August 28 – 31, 2011 – the dahlem cube, Berlin

Life Cycle Managment Conference **LCM 2011**

➔ Program

➔ Content

➔ Preface

Welcome to LCM 2011 in Berlin!

The Life Cycle Management conference series is one of the world's premier events for environmental, economic and social sustainability. We hope you find the conference not only productive, but enjoyable, and that you leave with exciting new contacts and ideas that move the branch as a whole forwards. Your contribution to this ever more important area of research is appreciated.

➔ Towards Life Cycle Sustainability Management

The global society has undergone a paradigm shift from environmental protection towards sustainability. The latter not only focuses on environmental impact, but instead comprises the three dimensions »environment«, »economy« and »social well-being«, for which society needs to find a balance or even an optimum. Nowadays, sustainability is a mainstream concept, accepted by all stakeholders – be it multinational companies, governments or NGOs. Unfortunately, this common understanding is all too often merely expressed as a general guideline, rather than in concrete actions.

This is where life cycle assessment (LCA) and life cycle management (LCM) come into play. LCA is the internationally accepted method for measuring environmental performance and LCM is, in a nutshell, about the application of LCA or rather life cycle thinking (LCT). While the measurement of the environmental dimension of sustainability with LCA is well established, similar approaches were developed more recently for the economic (life cycle costing – LCC) and the social (social LCA – SLCA) dimensions of sustainability. These two additional developments are crucial, because comprehensive life cycle-based sustainability assessments are now possible.

The Life Cycle Management conference series is one of the world's leading forums for environmental, economic and social sustainability. Just like our highly successful predecessor events in Copenhagen (2001), Barcelona (2005), Zurich (2007) and Cape Town (2009), our focus at LCM 2011 in Berlin will be on practical solutions for the implementation of life cycle approaches in strategic and operational decision-making.

The 2011 conference motto »Towards Life Cycle Sustainability Management« addresses the challenge of implementing sustainability concepts as outlined above.

In total, 414 abstracts representing more than 1100 authors from 47 countries were submitted. As the overall quality of the contributions was excellent, selecting the 180 oral presentations and roughly 150 posters was quite difficult. The rate of conference registrations at the time of writing suggests that, by the time you read this, the conference will be sold out, with more than 500 participants attending. We will do our best to accommodate everyone, but have to ask in advance for your patience and understanding if the large number of participants occasionally leads to bottlenecks in catering and session room capacity.

Apart from thanking the authors for their presentations and posters, we would like to express our gratitude to the members of the scientific committee for soliciting and selecting the right mix of contributions and our sponsors for supporting us. We hope you enjoy the scientific program of LCM 2011, the conference venue, the social events and the city of Berlin. Last but not least, we hope you meet old and make new friends in our LCM community.

Thank you for joining us at LCM 2011!

Matthias Finkbeiner
LCM 2011 chair

Stephan Krinke
LCM 2011 co-chair

Matthias Finkbeiner,
LCM 2011 chair

Stephan Krinke,
LCM 2011 co-chair

➔ Program

The LCM 2011 scientific committee evaluated more than 400 abstracts to draw up this year's program. Over 1100 authors from 47 countries submitted their research, which illustrates that life cycle management is now a pressing concern throughout the global economy. The final program features 180 oral presentations and 150 poster presentations – more than enough food for thought until the next LCM conference.

➔ Program at a Glance

Sunday, August 28, 2011	10.00 am – 08.00 pm
	06.00 pm – 08.00 pm
Monday, August 29, 2011	08.00 am – 10.00 am
	10.00 am – 12.30 pm
	12.30 pm – 02.00 pm
	02.00 pm – 04.00 pm
	04.00 pm – 04.30 pm
	04.30 pm – 06.00 pm
Tuesday, August 30, 2011	09.00 am – 10.45 am
	10.45 am – 11.15 am
	11.15 am – 12.30 pm
	12.30 pm – 02.00 pm
	02.00 pm – 04.00 pm
	04.00 pm – 04.30 pm
	04.30 pm – 06.00 pm
	07.00 pm – 11.30 pm
Wednesday, August 31, 2011	09.00 am – 10.45 am
	10.45 am – 11.15 am
	11.15 am – 12.30 pm
	12.30 pm – 02.00 pm
	02.00 pm – 04.00 pm
	04.00 pm – 04.20 pm
	04.20 pm – 05.30 pm

	Room 1	Room 2	Room 3
	Registration		
	Welcome Reception		
	Registration		
	PLENARY SESSION		
	Lunch and Poster Session		
	Water Footprint	Industrial Ecology & MFA	Building
	Coffee Break and Posters		
	New Methods 1	Labels	Electronics & ICT
	Biofuels	Packaging	Policy
	Coffee Break and Posters		
	Tools & Data 2	Retail & Food 2	Review
	Lunch and Poster Session		
	LCSA 1	Regions	Mobility
	Coffee Break and Posters		
	New Methods 2	Metals	Manufacturing
	Conference Dinner and Party		
	Carbon Footprint	Retail & Food 1	LCIA
	Coffee Break and Posters		
	LCSA 2	Energy 2	Chemicals
	Lunch and Poster Session		
	Tools & Data 1	Energy 1	Waste
	Coffee Break and Posters		
	CLOSING PLENARY		

➔ LCM 2011
Scientific Committee

Chair of the conference: Matthias Finkbeiner, TU Berlin
Co-chair of the conference: Stephan Krinke, Volkswagen
Scientific Committee coordinator: Marzia Traverso, TU Berlin

Carina Alles	DuPont
Emmanuelle Aoustin	Veolia
Pankaj Bhatia	World Ressource Institute
Clare Broadbent	Worldsteel
Andrea Brown	WBCSD
Maurizio Cellura	University of Palermo
Roland Clift	Society of Industrial Ecology
Mary Ann Curran	US EPA
Ichiro Daigo	University of Tokyo
Jim Fava	Fivewinds
Jeppe Frydendal	Ecolabel Denmark
Pere Fullana	ESCI
Gerard Gaillard	Agroscope Reckenholz -Tänikon
Mark Goedkoop	Pre Consultants
Minako Hara	Nippon Telegraph and Telephone Corporation
Michael Hauschild	Technical University of Denmark
Jens Hesselbach	Kassel University
Arpad Horvath	University of California, Berkeley
Atsushi Inaba	Kogakuin University
Allan Astrup Jensen	Nordic Institute of Product Sustainability
Anne Johnson	GreenBlue
Juha Kaila	Aalto University

Greg Keoleian	University Michigan
Henry King	Unilever
Walter Klöpffer	International Journal of Life Cycle Assessment
Annette Koehler	ETH Zurich
Stephan Krinke	Volkswagen
Paolo Masoni	Enea
Yasunari Matsuno	University Tokyo
Llorenc Mila i Canals	Unilever
Nils Nissen	Fraunhofer IZM
Philippa Notten	University of Cape Town
Erwin Ostermann	Evonik
Rana Pant	EU Joint Research Centre Ispra
Claus Stig Pedersen	Novozymes
Gerald Rebitzer	Amcor
Helmut Rechberger	TU Vienna
Klaus Ruhland	Daimler AG
Günter Seliger	TU Berlin
Guido Sonnemann	UNEP
Nydia Suppen	CADIS Mexico
Ladji Tikana	Deutsches Kupfersinstitut
Marzia Traverso	TU Berlin
Sonia Valdivia	UNEP
Paul Vaughan	Oakdene Hollins
Harro von Blottnitz	University of Cape Town

➔ General Information

➔ Conference registration

The conference registration fee includes admission to all conference sessions, the poster sessions and the exhibition. The conference package includes an electronic copy of the proceedings, a list of registered conference participants and authors, lunch and refreshments during breaks. Regular participants have free admission to the gala dinner. For students and accompanying persons extra tickets can be purchased for this event.

➔ The registration desk is open

Sunday, August 28, 2011	10.00 am – 08.00 pm
Monday, August 29, 2011	08.00 am – 06.30 pm
Tuesday, August 30, 2011	08.00 am – 06.00 pm
Wednesday, August 31, 2011	08.00 am – 04.30 pm

➔ Door registration fees

Regular 690 EUR

Gala Dinner »Wasserwerk« 90 EUR

➔ Payment

The registration fee must be credited towards the conference account no later than August 25, 2011. All transfer charges must by covered by the participant's bank. If we have not received your payment by August 25, 2011 you will have to pay at the conference.

➔ Reimbursement of travel grants

Please go the conference office during opening hours to have your travel grant reimbursed. If you have not yet send them to the organizers, please remember to bring copies of your travel documents and invoices.

➔ The conference office is open

Monday, August 29, 2011	10.00 am – 06.30 pm
Tuesday, August 30, 2011	08.30 am – 06.00 pm
Wednesday, August 31, 2011	08.30 am – 04.30 pm

➔ Message center

Please use the LCM registration desk to leave and pick up messages. During the conference you can reach the organizing committee at +49 163 7855994

➔ Lunch and coffee breaks

Lunch and coffee breaks will be held both on the 2nd floor next to the PE INTERNATIONAL GaBi Lounge and in the poster and exhibition room on the ground floor.

➔ Dietary requirements

The rich buffet lunch is designed to cater for all dietary requirements and all tastes. When in doubt, please consult one of the chefs serving the food, they will be able to give you detailed information.

➔ Internet access

The Seminaris Hotel kindly provides all conference delegates with wireless Internet access throughout the conference.

W–LAN Network name: SCB
User name: LCM
Password: LCM

Please remember to log out when not using the Internet in order to avoid jammed lines. If your browser blocks logout pop-up windows, use the following link http://1.1.1.1/logout

➔ Conference language and proceedings

The official language of all presentations is English. The conference package will be handed out at the registration desk upon check-in.

➔ Conference Venue

The LCM 2011 Conference will be held at the Dahlem Cube Seminaris Hotel, close to the heart of the city. The conference center in the shape of a glass cube is a masterpiece of modern architecture by Helmut Jahn, Chicago. It is situated in the southwest of Berlin, in the district of Dahlem.

➔ How to find your way around

We have booked the entire venue for the LCM 2011 Conference. The floor plan on the opposite page and the session overview on the pages 6–7 are designed to help you find your way around. Coffee break and lunchtime catering will be offered on the second floor and on the ground floor in the exhibition and poster area.

➔ Wardrobe and baggage checkroom

A wardrobe and baggage check room are available on the first floor.

➔ Contact information and assistance during the conference

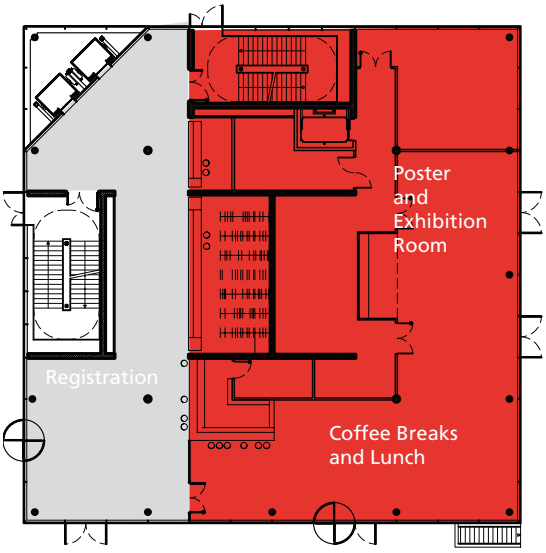
Don't hesitate to approach us at the registration desk or at the conference office on the first floor if you have any questions or requests. Our aim is to help you make the most of your conference participation.

➔ Seminaris Campus Hotel Berlin

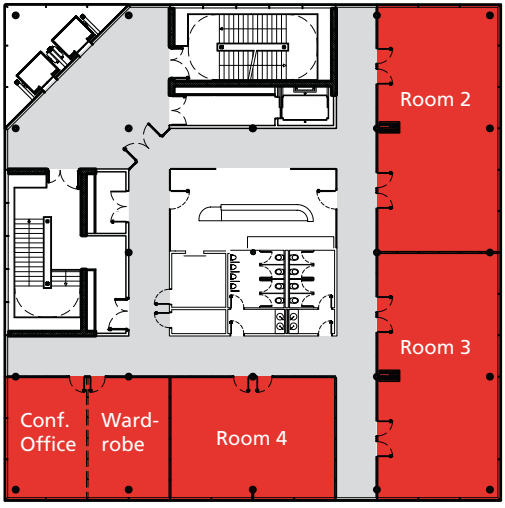
Takustraße 39, 14195 Berlin, Germany

Phone: +49 30 557797-0
Fax: +49 30 557797-100
www.seminaris.de

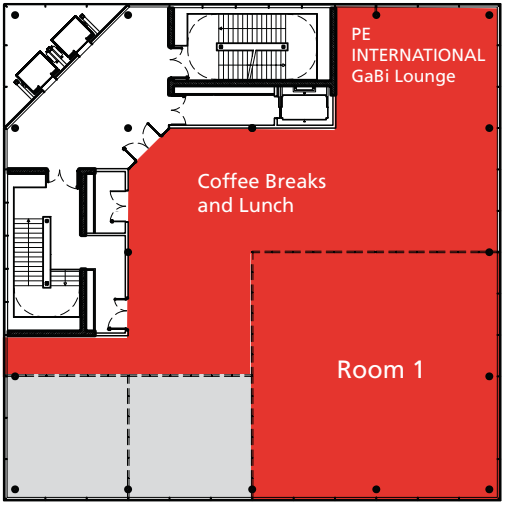
Hotel check-in: from 3 pm
Hotel check-out: till 11 am



Ground Floor



First Floor



Second Floor

➔ Keynote Speakers

The organizers are delighted to welcome seven distinguished representatives from politics, science and industry as keynote speakers at LCM 2011 who will showcase their latest research results and discuss the role of LCM trends in their respective institutions.

➔ Norbert Röttgen, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Dr. Norbert Röttgen originally trained as lawyer and received his doctorate in law from the University of Bonn in 2001. An active member of the CDU for almost 30 years, he was elected to the German Bundestag in 1994. Between 2002 and 2005, he was Chief Parliamentary Secretary of the CDU/CSU parliamentary group in the Bundestag. In 2009, Dr. Röttgen was appointed Federal Minister for the Environment, Nature Conservation and Nuclear Safety. He has also been Chair of the CDU, North Rhine-Westphalia, and Deputy Chair of the CDU at federal level since November 2010.

➔ Jürgen Leohold, Volkswagen AG

Jürgen Leohold is Executive Director of Volkswagen Group Research. After completing his studies with a PhD in Engineering at the University of Hanover, he began his career at Volkswagen in 1987. In 2005, having held a number of different positions in the Vehicle Electric/Electronics Development and in academia, he became Division Manager of the Electric/Electronic Domain and was appointed to his current position in 2006. Jürgen Leohold also holds a number key posts in sustainability-related associations and committees, including the World Business Council for Sustainable Development.

➔ Ernst Ulrich von Weizsäcker, International Panel on Sustainable Resource Management

Ernst Ulrich von Weizsäcker is a leading German scientist, writer and educator on sustainability issues. During the 1990s he was President of the Wuppertal Institute for Climate, Environment, Energy and served as a member of the German Bundestag and Chair of the Environment Committee between 1998 and 2005. From 2006 to 2008 he was Dean of the Donald Bren School for Environment, UCSB, Santa Barbara. He is author of two books on the environment and development, Ecological Tax Reform and Earth Politics, and co-author of Factor Four (with A & H Lovins) and Factor Five (with Charlie Hargroves and his TNEP team).

➔ Michael Betz, PE INTERNATIONAL AG

Michael Betz was appointed CEO of PE INTERNATIONAL AG at the start of 2011 and has over 17 years of experience in sustainability. He began his career in 1994 as Research Scientist in the Life Cycle Engineering Department of the University of

Stuttgart's Institut für Kunststoffprüfung und Kunststoffkunde (IKP) and was later promoted to Vice Director. At PE INTERNATIONAL AG, which is an international market leader in consultancy services and software solutions for sustainability, Michael Betz is responsible for overall strategy, business development, organizational development and marketing.


Norbert Röttgen


Jürgen Leohold


Ernst Ulrich v. Weizsäcker


Michael Betz

➔ Pankaj Bhatia, GHG Protocol Initiative at the World Resources Institute

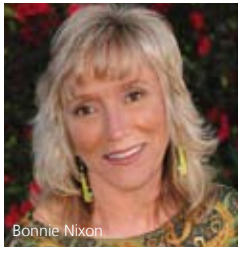
Pankaj Bhatia has over seventeen years of experience in designing and managing long-term public-private sector partnerships to address major global environmental issues including climate change. As the director of GHG Protocol, Mr. Bhatia leads and manages a global partnership involving more than 1500 stakeholders to develop and implement GHG Protocol standards and tools on corporate and supply chain emissions accounting. From 1998 to 2000, he was vice president of Tata Energy & Resources Institute, a not-for-profit research organization based in Arlington, Virginia. He holds a Masters in process engineering from the Indian Institute of Technology, Delhi, India.


Pankaj Bhatia


Guido Sonnemann

➔ Guido Sonnemann, UNEP

Guido Sonnemann is UNEP Programme Officer for Innovation and Life Cycle Management. Recently he has been appointed as the Science Focal Point for the UNEP's Resource Efficiency/Sustainable Consumption and Production (SCP) subprogramme. He works in the SCP Branch, Division of Technology Industry and Economics (DTIE) in Paris. He is liaison officer for two Resource Panel working groups on global metal flows and water efficiency. He coordinates the Secretariat of the UNEP/SETAC Life Cycle Initiative launched in 2002. He obtained his environmental engineering degree from TU Berlin.


Bonnie Nixon

➔ Bonnie Nixon, The Sustainability Consortium

Bonnie Nixon is Executive Director for The Sustainability Consortium, (TSC), an independent standards organization of over 100 corporate, academic, government and NGO groups. Prior to TSC, she implemented the world's largest and most complex electronic ethical and sustainable supply chain program at Hewlett Packard. Ms. Nixon was also a key driver in a common industry code of conduct as a founder of the Electronic Industry Citizenship Coalition (EICC) and is a previous owner of Circlepoint – an environmental consultancy focusing on large planning and infrastructure projects for the State of California and the US Federal Government.

➔ Sponsoring Companies and Institutions

The organizers would like to express their thanks to the following companies and institutions for their financial support and personal assistance

➔ Platium Sponsor: PE INTERNATIONAL

PE INTERNATIONAL is one of the world's most experienced sustainability software, content and strategic consulting firms. With 20 years of experience and 20 offices around the globe, we allow clients to understand sustainability, improve their performance and succeed in the marketplace. Moreover, PE offers two software solutions, the GaBi software for product sustainability and the SoFi software for corporate sustainability. Through these leading software solutions, Five Winds Strategic Consulting Services and implementation methodologies we have worked with some of the world's most respected firms to develop the strategies, management systems, tools and processes needed to achieve leadership in sustainability. www.pe-international.com

➔ Gold Sponsor: ecoinvent Centre

The ecoinvent Centre, created in 1997, is a Competence Centre of the Swiss Federal Institutes of Technology Zürich (ETHZ) and Lausanne (EPFL), of the Paul Scherrer Institute (PSI), of the Swiss Federal Laboratories for Materials Testing and Research (Empa), and of the Swiss Federal Research Station Agroscope Reckenholz-Tänikon (ART). econvent's mission is to provide the most relevant, reliable, transparent and accessible life cycle inventory data for users all over the world. www.ecoinvent.org

➔ Gold Sponsor: Malaysian Palm Oil Council MPOC

The Malaysian Palm Oil Council (MPOC) was incorporated on January 25, 1990 and its mission is to promote the market expansion of Malaysian palm oil and its products by enhancing their image and creating better acceptance through awareness of various techno-economic advantages and environmental sustainability of palm oil. www.mpoc.org.my

➔ Gold Sponsor: PRé Consultants

We put the metrics behind sustainability. For more than twenty 20 years we have been at the forefront of Life Cycle thinking, providing state of the art methods, consultancy and tools. We serve multinational corporations to empower them to sustainability excellence. SimaPro is our world-famous software tool for calculating environmental footprints, used by customers in more than 80 countries. www.pre-sustainability.com

➔ Silver Sponsor: KNAUER

KNAUER offers instrumentation for both analytical and preparative liquid chromatography, including LC/MS and biochromatography. KNAUER was the first manufacturer in the scientific instruments market to present a life cycle assessment according to ISO 14040 and 14044:2006 for PLATINblue, a high throughput UHPLC system with a small environmental impact. www.knauer.net

➔ Silver Sponsor: Novozymes

Novozymes is the world leader in enzymes and microorganisms for industry. We market over 700 products in 130 countries in industries such as biofuels, detergents, food, and animal feed. Around 14 % of our revenue is spent on research and development, and we currently hold more than 6,500 granted or pending patents. 5,400 people are employed in Novozymes. www.novozymes.com

➔ Silver Sponsor: Quantis

Quantis is a global leading LCA consulting firm specialized in supporting companies to measure, understand and manage the environmental impacts of their products, services and operations. Quantis offers cutting-edge services, training and innovative LCA software, such as Quantis SUITE 2.0 which enables organizations to evaluate, analyze and manage their environmental footprint. www.quantis-intl.com

➔ Silver Sponsor: World Steel Association

The World Steel Association, founded in 1967, represents over 170 steel producers, associations, and research institutes, producing 85 % of the world's steel. worldsteel is the focal point for the industry, providing global leadership on all major strategic issues affecting the industry, focusing on economic, environmental and social sustainability. www.worldsteel.org

➔ Silver Sponsor: Volkswagen AG

The Volkswagen Group is one of the world's leading carmakers. In 2010 7.28 million vehicles were delivered, the annual turnover exceeded 126 billion Euros. LCM and the ecological improvement over the entire Life Cycle is part of the VW management system. Environmental commendations inform the public about the environmental progress of new vehicle based on reviewed LCAs. www.volkswagen.de

➔ Side Events & Exhibition

PE INTERNATIONAL - Workshop »Improving Product and Process Sustainability by using the GaBi software & database suite«
Sunday, August 28 🕐 09:30 am – 04:30 pm

This seminar shows how the GaBi software is supporting water management and how to get on the fast lane from LCA to Ecodesign. You will learn about the up-coming GaBi 5 and enjoy a platform for exchange with international LCA experts.

Ecoinvent - Workshop »ecoEditor for version 3«
Sunday, August 28 🕐 09:15 am – 05:15 pm

One-day workshops on the ecoEditor for ecoinvent version 3, the new tool for data providers to create, edit, review and upload datasets for the ecoinvent database version 3. The participants will learn how to use the various new features of ecoinvent.

UNEP – Meeting of the International Life Cycle Board
Sunday, August 28 🕐 09:00 am – 05:00 pm
Invitation only.

FC-Hyguide – Training Course: »Performing Life Cycle Assessments for Hydrogen and Fuel Cell Technologies«
Thursday, September 1 🕐 09:00 am – 05:00 pm

The FC-HyGuide project aims to develop a guidance document and related training materials for LCA studies on fuel cells and hydrogen production. The training course is directed at LCA practitioners.

UNEP/SETAC Workshop: »Knowledge Mining on Product Sustainability from LCA Studies for Effective LCM Practices«
Thursday, September 1 🕐 08:00 am – 12:30 pm

This workshop is designed to exchange experiences and strengthen the capabilities of business and organizations in mining with regard to LCM knowledge from LCA studies.

➔ PE INTERNATIONAL GaBi Lounge

GaBi LCA Software incites unprecedented innovation to improve environmental performance. Stop by at the PE INTERNATIONAL GaBi Lounge on the second floor to learn more about this exciting software and may be enjoy a Tannenzäpfle beer before you head off in the evening.

PE INTERNATIONAL AG

Hauptstraße 111 – 113, 70771 Leinfelden-Echterdingen, Germany
www.pe-international.com

➔ Exhibition

The exhibition area is located right next to the poster session on the ground floor; and the program has been designed to give you ample time to visit the stands of the following exhibitors:

ecoinvent Centre, c/o Empa / Technology & Society Lab (TSL)
Lerchenfeldstrasse 5, 9014 St-Gallen, Switzerland, www.ecoinvent.ch

ifu Hamburg GmbH

Max-Brauer-Allee 50, 22765 Hamburg, Germany, www.ifu.com

PRé Consultants bv

Printerweg 18, 3821 AD Amersfoort, Netherlands, www.pre-sustainability.com

Quantis

395, rue Laurier Ouest, Montréal (Québec), Canada, www.quantis-intl.com

Volkswagen Group presents interactive environmental assessment tool at LCM

The Volkswagen Group will present two exhibits at LCM 2011. On a large touch screen, the attendants will have the opportunity to configure a car and visualize the environmental effects of their decisions. The second multimedia exhibit is entitled »the globe« and equips three screens. Volkswagen Group will present an example of successful life cycle management in a short movie-like presentation. www.volkswagen.de

➔ Gala Dinner at Wasserwerk

Tuesday August 30, 2011
07.00 pm – 11.30 pm

Hohenzollerndamm 208 a, 10717 Berlin
U-Bahn Spichernstraße

Join us for the LCM 2011 gala dinner at Wasserwerk. Built in 1906, Wasserwerk, which translates as water pump station, kept water flowing through Berlin's pipes throughout the 20th Century. The iconic red-brick building is very typical of turn-of-the-century Berlin and Brandenburg architecture and has now been transformed into a beautiful event location. Guests marvel most of all at the stunning, industrial-chic interior, which features the pumping station's original giant piston pumps.

The evening promises to be a lively highlight of the conference and an excellent opportunity for mingling and networking with conference delegates from all over the world. Discuss hot topics, controversial presentations or just shoot the breeze with experts from a wide range of disciplines to make the most of your conference participation.

A shuttle bus service from the conference to Wasserwerk has been arranged. Buses leave the conference hotel at 6:30 pm

If you want to make your own way to Wasserwerk, please get off at the underground station »Spichernstraße«, the venue is a five-minute-walk from there.


WASSERWERK

➔ About Berlin

➔ Berlin... a center of (re)invention

November 9th, 1989 marked the beginning of a new chapter in Berlin's history. The eyes of the world watched its residents level the wall that had outraged so many. Shortly afterwards, for the first time in over 28 years, East and West mingled via the Brandenburg Gate, setting the foundation for a new self-understanding. Over the last 20 years, much has changed. Germany's government moved to Berlin in 2001; its institutions, embassies, media, leading corporations, lobby groups and artists, drawn by Berlin's long cultural tradition and its newly emerging hopes and tensions, followed.

A previous no-man's zone that had, along with the wall, epitomized the breach between the two German republics, Potsdamer Platz has been completely rebuilt and rehabilitated to its former position as the city's governmental and commercial center. Many iconic buildings pepper the area, including the »Bundeskanzleramt«, presently home to Chancellor Angela Merkel, and a new central railway station, Europe's largest crossing station. Germany's parliament, the Reichstag, was restored and the inclusion of its famous glass dome, designed by Sir Norman Foster, was considered by some as intended to signal a new era of social and governmental transparency. While the number of new buildings to house political and diplomatic institutions has grown massively, construction is by no means complete. The city remains sprinkled with building sites, and indeed, in this city that has more bridges than Venice, some might argue, always will be.

➔ Germany's »salad bowl«

Over 3.4 million people live in Berlin; the majority in single-person households. Berlin is Germany's, if not melting pot, then salad bowl of cultures, religions and life styles. Berlin counts as its own residents from more than 150 nations, and is home to the largest Turkish community outside Turkey, which has led to the Kreuzberg district's nickname »Little Istanbul«. Each spring, new and old Berliners from around the world celebrate their cultural backgrounds at »Carnival of Cultures«, which is attended by more than half a million merry-makers. Take a walk around the 12 districts to get the size of this multicultural city, or do like the locals and hop on a bicycle – Berlin is arguably second only to Amsterdam as Europe's cycling capital.

➔ All things cultural

Berlin is one of the world's most exciting cities. Opera or performance art, antique sculpture or random street art, traditional or contemporary – the city caters to all tastes. With three opera houses, its Museumsinsel (literally, island of museums; a UNESCO World Heritage Site), tourists are kept on the go. Visit the Jewish Museum for an interesting overview of more than 2000 years of Jewish life or the Museum of Technology for a fascinating look at the history of aeroplanes, ships and computers. For fans of obscuria, Kreuzberg's Museum der Dinge (Museum of Objects) offers a lively, eclectic history of everyday items.

Berlin's inner-city districts of Mitte, Prenzlauer Berg, Friedrichshain, Kreuzberg and north Neukölln are home to the city's young and innovative arts scene. Temporary galleries, start-up boutiques, and all variety of musicians abound. These are also among the city's main party zones, with a large variety of clubs, bars, restaurants open around the clock.

Despite the cutting-edge urban experience Berlin offers, nature is never far away, as forests and lakes surround the city. Take a boat down the Spree river, go canoeing in the Spreewald, hiking in Grünewald, cycle part of the new bike path Mauerweg (wall trail), or take in some history at the beautiful Sanssouci palace and park in Potsdam.

➔ City of science

Berlin has four universities with more than 140,000 students. The city is also home to many other applied and basic research institutes, including the Fraunhofer-Gesellschaft, the Max-Planck-Gesellschaft and two technology parks, making it the perfect location for LCM 2011!

The Dahlem Cube is situated in Dahlem, a 30-minute-underground ride from the historic center and the Brandenburg Gate, the boulevard »Unter den Linden«, and the Museumsinsel. Berlin's widely praised public transport system and bike-friendliness ensures longer excursions are easily undertaken.

➔ Schedule

Start your LCM 2011 relaxed! Register on Sunday to avoid the Monday morning queues and enjoy the Welcome Reception!

Sunday August 28, 2011

10.00 am – 08.00 pm

Registration

10.00 am – 08.00 pm

Welcome Reception

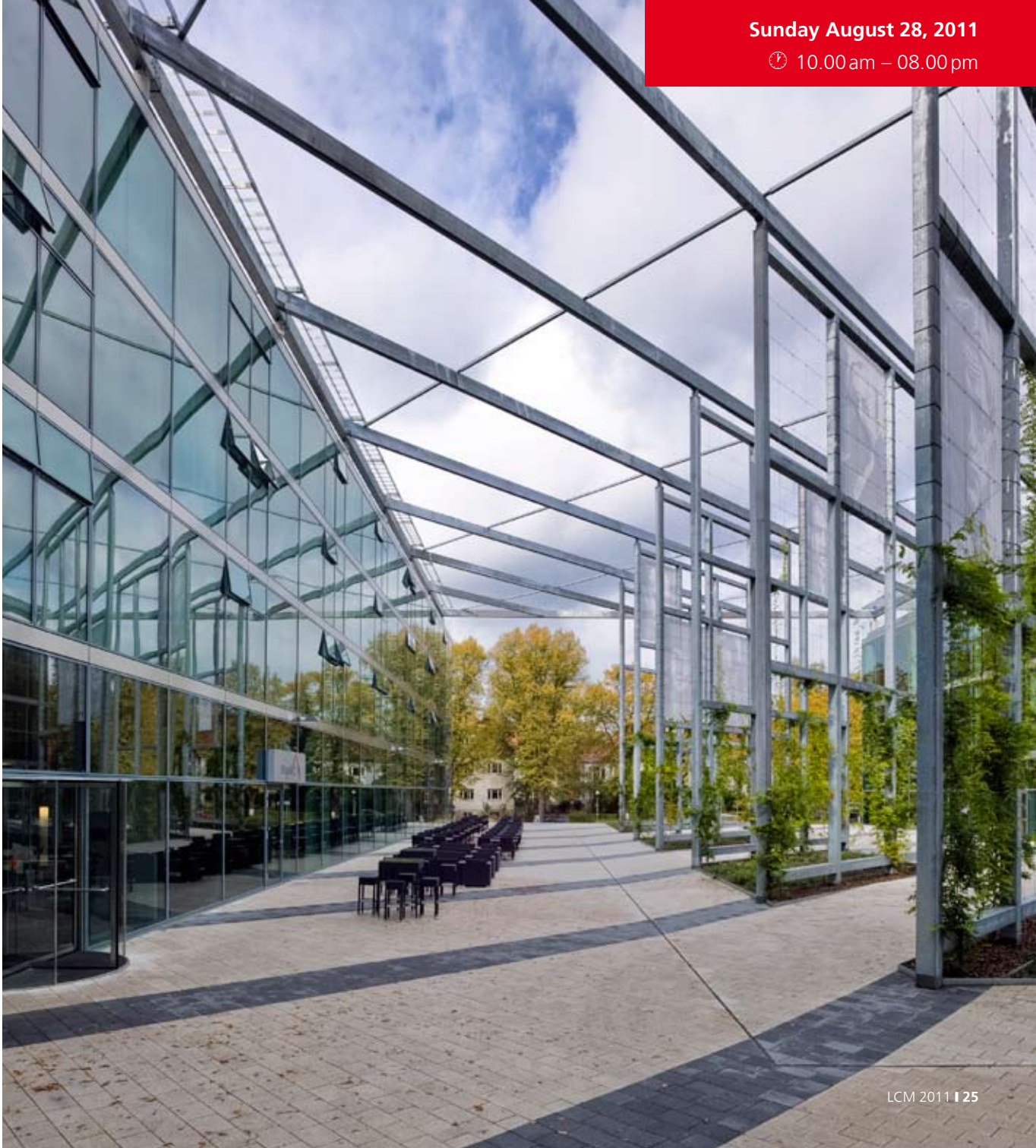
06.00 pm – 08.00 pm

Early arrival to the conference is recommended, as we will be kicking off this year's program with a welcome reception at event hotel Seminaris on the Sunday night, 28th August.

Weather permitting, the event will be held outside with a BBQ to make the most of Berlin's legendary but all too short summer weather. Don't miss the chance to get the lay of the land and meet some of the other delegates before heading into the hustle and bustle of the conference program.

Sunday August 28, 2011

10.00 am – 08.00 pm



➔ Schedule

Monday, August 29, 2011
🕐 10.00 am – 12.30 pm

Lunch and Poster Session
🕐 12.30 pm – 02.00 pm

Plenary Session: Welcome & Keynotes

➔ Location: Room ❶ ➔ Chairs: Matthias Finkbeiner, Stephan Krinke

10.00 am **Welcome to LCM 2011**
Matthias Finkbeiner, Stephan Krinke
Chairs LCM 2011, Germany

10.05 am **Life cycle data as basis for the implementation of a top-runner approach**
Norbert Röttgen
German Federal Minister for the Environment, Nature Conservation and Nuclear Safety, Germany

10.30 am **Life cycle management in the automotive industry**
Jürgen Leohold
Executive Director Group Research, Volkswagen AG, Germany

11.00 am **Circular economy, cascade use and efficiency as pillars of a Factor Five World**
Ernst U. von Weizsäcker
Co-Chair International Panel on Sustainable Resource Management

11.30 am **The launch of the GHG Protocol standards for products and corporate supply chains**
Pankaj Bhatia
Director of the GHG Protocol Initiative at the World Resources Institute, USA

11.45 am **Product sustainability getting mainstream – from science to business**
Michael Betz
PE INTERNATIONAL AG, CEO, Germany

12.00 pm **The launch of the Global Guidance Principles for LCA databases**
Guido Sonnemann
UNEP Programme Officer for Innovation and Life Cycle Management, France

12.15 pm **Greetings**
Jörg Steinbach
President Technische Universität Berlin, Germany

12.20 pm **Outline of LCM 2011**
Matthias Finkbeiner
Chair LCM 2011, Germany

➔ Schedule

Monday, August 29, 2011
🕐 02.00 pm – 04.00 pm

Coffee Break and Posters
🕐 04.00 pm – 04.30 pm

WF: LCM and Water Footprint

➔ Location: Room ❶ ➔ Chairs: Emmanuelle Aoustin, Annette Koehler

02.00 pm **Rethinking water policy in water-scarce countries: Lessons learned from a life-cycle water footprint perspective**
Maite Aldaya, Guido Sonnemann
UNEP, France

02.15 pm **Water consumption throughout a car's life cycle**
Jens Warsen[1], Stephan Krinke[1], Markus Berger[2], Matthias Finkbeiner[2]
[1]Volkswagen AG, Germany; [2]Technische Universität Berlin, Germany

02.30 pm **Assessing Water Footprint of companies in Colombia**
Sergio Perez[1], Anna Kounina[2,3], Francois Muenger[1], Walter Reithebuch[1], Yves Loerincik[2], Sebastien Humbert[2]
[1]Swiss Agency for Development and Cooperation, Colombia/Switzerland; [2]Quantis, Switzerland; [3]Swiss Federal Institute of Technology, Switzerland;

02.45 pm **Assessment of the Water Footprint of wheat in Mexico**
Carole Farell[1], Sylvie Turpin[1], Nydia Suppen[2]
[1]Universidad Autónoma Metropolitana, Mexico; [2]Centro de Análisis de Ciclo de Vida y Diseño Sustentable (CADIS), Mexico

03.00 pm **Damage assessment model for freshwater consumption and a case study on PET bottle production applied new technology for water footprint reduction**
Masaharu Motoshita[1], Norihiro Itsubo[2], Kiyotaka Tahara[1], Atsushi Inaba[3]
[1]National institute of Advanced Industrial Science and Technology, Japan; [2]Tokyo City University, Japan; [3]Kogakuin University, Japan

03.15 pm **The Water Impact Index: A new tool for water footprinting**
Jean-Baptiste Bayart, Emmanuelle Aoustin
Veolia Environnement, France

03.30 pm **Water Footprint in four selected Breweries in Nigeria**
Ife Kehinde Adewumi[1,2], Oluwadare Joshua Oyebode[2], Chidiebere Kingsley Igbokwe[2], Oluwatobi Gbenga Aluko[2]
[1]Obafemi Awolowo University, Nigeria; [2]University of Ibadan, Nigeria

03.45 pm **Development and application of a water footprint metric for agricultural products and the food industry**
Bradley George Ridoutt
Commonwealth Scientific and Industrial Research Organisation, Australia

IE & MFA: LCM and Industrial Ecology

➔ Location: Room ❷ ➔ Chairs: Roland Clift, Henrikke Baumann

02.00 pm **Comparing process-LCA and IO-LCA: Bioethanol production in Spain**
Cristina de la Rua, Yolanda Lechon, Natalia Caldes, Rosa Saez
CIEMAT, Spain

02.15 pm **Hybrid life-cycle MFA of ferrous materials embedded in passenger cars under explicit consideration of grades of secondary materials**
Shinichiro Nakamura[1], Shigemi Kagawa[2], Yuki Kudoh[3], Yasushi Kondo[1], Kazuyo Matsubae[4], Kenichi Nakajima[5], Tetsuya Nagasaka[4]
[1]Waseda University, Japan; [2]Kyushu University, Japan; [3]AIST, Japan; [4]Tohoku University, Japan; [5]NIES, Japan

02.30 pm **Sustainability assessment within the residential building sector based on LCA and MFA: The experience in a developed (Spain) and a developing country (Colombia)**
Oscar Orlando Ortiz Rodriguez[1], Francesc Castells[2], Guido Sonnemann[2]
[1]University of Pamplona, Colombia; [2]Universitat Rovira i Virgili, Spain

02.45 pm **Dynamic modelling of material flow and CO_2 emission induced by introducing next-generation vehicles**
Takahiro Kume, Hiroki Hatayama, Ichiro Daigo, Yasunari Matsuno, Yoshihiro Adachi
The University of Tokyo, Japan

03.00 pm **Life cycle management – managing the sustainability of supply chains in the TOSCA project**
Ellen Riise, Ann-Christin Pålsson
SCA Hygiene Products, Sweden

03.15 pm **Meeting the climate pledge via sustainable consumption wedge – development and application of dynamic hybrid multi-region LCI**
Chia-Wei Chao, Hwong-Wen Ma
National Taiwan University, China

03.30 pm **Skallerup Klit's carbon footprint – a tool for building up the business**
Kristina Overgaard Zacho[1], Niels Holm Ørnstrup[1], Tine Marquard Zimmermann[1], Mariia Kravchenko[2,1], Martin Lehmann[1], Trakarn Prapaspongsa[1]
[1]Aalborg University, Denmark; [2]Universidade de Aveiro, Portugal

03.45 pm **The importance of normalization references in interpreting LCA results**
Junbeum Kim[1], Yi Yang[2], Junghan Bae[2], Sangwon Suh[1]
[1]University of California, USA; [2]University of Minnesota, USA

Building: LCM Tools for Green and Sustainable Buildings

➔ Location: Room ❸ ➔ Chairs: Allan Astrup Jensen, Arpad Horvath

02.00 pm **Challenges for sustainability innovations in real estate and construction industry**
Juho-Kusti Kajander[1], Matti Sivunen[2], Jukka Heinonen[1], Seppo Junnila[1]
[1]Aalto University, Finland; [2]Boost Brothers Inc, Finland

02.15 pm **Determining the environmental influence of energy generating components for façade integration within existing high-rise buildings by means of LCA**
Katrin Lenz, Michael Held, Sarah Schneider, Klaus Sedlbauer
University of Stuttgart, Germany

02.30 pm **The energy and environmental implications of construction in China**
Yuan Chang, Robert Ries
University of Florida, USA

02.45 pm **Optimal insulation thicknesses according to different indicators for Germany**
York Ostermeyer, An De Schryver, Holger Wallbaum
ETH Zürich, Switzerland

03.00 pm **CLEAR – An LCA model for construction**
Allan Griffin, Iain Millar, Nick Avery, Nick Coleman, Peter Hodgson
Tata Steel Europe, United Kingdom

03.15 pm **Recycled concrete: Environmentally beneficial over virgin concrete?`**
Arthur Braunschweig[1], Susanne Kytzia[2], Stefan Bischof[3]
[1]E2 Management Consulting, Switzerland; [2]Hochschule Rapperswil, Switzerland; [3]Holcim, Switzerland

03.30 pm **Measuring environmental sustainability: The use of LCA based building performance indicators**
Anna Braune[1], Bastian Wittstock[2]
PE INTERNATIONAL, Germany; [2]Fraunhofer Institut for Building Physics, Germany

03.45 pm **Comparison of LCA calculation methods in building certification systems**
Alexander Passer, Helmuth Kreiner, Peter Maydl
Graz University of Technology, Austria

➔ Schedule

Monday, August 29, 2011

🕐 04.30 pm – 06.00 pm

New Methods I: New Methods and Concepts of LCM I

➔ Location: Room ❶ ➔ Chairs: Martin Baitz, Hongtao Wang

04.30 pm **The business case of life cycle management**
Allan Astrup Jensen
Nordic Institute of Product Sustainability, Environmental Chemistry and Toxicology, Denmark

04.45 pm **Life cycle management approach to the design of large-scale resorts**
Kristin Lee Brown, Daniel Greer, Ben Schwegler
Walt Disney Imagineering, USA

05.00 pm **A life cycle stakeholder management framework for enhanced collaboration between stakeholders with competing interests**
Christina Scandelius, Geraldine Cohen
Brunel Business School, United Kingdom

05.15 pm **A novel graphical method in consequential life cycle assessment for technological policy making**
I-Ching Chen[1], Yasuhiro Fukushima[2], Yasunori Kikuchi[1], Masahiko Hirao[1]
[1]The University of Tokyo, Japan; [2]National Cheng Kung University, Taiwan

05.30 pm **Technology as a catalyst for consumer behavioral changes: socio-psychological impacts of solar photovoltaic systems**
Hiroki Hondo
Yokohama National University, Japan

05.45 pm **The European standard FprEN 15804 for EPD in the construction sector and the application of the modularity principle**
Eva Schmincke
Five Winds International, Germany

Labels: LCM and Ecolabels

➔ Location: Room ❷ ➔ Chairs: Jeppe Frydendal, Paul Vaughan

04.30 pm **Methodology of ecological criteria development for products under ecolabelling program of type I**
Svitlana Berzina, Iuliia Shevchenko
Living Planet, Ukraine

04.45 pm **Environmental benefits of ecolabelling of services – the ripple effect**
Jeppe Frydendal
Nordic Ecolabelling, Denmark

05.00 pm **Eco-labelling criteria development for strategic life cycle management**
Cecilia Bratt[1], Sophie Isaksson Hallstedt[1], Karl-Henrik Robèrt[1], Göran Broman[1,2], Jonas Oldmark[3]
[1]Blekinge Institute of Technology, Sweden; [2]Luleå University of Technology, Sweden; [3]The Natural Step International, Sweden

05.15 pm **Feasibility of environmental product information based on life cycle thinking**
Niels Jungbluth, Sybille Büsser, Matthias Stucki, Rolf Frischknecht
ESU-services, Switzerland

05.30 pm **Product Sustainability Assessment (PROSA) as a tool to develop awarding criteria for eco-label**
Jens Gröger, Dietlinde Quack
Öko-Institut, Germany

05.45 pm **Society environmental economic benefits of swan-labelled workwear service**
Henrik Grüttner[1], Henrik Wenzel[1], Ole Dall[1], Henning Thomsen[2]
[1]University of Southern Denmark, Denmark; [2]Rambøll Management, Denmark

Electronic & ICT: LCM in the Electronics and ICT Sectors

➔ Location: Room ❸ ➔ Chairs: Nils F. Nissen, Emma Lena Cecilia Rex

04.30 pm **State of the art in life cycle assessment of laptops and remaining challenges on the component level: The case of integrated circuits**
Ran Liu[1], Siddharth Prakash[1], Karsten Schischke[2], Lutz Stobbe[2]
[1]Oeko-Institut, Germany; [2]Fraunhofer IZM, Germany

04.45 pm **Product carbon footprint (PCF) assessment of a Dell OptiPlex 780 Desktop – Results and recommendations**
Markus Stutz
Dell, Germany

05.00 pm **LCM of metals supply to electronics: Tracking and tracing "conflict minerals"**
Steven B. Young, Goretty Dias
University of Waterloo, Canada

05.15 pm **A product attribute to impact algorithm to streamline ICT environmental footprinting using a triage approach**
Elsa Olivetti[1], Melissa L. Zgola[1], Christopher Weber[2], Sarah Boyd[3], Eric Williams[4], Jeremy Gregory[1], Randolph E. Kirchain[1]
[1]Massachusetts Institute of Technology, USA; [2]Carnegie Mellon University, USA; [3]University of California at Berkeley, USA; [4]Arizona State University, USA

05.30 pm **Quantifying the life cycle assessment uncertainty in the information and communication technology sector**
Fredrik Guldbrandsson, Jens Malmodin, Anna Bondesson
Ericsson AB, Sweden

05.45 pm **European LCA standardization of ICT: Equipment, networks, and services**
Anders Sven Gunnar Andrae
Huawei Technologies Sweden AB, Sweden

➔ Poster Session

Monday, August 29, 2011
12.30 pm – 02.00 pm

Location: Poster and Exhibition Room, Ground Floor

1 Drivers for life cycle based environmental information – experiences from metal and food sector
Nani Mari Johanna Pajunen[1], Juha-Matti Katajajuuri[2]
[1]Aalto University, Finland; [2]MTT Agrifood Research Finland

2 Reduction of food waste in Finnish food production chain as part of life cycle management
Juha-Matti Katajajuuri, Hanna Hartikainen, Lotta Jalkanen, Heta-Kaisa Koivupuro, Kirsi Silvennoinen, Anu Reinikainen
MTT, Finland

3 Implementation of risk-based life cycle management by decision support tool for small- and medium-sized enterprises
Yasunori Kikuchi, Hiroki Matoba, Masahiko Hirao
The University of Tokyo, Japan

4 Life cycle assessment (LCA) and comparison of various cellulase production methods
Kevin Graham Harding[1], Susan Harrison[2]
[1]University of the Witwatersrand, South Africa; [2]University of Cape Town, South Africa

5 Lifecycle carbon dioxide emission and stock of domestic wood resources using material flow analysis and life cycle assessment
Junhee Cha[1,2], Yeo-Chang Youn[1], Jong-Hak Lee[2]
[1]Seoul National University, Korea; [2]Haies Soft Co., Korea

6 Comparative evaluation of different scenarios of cane sugar production in Cuba using parameterized inventories of life cycle
Ana Margarita Contreras Moya, Maylier Pérez Gil, Elena Rosa Domínguez, Vianka Espinosa Rodríguez
Central University of Las Villas, Cuba

7 Environmental evaluation of different cogeneration technologies in the Cuban sugar industry by means of life cycle parameterized inventories.
Maylier Pérez Gil, Ana Margarita Contreras Moya, Elena Rosa Domínguez, Vianka Espinosa Rodríguez
Central University of Las Villas, Cuba

8 **Energy from waste and residues: LCI model of decentralized combined heat and power plants**

Kai Sartorius, Witold Roger Poganietz, Liselotte Schebek

Karlsruhe Institute of Technology, Germany

9 **Life cycle inventory of physic nut biodiesel: Comparison between the manual and mechanized agricultural production systems practiced in Brazil**

Marília Ieda da Silveira Folegatti Matsuura[1], Gil Anderi da Silva[2], Luiz Alexandre Kulay[2], Bruno Galvêas Laviola[1]

[1]Empresa Brasileira de Pesquisa Agropecuária, Brazil; [2]Escola Politécnica da Universidade de São Paulo, Brazil

10 **Time dependency of emissions from energy generation influencing the life cycle management**

Eva Szczechowicz, Martin Scheufen, Thomas Pollok, Thomas Dederichs, Armin Schnettler

RWTH Aachen University, Germany

11 **Factor 10 for 10 domestic appliances? Is it reachable quickly? An ecodesign case studies experience at University**

Philippe Schiesser[1,2], Florent Chalot[2], Jean-Baptiste Martin[2], Béatrice Ledésert[1]

[1]University of Cergy-Pontoise, France; [2]Ecoeff, France

12 **Issues to be considered for an environmental, economic and social assessment of green roofs by a life cycle approach point of view**

Giorgia Peri[1,2], Marzia Traverso[2], Matthias Finkbeiner[2], Gianfranco Rizzo[1]

[1]University of Palermo, Italy; [2]Technische Universität Berlin, Germany

13 **Life cycle assessment, a tool for improving "wash appliances" performances in the framework of the Ecodesign Directive**

Laura Cutaia[1], Raffaele Scialdoni[2]

[1]ENEA, Italy; [2]University of Camerino, Italy

14 **Material substitution and weight reduction as steps towards a sustainable disposable diaper**

Pia Lindahl[1], Göran Broman[1,2], Karl-Henrik Robèrt[1]

[1]Blekinge University of Technology, Sweden; [2]Luleå University of Technology, Sweden

15 PEGASUS EU project is providing a software for ecodesign and LCA of carbody parts
Jerome Payet[2], Marion Sie[1]
[1]CYCLECO, France; [2]EPFL, Switzerland

16 Towards the use of LCA as an aproach to evaluate contribution of agriculture to sustainable development
Alexandre Thevenot, Jonathan Vayssières
CIRAD, France

17 A consistency analysis of LCA based communication and stakeholders needs to improve the dialogue on new electric vehicle
Stephane Morel[1], Tatiana Reyes[2], Adeline Darmon[1]
[1]Renault, France; [2]University of Technology of Troye, France

18 Advancing life cycle management for railway signalling and control systems
Christoph Lackhove, Florian Brinkmann, Benedikt Scheier, Ikedichi Mbakwe, Thomas Böhm
German Aerospace Center, Germany

19 An environmental tour along the life cycle of the asphaltic roads
Alberto Moral[1], Laura Pablos[1], Nuria García[1], José Ramón López[3], Jesús Felipo[3], Carlos García[4], Rubén Irusta[1,2]
[1]CARTIF Centro Tecnológico, Spain; [2]Valladolid University, Spain; [3]Pavasal E.C., Spain; [4]Collosa, Spain

20 Communication of LCA in the automotive sector: Environmental commendations
Jens Warsen, Carsten Gnauck
Volkswagen AG, Germany

21 Development of a methodical approach for the description of the use phase of electric vehicle concepts in a life cycle assessment
Michael Baumann, Michael Held
Fraunhofer Institute for Building Physics, Germany

22 Environmental lifecycle feasibility assessment of hydrogen as an automotive fuel in Western Australia

Wahidul Karim Biswas, Michele Rosano, Brett Callum Thompson
Curtin University, Australia

23 Environmental properties and scenarios for future rail systems: Infrastructure and operation of high-speed rail in Norway

Carine Grossrieder, Johan Pettersen
MiSA, Norway

24 Green logistics – How to do it right

Silvia Marton[1], Paul Wittenbrink[2]
[1]myclimate, Switzerland; [2]Duale Hochschule Baden-Württemberg, Germany

25 Instant LCA: A software to calculate LCA of packaging instantaneously and accurately

Elisabeth van Overbeke, Bernard De Caevel, Ooms Michaël, De Vos Marc
RDC Environment, Belgium

26 Life Cycle Assessment projects by process groups

Isabel Joaquina Niembro-García, Xavier Carod, Margarita González-Benítez
Universitat Politècnica de Catalunya, Spain

27 A LCA study of the production of modern highly effective windows in Norway

Rolf André Bohne[1], Edgar Hertwich[1], Oddbjørn Dahlstrøm[1], Silje Eriksen[2]
[1]Norwegian University of Science and Technology, Norway; [2]Norbohus AS, Norway

28 An effect of CO2 information labeling for the pork produced with feed made from food residuals

Hideaki Kurishima[1], Tatsuo Hishinuma[2], Yutaka Genchi[3]
[1]Shibaura Institute of Technology, Japan; [2]Utsunomiya University, Japan; [3]National Institute of Advanced Industrial Science and Technology, Japan

29 Application of life cycle assessment methodology to methane production from solid waste

Javier Dufour[1,2], David Serrano[1,2], Juan José Espada[1]
[1]Rey Juan Carlos University, Spain; [2]IMDEA Energy Institute, Spain

30 Environmental impacts of pellets production from winery residue: A site dependent result?
Colin Jury, Guy Kneip, Viola Huck, Antonino Marvuglia, Enrico Benetto
Public Research Centre Henri Tudor, Luxembourg

31 Environmentally friendly food consumption: What does this mean?
Niels Jungbluth, Sybille Büsser, Rolf Frischknecht
ESU-services Ltd., Switzerland

32 The role of LCA in sustainable food procurement by a city
Niels Jungbluth, Sybille Büsser, Matthias Stucki, Rolf Frischknecht
ESU-services Ltd., Switzerland

33 Inspiring, informing, and influencing sustainable urban planning processes through consumption based emissions inventories
Christian Solli[1], Rolf Andre Bohne[2], Hogne Nersund Larsen[1]
[1]MiSA AS, Norway; [2]NTNU, Norway

34 Market research to assess environmental impacts of consumer stage in food LCA
Jaime Zufía, Guillermo Pardo
AZTI-Tecnalia, Spain

35 Product-oriented environmental management system (POEMS): A sustainable management framework for the food industry
Roberta Salomone[1], Maria Teresa Clasadonte[2], Maria Proto[3], Andrea Raggi[4], Ioannis Arzoumanidis[4], Giuseppe Ioppolo[1], Agata Lo Giudice[2], Ornella Malandrino[3], Agata Matarazzo[2], Luigia Petti[4], Giuseppe Saija[1], Stefania Supino[3], Alessandra Zamagni[4]
[1]University of Messina, Italy; [2]University of Catania, Italy; [3]University of Salerno, Italy; [4]University of Pescara "G. d'Annunzio", Italy

36 Information exchange requirements for cradle to cradle implementation in an industrial setting: EoL treatment of flat screen televisions
Paul Vanegas[1,2], Jef Peeters[1], Dirk Cattrysse[1], Joost Duflou[1]
[1]Katholieke Universiteit Leuven, Belgium; [2]Universidad de Cuenca, Ecuador

37 Supporting tools for implementing LCM in SMEs.- The LiMaS Project

Juan Carlos Alonso[1], Julio Rodrigo[1], Noemi Canyellas[1], Francisco Campo[2], Ana de la Puente[2], Perrine Chancerel[3], Jana Rückschloss[3], Karsten Schischke[4]

[1]SIMPPLE, Spain; [2]IK Ingenieria, Spain; [3]Berlin Institute of Technology, Germany; [4]Fraunhofer Institut, Germany

38 The CAP'EM project: Providing scientifically sound information on environmental and health impacts of construction materials, based on a common LCA methodology across 5 European countries

Jodie Kathleen Bricout[1], Andrew Norton[2], Christian Traisnel[1]

[1]cd2e, France; [2]renuables, UK

39 Which packaging system for apple juice is most eco-friendly and at the same time more efficient? Eco-Efficiency analysis for apple-juice packaging

Daniela Kölsch[1], Daniela Klein[2], Bahar Cat-Krause[1], Brigitte Achatz[2], Peter Saling[2]

[1]TÜV Rheinland, Germany; [2]BASF, Germany

40 Innovation case study of a life cycle management company

Matti Sivunen[1], Juho-Kusti Kajander[2], Harri Väänänen[3], Jaakko Siltaloppi[1], Seppo Junnila[1]

[1]Aalto University, Finland; [2]Boost Brothers Inc, Finland; [3]Gensoft Inc, Finland

41 New spatiotemporally resolved LCI applied to photovoltaic electricity

Didier Beloin-Saint-Pierre, Isabelle Blanc

Mines ParisTech, France

42 Closing data gaps in LCI based on environmental IOA: A case study for German building products

Bodo Müller[1], Liselotte Schebek[2]

[1]KIT, Germany; [2]TU Darmstadt, Germany

43 Comparative prices of dry-cell portable batteries of carbon zinc (environmental unsound) and alkaline manganese (environmental sound) chemical systems in a developing country: Case of Yaoundé, Cameroon, Africa

Samuel Tetsopgang[1,2]

[1]CREPD, Cameroon; [2]The University of Bamenda, Cameroon

44 Comparison of life cycle inventory (LCI) methods for Carbon Footprint calculation – the case of pulp and paper sector in Spain

Eskinder Demisse Gemechu, Isabela Butnar, Javier Recari, Maria José Amores Barrero, Francesc Castells
Universitat Rovira i Virgili, Spain

45 Computation of operational and environmental benchmarks for dairy farms through the five-step LCA+DEA method

Diego Iribarren[1], Almudena Hospido[2], M Teresa Moreira[2], Gumersindo Feijoo[2]
[1]Madrid Institute for Advanced Studies in Energy (IMDEA Energy Institute), Spain; [2]University of Santiago de Compostela, Spain

46 Developing a method of assessment for events considering sustainability

Noriko Matsunaga, Norihiro Itsubo
Tokyo City University, Japan

47 Ecological Footprint evaluation of Japanese domestic food consumption considering Water Footprint

Naoki Yoshikawa, Koji Amano, Koji Shimada
Ritsumeikan University, Japan

48 Ecological and life cycle evaluation of bio-ethanol production from rice straw as a green energy alternative for Sri Lanka

Disni Sanjeewani Gamlath, Sohei Shimada
The University of Tokyo, Japan

Tuesday, August 30, 2011

09.00 am – 10.45 am

Coffee Break and Posters

10.45 am – 11.15 am

Biofuels: LCM of Biofuels

➔ Location: Room ❶ ➔ Chairs: Martina Fleckenstein, Kalyana Sundram

09.00 am **Lack of harmonization of LCA methodologies restricts the use of oil palm industry biomass and bioenergy as renewable energy sources**
Kalyana Sundram
Malaysian Palm Oil Council, Malaysia

09.15 am **Recent developments of biofuels' LCA in Europe: The case of palm oil biofuels**
Guido A. Reinhardt
IFEU, Germany

09.30 am **Life cycle analysis of Malaysian palm oil biofuel and land use implications**
Stefan Unnasch
Life Cycle Associates, USA

09.45 am **Environmental impacts of biofuels: What's new?**
Mireille C. Faist Emmenegger[1], Thomas Nemecek[2], Andrew Simons[3], Christian Bauer[3], Rainer Zah[1]
[1]Empa, Switzerland; [2]Agroscope Reckenholz-Tänikon, Switzerland; [3]Paul Scherrer Institut, Switzerland

10.00 am **Bioenergy for a low-carbon economy**
Martina Fleckenstein
WWF, Germany

10.15 am **Sustainability assessment of biomass utilisation in East Asian countries**
Yuki Kudoh[1], Masayuki Sagisaka[1], Sau Soon Chen[2], Jessie C. Elauria[3], Shabbir H. Gheewala[4], Udin Hasanudin[5], Hsien Hui Khoo[6], Tomoko Konishi[7], Jane Romero[8], Yucho Sadamichi[1], Xunpeng Shi[9], Vinod K. Sharma[10]
[1]National Institute of Advanced Industrial Science and Technology, Japan; [2]SIRIM Berhad, Malaysia; [3]University of the Philippines, the Philippines; [4]The Joint Graduate School of Energy and Environment, Thailand; [5]University of Lampung, Indonesia; [6]Agency for Science, Technology and Research, Singapore; [7]Fujitsu Laboratories, Japan; [8]Institute for Global Environmental Strategies, Japan; [9]Economic Research Institute of ASEAN and East Asia, Indonesia; [10]Indira Gandhi Institute of Development Research, India

10.30 am **Life-cycle greenhouse gas assessment of soybeans**
Erica Geraldes Castanheira, Fausto Freire
University of Coimbra, Portugal

Packaging: LCM of Packaging Sustainability

➔ Location: Room ❷ ➔ Chairs: Gerald Rebitzer, Anne Therese Johnson

09.00 am **Implementing sustainability in the packaging value chain – The role of a packaging converter**
Gerald Rebitzer, David Clark, Fabio Peyer
Amcor, Switzerland

09.15 am **Impacts of life cycle assessment results on society – The case of packaging materials in Switzerland**
Grégoire Meylan, Andy Spoerri, Roland W. Scholz
ETH Zürich, Switzerland

09.30 am **Full life cycle assessment versus "streamlined" LCA-based ecodesign tools for the fast-moving consumer goods sector: Pros and cons**
Lars Lundquist
Nestlé, Switzerland

09.45 am **A report format that advances packaging innovation and LCA**
Danny Ying Wong[1], Tom Gloria[2]
[1]Avery Dennison, USA; [2]Industrial Ecology Consultants, USA

10.00 am **Role of packaging in LCA of food products**
Frans Silvenius[1], Juha-Matti Katajajuuri[1], Kaisa Grönman[2], Risto Soukka[2], Heta-Kaisa Koivupuro[1], Yrjö Virtanen[1]
[1]MTT Agrifood Research Finland, Finland; [2]Lappeenranta University of Technology, Finland

10.15 am **The global warming potential analysis of beverage: Which is the best option?**
Jorgelina Pasqualino[1,2], Montse Meneses[1,3], Francesc Castells[1]
[1]Universitat Rovira i Virgili, Spain; [2]Catalonia Institute for Energy Research, Spain; [3]Universitat Autònoma de Barcelona, Spain

10.30 am **An NGO Perspective on the best use and limitations of life cycle analysis to improve the environmental sustainability of packaging**
Anne Therese Johnson
GreenBlue Institute, USA

Policy: LCM in Public Policy

➔ Location: Room ❸ ➔ Chairs: Guido Sonnemann, Mary Ann Curran

09.00 am **Life cycle management and multilateral environmental agreements**
Guido Sonnemann, Sonia Valdivia, Mireille Rack
UNEP, France

09.15 am **LCM for food supply in public policy – public procurement of food for schools**
Niels Heine Kristensen, Mette Weinreich Hansen, Thorkild Nielsen
AAU, Denmark

09.30 am **A novel weighting method in LCIA and its application in Chinese policy context**
Hongtao Wang[1,2], Ping Hou[1], Hao Zhang[1], Duan Weng[2]
[1]Sichuan University, China; [2]Tsinghua University, China

09.45 am **Life-cycle management in transport planning: Infrastructure development and operation of high-speed rail in Norway**
Johan Pettersen, Håvard Bergsdal, Christian Solli, Christine Hung
MiSA, Norway

10.00 am **Urban energy consumption patterns in Estonia - a mandate of master plans**
Martin Gauk, Antti Roose
University of Tartu, Estonia

10.15 am **Urban planning of sewer infrastructure: Impact of population density and land topography on environmental performances of wastewater treatment systems**
Philippe Roux, Ivan Mur, Eva Risch, Catherine Boutin
Cemagref, France

10.30 am **Packaging legislation and unintended consequences: A case study on the necessity of life cycle management**
James Michael Martinez
Dart Container Corporation, USA

➔ Schedule

Tuesday, August 30, 2011
🕐 11.15 am – 12.30 pm

Lunch and Poster Session
🕐 12.30 pm – 02.00 pm

Tools & Data II: Tools and Data for LCM II

➔ Location: Room ❶ ➔ Chairs: Paolo Masoni, Tomas Vilhelm Rydberg

11.15 am **Ecoinvent database version 3 – the practical implications of the choice of system model**
Bo Weidema
The ecoinvent centre, Switzerland

11.30 am **Development of Chinese reference life cycle database (CLCD) – Guidance, documentation and tools**
Hongtao Wang, Zhihui Wang, Cidong Fan, Ping Hou, Na Huang, Hao Zhang, Qin He, Yongguang Zhu
Sichuan University, China

11.45 am **Methodological guidelines for LCA of French agricultural products**
Peter Koch[1], Gérard Gaillard[1], Hayo M.G. von der Werf[2], Yannick Biard[2], Claudine Basset-Mens[3], Armelle Gac[4], Afsaneh Lellahi[5], Anne Paillier[6]
[1]Agroscope Reckenholz Tänikon, Switzerland; [2]INRA, France; [3]CIRAD, France; [4]Institut d'Elevage, France; [5]Arvalis, France; [6]ADEME, France

12.00 pm **Interacting with the ILCD data network from an LCA software - the example of openLCA**
Andreas Ciroth[1], Srocka Michael[1], Düpmeier Clemens[2], Kusche Oliver[2], Schebek Liselotte[2]
[1]GreenDeltaTC, Germany; [2]Karlsruhe Institut für Technologie, Germany

12.15 pm **Designers' requirements of lifecycle sustainability management tools**
Jamie O'Hare
Granta Design, United Kingdom

Retail & Food II: LCM in the Retail and Food Sectors II

➔ Location: Room ❷ ➔ Chairs: James A Fava, Llorenc Mila i Canals

11.15 am **Life cycle assessments for consumer products**
Michael Moscherosch
Johnson & Johnson, USA

11.30 am **The Sustainability Consortium: A stakeholder approach to improve consumer product sustainability**
Kevin Dooley, Joby Carlson, Georg Schöner, Vairavan Subramanian, Cameron Childs
The Sustainability Consortium, USA

11.45 am **Development of an eco-responsible product selection program for a Canadian retailer using a life cycle assessment**
François Charron-Doucet, Alexandre Courchesne, Renée Michaud, Réjean Samson, Manuele Margni
CIRAIG, Canada

12.00 pm **Environmental profiles of farm types in Switzerland based on LCA**
Daniel U. Baumgartner, Johanna Mieleitner, Martina Alig, Thomas Nemecek, Gérard Gaillard
Agroscope Reckenholz-Taenikon Research Station ART, Switzerland

12.15 pm **Best practice application of LCM by retailers to improve product supply chain sustainability**
David Styles, Harald Schoenberger, Jose Luis Galvez-Martos
Joint Research Centre, Spain

Review: Critical Review and Verification of LCA

➔ Location: Room ❸ ➔ Chairs: Walter Klöpffer, Philippe Osset

11.15 am **"Critical review" and "Verification" cannot be used synonymously. A plea for a differentiated and precise use of the terms**
Birgit Grahl[1], Eva Schmincke[2]
[1]Industrial Ecology, Germany; [2]Five Winds International, USA

11.30 am **Comparison of the critical review process of LCA with the verification in ETS**
Hans J. Garvens[1,2]
[1]LCA Consultant, Germany; [2]Umweltbundesamt, Germany

11.45 am **International reference life cycle data system (ILCD): Review schemes for life cycle assessment**
Kirana Chomkamsri, Marc-Andree Wolf, Rana Pant
Joint Research Centre, Italy

12.00 pm **The intersection of critical review and assurance**
Holly Lahd, Cynthia Cummis, Laura Draucker
World Resources Institute, USA

12.15 pm **Maintaining quality critical peer review (CPR) as the demand for life cycle assessments increases**
Mary Ann Curran
US Environmental Protection Agency, USA

Tuesday, August 30, 2011

02.00 pm – 04.00 pm

Coffee Break and Posters

04.00 pm – 04.30 pm

LCSA I: Life Cycle Sustainability Assessment I

➔ Location: Room ❶ ➔ Chairs: Claus Stig Pedersen, Marzia Traverso

02.00 pm **Unilever sustainable living plan: Implementing sustainability management across the value chain**
Henry King, Llorenc Mila i Canals
Unilever, United Kingdom

02.15 pm **Measuring the sustainability of products: The Eco-Efficiency and SEEBALANCE® analysis**
Peter Rudolf Saling, Marianna Pierobon
BASF, Germany

02.30 pm **Sustainable lifecycle engineering at Siemens AG**
Jens-Christian Holst, Katrin Mueller, Karin Uebelhoer
Siemens, Germany

02.45 pm **Natura Brazil, a life cycle management experience in the cosmetic industry**
Fabien Brones
Natura Cosmeticos, Brazil

03.00 pm **Life cycle management capability: An alternative approach to sustainability assessments**
Thomas E. Swarr[1], James Fava[1], Allan Astrup Jensen[2], Sonia Valdivia[3], Bruce Vigon[4]
[1]Five Winds International, USA; [2]Nordic Institute for Product Sustainability, Environmental Chemistry and Toxicology, Denmark; [3]UNEP, France; [4]SETAC, USA

03.15 pm **S-LCA: Preliminary results of Natura's cocoa soap bar**
Cassia Maria Lie Ugaya[1], Silvia da Costa Corrêa[1], Fabien Brones[2]
[1]UTFPR, Brazil; [2]Natura Cosmeticos, Brazil

03.30 pm **A social hotspot database for acquiring greater visibility in product supply chains: Overview and application**
Catherine Benoit[1,2], Deana Aulisio[1], Gregory Norris[2], Caroline Hallisey-Kepka[2], Susan Overakker[2], Gina Vickery Niederman[3]
[1]University of New Hampshire, USA; [2]New Earth, USA; [3]University of Arkansas, USA

03.45 pm **Social life cycle assessment of biodiesel in South Africa: An initial assessment**
Charles Mbohwa, Nonhlanhla Myaka,
University of Johannesburg, South Africa

Regions: LCM in the Regions

➔ Location: Room ❷ ➔ Chairs: Nydia Suppen, Harro von Blottnitz

02.00 pm **Sustainable resource management (SRM) in Latin America and the Caribbean (LAC) region**
Sonia Valdivia[1], Elisa Tonda[2]
[1]UNEP, France; [2]PNUMA ROLAC, Panama

02.15 pm **Life cycle inventories of the Latin-American electricity production systems**
Claudia Pena[1], Claudio Zaror[2], Alejandro P. Arena[3], Cassia Ugaya[4], Isabel Quispe[5], Nydia Suppen[6], Sonia Valdivia[7]
[1]Research Center for Mining and Metallurgy, Chile; [2]University of Concepción, Chile; [3]National Technological University, Argentina; [4]Federal Technological University of Paraná, Brazil; [5]Catholic University of Peru, Peru; [6]Center of LCA and Sustainable Design, Mexico; [7]UNEP, France

02.30 pm **Application of life cycle assessment in service industries: A review**
Sabrina Rodrigues Sousa, Aldo Roberto Ometto
University of São Paulo, Brazil

02.45 pm **Establishing a data framework for Life Cycle Management in India**
Gregor Wernet[1], Matthias Stucki[1], Megha Shenoy[2], N Muthusezhiyan[3]
[1]Ecoinvent Centre, Switzerland; [2]Resource Optimization Initiative (ROI), India; [3]Sohrabji Godrej Green Business Centre, India

03.00 pm **Life-cycle based sustainability assessment as decision support for an Integrated Water Resources Management in an Indonesian karst region**
Annekatrin Lehmann[1,2], Matthias Finkbeiner[1], Helmut Lehn[2], Jürgen Kopfmüller[2]
[1]Technische Universität Berlin, Germany; [2]Karlsruhe Institute of Technology, Germany

03.15 pm **Future scenarios for waste management in Kumasi, Ghana – a life cycle perspective**
Cecilia Sundberg, Emma Wikner, Kristina Dahlman
Swedish University of Agricultural Sciences, Sweden

03.30 pm **Global warming implications of construction works in Western Australia**
Wahidul Karim Biswas, Michele Rosano
Curtin University, Australia

03.45 pm **Social life cycle assessment of solid waste management in Kathmandu City Nepal**
Pradip Gautam
Paracon Consult, Nepal

Mobility: LCM in the Mobility Sector

➔ Location: Room ❸ ➔ Chairs: Stephan Krinke, Klaus Ruhland

02.00 pm **Implementing life cycle engineering efficiently into automotive industry processes**
Stephan Krinke
Volkswagen AG, Germany

02.15 pm **Global, regional and local environmental impacts: LCA indicators for energy & mobility**
Florent Querini[1,2], Stéphane Morel[2], Valérie Boch[2], Patrick Rousseaux[1]
[1]Université de Poitiers, France; [2]Renault, France

02.30 pm **Assessment of the environmental impacts of electric vehicle concepts**
Michael Held, Michael Baumann
Fraunhofer Institute for Building Physics, Germany

02.45 pm **Environmental optimization of electric vehicles slow-charging infrastructures through a life cycle management approach**
Joan Manuel F. Mendoza[1], Joan Rieradevall[1], Xavier Gabarrell[1], Alejandro Josa[2]
[1]Autonomous University of Barcelona, Spain; [2]Technical University of Catalonia, Spain

03.00 pm **Environmental product declaration of a commuter train**
Kathy Reimann, Sara Paulsson, Yannos Wikström, Saemundur Weaving
Bombardier Transportation, Germany

03.15 pm **Sustainable product development based on life cycle assessment in the field of railway vehicles**
Walter Martin Struckl, Michael Canori
Siemens, Austria

03.30 pm **Life cycle assessment of innovative vehicle technologies for passenger transport**
Christian Bauer, Andrew Simons
Paul Scherrer Institut, Switzerland

03.45 pm **Design for environment and environmental certificate at Mercedes-Benz cars**
Klaus Ruhland, Rüdiger Hoffmann, Halil Cetiner, Bruno Stark
Daimler, Germany

➔ Schedule

Tuesday, August 30, 2011

04.30 pm – 06.00 pm

New Methods II: New Methods and Concepts of LCM II

➔ Location: Room ❶ ➔ Chairs: Atsushi Inaba, Markus Berger

04.30 am **An integrated LCM framework for manufacturing SMEs**
Manuel Seidel[2], Rainer Seidel[1], Mehdi Shahbazpour[1], Helene Sterzik[3]
[1]The University of Auckland, New Zealand; [2]KBS Sustainable Innovation Partners, New Zealand, [3]Massey University, New Zealand

04.45 am **LCM of rainwater harvesting systems in emerging neighborhoods in Colombia**
Tito Morales[1,2], Sara Angrill[1], Joan Rieradevall[1,3], Xavier Gabarrell[1,3], Carles M. Gasol[1], Alejandro Josa[4]
[1]Universitat Autònoma de Barcelona, Spain; [2]Universidad Tecnológica de Pereira, Colombia; [3]Inèdit Innovació, Spain; [4]Technical University of Catalonia, Spain

05.00 am **The usefulness of an actor's perspective in LCA**
Henrikke Baumann[2], Johanna Berlin[3], Birgit Brunklaus[2], Mathias Lindkvist[2], Birger Löfgren[1,2], Anne-Marie Tillman[2]
[1]SKF, Sweden; [2]Chalmers University of Technology, Sweden; [3]Swedish Institute for Food and Biotechnology, Sweden

05.15 am **Time and life-cycle assessment: How to take time into account in the inventory step?**
Pierre Collet[1], Arnaud Hélias[1,2], Laurent Lardon[1], Jean-Philippe Steyer[1]
[1]INRA, France; [2]Montpellier SupAgro, France

05.30 am **Visual Accounting**
Andreas Möller[1], Martina Prox[2]
[1]Leuphana University, Germany; [2]ifu Hamburg, Germany

05.45 am **The EPD 2.0 concept**
Anna Braune, Johannes Kreißig, Siegrun Kittelberger
PE INTERNATIONAL, Germany

Metal: LCM in the Metal Sector

➔ Location: Room ❷ ➔ Chairs: Ladji Tikana, Clare Broadbent

04.30 pm **LCA based environmental index for process industries: Model for application in integrated steel plants**
Kishore Chenna
Rashtriya Ispat Nigam, India

04.45 pm **Limits of recycling and "sustainability"**
Markus A Reuter, Ilkka Kojo
Outotec, Australia/Finland

05.00 pm **Reinventing steel in the auto body – A life cycle perspective**
Nick Coleman[1], George Coates[2], Clare Broadbent[3]
[1]Tata Steel Europe, United Kingdom; [2]WorldAutoSteel, USA; [3]World Steel Association, Belgium

05.15 pm **Challenges for LCAs of complex systems: The case of a large-scale precious metal refinery plant**
Anna Stamp[1,3], Christina Meskers[2], Markus Reimer[1], Patrick Waeger[1], Hans-Joerg Althaus[1], Roland W Scholz[3]
[1]Empa, Switzerland; [2]Umicore Precious Metal Refining, Belgium; [3]ETH Zurich, Switzerland

05.30 pm **The benefits of using steel in a multi material society**
Clare Broadbent
World Steel Association, Belgium

05.45 pm **Assessing metals recycling performance between effectiveness and efficiency by analyzing concentration vs. dissipation and environmental impacts**
Stefan Goessling-Reisemann, Bernhard Cebulla
University of Bremen, Germany

Manufacturing: LCM in the Manufacturing Sector

➔ Location: Room ❸ ➔ Chairs: Manuele Margni, Ichiro Daigo

04.30 pm **Enablers and barriers to the development to life cycle management in the manufacturing sector of New Zealand**
Anthony Hume[1], Claire Mortimer[1], Jake McLaren[2]
[1]Landcare Research, New Zealand; [2]McLaren Consulting, New Zealand

04.45 pm **A method of prospective technological assessment of nanotechnological techniques**
Michael Steinfeldt
University of Bremen, Germany

05.00 pm **Sharing best practice in partnerships - Creating new markets for green products**
Mette Mosgaard[1], Arne Remmen[1], Claus Stig Pedersen[2]
[1]Aalborg University, Denmark; [2]Novozymes, Denmark

05.15 pm **Life cycle assessment of an aircraft cabin element**
Jan Paul Lindner[1], Benedict Michelis[2], Stefan Albrecht[3]
[1]Fraunhofer IBP, Germany; [2]Diehl Aircabin, Germany; [3]University of Stuttgart, Germany

05.30 pm **Energy-oriented layout planning for production facilities**
Chenqing Wang, Günther Seliger
Technische Universität Berlin, Germany

05.45 pm **Life cycle assessment of an air reservoir, component of an air compressor**
Guilherme Marcelo Zanghelini[1], Rodrigo Augusto Freitas Alvarenga[1,2], Sebastião Roberto Soares[1]
[1]Universidade Federal de Santa Catarina, Brazil; [2]Ghent University, Belgium

➔ Poster Session

Tuesday, August 30, 2011

12.30 pm – 02.00 pm

Location: Poster and Exhibition Room, Ground Floor

1 Analysis of the life-cycle costs and environmental impacts of cooking fuels used in Ghana
George Afrane[1], Augustine Ntiamoah[2]
[1]University of Ghana, Ghana; [2]Koforidua Polytechnic, Ghana

2 Seeds4Green: Free collaborative internet platform for LCA studies
Helene Teulon[1], Anna Mogensen[2]
[1]Gingko 21, France; [2]PanOrder, Germany

3 Life cycle assessment for biodiesel production under Latvian climate conditions
Francesco Romagnoli, Jelena Pubule, Dagnija Blumberga
Riga Technical University, Latvia

4 Life cycle inventory of pine and eucalyptus cellulose production in Chile: effect of process modifications
Claudio Zaror, Patricia Gonzalez, Mabel Vega
University of Concepcion, Chile

5 Assessing the environmental advantages of high strength steel
Lisa Hallberg[1], Jan-Olof Sperle[2]
[1]IVL Swedish Environmental Research Institute, Sweden; [2]Sperle Consulting AB, Sweden

6 Development of a sustainability assessment system for steel and composite bridges
Tabea Beck, Matthias Fischer
University of Stuttgart, Germany

7 Fully parameterized LCA tool for wind energy converters
Till Zimmermann
University of Bremen, Germany

8 Optimal repowering of wind energy converters: Energy demand and CO2 intensity as indicators
Till Zimmermann, Stefan Goessling-Reisemann
University of Bremen, Germany

9 By-products and recycled material in the life cycle of steel

Sabrina Neugebauer[1], Matthias Finkbeiner[1], Wolfgang Volkhausen[2]
[1]Technische Universität Berlin, Germany; [2]ThyssenKrupp Steel Europe, Germany

10 Environmental assessment of a biomethane production system from offshore-cultivated macroalgae

Juliette Langlois[1,2], Arnaud Hélias[1,2], Jean-Philippe Delgenes[2], Jean-Philippe Steyer[2]
[1]Montpellier SupAgro, France; [2]INRA, France

11 Development of sustainability management system based on LCM approach for steel industry

Rajesh Singh, Ritesh Agrawal
PE Sustainability Solutions, India

12 Exergetic life cycle analysis in the selection of energetic sources for isolated communities in Latin American

Elena Rosa Dominguez[1], Miguel Castro Fernández[2], Carlos Garzón Soria[3], Darwin Ortíz Clavijo[3], Pastora Martinez Nodal[1], Ana M Contreras Moya[1], Mayra C. Morales Pérez.[1]
[1]Universidad Central de Las Villas, Cuba; [2]Centro de Investigaciones y Pruebas Electroenergéticas; [3]Universidad de Cotopaxi, Ecuador

13 Life cycle assessment of biodiesel production from cardoon (Cynara cardunculus) oil obtained under Spain conditions

Javier Dufour[1,2], Jesus María Arsuaga[2], Jovita Moreno[2], Hely Noe Torrealba[2]
[1]IMDEA Energy Institute, Spain; [2]Universidad Rey Juan Carlos, Spain

14 Greenhouse gas emissions and economic feasibility of ethanol production systems in Thailand

Yue Moriizumi[1,2], Piyawan Suksri[3], Hiroki Hondo[2], Yoko Wake[1]
[1]Keio University, Japan; [2]Yokohama National University, Japan; [3]Chulalongkorn University, Thailand

15 Climate neutral hotels – an industry solution framework

Kai Spehr
myclimate, Switzerland

16 Turn LCA Results into Business Strategy – A Performance Management Approach
Jeroen Loosli[1], Thomas Kaegi[2]
[1]doCOUNT, Switzerland; [2]myclimate, Switzerland

17 The way to climate friendly veal – a case study from a Swiss veal producer
Caroline Wildbolz, Thomas Kägi
myclimate, Switzerland

18 How sustainable are organic fair trade cocoa products? – a combination of social labelling and LCA
Thomas Kägi, Silvia Marton
myclimate, Switzerland

19 Evaluating natural resources use for potable water production
Enrico Benetto[1], Ligia Barna[2], Benedetto Rugani[1], Isabelle Baudin[3]
[1]Public Research Centre Henri Tudor, Luxembourg; [2]National Institute for Applied Sciences, France; [3]Suez-Environnement, France

20 Life Cycle Analyisis in Water Industry
Mohamed Tawfic Ahmed
Suez Canal University, Egypt

21 Life cycle assessment of an advertising folder
Benedetta Folloni[1], Luisa Barbieri[1], Anna Maria Ferrari[1], Paolo Neri[2]
[1]Università di Modena e Reggio Emilia, Italy; [2]ENEA, Italia

22 Life cycle impact assessment of chemicals: Relevance and feasibility of spatial differentiation for ecotoxicity and human toxicity impact assessment
Serenella Sala[1], Dimitar Marinov[1], Anna Kounina[2,3], Manuele Margni[2,4], Sebastien Humbert[2], Olivier Jolliet[2,5], Shanna Shaked[5], David Pennington[1]
[1]Joint Research Center, Italy; [2]Quantis, Switzerland; [3]Swiss Federal Institute of Technology, Switzerland; [4]CIRAIG, Canada; [5]University of Michigan, USA

23 Making life cycle impact assessment models for toxicity suitable for organic acids and bases

Gea Stam[1], Rosalie van Zelm[1], Mark A.J. Huijbregts[1], Dik van de Meent[1,2]

[1]Radboud University Nijmegen, Netherlands; [2]National Insitute for public health and the environment, Netherlands

24 Implementing Water Footprints into LCA of agricultural products - review of methods

Daniel Thylmann[1,2]

[1]PE INTERNATIONAL, Germany; [2]Universität Hohenheim, Germany

25 Comparison of Water Footprint for industrial products in Japan, China and USA

Sadataka Horie, Ichiro Daigo, Yasunari Matsuno, Yoshihiro Adachi

The University of Tokyo, Japan

26 The preservation of material flows in recycling processes for further usage

Alexandra Pehlken[1], Stefan Gößling-Reisemann[1], Jorge Marx-Gómez[2], Marc Allan Redecker[1]

[1]Bremen University, Germany; [2]University of Oldenburg, Germany

27 Comparative LCA of container deposit scheme and green dot system for PET bottles, cans and beverage carton waste in Spain

Eva Sevine Itoiz[1,2], Carles M. Gasol[1,2], Jordi Oliver-Sola[1,2], Victor Mitjans[3], Xavier Gabarrell[1], Joan Rieradevall[1]

[1]Universitat Autonoma de Barcelona, Spain; [2]Inedit Innovació S.L. UAB Research Park, Spain; [3]Fundació Privada Catalana Per a la Prevenció de Residus i el Consum Responsable, Spain

28 Regional assessment of waste flow eco-synergy in food production: Using compost and polluted ground water in Mediterranean horticulture crops

Julia Martínez-Blanco[1], Pere Muñoz[2], Joan Rieradevall[1], Juan Ignacio Montero[2], Assumpció Antón[2,3]

[1]Universitat Autònoma de Barcelona, Spain; [2]Institute of Research and Technology in the AgriFood sector, Spain; [3]Universitat Rovira i Virgili, Spain

29 How corporate LCM supports urban waste management and waste value chain

Jiayi Yin

Norwegian University of Science and Technology, China

30 Integrating sustainability considerations into product development: A practical tool for prioritising social sustain ability indicators and experiences from real case application

Gustav Sandin[1], Greg Peters[2], Annica Pilgård[1], Magdalena Svanström[2], Mats Westin[1]
[1]SP Technical Research Institute of Sweden, Sweden; [2]Chalmers University of Technology, Sweden

31 Waste Management System in gated communities - example VIT-University-Campus

Sebastian Meier, Dirk Weichgrebe, Karl-Heinz Rosenwinkel
Leibniz University Hannover, Germany

32 Concept of a modern data-management system for legally compliant and sustainable product design

Andreas Schiffleitner, Thomas Leitner, Nick Stein, Marek Stachura
KERP, Austria

33 Empirical validation of uncertainty for the ecoinvent database

Andreas Ciroth[1], Pascal Lesage[2], Stéphanie Muller[2], Bo Weidema[3]
[1]GreenDeltaTC, Germany; [2]CIRAIG, Canada; [3]ecoinvent Centre, Switzerland

34 Life cycle database for bioenergy based on an open source IT infrastructure

Liselotte Schebek[1], Andreas Ciroth[2], Clemens Düpmeier[1], Ludger Eltrop[3], Sonja Simon[4], Peter Viebahn[5], H.-J. Wagner[6], Tobias Zschunke[7]
[1]Karlsruhe Institute of Technology, Germany; [2]GreenDeltaTC, Germany; [3]Universität Stuttgart, Germany; [4]Deutsches Zentrum für Luft und Raumfahrt, Germany; [5]Wuppertal Institut für Klima, Umwelt, Energie, Germany; [6]Ruhr-Universität Bochum, Germany; [7]Hochschule Zittau/Görlitz, Germany

35 Life-cycle assessment of two single family residental houses conforming to the new Norwegian standard TEK 07 and the passive house standard.

Rolf André Bohne[1], Edgar Hertwich[1], Kari Sørnes[1], Silje Eriksen[2]
[1]Norwegian University of Science and Technology, Norway; [2]Norbohus AS, Norway

36 Sensitivity of life-cycle assessments of windows to the choice of recycling allocation method

Gerhard Piringer, Christoph Berzsenyi, Doris Rixrath, Christian Wartha
FH Burgenland - University of Applied Science, Austria

37 State of the art study - How is environmental performance measured for buildings/constructions?
Anne Rønning, Kari-Anne Lyng
Ostfold Research, Norway

38 Environmental life cycle assessment and optimization of buildings
Marco Aurélio dos Santos Bernardes, Enrico Benetto, Antonino Marvuglia, Daniel Koster
Public Research Centre Henri Tudor, Luxembourg

39 Preliminay results of LCIA in the Sicilian durum wheat pasta chain production
Agata Lo Giudice, Maria Teresa Clasadonte, Agata Matarazzo
Università degli Studi di Catania, Italy

40 Product end-of-life in the motorcycle industry. Defining scenarios
Alberto Simboli[1], Anna Morgante[1], Raffaella Taddeo[1], Pietro Rosica[2]
[1]University "G. d'Annunzio" Chieti-Pescara, Italy; [2]CisiService Spa, Italy

41 Life cycle management and urban settlements in spatial planning
Kalterina Shulla
Ministry of Public Works and Transport, Albania

42 The concept of monitoring of LCM results based on refrigerators case study
Przemysław Kurczewski, Krzysztof Koper
Poznan University of Technology, Poland

43 The Cradle to Cradle concept - is it always sustainable?
Anders Bjørn[1], Maria Strandesen[2]
[1]Technical University of Denmark, Denmark; [2]FORCE Technology, Denmark

44 Water Footprint and life cycle assessment of Populus SPP_ bioenergy systems: a case study in Southern Europe
Eva Sevine Itoiz, Carles M. Gasol, Filippo Brun, Laura Rovira, Josep Maria Pagés, Francesc Camps, Joan Rieradevall, Xavier Gabarrell
Universitat Autonoma de Barcelona, Spain

45 A comparison of two wastewater treatment plants: Stabilization ponds and activated sludge with a social perspective impacts

Adba Musharrafie[1], Patricia Güereca[2], Alejandro Padilla[2], Juan Manuel Morgan[2], Adalberto Noyola[2]
[1]Instituto Tecnologico de Estudios Superiores de Monterrey, Mexico; [2]Universidad Nacional Autonoma de Mexico, Mexico

46 A simple method to better evaluate the freshwater use impact of irrigated crops. The case study of a Mediterranean basin

Almudena Hospido[1], Montserrat Nuñez[2], Assumpcio Anton[2,3]
[1]University of Santiago de Compostela, Spain; [2]IRTA, Spain; [3]Universitat Rovira Virgili, Spain

47 Sustainability aspects of plastic pipe systems for building applications: The environmental pillar

Carolin Spirinckx
Flemish Institute for Technological Research, Belgium

48 A web-based tool for efficient carbon footprint calculations: Lux screen CO2

Paula Hild, Mélanie Guiton, Julien Pieropan, Bianca Schmitt, Enrico Benetto
Public Research Centre Henri Tudor, Luxembourg

Wednesday, August 31, 2011

09.00 am – 10.45 am

Coffee Break and Posters

10.45 am – 11.15 am

GHG: GHG Protocol of Products and Supply Chains

➔ Location: Room ❶ ➔ Chairs: Pankaj Bhatia, Andrea Brown Smatlan

09.00 am **Greenhouse gas protocol product life cycle accounting and reporting standard**
Laura Draucker[1], Holly Lahd[1], Andrea Brown[2], Cynthia Cummis[1], David Rich[1], Pankaj Bhatia[1]
[1]World Resources Institute, USA; [2]World Business Council for Sustainable Development, Switzerland

09.15 am **GHG Management at the farm level**
Emma Josephine Keller[1,2], Jon Hillier[3], Christof Walter[1], Vanessa King[1], Llorenc Mila-i-Canals[1]
[1]Unilever, United Kingdom; [2]University of Surrey, United Kingdom; [3]University of Aberdeen, United Kingdom

09.30 am **Greenhouse gas emission factors for Helsinki regions waste management**
Reetta Johanna Anderson[1], Helena Dahlbo[2], Tuuli Myllymaa[2], Marja-Riitta Korhonen[2], Kaisa Manninen[2]
[1]Helsinki region environment services authority, Finland; [2]Finnish Environment Institute, Finland

09.45 am **Carbon Footprint of liquid beverage packaging in the UK**
Haruna Gujba, Adisa Azapagic
The University of Manchester, United Kingdom

10.00 am **Wood in carbon efficient construction: Environmental impacts assessment for the mitigation of climate changes**
Francesco Pittau, Enrico De Angelis
Politecnico di Milano, Italy

10.15 am **Challenges and opportunities of implementing Scope 3**
Andrea Brown Smatlan[1], Laura Draucker[2]
[1]World Business Council for Sustainable Development, Switzerland; [2]World Resources Institute, USA

10.30 am **Challenges and possible solutions of Scope 3 corporate green house gas accounting**
Martina Prox
ifu Hamburg, Germany

Retail & Food I: LCM in the Retail and Food Sectors I

➔ Location: Room ❷ ➔ Chairs: Llorenc Mila i Canals, Gerard Gaillard

09.00 am **How to measure and manage the life cycle greenhouse gas impact of a global multinational company**
Nicole Unger, Henry King, Siri Calvert, Llorenç Mila i Canals
Unilever, United Kingdom

09.15 am **Developing LCA methodology guide for the food industry**
Hannele Pulkkinen, Kristoffer Krogerus, Juha-Matti Katajajuuri, Merja Saarinen, Hanna Hartikainen, Frans Silvenius, Heli Yrjänäinen
MTT Agrifood Research Finland, Finland

09.30 am **LCA methodology from analysis to actions: Some Barilla's examples of improvement projects**
Luca Fernando Ruini[1], Laura Marchelli[1], Assunta Filareto[2]
[1]Barilla G.&R. Fratelli, Italy; [2]Life Cycle Engineering, Italy

09.45 am **LCM approach in the retail sector of cleaning products in Brazil**
Luiz Kulay, Luiza Arruda, Gil Silva
University of Sao Paulo, Brazil

10.00 am **Assessing management influence on environmental impacts under uncertainty: a case study of paddy rice production in Japan**
Kiyotada Hayashi
National Agriculture and Food Research Organization, Japan

10.15 am **Environmental analysis of organic broiler production in France and improvement options**
Fabienne Seguin[1], Hayo M.G. van der Werf[1], Isabelle Bouvarel[2], Eve Pottiez[2]
[1]INRA, France; [2]ITAVI, France

10.30 am **Timeline LCA study of the European hake fishery (Merluccius merluccius) in the Basque country**
Saioa Ramos[1], Ian Vazquez-Rowe[2], Gumersindo Feijoo[2], Jaime Zufia[1]
[1]AZTI-Tecnalia, Spain; [2]University of Santiago de Compostela, Spain

LCIA: Life Cycle Impact Assessment

➔ Location: Room ❸ ➔ Chairs: Ralph K. Rosenbaum, Sebastien Humbert

09.00 am **From science to support decision making: Recommendations and challenges in life cycle impact assessment**
Serenella Sala[1], Miguel Brandao[1], Rana Pant[1], Michael Hauschild[2], David Pennington[1]
[1]Joint Research Center, Italy; [2]Technical University of Denmark, Denmark

09.15 am **Resource efficiency potential analysis as tool for life cycle management**
Klaus Wiesen[1], Michael Lettenmeier[1], Holger Rohn[2]
[1]Wuppertal Institute, Germany; [2]Trifolium, Germany

09.30 am **Integrating human health impacts from occupational indoor emissions in LCA**
Greg Doudrich[1], Manuele Margni[1], Thitiporn Sukaew[2], Louise Deschenes[1], Sebastien Humbert[3], Olivier Jolliet[2]
[1]CIRAIG, Canada; [2]University of Michigan, USA; [3]Quantis, Switzerland

09.45 am **Using USETOX for assessing ecotoxic impacts of products for the French official environmental labelling**
Jerome Payet
CYCLECO, France

10.00 am **Review on land use considerations in Life Cycle Assessment: Methodological perspectives for marine ecosystems**
Juliette Langlois[1,2], Arnaud Hélias[1,2], Jean-Philippe Delgenes[2], Jean-Philippe Steyer[2]
[1]Montpellier SupAgro, France; [2]INRA, France

10.15 am **Comparison of allocation and impact assessment methodologies on the life cycle assessment of rape and sunflower seed oils**
Alexandra C Hetherington[1], Marcelle C McManus[1], David A Gray[2]
[1]University of Bath, United Kingdom; [2]University of Nottingham, United Kingdom

10.30 am **Single issue assessment versus full life cycle assessment: The case of a monocrystalline PV panel**
Alessandro Manzardo, Anna Mazzi, Benedetta Levorato, Monia Niero, Antonio Scipioni
University of Padova, Italy

➔ Schedule

Wednesday, August 31, 2011
🕐 11.15 am – 12.30 pm

Lunch and Poster Session
🕐 12.30 pm – 02.00 pm

LCSA II: Life Cycle Sustainability Assessment II

➔ Location: Room ❶ ➔ Chairs: Sonia Valdivia, Jens-Christian Holst

11.15 am **Toolbox for a life cycle sustainability assessment of products**
Sonia Valdivia[1], Andreas Ciroth[2], Guido Sonnemann[1], Cassia Ugaya[3], Bin Lu[4], Carmen Alvarado[5]
[1]UNEP, France; [2]GreenDelta, Germany; [3]Federal Center of Technologic Education, Brazil;
[4]Chinese Academy of Sciences, China; [5]Pré Consultants, Netherlands

11.30 am **Accounting for sustainability through life cycle assessment (LCA)**
Bryan Hartlin
ERM, United Kingdom

11.45 am **Social and environmental LCA of an ecolabeled notebook**
Juliane Franze, Andreas Ciroth
GreenDelta, Germany;

12.00 pm **Application of LCSA in used cooking oil (UCO) waste management**
Elisabet Vinyes Guix[1], Carles M. Gasol[1,2], Jordi Oliver-Solà[1,2], Cassia Ugaya[3], Joan Rieradevall[1]
[1]Universitat Autònoma de Barcelona, Spain; [2]Inèdit Innovació, Spain, [3]Universidade Tecnologica Federal do Parana, Brazil

12.15 pm **The sustainability of sugar supply chains – Swiss beet sugar compared to Brazilian cane sugar**
Andy Spoerri, Catharina Bening, Roland W. Scholz
ETH Zurich, Switzerland

Energy II: LCM in the Energy Sector II

➔ Location: Room ❷ ➔ Chairs: Hiroki Hondo, Roland Hischier

11.15 am **Assessment of biomass for electricity generation in China**
Guangling Zhao, Per Christensen, Søren Løkke
Aalborg University, Denmark

11.30 am **Development and application of a LCA model for coal conversion products (Coal to Y)**
Christian Nissing, Loïc Coënt, Nathalie Girault
TOTAL Gas & Power, France

11.45 am **Life cycle assessment of a solar PV/T concentrator system**
Maurizio Cellura[1], Vito Grippaldi[2], Valerio Lo Brano[1], Sonia Longo[1], Marina Mistretta[2]
[1]Università di Palermo, Italy; [2]Università di Reggio Calabria, Italy

12.00 pm **Energy efficiency and renewable energy in need of life cycle management: The cases of compact fluorescents and solar water heaters**
Harro von Blottnitz
University of Cape Town, South Africa

12.15 pm **Analysis on correlation relationship between life cycle greenhouse gas emission and life cycle cost of electricity generation system for energy resources**
Heetae Kim, Tae Kyu Ahn
Sungkyunkwan University, South Korea

Chemicals: LCM in the Chemical Sector

➔ Location: Room ❸ ➔ Chairs: Erwin Ostermann, Carina Maria Alles

11.15 am **Life cycle sustainability based innovation: Tools for an integrated approach**
David Anthony Russell
The Dow Chemical Company, Switzerland

11.30 am **Carbon Footprint estimation - A model for the evaluation of potential climate change impacts of new product ideas in early project stages**
Guido Vornholt
Evonik Degussa, Germany

11.45 am **Environmental impacts of ethanol from a Norwegian wood-based biorefinery**
Ingunn Saur Modahl[1], Bjørn Ivar Vold[1], Tuva Barnholt[2], Gudbrand Rødsrud[2]
[1]Ostfold Research, Norway; [2]Borregaard, Norway

12.00 pm **Operational LCA guidance for hydrogen production: Methodological approach and first results**
Aleksandar Lozanovski[1], Michael Held[1], Michael Faltenbacher[2], Oliver Schuller[2], Paolo Masoni[3], Angelo Moreno[3]
[1]Universität Stuttgart, Germany; [2]PE INTERNATIONAL AG, Germany; [3]ENEA, Italy

12.15 pm **LCM in chemical industry: Best available pathways of quantifiable steps towards sustainability**
Martin Baitz[1], Anna Braune[1], Johannes Partl[2], Niels Warburg[1]
[1]PE INTERNATIONAL, Germany; [2]PE CEE Nachhaltigkeitsberatung & Software

➔ Schedule

Wednesday, August 31, 2011
🕐 02.00 pm – 04.00 pm

Coffee Break and Posters
🕐 04.00 pm – 04.30 pm

Tools & Data I: Tools and Data for LCM I

➔ Location: Room ❶ ➔ Chairs: Rana Pant, Mark Goedkoop

02.00 pm **Process on "Global Guidance for LCA Databases" – Just in time**
Guido Sonnemann[1], Bruce Vigon[2], Clare Broadbent[2], Mary Ann Curran[2], Matthias Finkbeiner[2], Rolf Frischknecht[2], Atsushi Inaba[2], Aafko Schanssema[2], Martha Stevenson[2], Cassia Maria Lie Ugaya[2], Hongtao Wang[2], Marc-Andree Wolf[2], Sonia Valdivia[2]
[1]UNEP DTIE, France; [2]Various organizations

02.15 pm **What the open data movement means for the life cycle management community**
Chris B. Davis, Gerard P.J. Dijkema
Delft University of Technology, Netherlands

02.30 pm **Comparison of inventory database – Effects of inventory data differences on the results of life cycle assessment**
Kiyotaka Tahara
National Institute of Advanced Industrial Science and Technology, Japan

02.45 pm **Integrating environmental decision making into the product innovation process**
Helen Elizabeth Franceschini, Siri Calvert, Henry King, Llorenc Mila i Canals
Unilever, United Kingdom

03.00 pm **Modular extrapolation approach for crop LCA MEXALCA: Global warming potential of different crops and its relationship to the yield**
Thomas Jan Nemecek[1], Karin Weiler[1], Katharina Plassmann[3], Julian Schnetzer[1], Gérard Gaillard[1], Donna Jefferies[2], Tirma García–Suárez[2], Henry King[2], Llorenç Milà i Canals[2]
[1]Agroscope ART, Switzerland; [2]Unilever, United Kingdom; [3]Johann Heinrich von Thünen Institut, Germany

03.15 pm **The use of models to account for the variability of agricultural data in LCA studies**
Brigitte Langevin[1,2], Laurent Lardon[4], Claudine Basset-Mens[3]
[1]CEMAGREF-ITAP, France; [2]Solagro,France; [3]CIRAD-Hortsys, France; [4]INRA-LBE, France

03.30 pm **Development of an LCA tool for the evaluation of environmental performances and eco-design of drinking water treatment plants**
Yoann Manuel Méry[1], Ligia Tiruta-Barna[1], Isabelle Baudin[2], Enrico Benetto[3]
[1]Université de Toulouse, France; [2]Centre International de Recherche Sur l'Eau et l'Environnement, France; [3]Public Research Centre Henri Tudor/CRTE, Luxembourg

03.45 pm **The eco-efficiency development of economic sectors in Europe**
Sibylle Wursthorn[1], Roland Essel[2]
[1]Karlsruhe Institute of Technology, Germany; [2]TAURUS Eco Consulting, Germany

Energy I: LCM in the Energy Sector I

➔ Location: Room ❷ ➔ Chairs: Jens Hesselbach, Maurizio Cellura

02.00 pm **Life cycle management of F-gas-free refrigeration technology: The case of F-gases-free frozen dessert equipments**
Francesca Cappellaro, Grazia Barberio, Paolo Masoni
ENEA, Italy

02.15 pm **How gas turbines running on alternative fuels could reduce the life cycle impact of electricity generation considering geographical specificities**
Alyson Surveyer[1], Pascal Lesage[1], Pierre-Olivier Pineau[3], Michael Johnson[2], Réjean Samson[1]
[1]CIRAIG, Canada; [2]Rolls-Royce Canada, Canada; [3]HEC Montréal, Canada

02.30 pm **Potential of microalgae for sustainable energy production**
Annika Weiss, Andreas Patyk, Liselotte Schebek
Karlsruhe Institute of Technology, Germany

02.45 pm **Proposals of the agricultural products cultivation system due to Blue Tower gasification combined-cycle systems to reduce CO2 emission**
Kiyoshi Dowaki, Kazuhiko Fukumoto, Motofumi Shimoguchi, Motoko Yamanari
Tokyo University of Science, Japan

03.00 pm **The importance of dynamic production patterns in assessing the environmental and economic benefits of distributed generation from wind turbines and photovoltaic panels**
Mourad Ben Amor[1], Pierre-Olivier Pineau[2], Caroline Gaudreault[3], Réjean Samson[1]
[1]CIRAIG-Ecole Polytechnique de Montreal, Canada; [2]CIRAIG-HEC Montreal, Canada; [3]NCASI, Canada

03.15 pm **LCM of green food production in Mediterranean cities: Environmental benefits associated to the energy savings in the use stage of Roof Top Greenhouse (RTG) systems. A case study in Barcelona (Catalonia, Spain)**
Ileana Ceron Palma[1], Esther Sanye[2], Jordi Oliver-Solà[1,2], Joan Rieradevall[1], Juan Ignacio Montero[3]
[1]Universitat Autònoma de Barcelona, Spain; [2]Inedit Innovació SL, Spain; [3]IRTA, Spain

03.30 pm **Are catch crops sustainable for biogas production?**
Deborah Scharfy, Frank Hayer, Gérard Gaillard, Sören Honegger, Gregor Albisser Vögeli
Agroscope Reckenholz Tänikon (ART), Switzerland

03.45 pm **Life cylce assessment for bioethanol production from cassava in Colombia**
Jaime Botero[2], Carlos Naranjo[1], Hader Castaño[2]
[1]GAIA Servicios Ambientales S.A.S., Colombia; [2]Politécnico Jaime Isaza Cadavid, Colombia; [3]Clayuca - CIAT, Colombia

Waste: LCM in the Waste Sector

➔ Location: Room ❸ ➔ Chairs: Shinichiro Nakamura, Juha K. Kaila

02.00 pm **Policy instruments for a more sustainable waste management**
Maria H Ljunggren Söderman[1,5], Anna Björklund[2], Ola Norrman Eriksson[3], Tomas Forsfält[4], Åsa Stenmarck[5], Jan-Olov Sunwqvist[5]
[1]Chalmers University of Technology, Sweden; [2]Royal Institute of Technology, Sweden; [3]University of Gävle, Sweden; [4]National Institute of Economic Research, Sweden; [5]IVL Swedish Environmental Research Institute, Sweden

02.15 pm **Life cycle assessment aspects of reuse products**
Andreas Pertl, Gudrun Obersteiner, Stefan Salhofer
University of Natural Resources and Life Sciences, Austria

02.30 pm **LCA: A decision-making tool for recycling processes in textile industry**
Sandrine Pesnel[1], Anne Perwuelz[1,2]
[1]ENSAIT, France; [2]Université Lille Nord de France, France

02.45 pm **Biological recycling of bio-waste and compost utilization from a life cycle perspective**
Francesco Razza[1], Sandra Zaccheo[1], Beatrice Cavanna[2], Francesco Degli Innocenti[1]
[1]Novamont, Italy; [2]University of Tuscia, Italy

03.00 pm **Life cycle assessment of food waste management: A conceptual plan analysis**
Slawomir W Hermanowicz[1], Marc Francois Muller[1,2], Domenec Jolis[3], Natalie Sierra[3]
[1]University of California, USA; [2]Swiss Federal Institute of Technology (EPFL), Switzerland; [3]San Francisco Public Utilities Commission, USA

03.15 pm **Life cycle management for assessing systems of urban water management: Case studies and methodological gaps**
Christian Remy, Boris Lesjean
Berlin Centre of Competence for Water, Germany

03.30 pm **LCA in wastewater treatment - applicability and limitations for constructed wetland systems: Using vertical Reed Bed Filters**
Eva Risch, Catherine Boutin, Philippe Roux, Sylvie Gillot, Alain Héduit
Cemagref, France

03.45 pm **A comparative life cycle assessment of a wastewater treatment technology considering two inflow scales**
Leonor Patricia Güereca Hernández[1], Adba Musharrafie[2], Edgar Martínez[2], Alejandro Padilla[1], Juan Manuel Morgan Sagastume[1], Noyola Robles Adalberto[1]
[1]Universidad Nacional Autonoma de Mexico, Mexico; [2]Tecnológico de Monterrey, Mexico

➔ Schedule

Wednesday, August 31, 2011
🕐 04.20 pm – 05.30 pm

Closing Plenary Session

➔ Location: Room ❶ ➔ Chairs: Matthias Finkbeiner, Stephan Krinke

04.20 pm **Retailers as defacto regulators: The Sustainability Consortium launches in Europe**
Bonnie Nixon
Executive Director for The Sustainability Consortium, USA

04.50 pm **Closing Remarks LCM 2011**
Matthias Finkbeiner
Chair LCM 2011

05.10 pm **Invitation to LCM 2013**
Emma Rex, Anne-Marie Tillman, Ellen Riise
Chairs LCM 2013

➔ Poster Session

Wednesday, August 31, 2011
12.30 pm – 02.00 pm

Location: Poster and Exhibition Room, Ground Floor

1 Assessment of biogas production scenarios from grass silage and manure in Estonia through spatial and life cycle energy analysis
Sander Jahilo, Antti Roose
Tartu University, Estonia

2 Close to process changes in textile finishing industry - a key to LCM for SMEs
Jutta Hildenbrand[1], Joachim M. Marzinkowski[2]
[1]Chalmers University of Technology, Sweden; [2]Bergische Universitaet Wuppertal, Germany

3 LCA on bio-H2 fuel and/or bio-electricity production system in Thailand and Malaysia
Motoko Yamanari, Kenichi Adachi, Kiyoshi Dowaki
Tokyo University of Science, Japan

4 Production of renewable liquid fuels through hydrotreatment and transesterification: LCA comparison and sustainability aspects
Oscar Casas, Edgar Castillo, Jaime Torres, Martinez Aldemar
Ecopetrol S.A. Instituto Colombiano del Petróleo , Colombia

5 Life cycle assessment of biodiesel production from microalgae oil: effect of algae species and cultivation system
Javier Dufour[1,2], Jovita Moreno[1], Rosalía Rodríguez[1]
[1]Universidad Rey Juan Carlos, Spain; [2]IMDEA Energy Institute, Spain

6 Environmental profile and sustainability of hydrogen production technologies: The PHISICO2 Program
Javier Dufour[1,2], David Serrano[1,2], Jose Luis Galvez[3], Graciano Martínez[3]
[1]IMDEA Energy Institute, Spain; [2]Universidad Rey Juan Carlos, Spain; [3]National Institute of Aerospace Technology, Spain

7 Life cycle assessment of biogas plant from solid waste in Marianao, Cuba.
Ronaldo Santos
Universidad Central Marta Abreu de Las Villas, Cuba

8 Modeling the inventory of hydropower plants
Vincent Moreau[1], Gontran Bage[2], Denis Marcotte[3], Rejean Samson[1]
[1]CIRAIG, Canada; [2]LVM Dessau, Canada; [3]Ecole Polytechnique Montreal, Canada

9 **RECOMBIO: Life cycle assessment of solid recovered fuels combined with biomass**
Cristina de la Rua, Simone Manfredi Manfredi
JRC, Italy

10 **LCA characterization of freshwater use on human health and through compensation**
Anne-Marie Boulay, Cecile Bulle, Louise Deschênes, Manuele Margni
CIRAIG, Canada

11 **LCA implementation in firms EMS trough modular PLC descriptions**
Carlo Brondi[1], Emanuele Carpanzano[1], Andrea Chiodi[2]
[1]Institute for Industrial Technologies and Automation – National Research Council, Italy; [2]Synesis Consortium, Italy

12 **LCIA of agricultural water use: implications for sustainable regional water management**
Danielle Tendall[1,2], Ruth Freiermuth Knuchel[1], Stephan Pfister[2], Gérard Gaillard[1], Stefanie Hellweg[2]
[1]Agroscope Reckenholz-Tänikon, Switzerland; [2]ETHZ, Switzerland

13 **Methods addressing water use in LCA: review and recommendations**
Anna Kounina[1], Manuele Margni[2], Annette Koehler[3], Emmanuelle Aoustin[4], Sebastien Humbert[1]
[1]Quantis, Switzerland; [2]CIRAIG, Canada; [3]ETH, Switzerland; [4]Véolia, France

14 **Towards comprehensive inventory data for water footprinting**
Samuel Vionnet[1], Alicia Offutt[1], Lindsay Lessard[1], Anna Kounina[1,2], Manuele Margni[1], Yves Loerincik[1], Caroline Coquerel[1], Damien Friot[1], Sebastien Humbert[1]
[1]Quantis, Switzerland; [2]Swiss Federal Institute of Technology, Switzerland

15 **The importance of considering loss rates in life cycle assessment: An example of wine bottle closure systems**
Elisa Tatti[1], Anna Kounina[1,2], Richard Pfister[3], Amanda Pike[1], Jean-Francois Ménard[1,4], Yves Loerincik[1], Sebastien Humbert[1]
[1]Quantis, Switzerland; [2]Swiss Federal Institute of Technology, Switzerland; [3]Ing. Oenologist, Switzerland; [4]CIRAIG, Canada

16 **Setting up a relevant methodology and format for monitoring and communicating to the consumer the environmental impacts of water usage**
Jean-Pierre Maugendre[1], Capucine Journet[1], Hugues Haeffner[1], Philippe Osset[2], Jad Zoghaïb[2]
[1]Lyonnaise des Eaux, France; [2]Solinnen, France

17 Simplifying life cycle assessment to the essentials: Sustainability screening for decision-making assistance for SME
Henriette Cornet, Gabriele Weber-Blaschke, Christel Lubenau
Technische Universität München, Germany

18 Water footprint of soybean production in Argentina
Alejandro Pablo Arena[1,2], Bárbara María Civit[1,2], Roxana Inés Piastrellini[1,2]
[1]UTN FRM, Argentina; [2]CONICET, Argentina

19 Enhanced resource efficiency with packaging steel
Evelyne Frauman[1], Norbert Hatscher[2]
[1]APEAL, Belgium; [2]Stahlinstitut VDEh im Stahl-Zentrum, Germany

20 Environmental evaluation by means of LCA of champagne cork stopper production
Jesus Rives[1], Ivan Fernandez-Rodriguez[2], Xavier Rieradevall[1], Joan Rieradevall[1]
[1]Universitat Autonoma de Barcelona, Spain; [2]Catalan Cork Institute, Spain

21 LCA of ready-to-serve lasagne bolognese packed in aluminium foil containers
Niels Jungbluth, Sybille Büsser
ESU-Services, Switzerland

22 Sustainable food packaging: A case study of chocolate products
Cristina Allione, Claudia De Giorgi, Beatrice Lerma, Luca Petruccelli
Politecnico di Torino, Italy

23 Taking-home goods from supermarket: The role of biodegradable carrier bags
Francesco Razza, Sandra Zaccheo, Francesco Degli Innocenti
Novamont, Italy

24 A semantic wiki approach for peer review and collaborative curation of LCA data
Chris B. Davis, Gerard P.J. Dijkema
Delft University of Technology, Netherlands

25 A socio-economic comparison of green and conventional products (TV-sets, washing machines, textile services, bookshelves and copy paper)

Ole Leinikka Dall[1], Henrik Grütner[1], Henrik Wenzel[1], Hennning Thomsen[2]

[1]University of Southern Denmark, Denmark; [2]Ramboll Management, Denmark

26 Application of LCA in the built environment

Guofei Liu, Rolf André Bohne, Per Jostein Hovde

Norwegian University of Science and Technology, Norway

27 Assessing environmental sustainability of different apple supply chains in Northern Italy

Alessandro Cerutti[1], Daniela Galizia[1], Sander Bruun[2], Gabriella Mellano[1], Gabriele Beccaro[1], Giancarlo Bounous[1]

[1]University of Turin, Italy; [2]University of Copenhagen, Denmark

28 Environmental performance of a photovoltaic solar electrooxidation (PSEO) process: Comparisson with a conventional biological treatment

Ruben Aldaco[1], Maria Margallo[1], Maria Jose Amores[2], Montse Meneses[2], Jorgelina Pasqualino[2], Francesc Castells[2], Angel Irabien[1]

[1]Cantabria University, Spain; [2]Rovira and Virgili University, Spain

29 Environment product declaration in ceramic materials as sustainability tool

Marisa Isabel Azevedo Almeida[1], Ana Cláudia Dias[2], Érica Castanheira[3], Luis Arroja[2]

[1]Centro Tecnológico da Cerâmica e do Vidro, Portugal; [2]Universidade de Aveiro, Portugal; [3]Universidade de Coimbra, Portugal

30 Green or ecological roofs?

Beatriz Rivela, Irene Cuerda, Cesar Bedoya, Javier Neila

Technical University of Madrid, Spain

31 How to apply the life cycle thinking in the construction sector at local policy level: a survey from the European F.R.E.S.H. project

Monia Niero[1], Anna Mazzi[1], Ninetta Chanioutou[2], Alessandro Manzardo[1], Antonio Scipioni[1]

[1]University of Padova, Italy; [2]Kainuun Etu Oy, Finland

32 Stakeholder consultation: What do decision makers in public policy and industry want to know regarding abiotic resource use?
Marisa Vieira[1], Per Storm[2], Mark Goedkoop[1]
[1]PRé Consultants, Netherlands; [2]Raw Materials Group, Sweden

33 The integration of LCM and ecodesign in a multinational electrical devices company: Return on experience (2000-2010) with a managerial approach.
Christophe Abrassart, Frederic Rabier
Ecole Polytechnique de Montréal, Canada

34 Five companies and type I ecolabelling
Susan Alsing, Jeppe Frydendal
Ecolabelling Denmark, Denmark

35 Increased focus on ecolabelled cosmetics - or how to go from a 30€ to a 3€ moisturizer and be happy about it
Nina Rosenkilde Nielsen, Trine Thorup Andersen, Jeppe Frydendal
Ecolabelling Denmark, Denmark

36 Germanium wafers for high concentration photovoltaics: Exergetic resource consumption
Pilar Swart[1], Jo Dewulf[1], Herman Van Langenhove[1], Koen Moonens[1], Kristof Dessein[2], Carl Quaeyhaegens[2]
[1]University Ghent, Belgium; [2]Umicore, Belgium

37 Greening events: Waste reduction through the integration of life cycle management into event organisation at ESCi
Marta Anglada Roig, Sonia Bautista Ortiz, Pere Fullana
ESCI, Spain

38 Impacts of different drying process on the primary energy demand and global warming potential of maize
Amandine Bonnery[1], Aurélie Tailleur[1], Afsaneh Lellahi[1], Bertrand Carpentier[1], Régis Coudure[1], Gilles Espagnol[1], André Lebras[1], Jean-Paul Renoux[1], Damien Touraine[2]
[1]ARVALIS-Institut du Végétal, France; [2]MTE, France

39 LCM of green food production in Mediterranean cities: Environmental benefits associated to the distribution stage of Roof Top Greenhouse (RTG) systems. A case study in the city of Barcelona (Catalonia, Spain)

Esther Sanyé[1,2], Ileana Cerón[2], Jordi Oliver-Solà[1,2], Juan Ignacio Montero[3], Joan Rieradevall[2]

[1]Inèdit Innovació, Spain; [2]Universitat Autònoma de Barcelona, Spain; [3]SosteniPrA, Spain

40 Life Cycle Assessment approach for ArcelorMittal Steel in Krakow, Poland processes

Boguslaw Bieda

AGH-University of Science and Technology, Poland

41 Life Cycle Sustainability Assessment: an implementation to marble products

Cinzia Capitano[1], Marzia Traverso[2], Gianfranco Rizzo[1], Matthias Finkbeiner[2]

[1]University of Palermo, Italy; [2]Technische Universitaet Berlin, Germany

42 Quantitative life cycle sustainability assessment using monetization

Elisabeth van Overbeke, Simon Standaert, Bernard De Caevel

RDC Environment, Belgium

43 Resource management stability: Outlook on issues and analysis

Alexander Alexandrovich Voronov

ENGECON, Russian Federation

44 Comparative LCA of a digital invoice versus a paper invoice

Stéphane Le Pochat[1], Marie Gaborit[1], Françoise Berthoud[2], Théodore Mary[1]

[1]EVEA Evaluation et Accompagnement, France; [2]CNRS, France

45 Assessing the environmental profile of candles made from used cooking oil

Carla Caldeira[1], Camillo De Camillis[2], Pedro Serpa[1], Dulce Boavida[3], Filipe Duarte Santos[1]

[1]Lisbon University, Portugal; [2]University "G. d'Annunzio", Pescara, Italy; [3]National Laboratory of Energy and Geology, Portugal

46 Ecodesign Management certifiable standard: A proven instrument as a widespread driver of LCA in SMEs

Gorane Ibarra

Ihobe- Basque Government, Spain

47 **Exergoenvironmental analysis - A combination of exergy analysis and LCA to support the design for environment of energy conversion processes**

Jens Buchgeister, Udo Jeske, Ulf Richers
Karlsruhe Institute of Technology, German

48 **Decision for packaging waste management from a life cycle perspective. The FENIX project**

Ruben Aldaco[1], Maria Margallo[1], Alejandra Navarro[3], Alba Bala[2], Pere Fullana[2], Angel Irabien[1]
[1]Cantabria University, Spain; [2]Escola Superior de Comerç Internacional, Spain; [3]Universidad San Jorge, Spain

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