

LCM2009 TECHNICAL PROGRAMME

This programme is subject to change. Please note: papers currently identified by title and lead author



SUNDAY 6 SEPTEMBER 2009

12:00 - 14:00	Registration opens at Vineyard Hotel (Camphor foyer)
16:00 - 19:00	Registration continues
18:00 - 20:00	Welcome Reception

MONDAY 7 SEPTEMBER 2009

07:30	Registration desk opens	Refreshments
08:30	Introduction and Welcome	Venue: Camphor Harro von Blottnitz (Conference Chair) Danie Visser (Deputy Vice Chancellor, University of Cape Town) Sonia Valdivia and Jim Fava (UNEP-SETAC Life Cycle Initiative)
08:55	Plenary session 1	Venue: Camphor Chair: Jim Petrie (LCM2009 Scientific committee chair)
	Plenary speaker 1	Roland Clift: <i>The Sustainability of International Supply Chains: Aspirations and Practicality</i> (University of Surrey and ISIE)
09:45	Keynote speaker 1	Henry King: <i>LCM in the FMCG sector: the gap between theory and practice</i> (Unilever)
10:15	Keynote speaker 2	Kirstie McIntyre: <i>Structures and policies for the successful management of e-waste in Africa</i> (HP)
10:45	Morning tea	

11:15

VENUE: Camphor A**Chair:** Harro von Blottnitz**M2A LCM and Resources – Biofuels**

- SP 01 *Goodbye to carbon neutral: building carbon-stock changes into biomass carbon footprints* – Eric JOHNSON
- SP 02 *Comparative Life Cycle Assessment of Charcoal, Biogas and LPG as cooking fuels in Ghana* – Augustine NTIAMOAH
- SP 03 *LCA of biodiesel production from micro-algae coupled to Anaerobic Digestion of oilcakes* – Laurent LARDON
- SP 05 *Strategy for Developing a Life Cycle Inventory Database for the Cane Sugar Production Process in Cuba* – Ana Margarita CONTRERAS MOYA
- SP 06 *The Environmental and Energy benefits of using bio-ethanol on Life Cycle aspect in Thailand* – Soottivan NOKSA-NGA
- SP 07 *Web-based tool for streamlined biofuels' LCA* – Mireille FAIST EMMENEGGER
- SP 10 *Multicriteria decision-making for sustainable development programmes: A case of biofuels* – Thapelo LETETE
- SP 13 *Biodiesel supply chain optimisation* – Joachim BECKER

VENUE: Camphor B**Chair:** Alan Brent**M2B LCA for Development**

- OR 01 *Unit Process Data – Building more relevant LCAs for Developing Economies* – Philippa NOTTEN
- OR 02 *Design for Sustainability – UNEP Case Studies in Developing Economies* – Garrette CLARK
- OR 03 *A framework for assessing freshwater use within LCA: Results and working progress from the UNEP/SETAC Life Cycle Initiative Project on Water Use in LCA* – Manuele MARGNI
- OR 04 *The publication of the Code of Practice for a social and socio-economic LCA (sLCA): The result of An international effort within the Life Cycle Initiative* – To be confirmed
- OR 05 *Life Cycle Assessment in developing countries. Cuba case* – Elena Rosa DOMINGUEZ

VENUE: Boardroom**Chair:** Jim Fava**M2C Life-Cycle Based Decisions for Business focusing on the Food Sector and the Retailers**

12:30

Lunch

VENUE: Camphor A**Chair:** Matthias Finkbeiner**M3A LCM and Resources – Energy/Carbon**

- OR 06 *New Impact Assessment Method: New Decisions?* – Carmen ALVARADO ASCENCIO
- OR 07 *Carbon capture and storage: Life cycle assessment and external costs of future fossil power generation* – Christian BAUER
- OR 10 *Integrating GHG dynamics in biomass-based products LCA* – Anthony BENOIST
- OR 11 *Combining Life Cycle Thinking and Carbon Footprinting: Conceptualizing GHG Accounting Within LCA* – Sophie FALLAHA
- OR 12 *Material flow and stock analysis and LCI analysis on forest products in Japan* – Ichiro DAIGO
- OR 13 *Analysis of CO₂ emissions from daily life and consideration of the low carbon daily activities in Japan* – Tomohiko IHARA
- OR 14 *Carbon footprint analysis supporting environmental communication with customers: Case of Agfa Graphics printing plate systems* – An VERCALSTEREN
- OR 100 *What does 'Climate Neutral' really mean, and what are the implications for sustainable development?* – Rolf BOHNE

VENUE: Camphor B**Chair:** Anne-Marie Tillman**M3B Engaging with Complexity**

- OR 15 *An investigation into a method to quantify the external social footprint of Procter & Gamble's operations in South Africa* – Alan BRENT
- OR 16 *Bringing an LCM imperative to strategic planning in the resources sector* – Jim PETRIE
- OR 17 *Consumer acceptance of CO₂ reductive choices in shopping and improvement potential of supporting information* – Masaharu MOTOSHITA
- OR 18 *A framework for evaluating different evolutionary pathways of industrial networks* – Ruud KEMPENER
- OR 19 *Extending System Boundaries to Capture Indirect Effects on LCA – An Enlightening Example!* – Manuele MARGNI
- OR 20 *LCA as an accompanying and decision tool in production of biodiesel from waste cooking oils: an industrial perspective* – Cecile QUERLEU
- OR 21 *The sustainability assessment of bioenergy in the UK: participatory policy-making and the use of narratives* – Phil SINCLAIR
- OR 99 *Environmental Impacts of Multi-Storey Buildings Using Different Construction Materials* – Barbara NEBEL

VENUE: Boardroom**M3C Water Workshop**

- Cynthia Mitchell (UTS, Australia)
- Ulrika Palme (Chalmers University, Sweden)
- Rolfe Eberhard (Palmer Development Group, South Africa)

15.30

Afternoon tea

16:00

VENUE: Camphor A**Chair:** Roland Clift**M4A LCM and Resources – Biofuels**

OR 39 *2nd generation biofuels a sure bet? How to get it wrong* – Harro VON BLOTTNITZ

OR 40 *Life cycle assessment of biofuels in West Africa: what a challenge!* – Pascale SCHWAB-CASTELLA

OR 41 *Carbon Footprint of Palm Oil Based Biodiesel Production* – Wanida WANICHPONGPAN

OR 42 *Greenhouse gas emissions and soil carbon stocks in the agricultural phase of sugarcane-derived ethanol production in Brazil* – Marcelo VALADARES GALDOS

OR 43 *Wood gasification: a comparative LCA of different supply scenarios alternatives.* – Cecile QUERLEU

OR 44 *Influence of time dependency of landfill biogas production in LCA: a French case study aiming to support decision making* – Stéphane TCHUNG-MING

OR 45 *Gap Analysis of Tools Used to Assess the Environmental Impacts of Biofuels in the United States* – Mary Ann CURRAN

OR 46 *A Life Cycle Assessment on biodiesel in the context of the coal-to-liquids industry* – Tshupo MASHILE

VENUE: Camphor B**Chair:** George Afrane**M4B Policy, Governance and Delivery**

OR 31 *Development of a management framework for environmental remediation in South Africa* – Alan BRENT

OR 32 *Car Recycling Management in the Frame of LCM* – Zbigniew KLOS

OR 33 *Towards an information exchange system on substances in electrical and electronic equipment for safe and efficient end-of-life treatment* – Magnus BENGTSOON

OR 34 *LeNS_AFRICA. An African Learning Network on Sustainability, for the development and diffusion of teaching materials and tools on Design for Sustainability in an open-source and copyleft ethos* – Carlo VEZZOLI

OR 35 *Sustainable Production and Market Economy* – Nani PAJUNEN

OR 36 *Social Impacts in Life Cycles: Part I: Activity Level Modeling in a Global IO-LCA Model* – To be confirmed

OR 37 *Evolution of Life Cycle Thinking Worldwide – Insight into expectations, needs and challenges of Governments in Non OECD Countries* – Sonia VALDIVA

OR 38 *A Comparative Analysis of Sustainability Modernization Dimensions for Eighty-Nine Emerging and Developed Economies* – Hamieda PARKER

VENUE: Boardroom**M3C Water Workshop**

continued

18:00 Poster viewing Summerhouse

18:45 "LCA Lounge" at Splash Café for barbeque (braai)

TUESDAY 8 SEPTEMBER 2009

08:00 Conference office opens Refreshments

08:15 **Plenary session 2** **Venue: Camphor**
Chair: Francis Petersen (Dean EBE Faculty, UCT)
Plenary speaker 2 **Mark Drewell:** *Just when you thought it was safe to go back into the water - An exploration of society, business and leadership in the great transition* (3 Laws Capital)
09:00 Keynote speaker 3 **Benny Mokaba:** *A petrochemical industry approach to managing product life cycles in an emerging economy* (Sasol)
09:30 Keynote speaker 4 **Markus Reuter:** *The Niche of Metallurgy in Design for "Sustainability"* (Ausmelt)
10:00 UNEP Resources Panel update **Mark Swilling** (Sustainability Institute, Stellenbosch)

10:30 Morning tea

11:00	VENUE: Camphor A Chair: Johannes Gediga <i>Sponsored by Anglo American</i>	VENUE: Camphor B Chair: Bo Weidema	VENUE: Boardroom Chair: Göran Finnveden
	T2A LCM and Resources – Waste and Minerals	T2B Life Cycle Assessment	T2C Human Settlements/Implementation
SP 17	<i>The global life cycle of rechargeable Lithium ion batteries: what natural resource savings can be gained through recycling?</i> – Jo DEWULF	SP 27 <i>LCM in Designing Towards Innovation</i> – Zbigniew KLOS	SP 08 <i>Environmental management systems as cooperative governance tools to promote sustainable development in South African metropolitan cities</i> – Alan BRENT
SP 18	<i>From environmental impacts to economic valuation of different waste management options: An industrial perspective of the LCA-CBA approach</i> – Laurence HAMON	SP 28 <i>Life Cycle Assessment and Geographic Informatic System Integration in Southern Europe</i> – Carles GASOL	SP 37 <i>Rural Water Supply, Sanitation and Sustainable Rural Development with particular reference to India</i> – BL MATHUR
		SP 29 <i>Environmental Profile and Sustainability of Hydrogen Production Technologies; PHISICO2 Program</i> – J L. GÁLVEZ	
		SP 30 <i>Environmental impacts of meat producing farms in Switzerland</i> – Daniel BAUMGARTNER	

- SP 19 *Copper flow in Brazil and its comparison with other economic regions* – Armando Hirohumi TANIMOTO
- SP 21 *LCM's general appointments to design an electric vehicle to collect urban recyclable solid waste more ecofriendly* – Marcio LAZZARI
- SP 22 *Life Cycle Management of Natural Resources / The case of Aluminum* – C. KORONEOS
- SP 23 *LCA as a Methodology to Evaluate Energetic and Environmental Impacts of Integrated MSW Management Systems* – Lucia RIGAMONTI
- SP 24 *LC thinking in combination with meta-modelling technique- a useful tool for evaluating the environmental impact of recycling processes* – Alexandra PEHLKEN
- SP 25 *Systemic analysis and waste management* – Laetitia ADELARD
- SP 26 *Life Cycle Assessment of Aluminium Metal Production in Western Australia* – Wahidul BISWAS
- SP 32 *Application of Product Quality-Based Eco-Efficiency* – Kiyotaka TAHARA
- SP 33 *Product end-of-life in the automotive industry: an integrated management perspective. The I.D.R.A. Project* – A SIMBOLI
- SP 34 *Life Cycle Management of Piggery Waste* – Trakarn PRAPASPONGSA
- SP 35 *Visualization of Environmental Impacts of Electrical and Electronic Products using Multidimensional Scaling* – Sebastien LOZANO
- SP 36 *Life Cycle Assessment of renewable energies – Aspects of cumulated energy* – Hermann-Josef WAGNER
- SP 38 *Energy and Environmental analysis of retrofit actions for a single-family house in the Mediterranean area* – Giorgio BECCALI
- SP 39 *Traditional versus new buildings constructions concepts in Madagacar, evaluated from life cycle analysis point of view* – Bienvenue RAHELIALALAO
- SP 41 *Evaluation for CO₂ Emission from a Golf Tournament and Scenarios for CO₂ Reduction* – Hiroshi YAMAGUCHI
- SP 42 *LCA of Different Building Materials for Walls. Case: Housing in Colima, México* – Victor Alberto ARVIZU-PINA
- SP 43 *Life Cycle Comparative Analysis of Railway Sleepers Made of Wood and of Recycled Plastic: German Case Study* – Ana Claudia NIOAC DE SALLES
- SP 45 *Decomposition Analysis for Household Life Cycle CO₂ Emissions in Japan* – Yuki KUDOH
- SP 46 *Home and household as a funtions' network* – Brunella COZZO
- SP 47 *The SuFiQuaD project - Sustainability, Financial and Quality evaluation of Dwelling types* – Carolin SPIRINCKX

VENUE: Camphor A**Chair:** Henry King**T3A LCM and Resources – Food**

- OR 22 *Key environmental issues in the agro-food sector. A case study for citrus based products in the Italian context* – Maurizio CELLURA
- OR 23 *A Sector-Based Approach To Carbon Management for the Primary Agricultural Sector In New Zealand* – Sarah MCLAREN
- OR 24 *How to cope best with field emissions of nitrate in a food LCA?* – Ruth FREIRMUTH KNUCHEL
- OR 25 *Eco-Standardization of Frozen Vegetable and Fruits Industries in Chiang Mai Province* – Sate SAMPATTAGUL
- OR 27 *Environmental impacts of different food products and their contribution to the environmental impacts of consumption* – Juha-Matti KATAJAJUURI
- OR 28 *Literature review on dairy products for an inventory of key issues: List of environmental initiatives and influences on the dairy sector* – Sebastien HUMBERT
- OR 29 *Using a Fruit and Vegetable Dataset to Determine Statistically Independent Indicators for Food Production* – Christopher MUTEL

VENUE: Camphor B**Chair:** Hamieda Parker**T3B Implementation – Supply Chain Management**

- OR 09 *Carbon Footprint to support supply chain management* – Tania BOATTO
- OR 26 *LCA-based Assessment of the Sustainability of Packaging Systems for Fruit and Vegetable Transport in Europe* – Tabea BECK
- OR 48 *Moving Forward, Treading Lightly – Life Cycle Management in Action* – Juanita DAY
- OR 49 *EcoDesign at Grundfos – premisses, interests and competencies* – Mette MOSGAARD
- OR 51 *The Sustainable Value Chain: Life Cycle Management to enhance sustainability – business success stories* – Jim FAVA
- OR 52 *Orangina Schweppes environmental impact analysis: joint use of corporate carbon footprint and LCA* – Philippe SCHIESSER
- OR 53 *Cradle to Cradle and its meaning for life cycle thinking and supply chain management* – Jose POTTING

VENUE: Boardroom**T3C Energy Workshop**

- David Mitchell and Mary Stewart (Energetics, Australia)
- Gina Downes (Eskom, South Africa)
- Brett Cohen (The Green House, South Africa)

- OR 30 *Development of Normalisation Factors for Canada and comparison with Factors from Europe and the United States – Ralph ROSENBAUM*

15:30

Afternoon tea

16:00

VENUE: Camphor A

Chair: Rolfe Eberhard

T4A LCM and Resources – Water

- OR 54 *Ensuring a sustainable use of freshwater resources: overview of tools for corporate and product water use accounting and possible way forward – Jean-Baptiste BAYART*
- OR 55 *Characterizing the Impacts of Water Use in LCA: an Operational Method and Case Study Application in the Pulp and Paper Industry – Anne-Marie BOULAY*
- OR 56 *Assessment of urban wastewater re-use alternatives from an environmental point of view – Montse MENESES*
- OR 57 *Assessment of water use in LCA: state-of-the-art and case study – Sebastien HUMBERT*
- OR 58 *Sanitary systems: Life cycle thinking leads to distributed infrastructure – Cynthia MITCHELL*
- OR 98 *The Application of LCA within LCM for Municipal Water Systems – Are We Closing the Loop – Elena FRIEDRICH*

VENUE: Camphor B

Chair: Allan Astrup Jensen

T4B Implementation – Company focus

- OR 59 *Economical benefits tied to ecodesign – Sylvain PLOUFFE*
- OR 60 *ProdTect: a Tool to Facilitate LCM in the Automotive Industry – Stefan SALHOFER*
- OR 61 *Life Cycle Thinking and Assessment in a Stakeholder-based Learning Process for Multi-stakeholder Decision Making and Collective Action – Lanka THABREW*
- OR 62 *The Global Carbon Footprint of Knorr; assessing one of the world's largest food brands – Llorenç MILA-I-CANALS*
- OR 63 *Technological fix vs. the understanding of human interaction – Emma REX*

VENUE: Boardroom

T3C Energy Workshop

Continued

17:30	Tuesday sessions close
17:45	First busses depart for dinner at V&A Waterfront
19:00	Second busses depart for dinner at V&A Waterfront
20:00	Conference dinner at "221" Restaurant, V&A Waterfront

WEDNESDAY 9 SEPTEMBER 2009

08:00 Conference office opens Refreshments

08:30

VENUE: Camphor A

Chair: Joan Rieradevall

W1A Implementation – Education

OR 64 *Development of an input-output model and database for South African hydrogen infrastructure products* – Alan BRENT

OR 65 *Assessment of sustainability of national energy scenarios* – Rina TAVIV

OR 66 *Implementing Ecodesign for Single-Use Products: Combining LCA and Functional Characterization* – Mylène FUGÈRE

OR 67 *ecoSpold version 2 – An improved data exchange format* – Bo WEIDEMA

OR 68 *Land Use Impact Assessment according to biodiversity indicators in Brazil* – Danielle MAIA DE SOUZA

OR 69 *Regionalization of life cycle impact assessment: geographic differentiation vs archetypes* – Sebastien HUMBERT

VENUE: Camphor B

Chair: Emmanuelle Aoustin

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W1B LCM and Resources – Waste and Minerals

OR 73 *Dismantle or shred? Analytical tool for design for disassembly in electrical and electronic equipments* – Ichiro DAIGO

OR 74 *Using Life Cycle Thinking and Assessment for Industrial Waste Management Policy Making* – Pere FULLANA-I-PALMER

OR 75 *How LCA can help identify the right priorities in waste management for local authorities* – Sebastien HUMBERT

OR 76 *Impacts and potential of reuse and development of organic wastes in the French-speaking Switzerland* – Sebastien HUMBERT

VENUE: Boardroom

Chair: Jim Petrie

W1C Engaging with Complexity

SP 48 *Chain Value Agility For Achieving World-Class Man* – Hassan FARSIJANI

SP 49 *Practical Guide for Weighting Across Environmental Impacts* – Carmen ALVARADO ASCENCIO

SP 50 *Life Cycle Sustainability Dashboard* – Marzia TRAVERSO

SP 51 *Multivariate analysis of similarities between environmental profiles of crops* – Thomas NEMECEK

SP 52 *The influence of impact assessment value choices on the human health damage assessment in LCA* – An DE SCHRYVER

- OR 70 *Adding Lifecycle Assessment Information to Data Exchange Standards for the Electronics Industry* – Eric SIMMON
- OR 71 *Operational Analytical Uncertainty Propagation in Life Cycle Inventory and Impact Assessment: Application to an Automobile Front Panel* – Ralph ROSENBAUM
- OR 77 *An integrated concept for assessing policy instruments for a more sustainable waste management* – Maria LJUNGGREN SODERMAN
- OR 78 *LCM of Olive Oil Extraction Wastes in EU* – Marco Paolo NUTI
- OR 79 *Findings for LCIA and LCI in the mining sector – A regional approach from South America* – Sonia VALDIVA
- SP 53 *Stochastic Assessment by Monte Carlo Simulation for LCI applied to steel process chain: The ArcelorMittal Steel Poland S.A. in Krakow, Poland case study* – Boguslaw BIEDA
- SP 54 *Exergy and ACV* – Joaquina NIEMBRO-GARCÍA
- SP 55 *Land Use Impact Assessment of Forestry Processes in LCA* – Tabea BECK
- SP 59 *Identifying Key Parameters for the Optimisation of Aerobic Microbial Bioprocesses in terms of Environmental Burden Minimisation* – Susan HARRISON

10:30

Morning tea

11:00

VENUE: Camphor A

Chair: Mark Swilling

Sponsored by the African Centre for Cities

W2A Human Settlements

- OR 92 *Integration of LCM in Urban Planning as a Tool for Diminishing Greenhouse Gas Emissions: the Case of Concrete Sidewalks* – Jordi OLIVER-SOLÀ
- OR 93 *A cross-neighbourhood life-cycle approach in urban planning: case study of Estonia* – Antti ROOSE
- OR 94 *Housing Energy Efficiency* – Fernanda RODRIGUES
- OR 95 *LCA of renovated buildings* – Matthieu BUGEL

VENUE: Camphor B

Chair: Mark Goedkoop

W2B Implementation

- OR 87 *TOSCA – Towards Sustainable Supply Chains* – Johan WIDHEDEN
- OR 88 *Promoting Life Cycle Thinking in School Environmental Education: Visualization and Recovery of the Missing Link Towards Sustainable Consumption* – Hiroki HONDO
- OR 89 *Sustainability in the supply chains – analysis of current work practices and way forward* – Ulrika PALME
- OR 90 *Research and development needs for methods and tools within sustainable product management* – Tomas RYDBERG

VENUE: Boardroom

Chair: Pippa Notten

W2B Quantitative Approaches

- OR 81 *Research for Low LC-CO₂ Consumption using by Importance-Performance Analysis* – Hideaki KURISHIMA
- OR 82 *Sustainability Impact Assessment of a Majorcan Tourist Using LCA, LCC and Social Life Cycle Assessment* – Jenna WATSON
- OR 84 *Practical consequences of different interpretations of the Area of Protection 'resource depletion* – An DE SCHRVER
- OR 85 *Simulation based life cycle assessment and capital cost estimation to guide sustainable bioprocess development* – Sue HARRISON

OR 96 *Life cycle management within the Belgian clay roof tile and brick sector* – Carolin SPIRINCKX

OR 97 *Environmental impacts of the building and real estate management sectors* – Göran FINNVEDEN

OR 91 *Stakeholder engagement within the sustainability assessment of bioenergy: case studies from the UK* – Phil SINCLAIR

OR 101 *Broset: Towards a climate neutral housing settlement in Trondheim, Norway* – Rolf BOHNE

OR 86 *Managing global value chains – linking emerging and developed markets with knowledge-based Web-Portals* – Martin KREEB

OR 99 *Environmental Impacts of Multi-Storey Buildings Using Different Construction Materials* – Barbara NEBEL

12:30 **Lunch**

13:30 **Plenary session 3**

Venue: Camphor

Chair: Harro von Blottnitz

Plenary speaker 3

Raimo P Hamalainen: *Systems Intelligence for Life Cycle Management – Shifting the focus from products to people* (Helsinki University of Technology, Finland)

14:30 Keynote speaker 5

Richard Chance: *Bridging the governance and sustainability challenges of being a formal business in an informal industry - a brewing and beverage industry perspective* (SAB Miller)

15:00 Keynote speaker 6

Claus Stig Pedersen: *Operationalising life cycle management in a world-leading bio-innovation company, to deliver superior and sustainable solutions for tomorrow's ever-changing marketplace* (Novozymes)

15:30 **Afternoon tea**

16:00 **Venue: Camphor**

W3A Decision Support Workshop and panel discussion

Theo Stewart (UCT, South Africa)

Raimo P Hamalainen (HUT, Finland)

Jim Petrie (Sydney University, Australia)

17:30 **Closing Ceremony**