

Challenger Wave



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

NEWS

Professor Gideon Henderson selected for UN Decade Advisory Board

The International Oceanographic Commission (IOC) has announced the establishment of the UN Decade of Ocean Science for Sustainable Development (2021-2030) Advisory Board. It is a great pleasure to share that the UK has representation by way of Professor Gideon Henderson, Chief Scientific Adviser, Department for Environment, Food and Rural Affairs (Defra).



Gideon's nomination, supported by Defra and the FCDO demonstrates the UK's commitment to supporting the Ocean Decade at a critical time as the Advisory Boards helps set the direction of the Decade.

New Chair of NOCA announced

The NOC are very grateful to Professor David Thomas for chairing the NOC Association of Marine Science National Capability Beneficiaries (NOCA) over the last couple of years. As David is stepping down from this role, effective from 1st January 2022, the NOC is pleased to announce

that Professor Mark Inall, Scottish Association for Marine Science (SAMS), has now been appointed as the new Chair of the NOCA.



Professor Mark Inall, Scottish Association for Marine Science (SAMS)

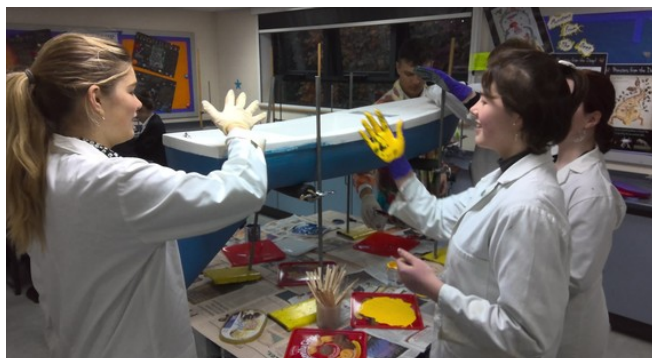
The NOCA is the main vehicle for National Oceanography Centre (NOC) engagement with the beneficiaries of NOC-led marine science National Capability (NC). The NOC is also delighted that David has kindly agreed to continue in an advisory role.

Mini-boat KES Kraken prepares to set-sail on RRS Discovery

Over the last 2 months, an Educational Passages, educationalpassages.org/, mini-boat project coordinated by the NOC has been underway at King Edwards VI School in Southampton, engaging students in the world of ocean exploration and key environmental issues.

During the programme, students have had the chance to hear Ocean Literacy talks from NOC experts Dr B. B. Cael, Dr Ben Moat, Prof. Stephanie Henson, Dr Eleanor Frakja-Williams,

Dr Alice Horton and Prof. Meric Srokosz, to help further enrich their understanding of topical ocean and environmental issues including microplastics and climate change.

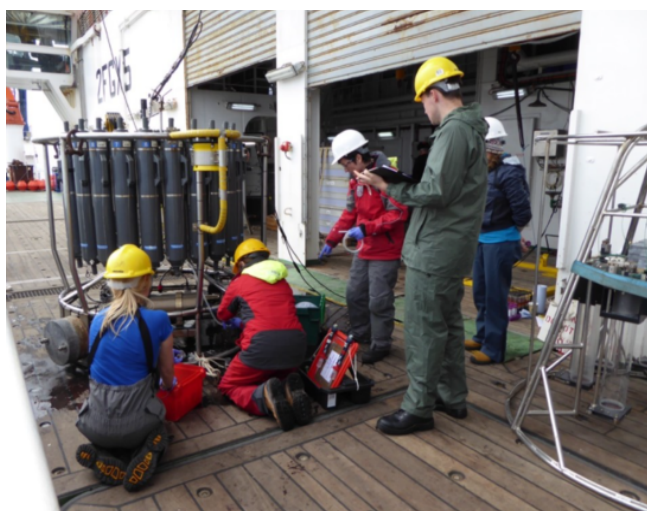


Students at King Edwards School VI working on 'KES Kraken'

The student-built mini-boat, named 'KES Kraken', is now ready for deployment from the forthcoming collaborative DY143 expedition departing this month. Equipped with a sail and a satellite tracker, *KES Kraken* will allow the students and the public to track its ocean journey. For more information, please visit noc.ac.uk/news/mini-boat-kes-kraken-built-southampton-students-set-sail-during-noc-expedition.

Support and opportunities for Early Career Researchers

The CLASS project is very pleased to announce that the Fellowship scheme for Early Career Researchers (ECRs) has now resumed following a suspension due to Covid-19. The scheme supports extended visits to the National Oceanography Centre, NOC, and the Scottish Association for Marine Sciences, SAMS, and aims to support the career development of ECRs.



Students at sea on training berths

Applications are also invited from students and ECRs interested in joining a CLASS research expedition in 2022. Students and ECRs will gain experience in a range of seagoing activities and receive support in collecting data and samples. Berths are available on several expeditions.

Full details of both opportunities, including application forms and deadlines can be found on the CLASS website, projects.noc.ac.uk/class-project/academic-engagement.

VIEWS

Ocean Decade Creative Communication Toolkits launched

The Ocean Agency, together with UNESCO's IOC, have launched the Ocean Decade Creative Communication Toolkits, making it easier than ever to help raise ocean awareness and inspire action.

7 Things
Everybody
Should
Know About
the Ocean

#CreateWaves

These are a range of free online communication resources made available thanks to the support of UN Environment Programme, 11th Hour Racing and Adobe. To discover more, visit www.oceandecade.org/news/new-ocean-decade-creative-communication-toolkits-launched-making-it-easier-than-ever-to-help-raise-ocean-awareness-and-inspire-action/.

LISST suspended particle size and concentration Systems for Rothamsted

Sequoia Scientific, Inc. has built and shipped 3 LISST-200X (Laser In-Situ Scattering and Transmissometry) packages to be deployed by Rothamsted Research. Planet Ocean, the Distributor for Sequoia in the UK has worked closely with the end user staff to meet their technical and delivery needs. The LISST-200X instrument harnesses laser diffraction to obtain in-

situ measurements of particle size distribution, volume concentration, optical transmission, and the optical volume scattering function (VSF) at depths down to 600 metres. An accessory item installed on each of the LISST-200X units is a Bio Block anti-fouling shutter for reducing the effects of fouling during extended deployments.



When asked about the expected use, Rothamsted Research staff stated, “As part of one of its current strategic science programmes, Soil to Nutrition (funded by the UK Research and Innovation-Biotechnology and Biological Sciences Research Council), Rothamsted Research, UK, is assembling a unique dataset on the effective particle size characteristics of the water-stable aggregates eroded from different land uses (peaty moorland, grassland, arable). In turn, these data, which are being assembled using the LISST-200X, and being linked with experimental work by Canadian partners, University of Waterloo and the National Water Research Institute, Burlington, on the critical thresholds for erosion and deposition of sediment flocs in the aquatic environment. The overall aim is to understand the landscape scale propensity for the flocs originating from different land uses to be deposited and thereby contribute to more severe in-stream impacts on aquatic ecology and nutrient and contaminant transfers. More widely, the work is contributing to ongoing exploration and debate over the impacts of land use change that might occur in the UK as a result of a number of drivers including climate change forecasts, net zero aspirations and the changing dietary preferences of consumers.”

Following delivery of the 3 LISST-200X systems in just 2 weeks the team at Rothamsted Research benefited from training provided by Sequoia staff

in the US, ensuring their ability to successfully operate and deploy the instruments; www.sequoiasci.com/about/news/rothamsted-research-lisst-delivery/.

Planet Ocean, the Sequoia Distributor based in country, has supported clients throughout Europe for years with an attentive staff and extensive knowledge base of applications and technology for the multidisciplinary scientific community in the region.

SALTS

No news from sea this month I'm afraid

I know that this is a favourite section for many readers, where we get the inside information about life at sea, its thrills and spills. So please the next time you are at sea or carrying out any fieldwork, please remember that a simple paragraph or two will get you published here. – Ed

CALENDAR

18th-19th January 2022: Arctic Circle Abu Dhabi Forum

Abu Dhabi, United Arab Emirates

Organized in association with the United Arab Emirates Ministry of Climate Change and Environment; governments, universities, research institutions, organizations, associations, companies and other partners are invited to submit proposals for Sessions to the Arctic Circle Secretariat. Submit your proposal before the 15th December, www.arcticcircle.org/proposal-guidelines-for-the-abu-dhabi-forum; Accepted Sessions will be notified before the 20th December. For more information, visit www.arcticcircle.org/forums/arctic-circle-abu-dhabi-forum.

18th-20th January 2022: Coastal Futures - REACH Conference 2022; Innovation for Ocean Recovery

Online

COP26 and the UN Biodiversity conference have highlighted the need to move beyond the status quo and become much more active about

recovering what we have lost. The urgency of the challenge over the next few years is the key message, we need to take the good ideas, innovation, and turn them into routine practice. We hope this conference will inspire you to play your part and will brief you on wide range of work currently underway.



Images: ZSL, The Crown Estate, Environment Agency

There will be Six Keynotes presentations and twenty one sessions with over 60 speakers, who are leaders in this work. The full programme can be accessed at, coastal-futures.net/programme. Booking is open, you can book online and download the booking form from, site.corsizio.com/c/6155c182f21e281e93c586a7.

24th-26th January 2022 and 10th-12th May 2022: Pre-Conference Workshops & African Kickoff Conference for the Ocean Decade *Alexandria, Egypt and online*

Due to Covid-19 restrictions, the Pre-Conference workshops and the Ocean Decade Kick-off Conference in Africa have been postponed to January 2022 and May 2022, respectively.



We thank you for your understanding and invite you to follow the event pages below for more information.

Pre-Conference Workshops: bit.ly/3pkTSEb

African Kick-off Conference: bit.ly/3deH4K6

For more information, please contact: Mika Odido
m.odido@unesco.org.

14th–16th February 2022: International Ocean Data Conference 2022 - The Data We Need for the Ocean We Want *Sopot, Poland*

www.challenger-society.org

Since IODE-XXII (2013) every Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE) has been preceded by a Scientific Workshop or Conference. This was also planned for IODE-XXVI in 2021 but due to the Covid19 pandemic this was not possible: the IODE-XXVI Session was held as a fully online event.

The original host of IODE-XXVI (Poland) has kindly offered to host instead the **"International Ocean Data Conference 2022 - The Data We Need for the Ocean We Want"**. The Conference will be held as a hybrid event with a number of participants on-site while others will participate through video conference.



All presentations, papers and posters should be made available by the authors by mid to end of December 2021. For more information visit www.ioode.org/index.php?option=com_content&view=article&id=645:first-international-ocean-data-conference&catid=74&Itemid=100407.

27th February – 4th March 2022: Ocean Sciences Meeting 2022 *Honolulu, Hawaii, USA*

The session list for the Ocean Sciences Meeting 2022 scientific program is now available, www.aslo.org/osm2022/scientific-sessions/.



The Ocean Sciences Meeting 2022 will be held in Honolulu, but with virtual components. Attendees will have the option of participating in-person or remotely.

15th–17th March 2022: Oceanology International (OI) *London, UK*

Oceanology International (OI) is the leading global event connecting industry, academia and government with the ocean technology

community. It has a 50 year legacy as market leader in the oceanographic sector. A Truly global event with 8,000 attendees from 90 countries representing 15 diverse end-user sectors. It is the largest exhibition/trade show in this sector, with 480+ exhibiting companies.

Oceanology International London 2022 will connect you with 7,500 buyers and influencers from more than 80+ countries looking for innovative solutions to improve strategies for exploring, monitoring, developing and protecting the world's oceans. For 50 years, no other event has provided such a perfect global platform to showcase your solutions, from technical to strategic professionals from academia, government and over 15+ key industries, all unified by their use of ocean technology.

Demonstrate and promote your company's capabilities, generate qualified leads and strengthen and develop your networks both face-to-face in London, and digitally throughout the year. For more information and register, please visit www.oceanologyinternational.com/london/en-gb.html.

9th–12th May 2022: Fourth ICES PICES Early Career Scientist Conference

St. John's, Newfoundland, Canada

Hosted by Fisheries and Oceans Canada (DFO), www.dfo-mpo.gc.ca/index-eng.html, The International Council for the Exploration of the Sea (ICES), www.ices.dk/about-ICES/Pages/default.aspx, and North Pacific Marine Science Organization (PICES), meetings.pices.int, welcome you the fourth conference of this series, where early career scientists will have the opportunity to meet colleagues from around the globe who share similar interests and an enthusiasm to improve equality and diversity in marine science. The conference aims to foster the development of contacts, collaborations, and associations among early career scientists that will persist for decades and to establish personal and institutional networks that will help to advance our understanding of the marine environment.

The scientific sessions will be organized around the following themes:

Ecosystem and ocean processes

1. Biodiversity and ecosystem functions
2. Understanding food webs and biogeochemical cycles

3. Developments in taxonomy and systematics
4. Connecting biological, oceanic, and atmospheric processes of different scales

Inclusive, interdisciplinary, and transparent ocean sciences

1. Human–ocean interactions
2. Science, management, and policy for a sustainable and productive Blue Economy
3. Science communication, inspiration, and engagement

Emerging technologies and techniques for ocean science

1. Using remote and *in situ* technologies to inform marine science
2. Advances in techniques and technologies: from 'omics to gear modifications to data analysis
3. Towards open-source science: freely available methods and data in the marine research

Visit the ECSC4 website, www.ices.dk/events/symposia/ecsc4/Pages/default.aspx, to read more about the conference and the theme sessions and stay up-to-date by following us on Twitter @ECSC_4 for announcements of keynote speakers, the programme, and important dates. Registration and call for abstracts will open in October 2021.

16th–20th May 2022: 53rd International Liège colloquium on Ocean Dynamics, and GO2NE oxygen conference

Liège, Belgium

Oxygen is critical to the health of the planet. It affects the cycles of carbon, nitrogen and other key elements, and is a fundamental requirement for marine life from the seashore to the greatest depths of the ocean. Nevertheless, de-oxygenation is increasing in the coastal and open ocean. This is mainly the result of human activities that are increasing global temperatures (CO₂-induced warming) and increasing loads of nutrients from agriculture, sewage, and industrial waste, including pollution stemming from power generation using fossil fuels and biomass.

The 53rd Liège colloquium will investigate new developments and insights related to de-oxygenation in open and coastal waters. It is jointly organized with the Global Ocean Oxygen Network (GO2NE) and is a contribution to the Global Ocean Oxygen Decade (GOOD) program

endorsed by IOC-UNESCO. The following sessions are considered:

- De-oxygenation: understanding causes and attributing changes
- Assessing open ocean and coastal de-oxygenation variability and trends
- De-oxygenation: observing and modelling
- De-oxygenation and ocean life
- De-oxygenation and co-stressors: understanding, monitoring and mitigating deoxygenation in the context of multiple stressors
- Ocean De-oxygenation - how the past can inform the future?
- Microbial Communities and their controls on biogeochemical feedbacks and interactions
- De-oxygenation, water quality and the climate system: understanding processes and feedbacks and developing actionable indicators
- De-oxygenation: ecosystem services, economic and societal consequences.
- Confronting de-oxygenation and its impacts: translating science to management and policy



Deadline for Abstract submission: January 16th 2022. Further details (scientific committee, submission, registration, deadlines, venue etc...) are available on the web site <https://www.ocean-colloquium.uliege.be/>.

5th-9th September 2022: Challenger Society Biennial Meeting – celebrating the 150th anniversary of the Challenger Expedition
London, UK

To be hosted by the National History Museum, just a 'date for the diary', stay tuned.

19th-23rd September 2022: Open Science Conference on Eastern Boundary Upwelling Systems (EBUS): Past, Present and Future and the Second International Conference on the Humboldt Current System
Lima, Peru



The meeting will bring together PhD students, early career scientists and world experts to understand, review, and synthesize what is known about dynamics, sensitivity, vulnerability and resilience of Eastern Boundary Upwelling Systems and their living resources to climate variability, change and extreme events. For more information, visit www.ebus-lima2022.com/.

The CSMS email address is info@challenger-society.org.uk. Contributions for next month's edition of Challenger Wave should be sent to: john@vectisenvironmental.com by the 31st December.

JOBS and OPPORTUNITIES

Modelling Vacancy at Cefas

Job Title: Senior Biogeochemical Modeller

Deadline: 21st December 2021

The Centre for Environment, Fisheries and Aquaculture Science is the UK's leading and most diverse centre for applied marine and freshwater science. We currently rank in the top 5% of over 2,500 international institutes publishing in the same fields. We advise government and private sector customers in the UK and abroad on the environmental impact of their policies, programmes and activities through our scientific evidence and impartial expert advice.

This role provides an exciting opportunity to work across multi-disciplinary projects, collaborating with oceanographers, biogeochemists, marine ecologists, and fisheries scientists, delivering quantitative applied marine science for a range of UK and international customers. The successful applicant for this post will be involved in a range of biogeochemical modelling activities relevant to ocean and coastal processes. For example, linking catchments to coastal water quality, effects of eutrophication, seabed carbon sequestration, and the potential for Blue Carbon management. We are seeking an enthusiastic and adaptable individual, with a strong background in biogeochemical modelling. You will work with a wide network of scientists, from universities and research institutes, both nationally and internationally. You will enjoy liaising with colleagues from a diverse range of marine disciplines, expanding your knowledge of broader marine science applications, and contributing towards proposals and new ideas.

Additional information, including how to apply, can be found here:

<https://www.civilservicejobs.service.gov.uk/csr/jobs.cgi?jcode=1756591>

Informal enquiries can be made to Jennifer Graham (jennifer.graham@cefas.co.uk).

There are jobs on the IMBER web site

<http://www.imber.info>



Integrated Marine Biosphere Research

Jobs and opportunities

New

- **PhD: Industry-connected PhD studentship in marine vessel drag reduction with smart coatings, Memorial University of Newfoundland, Canada. Open until filled; apply now**
- 2023 John A. Knauss Marine Policy Fellowship Program now open
- Call for Shipboard Training Fellowships, Nippon Foundation and POGO
- Informational video: NOAA Pacific Islands Ocean Acidification Master's Student Fellowship: requirements, application process and important dates
- Postdoc: Marine genomics, Okinawa Institute of Science and Technology, Okinawa, Japan. No deadline given; **apply now**
- Postdoc: Predictability of Earth system and ecosystem models, UC San Diego, USA. Open until filled; **apply now**
- Postdoc: Marine system-based stakeholder process, University of Cape Town, South Africa. Open until filled; **apply now**
- Postdoc: Integrated marine ecosystem assessment, University of Cape Town, South Africa. Open until filled; **apply now**
- Research Assistant: Statistical Analysis for Global Deep Sea Capacity Assessment, short term contract with Ocean Discovery League. Open until filled; **apply now**
- Research Technician: San Francisco State University, San Francisco, CA USA. Open until filled; **apply now**
- Call for applications: US Carbon program leadership Award for North American Carbon Science Community. Rolling submissions through April 2022; **apply now**
- Junior Program Associate, International Ocean Acidification Initiative, The Ocean Foundation, Washington, DC. No deadline given; **apply now**
- Senior Consultant in Environmental Policy, ICF, UK or Belgium. No deadline given; **apply now**
- Research Assistant: coral reef project, SAAMBER, Durban, South Africa. Apply by **20 December**
- Assistant or Associate Professor: Quantitative Fisheries Science, University of Florida, USA. Apply by **31 December**
- Fish and Wildlife Biological Scientist, Division of Marine Fisheries Management, State of Florida, Tallahassee, Florida, USA. Apply by **2 January**
- PhD: Rewilding the Sea: Perceptions, Values and Challenges, University of Hull, UK. Apply by **7 January**
- Call for nominations: AtlantOS Steering Committee. Submit by **10 January**
- Assistant Professor, limited term: Marine Affairs program, Dalhousie University, Halifax, Canada. Apply by **14 January**
- Assistant Professor: Environmental Justice, UCLA, USA. Apply by **15 January**
- Senior Quantitative Marine Ecologist, South Atlantic Environmental Research Institute, Stanley, Falkland Islands. Apply by **15 January**
- Tenure track Scientists (up to ten positions), Woods Hole Oceanographic Institution, Massachusetts, USA. Apply by **18 January**
- Fisheries Scientist, National Institute of Water and Atmospheric Research, Central Wellington and Nelson, New Zealand. Apply by **20 January**
- Research Scientist: Quantitative Coastal Ecology, CSIRO, Australia. Apply by **20 February**
- Study at 4 of Europe's leading institutes in aquaculture / International Master of Science. Apply by **1 March**

In case you missed it...

- PhD: James Bay ecosystem - linking primary producers to top predators, University of Manitoba, Canada. Open until filled; **apply now**
- Postdoc: Oceanography, Department of Natural Sciences, University of Maryland - Eastern Shore. Open until filled; **apply now**
- Postdoc: Observations and modelling of polar aerosols, Marine and Antarctic Research Centre for Innovation and Sustainability (MARIS), University of Cape Town. Open until filled; **apply now**
- Postdoc: Aquaculture metabarcoding, Cornell University, Ithaca, NY, USA. Apply by **22 December**
- Internship: Southern Indian Ocean Fisheries Agreement. Apply by **30 December**
- Research Master's fellowships: Pacific Islands Ocean Acidification, NOAA. **Apply by 10 March** via the university/ institute where you will/are enrolled in research Master's program

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