

Photo by Dr Alex James (EOS Ecology)

The Environmental Practitioner

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On behalf of the Executive, Council and Staff of the Environment Institute, we wish you and your loved ones a very happy festive season and a safe, healthy, prosperous and environmentally friendly New Year. As the Institute nears its 25th anniversary, we look forward with confidence in our membership and to delivering more news, more events, more information and more benefits to our members.

Best wishes

Michael Chilcott
President

Tiffany Thomson
Vice-President Australia

In This Issue

Editorial	2
From the Presidents Desk	3
Snapshot of the New EIANZ Executive	5
EIANZ Fellows	7
Facing the Future	9
Scientific Evidence versus Public Opinion	11
Shaking and Sewage in Christchurch's Iconic Rivers	14
Member Snapshots	16
New Members	18
EIANZ Directory	19

Opinions expressed in this newsletter reflect the views of the authors and do not necessarily represent the views of the Environment Institute of Australia and New Zealand Inc. unless specifically stated.



Photo by Dr Ing Toh (NRA)

Editorial

As another year draws to a close, we have an opportunity to reflect on the many challenges and experiences that have come our way throughout the year. I hope that at least some of you can look back with a sense of accomplishment, or, at least, lessons learned!



Following on from the Institute's AGM, I would like to welcome all the committed new individuals who have put themselves forward for volunteer positions on the Institute Executive, Council and within the Divisions and Chapters. I look forward to working with you all over the next two years.

The next deadline for the December issue is 24 February 2012, so please send your contributions to communications-editor@eianz.org before then. Event notices, reports, opinion pieces, member snapshots and photos are all welcome. Thank you to all the industrious members who have contributed this year – your efforts are certainly appreciated and have enriched *The Environmental Practitioner* for the benefit of all members.

Have a wonderful Christmas and New Years!

Bec McIntyre
EIANZ Communications Editor

EIANZ Central Office Holiday Closure

Please note that the EIANZ Central Office in Melbourne will be closing on Thursday 22 December 2011 and returning on Tuesday 10 January 2012.

Have a safe and happy festive season and see you all in the new year!



Environment
Institute of
Australia and
New Zealand



Photo by Bec McIntyre

From the President's Desk

This is my first newsletter column for the EIANZ membership since taking on the Presidency at the Institute's AGM in Melbourne at the end of October. It's an honour to take on such a role at any time. To take it on at this time is a real privilege. With almost 2500 members, a strong financial position, and an exceptional body of volunteer practitioners contributing to the work of the EIANZ, we are in the strongest position in the Institute's 24-year history.

Recently, the Institute's leadership met prior to our Annual Conference at Twin Waters on the Sunshine Coast. During the meeting we confirmed the Institute's vision of: 'Excellence in Environmental Practice'. A framework for the EIANZ's work in coming years was also agreed to at the meeting.

This work will be built around five pillars of activity:

- **Representing** the environment profession
- **Supporting** its members
- **Advancing** professional practice and standards
- **Connecting** practitioners
- **Leading** the profession

To give effect to these pillars of activity, we are preparing a corporate plan, as required under our by-laws, to be developed over the coming months. While much of its content is yet to be confirmed, there are some key themes that are emerging which I expect to see reflected in the work of the Institute. Perhaps most importantly, there will be a strengthening of the support provided to Divisions across Australia, and to the NZ Chapter.

'Excellence in Environmental Practice'

Our Division and Chapter Committees already deliver much for members and to the broader Institute. Increased support will assist them to continue and, we hope, expand services at a local level.

The development of the corporate plan will be led by Council and the Institute's Executive. The Melbourne EIANZ AGM on 25 October saw the new Executive confirmed for the coming two years.

Joining the Executive is John Braid, the Immediate Past President of the WA Division, who takes on the role of Secretary, and Jeska McNicol, the current NZ Chapter President, who takes on the role of Vice-President (NZ). Continuing as Executive members are Leo Fietje, who takes over as Treasurer, Bec McIntyre, continuing as Communications Editor, Bill Haylock, who becomes Immediate Past President, Tiffany Thomson, continuing as Vice-President (Australia), and myself.

I'm looking forward to working with this team, and with Council, over the coming years. They are a group of very committed members, truly representative of the membership, who contribute an immense amount to the Institute's work. They, and I, will continue to be supported by our Central Office staff – Anne Young and Catherine McCafferty - and Divisional support team members - Sue Oliver (in Victoria) and Danielle Bolton (in SE Qld).





Photo by Bec McIntyre

In the coming 12 months, I believe that members will see the Institute strengthen further in terms of membership and delivery of member services. Of particular note will be the Sydney Annual Conference to be held on 24 & 25 October 2012. The Organising Committee for that event is well advanced in its planning, and the Conference should be a highlight of the year. Book the dates now.

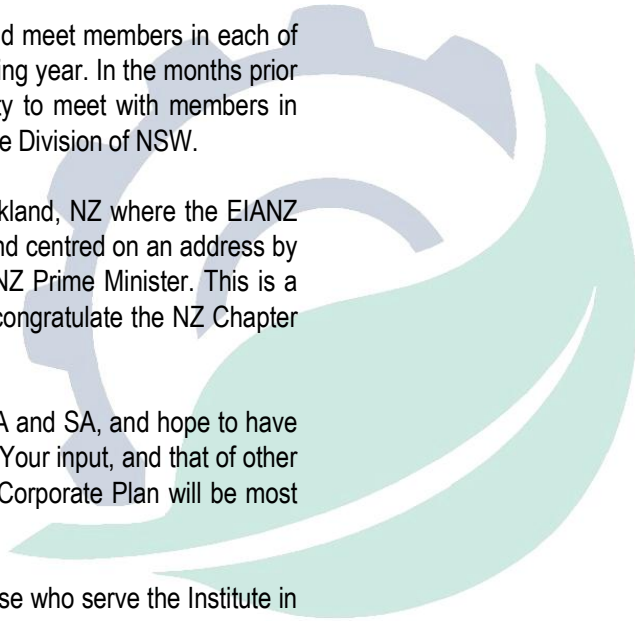

Finally, I will be making an effort to get around and meet members in each of our Australian Divisions and in NZ during the coming year. In the months prior to taking on the Presidency, I had the opportunity to meet with members in Victoria, Queensland, NT, and, of course, my home Division of NSW.

I am writing this newsletter contribution from Auckland, NZ where the EIANZ is co-hosting an event with the City of Auckland and centred on an address by Sir Peter Gluckman, the Science Advisor to the NZ Prime Minister. This is a landmark event for the EIANZ in Auckland and I congratulate the NZ Chapter on pulling it together.

In the coming two months I will be travelling in WA and SA, and hope to have the opportunity to meet members in those States. Your input, and that of other members, into the development of the Institute's Corporate Plan will be most welcome.

Finally, let me take the opportunity to thank all those who serve the Institute in a voluntary capacity in any form. Your efforts are much appreciated. Also, let me wish all EIANZ members and their families the very best of good wishes for the season, and for continuing professional success in 2012.

Michael Chilcott
President EIANZ

**Stronger
Wiser
Bolder**
EMPOWERING
THE PROFESSION

EIANZ Annual
Conference Sydney
24 -25 October 2012

Snapshot of the New EIANZ Executive



Michael Chilcott MEIANZ CEnvP - President

Director of Linchpin Environmental Pty Ltd, a specialist environmental consulting practice based in Sydney, Michael's career comprises experience covering the fields of natural resource planning and management, protected area planning, environmental impact assessment, strategic planning, environmental policy, community and governmental relations, and training . A founding member of EIANZ and a former President of the NSW Division, Michael holds a BSc in Zoology & Physiology, a Grad Dip in Natural Resources, an MSc in Wildlife Biology. He is a member of the Australian Institute of Company Directors, and is currently an advisory Board Member for Mondo Verde and a Governor of the World Wildlife Fund.



Tiffany Thomson MEIANZ – Vice-President Australia

As Regional Manager Australia and Principal Environmental Scientist (Climate Change Mitigation specialist) at Perenia in Sydney, Tiffany has extensive management and technical experience in energy and greenhouse gas (GHG) consulting to the Australian government, corporate and resource sector. She has specialised in fugitive emissions management, auditing and mitigation. Tiffany is Chair of the Climate Change Special Interest Section. She has a strong advocacy role with Federal Ministries and Departments ,and regularly visits Canberra for strategic discussions for ,and on behalf of, the environmental profession and practice. Tiffany holds a BSc in Sustainable Resource Management and is currently completing a Masters Degree in Environmental Systems, Markets and Climate Change. She is also a Certified Associate Environmental Auditor (EMS) .



Jeska McNicol MEIANZ – Vice-President New Zealand

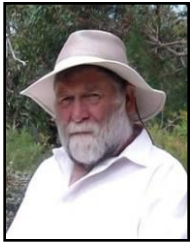
Jeska's professional goal is to promote sustainable environmental management practices through innovation, sound business strategy and processes. She enjoys sharing knowledge and providing training to other environmental professionals. On a personal level, she is trying to raise two children who appreciate the natural environment and who give more than they take from this world. Jeska is Managing Director of Prescott Horn and Director of EWOL Limited. She specialises in EMS audits, environmental legal compliance audits, environmental audits, GHG verification (organisational inventories and product footprints), ISO14044, PAS2050, ISO14067(draft), ISO14064-1, QMS, ISO14065, ISO17021, business/verifier/auditor/certifier training. She is the NZ Chapter President for EIANZ and on the panel of the Ministry for the Environment Product Stewardship Assessors. Jeska holds a BSc in Plant and Microbial Sciences, an MProf in Environmental Management and a Post GradDip in Environmental Technology.

Snapshot of the New EIANZ Executive



Leo Fietje MEIANZ - Treasurer

Leo Fietje is an inaugural member of the Institute when it became the EIANZ, and has held several positions within the New Zealand Chapter and Institute Executive. He has held the positions of New Zealand Chapter Treasurer, Councillor and Executive member as well as Institute Acting Treasurer (2007) and Secretary. Leo works for Environment Canterbury where he is involved with both project-level impact assessment and decision-making as well as strategic level assessments related to water quality and quantity. He has been deeply involved in the recovery and rebuilding of Christchurch following the devastating earthquakes of September 2010 and February 2011. Leo holds a Bachelor of Agricultural Science and a Masters of Civil Engineering.



John Braid MEIANZ CEnvP – Secretary

John Braid has been an active member of EIANZ since joining in 1995. He has served on the committee for the WA division since 2005 and was the president of the WA division for the past two years. He was in the inaugural intake for Certified Environmental Practitioners, and has been a member of the assessment committee for CEnvP for a number of years. He is currently Registrar of the Program. John holds a BSc with 1st class Honours in Environmental Management. His background prior to this was in civil engineering. He has worked for government agencies, non-government agencies and as an environmental consultant running his own business. John was the first CEO of the Northern Agricultural Catchment Council, a non-government organisation that is coordinating land management in the agricultural and coastal region north of Perth. Currently he is the principal of Country, Coast and Rivers.



Dr Bec McIntyre MEIANZ – Communications Editor

Bec McIntyre has been the Communications Editor for the Institute for the past two years. She is responsible for the quarterly newsletter *The Environmental Practitioner* and is on the editorial committee of the *Australasian Journal of Environmental Management*. Bec holds a BSc (Hons in Biology), a Graduate Certificate in Natural Resources and a PhD in Biogeochemistry. She works for NRA Environmental Consultants in Cairns as a Senior Environmental Scientist, and has over eight years experience in environmental consulting and research. Her professional focus has been on project management, ecological survey and impact assessment, and water and soil quality assessment, both in Western Australia and Queensland. Bec maintains a four acre rainforest block, contiguous with the Wet Tropics World Heritage Area, north of Cairns.



Bill Haylock FEIANZ CEnvP – Immediate Past President

Bill Haylock has over 30 years experience in environmental studies assessment, planning approvals and management, corporate due diligence, contaminated land, mining and exploration access, land use change and development, land restoration and professional training. He has functioned in all facets of environmental management, planning and impact assessment, licensing and permitting, risk management strategies, operations management and EMS Training. He served as President of the Institute from 2005 to 2011 and remains on the Institute Executive as Immediate Past President. Bill is a self-employed Environmental Consultant. He holds a BSc in Biology and a Grad Dip in Natural Resources.



Photo by Dave Manson

Call for Fellows Nominations

To date we have 50 Fellows across the Institute (listed opposite). However, we believe that you may personally know a number of members who are more than eligible for Fellowship status. We would be pleased if you could **help identify and nominate** some of these members.

Some Fellows sit on the Fellowship Review Committee and others are available to sit on Appeals Committees. However, as senior practitioners of influence there are a number of other areas where Fellows contribute to the development of the profession. We would also be keen to hear from members as to where you think the Fellows could effectively contribute in **developing the profession**.

You may also be aware that the Institute may award **Honorary Fellowship**. This category of membership is awarded to a person who the Institute believes has made an “outstanding contribution to the environment profession”.

Again, we believe that you may be aware of a number of individuals who fit this honorary category and are not current members of the Institute. We would be very pleased to consider all recommendations in respect of this membership category.

Please contact the EIANZ President Michael Chilcott (+61)0414281599 president@eianz.org or the EIANZ Immediate Past President Bill Haylock (+61)0417717793 ipp@eianz.org with your suggestions for nominations, and as to how the Fellows can effectively contribute to developing the profession.

EIANZ Fellows

Title	First Name	Last Name	Division	Title	First Name	Last Name	Division
Mrs	Lynn	Bain	ACT	Dr	Hugh	Lavery	SEQ
Mr	Rolfe	Hartley	ACT	Mrs	Mary	Maher	SEQ
Dr	David	Hogg	ACT	Dr	John	Thorogood	SEQ
Mr	Mark	O'Brien	ACT	Mr	Jonathan	Womersley	SEQ
Mr	Richard	Sharp	ACT	Mr	Philip	Millin	TAS
Mr	Lachlan	Wilkinson	ACT	Dr	Philip	Bachelor	VIC
Mr	Peter	Wright	ACT	Dr	Tom	Beer	VIC
Dr	Adam	Smith	FNQ	Dr	Terry	Bellair	VIC
Mr	David	Bell	NSW	Mr	Michael	Crowe	VIC
Mr	Graham	Brown	NSW	Dr	Peter	Ellyard	VIC
Mr	Warwick	Giblin	NSW	Prof.	Frank	Fisher	VIC
Mr	Nicholas	Graham-Higgs	NSW	Mr	Robert	Gell	VIC
Mr	Randall	Scott	NT	Mr	Richard	Graham	VIC
Hon. Prof.	Peter	Skelton	NZ	Ms	Zena	Helman	VIC
Prof.	Ian	Spellerberg	NZ	Dr	Neil	Marshman	VIC
Dr	Morgan	Williams	NZ	Dr	David	Mercer	VIC
Dr	Cecil	Camilleri	SA	Dr	Charles	Meredith	VIC
Dr	Andrew	Lothian	SA	Dr	Peter	Nadebaum	VIC
Dr	Jackie	Venning	SA	Prof.	Felicity	Roddick	VIC
A/Prof.	Robert	Beeton	SEQ	Mr	Robin	Saunders	VIC
Prof	John	Brannock	SEQ	Emeritus Prof.	David	Stokes	VIC
Mr	Simon	Cavendish	SEQ	Dr	Geoffrey	Wescott	VIC
Mr	Alan	Chenoweth	SEQ	Prof.	John	Zillman	VIC
Ms	Claire	Gronow	SEQ	Mr	Barry	Carbon	WA
Mr	Bill	Haylock	SEQ	Dr	John	Ottaway	WA

Contaminated Site Assessment, Remediation and Management (CSARM)



Professional Development Short Courses for Environmental Scientists and Health Officers

Six self contained modules are presented throughout 2012 and will cover the legal and regulatory requirements governing CSARM, site and risk assessment approaches to investigation, remediation plans and site management reporting obligations. You can take as many of the six modules as you like in one year.

2012 Program Available Now – Registrations Open – only 25 places available per module

YOU SHOULD ATTEND IF YOU ARE

- An environmental health officer, environmental scientist, marine scientist, manager or consultant seeking to update your knowledge,
- A new graduate entering this multidisciplinary field, as part of your career development
- Thinking about a Master of Science, by coursework, program – the CSARM courses contribute 18 credit points

Cost per module (GST incl.): \$1340, Early Bird registration \$1139. There are discounts for two or more modules and for EIANZ members

For more information, contact Marea Martlew 02 9514 1766, marea.martlew@uts.edu.au 2012 Program details at [UTS Science Short Courses](#)

Facing the Future: Reflections on EIANZ Annual Conference 2011

Like any good conference, this one had a catchy title, slick administration and an agenda packed with opportunity to learn from many eminent thinkers and leaders. But this time I had unusually high expectation for a first attendance of this annual event. Having recently started my own freelance business, it was the first of over 50 professional conferences attendances where my money, rather than my employer's, would wholly finance my participation. That sharpens the focus on my reasons for attending. For me the conference was to be about meeting new people who speak the language of environmental management. More importantly, the conference was billed as a "call to action by the environmental profession". My 30 years as an environmental scientist have mostly felt like a desperate rear-guard action, an environmental drought with only the occasional storm of hope and satisfaction providing confidence in a rich future harvest of environment enhancement. Could I dare hope for some brain soothing rain or a flood of consciousness in Southern Queensland?

So, who were the people who heard the call to action for the environmental profession? And what did we decide to do? Several of the session coordinators commented on how they were humbled by the credentials of the assembled presenters. Despite high representation by senior citizens and Baby Boomers, everybody seemed to have a history of achievement and responsibility well beyond what was reasonable for their age. In fact, if it were not for the eclectic professional origins of the group, it would hardly have seemed possible to assemble so many eminent environmental professionals from the New Zealand and Australia fraternity alone.

We had an Aboriginal elder, bureaucrats, business managers, CEOs, ex-Ministers of government, economists, engineers, futurists, lawyers, lobbyists, Lord Mayors, visual artists, spatial analysts, award winning scientists, silviculturists, sociologists and works contractors, all proudly wearing their particular environmental professional hat.

Engagement with this group was a fantastic learning opportunity and created really positive feelings of the importance and influence of the environmental work being done. It also presents a real challenge in the achievement of a common vision and unified leadership.

As is customary, at the end the discussion at the conference was eloquently summarised in key messages delivered by the EIANZ President; and it would be presumptuous to comment further on this here. Rather I will highlight the feelings and emotions that I felt were tangibly present over the two days.

Firstly, there was a feeling of loss. More mature attendants were seeking to "pass the baton". Many appeared a little punch weary and were looking for their tag out of the fight ring. We know that despite all the good work and the positive attitudes, we have irretrievably lost so much of what we value and strive to protect or enhance. For me, this loss was devastatingly well represented in the opening moments of the conference when Elder Nurdon Serico calmly explained the loss of the Gubbi Gubbi tribe's local language. With it we have lost the means to communicate the detail and nuance of stories from their landscape. The oldest environmental book for the Sunshine Coast can no longer be translated. Talks on climate change generally, and the Barrier Reef specifically, also brought a feeling of loss to mind.

The second pervasive feeling was one of frustration. Given that we are experiencing deep and ongoing environmental loss, why can we not find clear simple approaches to turning things around? There was frustration about the political system with short terms of office, frustration with legal tools which chronicle environmental decline rather than actively manage it, frustration that science and hard evidence of benefits to humanity are not enough to generate environmental protection, frustration that the vision and leadership pathway are still emerging in a young industry, and even frustration with ourselves for not imagining and promoting a brighter future.

Facing the Future: Reflections on EIANZ Annual Conference 2011 *ctd...*

Fortunately I think the frustration was at a healthy level, generating a creative tension and motivation rather than despair.

Finally, there was a feeling of uncertainty. There were many calls at the conference for vision and leadership, but only a vague notion of what that would look like. Three take home leadership examples stood out for me: The EIANZ executive's own CEnvP system, formation of the Australian Youth Climate Change Coalition and the work involved in Beyond Zero. There were calls for "back to basics" approaches, with reference to the tragedy of the commons, recognition of the broader consequence of targeted actions and the underlying inevitability of the need to address global human population growth. Unlike the leadership issue, these questions remained largely unanswered.

So now that the conference is over and the fresh enthusiasm it generated starts to fade, what are you doing differently and what new actions are you taking in facing the future?

If you are involved in environmental assessments are you "just following orders" like a soldier in an unjust war, excusing the chronicling of ecosystem demise as "just the way the system works"? Or are you moving from management to leadership and challenging that process?

If you are a senior advisor or organiser, what changes are you making to your own behaviour? Are you working to actively learn about how people work and creating new systems accordingly? How are you avoiding your affluence impose upon you the credibility of a "smoking medical doctor"? How will you use the conference to re-model your approach to addressing the divide between environmental change and the governance processes?

The EIANZ 'Facing the Future' conference certainly lived up to my expectations in terms of extending my professional network, but it did much more. It changed my view of both the current situation and the opportunities for imaginative integration and leadership of the environmental profession in our society. The EIANZ's agenda to make sure that we know who we are and that others can recognise our core credentials, irrespective of our origins, is a strong foundation for our confidence in creating a collective vision and making it happen.

The conference boosted my confidence in taking on several new leadership challenges. Thank you all for contributing to my behaviour-changing experience. I hope you will accept the challenges that the conference brought you, and that we can share our achievements again in Sydney in 2012.

Alastair Buchan
Wicked Ecolutions

Erratum

In the last issue of TEP it was discussed in the Editorial that tens of thousands of residents had left Christchurch in the wake of the devastating earthquakes. Statistics NZ indicate that in the year to June 2011, a net population decrease of 2.4% (8,9000 people) was recorded, encompassing a net migration loss of 10,600, partly offset by a natural increase of 1,700. Thanks to Diane Shelander of Christchurch City Council for forwarding these statistics!



Photo by Terry Reis (NRA)

Scientific Evidence versus Public Opinion

About a year ago, EIANZ was asked to contribute to a new Australian Standard. As usual in these endeavours, a committee of like-minded individuals gathered for this purpose and invited others to ensure there was a representative mix around the table. So far, so good. The sticking point has come from an unexpected place. The quandary for those trying to come to this complex agreement is whether public opinion can be a foundation - along with facts - for the process of setting a new standard?

The new standard is a proposal for standardising ecolabels and environmental claims for building designs and products. You might think this has been covered because there are already green rating tools and star scoring systems for eco-designed buildings. But there is no standard yet. So this committee has a big task ahead of it.

EIANZ participates because it recognises that existing international (ISO) ecolabelling standards need to be customised into more specific and rigorous clauses to become local standards governing the supply of information for Australian building and design. So your Institute is participating with the not-for-profit entity *National Standards* to take up this challenge. I am the EIANZ representative on its *Committee PP-20* to make the effort to obtain consensus and write the new standard. EIANZ considers its place at the table as the appropriate body for general matters in environmental science. Other people represent window, brick, steel and concrete groups.

Progress to-date has reached consensus on the appropriate mechanism to identify the range of environmental impacts in building products and construction materials - Life Cycle Assessment (LCA). LCA is a methodology recognised in ISO standards and there is a small but growing profession of trained practitioners able to conduct this type of analysis in Australia.

That is why there is second professional body represented at the table. The Australian Life Cycle Assessment Society (ALCAS) is the pivotal entity for understanding this methodology and how it applies to ecolabelling and environmental product declarations.

After a year of attending the *Committee PP-20* meetings, I can empathise with a customer who is commissioning a building's architecture and trying to be across the technical literature. It is apparent that customers want information presented in a readily accessible format. The demand for credible guidance on the environmental impact arising from building is strengthening as the amount of information erupts around decision-makers. The role of the new standard is to say how information should be consolidated to a level appropriate to a customer or their green target. The building industry is complex in both its components and its impacts so there is a push for technical guidance to be presented as a single number or an overall symbol. Perhaps a Heart Tick for buildings? But how prudent is it to have a single ecolabel or a few environmental product declarations to guide such complex choices?

This is why the standard has the role of setting the amount and degree of technical detail made available to, or withheld from, customers. It sets the cut-off points and assumption limits for data. The new standard will also have the role of being transparent and of revealing the set of criteria arising from LCA that endorses a preference of one product or one material over another in the building industry.

Like many complexities, Life Cycle Assessment has its devil in the detail. For this method in this specific purpose, *Committee PP-20* has reached a fork in the road. The difficult decision was whether the new standard may supplement facts with public opinion about environmental issues.



Photo by Terry Reis (NRA)

Scientific Evidence versus Public Opinion *ctd...*

Life Cycle Assessment is based on measurement. Democracy is based on each individual being entitled to their opinion. The dilemma for the writers of the new standard was whether to permit a subjective component to be incorporated into the guidance it gives.

If you think this is an easy question - that may be because each person can answer for themselves. But a committee has to answer as a collective. This question has been tossed around *Committee PP-20* for more than two years. It is driven by the ideal of having a one-size-fits-all label that tells a customer whether the product they are considering is environmentally preferable. If there was only one over-riding environmental issue, this would not be a problem. Consumer goods such as refrigerators and televisions are straightforward because energy is the dominant environmental consideration in the mind of the environmentally conscious customer. The Government has catered well for this particular choice by introducing energy star rating labels.

But it soon gets complicated. What about washing machines? Is water more important than energy? For the highly informed customer there are further questions. Is land-filling, recycling and inefficient use of resources part of the decision? What about the paradigm of planned obsolescence that has underpinned white goods manufacture in wealthy nations for more than a century? What to do? Which one to buy?

Many customers of the holistic design, supply and construction of an eco-building are advised by very technically literate specialists. There are architects, quantity surveyors and engineers - to name just a few. Furthermore the general public is becoming increasingly well-informed about the relative consequences of different environmental issues. The public (and therefore customers) have varying opinions, needs and responses on how they want to manage the environmental impacts of their own activities.

Various methods are available to support the difficult decision-making needed to resolve complex systems. There is multi-criteria analysis, normalisation of data, evidence-based practice and statistical weighting. It is the decision about which one to use that has caused disagreement and strained *Committee PP-20*.

After much soul-searching, *Committee PP-20* decided that its new standard would permit LCA to use weightings derived from public opinion polls on environmental issues. This introduces subjective decision-making into the Australian framework for ecolabels and environmental product declarations.

I have presented a view on behalf of EIANZ that the primary purpose of the new Australian ecolabelling standard for the building industry is to allow customers of building products and designs to arrive at their own, informed choice about environmental impacts. My rationale is that it is the customer's choice - rather than the specialist's or LCA practitioner's choice of what to buy for building products, materials and designs. The problem is that if opinion weighting is allowed to be used inside LCA methods, it pre-determines which environmental issue will receive 'weighting' in the final value judgement. The weighting of a range of environmental issues against each other puts a step in the process that can alter results before the customer reads the advice. My concern is that it interferes with the customer's choice of what to do in response to environmental information when designing a green building.



Image source: Greenmoves.com.au



Scientific Evidence versus Public Opinion *ctd...*

The new standard will be published as a draft for public discussion early in 2012 by National Standards so there is opportunity for this discussion to continue at large. Next year, feedback on the draft standard will be requested to see whether it is acceptable to use weightings in an otherwise evidence-based standard-setting process. This feedback will influence whether the application of LCA should be constrained to evidenced-based practice. Or should public opinion about environment issues be part of official guidance?

A typical customer of the building industry might be baffled by which product to buy, but as a profession we have a harder decision to make. Whether weighting inside Life Cycle Analysis is an acknowledgement of public opinion or whether it perverts the course of science?

Suzanne Little

Suzanne is a member of EIANZ's Policy & Practice Committee that writes position statements on behalf of the membership. Suzanne is a board member of a statutory authority in NSW. In private practice, she is a sustainability scientist and writer. Feedback on this article is welcome suegailittle@gmail.com.

What do you think?

Here's a few definitions to help you decide:

Normalisation is a transformation applied uniformly to each element in a set of data so that the set has some specific statistical property. For example, monthly measurements of the rainfall in London might be normalised by dividing each one by the total for the year to give a profile of rainfall throughout the year.

Source: <http://dictionary.reference.com/browse/normalisation>

Evidence-based practice is an interdisciplinary approach that gained ground after 1992. It started in medicine as evidence-based medicine and spread to other fields such as nursing, psychology, education, library and information science. Its basic principles are that all practical decisions should incorporate these:

- Be based on research studies
- These research studies be selected and interpreted according to some specific norms. Typically such norms disregard theoretical studies and qualitative studies and consider quantitative studies according to a narrow set of criteria of what counts as evidence.
- If such a narrow set of methodological criteria are not applied, it is better instead just to speak of research based practice.

Source: http://en.wikipedia.org/wiki/Evidence-based_practice

Weighting (in statistics) is to give a statistical weight to; to bias or to slant toward a particular goal or direction; manipulate. For example: The teacher weighted the test so students who had read both books would receive the highest marks.

Source: <http://dictionary.reference.com/browse/weighting>

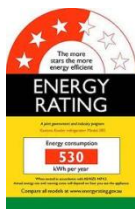




Photo by Terry Reis (NRA)

Shaking and Sewage in Christchurch's Iconic Rivers

The 22 February and 13 June 2011 earthquakes will remain in the memory of Christchurch as perhaps the most traumatic experience of our generation. Below the surface of the city's rivers the impact was no less severe, with inputs of liquefaction sand/silt, bank slumping, uplifting of streambeds, and inputs of raw wastewater from a broken and crippled sewerage infrastructure.

Following the February and June earthquakes, around 50 000 m³ of raw sewage entered the city's river and estuary on a daily basis. It took five months of tireless work by Christchurch City Council staff and contractors to reduce this level to 20,000 m³/day, while some sewage continues to enter the rivers as ongoing tremors, heavy snow falls, and rain hinder repair of city infrastructure. Input of untreated human waste into surface waterways is thankfully no longer the norm in New Zealand, and thus the scale of the inputs and knowledge of their effects was relatively unprecedented and warranted investigation. The amount and duration of sewage inputs entering the lower non-wadeable portion of the Avon and Heathcote Rivers following the February earthquake led the Christchurch City Council to commission a study on the impact on the river's inhabitants. With little pre-earthquake data on the lower non-wadeable portions of the rivers (traditionally a no-go area for most freshwater surveys programmes due to the difficulty of sampling) a bioassay experiment was decided to be most suitable to initially determine the level of impact to the rivers' aquatic inhabitants.

Approximately 2.5 months after the February earthquake, EOS Ecology scientists housed specimens of three aquatic invertebrate species (*Paracalliope*, *Potamopyrgus*, and *Paratya* (see photos)) - in cages in the Avon and Heathcote Rivers at a site upstream (control) and downstream (impact) of sewage discharges, and checked their survival after two, six, and 12 days.

During the 12 days of the experiment there was an estimated daily overflow volume of 4,800 m³/day of raw sewage to the Avon River upstream of the impact site, with the nearest regular discharge 1 km upstream and an intermittent discharge 150 m upstream of this site. On the Heathcote River 2,700 m³/day discharged from one overflow point, approximately 1 km upstream of the impact site.

Survival of all three species was not significantly lower at the downstream site on the Heathcote River, but there was a decrease in survival of *Paracalliope* and *Potamopyrgus* at the downstream site on the Avon River over time. Survival of *Paracalliope* dropped to around 60% at the downstream impact site after six days, indicating short-term susceptibility to conditions. While survival continued to decrease after 12 days, a similar mortality spike at the upstream control site indicated cage effects weighing in during this latter time period. At 10%, the mortality of *Potamopyrgus* over the 12-day period, while not as dramatic, may indicate an impact on these snails over a longer period of time. The significantly lower dissolved oxygen levels and the elevated ammonia levels at this site are the most likely cause of the decreased survival of these two species.

The dissolved oxygen levels at the downstream site were below the acute guideline value of 3 ppm for the duration of the 12-day experiment. Ammonia levels fluctuated widely at this site but at times reached levels greater than the concentration found to be toxic to *Paracalliope* and *Potamopyrgus* in laboratory studies. It is also probable that tolerance levels would be lower than what has been found in laboratory tests, given the long duration of the sewage overflows into the Avon and Heathcote Rivers (over two months at the time of the bioassay experiment).



Photo by Terry Reis (NRA)

Shaking and Sewage in Christchurch's Iconic Rivers *ctd....*

The higher inputs of sewage during the first few weeks of the February earthquake (estimated at almost 35,000 m³/day for the Avon River and 12,500 m³/day for the Heathcote River three weeks after the quake) would have presumably created a more widespread die-off of invertebrate fauna. However, the low inputs of sewage that was continuing to discharge into the Avon River for two months after the February earthquake still appears to have been sufficient to cause problems for more sensitive invertebrates such as the amphipod *Paracalliope*, and for species typically regarded as being more hardy, such as the snail *Potamopyrgus*. Given the duration of the overflows, which currently stands at six months, invertebrates remaining in the lower reaches of both rivers may well be exposed to chronic (sub-lethal) effects, with long-term impacts such as increased susceptibility to disease, impaired reproduction, and altered biotic interactions. After the most recent 13 June 2011 earthquake, the sewage inputs to the Heathcote and Avon Rivers returned to similar levels as for the days following the 22 February earthquake, putting additional pressure on a system already stressed from months of sewage overflows.



Removing invertebrate bioassay cages in the Avon River upstream



We can probably all agree that while the sewage inputs remain there is going to be an impact on the fauna in the lower reaches of our much loved rivers. The interesting question is: what can we do about this? Providing some level of re-oxygenation is tricky to realise in such large, deep, and slow flowing rivers. Diverting the sewage overflows to 'somewhere else' is certainly not an option. The choice between sewage backing up in the streets or private backyards versus overflowing to the nearest waterway is an easy one to make if it is your backyard which will become a 'poo pond'. In this regard we can be thankful that Christchurch is able to avoid the human health implications of sewage in the streets and should reflect on yet another unquantified ecosystem service that our waterways provide. So, in some cases all we can do is watch and wait, and use this time to gain as much understanding as we can regarding the impacts on, and eventual recovery of, these systems.

For a copy of the EOS Ecology report go to :

<http://ecan.govt.nz/publications/Reports/eq-effects-invertebrates-lower-rivers-eos.pdf>



Potamopyrgus antipodarum

Paracalliope fluviatilis

Paratya curvirostris

The three invertebrate species used in the bioassay experiment in the Avon and Heathcote Rivers following the 22 February earthquake

Shelley McMurtrie

Aquatic Scientist - EOS Ecology www.eosecology.co.nz



Photo by Bec McIntyre

Member Snapshot – Paul Keighley

Quals: BSc (Environmental Science), M. Environmental Science and Law, M. International Law and International Relations (in progress), CEnvP.

What do you do?

Senior Project Officer in the Strategic Approaches Branch of Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) in Canberra

How did you get there?

I started as an ecologist at Cumberland Ecology, then moved to Conacher Travers. I was at Manidis Roberts for four years before moving to the SEWPaC in 2011.

Best aspects of your work?

Working with diverse stakeholders, often with quite conflicting views and priorities, to develop outcomes and solutions that are acceptable to all.

Biggest environmental concern?

Population increase coupled with a per capita increase in rates of consumption.



How and why did you get involved with EIANZ?

I joined initially as a second year undergraduate student. At that time, I joined for the mentoring program and to be involved in the industry. More generally, I also felt (and still feel) that it was important to be a member of the professional environmental association. I have remained a member ever since. More recently, I've become involved in the NSW Division committee (currently as vice-president) and the Students and Early Careers committee (currently as chair) to assist in the governance of the EIANZ and delivery of services to members.



Photo by Bec McIntyre

Member Snapshot – Mark Miller

Quals: BSc (Hons) Environmental Protection

What do you do?

I work for EcoMatters Environment Trust as Programme Manager for the Auckland Sustainable Development Centre (ASDC). This is an ambitious programme which aims to be a 'one stop shop' offering education for sustainability, community workshops and sustainability advice, low impact urban design demonstration areas, research facilities, community gardens, a sustainability trail and an Eco-Café.

How did you get there?

Before relocating to New Zealand from the UK last year, I spent 12 years working in nature conservation and protected area management, as a Ranger, Senior Ranger and most recently Countryside Manager for local councils. Once here, I was employed by EcoMatters Environment Trust, to work on Project Twin Streams, a riparian restoration and community engagement project in West Auckland, before starting my new role in July this year.

Best aspects of your work?

Working with colleagues who are passionate about the environment and sustainable development, and the opportunity to manage an exciting project that has the potential to make a difference at a local, regional and national level.

Biggest environmental concern?

I guess, due to my background, species extinction is one of the things I am particularly concerned about, but on a more global scale, I think is public apathy could be the deciding factor in a huge range of environmental issues.



Mark Miller (far left)

How and why did you get involved with EIANZ?

I feel very strongly that environmental professionals should be afforded the same respect and standing as other professionals. I was a member of several bodies in the UK, including the Institute of Ecology and Environmental Management (IEEM) and the Institute of Parks and Green Spaces (IPGS). When I relocated to New Zealand, I wanted to retain a professional membership and the EIANZ seemed the most appropriate.

Photo by Dave Manson

New Members

Division	First Name	Last Name	Category
ACT	Chris	Pulkinnen	FULL MEMBER
ACT	Wil	Allen	FULL MEMBER
ACT	Emma	Struys	FULL MEMBER
ACT	Alice	Fenwick	FULL MEMBER
ACT	Peter	Cowper	FULL MEMBER
ACT	Juliana	Lazarri	STUDENT
ACT	Brett	Howland	STUDENT
FNQ	Tania	Olsen	ASSOCIATE
FNQ	Huw	Rabone	FULL MEMBER
FNQ	Lars	Kazmeier	FULL MEMBER
FNQ	Nicholas	Toon	FULL MEMBER
FNQ	Timothy	Nash	FULL MEMBER
FNQ	David	Walters	FULL MEMBER
NSW	Emma	Dean	FULL MEMBER
NSW	Alannah	Duffy	ASSOCIATE
NSW	Jacquie	Davidson	ASSOCIATE
NSW	Alexander	Larance	FULL MEMBER
NSW	Phillip	Weir	FULL MEMBER
NSW	John	Turville	FULL MEMBER
NSW	Katherine	Dodd	ASSOCIATE
NSW	Sally	Perry	ASSOCIATE
NSW	Callum	Juniper	STUDENT
NSW	Ryan	Ellis	FULL MEMBER
NSW	Nicholas	Valentine	FULL MEMBER
NSW	Andrew	Spinks	FULL MEMBER
NSW	Laura	Eadie	STUDENT
NSW	Allison	Sharp	FULL MEMBER
NSW	Russell	Tacken	APPLICATION
NT	Le	Bai	STUDENT

Division	First Name	Last Name	Category
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NZ	Carla	Rearon	FULL MEMBER
NZ	Susan	Tulloch	FULL MEMBER
NZ	Liz	Coombes	FULL MEMBER
NZ	Archana Arti	Singh	FULL MEMBER
SA	Neale	Draper	FULL MEMBER
SA	Grant	Pinnington	FULL MEMBER
SEQ	Jody	Kreuger	FULL MEMBER
SEQ	Karen	Delaforce	FULL MEMBER
SEQ	Amelia	Badri	ASSOCIATE
SEQ	Karen	Douglas	FULL MEMBER
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SEQ	Luke	Holley	FULL MEMBER
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seq	Paxton	Kearney	STUDENT
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SEQ	Claire	Forbes	STUDENT
SEQ	Ramon	Lewis	STUDENT
SEQ	Adam	Christison	FULL MEMBER

Division	First Name	Last Name	Category
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SEQ	Mathew	Davis	FULL MEMBER
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TAS	Nick	Travers	FULL MEMBER
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TAS	Gillian	Sutherland-Harris	STUDENT
VIC	Natasha	Reifschneider	FULL MEMBER
VIC	Geoffrey	Caine	ASSOCIATE
VIC	Jasmyn	Lynch	FULL MEMBER
VIC	Matt	Dobson	ASSOCIATE
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VIC	Fiona	Gilbert	FULL MEMBER
VIC	Vicky	Lee	STUDENT
VIC	Simon	O'Brien	STUDENT
VIC	James	David	FULL MEMBER
VIC	Goce	Karanfilovski	STUDENT
VIC	Rebecca	Coonan	STUDENT
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WA	Natasha	Burkett	FULL MEMBER
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WA	Katy	Richter	FULL MEMBER
WA	Vicki	Laurie	FULL MEMBER
WA	Catherine	Galli	FULL MEMBER
WA	Rory	Swiderski	FULL MEMBER
WA	Vanja	Sekizovic	FULL MEMBER



Photo by Dave Manson

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CAN YOU AFFORD NOT TO GET A QUOTE FROM THE EIANZ PI FACILITY?

If you would like to receive a quote through the EIANZ PI facility for your Professional Indemnity Insurance or for further information call:

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Tel: + 61 3 9603 2190
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Tel: + 61 3 9603 2760
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ABN 86 004 651 512
555 Lonsdale Street
Melbourne VIC 3000

This information is general advice only and takes no account of your individual circumstances, needs or financial objectives. We recommend that you contact us to obtain a copy of the policy wording in order to understand whether the cover provided is appropriate for you.

Please note that EIANZ receives a financial benefit from the sale of this insurance product, enabling them to continue to develop and provide further services to their members.

In your role, as an environment professional, the need for insurance protection has never been more important.

Marsh and the EIANZ understand your industry needs and have tailored an insurance program to protect you.

Marsh, in consultation with EIANZ, has developed a professional indemnity insurance facility designed for environmental professionals that addresses the specific risks that you are exposed to and recognises and understands your business.

Some of the key features of this facility are:

- A competitive insurance product in:
 - premiums
 - deductible
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 - exclusions
- The facility recognises the role that the CEnvP initiative plays in risk management within the businesses.
- A facility which is able to provide cover to the majority of environmental businesses within EIANZ
- A streamlined application/proposal form
- An effective administration process that promptly deals with enquiries, renewals and claims through a dedicated team
- Premium can be paid in monthly instalments using our Premium Finance facility

Alternatively, if you would like to receive a quote when your insurance cover falls due, complete the information below and fax to John Delves on 03 9603 2753.

Name of Company: _____

Contact Person: _____

Address: _____

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Best time to call you: am/pm Renewal Date of your Current PI Policy / /



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