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Endpoint

SOCIETY OF ENVIRONMENTAL TOXICOLOGY
AND CHEMISTRY AUSTRALASIA
(SETAC AU)

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Message from the Editor

Hi everyone and welcome to the last issue of Endpoint for 2014. Sorry this issue is late but things have been very busy for many of the regular contributors; as always, however, the guys have come through and supplied a lot of good material for your to read in the lead up to the silly season.

Once again this was another very successful year for SETAC Au. The highlight of course would have been the Adelaide conference. Rai has supplied a report with many photos of the event to reminisce over.

Next year of course will see the conference move across the Tasman to Nelson, New Zealand. Once again this promises to be a great event which I am sure many of us are already looking forward to. Look out for more details from Louis and the team in future issues of Endpoint. For now just be sure to block out 25 to 28 August 2015 in your calendars.

It would be good to see some more reports from our Regional Representatives. If you are a Regional Representative and have not supplied a report for a while see if you can get something to me next year. If you are not a Regional Representative, look up who is your Regional Representative and send them a snippet about what your organisation is up to in the world of Ecotox; it will assist these guys immensely in their roles.

I do note that Di has listed quite a number of culturally significant days for the early part of the new year but let me just say have a happy and safe holiday season, make sure you get lots of R&R and we will see or hear from all of you in the new year. All the best for 2015.

David Everett (david.everett@ehp.qld.gov.au)

Editor

Sustaining Member



Office of
Environment
& Heritage

NSW Office of Environment and Heritage

<http://www.environment.nsw.gov.au>

From La Presidenta

Hello everyone,

Many of our Higher Education members are now waiting to understand the implications of **Australian Senate's rejection of the University fee deregulation**. The debate is continuing, and the dust is far from settled. The flow-on effects within our community are unclear at this stage, and there is much uncertainty surrounding this impacts of this decision, particularly when combined with the 2014 Budget cuts to the tertiary sector that were announced earlier in the year.

Do you remember completing the SETAC-AU member survey either online or at the Melbourne SETAC-AU conference in 2013? Andrew Hartford has invested a mammoth effort into collating this data, and has produced a fantastic summary document. This document reports on the demographics of **the society's membership and what members want from the society**. In response to this survey we trialled a Buddy-System at this **years' Adelaide conference, in which people new to SETAC-AU meetings and early career members were paired up with more experienced SETAC-AU members**. The feedback shows that the Buddy System was a huge success (thank you Tom Creswell and Andrew Hartford), and we will maintain this for future meetings. This report is also available for you in this version of Endpoint.

We have a range of new SETAC-AU awards on offer in 2015. Please consider nominating yourself or a colleague for these awards. We have two medals, an early and mid-career medal, awarded in recognition of excellence in scientific work in Australasia that has involved substantial environmental toxicology and chemistry, or for service to environmental toxicology and chemistry in Australasia. We have a new travel fellowship, with the goal to represent SETAC as a professional society in universities and workplaces around Australasia, through dynamic cutting-edge science, recent developments and current research. We have a postgraduate publication award, which acknowledges the high quality and impact of original research published by the postgraduate student, and the contribution of this research to the field of Environmental Toxicology and/or Chemistry.

Science Technology Australia (STA) has its latest newsletters on the web, with the most



recent edition found at <http://scienceandtechnologyaustralia.org.au/wp-content/uploads/2014/12/December-Newsletter-2014.html>. On the political front we have seen prolonged instability and tough times for science and technology as cuts bite across the nation. The Chief Scientist issued his long-awaited strategic plan for STEM, and it has gained some traction, but there is a way to go. The STA newsletter also reflects on both 2014 and 2015 activities. The nominations for the SETAC-AU Ambassador Award to represent us at Science Meets Parliament (in Canberra, March 2015) have just closed, so if you missed out, put a reminder in your diaries to submit a nomination next year.

This is the first endpoint edition after a very successful Societal meeting in Adelaide in September. SETAC events are renowned for promoting high-quality science, and this conference upheld this tradition. The 9th SETAC Asia/Pacific 2014 Conference was held at the Adelaide Convention Centre 14-17th September 2014 with the theme **Advancing Science for a Sustainable Environment**. The conference was jointly organised by SETAC Asia/Pacific and SETAC Australasia. The meeting offered a platform for all of us to network, integrate, and transfer knowledge and expertise. The program was very exciting with a broad range of presentations from both experienced scientists and younger members. Over 370 delegates from 26 countries attended with nearly half from Asia, Europe and the Americas. A meeting report with fantastic photos appears later in this edition,

From La Presidenta

and it is worth the read. The winner of the SETAC-AU Honours Prize (Joshua King) gave a tremendous presentation on his research at this meeting. We are looking forward to submissions for the 2015 prize, which we will call for next year. I would also like to congratulate the Postgraduate travel award winners for this meeting (Jennifer Braunig (University of Queensland); Bryant Gagliardi (University of Melbourne); Thi Kim Anh Tran (University of Newcastle); Dingkun Fu (University of Tasmania); Patricia Corbett (Deakin University); Nural Mohd Annuar (University of NSW); and Chamani Marasinghe Wadige (University of Canberra)).

A two-day workshop in Ambon, Indonesia, explored challenges and opportunities for high-quality data production in the context of environmental contaminants. The Comprehensive and Representative Aquatic Contaminant Sampling attended by 53 participants was conducted at by SETAC Asia Pacific during September 2014 in association with a conference of the Indonesian Chemistry Society. Key organisers and presenters were Dr Amanda Reichelt-Brushett from Southern Cross University (Lismore, Australia), Dr Yusthinus Male from University of Pattimura (Ambon, Indonesia), and two commercial laboratory managers - Reg De Wit from Intertek (Jakarta, Indonesia), and Graham Lancaster from the Environmental Analytical Laboratory (SCU Lismore, Australia). Once again there is a meeting report with fantastic photos appears later in this edition, and it is worth the read.

The planning for our 2015 SETAC-AU meeting in Nelson New Zealand is well under way. The theme is 'System Approach to Environmental Management' and recognises the continuity of environmental processes in space and time, a concept that your company is likely to help delegates shape and implement. You can visit the website and register your interest to ensure that you are informed of relevant deadlines (<http://www.setac2015.org.nz/>)

It has been an honor for me to serve as the SETAC Australasian President this past year. I have learned a great deal from this experience, and strongly encourage others to get actively involved with the society as well. I have found it very rewarding! Our continued strength is only made possible by the committed team of council members, state representatives, and enthusiastic members. Our membership is varied and dynamic, and I have prepared a list with some of the major events happening over this time (please forgive any omissions). On that note I wish you all a happy and safe time with your family and friends.

17-24 December - Hanukkah (Jewish)

21 December - Summer Solstice (Pagan), Yule (Wicca and Christian)

25 December - Christmas, The Nativity of Christ (Eastern Orthodox Christian)

26 December - Zarathosht Diso (Zoroastrian)

1 January - Feast of St Basil (Orthodox Christian) & Gantan-sai (Shinto)

5 January - Mahayana New Year (Buddhist)

3 January - Milan un Nabi (Islam), Mawlid al-Nabi (Islam)

6 January - Feast of Theophany (Orthodox Christian), and Feast of Epiphany (Christian, Eastern Orthodox Christian)

7 January - Christmas Day (Orthodox Christian & Etheopian Rastafari)

13 January - Maghi (Sikh)

14 January - Makar Sankranti (Hindu)

15 January - Seijin Shiki (Shinto)

19 January - Timkat (Ethiopian Orthodox Christian)

19 February - Chinese New Year (Confucianism/Taoism/Buddhism)



Best wishes,

Dianne Jolley (djolley@uow.edu.au)

President

Regional Reports

New South Wales



Aquatic Ecosystems group, ANSTO Institute for Environmental Research – Tom Cresswell (tom.cresswell@ansto.gov.au)

We have had several successful AINSE (Australian Institute of Nuclear Science and Engineering) research grants awarded to our collaborators for the second half of the year. AINSE provides funds to assist researchers from member universities and institutions to gain access to the national facilities at ANSTO and other AINSE facilities. The successfully funded projects include using ANSTO's greenhouse and radiotracing facilities to assess the role of nutrient partitioning between fungi and plants as the main driver in the outcome of the competition between ectomycorrhizal fungal isolates for host plant colonisation. This study has thrown up some really interesting logistical challenges for the analysis of samples enriched in stable isotopes and in radioisotopes, all on top of a strict timeline dictated by a short half-life radiotracer...use it or lose it has a new meaning when it comes to project planning!

The team have been successful in collecting mangrove crabs from a local estuary and they are doing well in the lab in reconstituted estuarine water. The crabs are going to be used for radionuclide (^{85}Sr and ^{134}Cs) uptake and organ distribution studies under differing scenarios of accumulation. The gamma-emitting radioisotopes will be used to determine the kinetics of uptake and loss from water, sediment and food. At the end of the exposures, the organisms will be sectioned for autoradiography to determine organ distribution, which will be quantified and used for organ-specific dose modelling. The work will provide us with a better understanding of the effects of nuclear accidents on aquatic biota and radionuclide transfer through an aquatic food chain.



Semaphore crab *Heloecius cordiformis* settling into the lab environment.

Centre for Environmental Sustainability, UTS – Bec Wood (Rebecca.Wood@uts.edu.au)

Our group at the University of Technology, Sydney, Centre for Environmental Sustainability, is continuing work on a broad range of topics including environmental flows, herbicide toxicity, and algal blooms.

Rebecca Wood is continuing to write up her experiments on herbicide sensitivity of benthic diatoms and will soon be submitting two articles co-authored with Simon Mitrovic, Richard Lim and Ben Kefford titled "Is the relative sensitivity of benthic diatoms exposed to herbicides altered by light conditions?" and "Does herbicide mode of action alter the relative sensitivity of benthic diatoms?". James Hitchcock is finalising his PhD thesis on estuary inflows and carbon dynamics and looking forward to a well-earned break after submitting. Richard Carney is following in James footsteps starting his PhD this year and is focusing more on bacterial community changes in response to inflows. Ann-Marie Rohlf is gearing up for some experiments examining bacterial responses to environmental flows in the Snowy River and just received some good news from a journal article she submitted on tributary flows to regulated rivers. Steven Leahy has picked up a job as a research chemist after recently being awarded a University Medal for his First Class Honours thesis on antimony in estuaries working with Simon Apte of CSIRO. Carla Thomas received a first class Honours thesis supervised by Simon, Anne Colville and David van Reyk examining algal toxins on terrestrial plants. She will be helping write a paper or two from the work while she looks for a job. Stefanie Mueller has now graduated from her PhD on cyanobacterial growth in a drinking water

Regional Reports

New South Wales



reservoir in the Hunter, and has just had a paper accepted in Hydrobiologia on limiting nutrients for algal growth - congrats Steffie! Rachel Gray is continuing sampling water temperature and quality downstream of Burrendong Dam and is looking for changes as this summer the thermal curtain to reduce cold water pollution will be operational. Alec Davie also graduated with his PhD this year on benthic algal responses to environmental flows and has just had a paper published in Marine and Freshwater Research - Congrats Alec. Thuy Chung Nguyen, from Engineering, is continuing to work with Anne Colville, Richard Lim and Aziz Raman, looking at toxicology of Road Deposited Sediments (road dust), to complement the chemistry she is doing in Engineering. The group had several presentations at SETAC in September. Thuy Chung presented a paper titled "Aquatic toxicity assessment of road-deposited sediments in Sydney, Australia", Aziz Rahman presented a poster titled "Ecotoxicological validation of arsenic remediation method using freshwater organisms", Anne Colville presented some work that extended Carla Thomas and Simon Mitrovic's work, titled "Effects of cyanobacterial toxins with other stressors on plants", and Rebecca Wood presented "Determining the relative sensitivity of freshwater benthic diatoms to herbicides: effects of light and herbicide mode of action".



Sea anemone
Aiptasia pulchella, cultured in
the ESA laboratory

Exotox Services Australia – Zoë Fluit (zfluit@ecotox.com.au)

In September a team from ESA headed to Adelaide for the 9th SETAC Asia/Pacific Conference, themed Advancing Science for a Sustainable Environment. We would like to thank the hosts, SETAC-AU, and everyone who contributed to make the conference informative and enjoyable. Zoë Fluit presented her work on chronic test development using tropical copepods: "Towards a commercially viable chronic toxicity test for the calanoid copepod, *Parvocalanus crassirostris*: Is it possible?". Zoë and Katrina Selles have been troubleshooting with this species for a while now, and were excited to present the outline for the 8-day sub-chronic test to their peers, and then discuss further ideas over lunch. Anneke Ralph presented a poster covering the work that she had collaborated on with Julia Fracala and Steve Sum: "Developing a chronic toxicity test with the Eastern Rainbowfish *Melanotaenia splendida splendida*". This test is currently available at ESA, and the chronic tropical copepod test will be available shortly.

Recently we have been working with Pelli Howe from SCU with sea anemone testing for current oil and gas projects. Pelli's expertise with the tropical symbiotic sea anemone *Aiptasia pulchella* has helped us to offer a broader range of ecologically relevant test species in this field. She was able to come and spend some time with us in the lab, and introduced us to the acute and chronic sea anemone tests, as well as culturing procedures. Thanks, Pelli! We look forward to working with these tests more in the future.

On top of conferences and new tests, we have really started to pick up again in the laboratory. We are looking for casual lab technicians to join us, 2-3 days per week. Please send your resume through to Claire at: clesslie@ecotox.com.au. Please pass this information on to anyone you may think would be interested in joining the ESA team.

As we approach the Christmas period, we would like to wish you all a safe and relaxing summer break (when we get there!).

On behalf of the ESA team,

Zoë Fluit



Anneke, Zoë, Rick, Julia and Kat at the recent SETAC AU conference in Adelaide

Regional Reports

New South Wales



CSIRO Land and Water Flagship, Aquatic Contaminants Group – Merrin Adams (Merrin.Adams@csiro.au)

Over the last few months we have welcomed a number of visiting scientists, students and returning staff to the group.

Dr Maria Vicenta Valdivia Santib  n  z from Chile joined our group in June after being awarded a one-year fellowship from Becas Chile. Maria is working with Simon Apte, Jenny Stauber, Graeme Batley, Lisa Golding, Brad Angel, Chad Jarolimek and Rob Jung investigating the sensitivity of marine biota to arsenic speciation. This new and novel information will ultimately be utilised to update marine water quality guidelines in Australia, and to develop new guidelines in her home country. Maria was formerly the first Research Director for the CSIRO Chile International Centre of Excellence and so we also welcome Maria back to the CSIRO family.

Magali Perez from the University of Pau, France, has joined us for 6 months during the second year of her PhD. Magali has been working with Stuart Simpson, Chad and Merrin Adams comparing the bioavailability of copper measured with passive samplers, chelex-based techniques and bioassays (cladocerans).

Sarah Stone, from University of Wollongong, has joined us for a year while she defers her University degree. This yearly rotating position supports the ecotoxicology projects, and provides the undergraduates with hands-on experience and training in aquatic and sediment ecotoxicology. Sarah is now confidently running microalgal assays using flow cytometry, and helping with the culture and maintenance of our **Group's test organisms (microalgae, daphnids, copepods).**

Darren Koppel, a previous trainee, returned to our group in October to pursue his PhD. Darren will be researching the impacts of metals in Antarctic waters with Di Jolley (University of Wollongong) Cath King (Australian Antarctic Division), Merrin and Jenny. Darren has hit the ground running continuing with **metal toxicity studies on an Antarctic microalga which follows on from Francesca Gissi's honours project.**

Monique Binet returned to the group from maternity leave in May this year, and is thoroughly enjoying being back at work full time. While it is a juggle between running experiments, managing projects and managing the ecotox labs one minute to building blocks and playing cars and monsters the next, so far, it has worked out well. Monique and her collaborators at Macquarie University are now in discussion to continue the work she presented at the recent SETAC meeting, developing methods to assess the mode of action of toxicants and climate change stressors on marine invertebrate gametes.

Brad Angel travelled to Papua New Guinea in late August to carry out sampling of waters and sediments in the Strickland River and tributaries. This project has been keeping Brad busy with metal speciation work back in the laboratory. Brad has also been busy investigating the effect of suspended particulate matter on the solubility and precipitation of aluminium in marine waters.

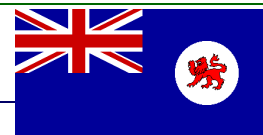
And congratulations to Megan Gillmore who submitted her honours thesis in October. Under the supervision of Lisa, Brad and Di Jolley, **Megan's research demonstrated very different sensitivities amongst 3** marine diatom species related to aluminium speciation (dissolved versus precipitate forms) that affected growth rate but not membrane permeability. This work will be published shortly and builds on the recent publication in ET&C by Golding et al. (2014) on the derivation of a new marine water quality for aluminium.

Tom Cresswell (tom.cresswell@ansto.gov.au)

New South Wales Regional Representative

Regional Reports

Tasmania



The 2014/15 summer is shaping up to be another great field season at Macquarie Island and Casey station. The first Hercules flight landed at Casey Station on 12th November after being **stuck at America's McMurdo Station for a little over a week due to poor weather conditions.** The flight brought with it the first of the fuel remediation team including Bianca Sfiligoj, Greg Hince and Ian Snape, as well as other essential personal for the field season. Everyone had a great time at McMurdo and took advantage of their situation, visiting the nearby New Zealand Scott base and the NASA experimental and balloon launch site. They are now hard at work. The remediation team at Macquarie Island are also in full swing arriving on the island at the start of the season in October.

PhD student from Macquarie University, Ingrid Errington is currently at Macquarie Island busily finding earthworms to set up her mesocosm experiments. The mesocosms will have hydrocarbon spiked soils and will examine the impact of residual fuels in the soil on microbial and invertebrate communities. Jess Holan (PhD student, UOW) will be joining Ingrid shortly at Macquarie Island continuing her research investigating interactive impacts of climate change and metal contaminants on subantarctic marine biota after a hugely successful season last year. They are due to return to Australia on a voyage in April.

Kathryn Brown (SCU) is in the final stages of her PhD thesis write up on the toxicity of fuels on early life stages of Antarctic marine invertebrates. She has recently received some essential data for her thesis completion and is busily writing and has manuscripts almost ready for submission.

Back at Kingston Frances Alexander (PhD student, SCU) has recently begun a fuel and fuel dispersant toxicity test on the Antarctic sea urchin ***Sterechinus neumeayeri*** with the assistance of recently submitted PhD student Trish Corbett (Deakin Uni). The team were able to successfully spawn and fertilise ***Sterechinus*** which were collected last summer field season from Casey Station and have been maintained in the Kingston Marine Research aquarium facilities since. Two tests are currently underway assessing their development with exposure to physically and chemically dispersed fuel. Trish is also preparing for the field season at Casey Station where herself and Julie Mondon (Deakin Uni) will be working alongside the dive team to collect fish and shellfish for assessment of histology and contaminant body burden of individuals exposed to wastewater effluent.

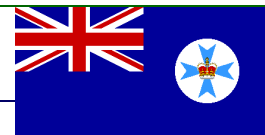
A new member to the Antarctic Ecotox team, Abigail Proctor has recently commenced a PhD in Quantitative Antarctic Science at UTAS. Abby, originally from the US, recently completed her MSc at Oxford University and her PhD research will focus on developing analysis and modelling tools for our Antarctic toxicity data sets. Also recently started is Darren Koppel who has commenced a PhD (UOW) at CSIRO following on from Francesca Gissi's Antarctic microalgal work which she completed in her Honours degree earlier this year.

Ashley Cooper has been setting up culturing methods for Antarctic nematodes for use in toxicity tests at Kingston. He has been hugely successful and now has thousands and thousands of breeding animals which reliably lay eggs. This is the first step in developing soil toxicity tests for Antarctic micro invertebrates to be conducted in Australia. Finally, Cath King and Jane Wasley are assisting with season preparations and are busily continuing to finalise data sets, conduct analysis and dealing with a large backlog of paper writing and editing.

Catherine King (cath.king@aad.gov.au)
Tasmania Regional Representative

Regional Reports

Queensland



Smart Water Research Centre (Griffith University) - Erik Procházka, Fred Leusch, Steven Melvin, Peta Neale and Jason van de Merwe

Greetings from Smart Water Research Centre (Griffith Uni) on Gold Coast! We have had a very productive several months. **Erik Procházka**, **Dr Peta Neale** and **Dr Jason van de Merwe** were at the SETAC AP conference in Adelaide, presenting their work on drinking water disinfection by-products, toxicology of exposure to tattoo ink, and development of a new bioluminescent bacterial assay, respectively.



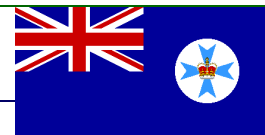
SWRC's Water Quality and Diagnostics team (from left to right: Helene Berthelot, Steven Melvin, Jason van de Merwe, Fred Leusch, Erik Procházka, Peta Neale, Shima Ziajahromi, and Chantal Lanctôt)

Dr Frederic Leusch is currently wrapping up a few projects, including a Water RF/Water RA funded project on transformation products of EDCs and pharmaceuticals, and two Water RA funded projects on stormwater quality and short term drinking water guidelines that may be suitable in emergency situations due to extreme weather events. Fred has recently been promoted to Associate Professor and father of a gorgeous little girl.

Dr Steven Melvin (CQUniversity and honorary member of the SWRC lab) has primarily been investigating the ability of constructed wetland treatment systems to remove chemical contaminants and eliminate toxicity from wastewater. The research has incorporated a range of chemical analyses, *in vitro* bioassays and whole-organism toxicity tests, and has resulted in a great collaborative effort including the entire Leusch lab! Steve recently presented two posters at the International Water Associations (IWA) World Water Congress & Exhibition, held this September in Lisbon, Portugal.

Regional Reports

Queensland



Helene Berthelot is currently visiting the SWRC as an intern from France, and is working closely with Drs Melvin and Leusch. Helene's project involves establishing a repeatable testing methodology for assessing behavioural endpoints in daphnia exposed to emerging contaminants.

Chantal Lanctôt (CQUniversity and honorary member of the SWRC lab) is studying the effects of coalmine wastewater on Australian aquatic organisms, and exploring the possibility of using behavioural endpoints as ecological indicators of water quality in mine affected areas. Chantal is now a year and a half into her PhD research, and making great progress!

Steve chaired a session on behavioural toxicology testing at the Aquatic Toxicology Workshop (ATW) in Ottawa, Canada in October. Both Steve and Chantal presented in that session, and Steve also presented some of his groups work on constructed wetlands in another session.

Shima Ziajahromi has started her PhD under supervision of Drs Fred Leusch and Peta Neale in mid-July on identification and quantification of microplastics in wastewater called "Investigation of chemical-environmental fate, biological effects and removal method". She is currently at the beginning of her PhD working on designing a new device for improved sampling of microplastics from wastewater.

Dr Jason van de Merwe has recently developed a sensitive and high throughput bacterial luminescence toxicity screen (the BLT-Screen) that is currently being applied in a wide range of research and commercial projects. Jason is also wrapping up Water RF and Water RA funded projects on drinking water disinfection by-products and micropollutants in stormwater.

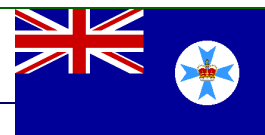
Two of our honours students **Olivia King** and **Alfred Joly** have successfully completed their projects, both receiving a First Class Honours grade.



Olivia King collecting water samples for her project

Regional Reports

Queensland

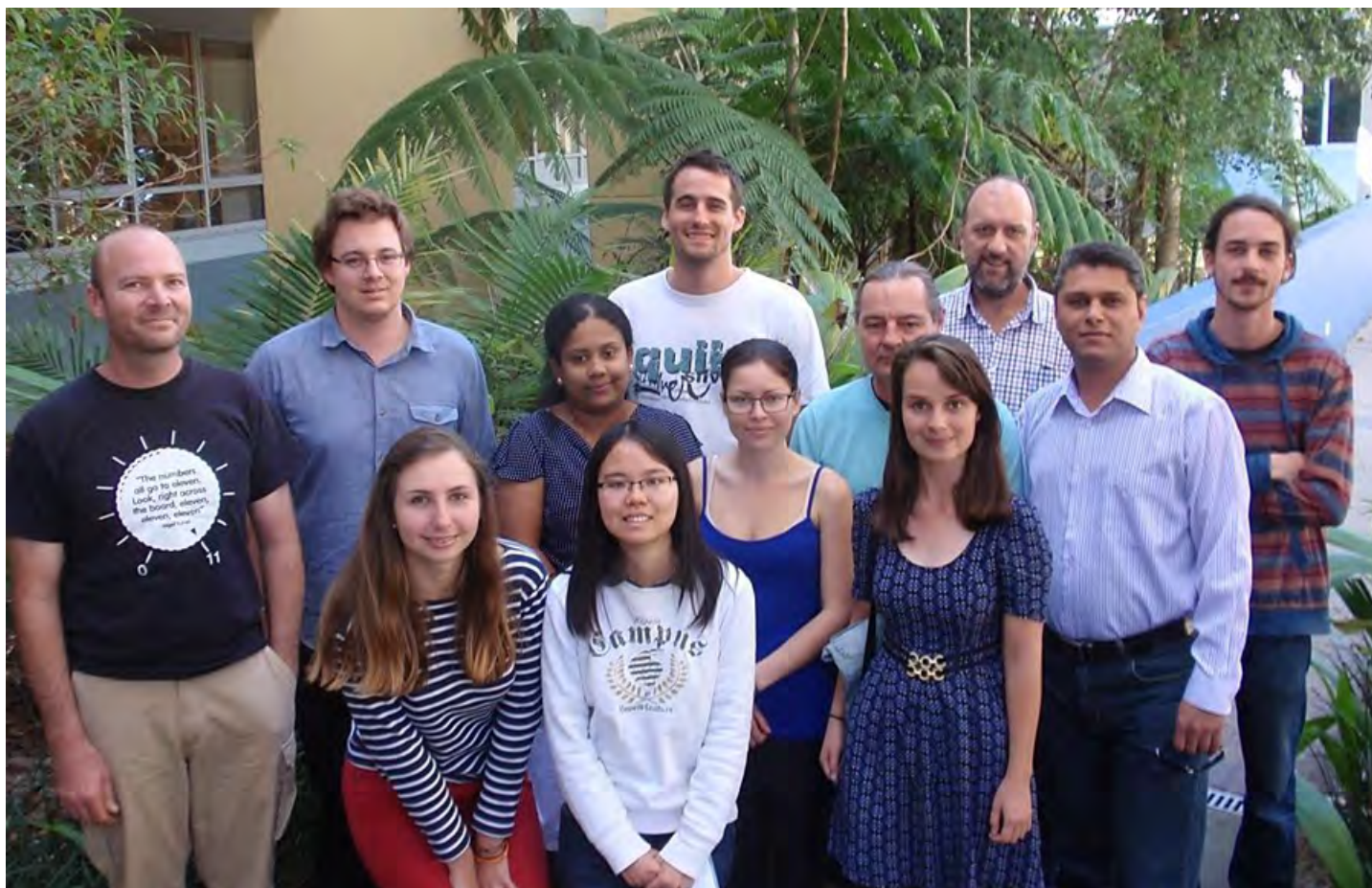


Environmental Chemistry at the Environmental Futures Research Institute (Griffith University) - Will Bennett (w.bennett@griffith.edu.au)

The Environmental Chemistry research group within the Environmental Futures Research Institute at Griffith University is led by **Professor Peter Teasdale**, **Associate Professor David Welsh**, and **Dr Will Bennett**. We currently have three PhD students and two Honours students working on a variety of research areas. Current projects include:

- The development and evaluation of new diffusive gradients in thin films (DGT) techniques for measuring metals, metalloids and nutrients in fresh and marine waters.
- The spatial mapping of antimony and arsenic in the sediment and vegetation of a contaminated site in northern NSW.
- The investigation of antimony and arsenic biogeochemistry in controlled mesocosm experiments using DGT and synchrotron x-ray absorption spectroscopy (XAS).

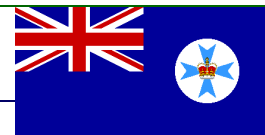
In addition, our group also provides commercial consultancy services to a number of external clients that are interested in using diffusion-based passive samplers for environmental monitoring. We have supplied DGT samplers to Universities, Government agencies and private consultants for measuring trace metals and metalloids in natural waters, and sulfide in marine sediments.



The Environmental Chemistry Team at EFRI (from left to right: Mark Jordan, Will Bennett, Noemie Figeac, Nadeeka Kankanamge, Leslie Huang, Sean Gardiner, Rosie Ohlsson, David Welsh, Maja Arsic, Peter Teasdale, Amir Shiva, and Jacob Dawood)

Regional Reports

Queensland



Bioanalytical Tools Group, Entox, The University of Queensland – Janet Tang
(y.tang@uq.edu.au)

In October 2014 **Daniel Stalter** attended an international conference on disinfection by-products (DBPs) in Muehlheim, Germany. This international conference focussed on the challenges faced by water utilities and regulatory authorities around the world in balancing the risk of microbial contamination against the potential health risks associated with DBPs (www.DBP2014.eu). Daniel talked about the challenges in the bioanalytical quality assessment of disinfected drinking water and presented latest results about the toxicological characterisation of reactive DBPs and about a newly developed extraction method of volatile DBPs. Volatile DBPs are usually lost during sample preparation before the bioanalytical assessment which emphasises the need for new methods to include the volatile fraction. The presented study highlighted (i) the importance of improved sample extraction and dosing methods to minimise the loss of volatile and polar DBPs for bioanalytical water quality assessment and (ii) the applicability of the concentration additive model to assess the toxicological relevance of the unknown fraction as well as the contribution of single DBPs to known mixtures.

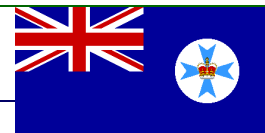
Elissa O'Malley was awarded the QLD branch Australian Water Association (AWA) Undergraduate Award presented at the QLD gala night in September. Her winning project was completed at the National Research Centre for Environmental Toxicology and investigated the toxicity of nanomaterials in an aquatic system focusing on organic matter interactions. The year long project focused on characterising nanomaterial titanium dioxide with and without the presence of wastewater organic matter and using bioassays to test its toxicity towards an alga species. AWA provides numerous opportunities for students such as Elissa to get involved in industry through competitions such as this as well as its Young Water Professionals branch. Winning this award has given Elissa an opportunity to be recognised by leading water industry members and the prize of attending and presenting at OzWater 2015 for the national AWA Undergraduate Award.



Elissa O'Malley receiving the AWA Undergraduate Award

Regional Reports

Queensland



Water Quality and Investigations (WQI), Environmental Monitoring and Assessment, DSITIA - Michael Warne, Ryan Turner, Suzanne Vardy, Alex Garzon-Garcia, Rachael Smith, Rohan Wallace, Rae Huggins, Belinda Thomson, David Orr, Sarah Lindeman, Richard Gardiner, Ben Ferguson

Rachael Smith and **Michael Warne**, along with other members of the WQI team have derived new proposed guideline values for six pesticides to be included in the revision of the Australian and New Zealand water quality guidelines for ecosystem protection and the Great Barrier Reef Water Quality Guidelines. The six pesticides include five photosystem II herbicides, ametryn, atrazine, diuron, hexazinone and tebuthiuron, and the neonicotinoid insecticide, imidacloprid. The derived guideline values are currently under review.

Michael Warne, Graeme Batley and **Rick Van Dam** have been finalising two reports (1) the rationale for changing the method for calculating water quality guidelines for toxicants and (2) the revised method for calculating the new Australian and New Zealand water quality guideline values for toxicants. The Independent Science Panel for the Reef Water Quality Protection Plan has endorsed the toxic loads method developed by Rachael Smith and the WQI team. The method will become the new means of setting the pollution reduction targets for Reef Plan. The toxic loads method uses a modified toxic equivalency method to weight pesticide loads based on their relative toxicities to multiple species. The method will be submitted for publication early in the New Year.

A pesticide synthesis report being co-authored by **Rachael Smith, Michael Warne**, and **Ryan Turner**, along with a number of other Queensland researchers is being undertaken. The synthesis report will be reviewing all the current research conducted on pesticide management, application, transport, exposure and toxicity to the Great Barrier Reef and its adjacent catchment and coastal ecosystems.

WQI collaborated with **Cliff Seery** and **Nicola Pradella** (Australian Catholic University) to test tropical micro and macro algal species against the five priority photosystem II herbicides of the Reef Water Quality Protection Plan. There is a deficiency of ecotoxicity data from tropical species available for these five photosystem II herbicides, so this data will be highly valuable for deriving guideline values and other ecotoxicity information for the Great Barrier Reef. Photosynthesis inhibition and traditional endpoints were measured simultaneously.

BEST WISHES!

On behalf of the SETAC AU Queensland, I would like to wish everyone a wonderful Festive Season, Merry Christmas and a Happy New Year 2015!

Erik Procházka (e.prochazka@griffith.edu.au)
Queensland Regional Representative



Student Profiles

Jung-Ho (John) Lee

Name: Jung-Ho (John) Lee

Degree: Doctor of Philosophy (Geosciences)

Institution: University of Sydney

Supervisors: Assoc. Prof. Gavin Birch, Dr. Phillip Mulhearn, Prof. Charles Lemckert (Griffith)

Estimated Completion: Dec 2014 – Jan 2015

Thesis: Role of Resuspension in Metal Uptake by Estuarine Filter-Feeding Animals

E-mail: jungho.lee@sydney.edu.au

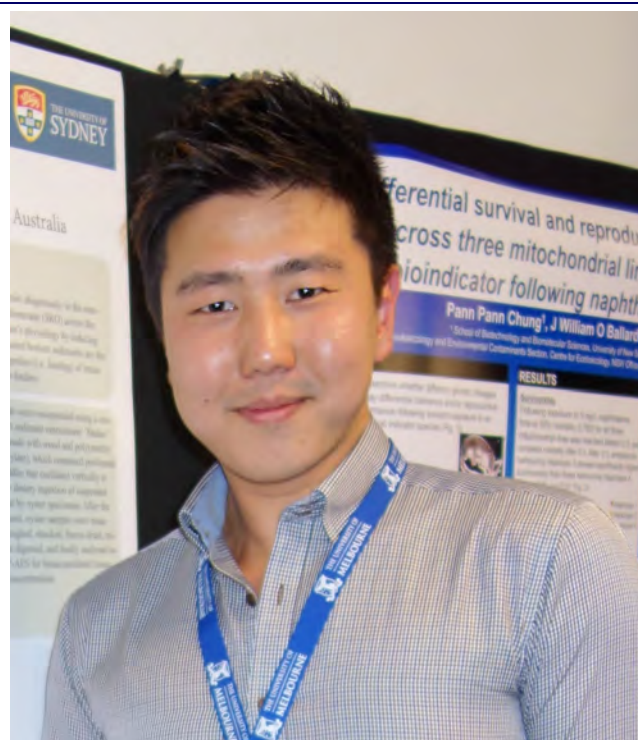
About me

Born in South Korea and raised in New Zealand, I initially came to Australia straight after high school to become a medical doctor. It was my plan to go to postgraduate medical school after completing a Bachelor of Medical Sciences at the University of Sydney. Studying the medical sciences was certainly interesting and rewarding, however it dawned on me that being a medical doctor was not what I sought in life. Upon graduation from my undergraduate degree I saw that my true passion lied in the environmental sciences. I enrolled in the Master of Applied Science (Environmental Science) and subsequently began my PhD with my supervisor Assoc. Prof. Gavin Birch as his work with heavy metal contaminants in the aquatic environment fascinated me immensely.

PhD

My PhD research focuses on the resuspension of contaminated sediments and how they result in the uptake and bioaccumulation of trace metal contaminants into the tissues of filter-feeding organisms. During my masters studies it came to my attention that sediment resuspension, particularly in an Australian setting, was not studied in great detail. Sediments lying on the seafloor are vulnerable to the actions of meteorological or hydrological processes or anthropogenic activities such as shipping and dredging. Moreover, resuspension of bottom sediments is a key dispersal pathway for the transport of contaminants into more pristine areas and can increase the bioavailability of contaminants to filter-feeding marine biota resulting in adverse biological effects. For these reasons I personally felt that further research was a high priority.

My PhD is divided into four main stages. First, I had to collect a wide range of abiotic meteorological and hydrodynamic field data related to sediment resuspension from my study



site, Sydney harbour. I also collected wild oyster, sediment and water samples for trace metal concentrations. In the second stage I conducted a two month long mesocosm experiment at the aquarium facilities in SIMS, Chowder Bay, to replicate the water column turbidity ranges I observed in the field. Farmed, uncontaminated Sydney rock oysters (*Saccostrea glomerata*) were exposed to a gradient of resuspended and contaminated sediments to see if either an increase in the resuspended sediment mass or sedimentary metal concentration induced greater bioaccumulation in oyster tissue. The experimental results showed a poor relationship between either resuspension mass or metal concentration to oyster tissue metals, and this was presented at the SETAC 2013 conference in Melbourne.

In the third stage of my PhD, the original plan was to repeat the mesocosm experiment but only for a week and observe changes in the transcription of proteins in the oysters as a response to resuspended sediment exposure and thus possibly detect novel biomarkers. However the proteomics labwork was abandoned due to the mesocosm results in favour of answering the questions behind the poor resuspension-bioaccumulation relationship. The mesocosm results brought into question the widely-held belief that the dietary intake of contaminated particles played the only significant role of metal bioaccumulation in filter-feeding organisms. To

Student Profiles

Jung-Ho (John) Lee

address this, experimental labwork using the radioisotope tracer ^{65}Zn in dissolved, sediments, and algae uptake routes in the Sydney rock oyster was conducted at ANSTO, Lucas Heights with the expertise of Tom Cresswell (ANSTO) and Stuart Simpson (CSIRO). The results of this labwork were presented at the SETAC conference in Adelaide. In the fourth and final stage of my PhD, I will conduct statistical analysis of all my data as well as develop a sediment resuspension model and an oyster biokinetic model to tie together all my field and laboratory data.

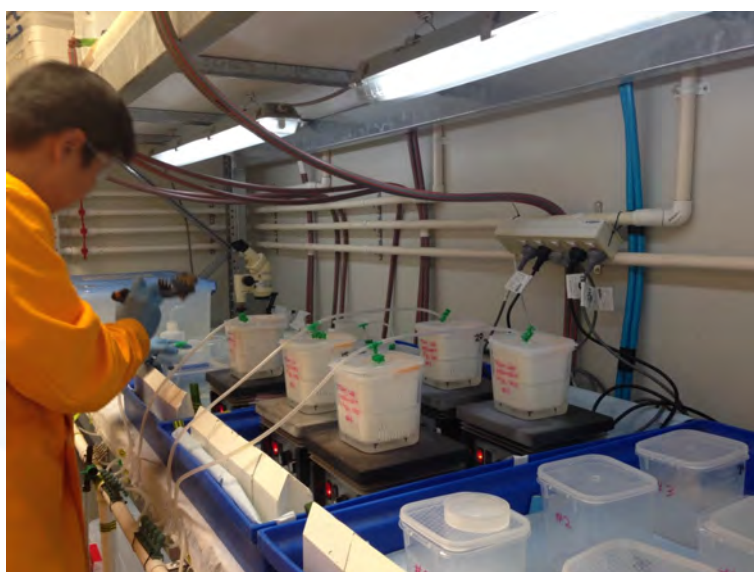


Jung-Ho and his supervisor, Gavin Birch, on Sydney Harbour.

In the third stage of my PhD, the original plan was to repeat the mesocosm experiment but only for a week and observe changes in the transcription of proteins in the oysters as a response to resuspended sediment exposure and thus possibly detect novel biomarkers. However the proteomics labwork was abandoned due to the mesocosm results in favour of answering the questions behind the poor resuspension-bioaccumulation relationship. The mesocosm results brought into question the widely-held belief that the dietary intake of contaminated particles played the only significant role of metal bioaccumulation in filter-feeding organisms. To address this, experimental labwork using the radioisotope tracer ^{65}Zn in dissolved, sediments, and algae uptake routes in the Sydney rock oyster was conducted at ANSTO, Lucas Heights with the expertise of Tom Cresswell (ANSTO) and Stuart Simpson (CSIRO). The results of this labwork were presented at the SETAC conference in Adelaide. In the fourth and final stage of my PhD, I will conduct statistical analysis of all my data as well as develop a sediment resuspension model and an oyster biokinetic model to tie together all my field and laboratory data.

Where to from here?

I have just commenced the final stage of my PhD and am focusing all my efforts into the statistical analysis of my data, developing and refining my models, writing up journal articles for publication, and putting together the manuscript for my thesis. Towards the end of the year I intend to begin applying for positions in the job market and start the first steps of my soon-to-be illustrious career.



Jung-Ho in the radioecology lab at ANSTO conducting suspended sediment ingestion studies with ^{65}Zn and the Sydney rock oyster (*Saccostrea glomerata*)

Conference Reports



Meeting Report: 9th SETAC Asia/Pacific 2014 Conference Adelaide, South Australia.

Rai Kookana and Anu Kumar; Conference co-chairs, CSIRO, Adelaide.

The 9th SETAC Asia/Pacific 2014 Conference was held at the Adelaide Convention Centre 14-17th September 2014 with the theme Advancing Science for a Sustainable Environment.

The conference was jointly organised by SETAC Asia/Pacific and SETAC Australasia. Over 370 delegates from 26 countries attended with nearly half from Asia, Europe and the Americas.



Delegates at the SETAC Asia Pacific 2014 Conference in Adelaide.

The conference started with a welcome mixer on the Sunday evening, after Uncle Lewis O'Brien, an Elder of the Kaurna people, gave the traditional "Welcome to Country" ceremony. In addition to food, drinks and networking with colleagues and exhibitors, delegates also had an opportunity to get up close with some native wildlife (e.g. Koalas) from Urimbirra Wildlife Park.

Conference Reports



Traditional Welcome to the Country Ceremony (Left Panel) given by Uncle Lewis O'Brien, seen here with his grandson Rory O'Brien on the dais, while the conference co-chairs, Anu Kumar and Rai Kookana look on. The right panel shows some members of the conference organizing committee at the welcome mixer – from left Peter Bain, Mike Williams, Hai Daon, Mike McLaughlin, Danni Oliver and Munro Mortimer.



Some delegates enjoying the "Koala experience" during the welcome mixer.



Delegates at the welcome mixer.



Delegates enjoying themselves at the welcome mixer.

The Governor of South Australia, His Excellency the Honorable Hieu Van Le AO officially opened the Conference on Monday (15 Sept.) morning. This was followed by two high-profile keynote speakers. Dr Paul Bertsch (CSIRO, Australia) spoke on "Sustainable Intensification", a very fitting topic on the theme of the conference. He discussed the grand challenges and opportunities that we face in order to sustainably meet our water, food and energy requirements this century.

Conference Reports



His Excellency, the Honourable Hieu Van Le, Governor of South Australia (3rd from left) opened the Conference. Seen here on the podium (from left) are Prof Koji Arizono (President SETAC Asia/Pacific); Dr Diane Jolley (President SETAC Australasia), Dr Anu Kumar (Conference Co-chair) and Dr Rai Kookana (Conference Co-chair) on the lectern.

Prof. Charles Tyler (University of Exeter, UK) delivered his keynote on application of molecular approaches to unravel the effects of endocrine disrupting chemicals (EDCs) and other emerging contaminants in fish. This talk provided latest research on novel molecular approaches to better understand the mechanisms of endocrine disruption in fish. Both lectures, covering fundamental and applied sciences, provided an excellent start to the conference. The science of EDCs from genes to population was followed up by a full day session on this topic. The other topics on the Monday included ecological risks to the Great Barrier Reef and the Antarctica, mining and acid-sulfate soils, environmental chemistry and remediation as well as passive-samplers, analytical chemistry and ecotoxicology.



Prof. Charles Tyler (University of Exeter) delivering the keynote at the conference. His first slide shows the biodiversity he photographed near the venue in Adelaide.

Conference Reports

The poster session in the afternoon was preceded with several short snapshot platform presentations by selected poster presenters in their respective session. This served as an entrée and promotion for various posters presented on the day.



Harpreet Bhatia discusses her poster with delegates during the poster session.

Associate Prof. Caroline Gauss (ENTOX Australia) opened the proceedings on the second day with the Tony Roach Memorial Keynote Address. Dr Gauss presented a keynote lecture covering key challenges associated with evaluating contaminant impacts on marine megafauna. The talk was widely acknowledged as thought-provoking and truly stimulating.

This was followed by the keynote by Dr Phil Reeves, Chief Regulatory Scientist of the Australian Pesticides and Veterinary Medicines Authority (APVMA) on regulatory considerations for nanomaterials. This **was particularly welcome as SETAC's mission is to achieve a tripartite balance among academia, business and government.** These two lectures kicked-off yet another day of excellent presentations covering several themes including a review of the last decade of research on nanomaterials, environmental-omics, bioavailability and risk assessment approaches for metals, pharmaceuticals and personal care products, off-shore oil and gas exploration.

In the evening, after a brief break after the posters session, the delegates gathered together again for the conference dinner in the beautiful dining hall of the Convention Centre. In addition to the excellent performance by the band and delegates' response on the dance floor, another highlight of the evening was the Aussie tradition of 'fun prizes' at SETAC conferences. Several colleagues were acknowledged light-heartedly by our expert comedian trio for this event (John Chapman, Mike McLaughlin and Scott Wilson). For example, the "Crocodile Dundee award" went to Mike Williams for exploding the myth that the majority of Australians commonly wrestle crocodiles and the "The Imperial Perfectionist" award to Jenny Stauber for the presentation title "....an ounce of prevention or a pound of cure?", to name some of the "more benign" prize descriptions.

Conference Reports



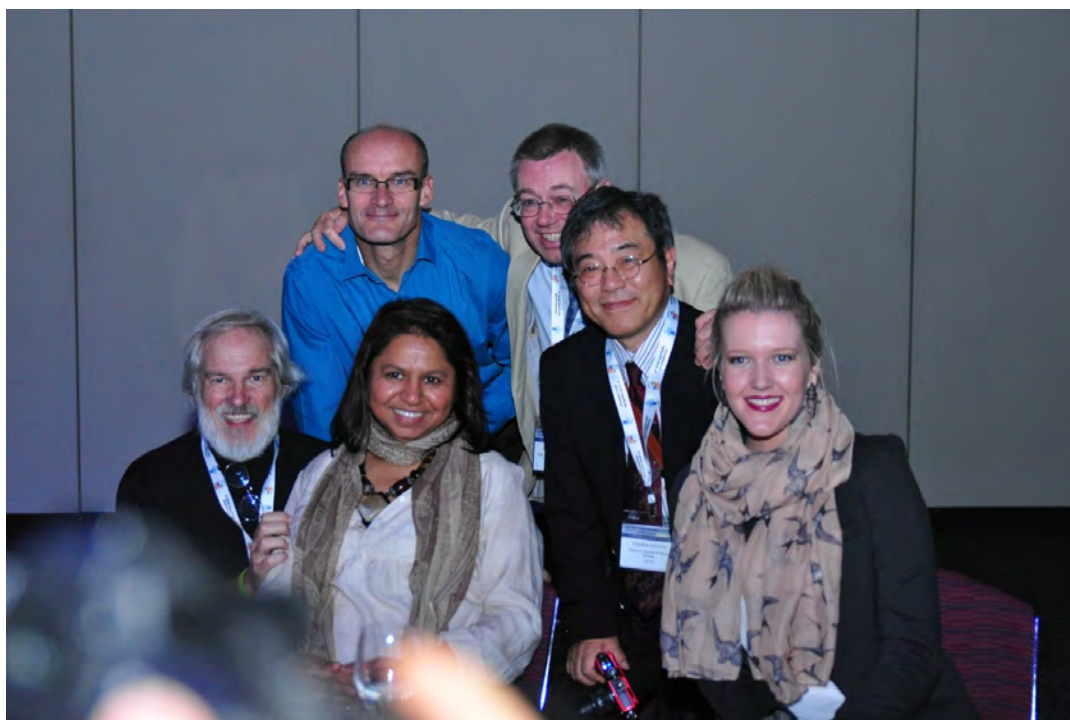
Delegates at the conference dinner at the Adelaide Convention Centre.

The beautiful ambience, sumptuous food, suitably supported by the famous South Australian wines, no wonder the delegates danced on and on well into the night!



A scene from the dance floor during conference dinner.

Conference Reports



A truly happy bunch at the conference dinner (back row - Charles Tyler and Mike Roberts and front row from left - Louis Guillette, Anu Kumar, Taisen Iguhci and Jenna Roberts).

The final day commenced early with a student breakfast sponsored by Hydrobiology and perfectly organized by Casey Doolette and Mike McLaughlin. This provided a forum for students to meet informally with some of the international and local speakers and some 40 students enjoyed this opportunity. Several speakers, namely Dr Jo Cavanagh (New Zealand), Dr Heather Henry (USA), Dr Charles Menzie (SETAC HQ); Dr Ross Smith (Australia) shared their experiences on how they reached their current positions and the challenges that they faced along the way. One of the topics that particularly sparked interest amongst the students was hearing from guest speakers about what qualities they would look for if they were to hire a PhD graduate. The overriding message was that your career may not follow the path that you originally plan! However, this is not a bad thing, according to the speakers, as every opportunity is a chance to develop your skills, meet new contacts and gain experience in a new area, all of which may lead to successful employment.



Dr Jo Kavanagh, Dr Heather Henry, Dr Ross Smith and Dr Charles Menzie shared their experiences with the students during a entertainingly laid out student breakfast.

The fifth keynote address on the final day was presented by Prof Norihiro Itsubo (Tokyo University, Japan) on **"Life cycle assessment"** topic, providing a thought-provoking research perspective of the environmental assessment method for global supply chain. The third day's proceedings included sessions on lifecycle assessment, water quality guidelines, ports and estuaries, ecological risk assessment and also included a special forum on sustainability.

Conference Reports

At the closing ceremony, several more awards were handed out, including Best Student presentation awards for Platform and Poster presentations. The first prize for the platform presentation was shared by Ms Patricia Corbett and Ms Harpreet Bhatia, while Ms Zhen Wang received the first prize for poster presentations. Other prize winners were Ms Melanie Sun, Ms Jenna Roberts, Mrs Chamini Priyandika, Mr Dingkun Fu and Mr Adam Wilkinson.



Ms Patricia Corbett (far right) receiving the Best Student Platform Presentation award from Dr Jason Kirby (middle) and Dr Diane Jolley (at the lectern).

Overall, the program consisted of 5 plenary and, 207 proffered oral presentations, 149 posters, 6 poster snapshot sessions and 1 panel discussion. Based on survey responses and delegate comments, the Conference was a success in terms of outcomes for participants. A vast majority of respondents (> 90%) considered the conference to be good to excellent. Indeed, the conference was able to cover fundamental science to integrated system sciences of life-cycle and risk assessment as well as regulatory considerations, involving academia, business and government in the SETAC tradition.

The conference organisers would like to thank the 2014 sponsors and exhibitors for their on-going support and contributions to the success of 9th SETAC Asia/Pacific 2014 Conference; Metals Environmental Research Associations (MERA), Advanced Analytical, CSIRO, Vision Environment, Australian Environment Agency, CAPIM, Ecotox Services Australasia, Government of South Australia Department of Environment, Water and Natural Resources, Intertek, Loligo Systems, P S Analytical, Modern Water, and Hydrobiology.

Conference Reports

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AUSTRALIA



Silver



Bronze



Exhibitors



P S ANALYTICAL
"applying the power of atomic fluorescence"



We gratefully acknowledge the hard work by the conference organizing committee members (several of whom do not get a mention here) and the support from international advisory committee and SETAC A/P board and SETAC AU council. Thanks also to Plevin and Associates who did a splendid job as our Event Manager and Adelaide Convention Centre team for their professional support. Obviously the conference would not be possible without the contributions of delegates from far and wide.

The next Australasia conference is scheduled to be held in Nelson (New Zealand) in Aug 2015. For further information contact: Louis.Tremblay@cawthron.org.nz

SETAC Asia-Pacific Workshop

Ambon, Indonesia

A two-day workshop on comprehensive and representative aquatic contaminant sampling attended by 53 participants was conducted at by SETAC Asia Pacific during September 2014 in association with a conference of the Indonesian Chemistry Society.

Key organisers and presenters were Dr Amanda Reichelt-Brushett from Southern Cross University (Lismore, Australia), Dr Yusthinus Male from University of Pattimura (Ambon, Indonesia), and two commercial laboratory managers - Reg De Wit from Intertek (Jakarta, Indonesia), and Graham Lancaster from the Environmental Analytical Laboratory (SCU Lismore, Australia).

This is understood to be the first formal activity by SETAC in Indonesia, and was well received by the participants, mostly from academia (including University of Pattimura in Ambon, Udayana University in Bali, University of Indonesia in Jakarta, and Tual Polytech in Tual). More than half of the participants were students.

Workshop session topics included study design, sampling methods and sample preservation, laboratory integrity and proficiency testing, and the interpretation of contaminant concentrations in the context of guideline values, with a focus on case studies in the Indonesian environment.

The workshop program comprised a mix of presentations, open discussions and break out groups. A workshop dinner was held on the evening after day one.

The Republic of Indonesia has a population of over 250 M, the 4th largest after China, India and USA, and university education is well established, for example the State-owned Universitas Indonesia and Universitas Gadjah Mada have enrolments of over 37,000 and 54,000 respectively, and the country has an established chemical society. However there are less than 10 members of SETAC in this diverse nation.

Through the presentation of the Ambon workshop and promulgation of SETAC information at the associated conference of the Indonesian Chemistry Society, the profile of SETAC has been raised in Indonesia.

Participants expressed a strong interest in follow-up in-country workshops in both Jakarta and Bali, and SAP Board will follow this up.



Workshop group photo

SETAC Asia-Pacific Workshop

Ambon, Indonesia



Presenter Amanda Reichelt-Brushett with workshop participants



Presenter Graham Lancaster

Presenter Reg De Wit with Dr. Yus Male

SETAC AU 2013 Membership Survey

Executive Summary

In September 2013, a survey of the SETAC-AU members was conducted with the aim of developing a strategic direction for the Society through an assessment of:

- 1) the general demographics of SETAC-AU
- 2) the current participation of members
- 3) the sentiment of members towards the Council's management of the Society
- 4) the effectiveness of communication methods and
- 5) the current and potential benefits most valued by the members

A survey consisting of questions around these themes was delivered online to the members. During the 2013 SETAC-AU conference members and attending non- members also had the opportunity to complete hardcopy surveys.

The key findings of the survey were:

- 1) The majority of the respondents were happy with the running of the Society
- 2) Communication strategies with members could be improved
- 3) Members are keen to see any additional benefits. Mentoring schemes, technical workshops and prizes were highly desired by the membership. The majority did not value formal accreditation or webinars.

Five key recommendations were made to the Council

- 1) The Council should make a long-term commitment to the current prizes (i.e. the Honours thesis prize and conference travel awards) and establish specific protocols for their administration
- 2) The Council should consider introducing new prizes for:
 - a) Best postgraduate paper;
 - b) Early and mid-career researchers; and
 - c) A travelling fellowship award, which should include technical workshops
- 3) The Council should consider developing mentoring scheme, including a buddy system for conferences.
- 4) The Council should consider developing a communication strategy for both internal and external promotion and dissemination of information.
- 5) The Council should consider re-surveying the membership in 3 or 4 years, possibly with the help of a consultant.

The Council would like to thank all the members and non-members that participated in this survey.

Full version of the document is available at: http://ww2.setac.org/sapau/files/2013_Membership_Survey.pdf

Andrew Harford (andrew.harford@environment.gov.au)

Student Research Project Opportunity

CAPIM, Melbourne



Student Research Project Opportunities at CAPIM

CAPIM is a multidisciplinary research centre located at the University of Melbourne and we are dedicated to developing innovative solutions for healthier waterways. Our research primarily targets freshwater and estuarine environments, including **Melbourne's Bay areas, and there are several opportunities for student research projects within the following areas:**

- Ecotoxicology comprising water & sediment toxicity testing
- Genetic and genomic assessment of toxicant impact
- Novel Chemistry
- Fish health assessment
- Animal morphology
- Metabolomics and Biomarkers
- Biomonitoring and real-time behaviour analysis

For more information contact Cindy Halliwell, Communications Manager, cindy.halliwell@unimelb.edu.au or 9035 7742. CAPIM, Department of Zoology, University of Melbourne, VIC 3010

www.capim.com.au

What's Happening?

Conferences and Workshops

If you are aware of critical dates conferences or workshops that would be of interest to other members of SETAC – AU please email the details to the EndPoint Editor
david.everett@ehp.qld.gov.au.

Please include a link to the Webpage for the event and the critical dates SETAC – AU members should be aware of.

SETAC Australasia Nelson, New Zealand 25 to 28 August 2015

Registrations & Abstracts Open: 23 Feb 15

Abstract Submissions Close: 25 May 15

Early bird registration close: 22 Jun 15

<http://www.setac2015.org.nz/>

Student Publications

If you have recently conferred your thesis or are a current student that has published a paper, let our editor know, david.everett@ehp.qld.gov.au, so that we can share your success and let everyone else know.

Please include a full reference to your thesis or publication and details of the institution you were/are enrolled at.

Jeppe, Katherine, J., Carew, M.E., Long, S, Lee, S.F., Pettigrove, V. and Hoffman, A.A. (in press) Genes involved in cysteine metabolism of *Chironomus tepperi* are regulated differently by copper and by cadmium, *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*.

Sun, Melanie, Y., Dafforn, K.A., Johnston, E.L. and Brown, M.V. (2013) Core sediment bacteria drive community response to anthropogenic contamination over multiple environmental gradients. *Environmental Microbiology* **15**: 2517-2531.

Yeh, R.Y.L., Farré, M.J., Stalter, D., Tang, J.Y.M., Molendijk, J., and Escher, B.I. Bioanalytical and Chemical Evaluation of Disinfection By-Products in Swimming Pool Water. *Water Research* (2014), DOI: 10.1016/j.watres.2014.04.002.

Australasian Bulletin of Ecotoxicology and Environmental Chemistry

Call for papers

We invite all SETAC AU members to submit new manuscripts to the *Australasian Bulletin of Ecotoxicology and Environmental Chemistry*. The *Bulletin* is a publication of the Australasian Chapter of the Society for Environmental Toxicology and Chemistry (SETAC AU), and is a regional publication dedicated to publishing original, scientifically-sound research dealing with all aspects of ecotoxicology and environmental chemistry relevant to Australasia. Papers published may be research reports, review papers, short communications, descriptions of new techniques and equipment, thesis abstracts, thesis literature reviews and comments on previously published papers.

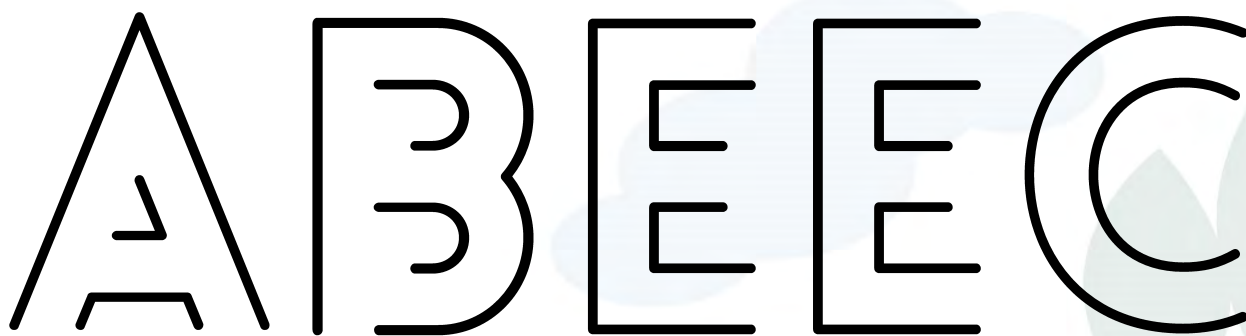
All papers published in ABEEC will be made freely available through the website for SETAC AU. It will be an online publication only.

This is how the submission process works. Contributions should be submitted to the editor as a manuscript in the same manner as you would for any other journal. You also need to provide the name(s) of at least one reviewer to assess the manuscript. All manuscripts will be sent out for review by at least two experts in the field. After the review process, manuscripts will be sent back to authors for final revisions prior to online publication.

If you wish to submit a manuscript to *ABEEC* or would like to discuss publication of a manuscript, then please contact the editor. A copy of *Instructions to authors* is also available from the editor.

We look forward to receiving your manuscripts.

Reinier M Mann (reinier.mann@qld.gov.au)
Editor – *ABEEC*



ABEEC

The logo for ABEEC is displayed in a large, black, outlined font. The letters are 'A', 'B', 'E', 'E', 'E', and 'C'. The background features a light blue cloud-like shape behind the letters, and a decorative footer at the bottom with a blue wavy line representing water, two white fish swimming to the left, and a light orange landmass on the right with green leaf-like shapes.

Membership Details

How to join SETAC Australasia

Even if you are a SETAC member based in Australia, New Zealand or PNG, you may not be a member of SETAC Australasia. You can join SETAC Australasia by going to <http://www.setac.org/>. After logging in, go to the SETAC Australasia page and click 'Request Membership' (see below). You can find this page by either searching 'Australasia' or going to the 'Get Involved' tab on the left of the page, then 'Regional Branches and Chapters', then 'Asia Pacific Chapters'. There are no additional fees attached to the SETAC Australasia chapter.



Current SETAC Australasia Members

To make sure you don't miss out on attending SETAC get-togethers in your state or territory or contributing your latest research to Endpoint, please update your SETAC profile to include your location so your regional rep can get in touch with you. You can do this by logging into <http://www.setac.org/> and selecting 'Manage Profile', then 'Edit Bio'.

Peta Neale (p.neale@uq.edu.au)

SETAC AU Secretary

Affiliate and Sustaining Memberships

Have you considered affiliate or sustaining membership or do you know an organisation that should? Affiliate memberships are suitable for not-for-profit organisations or academic institutions and sustaining memberships are suitable for for-profit organisations, government agencies, or individuals. They are cost effective means of covering membership and conference registrations as well as other benefits. Here are the details below:

SETAC-AU Sustaining Member

- For-profit group, government agency or individual
- **AUD1650 GST inc**
- 2 free registrations or 4 free student registrations or 1 full and 2 student registrations
- Meeting signage and program
- Meeting receptions free
- Membership Directory access
- Journal -Hardcopy & online
- Access to online newsletter
- Annual acknowledgement in journals (SETAC AU publication)
- Free advertising
- Free Job adverts online
- Listing on SETAC AU web page
- Acknowledgment for other assistance

SETAC -AU Affiliate Member

- Non-profit group or academic institution
- **AUD880 GST inc**
- 1 free registration or 2 free student registrations
- Meeting signage and program
- Meeting receptions free
- Membership Directory access
- Journal –online
- Access to online newsletter
- Annual acknowledgement in journals (SETAC AU publication)
- Free advertising
- Free Job adverts online
- Listing on SETAC AU web page
- Acknowledgment for other assistance such as student grants etc.

To follow up with these membership options please email me at p.neale@uq.edu.au and also pass this information on to anyone or any organisation you think might be interested. Remember we now represent ecotoxicology and environmental chemistry.

Peta Neale (p.neale@uq.edu.au)
SETAC AU Secretary



Position/Region	Elected Member
<u>President</u>	Dianne Jolley (djolley@uow.edu.au)
<u>Immediate Past President</u>	Dayanthi Nugegoda (dayanthi.nugegoda@rmit.edu.au)
<u>Vice Presidents</u>	Fred Leusch (f.leusch@griffith.edu.au) Anthony Chariton (anthony.chariton@csiro.au)
<u>Secretary</u>	Peta Neale (p.neale@griffith.edu.au)
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