

## ALCAS Column

### Best Practice Seminar and Announcement of Forthcoming 2005 Conference

Karli James<sup>1\*</sup> and Venky Narayanaswamy<sup>2</sup>

<sup>1</sup>Dr. Karli James (ALCAS Secretary), Program Manager – Sustainable Products, Centre for Design RMIT University, GPO Box 2476V, Melbourne, Victoria 3001, Australia ([Karli.James@rmit.edu.au](mailto:Karli.James@rmit.edu.au))

<sup>2</sup>Research Fellow, Centre of Excellence in Cleaner Production, Curtin University of Technology, GPO Box U1987, Perth, WA 6845, Australia ([V.Swamy@curtin.edu.au](mailto:V.Swamy@curtin.edu.au))

\* Corresponding author ([Karli.James@rmit.edu.au](mailto:Karli.James@rmit.edu.au))

#### ALCAS Committee

The Australian Life Cycle Assessment Society (ALCAS) committee has 8 members elected each year at the annual general meeting.

The current committee consists of

**President:** Mr. Tim Grant ([Tim.Grant@rmit.edu.au](mailto:Tim.Grant@rmit.edu.au))

**Vice President:** Dr Sven Lundie

**Secretary:** Dr Karli James

**Treasurer:** Jean Weigard

Mr John Pullen

Mr Bob Pagan

Mr Ignatius Verbeek

Associate Professor Kees Sonneveld

This ALCAS column reports on the recent LCA Best Practice Seminar organized by ALCAS and the Western Australian Sustainable Industry Group in Perth on 12<sup>th</sup> May and the first call for papers for the 4<sup>th</sup> Australian LCA Conference to be held in February 2005 in Sydney.

#### LCA Best Practice Seminar

The LCA best practice seminar was conducted at Perth, Western Australia, on the afternoon of 12<sup>th</sup> May 2004. Six presentations were made and a summary of each is given below.

RENE VAN BERKEL, Chair in Cleaner Production and Director of Centre of Excellence in Cleaner Production, Curtin University of Technology, started the seminar by giving an overview of LCA and its progress in the Australian context. He explained the similarities and differences in the LCA methodology by the UNEP/SETAC initiative, ALCAS initiative, CML-Leiden University, etc. He addressed the ISO 14040-series on LCA and their implications on LCA work currently practiced in Australia. He also presented the potential limitations posed by the LCA methodology and prescribed a few potential solutions or the way forward. Despite LCA as a tool in its evolutionary phase, Prof. Van Berkel reiterated LCA's usefulness as a key tool in environmental decision-making in Australian businesses and environmental policy framework through the use of examples.

TIM GRANT, Assistant Director at the Centre for Design at Royal Melbourne Institute of Technology University (RMIT), Melbourne, gave an exquisite presentation on the need for a robust LCA database in the Australian context. He explained the history of LCA data development over the past five years in Australia. Along with describing the current initiative of developing a comprehensive LCA database project funded by the Australian Greenhouse Office, he also gave few international examples (especially from Japan) on LCI databases.

He illustrated the methodological issues involved in relation to data collection, collation, and presentation formats whilst maintaining data accuracy, reliability, and transparency. He asserted that the National Life Cycle Data Resource would significantly support further fundamental and applied research uptake in the LCA arena and reduce the cost of doing LCA. He reiterated that the LCA database needs to be transparent, independent, and accessible with project stakeholder links and must continuously and consistently engage all the relevant stakeholders from the beginning and throughout the entire journey.

VENKY NARAYANASWAMY, Research Fellow at the Centre of Excellence in Cleaner Production, Curtin University, gave a presentation on the LCA of the grains and the grain products funded by the Australian Grains Research and Development Corporation. He started the presentation by providing a brief history of the food LCA work in Australia. He went on to illustrate the applicability of LCA in wheat-to-bread, barley-to-beer, and canola-to-cooking oil. He also drew eco-efficiency implications from these LCA studies and explained the process involved in communicating the eco-efficiency opportunities to the individual companies and the farmers. He added that agriculture remains to be a complex sub-system to be tackled under the LCA framework in comparison to manufacturing and retail phases. The variability in LCI data and impact values needs to be dealt with in order to arrive at a representative environmental profile of grains to be used in the food LCAs.

MARY STEWART from the Department of Chemical Engineering, University of Sydney, gave a presentation on the application of Life Cycle Assessment in mining, metals processing, and the refining sector. She gave a historical context of the application of LCA in the resource industry by taking examples from South Africa and Australia. She highlighted the methodological problems in the LCIA in regards to eco-toxicity, abiotic resource depletion, etc. in the application of LCA in this sector. She also pointed out the lack of impact category indicators for water use and depletion of freshwater resources, as it is the most important issue concerning the metals industry.

She gave a brief overview of current LCA examples from steel, nickel, aluminium, cadmium, cellular phones, and lead industries. She presented the user analysis of LCI and LCIA data by the industry and elicited the relative importance of various aspects of LCA as seen by the industry. She pointed out the current methodological shortcomings and suggested how the on-going UNEP/SETAC initiative is envisaging in addressing these issues.

ROBERT PAGAN, Director of the Environment Management Centre, University of Queensland, gave a presentation on integrating cleaner production and LCA for better decision support in the meat processing industry. He defined the cleaner production and eco-efficiency principles, and the reinforcing similarities they carry, in relation to the LCA framework. He illustrated the application of the LCI framework in arriving at a water, energy, and a waste calculator for a meat processing factory. He demonstrated how LCA helped the business in strategic environmental prioritisation and how well it fits within the other company initiatives such as certified EMS, ecolabelling, supplier cooperation, etc.

LESLEY STONE, Senior Lecturer, at the Centre of Excellence in Cleaner Production, Curtin University of Technology, gave the final presentation on LCA and its implications for the Design for the Environment. She gave practical business examples such as the most famous Interface Corporation, Fuji Xerox, Ikea, Electrolux, and the Toyota Prius. She also gave DfE examples in particular in toxic material substitution using an LCA approach in coloured cotton fibres and paints, and a few examples in water and energy use efficiency products.

Please check out this weblink <[http://cleanerproduction.curtin.edu.au/sig/2004activities/lca\\_presentations.htm](http://cleanerproduction.curtin.edu.au/sig/2004activities/lca_presentations.htm)> where our presentations are downloadable.

#### **Announcement for the Fourth Australian Conference on Life Cycle Assessment (Feb 2005)**

The Australian LCA Society is pleased to announce the Fourth Australian LCA Conference titled *Sustainability Measures for Decision Support* to be held in Sydney between 23–25 February 2005. Internationally and in Australia, Life Cycle Assessment continues to grow both in the detail of application, and the breadth of assessment. At the same time, many other tools and approaches are increasingly being used along with LCA or incorporating LCA aspects. It is now recognized that decision support for sustainability requires many players and approaches beyond traditional methodologies.

One aim of the conference is to make bridges between different environmental assessment methods that have a sustainability focus. This includes:

- Life cycle assessment,
- Energy and greenhouse life cycle studies,
- Life cycle costing,
- Triple bottom line accounting approaches,
- Ecological footprints,
- Materials flow analysis,
- Uncertainty analysis in environmental assessment,
- Input Output analysis.

The conference also aims to provide a forum for sharing LCA experience in different sectors such as:

- Building applications,
- Waste Management,
- Water issues,
- Energy and fuel production system,
- Products and packaging manufacture,
- Food and Agriculture.

**This is the first call for papers.** Two types of papers are invited for the conference:

- Papers for full conference peer review – These papers will need to be completed and submitted by October 31st 2004 for a double-blind, peer review process.
- Abstract for presentations at the conferences – These abstracts are for people wishing to present projects, work or ideas at the conference without completing a full paper prior to the conference. A PowerPoint presentation is required.

Abstracts should be sent to <[papers@lca-conf.alcas.asn.au](mailto:papers@lca-conf.alcas.asn.au)>. Abstracts should be approximately 100 words and should include proposed authors and corresponding author contact details and affiliation. Additional information on the timing of paper and presentation deadlines can be found at [www.alcas.asn.au](http://www.alcas.asn.au).

The **Technical Peer Review Committee** consists of the following Australian LCA practitioners: Mary Stewart, Jean Wiegard, Claire Diaper, Tim Grant, Christopher Dey, Terry Norgate, Karli James, Marguerite Renouf, Tom Beer, Rene van Berkel, Steven Moore, Pene Mitchell, Bob Pagan, David Brennan, Leanne Philpot, Paul Koltan, Delwyn Jones, Dominique Hes, Venky Narayanaswamy, Selwyn Tucker, Graham Treloar, Manfred Lenzen, Sven Lundie and Kees Sonneveld.

The **Conference Organising Committee** consists of Tim Grant, Karli James, Jean Wiegard, Bob Pagan and Sven Lundie. If you would like to be involved, contact [secretary@alcas.asn.au](mailto:secretary@alcas.asn.au). Additional information on the conference can be found at <http://www.alcas.asn.au>.

#### **Timing of the Conference**

##### **Peer review process deadlines**

- Abstracts submission closes: July 31st 2004
- Authors notified: August 31st 2004
- Papers submitted: October 31 2004
- Comments returned to authors: November 31st 2004
- Final papers and PowerPoint presentations are due: January 31st 2005

##### **Presentation only process deadlines**

- Abstracts submission closes: September 30th 2004
- Authors notified: October 31st 2004
- PowerPoint presentations due: January 31st 2005