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ALCAS Update

Well here we are at the end of another financial year; you all should have received by now your renewal invoices for ALCAS membership for another 12 months. We trust (despite the global financial crisis) that you will make this modest investment to allow the important work of ALCAS to continue – membership contributions are currently really ALCAS’ only form of income; though the Committee of Management has set a task to investigate other sources in 09/10.

It has been a significant year for ALCAS with the delivery of the Sixth Australian Conference on Life Cycle Assessment in February, which attracted approx 150 delegates and a range of excellent local and international presenters across the three day program.

Over 40 participants also attended a series of workshops held prior to the conference on a diverse range of topics including ‘An Introduction to Life Cycle Assessment’, ‘Advanced LCA Techniques’, ‘Life Cycle Management’, and ‘Greenhouse Gas Accounting’. ALCAS has also organised and delivered throughout the year a range of roundtables on water, biodiversity and LCI methodology guidelines.

Equally importantly, ALCAS has also now agreed to host the AusLCI National Database Initiative whilst it seeks broader recognition with Federal and State Government departments and further industry sectors - financial support and data development are the two major priorities over the next 12 months.

So please both renew your ALCAS Subscriptions and enjoy this June 2009 Newsletter.
Back in mid 1993 I spent a week of telephony identifying the LCA work underway in Australia. It seemed to be centred on a handful of academics in Melbourne, Sydney and Brisbane. A couple of consultants had also put their toes in the water but the results were generally confidential.

Real growth is apparent if you fast-forward to 2009 and our recent ALCAS conference (the 6th) which had about 150 delegates including 10% from other countries. This was similar to the previous conference in 2006 and maintained the impression that the Australian LCA industry is no longer the realm of academics that it seemed to be at the first three national LCA conferences. 23% of delegates came from universities, slightly more from consulting firms (24%) with good representation from government (19%), industry and industry peak bodies (20%).

Conferences always lead to a surge in membership, but this time it seems there are more organisations than before which see the benefit of corporate membership.

One reason for this is the realization that LCA methodology is fundamental to carbon footprinting, which has become much more important for corporate Australia since the last federal election. Let’s give ourselves and the international LCA community a pat on the back for having done much of the work to date on LCA methodology that makes carbon footprinting possible for all sorts of people including many who may not yet be aware of that LCA can take them beyond this single midpoint indicator into many other environmental issues.

Another possible reason why corporate membership is up is the current Australian Life Cycle Inventory Database Initiative (AusLCI). This aims to replace the relatively sparse and methodologically uneven data available on local production systems, and represents the first major update since the original national database project began over ten years ago.

This activity is currently progressing on the basis of some government and industrial seed funding and the voluntary contributions of ALCAS members. Hopefully these data will eventually be easily accessible by all researchers so they do not have to make environmentally pessimistic assumptions about the production of Australian products relative to the rest of the world.

Organising AusLCI and running national conferences are two of ALCAS’ most important activities. ALCAS also runs roundtables. These are intended as more discursive and informal events, such as our Water Roundtable in February, which examined aspects of accounting for water use in LCA.

ALCAS is also there to connect people outside meeting rooms and provide responses when, for example, the Federal Government called on us to comment on aspects of the design of National Carbon Offset Standard.

It is fair to say that sustainability assessment in Australia will be weaker and less useful today without ALCAS, but also that ALCAS only exists because of its members.

Thank you for your contribution to this organisation. I look forward to seeing you in future fora as we strive to develop a national competence in LCA to meet our environmental challenges both locally and internationally.
The AusLCI National Database Initiative
- Developments & Plans

The Australian Life Cycle Inventory (AusLCI) Database Initiative has completed the transfer of its governance structure into the ALCAS fold in May 2009. The AusLCI Governing Committee, chaired by CSIRO’s Dr Greg Foliente, oversees a range of technical and industry sector subcommittees, and now reports to the ALCAS Committee of Management.

The immediate priorities for AusLCI in 2009 and 2010 are to:
- establish Australian methodologies and protocols for recording Australian LCI data and build a national database to host the datasets from all the industry groups; and
- facilitate industry sector groups to get organised for the purpose of collecting LCI data for that sector.

AusLCI’s over-arching goals are to:
- produce a comprehensive Australian database that is recognised as best practice and which supports decision making for the use and application of LCI data in Australia;
- have the database used as a significant enabler for the development of sustainability and environmental policy and legislation;
- educate and drive the adoption of life cycle assessment, in particular, and life cycle thinking, in general, in Australian industry, government and education.

It is envisaged that various LCA tools and applications, and similar databases in other countries would be linked or integrated with AusLCI in the future.

The AusLCI Governing Committee is engaging with government (including exploring funding options) and industry (facilitating sectoral efforts to develop and contribute LCI data) to meet the priorities stated above and advance its goals. A series of meetings are currently being planned and updated brochures are being produced.

Another potential linkage being considered is with Standards Australia to administer and manage the standardisation and documentation activities of its technical committees. Anyone interested in participating and contributing to AusLCI technical committees is advised to contact the ALCAS Secretary.
Your Thoughts on Future ALCAS Newsletter Stories and Format

The ALCAS Committee of Management is keen to seek your views as to what you would like to see in your newsletter and how you’d like it to be delivered.

In the coming days all ALCAS members will receive an email inviting their participation in a simple, brief and anonymous online survey, that will aim to collect the thoughts and views of the membership.

One of the benefits of being an ALCAS member is receiving the ALCAS newsletter, which contains articles and stories relating to LCA both locally and overseas. To date, the newsletter has been provided through the efforts of the ALCAS committee and through the kind contributions of ALCAS members and others.

Like most organisational newsletters, content is an ongoing challenge that relies heavily on the judgement of the editorial committee.

Ensuring that content is relevant, useful and interesting to members is key to the newsletters success, so too is the mode of distribution. The traditional ‘mail-out’ distribution mode may no longer be the way members wish to receive information, with other options such as web-linked summaries and even social networking sites representing potential alternatives.

We’re looking forward to reading your responses and using them to guide the form and content of future newsletters.

Thanks in advance for your support!

Andrew Carre
ALCAS Committee Member

ALCAS Membership

The benefits of ALCAS membership include:

- Discounted access to ALCAS events such as conferences and roundtables
- 50% discount on subscriptions to the International Journal of Life Cycle Assessment, where ALCAS has a permanent column
- Quarterly ALCAS newsletter with information on LCA developments, events and committee news.

As an ALCAS member you can:

- Be part of the Australian LCA Community and keep abreast of, and have input into, national and international issues in LCA, and related environmental tools and methods
- Help in the advancement and appropriate application of LCA and associated tools to create a more sustainable society
"Buildings and the Environment – Full Life Cycle Assessment”
Progress with the BPIC/ICIP Project
Nigel Howard & David Sharp

The Building Products Innovation Council (BPIC) ICIP Project is now past half way and some significant milestones have been achieved.

The project had a relatively slow start, working through the difficult issues of methodology development as the BPIC members wrestled with both the practicalities of what this would mean for data collection and what it could mean for their sector commercially and strategically.

In my opinion the 10 Contributing Member Associations deserve considerable kudos for the way they have been able to reconcile and coordinate their vigorous competitive instincts to achieve consensus on the BPIC/ICIP Methodology Guidelines that provide the basis for data collection in this sector. (This activity took 10 years in the UK). The BPIC/ICIP Methodology Guidelines are mostly identical and compatible with AusLCI guidelines except on Allocation rules where AusLCI guidelines remain silent.

Data collection is now underway in earnest with all sectors compiling data and bringing it to their Associations to compile into the generic average data for Australia scheduled for completion by September 2009.

The data will be generic average data at a practical level of data aggregation for the Associations to simultaneously signal the real variations between products to decision-takers, whilst also protecting commercially confidential information. In many cases this is a difficult balancing act for the Associations.

CSIRO have completed the data collection sheet used to gather the data and ensure that this will be compatible with other international datasets.

CSIRO have also completed the alpha version of the database that will be used to house the BPIC data and reference sources.

In addition, three further major tasks are currently underway:

Firstly, a first draft review of methods of Impact Assessment has been produced and is now being refined in collaboration with the ALCAS/AusLCI Impact Assessment Working Group.

This review studies all of the existing methods of impact assessment internationally for their relevance and practical application in Australia.

The review goes further and is more detailed than the AusLCI impact assessment report and will be published alongside the BPIC/ICIP methodology guidelines.

Secondly, and following from the Impact Assessment activities, work has started on Weightings for Australia, to allow LCA results to be interpreted into final indicators – as an ecopoint or ecoindicator for example.

The first step is to convene a Weightings Working Group of key stakeholders from those with a concern about weightings and their application and those with an interest in using the weightings results once they are available.

The membership of this group will comprise one member from each BPIC Contributing Member Association plus invited members from other relevant stakeholder groups. To-date, Green Building Council Australia, DECC/NABERS, Good Environmental Choice Australia, Ecospecifier, LCA Design and RMIT/BAMS have been identified.

ALCAS as partners to the project are directly involved through our Chairman Greg Peters who is also Chair of the Impact Assessment Working Group. UNSW will also assist with the development of the method and the conduct of the weightings exercises around Australia.

(continued p 6)
Progress with the BPIC/ICIP Project – continued from p 5

The job of the Weightings Working Group will be to agree the impact categories to be weighted, agree the methodology for the weightings exercises, agree the sampling frame of stakeholders and locations to be surveyed and then act as a peer review group providing commentary on the results that are achieved at the end. The Weightings will be published with the other outputs from this project all via the CSIRO developed web application.

Finally, work is now quite advanced on the buildings and components maintenance, cleaning and replacement life database – this is needed to provide a consistent source of data to be used in building LCA studies for the maintenance and lives of the buildings, of building elements (assemblies) and components – so for example it will contain data on different building lives, rates of refurbishment of properties, wall and roof recladding and repainting intervals, vacuum cleaning frequencies for carpets etc.

The data that we seek is real replacement life or obsolescence data, not guarantee periods or accelerated life testing data – only rarely are materials or products really replaced at these periods – structural components typically out-live their guaranteed life and are only replaced when a whole building is no longer appropriate for it location, many products either outlive their guarantee period or are replaced sooner for reasons other than wear and tear – fashion, colour scheme, business churn etc.

Many products last much longer in homes than the equivalent in a commercial setting. Many products have a longer life in a public sector organization than in a private sector one – large prestigious commercial organizations replace sooner than small less prestigious ones.

We would be very pleased to hear from anyone interested in contributing perspectives, relevant contacts or help to progress or extend any of these aspects or to help other sectors to engage with this activity. Contact details:

nigel.howard@edgeenvironment.com.au
davidsharp@bpic.asn.au

International LCA Conferences 2009

LCM 2009, Cape Town, South Africa, 6 - 9 September, 2009*

LCA IX, Boston, 29 September - 2 October 2009

SETAC Latin America, Ecotoxicology and Social Responsibility, 5 - 9 October, Lima, Peru 2009

4th SETAC Africa Meeting, Status and Strategies for Sustainable Environmental Quality, Munyongo, Kampala, Uganda, 2 - 5 November 2009

3rd International Conference on Eco-Efficiency and Eco-Innovation Modelling, Evaluation and Drivers for Sustainable Development, Egmond aan Zee, the Netherlands, 18 - 20 November, 2009*

1st LCM China Conference, Beijing, China, November 2009 (dates to be confirmed)

SETAC North America 30th Annual Meeting, New Orleans, Louisiana, USA, 20 - 24 November, 2009*
Life Cycle Thinking Promoted to Businesses

Rob Rouwette

The Plastics and Chemicals Industries Association (PACIA) has been a fervent advocate of Life Cycle thinking for years. The partnership between PACIA and EPA Victoria has driven the development of this one-day industry course around implementing life cycle thinking into business practice. The course is being delivered by Energetics.

Organisations taking a life cycle approach will not only achieve resource and cost efficiencies across the entire value chain, but can also improve their brand value, reduce their risks, and open up new market opportunities. PACIA and EPA Victoria are leading the charge in helping companies to understand a life cycle approach and realise the business benefits.

Attendants to this interactive course are equipped with the tools needed to integrate a life cycle approach within their business and begin reaping the rewards. A range of case studies and real-life examples demonstrate how life cycle thinking has enabled other organisations to achieve resource efficiencies, establish successful supply chain partnerships and increase the value of their products and services.

The first training took place in Melbourne (17th June) and was well received. Additional sessions in Melbourne are planned for early September and November.

For more information on the content of the course, registering your interest, or exploring opportunities to develop (tailored) interstate or in-house training, please contact Krista Imberger of PACIA (03 9429 0670; training@pacia.org.au).

Other contacts:
Sean Shiels (sean.shiels@epa.vic.gov.au)
Rob Rouwette (Rob.Rouwette@energetics.com.au)

International LCA Conferences 2010

SETAC Europe 16th LCA Case Studies Symposium - From simplified LCA to advanced LCA, Poznan, Poland, 1 - 2 February, 2010

20th SETAC Europe Annual Meeting, Seville, Spain, 23 - 27 May, 2010

Brazilian LCM Conference 2010, Florianopolis, SC, Brazil, 13-15 October 2010

EcoBalance 2010, Tokyo, Japan, 9 - 12 December 2010 (contact: ecobalance2010@sntt.or.jp)
New Publications

**Life Cycle Assessment**
Principles, Practice and Prospects

Ralph E Horne  Centre for Design, RMIT
Tim Grant  Centre for Design, RMIT
Karli Verghese  Centre for Design, RMIT

*Life Cycle Assessment* focuses on the reflective practice of LCA, and provides critical insight into the technique and how it can be used as a problem-solving tool. It describes the distinctive strengths and limitations of LCA, with an emphasis on practice in Australia, as well as the application of LCA in waste management, the built environment, water and agriculture. Supported by examples and case studies, each chapter investigates contemporary challenges for environmental assessment and performance improvement in these key sectors.

LCA methodologies are compared to the emerging climate change mitigation policy and practice techniques, and the uptake of ‘quick’ LCA and management tools are considered in the light of current and changing environmental agendas. The authors also debate the future prospects for LCA technique and applications.

Illustrations
192 pages, 230 x 155 mm
Publisher: CSIRO PUBLISHING
March 2009

For more information visit:
www.publish.csiro.au/

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**LCA Related Websites**

**ALCAS**
www.alcas.asn.au

**AusLCI**
www.auslci.com.au

**The Life Cycle Initiative**
www.lcinitiative.unep.fr

**SETAC**
www.setac.org/

**US Life Cycle Inventory Database**
www.nrel.gov/lci/

**Swedish National LCA Database**
www.globalspine.com

**Dutch LCA Database – IVAM**
www.ivam.uva.nl/

**Ecoinvent**
www.ecoinvent.ch/

**Gabi LCA Software**
www.gabi-software.com/

**SimaPro LCA Software**
www.pre.nl/
Water Roundtable

Some very interesting numbers and ideas have been emerging from recent attempts to estimate the water use of products and processes in an LCA framework. Much of the diversity has to do with disparate groups coming together but using different terminology, and the question of how rain logically fits into environmental assessment. This was a major topic of discussion amongst a group who gathered after the ALCAS conference in February for a Roundtable on water use in LCA. Some excellent presentations were provided generating some thought provoking discussion.

- Stephanie Hellweg gave a summary of current research activities occurring under the banner of the UNEP/SETAC working group on freshwater use and consumption. This has included attempts to create a "stress weighted" water use indicator in litres and approaches to integrating water use into the Ecoindicator 99 framework of damages to human health, the environment and resources.
- Greg Peters presented issues and recommendations emerging from an Australian study of red meat production and argued that LCI reporting should be based on classification of water sources and discharge qualities consistent with Owens (2002).
- Tim Grant presented another approach based on identification of the area associated with precipitation inputs to agricultural products which would measure water in hectare-years.
- Peter Holt discussed the drivers for water calculus in industry and some shortcomings of the current situation.
- Brad Ridout presented an Australian case study based on an approach fairly consistent with that which Stephanie presented.
- Sandra Eady presented a case using water use efficiency of crops and vegetation as a means of estimating the total water requirement (including rainwater) for an agricultural product.

The meeting considered a “Melbourne Declaration” of those present, deploring the media’s mindless use of economics-based water use statistics in environmental debates. But it was agreed that this could backfire while a solid alternative methodology is still under development. Greg Peters and Brad Ridout put themselves forward as willing channels between the UNEP/SETAC process and the Australian scene.

The meeting created a draft list of inventory nomenclature for use in AusLCI to allow for current and future LCIA. This is intended to be the basis for further discussions between AusLCI members centred on the LCIA Development Committee.

Roundtable – Perth October 2009

Resources & Waste - Using LCA to Improve Efficiency and Profitability

If you are interested in presenting your LCA research please contact Dr Wahidul Biswas on w.biswas@curtin.edu.au or on (08) 9266 4520 with your suggested research presentation topic by 17th July 2009.
AUSLCI Data Guidelines release as Draft Standard

The long process of guidelines development for AUSLCI is completed with the release of the “Guidelines for Data Development for an Australian Life Cycle Inventory Database” Draft Standard which is being released on July 1st 2009.

The guidelines give requirements and guidance for collection and documentation of data for AusLCI, covering issues such as system boundaries, naming elementary flows through to aggregation of data and product groups. The guidelines are aimed to guide LCI development for all sectors and wide range of application and therefore questions which are normally part of on LCA – such as what indicators to use, how to compare products – are not part of the guidelines.

The plan from here forward is to allow practitioners to use the AUSLCI guidelines for 12 months, before undergoing review of the standard to look to produce a final standard for data development. Processes for data documentation and data review are still being finalized and will be added to the guidelines when they are ready.

The document can be downloaded from the AusLCI wiki site which is a great place to catch up on what all the different committees are doing in AusLCI.


Hybrid LCA working group

Following on from a Master Class held in Melbourne after the 6th National Conference on LCA a working group has been formed to share and develop resources for undertaking Hybrid Process/Input Output LCA. This technique uses the completeness of the economic input output LCA models which are based on ABS economic statistics, with the detail and resolution of conventional process LCA data. This is a somewhat difficult and data intensive area, but has great promise for the future of LCA. The initial task of the group is to evaluate the available public data for undertaking Hybrid Input Output LCA. In the longer term the group hopes to publish a guideline for undertaking hybrid LCA.

People interested in joining the working group should email Tim Grant tim@lifecycles.com.au for further information.
Improve farm productivity and improve environmental performance - who wouldn't want to do that? The question is - how?

Agricultural Greenhouse Emissions (AGE) is a project involving 50 beef and dairy farmers who are exploring the range of options to reduce energy use, water use and cut down on waste at the same time as they boost farm income.

The project, supported by the Victorian government's Sustainability Fund, is being conducted by the Western Port Greenhouse Alliance (WPGA) in association with the Western Port Catchment and Bass Coast Landcare Networks. GenesisNow carries out farm audits in emissions, water and waste. They work with the farmer to prepare the business case, based in part upon a Life Cycle Assessment via a series of calculators and detailed designs, for introducing a range of changes, from animal and pasture management to farm practice and new technologies converting wastes into useful resources that will boost production and reduce environmental impacts. The farmer can then make a judgement, based on the data he or she receives, as to what they will change and when. They also look at feed additives to cut methane production, the use of organic fertilizers and planting programs to boost soil moisture, pasture growth and reduce animal stress.

The AGE project also features a strong evaluation component to see that we capture everything that we are learning for the broadest dissemination. Field days and forums are held in conjunction with the project and further information is available on the WPGA website <www.wpga.org.au> or you can contact the WPGA by email ghunt@casey.vic.gov.au

Key Upcoming Dates

- 17th July – Expressions of Interest for Perth October Roundtable
- July - August Biodiversity Roundtable
- 6th August – ALCAS Annual General Meeting
- 23rd October – Roundtable Resources & Waste

ALCAS Committee Members 2009

For further information in regards the ALCAS Committee feel free to contact any of the Executive members:

President: Greg Peters (02) 9385-5097
Vice President: Nigel Howard (02) 8962-2644
Treasurer: Lisa Opray 0411 202 940
Secretary: Alastair Woodard (03) 9611-9058

Committee Members:
Andrew Carre
Tim Grant
Paul Koltun
Rob Rouwette
Sean Shiels
Jean Wiegard
Greg Foliente (coopted)