appointment as co-Principal Investigator (PI) of the internationally recognised RAPID AMOC programme. Tillys said: "I am surprised and delighted by this award. I did not expect this, at all, but I do feel incredibly proud. I am grateful to have had the opportunity to work on crucial projects alongside so many outstanding scientists, who inspire and challenge me."



Dr Ben Moat, who heads the open ocean physics team at NOC, added: "Tillys is an outstanding scientist, who demonstrates great leadership in her work and with her colleagues. She actively

mentors other early career students and scientists as well as supporting outreach programmes to inspire the next generation of ocean scientists. I am delighted to see her ground-breaking contributions to our understanding of the AMOC recognised so prominently."

Beyond AMOC, Tillys has secured funding for a number of innovative projects that utilise advanced artificial intelligence, ocean technologies, and predictive models to develop an early warning system for tipping points in the North Atlantic.

Global Tipping Points Report 2025 reveals first Earth system tipping point reached

The first Earth system tipping point has been reached with widespread mortality of warm-water coral reefs underway according to a report released by the [University of Exeter](#), [Potsdam Institute for Climate Impact Research](#), [WWF](#) and international partners: [Global Tipping Points Report](#). The new report brings together the work of more than 160 scientists at 87 institutions in 23 countries, including Dr Yevgeny Aksenov, Dr Stefanie Rynders and Dr Bablu Sinha from The National Oceanography Centre (NOC). It offers the most up-to-date assessment yet of where we stand relative to Earth's critical climate and ecological thresholds:

- Widespread mortality of warm-water coral reefs is now underway.
- With global warming set to breach 1.5°C, the world is dangerously close to further catastrophic tipping points. These include melting ice sheets, Amazon rainforest dieback and collapse of vital ocean currents.
- Tipping points pose a new type of threat that current international structures and agreements are not designed to counter.

- Key to averting catastrophe is to act urgently, by supporting societal transformation and triggering 'positive tipping points' such as the self-propelling rollout of green technologies.

As ministers gathered ahead of the COP30 summit, the second Global Tipping Points Report found that warm-water coral reefs, on which nearly a billion people and a quarter of all marine life depend, are passing their tipping point. Widespread dieback is taking place and, unless global warming is reversed, extensive reefs as we know them will be lost, although small refuges may survive and must be protected. We are also on the brink of more tipping points, including the melting of polar ice sheets, the collapse of key ocean currents and the dieback of the Amazon rainforest. With global warming set to breach 1.5°C, the report argues that countries must minimise temperature overshoot to avoid crossing more tipping points. Every fraction of a degree and every year spent above 1.5°C matters.



Dr Yevgeny Aksenov, Dr Stefanie Rynders and Dr Bablu Sinha from The National Oceanography Centre, said: "We are more concerned about Arctic winter sea ice decline as a potential tipping point than in the previous

assessment, which would impact weather and climate in Europe. NOC contributed to the Atlantic Meridional Overturning Circulation (AMOC) and the North Atlantic Subpolar Gyre (SPG) case study. A SPG collapse would have important impacts for the UK agriculture and severe weather events. More research is



needed on impacts of SPG/AMOC tipping scenarios with a focus on social and economic impacts. NOC is leading topical research in socio-oceanography. The report recommends the UK should initiate a national review of adaptation strategies and stress-test food supply chains."



Professor Tim Lenton, from the [Global Systems Institute](https://www.global-systems-institute.org) at the



University of Exeter, said "Only with a combination of decisive policy and civil society action can the world tip its trajectory from facing existential Earth system tipping point risks to seizing positive tipping point opportunities." Review the full [Global Tipping Points Report](#).

New Chair of UK SCOR

Congratulations Professor Alex Poulton (Heriot-Watt University) who has been appointed as the new Chair of the UK Scientific Committee on Oceanic Research (SCOR) National Committee. [SCOR](#) is the leading international non-governmental organization for the promotion and coordination of international oceanographic activities. SCOR helps promote international cooperation in planning and conducting oceanographic research, and solving methodological and conceptual problems that hinder research.



Volunteer Opportunity, Electronic recording of Orkney Crustaceans Observer trips

Beta Rodrigues, a PhD student at Heriot-Watt University, Orkney Campus, is researching the interactions that the creel fishery have with the Orkney waters ecosystem. Beta has a large data set, in paper format, from 2014 to 2023, collected from commercial fishing vessels, and is looking for someone that could help input that data into electronic format. If this is something you would be interested in helping with, please email Beta on ecr3@hw.ac.uk. This is open to all but may be of particular interest to someone based in Orkney. You must be familiar with Excel in order to help.

Mathematics of Sea Ice at UEA, 16th-17th December 2025

Measuring and modelling sea ice and its behaviour is a challenging problem as highlighted in The Phil. Trans. Roy. Soc. A theme issue [Theory, modelling and observations of marginal ice zone dynamics: multidisciplinary perspectives and outlooks](#) and the INI (Isaac Newton Institute) programmes [Mathematics of Sea-Ice Phenomena](#) and (SIP) Follow on, [Mathematics of sea ice in the 21st century](#). To continue the discussion initiated at INI we are planning a meeting between the 16th and 17th of December 2025 at the University of East Anglia, Norwich, UK.

We aim to start the meeting on Tuesday at 12:30 and close it no later than 15:00 on Wednesday to facilitate travel. The meeting will bring together researchers from different fields to present modern problems of ice dynamics and thermodynamics, to formulate new problems and models and to discuss strategies for their solutions. Invited speakers for this meeting are:

Takuji Waseda (The University of Tokyo)
Ed Blockley (MetOffice)
Veronique Danserau (Université Grenoble Alpes)
Robyn Verrinder (University of Cape Town)

Others will have the opportunity to deliver 5 minute talks and a poster leaving plenty of time for discussion. The meeting is supported by the Isaac Newton Institute Network Support (EP/V521929/1), there are no registration costs. We aim to support reasonable travel and accommodation costs with priority given to Early Career Researchers (PhDs from the UK) by providing support towards travel expenses. We hope you can join us in Norwich, please sign-up as soon as possible to help us plan, <https://forms.cloud.microsoft/e/ejFjFcw2As>.

Forward the invitation to interested people in your network, particularly Early Career Researchers that we might have missed. Do not hesitate to get in contact with any questions, the organising team Alberto Alberello, Emilian Parau & Alexander Korobkin.

Marine Measurement Forum Announces Exciting New Venue: Winchester Science Centre & Planetarium



The Ocean Business team are delighted to be hosting the 70th edition of the [Marine Measurement Forum](#), fondly known as the MMF,

taking place on the 28th January 2026. The conference will bring together professionals from across the marine sector under the spectacular dome of one of the UK's leading science engagement venues, the Winchester Science Centre & Planetarium. Powerfully connecting two largely unexplored realms, particularly as the need for satellite and space technology for navigation and remote data collection is ever increasing.

January's event will highlight how knowledge-sharing between ocean and space science is essential to providing answers, and to help us better understand our planet. The call for speakers will be issued shortly, contributors from all corners of the marine and space sectors are encouraged to apply. For event updates make sure you [sign-up here](#). Your Ocean Business Team, looks forward to seeing you there.

Marine Facilities Advisory Board Working Groups, can you help ?

The Marine Facilities Advisory Board (MFAB) advises the National Oceanography Centre on marine facilities and services, including the Natural Environment Research Council's [National Marine Equipment Pool \(NMEP\)](#), the British Oceanographic Data Centre and the British Ocean Sediment Core Research Facility. MFAB is seeking members for two new working groups which will contribute to national strategy and future investment. These voluntary positions, starting from January 2026, offer exciting opportunities to gain experience in science governance, and collaborate with leading scientists and technical experts across the UK.

MFAB National Marine Sampling Working Group

MFAB Working Group on Marine Autonomous and Robotic Systems

For general enquiries, about MFAB or these working groups, please contact MFAB Secretary, Jackie Pearson, jfpea@noc.ac.uk

VIEWS

Promotion and Tenure Survey

The Oceanography Society (TOS) has just [launched a survey](#) to gather input on experiences with promotion and tenure. The goal of this

project is to gain a deeper understanding of the formal and informal processes that underpin promotion and tenure systems, including perceptions of fairness, mentorship, flexibility, and overall well-being. Our goal is that the survey results will help TOS and other organizations better understand the issues faced by our community members and catalyze pathways to equity in promotion and tenure. All data collected in the survey will be de-identified and analyzed in aggregate. Also, more details about why TOS leadership developed this survey are available in the "From the TOS President" column written by Dr. Paula Bontempi, which is available on the The Oceanography Society's home page: tos.org

Biomaterial Design Collaboration Request

I am reaching out to the MASTS community to see if there are any individuals or organisations I can connect with in relation to my ongoing research in biomaterial design. My name is Andrea Dritschel, and I am a design researcher based in St Andrews with a background in Design and Sustainability (University of Dundee). I have recently completed a Master's in Design for Change at the University of Edinburgh (with distinction). I also completed a residency last summer at the Basque Bio Design Centre, where I developed new designs from organic waste materials. My interests lie in how design can be used as a tool to advocate for environmental sustainability and create futures of hope through new visual narratives. More recently, I have developed a specific interest in the marine environment, focusing on Wakame seaweed, which has become a problematic invasive species globally, as well as in UK waters. This species is currently used widely in the food and beauty industry. However, I believe Wakame seaweed has significant untapped potential as a sustainable biomaterial. If you are interested in knowing more or would be open to working together, please contact me at andreaemilydritschel@gmail.com.

Research Internship wanted

Mathilde Dechambe, a French agronomic engineering student at INP-AgroToulouse (the equivalent of the first year of a master's degree) is looking for an 18 week research internship opportunity within the Marine Association for Science and Technology (MASTS) network from May to September 2026. Mathilde is particularly interested in marine biology and aquatic ecology

and has some practical experience including water sampling, identification of aquatic macro-invertebrates, statistical data analysis (R Studio), and scientific reporting. Mathilde is eager to apply these skills and learn more about marine ecosystems and research practices. Please [contact Mathilde](#) directly if you can offer an opportunity.

Take part in the UN Call for Decade Actions No. 10/2025

The [call for decade actions No 10/2025](#) is open. The vision of the Ocean Decade is 'the science we need for the ocean we want'. The Ocean Decade provides a convening framework for diverse sectors from around the world to co-design and co-deliver the scientific knowledge and the partnerships needed to achieve a better understanding of the ocean system, and deliver science-based solutions to achieve the 2030 Agenda for Sustainable Development.

To achieve the Ocean Decade vision, a wide range of partners will implement endorsed Decade Actions in the form of programmes, projects or activities until 2030 and beyond. You are invited to contribute to that vision by [requesting endorsement](#) for transformative Decade Actions via Call for Decade Actions No. 10/2025. The process for proposing Decade Programmes involves two stages:

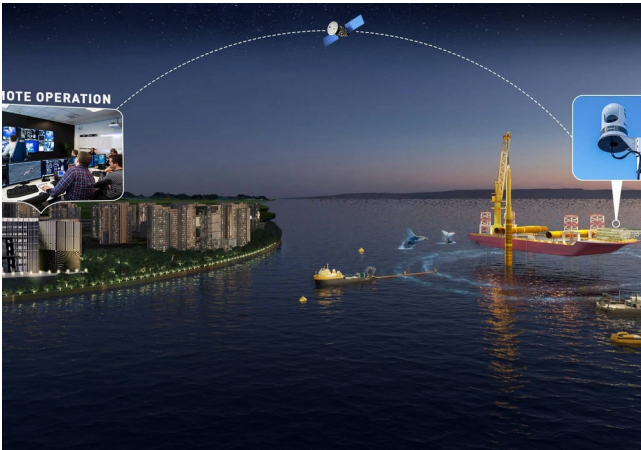
1. Submission of Expression of Interest outlining:
 - How the Programme addresses the [Decade Challenges](#), in line with the [Barcelona Statement](#) and the [Vision 2030 process](#)
 - How it plans to collaborate with other [endorsed Decade Programmes](#)
 - How the science and knowledge generated will support decision-making and contribute to sustainable development
2. Submission of full Programme proposal:
Selected applicants will be invited to submit a full Programme proposal.

Click [here](#) to access the online form; deadline 5th December 2025, 23.59h UTC. All applicants are strongly encouraged to consult the Guidance Note for Applicants for Call for Decade Actions No. 10/2025 published [here](#). Please click [here](#) to find answers to Frequently Asked Questions for

Call for Decade Actions No. 10/2025. For additional information or queries, please contact oceandecade@unesco.org and include "Call for Decade Actions No. 10/2025" in the subject line.

Oceaneering Successfully Completes North Sea Field Trial of Ocean Perception™ Marine Wildlife Mitigation Solution

Oceaneering International, Inc. is pleased to announce the successful completion of a field trial of its patented **Ocean Perception™** marine mammal and wildlife mitigation software solution in the Dutch sector of the North Sea. The trial was conducted aboard an offshore wind installation vessel in collaboration with client Van Oord. Ocean Perception is an intelligent, automated monitoring platform designed to enhance marine wildlife protection and environmental compliance while reducing project downtime. The system integrates 360-degree thermal imaging cameras for full visibility in low-light and night-time conditions, radar for marine wildlife detection, and a centralized onboard monitoring station. During the trial, the platform demonstrated its ability to detect and track bird activity, critical for offshore wind operations in the North Sea, where avian interaction is a key regulatory and ecological concern.



This latest trial builds on the success of a [2023 field trial](#) on the U.S. East Coast, where Ocean Perception successfully tracked and identified whale movements in support of construction operations. By enabling accurate, real-time detection of protected species, the system helps reduce false positives often encountered with traditional monitoring methods, opening additional operational windows, particularly at night, and enhancing overall project efficiency. Remote access capabilities allowed

Oceaneering's onshore operations centres to support real-time decision-making during the trial, further demonstrating the platform's scalability and flexibility for global offshore applications.

Blanca Montoya, Product Manager at Oceaneering, commented: "We are excited by the results of this latest trial, which confirms Ocean Perception's ability to deliver reliable, real-time wildlife monitoring in the North Sea. The ability to track birds and marine mammals, even in challenging low-visibility conditions, not only improves environmental stewardship, but also enables more efficient and flexible offshore operations."

Caitlin Holzhauser, Environmental Engineer, Offshore Energy, at Van Oord, said: "As a leading marine contractor, Van Oord is proud to support new technologies in the Marine Mammal Observation space." Aniruddha Paranjape, Environmental Engineer, Offshore Energy, at Van Oord, added: "Ocean Perception's ability to detect marine fauna in varying conditions is an extremely useful resource that enables more informed and responsible decision making during offshore operations. We look forward to seeing the Ocean Perception technology evolve further, contributing to the shared goal of protecting marine fauna." Gerwin Guichelaar, Environmental Engineer, Offshore Energy, at Van Oord, said: "The possibility to select a high viewing point on the vessel enables optimal observation of the water surface during rough seas as well. Furthermore, the reduction of required cabin space can prove to be extremely valuable during certain projects."

SALTS

Look out for the *A. S. Brierley* on the Fife coast



Last month, Professor Paul Fernandes (Heriot-Watt University) named their newly coded small research vessel after the late Professor Andrew Brierley (University of St Andrews). This naming was in the company of Prof. Brierley's partner Kirsty, his mum Margaret, daughter Laura, and the [FEAST](#) research team. Look out for the *A. S. Brierley* on the Fife coast as they use it to deploy their AUV and USV around the offshore windfarms to study what happens to our fish stocks as the blue economy develops.

Carnivorous “Death-Ball” Sponge Among 30 New Deep-Sea Species from the Southern Ocean

Thirty previously unknown deep-sea species, including a carnivorous “death-ball” sponge, have been confirmed from one of the most remote parts of the planet by The Nippon Foundation, Nekton Ocean Census and collaborators. The discoveries follow two 2025 research cruises with Schmidt Ocean Institute and were verified at the Southern Ocean Species Discovery Workshop hosted by Universidad de Magallanes, Punta Arenas, Chile in August 2025. A standout discovery is a new predatory sponge



(*Chondrocladia sp. nov.*). Its spherical form is covered in tiny hooks that trap prey, a clear contrast

to the gentle, passive, filter-feeding undertaken by most sponges. ‘Zombie worms’ (*Osedax sp.*) were also observed. Although not thought to be new to science, these worms have no mouth or gut and rely on symbiotic bacteria to break down fats inside the bones of whales and other large vertebrates.

“Accelerating species discovery is not a scientific luxury, it is essential for public good,” said Mr Mitsuyuki Unno, Executive Director of The Nippon Foundation, who leads Ocean Census with the Nekton Foundation. “Ocean Census is a program with the goal to reveal the unknowns of our world. Through its expeditions, we have seen another groundbreaking species discovery that benefits the world’s scientists, policymakers and communities.”

[Searching for New Species in the South Sandwich Islands](#) was an Ocean Census Flagship expedition onboard Schmidt Ocean

Institute’s R/V *Falkor* (too) using ROV *SuBastian* to survey volcanic calderas, the South Sandwich Trench, and seafloor habitats around Montagu and Saunders Islands. The team collected nearly 2,000 specimens across 14 animal groups (phyla), alongside thousands of high-definition images and hours of video. Highlights include new hydrothermal vents at ~700 m with chemosynthetic communities, vibrant coral gardens, evidence of explosive undersea volcanism, and [the first confirmed footage of a juvenile colossal squid](#).

In addition, three researchers from the Ocean Census Science Network supported an expedition onboard *R/V Falkor (too)* in [the Bellingshausen Sea](#). When iceberg A-84 (~ 510 km²) calved from the George VI Ice Shelf in January 2025, the ship pivoted to the newly exposed seabed, becoming the first to investigate an area previously sealed beneath ~150 metres of ice.

Training course: Autonomous Platforms as A Research Tool (A.P.A.R.T)

Observational marine science operates in a harsh and challenging environment. Traditionally, data collection relied on specialised research vessels, but their limited number and inability to operate in poor weather or heavy sea ice led to biased, sparse data. Instrumented moorings provide fixed-point data, and while satellites greatly improved surface observations, they only penetrate a few tens of metres in an ocean averaging over 3000 m deep.

The adoption of autonomous platforms, such as drifting Argo floats and self-propelled gliders or Autonomous Underwater Vehicles (AUVs), is transforming ocean science. These platforms can collect data from beneath the ocean surface in all conditions, including under sea ice, and operate for extended periods without human presence. With improving technology and lower costs, large-scale deployments of these platforms are becoming feasible, enabling global, daily ocean monitoring. Locally, they offer long-term presence in remote areas, surpassing the duration of ship-based missions. Their use also accelerates sensor innovation, pushing the boundaries of what data can be collected. It is therefore imperative that we equip the next generation of marine researchers to be able to exploit fully the great potential that autonomous platforms offer.

This online course has been designed to provide that much-needed foundation, making use of the national facilities offered by the [Marine Autonomous Robotic Systems \(MARS\)](#) autonomous fleet and the [British Oceanographic Data Centre \(BODC\)](#), coupled to a team who have pioneered the scientific use of autonomous platforms. It provides a grounding in the full span of knowledge required to use autonomous platforms: from knowing what platforms are available, their strengths and weaknesses, what data can be collected by them, and how one goes about assembling a mission; to what new areas of science these new platforms open up; and to the often under-estimated but vital issue of how the enormous amounts of data they can generate should be handled to make it a resource not just for one project but a valuable resource for the community for many years. It also highlights how research vessels remain a critical component of ocean observations, providing independent data to calibrate autonomous platforms and to allow observations that still require the presence of scientists, of which there will always be many. Visit the course webpage for [more information](#) and timing in 2026, and [register here](#).

CALENDAR

4th December 2025: MEDIN Open Meeting: "Unlocking the oceans: managing emerging and established marine data".

Exeter, UK

Please save the date (4th December 2025) and register for the next MEDIN Open Meeting entitled "Unlocking the oceans: managing emerging and established marine data". This meeting will be hybrid at the Met Office, Fitzroy Rd, Exeter EX1 3PB and online using Microsoft Teams. The MEDIN Open Meeting 2025 is free and open to anyone with an interest in marine data. This meeting aims to highlight the progress in addressing marine data management challenges that have been made and to acknowledge and discuss unresolved issues around data. The meeting will include the following sessions:

Session 1: Marine data types without a MEDIN Data Archive Centre

Session 2: Solutions for marine data management challenges.

Please register to secure your place whether in person or online: <https://noc-events.co.uk/medin-2025>. The meeting will start at 09:30, but please arrive earlier to allow time for security. More information about the meeting will be on our webpage as we create the agenda and can provide more details. We invite you to [submit an abstract](#) to present on either of the sessions outlined above. If you have any questions please [email](#).

16th-17th December 2025: Mathematics of Sea Ice at UEA

Norwich, UK

Measuring and modelling sea ice and its behaviour is a challenging problem as highlighted in The Phil. Trans. Roy. Soc. A theme issue [Theory, modelling and observations of marginal ice zone dynamics: multidisciplinary perspectives and outlooks](#) and the INI (Isaac Newton Institute) programmes [Mathematics of Sea-Ice Phenomena](#) and (SIP) Follow on, [Mathematics of sea ice in the 21st century](#). To continue the discussion initiated at INI we are planning a meeting between the 16th and 17th of December 2025 at the University of East Anglia, Norwich, UK.

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28th January 2026: Marine Measurement Forum 2026

Winchester, UK

The Ocean Business team are delighted to be hosting the 70th edition of the [Marine Measurement Forum](#), fondly known as the MMF, taking place on the 28th January 2026. The conference will bring together professionals from across the marine sector under the spectacular dome of one of the UK's leading science engagement venues, the Winchester Science Centre & Planetarium. Powerfully connecting two largely unexplored realms, particularly as the need for satellite and space technology for navigation and remote data collection is ever increasing.



January's event will highlight how knowledge-sharing between ocean and space science is essential to providing answers, and to help us better understand our planet. The call for speakers will be issued shortly, contributors from all corners of the marine and space sectors are encouraged to apply. For event updates make sure you [sign-up here](#). Your Ocean Business Team, looks forward to seeing you there.

22nd-27th February 2026: Ocean Sciences Meeting 2026

Glasgow, Scotland

The OSM is the flagship conference for the ocean sciences and the larger ocean connected community. Every two years, the Ocean Sciences Meeting unifies the oceans community to share findings, connect scientists from around the world, and advance the impact of science. The Ocean Sciences Meeting 2026 is co-sponsored by the American Geophysical Union (AGU), the Association for the Sciences of Limnology and Oceanography (ASLO), and The Oceanography Society (TOS). This time we look forward to seeing you in Glasgow, Scotland in February 2026. Visit the [Ocean Science Meeting website](#) for up to date information.

Session OT004: Autonomous observing technologies and methods for sustained ocean carbon observations and climate mitigation research. Topic Area: Ocean Technology and Observatories.

Oceanic carbon data and information are needed for accurate assessment of the ocean's carbon uptake rate and capacity. These insights are vital for shaping national and international climate policies and guiding mitigation strategies. Our ability to observe and model the oceanic carbon cycle depends strongly on the availability of sustained high-quality observations enabled by fit-for-purpose observing tools and methods. Such observations are also critical for evaluating current and future marine Carbon Dioxide Removal (mCDR) applications building the backbone of global Measurement, Monitoring, Reporting and Verification (MMRV) schemes.

Advancements in material science, ocean technology and evaluation of new sensing techniques are paramount in enabling ocean measurements on wide spatio-temporal scales necessary to: a) understand past, present and future changes in the global carbon cycle, and b) evaluate the feasibility, durability and efficiency of mCDR methods currently being investigated. We invite submissions from academic and government researchers, nonprofits and the ocean technology industry developing and evaluating novel tools and methodologies for direct observations of the seawater's carbonate system. The session aims to showcase the current state-of-the-art in ocean carbon observing and highlight new observing strategies

using autonomous sensors and platforms. Technology performance evaluations in laboratory studies and field deployments are especially welcome.

Session PI010: Unraveling physical–biological interactions at meso- and submesoscales, <https://agu.confex.com/agu/osm26/prelim.cgi/Session/253850>.

Mesoscale and submesoscale structures, such as cyclonic and anticyclonic eddies, filaments, and fronts, play a fundamental role in shaping marine ecosystems. These dynamic features have been demonstrated to impact the distribution of nutrients and enhance biological activity across trophic levels. They influence key processes including phytoplankton blooms, larval dispersal, and the biological carbon pump. Despite the growing recognition of their importance, the complexity and scale of these interactions are still not well understood, limiting our ability to quantify their regional and global impacts.

Technological advancements, such as higher-resolution ocean models and new generations of satellites like PACE and SWOT, are creating unprecedented opportunities to study these fine-scale processes, while also posing new challenges for data interpretation and integration. This session invites contributions investigating the interplay between physical processes and biological responses at meso- and submesoscales. We aim to bring together observationalists, modellers, and theorists working at the interface of physics and biology to deepen our understanding of how ocean dynamics at these scales influence marine life.

Session AI006: Philippa Rickard (Heriot Watt University) is delighted to be co-chairing Session AI006, [The Influence of Marine Biota on Air-Sea Exchange Processes](#) alongside Dr Theresa Barthelmeß and Prof Dr Anja Engel (GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel), and Dr Ryan Pereira (The Lyell Centre for Earth and Marine Sciences).

Session CC006: Kate Fraser (SAMS) is co-chairing a session called "[Climate Change in the Deep Sea: Impacts, Interventions, and Cumulative Stressors](#)" in preparation for the IPCC AR7 process.

Session HC001: Jack Laverick (University of Strathclyde) is cohosting a session on "[Advances in Marine Conservation for Local-to-Global Sustainability](#)". This session will complement a new "Advances in marine conservation for local-to-global sustainability" special issue in the journal *Aquatic Conservation: Marine and Freshwater Ecosystems*.

Session HC003: Bahareh Kamranzad (University of Strathclyde) is chairing a session on [Arctic Maritime Safety, Climate Impacts, and Human–Environment Interactions](#). As Arctic sea ice rapidly retreats and ocean conditions evolve, maritime activities in the region are increasing, leading to complex environmental, operational, and societal challenges. This interdisciplinary session aims to explore the impacts of Arctic climate change on oceanic conditions, navigational safety, and human interactions.

Session CM006: Heather Hyewon Kim, Alicia Karspeck, Cristina Schultz and David Keller are hosting "[Modeling approaches for marine Carbon Dioxide Removal \(mCDR\)](#)". There is growing interest in marine carbon dioxide removal (CDR) approaches, including ocean alkalinity enhancement, direct ocean capture, nutrient fertilization, biomass sinking, macroalgae cultivation, and artificial upwelling, as a portfolio of approaches aiming to remove 10–20 gigatons of atmospheric CO₂ annually by mid- to late-century. Modeling these approaches offers insights that enable assessment of carbon sequestration efficacy, permanence, and ecological impacts across broad spatial and temporal scales under various scenarios. These tools are critical for aligning mCDR deployments with climate goals and environmental safeguards.

Session OB015: Sarah Cryer (Heriot Watt University) is co-chairing a session on [Marine life and Carbon cycling in a changing ocean: Integrating observations, AI, and models \(OB015\)](#) which relates to the joint BIO-Carbon – MASTS international data workshop on the role of marine biology in helping the ocean store carbon.

Session OB029: Alex Poulton (Heriot Watt University) is chairing a session on [The Open Ocean Carbonate Pump: From Alkalinity to Ecology \(and Back Again\) \(OB029\)](#). This session will explore different aspects related to pelagic

carbonate biogeochemistry that underpins the magnitude and functioning of the carbonate pump.

13th-17th April 2026: Environmental Interactions of Marine Renewables conference

Oban, Scotland, UK

The Scottish Association for Marine Science (SAMS) is organising the next Environmental Interactions of Marine Renewables (EIMR2026) conference. This event will bring together marine renewable energy experts from across the globe. It will represent all disciplines that form the landscape of marine energy research, a foundation that continues to stimulate new and exciting discoveries.

Registration and calls for abstracts and workshops are currently open. Details of the conference are available [online](#). Abstract deadline is the 12th December 2025.

19th - 24th July 2026: International Coral Reef Symposium 2026

Auckland, New Zealand

ICRS is the largest conference for coral reef science, run by the International Coral Reef Society every four years, this time hosted by Victoria University of Wellington, New Zealand. Abstract submission is now open (submission deadline: 1st December 2025). Please visit the [conference website](#) for further information. The following sessions may be of particular interest for UK marine scientists engaged in coral reef research:

Session 10: From knowledge to action: Tools and stories to tackle water pollution

Session 19: Modelling coral reef ecosystems across scales

Session 21: Plastic pollution in coral reefs: from emerging evidence to future solutions

Session 52: Exploring the sustainability and resilience of coral reef fisheries

Session 60: Pelagic reefs: how oceanic inputs shape the structure and function of coral reefs

Session 67: A window on future oceans:

forecasting multi-scale impacts of the Anthropocene on coral communities using extreme systems as natural laboratories

Session 99: Cross-habitat linkages and coral reef integrity in connected coastal seascapes

Session 116: Biodiversity and transformation in Indian Ocean coral reefs

Session 117: Understanding mesophotic coral ecosystems: The way forward

Session 128: Exploring the new, blue frontier: Coral reef science of the South Pacific

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. Further information to follow. We can also accommodate Special Interest Group (SIG) meetings around the conference (on the 7th and 11th September) please contact Tom Rippeth for further information, t.p.rippeth@bangor.ac.uk. If you are interested in sponsoring events at the conference please contact Terry Sloan, terry@planet-ocean.co.uk.

7th-9th April 2027: 2027 Ocean Decade Conference

Rio de Janeiro, Brazil

Co-organized by the Intergovernmental Oceanographic Commission (IOC) of UNESCO, Brazil's Ministry of Science, Technology and Innovation (MCTI), and the City of Rio de Janeiro, the 2027 edition will build on the outcomes of the [2024 Ocean Decade Conference](#) in Barcelona, Spain, and carry forward the ambitions and milestones of the Ocean Decade; [UN Decade of Ocean Science for Sustainable Development 2021-2030](#) ('Ocean Decade').

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 28th November.

JOBS and OPPORTUNITIES

DSIT Embedded Expert to the National Technology Adviser & Chief Scientific Adviser

The [Department for Science, Innovation and Technology \(DSIT\)](#) is seeking subject matter experts to support the National Technology Adviser (Dr Dave Smith) and Chief Scientific Adviser (Professor Chris Johnson). As an Embedded Expert, you will:

- Provide rapid, high-quality input into policy development
- Conduct bespoke research projects
- Help inform the UK's science and technology agenda
- Engage directly with ministers, senior officials, and external stakeholders

This is a flexible role for 9–18 months.

Full details and application: [Civil Service Jobs – Embedded Expert](#) (Closing date: 23:55, Sunday 30 November)

There are jobs in the MASTS newsletter

[New vacancies:](#)

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

- ✓ Snr Marine Surveyor - APEM - apply asap
- ✓ Severn Estuary Partnership Projects Coordinator - apply by 24/11/25
- ✓ MASTS/SUPER Programme Support Officer - closing 26/11/25
- ✓ Marine Partnerships Officer - CWT - apply by 30/11/25
- ✓ Assistant Biologist - LFCT - apply by 3/12/25
- ✓ Research Associate in Underwater Acoustics - Bath University - apply by 14/12/25

[New PhD studentships](#)

[PhD: Investigating the organic matter reactivity continuum in UK Coastal Shelf Seas](#)

[Physics, biology and ecology of toxic plankton blooms](#)