

New animal tagging receiver lines deployed in north-west Australia

Researchers in the Western Australian IMOS (WAIMOS) science Node have been using the IMOS observations in the Ningaloo region since 2007.

With the new co-investment by the Western Australian Government, IMOS has extended the observations to the two largest coral atoll groups in the Kimberley region, Scott Reef and Rowley Shoals.

Rob Harcourt, Kate Lee, Phil McDowall and Andrew Boomer from the Animal Tagging and Monitoring Facility have recently deployed these receiver lines at Rowley Shoals and Scott Reef region, and also tagged 48 sharks (including grey reef, white tip and silver tip reef sharks). The Australian Institute of Marine Science (AIMS) has co-invested vessel and staff time to facilitate these deployments using the AIMS research

vessel *Solander*. The Facility would like to acknowledge the assistance of Peter Doherty and Mark Meekan from AIMS with these deployments.

WAIMOS hope to use the data to:

- better understand the effect of climate change on mega-fauna connectivity between the island groups, and examine whether habitat use by major fish groups alter as warming occurs;
- compare the vulnerability of the island groups (Scott reef and Rowley Shoals) to the more extensive Ningaloo reef area; and

- examine how changes in the boundary currents (for example the Leeuwin current) impact marine biodiversity in the region.

Rob Harcourt, Macquarie University.



Andrew Boomer, Sydney Institute of Marine Science (SIMS).



Andrew Boomer, SIMS

director's corner

Tim Moltmann



IMOS has continued to go from strength to strength in the second half of 2011, increasing its relevance and growing through partnership and collaboration.

As we come towards the end of our fifth year of operation, it is fantastic to see an increasing amount of emphasis being placed on the uptake and use of IMOS data to do science with impact. This is evident in a number of items featured in this edition.

The 2010-11 Annual Highlights document demonstrates the acceleration in the rate of science output over the last twelve months. IMOS Nodes are becoming very focused on availability and use of data, and it's particularly pleasing to see the growing number of students becoming involved. They are our next generation of champions for sustained observing in the marine environment.

The integrated nature of IMOS is also really coming to the fore, and we now have great stories to tell about the power of a national, collaborative, multi-platform system designed to address key science questions in areas such as ocean acidification.

IMOS is also growing through various forms of partnership and collaboration. We are seeing increased co-investment by partners such as the Western Australian State Government, greater regional collaboration including in the Southern Ocean, and stronger engagement in international programs such as the Ocean Tracking Network.

We're all keenly aware that IMOS is currently funded until June 2013, and it is encouraging to see the new Strategic Roadmap for Australian Research Infrastructure released, and including such positive signals about the ongoing need for sustained observing of the marine environment.

The Minister and the Department for Innovation Industry Science and Research continue to be strongly supportive of national, collaborative, research infrastructure development, and we are working hard to ensure that other portfolios of Australian Government, the University sector, State and Territory Governments, and

marine industries are all fully aware of the services provided and the benefits delivered by this approach. I've recently had the opportunity to visit both the US and Europe to meet with colleagues involved in running ocean observing programs, and received strong, positive feedback about what we are doing here in Australia.

A well-constituted Advisory Board is a key element of keeping IMOS on track, and we are fortunate to be continuing to attract high calibre people to our Board. Recent additions are Professor Lee Astheimer (Deputy Vice Chancellor Research at Deakin University, featured here) and Dr Bruce Mapstone (Chief of CSIRO Marine and Atmospheric Research), with Dr Ian Poiner (formerly CEO of AIMS) taking up the role of Independent Chair.

In closing, I'd like to take this opportunity to wish to you and your families a safe and enjoyable Christmas/New Year season, from all at the IMOS Office.

Tim Moltmann

2011 Strategic Roadmap for Australian Research Infrastructure released

The 2011 Strategic Roadmap for Australian Research Infrastructure was released by Senator the Hon. Kim Carr, Minister for Innovation, Industry, Science and Research in September.

The 2011 Roadmap articulates the priority research infrastructure areas of a national scale (capability areas) to further develop Australia's research capacity and improve innovation and research outcomes over the next five to ten years.

Overall, the Roadmap is strongly positive about the need for ongoing investment in a national marine observing research infrastructure for Australia, which is broadly-based, data-centric and globally-relevant.

Current IMOS forward strategy is considered to be well-aligned

with the signals in the Roadmap, specifically in terms of:

- Building broadly-based support within the Australian stakeholder community, across climate change and impacts, sustainable management of biological resources, and seabed resources, protection of marine ecosystems, operation of marine industries, and national security, and maritime safety.
- Taking a 'data-centric' approach to research infrastructure development, ensuring that all observations result

in data streams that are discoverable, accessible and usable/used.

- Partnering with the modelling communities to ensure greater uptake, use and impact.
- Engaging with the global ocean observing community.

Gaps identified are consistent with those in the IMOS Science and Implementation Plans, noting that there is now specific mention of sea-ice and Antarctic cryosphere in the Roadmap.

A copy of the Roadmap is available at www.innovation.gov.au/Science/ResearchInfrastructure/Pages/default.aspx

Joint meeting of the IMOS and TERN boards

After the IMOS Board meeting on 14 September this year, the IMOS and the Terrestrial Ecosystem Research Network (TERN) boards held a joint meeting.

This joint meeting of TERN and IMOS Boards was very useful in terms of improving understanding, sharing experience, and exploring opportunities for closer collaboration, particularly in the coastal zone.

We identified a few areas of current activity that can be more closely aligned, committed to bringing our collective knowledge of international developments into the discussion, and agreed to look at identifying a small number of areas in which there is clear need for national scale data sets that both Capabilities can contribute to.

These actions will be followed through in the coming months, and provide an excellent example of the type of cooperation and coordination that becomes possible with a national, collaborative, research infrastructure program in place.



Back row (L-R): Dr Peter Rogers (IMOS), Professor Jason Middleton (IMOS), Professor Lee Astheimer (IMOS), Dr Bruce Mapstone (IMOS), Mrs Jo Neilson (IMOS Board Secretary), Professor Andrew Lowe (TERN Board Observer), Professor Stuart Phinn (TERN Director), Professor Stephen Walker (TERN), Dr Neville Smith (IMOS), Professor Stephen Williams (TERN), Professor Mark Westoby (TERN), Mr Geoff Richardson (TERN), Professor Rob Lewis (IMOS).

Front row (L-R): Mr Tim Moltmann (IMOS Director), Dr Nick D'Adamo (IMOS), Professor Paddy Nixon (IMOS), Dr Margaret Byrne (TERN), Dr Ian Poiner (IMOS Board Chair), Professor Andrew Campbell (TERN Board Chair), Dr Lauren Rickards (TERN), Dr Peter Woodgate (TERN). Absent: Dr Neil McKenzie (TERN), Dr Steve Rintoul (TERN), Mr John Gunn (IMOS).

Introducing the Southern Ocean Observing System (SOOS)

The Southern Ocean is changing. Limited observations indicate that the region is warming more rapidly than the global ocean average; changes in precipitation and ice melt are effecting upper and lower abyssal ocean salinity; basin-wide ocean acidification is occurring due to uptake of anthropogenic CO₂; and ecosystems are responding to changes in the physical and chemical environment.

Given the central role that the Southern Ocean plays in global ocean circulation, and its influence on climate patterns, and nutrient and carbon cycling, changes in this environment have global ramifications.

Sustained, long-term multidisciplinary observations are therefore required to accurately detect, interpret and respond to change.

The Southern Ocean Observing System (SOOS) was launched in August 2011 with the mission to *establish a multidisciplinary observing system to*

deliver the sustained observations of the Southern Ocean that are needed to address key challenges of scientific and societal relevance (e.g., climate change, sea-level rise, impacts of global change on marine ecosystems).

The SOOS effort will be run from an International Project Office (IPO), which is hosted by the Institute for Marine and Antarctic Studies (University of Tasmania), with additional support from the Australian Antarctic Division.

As a first step in the development of the SOOS, the international Southern Ocean scientific community drafted an *Initial Science and Implementation Strategy*, which is to be published in December. Using this strategy as a solid foundation, the objective of the SOOS is now to forge ahead and identify clear steps to achieving the SOOS mission. Towards this goal, the SOOS Scientific Steering Committee (SSC) has been selected from an international pool of nominees.

This committee will meet at the inaugural SSC meeting in February 2012 in Salt Lake City (Utah, USA) alongside the Ocean Sciences Meeting, to decide on the next steps in the implementation of the SOOS. Committee and meeting details will be announced on the SOOS website (www.soos.aq), which is currently being developed and will be up and running by the early 2012.

For more information on the SOOS, or to receive a copy of the *SOOS Initial Science and Implementation Strategy*, please contact the SOOS Executive Officer Louise Newman (Louise.Newman@utas.edu.au).



SOOS
SOUTHERN OCEAN
OBSERVING SYSTEM

New faces in IMOS and eMII team restructured



Prof. Lucy Wyatt.

The IMOS office would like to welcome the following new Facility, and Node Leaders.

Professor Lucy Wyatt has been appointed as the new Australian Coastal Ocean Radar Network (ACORN) Facility Director and started in her new role at James Cook University (JCU) in late November.

Prof. Lucy Wyatt is a mathematician and experienced academic who joined us from the University of Sheffield, where she was professor and served several stints as head of department.

Lucy trained as a mathematician and holds a PhD in Oceanography (1976) from the University of Southampton, UK.

She held several post-doctoral research positions including one at the University of Birmingham (1981-87) where she worked in a team that pioneered HF radar systems. Lucy has worked with HF radar ever since. Lucy joined the University of Sheffield in 1987, and has worked there since; for the past 12 years as professor.

In the last twenty years, Lucy has published extensively, managed large research grants and graduated 10 PhD students. She also has extensive administrative and teaching experience.

She combines extensive practical knowledge of HF radars with a fundamental understanding of mixed-layer oceanography and computational skills and will be a great asset to the ACORN team and lead them forward.

Lucy's research activities are focussed on oceanographic applications of High Frequency (HF) radar such as ocean surface wave measurements and HF radar signal analysis.

Lucy developed a numerical inversion method for extracting a directional spectrum for ocean waves from HF radar data (extended into real-time); has developed algorithms for extracting wind direction from HF radar data; and has developed statistical methods to assess the accuracy of wave and wind measurements with the aim to assess the usefulness of HF

radar data for operational applications e.g. energy contained in wave trains for use in coastal engineering, or sustainable energy generation.

Lucy has been appointed for a three year period in a joint arrangement between IMOS, Australian Institute of Marine Science (AIMS) and JCU, to lead the ACORN team, continue to develop the Australian HF radar network, and develop and promote research using ACORN data. Professor Mal Heron, who has led the ACORN Facility from inception, will continue to be involved over the next twelve months as a senior researcher at JCU/AIMS.

We thank Mal for all of the effort he's put in over the last five years in getting the radar network established.

The Bluewater and Climate Node have also had a change in leadership this year.

The new co-leaders are: **Dr Steve Rintoul** (<http://www.csiro.au/people/Steve.Rintoul.html>) and **Associate Professor Peter Strutton** (<http://www.imas.utas.edu.au/people/profiles/current-staff/Peter-Strutton>).

Steve has a very strong record in forging community consensus around both national and international science plans for Southern Ocean science. Peter spans the physics to productivity space and also has great international connections.

The IMOS office would like to thank the outgoing Node co-leaders Dr Susan Wijffels and Ken Ridgway for their leadership over the last 4-5 years.

They have made a very significant contribution to the success of IMOS to date, and leave the Node in great shape for the future. Both Susan and Ken will remain well-engaged with IMOS through their ongoing Facility roles.

The eMarine Information Infrastructure (eMII) and Australian Ocean Data Network (AODN) Development Office teams have been merged and restructured into an Information Infrastructure team and a Data Services team.

Team restructured at eMII Facility.

eMII now has a team of 21 software engineers and data scientists working



Dr Steve Rintoul

together on delivering datastreams for IMOS and supporting the AODN.

Heading up the Information Infrastructure team is **Dr Peter Blain**, and the Data Services team leader is **Sebastien Mancini**.



Associate Professor Peter Strutton

Peter joins the eMII office from the Tasmanian Partnership for Advanced Computing (TPAC), which is also based at the University of Tasmania.

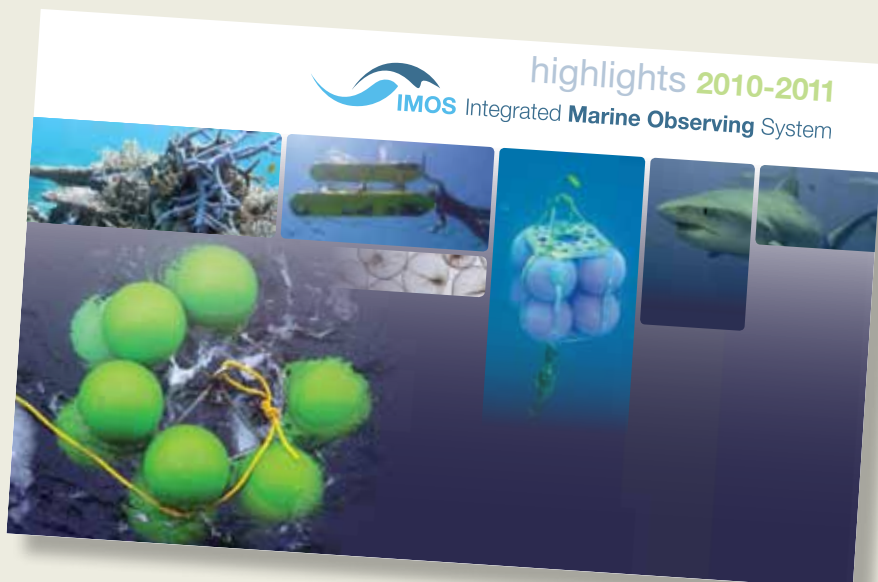
2010/11 Annual Highlights document published

The IMOS office published the 2010/11 Annual Highlights Document in November.

The document opens with an overview of the year and a brief description of how IMOS works. Summaries are then provided for the five, major research themes addressed by IMOS, along with a small selection of annual highlights by theme. Performance indicators and a financial summary are provided at the rear, along with acknowledgement of our Operators and Co-Investors.

The activities and outcomes highlighted in the report reflect the collective efforts of ten operating institutions, dozens of co-investors, and hundreds of scientists, technicians and administrators working across Australian marine and ocean-climate science. By all measures, 2010-11 has been an outstanding year.

The Australian marine and ocean-climate science community is fortunate to have been given the



opportunity to create a national, collaborative, multi-disciplinary observing system of this scale.

Through IMOS, we are very conscious of seizing the opportunity and the acceleration of science and research output reflected in this document

gives a taste of things to come.

The Annual Highlights document is available from the IMOS website <http://imos.org.au/highlights.html> or if you would prefer a paper copy please contact the office at imos@imos.org.au

New Postgraduate course using IMOS case studies

Under the umbrella of the Sydney Institute of Marine Science (SIMS) four partner universities have set up a collaborative postgraduate program in Marine Science and Management.

The program draws on expertise from Macquarie University, University of New South Wales, University of Sydney and University of Technology Sydney and it includes subjects from the four participating universities. In addition, one new subject is currently being developed, which will be a core unit of the new program and taught collaboratively at SIMS.

Topics in Australian Marine Science will introduce students to Australia's Integrated Marine Observing System (IMOS) and the wealth of oceanographic data that has been collected by IMOS. Students will learn about a range of different instruments and facilities such as ocean gliders, moorings, autonomous underwater vehicles as well as Australian Animal Tagging and Monitoring System (ATAAMS) and will work on case studies developed for data recorded with these instruments.

The objective of the course is to not only introduce students to IMOS and its instruments, but to teach students the analysis of marine data on different

spatial and temporal scales. Analysis tools provided by IMOS and other online sources have been utilised or have been specifically developed by scientists for the course.

Scientists in the New South Wales IMOS Node have been pivotal in the development of the course content with the additional support of scientists from the four partner universities.

The course will commence in March 2012.

For further information please contact: Dr Inke Falkner
inke.falkner@sydney.edu.au

Australian National Mooring Network Facility news

Up-date on Australian National Mooring Network QC processes

The Australian National Mooring Network (ANMN) Facility has been developing its Quality Control (QC) processes. As part of the approach an annual QC summit was initiated in Hobart in August with representatives from all sub-facilities providing input, along with members of other facilities such as eMII and Argo.

Recommendations and actions from the summit are available via the IMOS website at http://imos.org.au/anmn_data.html.

An extended conference proceedings (Morello *et al*, 2011), which outlines the facility's QC approach, was presented at the MTS IEEE conference Oceans 11.

A workshop was also held at Oceans 11 on the Wetlabs WQM, between the key instrument manufactures for ANMN sensors, Wetlabs and Seabird, as well as representatives of the major users from AIMS, Sydney Institute of Marine Science, CSIRO and the Chesapeake Bay Interpretative Buoy System (CBIBS) run by the National Oceanic and Atmospheric Administration (NOAA).

Morello E. B., Lynch T. P., Slawinski D., Howell B., Hughes D., and G. P. Timms.

2011. Quantitative Quality Control (QC) procedures for the Australian National Reference Stations: Sensor Data. IEEE Proc. Oceans2011 – Hawaii.

CSIRO Froehlich fellow to work with the ANMN facility

As part of its benchmarking process, the ANMN has been collaborating with NOAA's Chesapeake Bay Interpretative Buoy System (CBIBS). Following a number of technical exchanges the director of CBIBS, Doug Wilson, has been awarded a CSIRO Froehlich fellowship to live and work in Australia.

Doug will be based in Hobart between January and March 2012 and will also visit other members of the mooring network. Besides managing the ten telemetry buoys that make up the CBIBS, Doug has recently been running field trials of a profiling mooring.

Doug has also initiated a number of novel outreach programs such as an iPhone app for the telemetry feeds from the buoys, and a facebook

page which provides both data products and interpretation.

NRS biogeochemical sampling training

An important part of the IMOS National Reference Station (NRS) program



BGC training, left to right: Val Latham (CMAR, Hobart); Mark Doubell (PIRSA SARDI); Mark Rayner (CMAR, Hobart); Paul Van Ruth (PIRSA-SARDI); Kirsty McAllister (AIMS); RV South Cape.

is extensive water and plankton sampling that occurs either monthly or quarterly at the nine sites around Australia's coast. Samplers, based at each of the partner institutions, collect and filter physical samples for packaging and dispatch to the four central processing laboratories.

To ensure the quality of the data, regular training sessions are held at CSIRO's Marine Labs in Hobart, and one was held in November.

Queensland and Northern Australian Moorings team awarded AIMS performance reward

The IMOS office extends its congratulations to the team from AIMS who were awarded a performance reward on the basis of their excellent performance undertaking the IMOS moorings deployment and delivery of data since 2007 in Queensland and Northern Australia.

The team which is led by Craig Steinberg and consists of: Felicity McAllister, Experimental Scientist; Paul Rigby, Experimental Scientist; John Luetchford, Senior Oceanographic Technician; Chris Bartlett,



Above: Neil Roberts, Felicity and Kirsten McAllister, Chris Bartlett and John Luetchford at Lizard Island.

Inset: Paul Rigby, Felicity McAllister and Chris Bartlett.

Oceanographic Technician; and Neil Roberts, Oceanographic Technician.

Four of the five team members have been recruited to AIMS since June 2008 and they have been required to undertake a steep learning curve whilst maintaining an excellent mooring and data recovery record.

The moorings the team manages span the remote northern tropical regions from the Southern Great Barrier Reef in the east to Ningaloo in the West. The array also incorporates three state of the art National Reference Stations (Yongala, Darwin and Ningaloo) that produce over 30 data streams and also require biogeochemical sampling support.

The extension of IMOS into Northern Australian waters with the Education Investment Fund in 2009, has meant this team also had to establish the new Indonesian Throughflow (ITF) shelf array. This year in June, the team were involved with the facilitation of an international cruise to assist CSIRO deploy the IMOS ITF deep mooring array. With the new WA State Government funding for the IMOS in Western Australia the roll out continues with the Kimberley and Pilbara arrays to be deployed in 2011/12.

The team have implemented and maintained delayed mode and complex real time systems in the wake of extreme ocean and weather events. New data reporting tools have been developed as is necessary for improved QA & QC to IMOS and have been actively engaged in national efforts promoted by IMOS.



SAIMOS Node data workshop

On 21 September a joint workshop was conducted by Southern Australian IMOS Node (SAIMOS) and eMII at Flinders University.

About 50 people attended from a wide range of marine disciplines from both Flinders University and the University of Adelaide and included academic staff, researchers and graduate students.

In addition there were local and interstate participants from the Bureau of Meteorology, CSIRO, Department of Natural Resources (DENR), South Australian Museum, Defence Science and Technology Organisation (DSTO), South Australian Research and Development Institute (SARDI), and Geoscience Australia.

The first part of the day long program included an overview of IMOS and SAIMOS, physical and biological science plans, data streams in relation to mooring and glider activities, radars, apex predators and the SA regional ocean model; and data streams in relation to phytoplankton abundance, nutrient nano/pico plankton, bacteria, viruses data and passive acoustics.

All participants were invited to discuss/collaborate with presenters and uptake data available.

The afternoon session focussed on a data users workshop which was a hands-on session accessing the eMII data

The workshop allowed for lots of useful interaction between staff from a range of potential collaborative

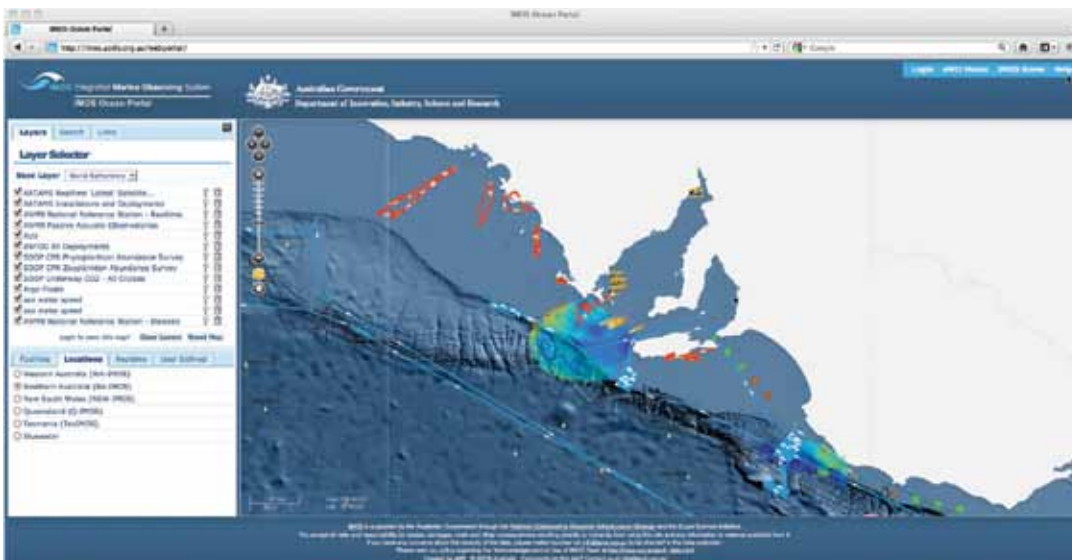


Dr Roger Proctor, eMII Director, addresses the workshop.



Dr Roger Proctor and Dr Sophie Leterme SAIMOS Deputy Node Leader.

A snapshot of the current data available on the IMOS Ocean Portal in the Southern Australian region



Including: Argo floats, Underway CO₂ measurements, Continuous Plankton Recorder routes (with zooplankton and phytoplankton abundances), ocean glider deployments, autonomous underwater vehicle deployments, moorings (regional shelf moorings, National Reference Station and acoustic), surface currents from ocean radars, and satellite tagged sea lion routes. To download the data please visit the portal at <http://imos.aodn.org.au>.

IMOS welcomes Professor Lee Astheimer to the IMOS Advisory Board

Professor Lee Astheimer has recently joined our IMOS Advisory Board, and attended her first board meeting in September. Professor Astheimer is the Deputy Vice-Chancellor (Research) of Deakin University a position she commenced in March 2009.

Professor Astheimer's role at Deakin is to provide academic leadership in respect of the advancement of research and research training and promoting, both nationally and internationally, Deakin University's distinctive contribution to research and research training.

Prior to joining Deakin Professor Astheimer was appointed Pro Vice-Chancellor (Research) at the University of Wollongong in 2006 and also served as Acting Deputy Vice-Chancellor (Research) between 2007 and 2008,

managing research policy, development, commercialisation and training. She was a member of the Biological Sciences and Biotechnology panel of the ARC College of Experts 2008-2010.

Professor Astheimer received her BSc Hon. from Lakehead University, Ontario Canada and her PhD in Ecology from University California, Davis, USA (1984). She was awarded a National Institutes of Health-NIMH Postdoctoral Award (1988-1991) in comparative endocrinology and behaviour at the University of Washington, Seattle.

Lee's research has focused on comparative endocrinology and behaviour related to nutrition, reproduction and stress in vertebrates including humans. She has held academic positions at Rutgers University, New

Jersey and the Universities of Tasmania and Wollongong.

In her position as Deputy Vice-Chancellor (Research) Professor Astheimer chairs the Research Management Subcommittee and the Institute for Technology Research and Innovation (ITRI) Board and is currently a member of various external boards including Victorian Centre for Advanced Materials & Manufacturing (VCAMM), Victorian Partnership for Advanced Computing Limited (VPAC) Board, Enterprise Connect Innovative Regions Advisory Board, Universities Australia Executive Women Board and the board of AINSE.

We welcome Professor Astheimer to the IMOS Advisory Board and the wider IMOS community.



IMOS Postgraduate Student Profile

Students using IMOS data for their postgraduate research

Cecile Rousseaux

2007-2011: The University of Western Australia-School of Environmental Systems Engineering

The BLUElink Reanalysis (BRAN) was used – which sources data from Argo floats, XBT's and SST from Ships of Opportunity.

In this study we describe the temporal dynamics of phytoplankton biomass off the North West Cape region of Australia surrounding Ningaloo Reef.

The physical mechanisms that influence the seasonal variability in chlorophyll *a* concentration were investigated. The results showed that the mixed layer depth deepened to ~100 m in autumn, which coincided with an increase in nutrient and surface chlorophyll *a* concentrations in this region. For this analysis we combine historical field data sets, satellite-derived ocean colour observations and output from a data-assimilating numerical ocean model.

Estimates of compensation depths from remotely sensed photosynthetic active radiation and attenuation coefficients were used to investigate the potential of light limitation on phytoplankton growth and the standing stock of chlorophyll *a*.

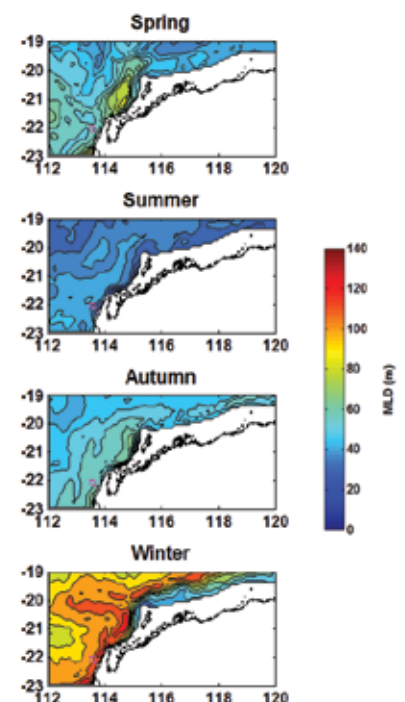
We discuss the various factors influencing the phytoplankton dynamics such as nutrient concentrations, light limitation and grazing pressure.

We conclude that the mixed layer depth deepening observed in autumn is the mechanism responsible for most of the seasonal variation in chlorophyll *a* observed in the waters off Ningaloo Reef and that light is likely to be non-limiting despite MLDs ~100 m.

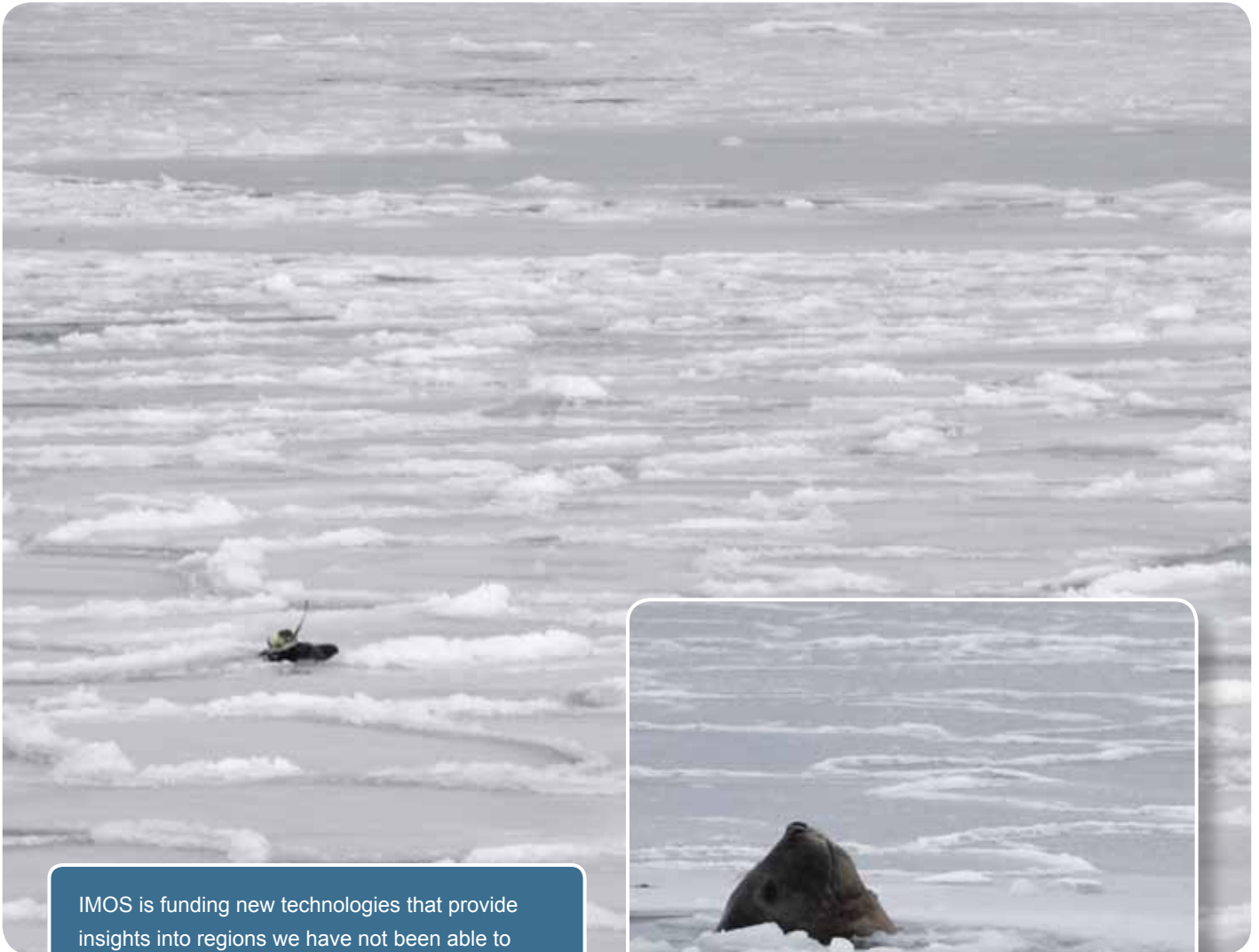
Project: Oceanographic forcing of phytoplankton dynamics in the waters off north Western Australia



Right: Contour plot of the average MLD (in meters) derived from BLUElink in 2007, showing areas with depths greater than 50 m. Each plot is an average for the following season: spring (September-November), summer (December-February), autumn (March-May) and winter (June-August).



Southern Seals as Ocean Samplers



IMOS is funding new technologies that provide insights into regions we have not been able to observe before. Ice capable Argo floats and elephant seals equipped with sensors are providing invaluable data from under the ice shelves, helping to understand ocean-ice shelf interactions, and how this impacts on ice shelf stability and ocean circulation. The first observations of the calving of the Mertz Glacier Tongue in February 2010, were by two tagged Elephant Seals from Macquarie Island. The seals investigated the new iceberg that had formed and then proceeded to occupy Commonwealth Bay from March through April during the summer/autumn transition. Collecting environmental data as they dived, the seals documented the overturning of the summer mixed layer in preparation for the new season's dense shelf water formation. The data provided an independent assessment of sea ice production in the Commonwealth Bay polynya and is now being used to validate satellite-derived estimates.



Images by Iain Field, Macquarie University

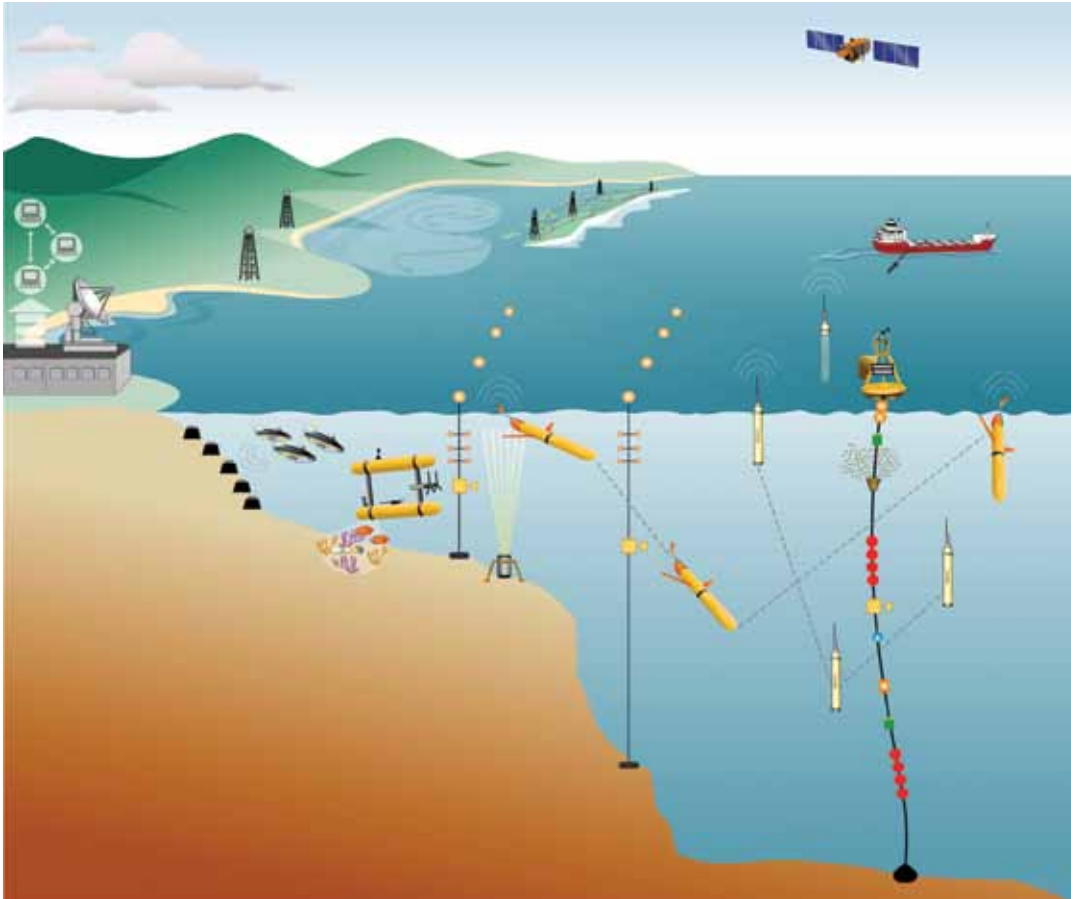


Diagram illustrating how the national IMOS program works. IMOS integrates several independent technologies and instruments, ranging from moored sensors and deep sea autonomous floats to acoustic tracking devices, radar imagery and remote satellites, among others, into research infrastructure covering a vast swath of Australia's large coastal and deep water marine territory. IMOS will generate critical data needed to support a diverse range of marine research projects.

For more information about IMOS please visit the website www.imos.org.au

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