

IMOS Bulletin

Issue #67 July 2017

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

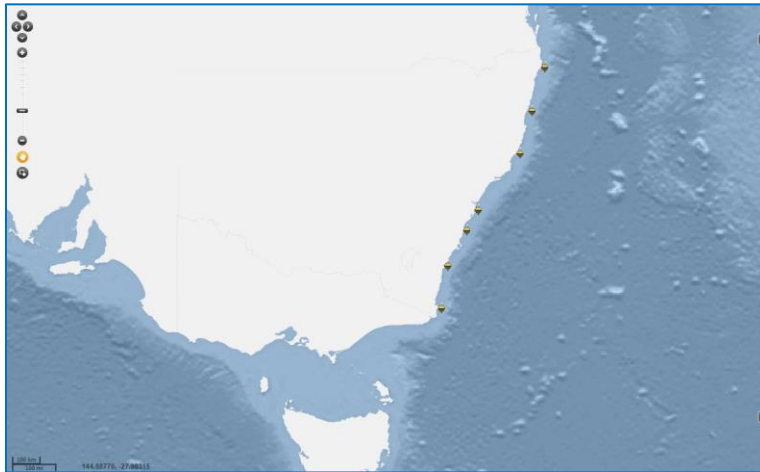
From the IMOS Office

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

- Tim Moltmann, Ana Lara-Lopez and Indi Hodgson-Johnston attended the annual AMSA conference in Darwin on 3–6 July. The final morning of the conference had a focus on celebrating the first 10 years of IMOS, with plenary talks by Moninya Roughan (UNSW/Metocean Solutions), Richard Brinkman (AIMS), Rob Harcourt (Macquarie/SIMS) and Anthony Richardson (UQ/CSIRO). Ana Lara-Lopez and colleagues also led a session on ‘Observing the north’ with a number of presentations drawing on IMOS observations and data. AMSA has been a wonderful forum for showcasing IMOS over the years, and we thank the National Council and the 2017 organising committee for their support.
- IMOS Director attended a NESP Earth Systems & Climate Change Hub stakeholder advisory committee teleconference on 11 July.
- A National Marine Science Committee meeting was held in Canberra on 20 July.
- The second Australian Forum for Operational Oceanography (FOO) conference was held in Fremantle, WA on 25-27 July. Feedback from the 120 participants was very positive. We came away with increased confidence that the Forum is addressing an unmet need, and that it should endure. A meeting report will be available soon. If you want to know more about FOO, please register your interest [here](#).

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

Wave and Sea Surface Temperature data collected by the NSW-OEH Manly Hydraulics Laboratory (MHL) available on the AODN portal



Detail of AODN Data Portal map showing location of Manly Hydraulics Laboratory waverider buoys

Manly Hydraulics Laboratory (MHL), part of the NSW Office of Environment and Heritage (OEH), operates a system of waverider buoys off the NSW coastline.

The buoys measure wave height and other wave statistics such as wave period and wave direction.

Sea Surface Temperature data (SST) is also collected for each wave rider buoy. Thermistors are mounted inside the buoys, at the base of the hull about 0.5m below the water surface.

Recent work has been performed to update the dataset collection containing the wave data (<https://portal.aodn.org.au/search?uuid=bb7e9d82-3b9c-44c6-8e93-1ee9fd30bf21>) in order to extend the temporal coverage up to December 2015 and to also publish for the first time the associated SST data (<https://portal.aodn.org.au/search?uuid=81c5f192-d4af-4dfe-a660-af15ae46a22a>).

Data collected at the following seven buoy sites along the NSW coast is available through the AODN portal:

- Port Kembla (February 1974 – December 2015)
- Coffs Harbour (May 1976 – December 2015)
- Byron Bay (October 1976 – December 2015)
- Eden (February 1978 – December 2015)
- Crowdy Head (October 1985 – December 2015)
- Batemans Bay (May 1986 – December 2015)
- Sydney (March 1992 – December 2015)

In step 2 of the AODN portal, the user can filter the data by site, spatial extent and temporal extent before downloading the corresponding data in CSV or netCDF format.

The IMOS data holdings are detailed in a suite of reports generated by the AODN on a monthly basis. The summary reports for June 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.

New AODN Data Submission Tool (DaST) has been released which simplifies the creation of metadata records for submission to both the AODN catalogue and AODN Portal.

The simplification of metadata submission has been identified as a key factor to encourage users to create and submit their own metadata. The use of software tools such as GeoNetwork is commonly understood to be a factor limiting the creation of metadata due to the complexity of the tools and the understanding required to use them. The mandatory submission of data and associated metadata is becoming a more commonplace occurrence, and simplifying the submission process will help to make the experience more enjoyable and achievable.

The AODN has previously advocated [ANZMETLite](#), a metadata entry tool that runs under windows with a wizard user interface, designed to connect with GeoNetwork. The new AODN metadata tool provides a more intuitive user interface that is online, and allows users to submit associated files or data files as part of their submission. Users are provided with a personalised dashboard, which allows for management of all draft, submitted and uploaded metadata records.

Users are able to access the tool via this URL: <https://metadataentry.aodn.org.au/submit/>, or it can be accessed from the [IMOS Website](#). A [help guide](#) is available to aid users in metadata creation, as well as providing steps on how to complete a compliant metadata record that can be submitted to the [AODN metadata catalogue](#), and where possible be published on the [AODN Portal](#).

The AODN would like to acknowledge initial development of this tool by the Institute for Marine and Antarctic Studies (IMAS), and the subsequent work, co-funded by [Research Data Services \(RDS\)](#), to make it applicable to the AODN catalogue and AODN Portal. Software development was completed by [Condense](#).

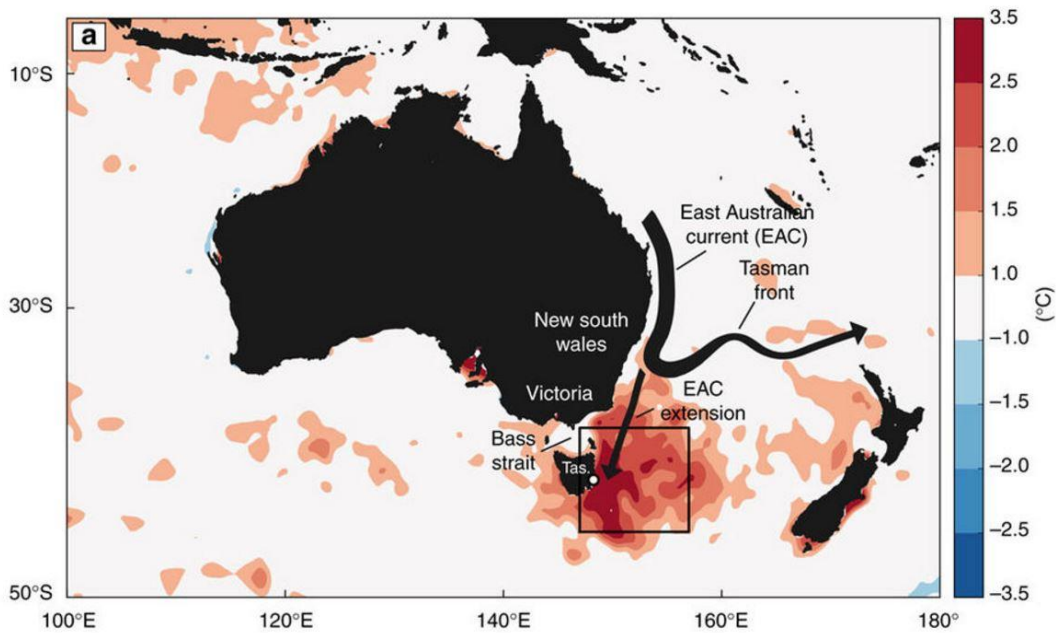
Paper of the month

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

ECJ Oliver, JA Benthuisen, NL Bindoff, AJ Hobday, NJ Holbrook, CN Mundy & SE Perkins-Kirkpatrick. 2017. The unprecedented 2015/16 Tasman Sea marine heatwave. *Nature Communications*, **8**, doi:10.1038/ncomms16101

A new study published in *Nature Communications* reports on the intense marine heatwave that occurred in the Tasman Sea in 2015/16, using data from the Maria Island National Reference Station and ocean surface circulation data from IMOS *OceanCurrent*. The 2015/16 marine heatwave in the Tasman Sea was the longest (251 days) and most intense (+2.9 °C maximum anomaly) event on record in this region. This event was identifiable in daily remotely sensed SSTs, monthly gridded *in situ*-based SSTs and daily *in situ* near-shore sub-surface loggers. The event impacted regional biodiversity, such as the appearance of marine species normally found further north, and was a detrimental stressor on coastal fishery and aquaculture industries, including the abalone, Pacific oyster and Atlantic salmon industries.

Read the full paper online: <https://www.nature.com/articles/ncomms16101>



The mean 2015/16 austral summer (December to February) mean SST anomalies from NOAA OI SST, the box used to define the southeast Australia (SEAus) region (black lines) and the location of the Maria Island Time Series (open circle). Anomalies are relative to the 1982–2005 climatology.

Postdoctoral Fellowships at CSIRO Oceans and Atmosphere in Hobart, Tasmania

CSIRO are recruiting two postdoctoral fellows for a new project on Environmental Genomics of coastal environments at CSIRO Oceans and Atmosphere.

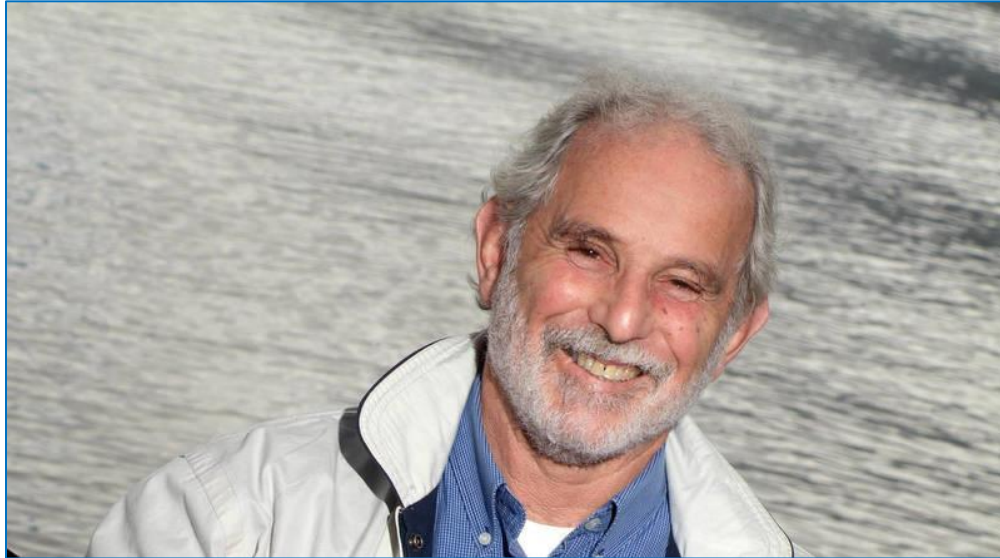
They are seeking candidates with experience in:

- 1) Microbial Ecology of Coastal Environments: please read the full job description [here](#).
- 2) Biogeochemistry of Coastal Environments: please read the full job description [here](#).

Applications close by the 21st of August.

Upcoming Events

AMOS-ICSHMO 2018 to honour Gary Meyers



Gary Meyers, IMOS foundation Director

The joint 25th AMOS National Conference and 12th International Conference for Southern Hemisphere Meteorology and Oceanography, AMOS-ICSHMO 2018, will this year host a special session 'Variability and change in the Indo-Pacific and Australian regional seas' in honour of the founding director of IMOS, Gary Meyers.

This session invites contributions based on observations, modelling, and theory that address Indo-Pacific variability and change across a range of timescales. In particular, we welcome submissions on Indo-Pacific exchange, the Indonesian Throughflow, regional oceanography around Australia, and contributions focused on sustained observing systems, such as the IMOS or RAMA systems. The session is convened by Caroline Ummenhofer, Woods Hole Oceanographic Institution, Helen Phillips, University of Tasmania, and Tim Moltmann, IMOS.

[Dr Meyers](#) was an eminent oceanographer at CSIRO in Hobart for many years before taking up the role of Director of IMOS in 2007. His contributions have been instrumental in advancing research on a wide variety of topics, such as understanding the circulations in the Indian and Pacific Oceans, the Indonesian Throughflow, and the role of the Indian Ocean in regional climate variability and change.

Abstract submission close: August 31. See: <https://www.amos-icshmo2018.com.au/>

Australian Coastal and Oceans Modelling and Observations Workshop (ACOMO) 2018 Workshop

ACOMO 2018 will be held in Canberra's Shine Dome on the **9-11th October 2018**.

The ACOMO 2018 Steering Committee has agreed to have a **special issue** published in the **Journal of Marine Systems** <https://www.journals.elsevier.com/journal-of-marine-systems> for the ACOMO 2018 workshop with the title "*Integrated approaches for coastal and ocean modelling and observation in Australia*". The timeline for submissions will be announced next year. This early announcement aims to provide enough time for participants to consider possible contributions to this issue, and adequate time to work with colleagues and reach out to others for collaborations. For more information please contact Dr. Ana Lara-Lopez Ana.Lara@utas.edu.au.

- **21 – 25 August 2017** Online training for Using the Copernicus Marine Data Stream for Ocean Applications. The classroom phase of the course will be **4-8 September** in Oostende, Belgium. The deadline for application is Wednesday, 7 June 2017 via <http://training.eumetsat.int/course/view.php?id=158>
- **27 August – 1 September 2017** Joint IAPSO-IAMAS-IAGA Assembly in Cape Town, South Africa. <http://www.iapso-iamas-iaga2017.com/index.php>
- **5 – 7 September 2017** Eighth GOOS Regional Forum Meeting, Singapore. http://goosocean.org/index.php?option=com_oe&task=viewEventRecord&eventID=1973
- **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/>
- **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.