



IMOS Bulletin

Issue #71 November 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.

- IMOS Director gave an invited keynote at the [Oceanology International China](#) Conference in Qingdao, on 1-3 November. Also visited the Qingdao National Laboratory for Marine Science and Technology, the Chinese partner in the new CSIRO Centre for Southern Hemisphere Ocean Research (CSHOR).
- Attended a Reef Integrated Monitoring and Reporting (RIMREP) Steering Committee Meeting in Brisbane on 10 November.
- Tim Moltmann and Helen Beggs have joined the Steering Committee of a new NASA project called COVERAGE, and attended their first meeting by teleconference on 16 November.
- An IMOS Node Steering Committee meeting was held on 23 November.
- WAIMOS has a new Node Leader in Dr Nicole Jones (UWA), and an introductory discussion was held on 24 November. Our thanks go to Julian Partridge (UWA) as the outgoing WAIMOS Node Leader.
- A Forum for Operational Oceanography Steering Committee Meeting was held on 24 November.

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

Enhancements made to the Autonomous Underwater Vehicles (AUV) Images Viewer

The [AUV Viewer](#) is a tool designed to view images from the IMOS Autonomous Underwater Vehicles Facility. The vehicles produce a precisely navigated time series of sea-floor images. The viewer sorts and displays a selection of the images upon a mouse click on a track map.

Some exciting enhancements were recently made to the viewer and released into the production environment this week. These were based upon user feedback as well as AODN Project Officer input.

- Previously when a multi directional track was selected, the display defaulted to the centre of the geographic bounds, which resulted on occasion in a display zoomed to open water not on any track (track was discoverable by zooming out). Now, the default display of the track is a central display around the start location.
- Secondly, tracks provided no visual indication of the depth variable, this was only obtained by a click on the map. Now tracks are colour coded representing depth ranging from 10m through to 80m and beyond, the link to the legend is provided below the track window. This now provides easy depth

recognition, for track segment selection. Further information is provided within each image caption, after a point selection is made on the track.

The backend database carries additional information, which if utilised could further enhance user experience of the viewer, watch this space!



The IMOS AUV on a recent voyage in the Beagle Commonwealth Marine Reserve. Image: Asher Flatt

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

Cross-Tasman collaboration leads to the release of the New Zealand Ocean Data Network (NZODN) Portal

Collaboration between IMOS and the National Institute of Water and Atmospheric Research (NIWA) of New Zealand has resulted in the NZODN Portal.

The collaboration between IMOS and the National Institute of Water and Atmospheric Research (NIWA) of New Zealand was established in 2011 with support from the Australian Government and the New Zealand Ministry of Science and Innovation.

Since an initial workshop in 2011 the two nations have been working closely together to observe the oceans in the region, and deliver data required for research nationally, regionally and globally.

“This is a major milestone for the collaboration between the two nations,” says IMOS Director Tim Moltmann. The infrastructure for the [NZODN portal](#) is built upon the Australian Ocean Data Network (AODN) open source code, which will allow for seamless integration of new data collections between the two portals. “The New Zealand Ocean Data Network Portal and our AODN portal complement each other, which allows for future strengthening of the collaboration in this region,” says Mr Moltmann.

AODN Director, Dr Roger Proctor, is also happy to see the completion of this project.

“Great to see the New Zealand Ocean Data Network (NZODN) portal up and running. AODN is looking forward to the quality datasets this portal will now provide access to”.

Another example of the benefit that this collaboration has brought to IMOS is that the NIWA Research Vessel the *Tangaroa*, is part of the IMOS [Ships of Opportunity Fleet](#), it collects data for IMOS as it works in the ocean surrounding New Zealand.



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.

Paper of the month

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

Roxana Vasile, Klaas Hartmann, Alistair J. Hobday, Eric Oliver, Sean Tracey. 2017. Evaluation of hydrodynamic ocean models as a first step in larval dispersal modelling. *Continental Shelf Research*, <https://doi.org/10.1016/j.csr.2017.11.001>

IMOS mooring data has been used to evaluate the accuracy of hydrodynamic ocean models, an important first step in larval dispersal modelling.

Larval dispersal modelling, a powerful tool in studying population connectivity and species distribution, requires accurate estimates of the ocean state, on a high-resolution grid in both space and time, particularly of current velocities and water temperature.

These estimates are usually provided by hydrodynamic models based on which larval trajectories and survival are computed.

This new study assessed the accuracy of two hydrodynamic models around Australia – Bluelink ReANalysis (BRAN) and Hybrid Coordinate Ocean Model (HYCOM) – through comparison with empirical data from the IMOS National Moorings Network.

The study identified important inaccuracies in the hydrodynamic models' estimations of the real ocean parameters and on time scales relevant to larval dispersal studies. These findings highlight the importance of the choice and validation of hydrodynamic models, and calls for estimates of such bias to be incorporated in dispersal studies.

To read the full paper: <http://www.sciencedirect.com/science/article/pii/S027843431730585X>

Upcoming Events

- **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/>
- **19-20 February 2018** Southeast Queensland Aquatic Telemetry Workshop, UQ Moreton Bay Research Station, Dunwich, North Stradbroke Island, QLD. Register online at: <https://payments.uq.edu.au/OneStopWeb/asp/transform.aspx?TRAN-TYPE=W01SOBMS02>
- **26-28 February 2018** IMOS Annual Planning Meeting, Hobart, Tasmania. This is an invitation only event.
- **7-9 March 2018** World Ocean Summit, Riviera Maya, Mexico. <https://events.economist.com/events-conferences/americas/world-ocean-summit/>
- **9-13 April 2018** Marine Ecosystem Assessment for the Southern Ocean (MEASO) International Conference, Hobart, Tasmania. <http://www.measo2018.aq>

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- **13-16 May 2018** 4th World Conference on Marine Biodiversity, Montréal, Canada. Submission of abstracts deadline extended to: **1 December, 2017**, <http://www.wcmb2018.org/> Reminder about the special session: Sustained observations of life as an integral component of coastal and ocean observing systems. Enquiries: Patricia Miloslavich, Patricia.Miloslavich@utas.edu.au or pmilos@usb.ve

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.