

Challenger Wave



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

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NEWS

Call for nominations of CLIOTOP task teams
IMBER's regional programme CLIOTOP (Climate Impacts on Top Oceanic Predators) announces a

call for nominations for task teams to contribute to its international science program with a start in 2017.

CLIOTOP is an international research network open to researchers, managers, and policy makers involved in research related to large

marine species. Network participants organise large-scale comparative efforts to elucidate key processes involved in the interaction between climate variability and change and human uses of the ocean on the structure of pelagic ecosystems and large marine species. CLIOTOP seeks to develop predictive capability for these socio-ecological systems and evaluate adaptation options to ensure future sustainability.

Each year, CLIOTOP provides seed funding to support its task teams. Task teams are cross-disciplinary, problem solving and output oriented, with varying life times (e.g. 6 months to 2 years). They bring together experts from domains needed to resolve overarching questions orientated around the goals of CLIOTOP and be consistent with the Grand Challenges and Innovative Challenges of CLIOTOP's parent program IMBER (<http://www.imber.info>). Task teams may be led by individuals or groups, tasks may be simple (e.g. writing a paper) or complex (developing new approaches to addressing a problem). Seed funding can be used to assist with bringing task team members together, contribute to funding for research projects or workshops, or assist with publication costs for example. Funding is limited so cannot cover all costs associated with a project or activity. Further details on CLIOTOP's science goals, it's framework and current task teams can be found on the CLIOTOP website: <http://www.imber.info/en/projects/imber/science/regional-programmes/cliotop>

If you are interested in submitting a nomination for a task team we ask that you submit a proposal addressing the following 6 key elements by close of business **Friday 23 December 2016** to karen.evans@csiro.au. Task team nominations will be assessed by the CLIOTOP SSC against 6 key elements:

1. What is being proposed by the task team and over what period?
2. What outputs will be produced by the task team and what are the associated outcomes?
3. How will the outputs from the task team address the overarching science questions of CLIOTOP?
4. How will the task team help CLIOTOP meet its goals?
5. What resources is the task team expecting from CLIOTOP?
6. How will those resources be used by the task team in achieving the expected

outputs and outcomes from the task team?

Task teams will be expected to provide a short report to CLIOTOP on their activities which can be posted on the CLIOTOP website and included in regular activity reports to IMBER. Task teams are expected to identify their alignment with CLIOTOP in any publications arising from their activities and to provide copies of any publications for listing on the CLIOTOP and IMBER websites.

We would anticipate that nominations will be assessed in January with new task teams starting in February 2017. Any queries regarding nominations can be directed either to karen.evans@csiro.au or kevinweng@vims.edu.

2nd Challenger Society Coastal Ocean Special Interest Group workshop held at the UK Meteorological Office 22-23 November 2016

A group of scientists from UK research institutions and academia met together at the Met Office to review the latest developments in coastal ocean research and discuss future research directions. The Coastal Ocean Special Interest Group, kindly supported by the Challenger Society for Marine Science, provides a forum for dissemination of UK coastal ocean research and to explore future demands on, and opportunities for, the marine science community.

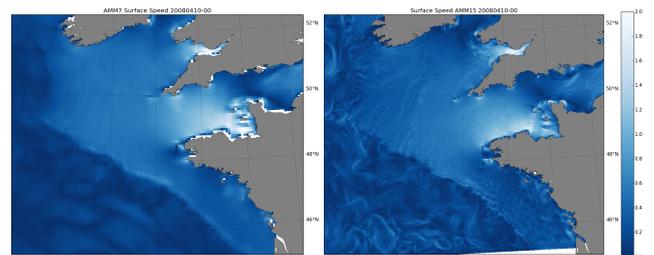


Illustration of “quantum shift” in future operational coastal ocean modelling capability, comparing a snapshot of surface currents (m/s) from (left) current 7 km horizontal resolution grid and bathymetry AMM7 system with (right) future 1.5 km horizontal resolution grid and bathymetry AMM15 system. (Figure courtesy of Jennifer Graham, Met Office)

As illustrated by a packed meeting agenda, the workshop content covered the full breadth of coastal oceanography including physical, biological and chemical oceanography from both observational and modelling disciplines. The meeting also continued the tradition in oceanography of facilitating ongoing dialogue and

interaction between those working at the forefront of the operational application of ocean models and observations, such as those provided by the [Met Office](#) and [National Partnership for Ocean Prediction](#) with those working at the more 'blue skies' research frontiers. Contributions were also gratefully received from established researchers with several decades experience and those early-career researchers and PhD students just setting out on their careers in marine science.

A number of presentations discussed work that sits across the traditional boundaries of ocean science, indicating that increasingly integrated and multi-disciplinary approaches to observation and modelling is already being delivered and is likely to become more critical in future. This is leading to much closer dialogue between observation and modelling specialists and between those working on physical oceanography and marine biogeochemistry. There is also a growing appreciation of the need to focus effort on improving observations and predictions in the very near coastal and estuarine regions. Interactions between the ocean and surface waves were also discussed, in the context of moving towards more integrated [Earth System or Environmental Prediction approaches](#) to observation and prediction.

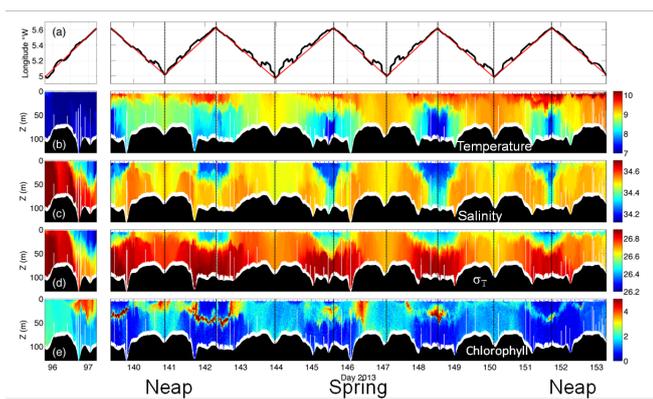


Illustration of sustained glider observations of physical and biological ocean properties in the western Irish Sea across a tidal mixing front. The prospects for the use of such glider data as a long-term solution for sustained observations of our coastal ocean was discussed at the workshop. (Figure courtesy of Matthew Palmer, National Oceanography Centre)

The Challenger Coastal Ocean Special Interest Group will continue to provide a forum for progressing these ideas. The meeting agreed to further champion and develop research proposals and collaborations which help to deliver ongoing improvements of the observation, understanding

and simulation of our coastal oceans, in order to deliver benefits to those using and impacted by the seas around us.

Scientists take 'blue-action' to help society cope with the impacts of dramatic Arctic climate changes

While the Arctic faces rapid warming and less sea ice currently covers the Arctic Ocean than ever before at this time of the year, an international partnership launches a major project to improve our detailed understanding of the processes and impacts of this changing climate and to construct better long-term forecast systems for the increasingly extreme weather of the Arctic and the wider northern hemisphere.

Blue-Action is a four-year research and innovations project funded by the European Union's Horizon 2020 programme with €7.5 million investment. It brings together 116 experts from 40 organisations in 17 countries on three continents working in academia, local authorities and maritime industries. Pooling their expertise, skills, approaches and networks, the partners aim to improve how we describe, model and predict the weather and climate on seasonal to decadal time scales in the Arctic and over the northern hemisphere. This information will allow communities and businesses in Eurasia and North America to develop and plan their activities better.

"We will deliver this by synthesizing observations, assessing model performance, conducting coordinated multi-model sensitivity experiments, reducing and evaluating the uncertainty in prediction systems and developing new initialization techniques" explains Dr Daniela Matei from the Max-Planck Institute for Meteorology in Hamburg, one of two coordinators of the project.

"Working directly with local communities, businesses operating in the Arctic and industrial organisations, *Blue-Action* will demonstrate new opportunities for growth through tailored climate services. These will give users the information they need to live and work safely and successfully in the rapidly changing regions in and surrounding the Arctic" says project coordinator Dr Steffen M Olsen from the Danish Meteorological Institute in Copenhagen. "We are starting today to reach out to the many communities and businesses in the far north to work with us to guide our research

direction and to co-develop adaptation mechanisms that will allow them to not only sustain but to boost their performance”.

“We will collaborate with other modelling and observational climate projects funded within the JPI-Climate Belmont-Forum, EU-H2020 frameworks to maximise the synergy and efficiency of our research efforts,” adds Dr Matei.



To thrive in the rapidly changing Arctic environment people, like polar bears, have to adapt swiftly. The new Blue-Action project will help empower Arctic communities and businesses to make informed choices through better forecast systems. (Photo copyright: Dirk Notz, Max-Planck Institute for Meteorology).

While the project begins its work on 1st December 2016, the *Blue-Action* kick-off meeting will be held 18-20 January 2017 at the Max Planck Society’s Harnack-Haus in Berlin. For more information, contact Euan Paterson, Scottish Association for Marine Science (SAMS), Blue-Action media officer, +44 7768 507 342, Euan.Paterson@sams.ac.uk (Or: Dr Anuschka Miller; E: Anuschka.Miller@sams.ac.uk, +44 7786 327780)

IEWS

Sonardyne welcomes Ioseba Tena as its new

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Global Business Manager for Marine Robotic Systems

Subsea technology company Sonardyne International Ltd. UK, has announced the appointment of Ioseba (Joe) Tena as its new Global Business Manager for Marine Robotic Systems. Joe joins Sonardyne with immediate effect and brings with him extensive experience gained over 20 years working with marine robotic systems, most recently, at SeeByte.

Early in his career Joe worked with marine robots as a Research Associate at Heriot-Watt University. His PhD was completed in 2001 and focused on navigating Autonomous Underwater Vehicles using imaging sonars. The following year, Joe became part of the original team of SeeByte founders working as part of the management team. In 2008, he became SeeByte’s sales manager responsible for the development and implementation of the sales and marketing process. Joe also led the recruitment and management of SeeByte’s sales and marketing team.



Ioseba Tena, formerly with SeeByte, has joined subsea technology company Sonardyne International Ltd as its new Global Business Manager for Marine Robotic Systems.

Commenting on his appointment, Joe said, “Over the last ten years, the industry’s witnessed how Sonardyne has expanded its product portfolio far beyond acoustic positioning to include inertial navigation, Doppler and high speed optical communications. With everything now available from one source, it’s no surprise that manufacturers of unmanned platforms are looking to integrate these solutions at the factory, and in doing so, engineer greater value and efficiency into their robotic systems. I’m really excited to

have been given the opportunity to help drive forward Sonardyne's offering for this rapidly evolving cross-market sector."

Once in a life time waterfront opportunity unveiled

One of the most exciting waterfront development opportunities in the country has now been unveiled. Plymouth Council is inviting preliminary expressions of interest in Phase 3 of the Oceansgate Enterprise Zone in Devonport. Docks and jetties which once saw the departure of Royal Naval ships could welcome state of the art marine manufacturing, heralding a new era in the history of one of the largest dockyards in Europe.

The 35 hectare complex features three docks, ranging from 84m to 145m long, which are suitable for many marine industry dockside operations and offer marine specialist companies a unique expansion opportunity. The dry dock facilities can be reinstated and the site has the capacity for deep water testing. Significant interest has already been generated in the site and the Council is now inviting informal expressions of interest from marine businesses for all or parts of Phase 3.

Council leader Ian Bowyer said: "This site has an extraordinary amount of potential. It's a unique opportunity. There is nowhere quite like it; a former naval site, with access to deep water in the country's first marine enterprise zone. This is a once in a life time opportunity for developers to become part of a very exciting story. As Britain's Ocean City we have some 300 marine and maritime related businesses here and a wealth of knowledge and expertise recognised across the world. Developing this site means we can capitalise on what Plymouth is great at."

Construction work on phase one of Oceansgate is due to start early next year. The £7.5m project, which has planning permission, will see the creation of offices and industrial units at the site's gateway. The facilities have been designed to be flexible and adaptable so they can include office, design suites, testing labs and training rooms for technology development and prototype production spaces as well as workshops for engineering and manufacturing. It also takes into account the historic nature of South Yard; which is five times the size of Royal William Yard and reflects the quality of the Plymouth Limestone buildings that exist on the site.

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The Council will receive responses until 1 February 2017 when it will review all the submissions. If businesses do not submit an Expression of Interest during this time it will not exclude them from any future formal processes that will be in place. Download an expression of interest form from our website, www.oceansgateplymouth.com/downloads-links

Plymouth's Marine sector supports 11.3 per cent of the jobs in Plymouth including scientists, engineers, boat, shipbuilders and repairers; that's around 13,600 jobs. Around 300 marine and maritime related businesses are worth more than £400 million a year to the region. It provides high-value, sustainable jobs, which have a significant economic impact, strong export potential and good growth prospects. For further information please contact: Jane Slavin, Corporate Communications Officer, Tel: 01752 304049, Fax: 01752 304933, or Email: jane.slavin@plymouth.gov.uk

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

11th-13th December 2016: Arctic Circle Québec Forum

Québec City, Canada

The program for the Arctic Circle Québec Forum is now available, and registration is open [here](#). Organized together with the Government of Québec, the Forum will be opened by Philippe Couillard, Premier of Québec, and Ólafur Ragnar Grímsson, Chairman Arctic Circle and former President of Iceland (1996-2016).

Discussions will focus on the sustainable development of northern regions, using examples

from Québec and other provinces in Canada, as well as Greenland, Alaska, Iceland, Finland and Norway. Québec will present its own approach as implemented in the Plan Nord, and other participants will share their experience and expertise in this area. The event will apply a comparative and interactive approach. Click to view the [program](#) or a mobile-friendly version of the [program](#), and we hope to see you soon in Québec City !

20th-24th February 2017: Marine Imaging Workshop 2017
Kiel, Germany



The Marine Imaging Workshop 2017 follows on from a successful 2014 workshop, and invites anyone using visual imagery in the marine realm: scientists, engineers, researchers, regulators, and commercial partners. The focus is on developments and challenges in methods of marine optical imaging: imagery acquisition, processing and manipulation, annotation, segmentation and automated strategies, data management, application to scientific aims, and outlook and future developments.

Important Dates

30 Sept 2016	Registration and abstract submission open
8 Nov 2016	Abstract submission deadline
25 Nov 2016	Abstract acceptances announced
16 Dec 2016	Registration deadline
13 Jan 2017	Photo competition entry deadline
20-23 Feb 2017	Workshop

Registration

Attendance is limited to 120. Those with presentations (talk/poster) will be given preference – limit of 1 talk per attendee (additional posters available).

Please register on the workshop website. The registration fee is 250 € (+optional conference dinner), to be paid upon abstract acceptance.

Photo competition

Submit your best marine images to be judged for prizes! Adriana Basques is an international award winning underwater photographer who will judge the entries (<http://www.adrianabasques.com>). See contest rules on the workshop website.

Accommodation

Special rates at some Kiel hotels are provided for workshop attendees. Details are on the workshop website.

www.marine-imaging-workshop.com

23rd-28th April 2017: European Geosciences Union General Assembly
Vienna, Austria
The abstract Deadline is 11th January 2017.

Craig Smeaton from the University of St. Andrews invites the submission of abstracts for the session BG3.3/OS3.9, entitled *Coastal Carbon: From Vegetated Coasts to Sedimentary Stores*, which he is convening alongside William Austin (also University of St. Andrews), Hilary Kennedy (University Bangor), Evina Gontikaki (University of Aberdeen) and Thomas Bianchi (University of Florida). We welcome abstracts from researchers of any level working on aspects of coastal carbon, additional details of the session can be found at

www.challenger-society.org

<http://meetingorganizer.copernicus.org/EGU2017/session/24946>.

The *Copernicus Marine Environment Monitoring Service (CMEMS)* session, OS4.6, will focus on studies of:

- scientific advances on thematics relevant to CMEMS that are needed for the short to long term evolution of the CMEMS products.
- verification, validation and uncertainty estimates of CMEMS products, forecasting skills.
- the use of CMEMS products for downstream applications.
- ocean monitoring and on the long-term assessment of the ocean physical and biogeochemical states.

Please note that presentations are not to be limited to research teams directly involved in CMEMS, and participation from external teams is strongly encouraged. A detailed description is available in the direct link to session OS4.6, <http://meetingorganizer.copernicus.org/EGU2017/session/24345>. The deadline for abstract submission is **January 11th 2017**. General information on the General Assembly, in particular instructions for submitting abstracts are available at <http://egu2017.eu/home.html>.

19th-22nd June 2017: Oceans '17 conference
Aberdeen, Scotland



This flagship conference covers all aspects of ocean science, technology and engineering and returns to Aberdeen, highlighting the importance and size of the oceanic industry to the region. The conference programme will include not only the traditional OCEANS themes but there will also be special topics focusing on the region's expertise.

For more information on the conference, exhibition, patronage opportunities, and attending the event please visit the conference website: www.oceans17mtsieeeaberndeen.org



6th-7th September 2017: Advances in Marine Biogeochemistry Conference VIII
Oban, Scotland

Save the date for AMBIO VIII, more information nearer the time, www.challenger-society.org.uk/Marine_Biogeochemistry_Forum

Advances in
Marine
Biogeochemistry
Conference VIII

Save the date!
6 – 7 Sept 2017
at SAMS in Oban

Marine Biogeochemistry Special
Interest Group of the Challenger Society



Organisers:
MBF Chair: Gary Fones, Uni. Portsmouth
AMBIO VIII Co-convenors: Kirsty Crocket and Natalie Hicks, SAMS
Photo: Emma Defew and Mark James

AMBIO meetings set the stage for Marine Biogeochemistry in the UK, connecting disciplines within the field and establishing networks for the integration of early career scientists. The AMBIO VIII meeting in September 2017 is to be hosted at the Scottish Association for Marine Science in Oban. Save the date! Registration will open in early 2017.

Info: www.challenger-society.org.uk/Marine_Biogeochemistry_Forum
Contact: kirstycrocket@sams.ac.uk, natalie.hicks@sams.ac.uk

2nd-6th October 2017: the 5th IMBIZO

Woods Hole, MA, USA

Mark the dates !, IMBER will hold its fifth IMBIZO (the Zulu word for a gathering) at the Woods Hole Oceanographic Institute. The theme of IMBIZO V will be: *Marine biosphere research for a sustainable ocean: Linking ecosystems, future states and resource management*. We will follow the usual IMBIZO format of three concurrent but interacting workshops – topics to be announced soon. Please spread the news widely.



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 30th December.

We continue to send printed copies of Challenger Wave to members of the CSMS without email addresses. However it is in everybody's interest to send your email address to Jennifer Jones jxj@noc.ac.uk as soon as possible

JOBS

Two PhD studentships

PhD 1: [Role of the world's deepest living marine algae in the global carbon cycle](#)

Supervisors: Dr Heidi Burdett (Lyell Centre) and Prof Graham Turnbull (University of St Andrews)

This fully-funded Lyell scholarship will use a range of fluorescence and biogeochemical techniques to investigate the primary production of coralline algae, the world's deepest living marine photosynthesisers, and identify how this impacts local and regional carbon cycling in the mesophotic zone. This multi-disciplinary project is in collaboration with Prof Graham Turnbull, University of St Andrews, and engagement with non-academic partners will set the project within the wider policy context. More information about the project can be found [here](#), and details of how to apply are [here](#). This project is open to UK, EU and international applicants; deadline for applications is 31st January 2017. Start date is flexible, but should be by October 2017.

PhD 2: [Resilience of coralline algae to oil contamination via intricate microbial associations](#)

Supervisors: Drs Heidi Burdett (Lyell Centre), Tony Gutierrez (Heriot-Watt University) & Lynda Webster (Marine Scotland Science)

This competitively-funded studentship will characterise how the microbial community of coralline algae, a globally distributed calcifying seaweed, interacts with its host, and determine the effects of contamination from the oil and gas industry (hydrocarbons, dispersants, etc) on these microbiome-host interactions. More information about the project can be found [here](#), and details of how to apply are [here](#). This project is in collaboration with Marine Scotland Science and is part of the NERC Oil & Gas CDT, providing unique opportunities for industrial and policy engagement. NERC eligibility rules apply; deadline for applications is 31st January 2017. Start date is October 2017.

Contact: Dr Heidi Burdett, Research Fellow
Lyell Centre for Earth and Marine Science and Technology
Research Avenue South
Edinburgh
EH14 4AP

There are also jobs on the IMBER web site

<http://www.imber.info>

IMBER e-News

Visit the IMBER Website

Jobs and opportunities

- [Postdoc: Physical oceanography at University of Gothenburg, Sweden](#)
- [Interdisciplinary PhD Course in Marine Sustainability in Norway](#)
- [Postdoc: Bioinformatics at University of Bergen's Marine Biodiversity Group, Norway](#)
- [PhD: Impact of climate change on Arctic foodwebs at SAHFOS and U Liverpool in UK](#)
- [Oceanographer position, University of Hawaii, Honolulu, Hawaii](#)

Calls

- [Call for experts to serve on Ocean Observations Panel for Climate \(OOPC\)](#)
- [Public stakeholder consultation for interim evaluation of Horizon 2020](#)
- [Call for proposals for MarineGEO Postdoc fellowship](#)
- [IPCC Call: Lead Authors and Review Editors for the "Special Report on Global Warming of 1.5°C"](#)

Announcements

- [ESSAS Open Science Meeting: Moving in, out & across Arctic and Subarctic ecosystems](#)
- [2016 Global carbon budget has been published](#)
- [Photographic exhibition from the IMBER-endorsed BIOACID project](#)
- [Ocean Actions Day at COP22 Report](#)

imber@imr.no

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