

IMOS Bulletin

Issue #69 September 2017

Welcome to the IMOS Bulletin. Please feel free to distribute this email bulletin to others. The Bulletin is also available for download from the website at <http://imos.org.au/bulletin.html>.

If you have any comments or questions regarding the IMOS Bulletin please contact IMOS Communications, communication@imos.org.au.

From the IMOS Office

Below is a brief roundup of activity and engagement done through the IMOS Office over the last month.

- The IMOS Director convened a three-day Global Ocean Observing System (GOOS) Regional Alliance Forum in Singapore on 5-7 September. IMOS is currently chairing the 13-member 'GRA' Council, and had responsibility for organising this biennial Forum event. As Chair of the GRA Council, the IMOS Director is also an *ex officio* member of the GOOS Steering Committee, which met in Singapore in the following week (11-13 September). More detail on these events is given in the item below.
- A Node Steering Committee meeting was held on 21 September. Agenda items included 2017-19 planning and budgeting (including discussion of the AUV work program), Engagement strategy and Node renewal, and the 2018 IMOS Annual Planning Meeting.
- The Ocean Colour Radiometry (OCR) Task Team has delivered its report, and recommendations were discussed with the IMOS office on 28 September.
- A third Harmful Algal Blooms meeting was held at the IMAS building in Hobart on 1 September. IMOS Scientific Officer, Ana Lara-Lopez convened the meeting which was attended by IMOS Director, Tim Moltmann, and industry representatives and regulators.

IMOS Activity Planning

Deployment and maintenance activities next month include:

- The Argo Floats Facility will deploy four floats from the *Kaharoa* in the Pacific Ocean with CSIRO, Scripps and the Royal Australian Navy (RAN)
- The Autonomous Underwater Vehicles facility, in partnership with SIMS, Deakin University and Parks Victoria will deploy a smaller AUV, *Iver*, off Gippsland, Victoria.

Future activity planning for the IMOS Facilities is provided via the IMOS website (<http://imos.org.au/imosactivityplanning.html>). The activity plans contain details for all the planned deployment/recovery/servicing/sampling etc. activities. Note that the 2017-18 activities are still being finalised.

IMOS is a national collaborative research infrastructure, supported by Australian Government. It is operated by a consortium of institutions as an unincorporated joint venture, with the University of Tasmania as Lead Agent.

The latest news from the Australian Ocean Data Network (AODN)

Help is at hand! How the Australian Ocean Data Network (AODN) Helpdesk support process works



The AODN maintains, enhances and supports numerous applications and platforms (not just the AODN Portal); these applications include the IMOS Matlab Toolbox, Animal Tracking Database, Autonomous Underwater Vehicle Images Viewer and IMOS OceanCurrent.

The AODN Helpdesk is in place to ensure that any queries received are addressed, monitored and recorded in a centralised location.

The majority of Helpdesk queries arrive via email to info@aodn.org.au, on the odd occasion a phone call (03-6226 7488), and more recently enquiries via social media. Email is the AODN preferred method, it ensures the query is never missed as it is distributed to a group and it provides an accurate record of the initial request.

In many cases answers to queries about the AODN Portal can be found in the [Portal User Guide](#).

Further information on AODN help services is in the recent [AODN News item](#).

The IMOS data holdings are detailed in a suite of reports generated by the AODN on a monthly basis. The summary reports for July 2017 can be downloaded directly via the IMOS website <http://imos.org.au/datareports.html>.

Did you know?

This section features news from the marine science community and highlights various ways in which you can discover, access and use IMOS data.

IMOS site information displayed through The National Environmental Monitoring Sites Register

The National Environmental Monitoring Sites Register ([NEMSR](#)), is managed by the National Environmental Information Infrastructure (NEII) at BOM.

NEMSR provides a consolidated view of Australia's environmental monitoring sites. It brings together a diverse range of networks across environmental domains, including seismic monitoring stations, ocean radars, long-term weather observation sites, flux stations, and ground cover reference sites. Other nationally-important networks are coming soon.

AODN submitted site information under four networks (will soon be split up into more networks) listed under the Ocean sites.

Go to the data viewer - <http://neii.gov.au/viewer/>, “add data” on the left hand side, select “Environmental Monitoring sites register”, and add any of the ocean networks by clicking “+”.

Location of the sites is displayed on the map, and if you select a point, information is provided about the site in the pop-up window. A probable enhancement in the near future is different colours representing active and inactive sites.



NEMSR’s interactive map shows Australia’s environmental monitoring sites, including IMOS sites

IMOS AUV captures an unusually large group of Port Jackson sharks in the Beagle Commonwealth Marine Reserve

An unusually large assemblage of Port Jackson sharks was a surprise highlight for scientists surveying life in the Beagle Commonwealth Marine Reserve (CMR) earlier this year.

Hundreds of the distinctive, dark-striped sharks were massed on the sandy seafloor among low rocky reefs covered with brightly coloured sponges.

Research leader Neville Barrett of the University of Tasmania Institute of Marine and Antarctic Studies (IMAS) said it was the largest aggregation of Port Jackson sharks he’d ever seen.



Part of a large group of Port Jackson sharks pictured by the Sirius autonomous underwater vehicle during a pilot survey of deep rocky reefs in Beagle Commonwealth Marine Reserve conducted from the RV Bluefin. Image: IMOS

The voyage was part of national programs run by the Integrated Marine Observing System and the National Environmental Science Programme Marine Biodiversity Hub to survey and monitor seafloor life beyond diving depths in the waters of Australia's continental shelf. It was supported by funding from Parks Australia which manages the Commonwealth Marine Reserve Network. This was the tenth mission in Tasmanian waters for the IMOS AUV Sirius, which is operated by engineers from the University of Sydney and the Australian Centre for Field Robotics.

Read more about the voyage in the [IMOS News item](#) and the 40° South article [The truth about sponges](#).

See [footage of this rocky reef habitat](#), including the large assemblage of Port Jackson sharks on YouTube



The Global Ocean Observing System

Tim Moltmann recently convened a three-day Global Ocean Observing System (GOOS) Regional Alliance Forum in Singapore and then met with the GOOS Steering Committee. He has provided some brief notes on the events.

As current chair of the 13-member GOOS Regional Alliance (GRA) Council, IMOS had responsibility for organising the biennial Forum event. The Forum provided an excellent opportunity to showcase IMOS, benchmark against other regional observing systems, and explore new partnerships and collaborations. For example, as a result of discussions in Singapore, we hope to have representatives from both South Africa and Indonesia in attendance at the IMOS 2018 Annual Planning Meeting.

The global High Frequency Radar community and the international Ocean Glider community both provided updates on status and issues. It is interesting to note that Simone Cosoli and Chari Pattiaratchi were asked to represent these two communities at the GRA Forum, providing another indication of the strong contribution IMOS is making to ocean observing at the international level. The GRA Forum agenda and papers can be found on the GOOS website ([here](#)) and a meeting report will be available soon.

As Chair of the GRA Council, the IMOS Director is also an *ex officio* member of the GOOS Steering Committee, which met in Singapore in the following week (11-13 September). Major topics of discussion included the state of the observing system, GOOS Strategic Plan, and updates from the three expert panels (physics, biogeochemistry, and biology & ecosystems). It was noted that plans are now underway for the third, decadal 'OceanObs' conference (OceanObs'19), to be held in Honolulu on 16-20 September 2019. Sign up to stay informed at <http://www.oceanobs19.net/>. The GOOS Steering Committee agenda and papers can be found on the GOOS website ([here](#)) and a meeting report will be available soon.

Paper of the month

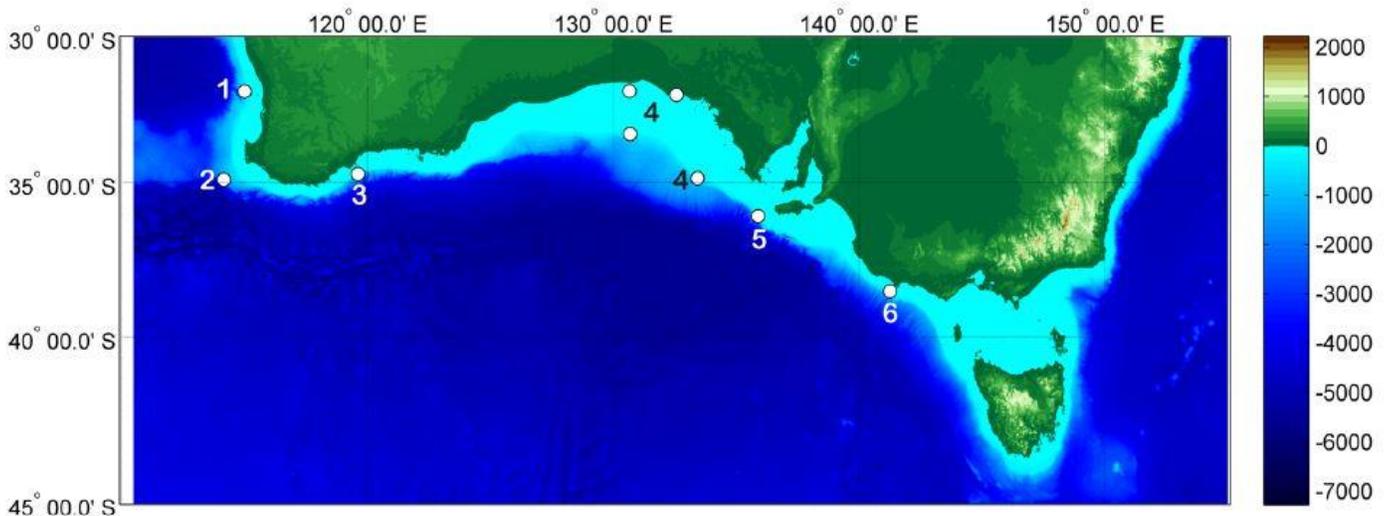
This month we'd like to highlight the following paper that references IMOS data:

Rhianne Ward, Alexander N. Gavrilov, and Robert D. McCauley

“Spot” call: A common sound from an unidentified great whale in Australian temperate waters, *The Journal of the Acoustical Society of America*, August 2017

Underwater passive acoustic recordings in the Southern and Indian Oceans off Australia from 2002 to 2016 have regularly captured a tonal signal of about 10 s duration at 22–28 Hz with a symmetrical bell-shaped envelope. The sound is often accompanied by short, higher frequency downsweeps and repeated at irregular intervals varying from 120 to 200 s. It is termed the “spot” call according to its appearance in spectrograms of long-time averaging. Although similar to the first part of an Antarctic blue whale Z-call, evidence suggests the call is produced by another great whale, with the source as yet not identified.

Read the full paper online: <http://dx.doi.org/10.1121/1.4998608>



Locations of underwater noise recorders where individual spot calls and/or spot call choruses have been recorded: 1—IMOS Perth Canyon; 2—CTBT H01; 3—Bremer Bay; 4—GAB; 5—IMOS Kangaroo Island; 6—IMOS Portland.

Upcoming Events

4th World Conference on Marine Biodiversity, 13-16 May 2018, Montréal, Canada



Abstract submissions are invited for the 4th World Conference on Marine Biodiversity special session on:

“Sustained observations of life as an integral component of coastal and ocean observing systems”

Chairs of the session: Patricia Miloslavich (GOOS/IMOS/University of Tasmania) and Eduardo Klein (Universidad Simón Bolívar, Venezuela).

The goal of this session is to show temporal trends in marine biodiversity, distribution and abundance based on long term observations and datasets. Abstract submissions are welcomed on case examples that illustrate how sustained ocean biodiversity observations help understand if, and how, ocean life is responding to global changes as well as on case examples of successful implementation of management practices based on long term data.

Discussions will be focused on 1) the societal requirements for sustained biological ocean observations, 2) the need for coordination to maximise global implementation and coverage, 3) the technological developments needed to improve our observing capacity, 4) lessons learned from biological ocean observations, 5) examples of integration across disciplines, and 6) Data management.

Abstracts submitted to this session may be considered for publication in a collection in *Frontiers of Marine Science* (section Marine Evolutionary Biology, Biogeography and Species Diversity). The topic of the collection will be: "Monitoring Marine Biodiversity from Microbes to Apex Predators: Why, What, and How" (Guest Editors: Thomas Malone, Anthony Knap).

Submission of abstracts deadline extended to: 1 December, 2017, <http://www.wcmb2018.org/>

Enquiries: Patricia Miloslavich, Patricia.Miloslavich@utas.edu.au or pmilos@usb.ve

Applications are now open for the ACE CRC's Summer Internship Program.

Three successful student applicants will receive the opportunity to work alongside leading Australian climate scientists at our headquarters in the University of Tasmania's Waterfront Building in Hobart. Interns will also receive a stipend of \$700 per week to cover living expenses. **The deadline is 5pm on October 13.**

Details of the three projects on offer in this round are all on the [ACE CRC website](#).

- **2 – 13 October 2017** GODAE OceanView International School, New Frontiers in Operational Oceanography, Mallorca, Spain. <https://www.godae-oceanview.org/outreach/education-training/gov-summer-school-2017/>
- **3 – 5 October 2017** EuroGOOS International Conference: Operational Oceanography serving sustainable marine development, Bergen, Norway. <http://eurogoos.eu/events/eurogoos-international-conference/>
- **5 – 6 October 2017** Our Ocean, Malta. <http://ourocean2017.org/>
- **24-26 October 2017** 3rd Australian Wind Waves Symposium, Perth, Western Australia. Register your interest and/or submit abstracts to: 3windwaves-oceans@uwa.edu.au before Friday 18 August 2017.
- **1-3 November 2017** Oceanology International, Qingdao, China <http://www.oichina.com.cn/en/Conference-Activities/OI-China-2017-Conference-Forum/>
- **22-30 November 2017** WAMSI Research Conference 2017, Perth, Western Australia. <http://www.wamsi.org.au/wamsi-research-conference-2017>
- **5-9 February 2018** 25th AMOS National Conference and 12th International Conference for Southern Hemisphere Meteorology (AMOS-ICSHMO), Sydney, New South Wales. <https://www.amos-icshmo2018.com.au/>
- **11-16 February 2018** Ocean Sciences, Portland, USA. <http://osm.agu.org/2018/> Abstract submission deadline for AGU Ocean Sciences is **6 September 2017**. There are a number of sessions covering biology and physics, one session titled From Physics to Predators: Understanding Bottom-up Forcing of Pelagic Ecosystems, may be of interest.
- **26-28 February 2018** IMOS Annual Planning Meeting, Hobart, Tasmania. This is an invitation only event.

For a full list of upcoming conferences please visit the Calendar page at <http://imos.org.au/calendar.html>. If you would like an event or conference featured on our website calendar please contact communication@imos.org.au.