

THE 6TH INTERNATIONAL
CONFERENCE ON

Life Cycle Management Program



LCM
2013

25–28 August 2013
Gothenburg, Sweden



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A HILL (PAGE 16) DICK GILLBERG/GOTEBORG.COM (PAGE 36) EVA STÖÖP (PAGE 37) JENNIE CORNESKOG (PAGE 39)
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Welcome to LCM 2013	4
Sustainability is business and business is sustainability	6
Host of LCM 2013 – the Swedish Life Cycle Center	7
Organizing committee	8
Scientific and business committee	10
.....	
Program overview	12
Keynote speakers	15
Thematic lunch sessions	20
Additional meetings	22
Excursion	24
Sustainability considerations	25
Sponsors	26
Exhibition area	29
Social events	30
Conference venue	32
Conference venue – overview	33
Conference venue – menu	34
About Gothenburg	36
Practical information	40
.....	
Scientific program Monday, August 26	42
Posters Monday, August 26	60
Scientific program Tuesday, August 27	68
Posters Tuesday, August 27	92
Scientific program Wednesday, August 28	102
Posters Wednesday, August 28	120
.....	
Thank you	130
Contact	131



Welcome to LCM 2013

Life cycle management, LCM, is all about making entire production and consumption systems more sustainable in practice. It is an empowering concept that opens up new opportunities to influence these systems beyond organizational and national borders.

Many types of actors, consumers, as well as producers, policy makers and NGOs, have the potential to make a difference. And yet, none of them fully control the life cycle chain. This year's conference theme – Perspectives of managing life cycles – was chosen to shed light upon the many dimensions of life cycle management needed to achieve life cycle action in practice. This theme includes the importance of local versus global perspectives, roles and responsibilities for different actors and the relations between divergent theoretical and practical conceptions of sustainable value chains.

LCM 2013 is the 6th conference in a series which was started in 2001 in Copenhagen. Through highly successful events in Barcelona (2005), Zürich (2007), Cape Town (2009) and Berlin (2011), it is now established as one of the leading conferences on sustainability worldwide. This year's conference in Gothenburg is hosted by the Swedish Life Cycle Center CPM,

a cooperation in which industry, academia, research institutes and authorities work together on LCM.

The amount and quality of research and implementation of LCM worldwide is truly impressive. We have received more than 90 suggestions for sessions and well over 500 abstracts for contributions (representing 1100 authors from almost 50 countries). In spite of increasing the number of parallel sessions, it was a difficult task indeed to choose contributions. We especially want to thank the Scientific and business committee for their engagement and help in this process.

Like a Swedish “smorgardsbord”, you can look forward to an inspiring buffet of scientific and social events during the days to come. This will include 40 sessions with almost 200 oral presentations and some 150 posters as well as a range of exhibitions, seminars and time for social interaction.



In our aim to create a dynamic and creative atmosphere, we have experimented with different formats to boost interaction and inspiration. You will notice that some sessions differ from traditional ones and are held as workshops, round tables or panel debates. Also, do not miss the LCA highlight session where we try the “PechaKucha” format for speedy and focused snapshots of latest research.

By Wednesday evening, we hope that you all have collected not only new perspectives of life cycle management, but also a range of new ideas and partners for further collaboration.

On behalf of the local Organizing committee we warmly welcome you to LCM 2013.

EMMA REX

Chair of LCM 2013

ANNE-MARIE TILLMAN

Chair of Scientific and business committee LCM 2013



EMMA REX



ANNE-MARIE TILLMAN

Sustainability is business...

...and business is sustainability. The industry partners of the Swedish Life Cycle Center CPM (ABB, AkzoNobel, SCA, SKF, Vattenfall and Volvo Group) would like to welcome you all to the 6th International Conference on Life Cycle Management in Gothenburg, Sweden.

We all have different ways of integrating sustainability strategies in our companies. But we have one thing in common. We strive to think and act using a life cycle management approach.

Over the past decades, we industry partners of the Swedish Life Cycle Center have in each company built a very strong foundation for sustainability. We are often recognized as leaders in the sustainability arena, as demonstrated by e.g. positions on the Dow Jones Sustainability Index (DJSI). This result is strongly connected to the cooperation and open exchange of experiences among the partners in the Swedish Life Cycle Center.

However, if we are to maintain our leadership positions and take advantage of business growth opportunities, a new approach to sustainability has to be realized in society. This new approach is focused on getting more value from fewer resources. Focusing on more effective use of scarce natural resources will contribute to cost savings and will generate revenue growth for us and our business partners across the entire value chain. And most important, the only way to achieve this goal is to increase the cooperation and understanding of what a sustainable development means for all the actors along the life cycle chain of our products.

So for us, to follow up and work with all our partners from cradle to grave is essential. If one link in the chain is lagging, we will all be lagging in our work to be fit for the future.

By doing more with less, sustainability value will be fundamentally connected to business value. We are making sustainability profitable by tailoring solutions to our customers' needs today and by proofing our supply chains for the future.

So, sustainability is business and business is sustainability.

KLAS HALLBERG

Manager Sustainable Development AkzoNobel,
Co-chair of LCM 2013



KLAS HALLBERG

Host of LCM 2013

The Swedish Life Cycle Center (former CPM) is a center of excellence for the advance of life cycle thinking in industry and other parts of society. The Swedish Life Cycle Center is working with research, implementation, communication and exchange of experience on life cycle management.

The mission is to improve the environmental performance of products and services, as a natural part of sustainable development.

The work within the Swedish Life Cycle Center is characterized by close and continuous interaction between academia, applied research institutes, industry and authorities. Our partners are industries and research groups with profound commitment to sustainable development and life cycle thinking.

Current partners are Chalmers University of Technology (host of the center), KTH Royal Institute of Technology, Swedish Environmental Protection Agency, ABB, AkzoNobel, SCA, SKF, Vattenfall, Volvo Group, IVL Swedish Environmental Research Institute and SP Technical Research Institute of Sweden.

www.lifecyclecenter.se

THE SWEDISH
LIFE CYCLE CENTER
aims for credible &
applied life cycle
thinking globally

the Swedish Life Cycle Center



Organizing committee

The organizational arrangements of LCM 2013 have been managed through a local Organizing committee, which has included representatives from the Swedish Life Cycle Center CPM. These representatives have been of high value for their scientific and business expertise as well as their practical experience. We are most grateful to the organizations providing these experts.

Recessed:

HENRIKKE BAUMANN

Associate professor Environmental Systems Analysis, Chalmers University of Technology

Standing from left:

ANNE-MARIE TILLMAN

Professor Environmental Systems Analysis, Chalmers University of Technology
(Chair of Scientific and business committee LCM 2013)

ANNIKA BURSTRÖM

Project manager the Swedish Life Cycle Center

ELLEN RIISE

Senior scientist SCA Hygiene Products

ULF SONESSON

Research manager SIK The Swedish Institute for Food and Biotechnology

MALVINA HAGBJÖRK

Project assistant, GMV Centre for Environment and Sustainability

TOMAS RYDBERG

Senior researcher IVL Swedish Environmental Research Institute

Sitting from left:

JOHAN WIDHEDEN

Senior sustainability expert AkzoNobel

EMMA REX

Director the Swedish Life Cycle Center
(Chair of LCM 2013)

SARA PALANDER

Deputy director the Swedish Life Cycle Center

CHALMERS

the Swedish Life Cycle Center





Organizing committee LCM 2013.

Scientific and business committee

Successful life cycle management is a collaborative effort across disciplines and sectorial borders, and so is the organization of a LCM conference. We want to express our true gratitude to our Scientific and business committee, with active representation from universities, governmental organizations, institutes, non-governmental organizations and business alike. Their commitment and expert knowledge have been invaluable in the set-up and execution of this conference.

GEORGE AFRANE University of Ghana

EVA AHLNER Swedish EPA

HENRIKKE BAUMANN Chalmers University of Technology

NIKI BEY Technical University of Denmark

RAUL CARLSON Viktoria Institute

RUBÉN CARNERERO Ingurumenaren Kideak Ingeniería S.L.

ALEJANDRO CHACÓN Ecodiseno.cl

ANDREAS CIROTH GreenDelta

PIERRE CONRATH EDANA

MARY ANN CURRAN BAMAC Ltd.

LAURA CUTAIA ENEA

JAMES FAVA PE International

CHRISTER FORSGREN Stena Recycling International

JEPPE FRYDENDAL Ecolabelling Denmark

YASUHIRO FUKUSHIMA National Cheng Kung University

MICHELE GALATOLA European Commission, Environment

HANS J. GARVENS LCA Consultant and Review

MARK GOEDKOOP PRé Consultants BV

JEROEN GUINÉE Leiden University

KLAS HALLBERG AkzoNobel

PER HANARP Volvo Group

OLE JØRGEN HANSSEN Ostfold Research

STEFAN HENNINGSSON WWF International

CHRISTOPH HERRMANN TU Braunschweig

BJÖRN JOHANSSON Chalmers University of Technology

MIEKE KLEIN ifu Institut fuer Umweltinformatik Hamburg GmbH

ERIKA KLOOW Tetra Pak

BEATRICE KOGG Lund University

STEPHAN KRINKE Volkswagen AG

MATTIAS LINDAHL Linköping University

JAN PAUL LINDNER Fraunhofer IBP

MARIA LJUNGGREN SÖDERMAN Chalmers University of Technology

BIRGER LÖFGREN SKF



BJÖRN-ERIK LÖNN Nordic Ecolabelling Board

MAHESH MANI University of Maryland

SARAH MCLAREN Massey University

PAVEL MISIGA European Commission, Environment

ÅSA MOBERG KTH Royal Institute of Technology

SVERKER MOLANDER Chalmers University
of Technology

CLEMENTINE O'CONNOR BIO Intelligence Service

ISABEL ORDOÑEZ Chalmers University of Technology

SARA PALANDER The Swedish Life Cycle Center CPM

ULRIKA PALME Chalmers University of technology

MARTIN PATEL Utrecht University

CLAUDIA PEÑA Chilean Network of LCA /
University of Concepción

JIM PETRIE University of Sydney

PHILIPP PREISS Universität Stuttgart

MARTINA PROX ifu Institut fuer Umweltinformatik
Hamburg GmbH

LIAZZAT RABBIOSI United Nations Environment
Programme

ANNELI RAFIQ GEDnet

ELLEN RIISE SCA Hygiene Products AB

TOMAS RYDBERG IVL Swedish Environmental
Research Institute

PETER SALING BASF SE

BJÖRN SANDÉN Chalmers University of Technology

CHRISTINA SCANDELIUS Brunel Business School

MICHAEL SCHARPF Holcim Technology Ltd

ANDREAS SCHIFFLEITNER iPoint-systems/KERP

ULF SONESSON SIK The Swedish Institute for Food
and Biotechnology

GUIDO SONNEMANN University of Bordeaux

MAX SONNEN Ecomatters B.V.

BENGT STEEN Chalmers University of Technology

ANDERS HAMMER STRØMMAN Norwegian University
of Science and Technology

NYDIA SUPPEN Center for LCA and Sustainable Design

LENNART SWANSTRÖM ABB AB Corporate Research

ANNE-MARIE TILLMAN Chalmers University of Technology
(Chair of Scientific and business committee LCM 2013)

ANDREAS UIHLEIN SCA Hygiene Products AB

SONIA VALDIVIA United Nations Environment Programme

IAN VÁZQUEZ-ROWE CRP Henri Tudor

BRUCE VIGON Society of Environmental Toxicology
and Chemistry

HOLGER WALLBAUM Chalmers University of Technology

JOHAN WIDHEDEN AkzoNobel

STEVEN B YOUNG University of Waterloo

FRIEDERIKE ZIEGLER SIK The Swedish Institute for
Food and Biotechnology

KARIN ÖSTERGREN SIK The Swedish Institute for
Food and Biotechnology

Program overview

SUNDAY, AUGUST 25

06.00 pm – 09.00 pm GET TOGETHER BBQ

MONDAY, AUGUST 26

	DROTTNING 1	DROTTNING 2	BREV 1	BREV 2	BREV 3
08.30 am – 09.00 am	Doors open				
09.00 am – 10.20 am	Opening ceremony				
10.20 am – 10.50 am	COFFEE BREAK AND POSTER SESSION				
10.50 am – 12.00 pm	Opening ceremony continues				
12.00 pm – 01.30 pm	LUNCH AND POSTER SESSION				
12.20 pm – 01.15 pm	THEMATIC LUNCH SESSION				
01.30 pm – 03.00 pm	Business strategy and LCM	Does research matter? – The role of LCA and LCM tools in public policy-making	Biodiversity and ecosystem services in LCM – Methods and values: Workshop		LCA critical review
03.00 pm – 03.30 pm	COFFEE BREAK AND POSTER SESSION				
03.30 pm – 05.00 pm	The role of communication in LCM	Application of life cycle approach in environmental policy	Chemical assessment	Preparing for right prices	LCA highlights: PechaKucha
06.30 pm – 08.00 pm	WELCOME RECEPTION				



TUESDAY, AUGUST 27

	DROTTNING 1	DROTTNING 2	BREV 1	BREV 2	BREV 3
08.30 am – 10.00 am	Exploring challenges and opportunities of LCM and LCA – Industry cases	Current developments in life cycle based labeling	Ecodesign		Metrics behind the management of supply chains
10.00 am – 10.30 am	COFFEE BREAK AND POSTER SESSION				
10.30 am – 12.00 pm	Roles and responsibilities in building and construction	Current developments in life cycle based declarations	Management of green product portfolios: Panel		Databases and capacity building
12.00 pm – 01.30 pm	LUNCH AND POSTER SESSION				
12.20 pm – 01.15 pm	THEMATIC LUNCH SESSION				
01.30 pm – 03.00 pm	Sustainable product chains – The role and responsibilities of retailers	Innovation and product development	Current developments in life cycle based labeling and declarations: Round table		Governance of critical raw materials
03.00 pm – 03.30 pm	COFFEE BREAK AND POSTER SESSION				
03.30 pm – 05.00 pm	Sustainability data exchange	Innovation and product development: Interactive	Trade associations – Drivers for LCM?	Roles and responsibilities in the mobility sector	Management of natural resources – Abiotic
06.30 pm – 01.00 am	CONFERENCE DINNER				

Program overview cont.

WEDNESDAY, AUGUST 28

	DROTTNING 1	DROTTNING 2	BREV 1	BREV 2	BREV 3
08.30 am – 10.00 am	Broadening the scope of LCA – LCSA	End of life management	LCM and decision making – What we have learnt		Management of natural resources – Biotic
10.00 am – 10.30 am	COFFEE BREAK AND POSTER SESSION				
10.30 am – 12.00 pm	Broadening the scope of life cycle approaches	Sustainable production 1	Exploring challenges and opportunities of LCM and LCA for the industry: Panel		Food waste in a value chain perspective 1
12.00 pm – 01.30 pm	LUNCH AND POSTER SESSION				
12.20 pm – 01.15 pm	THEMATIC LUNCH SESSION				
01.30 pm – 02.30 pm	Management of seafood and fisheries	Sustainable production 2	Exploring challenges and opportunities of LCM and LCA for the industry: Round table		Food waste in a value chain perspective 2
02.45 pm – 03.45 pm	Closing ceremony				
03.45 pm – 04.15 pm	FAREWELL COFFEE				

Keynote speakers



The Organizing committee is honored to introduce you to the following keynote speakers who will share their different perspectives on managing life cycles.



PHILIP WRAMSBY *Moderator of opening ceremony*

Being both an experienced ceremony leader and a professional in supply chain management, Philip Wrambsby has a suitable background to guide us through the opening ceremony. Philip has a MSc in Industrial Engineering and Management with a major focus in Supply Chain Design Management from Chalmers University of Technology and a BSc in Business Economics and Administration from Gothenburg School of Economics and Commercial Law. For the last seven years he has worked for the management consultancy boutique Montell & Partners where he has focused on issues concerning corporate finance, strategy and organization. Philip has been project leader in supply chain related projects including footprint analysis.



KARIN MARKIDES *President and CEO of Chalmers University of Technology*

Chalmers for a sustainable future

Karin Markides, President and CEO of Chalmers University of Technology, is proud to welcome you all to the LCM 2013 conference. Sustainable production and consumption systems are common goals of Chalmers and the LCM conference series, with “Chalmers for a sustainable future” as the main vision permeating both education and research at the university.

Karin Markides has served as President and CEO since August 2006 and she is also a professor of Analytical Chemistry. During her leadership Chalmers has developed a role and responsibility in the global society. This is demonstrated by Chalmers being members in several global organizations. CESAER, an association of the leading European Universities of Technology cooperating on policy issues, UNITECH an international exchange program with focus on leadership, performed between academia and industry and AGS – Alliance for Global Sustainability. Between 2004 and 2006, Karin Markides worked as Deputy Director General at VINNOVA, Sweden’s Innovation Agency.

Keynote speakers cont.



ANDRÉ REICHEL *Senior research fellow at European Center for Sustainability Research*

Sustainability beyond growth

The “post-growth economy” is more than just a potential future: it is a new economic normality with serious implications for both policy-making and business strategies. In his speech, André Reichel will elaborate upon this future state, and present ideas and findings from his own research in the field.

André Reichel is a senior research fellow at the European Center for Sustainability Research, Zeppelin Universität in Germany and Visiting Lecturer for Ecological Economics at the Environmental Change Institute, University of Oxford. His research focuses on the implications of a degrowth society for business with a special emphasis on metrics, business models and strategies. André got his PhD in economics and social sciences from the Universität Stuttgart. From 2008 until 2011 he was heading the research cluster on “sustainability in manufacturing” at the Graduate School for advanced Manufacturing Engineering.



EMMA IHRE *Head of Sustainable Business at the Swedish Ministry of Finance*

Implementing sustainability into governance of state-owned enterprises

Emma Ihre is the person responsible for integrating sustainability into the governance of state-owned companies in Sweden. She will address how the Swedish government influences sustainability strategies through responsible ownership in enterprises completely or partly owned by the State.

Emma Ihre is head of Sustainable Business at the Swedish Ministry of Finance. Emma has a background as a financial analyst and holds a degree in economics from Stockholm University. For 15 years, Emma has built up experience working as an advisor to investors on issues regarding sustainability and ethics. She has also been on the board of Amnesty Business Group and is a founding member of Economic Shift – a non-profit foundation that helps companies develop new business models based on changing consumer preferences. Earlier this year Emma was appointed (by the Swedish environmental journal “MiljöAktuellt”) as one of the third most powerful person within the field of environment.



ANDRÉ VENEMAN *Director of HSE & Sustainability, AkzoNobel*

More value from fewer resources

André Veneman will present how a focus on the full value chain can help large corporations drive business and at the same time gain both resource and engagement benefits. He will outline AkzoNobel's approach to sustainability, an approach that is "customer-led" and aimed at delivering more value from fewer resources.

André Veneman graduated as a Medical Doctor in 1983. André has previously worked for UNHCR as a Medical Coordinator in Emergency and Refugee situations and at Shell International as an adviser in Occupational Health Management and Preventive Health Programs. He joined AkzoNobel 1999 and in 2003 he was appointed as Corporate Director Sustainability & Health Safety and Environment. André Veneman is also chairman of the Supervisory Board of Initiative Sustainable Trade and Stichting Milieu Keur / European Eco label. He also represents AkzoNobel in international organizations such as World Business Council for Sustainable Development and UN Global Compact.



ANNIKA AXELSSON *Founder of Dem Collective*

By Dem corporate with ethics included

Annika Axelsson is an entrepreneur with sustainability as foundation and driving force for the business. She will speak about how business and civil society can work together for sustainable development, and how corporations in fact can be a part of the solution: by acting as a platform and tool for change towards a better world.

Annika Axelsson is one of the founders of Dem Collective, a textile company where fair wages, good working conditions and ecological sustainability are the order of the day. Putting words into action is extremely important for Dem Collective as is overcoming cultural barriers and work together. Annika Axelsson has field experience from Africa, Asia and Europe and was a member of the CSR Board of Region Västra Götaland (VGR). She was awarded the Social Capitalist Award and has received the Folksam Environment Prize and Sweden's Green Party's Congress Prize.

Keynote speakers cont.



SUSANNE FREIDBERG *Professor and Chair of Geography at Dartmouth College*

The renaissance of life cycle assessment: a social scientist's perspective

Susanne Freidberg is an economic and cultural geographer whose current research focuses on the use of life cycle approaches to assess the footprint of food products. In her speech, she will present findings from a multi-year study of LCA's internal culture, debates and rising real-world influence.

Susanne Freidberg is Professor and Chair of Geography at Dartmouth College. After studying anthropology at Yale University she received a PhD in geography from the University of California, Berkeley. She has since traveled to five continents to study the expertise behind international fresh food supply chains. She is the author of two books, "Fresh: A Perishable History", and "French Beans and Food Scares: Culture and Commerce in an Anxious Age".



ROB JENKINSON *Director of Corporate Sustainability at SKF*

Beyond zero – bringing life cycle management to life in SKF

Rob Jenkinson firmly believes that an integrated life cycle approach will bring SKF and other firms sustained economic and environmental value. He will present how SKF integrates life cycle management in their business and how it has influenced the work with their BeyondZero portfolio. He will also define some of SKF's key challenges and steps going forward.

Rob Jenkinson has been the Director of Corporate Sustainability at SKF since 2010. He began his career with SKF in 1989 and has held a variety of engineering and management roles in a range of countries, including the UK, China, USA and Japan. Rob has been very much involved in the development of SKF's BeyondZero strategy and the Groups overall approach towards integration of sustainability. He holds a Masters Degree in Energy, Environment technology and Economics and an Honours Degree in Mechanical Engineering.



TERESA FOGELBERG *GRI's Deputy Chief Executive*

Sustainability reporting as a key in LCM – the role of GRI

GRI has just launched G4, the fourth generation of sustainability reporting guidelines, which focus on material impacts and supply chain disclosure. Teresa Fogelberg will speak about the role of policy and sustainability reporting in defining sustainability strategies for reporters.

Teresa Fogelberg is the Global Reporting Initiative Deputy Chief Executive. As such, she is in charge of GRI's strategic political relationships and engaged in strategic external relationships with businesses, governments, civil society and other stakeholders. She started her career as an anthropologist at Leiden University in the Netherlands. Teresa has long experience of development of organizations, including ILO, USAID, and Netherland's Ministry of Foreign Affairs. She spent eight years in West Africa, specializing in economic development, gender issues and famine-early warning systems.

Thematic lunch sessions

New for this year's conference is the thematic lunch sessions. During lunch time conference delegates have the opportunity to attend interesting seminars and discussions. Join on a first come first served basis. Maximum delegates 100, including lunch (the menu is presented on page 34).



TOWARDS GLOBAL LEADERSHIP IN RESOURCE EFFICIENCY

Hosted by: IVL Swedish Environmental Research Institute

When: Monday, August 26, 12.20 pm – 01.15 pm

Location: Brev 1 and 2

Resource efficiency is on top of the agenda in Europe. UNEP has established a Resource Panel. Obviously resource efficiency is a key concept in the global environmental agenda of today.

You are welcome to take part in a discussion relating to the history of resource efficiency, from Limits to growth, via the Energy crisis, Integrated Product Policy and Sustainable Consumption and Production, to current days. What will be the path forward? And what role will life cycle management play in the efforts to global resource efficiency and sharing?



MANAGEMENT OF GREEN PRODUCT PORTFOLIOS

Hosted by: SKF and WWF

When: Tuesday, August 27, 12.20 pm – 01.15 pm

Location: Brev 1 and 2

Following the panel discussion in the session on Management of green product portfolios, you are invited by SKF and WWF to join a thematic lunch session. Participants are divided in groups and placed at ten lunch tables. While enjoying the meal we follow-up and deepen the panel discussion, with support from a moderator at each table that is provided by the session hosts. Halfway through the lunch, a recent MSc study on the application of green portfolios is presented, to further stimulate thoughts and opinions. This is an opportunity to get deeper understanding of, and contribute to, a fast evolving area of life cycle management. Focus of the lunch



discussions will be on credibility of carbon claims, criteria for carbon accounting of portfolios and whether there is a need for international guidance or standards for carbon accounting of avoided emissions.

CHALMERS

CHALMERS AREAS OF ADVANCE – CROSS-BORDER RESEARCH AND OUTREACH

Hosted by: Chalmers University of Technology

When: Wednesday, August 28, 12.20 pm – 01.15 pm

Location: Brev 1 and 2

The eight Chalmers Areas of Advance span across our 17 departments and bring together the three components that make up the knowledge triangle: research, education and innovation. Through scientific excellence, the Areas of Advance give Chalmers a

clearer profile, greater visibility and new opportunities to focus on areas, where we can make a difference to major societal challenges.

Meet three of Chalmers Areas of Advance and listen to how they take on the challenges towards a sustainable future. Presented from the Transport Area of Advance is the interdisciplinary project SEVS (Safe Efficient Vehicle Solutions) where future transport solutions are analyzed using methods developed for solving wicked problems. The Production Area of Advance will introduce their work on how to increase a researcher's awareness on sustainability and how to measure sustainability effects. Highlighted from the Energy Area of Advance is the €150 million GoBiGas project where Chalmers collaborate with the industrial partner Göteborg Energi to commercialize high efficient and large scale biofuel production.

Additional meetings

In relation to the conference a number of additional meetings are organized by participating organizations. Please find the meetings below. For more information of each meeting see the conference webpage. Interested in participating some of the meetings, please contact specific organizer.

QUANTIS AND TECHNICAL UNIVERSITY OF DENMARK

*Using the USEtox™ model in life cycle assessment:
Practical walk through and case studies*

When: Sunday, August 25, 09.00 am – 05.00 pm

Location: Post 5

The aim of this course, organized within the EU-funded TOX-TRAIN project, is to provide participants with a very practical introduction to USEtox™ (www.usetox.org) and its use in life cycle assessment.

PE INTERNATIONAL

Best practice for data and software used in LCA

When: Sunday, August 25, 01.30 pm – 04.30 pm

Location: Post 6

High quality LCA software and data is key to efficient modeling and robust decision making. GaBi Software will be on hand to discuss the current state and future vision of LCA software and data developed by PE International.

PE INTERNATIONAL

Capturing complexity in LCA: Modeling global supply chains for electronic products and components

When: Sunday, August 25, 01.30 pm – 04.30 pm

Location: Post 3

This is a hands-on workshop regarding modeling of electronics and electronic components. The focus will be on how to use parameterized plans and other electronics specific data to quickly model this critical part of many modern products.

UNEP/SETAC LIFE CYCLE INITIATIVE

Stakeholder workshop on guidance on environmental indicators

When: Sunday, August 25, 03.30 pm – 06.00 pm

Location: Brev 3

This workshop is part of the flagship project on consensus LCIA indicators of the third phase of the UNEP/SETAC Life Cycle Initiative. The main objective of the project is to harmonize selected impact category indicators globally. The objective of the workshop is to discuss a preliminary working list of impact categories and themes.



UNEP/SETAC LIFE CYCLE INITIATIVE

Practical issues in life cycle sustainability assessment

When: Thursday, August 29, 09.00 am – 05.30 pm

Location: Lindholmspiren 5

Aim of the training session is to enhance the understanding and facilitate the use of UNEP/SETAC approach towards life cycle sustainability assessment in decision making processes and also exchange on LCSA experiences worldwide.

ECOINVENT

The ecoinvent v3 – Introduction, users' experience and discussion

When: Thursday, August 29, 09.00 am – 12.00 pm

Location: Drottning 3

The meeting will introduce the participants to the new ecoinvent v3 database. This database has been released on the 6th of May this year. The meeting intends to give users of the ecoinvent v3 database the possibility to raise questions and participate in an open discussion. The meeting will focus on specific modeling used in ecoinvent v3 which some users might find challenging to understand.

ECOINVENT

Workshop for potential data providers – Why and how to submit data

When: Thursday, August 29, 01.00 pm – 05.00 pm

Location: Drottning 3

Workshop for potential data providers is offered to anybody who is interested in submitting datasets to the ecoinvent database in the future. The participants will be informed on the procedure of data submission. They will have possibility to ask questions related to data submission. The workshop will mainly focus on working with the ecoEditor.

PRÉ

Meet PRé

When: Monday – Wednesday, August 26–28

Location: Post 5

Meet PRé and their partner network to get the latest information and developments around SimaPro. PRé are also available to discuss your sustainability challenges and you have the opportunity to meet with other clients and SimaPro users.



Excursion

During the conference an excursion to a metal scrap recycling facility will take part. For more information, see the conference webpage.

VISIT TO A METAL SCRAP RECYCLING FACILITY

Hosted by: Stena International Recycling

When: Wednesday, August 28, 04.15 pm – 06.15 pm

Location: Departure from Clarion Hotel Post main entry

Gain understanding of the end of life of products as well as what happens to spill from production of goods.



Sustainability considerations

Big events like an LCM conference will by necessity imply environmental and social impacts. In organizing LCM 2013 we have taken measures to both reduce negative impacts, and encourage good initiatives.

The conference location has been chosen to allow for environmentally sound means of transport. The venue is situated just next to the Central Station of Gothenburg, easily reached by train from international destinations. Within Gothenburg all events are located within a walking distance from the venue.

The venue Clarion Hotel Post has a strong commitment to running hotels in an environmentally sound manner. Reducing residual waste, using less energy, reducing water consumption, minimizing the use of chemicals and making sure transportation to and from the hotels is kept to a minimum are some of the areas for their efforts. A voluntary “CO2 tax” donated for each guest, used to conserve rainforests, is another example.

When it comes to food, you will find a bit less meat and some more vegetarian elements on your plates. And as far as possible the food is organic and locally produced.

Your delegate bags are produced by an entrepreneur from Gothenburg, who started up her own factories in Sri Lanka to ensure proper environmental and social conditions in production.

In the planning and execution of the conference we have engaged students from Chalmers Students for Sustainability – to allow them valuable work experiences and to be further inspired to take on sustainability challenges in the years to come.

Sponsors

The Organizing committee is honored to introduce you to the sponsors of the LCM 2013 and thank the following organizations for financial support and personal assistance.

SKF PLATINUM SPONSOR: SKF

SKF is a leading global supplier of bearings, seals, mechatronics, lubrication systems, and services which include technical support, maintenance and reliability services, engineering consulting and training. SKF is represented in more than 130 countries and has around 15 000 distributor locations worldwide. Annual sales in 2012 were SEK 64 575 million and the number of employees was 46 775.

For over ten years, SKF has built knowledge around environmental life cycle management. This knowledge has been used among other things to develop the SKF BeyondZero portfolio – including methods to quantify environmental benefits of avoided emissions for the Group's customers.

www.skf.com



PLATINUM SPONSOR: **AKZONOBEL**

AkzoNobel
Tomorrow's Answers Today

AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals headquartered in Amsterdam, the Netherlands, with operations in more than 80 countries and 55 000 employees around the world. AkzoNobel 2012 revenue was 15 390 M€.

AkzoNobel supplies industries and consumers worldwide with innovative and sustainable products and services. Activities are concentrated on two main end-user segments: Buildings & Infrastructure and Transportation. The extensive product portfolio includes many trusted, well-known and leading brands, including Dulux, Sikkens, Nordsjö, International and Eka. AkzoNobel is also sector leader in the Dow Jones Sustainability Index, underlining a strong focus on developing sustainable solutions for all customers.

www.akzonobel.com



GOLD SPONSOR:
PE INTERNATIONAL

PE International is the global leader in integrated product and enterprise sustainability performance with proven software solutions, sustainability databases and unparalleled consulting expertise. With more than 20 years of experience and 20 offices around the globe, PE International works with 1 500 clients including companies such as Bayer, Hewlett-Packard, Interface, Siemens, Unilever and Volkswagen.

www.pe-international.com



GOLD SPONSOR: PRÉ

Putting the metrics behind sustainability. Leading businesses work with PRé to integrate sustainability into their value chain, creating business value. By using PRé's services, our clients are empowered, and able to make informed decisions about developing sustainable products. The solutions

are specific to each organization: from developing the needed in-house capabilities, to creating the tools, metrics, and knowledge necessary to implement sustainable strategies. SimaPro helps clients to quantify environmental impacts across value chains, providing actionable data.

www.pre-sustainability.com



SILVER SPONSOR: SCA

SCA is a leading global hygiene and forest products company. The Group develops and produces leading global brands TENA and Tork, and regional brands, such as Lotus, Libresse, Tempo and Libero. SCA aims to deliver better, safer and environmentally sound solutions to its customers. Life cycle based innovations is our driving force for active participation in the Swedish Life Cycle Center CPM since 1996.

www.sca.com

Sponsors cont.



**SILVER SPONSOR:
SWEDISH ENVIRONMENTAL
PROTECTION AGENCY**

We are the public agency in Sweden that has an overview of conditions in the environment and progress in environmental policy. We also have the task of coordinating, monitoring and evaluating efforts, involving many agencies, to meet Sweden's environmental objectives. Life cycle thinking and life cycle assessments play a vital role in solving major environmental problems related to unsustainable consumption and production patterns.

www.swedishepa.se



**SILVER SPONSOR:
IFU HAMBURG**

Since 1992, ifu Hamburg has been creating software solutions for life cycle assessment and for efficient use of resources through optimization of production systems. Our software tools are used all over the world, helping companies to both reduce their environmental footprint and to increase their cost efficiency.

www.ifu.com



**BRONZE SPONSOR:
ECOMATTERS**

Ecomatters is a consultancy that focuses on sustainability and chemical safety. We support our clients with services, trainings and tools based on life cycle thinking, such as sustainability strategy development, sustainability assessment, environmental footprinting and LCI data management. Additionally we provide environmental risk assessments and toxicology services.

www.ecomatters.nl



**BRONZE SPONSOR:
VOLVO GROUP**

The Volvo Group is one of the world's leading manufacturers of trucks, buses, construction equipment and marine and industrial engines. The Volvo Group, which employs about 115 000 people, has production facilities in 19 countries and sells its products in more than 190 markets. In 2012 the Volvo Group's sales amounted to about SEK 304 billion.

www.volvogroup.com



Exhibition area

Take the opportunity to meet the LCM 2013 exhibitors during lunches and coffee breaks in the area called Winter Garden (Vinterträdgården).

- SKF
- AkzoNobel
- PE International
- PRé
- SCA
- IFU – Institut fuer Umweltinformatik Hamburg
- Ecoinvent
- Ecomatters
- Chalmers Areas of Advance (Energy, Production and Transport), Chalmers University of Technology
- Environmental Systems Analysis, Chalmers University of Technology
- LCM 2013 Packaging and Design Inspiration Corner
- The Swedish Life Cycle Center CPM
- GreenDelta
- Volkswagen
- Centre de Recherche Public Henri Tudor

LCM 2013 PACKAGING AND DESIGN INSPIRATION CORNER

The LCM 2013 Packaging and design inspiration corner is created to provide real examples of products that have used life cycle thinking to a significant extent in their development process. It shows that considering the different phases of a product's life leads not only to reduced environmental impact, but also to reduction in costs, edgy innovation and most importantly, to appealing products.

The exhibition consists of two sections, one displaying existing commercial examples and the other showing the best contest submissions received by the LCM 2013 Organizing committee for the design contests "Taking life cycle thinking home".

Social events

The LCM conference series is not only about the scientific program. It also gives the delegates a great opportunity to meet and discuss under less formal conditions. The Organizing committee hopes you will join us during the social events.

GET TOGETHER BBQ

When: August 25, 06.00 pm

Location: Nya Allén 11

Welcome to a sociable summer BBQ at Restaurant Trädgår'n ("the Garden"). Restaurant Trädgår'n is a popular meeting point on warm summer days and nights. We hope that you will get to experience Gothenburg's best summer costume while mingling with your fellow delegates.

The conference starts with a Get together BBQ att Trädgår'n "The Garden".



WELCOME RECEPTION IN THE CITY HALL

When: August 26, 06.30 pm

Location: Gustaf Adolf's torg

The City of Gothenburg has the pleasure to invite you to attend the Welcome reception at the City Hall, called Börsen ("the Exchange"). Börsen was originally a commodity and stock exchange where town authorities also gathered for formal festivities. It opened in 1849 and the City Council has conducted



The City of Gothenburg warmly welcome all delegates to the City Hall, called Börsen "The Exchange".



its meetings there since 1863. Centrally located at Gustaf Adolf's torg (square) just five minutes' walk from Clarion Hotel Post.

The Welcome Reception is free of charge however pre-registration is mandatory. This is included in the registration fee for delegates only if marked upon registration. The reception includes wine and cocktail snacks.

CONFERENCE DINNER AT KAJSKJUL 8

When: August 27, 06.30 pm boat trip from the venue, 07.30 pm dinner

Location: Packhusplatsen 11

By Paddan-tour boat you will arrive to Kajskjul 8. Kajskjul 8 is genuine and rustic venue in the middle of the harbor, in the middle of the city. Welcome to enjoy the terrace with a nice view of the harbor.

Kajskjul 8 was built in 1870 and was originally used as an old warehouse. With an enormous capacity

and a perfect position at the quayside it was used to store exotic spices imported from the foreign east and timber that was exported throughout the world. Nowadays the venue is filled with expectant guests.

A few seats are still available for the conference dinner on Tuesday for an additional cost of 500 SEK. If interested, please contact the information desk.



The conference dinner will take place in the old warehouse Kajskjul 8.

Conference venue

The conference venue is the newly built Clarion Hotel Post, in central Gothenburg. Clarion Hotel Post opened January 26, 2012.

The post office on Drottningtorget in Gothenburg is an impressive, much-appreciated public building. Designed by Ernst Torulf, it is a typical 1920s building in neo-classical style and has been designated an historical building by the Swedish State. The building has been developed into an efficient, modern hotel facility suited to contemporary requirements for logistics and functionality.

A new building containing 500 hotel rooms with a rooftop sun terrace and pool overlooking Gothenburg has been constructed next to the old post office, on the site of the old loading yard that faces Åkareplatsen and Odinsgatan. Half of the façade is covered with slate and the other half with copper – the same materials used in the original post office building.

CONTACT CLARION HOTEL POST

Drottningtorget 10, SE-411 03 Göteborg, Sverige

Phone: +46 (0) 31 61 90 00

Fax: +46 (0) 31 61 90 99

E-mail: cl.post@choice.se

www.clarionpost.com/english



*Clarion Hotel Post
welcome all delegates
to the conference.*

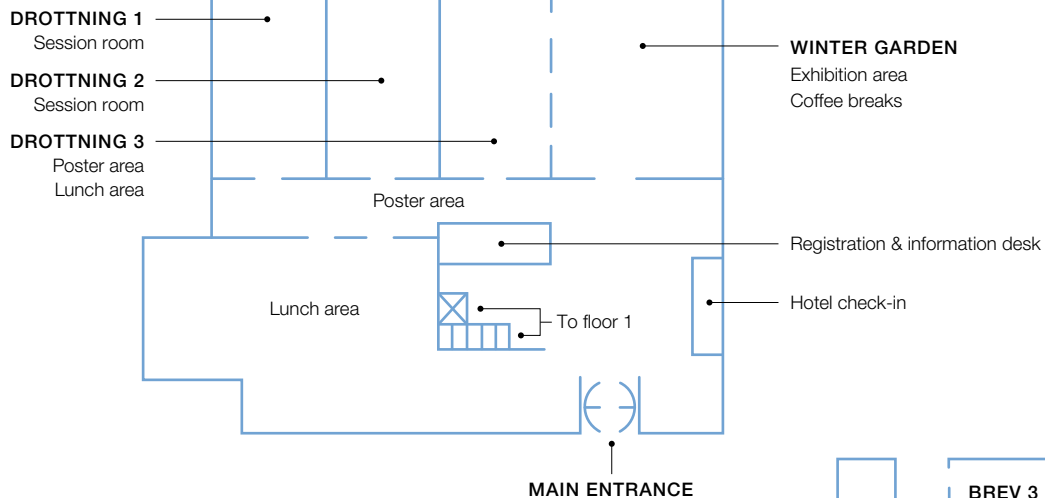


*The exhibitions will take
place in the Winter Garden
"Vinterträdgården".*

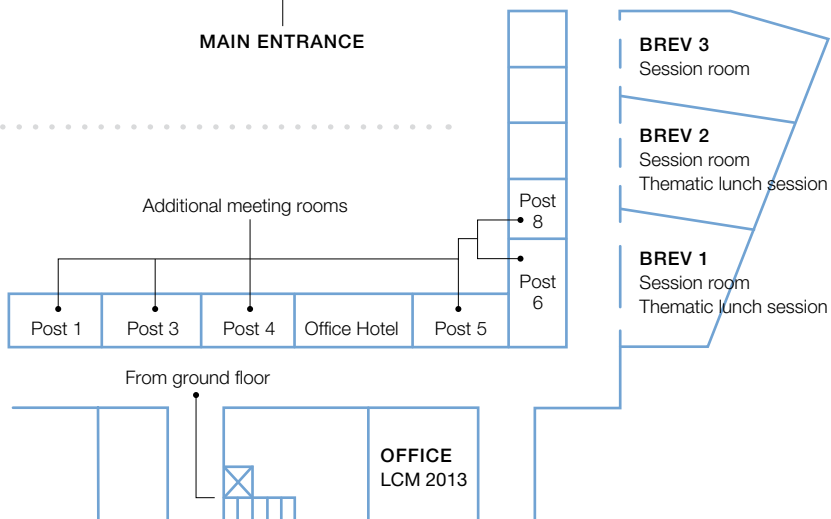
Conference venue – overview



GROUND FLOOR



FIRST FLOOR





Conference venue – menu

Clarion Hotel Post purchase their products freshly from mainly local ecological suppliers.

CONFERENCE MENU

Location: Lunch area

MONDAY, AUGUST 26

Pan seared pollock served with oyster mushrooms, pickled onions and a green peasauce.

Vegetarian alternative: Oven baked and grilled celeriac served with oyster mushrooms, pickled onions, carrot pure and a lemon vinaigrette.

TUESDAY, AUGUST 27

Chicken served alongside a ragu of seasonal vegetables and lemon and parsley sauce.

Vegetarian alternative: Oven baked point cabbage served with truffle infused cauliflower, a marinated assortment of fresh tomatoes topped with green pea foam.

WEDNESDAY, AUGUST 28

Creamy wild mushroom risotto with an assortment of mushrooms and Sveica hard cheese.

MENU THEMATIC LUNCH SESSIONS

Location: Brev 1 and 2

MONDAY, AUGUST 26

Pickled salmon served alongside potato salad, red radish, roasted onion and a mustard vinaigrette.

Vegetarian alternative: Mixed salad consisting of red lentils, baked Portobello mushrooms and a herb pesto.

TUESDAY, AUGUST 27

Chicken served with lemon marinated root vegetables and a watercress crème.

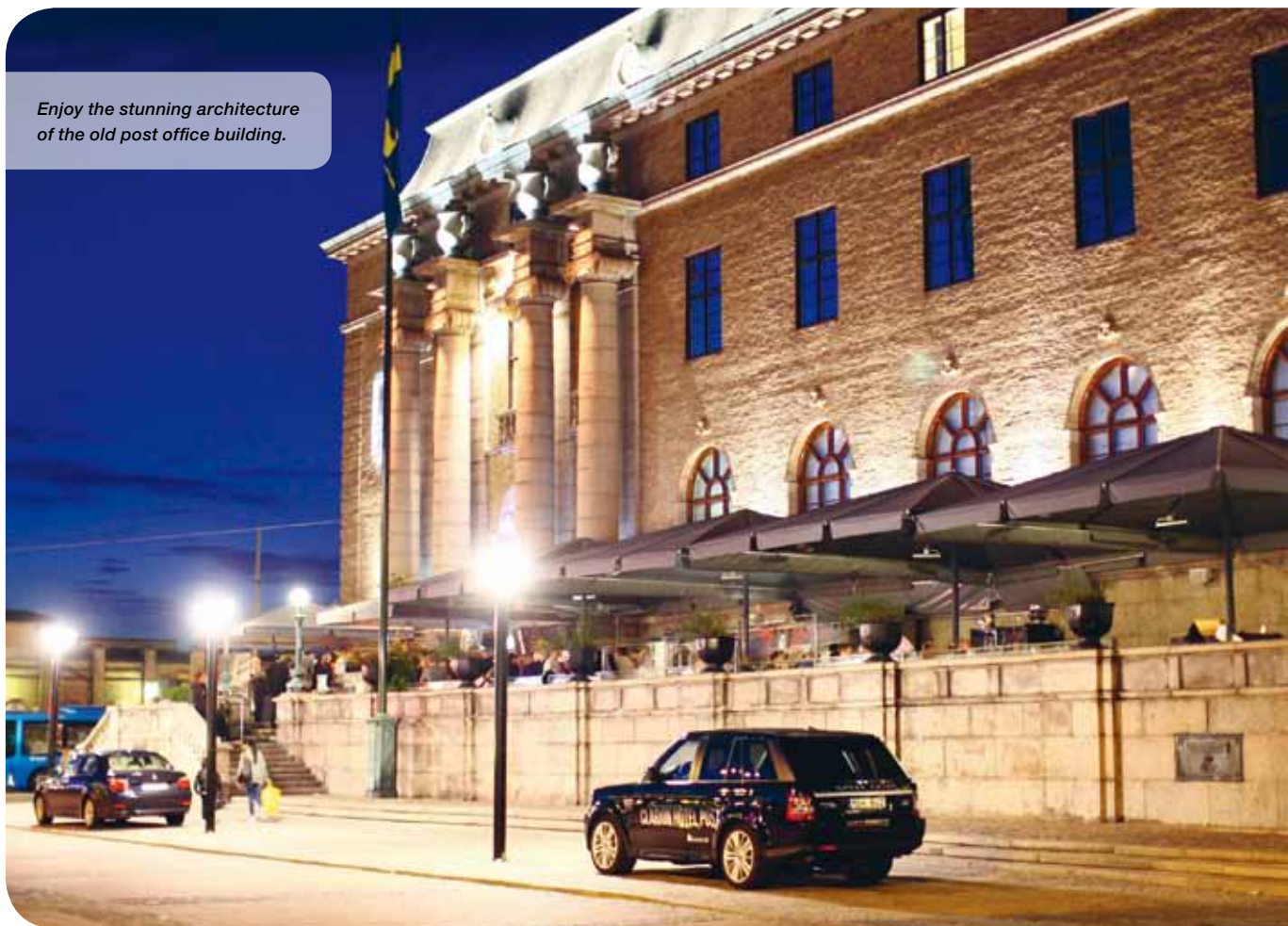
Vegetarian alternative: Chickpea beef served with lemon marinated root vegetables and a watercress crème.

WEDNESDAY, AUGUST 28

Mixed salad consisting of beets, apples, roasted nuts and a terrine of goat cheese.



*Enjoy the stunning architecture
of the old post office building.*



About Gothenburg

Gothenburg is located on the beautiful west coast of Sweden. Being the second largest city in Sweden, Gothenburg blends a distinct feeling of charm with the pulse of modern urban life.



The city was founded in 1621 on a Dutch model by king Gustav Adolf II and has since then undergone an exciting journey from being a shipping and industrial city to also becoming a creative hub for innovation and a centre for cultural events in Scandinavia. Not only does Gothenburg feature a compact city centre with virtually everything within walking distance, but also spectacular surroundings, closeness to both the forests and the sea with its stunning archipelago.

In the heart of the city you can find everything from fashionable boutiques and department stores, to picturesque markets selling crafts, souvenirs and antiques. You can choose from many attractions i.e. Liseberg Amusement Park, the Göteborg Opera House, Gothenburg Symphony Orchestra – Sweden's national orchestra, the Art Museum's fascinating collections, Universeum Science Centre, the Museum of World Culture and a wide repertoire of entertaining shows, sports, cultural events, fairs and exhibitions. There are also many beautiful parks scattered around the city.



Gothenburg is situated by the Kattegatt, on the west coast of Sweden.



About Gothenburg cont.

*The Paddan-tour boat ("Toad-boat")
will take you to the conference dinner.*





In the evening you can experience the city's buzzing nightlife or simply enjoy a gourmet meal at one of many superb restaurants of which five are Michelin star awarded. The main culinary attraction in Gothenburg is the local seafood; prawns, lobster and a wide selection of fish.

The Gothenburg archipelago is an extraordinary experience. Thousands of islands lie scattered along the west coast all the way up to Oslo, Norway. Find some of the many untouched spots, and explore the charming little fishing villages. With a public transport ticket you can take the tram to the ferries, in 20 minutes, for a trip to the southern archipelago.

Gothenburg has a long and successful tradition of trade and industry, and some of Scandinavia's best-known corporations such as Volvo, SKF, ESAB and Hasselblad have their origins and head offices here. A significant proportion of Sweden's exports and imports pass through Gothenburg's port, the largest in Scandinavia.

The welcoming attitude of the local people is well-known. Combined with the city's seaside location, great food and many cultural, entertainment and sporting events, everything is in place to make your visit to Gothenburg a pleasant experience.

www.goteborg.com/en/Do/Artiklar/Mobileapp

In the city center everything is within walking distance. For comfortable travelling you can take the tram.



Practical information

CONFERENCE REGISTRATION

The conference registration fee includes admission to all conference sessions, poster area and exhibition area. It also includes lunch and refreshments (Swedish “fika”) during breaks. Participants are also welcome to take part in the social events, the get together BBQ during Sunday, the welcome reception in the City Hall during Monday and the conference dinner on Tuesday evening. To take part in the social activities a pre-registration has been mandatory in the Conftool registration system.

A few seats are still available for the conference dinner on Tuesday for an additional cost of 500 SEK. If interested, please contact the information desk.

REGISTRATION/INFORMATION DESK IS OPEN

Sunday, August 25	12.00 pm – 08.00 pm
Monday, August 26	07.30 am – 06.30 pm
Tuesday, August 27	08.00 am – 06.30 pm
Wednesday, August 28	08.00 am – 04.30 pm

Phone number to the registration/information desk: +46 (0) 72 16 64 337 (available during registration/information desk opening hours)

EXHIBITION HALL IS OPEN

Monday, August 26	08.00 am – 06.00 pm
Tuesday, August 27	08.00 am – 06.00 pm
Wednesday, August 28	08.00 am – 04.30 pm

POSTER INFO

Posters will be changed every day at the conference venue and will be displayed during the same day as the associated session. Posters will be mounted and dismantled by the presenting author, according to time shown below. The presenting author is expected to attend the poster at coffee breaks and during lunch time.

Monday, August 26

07.00 am – 08.00 am	Poster setup
05.00 pm – 06.00 pm	Poster take down

Tuesday, August 27

07.00 am – 08.00 am	Poster setup
05.00 pm – 06.00 pm	Poster take down

Wednesday, August 28

07.00 am – 08.00 am	Poster setup
04.15 pm – 05.00 pm	Poster take down



ERRATA SHEET

If you do not find your presentation or meeting in the program book, please check the errata sheet in your delegate bag.

WIFI

The conference venue Clarion Hotel Post kindly provides all delegates with wireless Internet access throughout the conference.

Network name: Telia homerun

User name: lcm2013

Password: post2013

TWITTER

Twitter hashtag: #lcm2013

ADDITIONAL MEETING ROOMS

If you get ideas or gain contacts you immediately want to discuss further, do not hesitate to use our small meeting rooms specifically devoted to spontaneous meetings. The rooms can be booked free of charge at the information desk. (Max 2 hours per constellation).

LUGGAGE

Luggage can be taken care of by Clarion Hotel Post during Monday, August 26, and Wednesday, August 28.

PUBLIC TRANSPORT

In Gothenburg, almost everything is within walking distance. Gothenburg has a comprehensive public transport system. Tickets (one trip, one day or three days tickets) can be purchased at Pressbyrå or 7-Eleven.

www.vasttrafik.se/#!/en/travel-information/

TAXI

Taxi Göteborg, phone number: +46 (0) 31 650 000

Taxi 020, phone number: +46 (0) 20 93 93 00

IN CASE OF EMERGENCY

In case of emergency use the phone number 112.

If you need to get in contact with health center, please call 1177 (Sjukvårdsrådgivningen).

Schedule

MONDAY, AUGUST 26

08.30 am – 10.20 am

COFFEE BREAK AND POSTER SESSION

10.20 am – 10.50 am

OPENING CEREMONY

LOCATION: DROTTNING 1 AND 2

MODERATOR: PHILIP WRAMSBY

08.30 am Doors open

09.00 am Welcome to LCM 2013

Klas Hallberg

Co-chair of LCM 2013

Chalmers for a sustainable future

Karin Markides

President and CEO of Chalmers University of Technology

Sustainability beyond growth

André Reichel

Senior research fellow at European Center for Sustainability Research

Implementing sustainability into governance of state-owned enterprises

Emma Ihre

Head of Sustainable Business at the Swedish Ministry of Finance

More value from fewer resources

André Veneman

Director of HSE & Sustainability, AkzoNobel



Schedule

MONDAY, AUGUST 26

10.50 am – 12.00 pm

LUNCH AND POSTER SESSION

12.00 pm – 01.30 pm

THEMATIC LUNCH SESSION

12.20 pm – 01.15 pm

TOWARDS GLOBAL LEADERSHIP IN RESOURCE EFFICIENCY

Hosted by IVL Swedish Environmental
Research Institute

OPENING CEREMONY CONTINUES

LOCATION: DROTTNING 1 AND 2

MODERATOR: PHILIP WRAMSBY

10.50 am By Dem corporate with ethics included

Annika Axelsson

Founder of Dem Collective

The renaissance of life cycle assessment: A social scientist's perspective

Susanne Freidberg

Professor and Chair of Geography at Dartmouth College

Perspectives on managing life cycles: Interactive session

Philip Wramsbj

Moderator

Let's get started!

Annika Burström

Organizing committee LCM 2013



Schedule

MONDAY, AUGUST 26

01.30 pm – 03.00 pm

COFFEE BREAK AND POSTER SESSION

03.00 pm – 03.30 pm

BUSINESS STRATEGY AND LCM

LOCATION: DROTTNING 1

CHAIRS: SARAH MCLAREN, MASSEY UNIVERSITY, NEW ZEALAND
LENNART SWANSTRÖM, ABB AB CORPORATE RESEARCH, SWEDEN

- 01.30 pm Integrating life cycle management into Danone's water sustainability strategy**
JEAN-CHRISTOPHE BLIGNY¹, Jean-Jacques Beley², Jean-Baptiste Bayart³, Samuel Vionnet³
¹Danone Group, France; ²Danone Research, France; ³Quantis International, Switzerland
- 01.45 pm Social practices – A challenging focus area in life cycle management**
KIRSTEN SCHMIDT
Aalborg University, Denmark
- 02.00 pm Use of the life cycle approach on company, category and product level to support the greenhouse gas strategy in a multinational company**
NICOLE UNGER, Henry King
Unilever, United Kingdom
- 02.15 pm Open business models and co-creation in real estate and construction sector**
KAROLIINA RAJAKALLIO, Seppo Junnila
Aalto University, Finland
- 02.30 pm Implementing life cycle management in an industrial value chain – Strategies for success**
GERALD REBITZER, Fabio Peyer
Amcor, Switzerland
- 02.45 pm Business models: The silent ruler of firms**
Mats Williander¹, THOMAS NYSTRÖM²
¹Viktoria Swedish ICT, Sweden; ²Chalmers University of Technology, Sweden



DOES RESEARCH MATTER? – THE ROLE OF LCA AND LCM TOOLS IN PUBLIC POLICY-MAKING

LOCATION: DROTTNING 2

CHAIRS: BJÖRN SANDÉN, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
PAVEL MISIGA, EUROPEAN COMMISSION, BELGIUM

01.30 pm **How and why do actors use LCA in the context of waste policy? Justifying the use of LCA through plural systems of legitimacy**

DAVID LAZAREVIC

KTH Royal Institute of Technology, Sweden

01.45 pm **How to make policy-relevant life cycle assessments of future products? Lessons learned from nanomaterials**

RICKARD ARVIDSSON, Duncan Kushnir, Björn Sandén, Sverker Molander

Chalmers University of Technology, Sweden

02.00 pm **New LCA guidelines for e-mobility as a tool to improve the basis for political decision making – The eLCAr project**

SEBASTIAN WINTER, Eva Szczechowicz

RWTH Aachen University, Germany

02.15 pm **The role of steel in enabling future vehicles to meet global emissions standards**

CLARE BROADBENT¹, George Coates², Russ Balzer²

¹World Steel Association, Belgium; ²WorldAutoSteel, United States of America

02.30 pm **A geopolitical model for the implementation of life cycle thinking based methodology in Latin America**

CLAUDIA PEÑA

Ibero-American Network of LCA, Chile

02.45 pm **Policy options and governance bottlenecks for sustainable materials management**

GUNILLA ÖLUND WINGQVIST, Daniel Slunge

Centre for Environment and Sustainability, GMV, Sweden

**BIODIVERSITY AND ECOSYSTEM SERVICES IN LCM – METHODS AND VALUES:
WORKSHOP****LOCATION:** BREV 1 AND 2**CHAIRS:** ULRIKA PALME, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
JAN PAUL LINDNER, FRAUNHOFER IBP, GERMANY

This session includes brief presentations on methodologies and applications dealing with assessment and communication of biodiversity and ecosystem services from a life cycle perspective. This is primarily a workshop, i.e. it leaves plenty of space for discussions. Expected topics for discussion include management of trade-offs between biodiversity and/or ecosystem services vs. other values in the product chain. It also includes “success stories” and shortcomings and deficiencies in existing methods. The workshop will hopefully contribute to resolving, or at least come up with recommendations, on how to approach such problems.

PRESENTERS:**Karin Halldén**, AkzoNobel, Sweden**Jan Paul Lindner**, Fraunhofer IBP, Germany**Maria Lindqvist**, Chalmers University of Technology, Sweden**Danielle Maia de Souza**, European Commission, Italy**Ulrika Palme**, Chalmers University of Technology, Sweden

LCA CRITICAL REVIEW

LOCATION: BREV 3

CHAIRS: MARY ANN CURRAN, BAMAC LTD., UNITED STATES OF AMERICA
STEVEN B YOUNG, UNIVERSITY OF WATERLOO, CANADA

01.30 pm The critical review according to ISO 14040+44 – How and why it came about

WALTER KLÖPFFER
LCA Consult & Review, Germany

01.45 pm International survey on critical review and verification practices in LCA with a focus in the construction sector

SÉBASTIEN LASVAUX¹, Yann Leroy², Capucine Briquet², Jacques Chevalier¹
¹*Université Paris-Est, Centre Scientifique et Technique du Bâtiment (CSTB), France;*
²*Laboratoire Genie Industriel – Ecole Centrale Paris, France*

02.00 pm Guidance for conducting collaborative critical peer review using co-design tools and reviewer profiles

STEPHANE MOREL^{1,2}, Philippe Osset³, Sarah Ertel⁴, Franck Aggeri²
¹*Renault sas, France;* ²*Mines Paristech, CGS, France;* ³*Solinnen, France;*
⁴*Be-linked, Business & Community Intelligence, France*

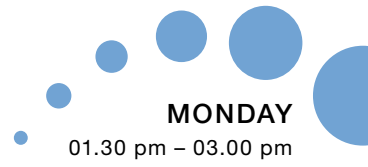
02.15 pm Radically reducing the costs of panel critical reviews according to ISO 14040

BO WEIDEMA^{1,3}, Kim Christiansen², Gregor Wernet³
¹*Aalborg University, Denmark;* ²*Danish Standards, Denmark;* ³*The ecoinvent Centre, Switzerland*

02.30 pm Critical review of LCA – Essential for quality and understanding

MATTHIAS SCHULZ, Ivo Mersiowsky
DEKRA Consulting GmbH, Germany

02.45 pm Discussion and poster highlight

[illegible]

Schedule

MONDAY, AUGUST 26

03.30 pm – 05.00 pm

THE ROLE OF COMMUNICATION IN LCM

LOCATION: DROTTNING 1

CHAIRS: CHRISTINA SCANDELIUS, BRUNEL BUSINESS SCHOOL, UNITED KINGDOM
JOHAN WIDHEDEN, AKZONOBEL, SWEDEN

03.30 pm Finnish consumers' understanding of carbon labels on food products

HANNA HARTIKAINEN, Juha-Matti Katajajuuri, Hannele Pulkkinen, Taneli Roininen
MTT Agrifood Research Finland, Finland

03.45 pm Challenges and opportunities in communicating LCM issues among academia, policy makers and industries in the region of Western Balkans

SRDJAN GLISOVIC¹, Evica Stojiljkovic¹, Vesna Zikic², Predrag Stojiljkovic³
¹University of Nis, Serbia; ²Regional Environmental Center, Budapest, Hungary; ³Economic Association for Electric Energy distribution, Serbia

04.00 pm From burdens to benefits: Quantifying the avoided climate impact of solutions in the SKF BeyondZero portfolio

JENNIFER DAVIS, Birger Löfgren, Mats Berglund, Matilda Sjölin, Jenny-Ann Nilsson, Magnus Rosén
SKF Group, Sweden

04.15 pm Web based tools for life-cycle environmental analysis. Some experiences with private companies and business associations

Luca Petruccelli, Gian Luca Baldo, Assunta Filareto, MARINO MASSIMO
Life Cycle Engineering, Italy

04.30 pm Statistical approach to handling uncertainty in LCA

ANANDA KUMARAN SEKAR, Sreenivasan PS, Utpal M Vakil, Sivakumar S, Shyamal Gondkar
GE India Technology Centre Pvt. Ltd., India

04.45 pm Evolution of life cycle thinking worldwide (2008–2012) – Baseline of phase 3 and the communication strategy of the UNEP/SETAC Life Cycle Initiative

SONIA VALDIVIA, Guido Sonnemann, Ana Quiros, Jim Fava, Bruce Vigon, Beatriz Macyshyn
United Nations Environment Programme



APPLICATION OF LIFE CYCLE APPROACH IN ENVIRONMENTAL POLICY

LOCATION: DROTTNING 2

CHAIRS: EVA AHLNER, SWEDISH EPA, SWEDEN
PAVEL MISIGA, EUROPEAN COMMISSION, BELGIUM

- 03.30 pm How LCT / LCM can help shape a resource-efficient and de-carbonised economy: Imperatives for, and emerging lessons from, South Africa**
JIM PETRIE
Dept of Economic Development Western Cape Govt, South Africa / University of Sydney Australia
- 03.45 pm Environmental impacts of food consumption and its reduction potentials**
NIELS JUNGBLUTH, Karin Flury
ESU-services Ltd., Switzerland
- 04.00 pm Addressing resource efficiency through the ecodesign directive: A review of opportunities and barriers**
CARL DALHAMMAR
Lund University, Sweden
- 04.15 pm Methodological framework for assessing the environmental impacts of photovoltaics systems using the LCA method**
Bastien Evon¹, JÉRÔME PAYET¹, Isabelle Blanc², Didier Beloin-Saint-Pierre², Eric Raison³, Nadine Adra³, Yvonnick Durand⁴
¹Cycleco, France; ²ARMINES / MINES Paris Tech, France; ³Transénergie, France; ⁴ADEME, France
- 04.30 pm Target-oriented weighting method in LCA for achieving multiple environmental political targets**
HONGTAO WANG¹, Yongguang Zhu², Ping Hou², Duan Weng³
¹Sichuan University, China; ²IKE Environmental Technology Ltd. Co., China; ³Tsinghua University, China
- 04.45 pm A life cycle based climate indicator in Swedish environmental policy**
Hanna Brolinson, ANITA LUNDSTRÖM
Swedish EPA, Sweden

CHEMICAL ASSESSMENT

LOCATION: BREV 1

CHAIRS: SVERKER MOLANDER, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
PETER SALING, BASF SE, GERMANY

03.30 pm Sustainable innovation of chemicals: Using LCA as a metrics in advancing and scaling up green chemistry research

GUIDO SONNEMANN¹, Amandine Foulet¹, Philippe Garrigues²
¹ISM, University Bordeaux, France ISM, CNRS, France

03.45 pm Gate-to-gate life cycle assessment of porous materials made from black liquor: Comparison of different scenarios including by-products from paper mill and petro-chemistry

AMANDINE FOULET¹, Guido Sonnemann¹, Hervé Deleuze¹, Philippe Garrigues²
¹ISM, University Bordeaux; France; ²ISM, CNRS, France

04.00 pm Improved characterization of detergent (eco) toxicity in LCIA using REACH experience

ELORRI IGOS¹, Ruth Moeller¹, Enrico Benetto¹, Arno Biwer¹, Mélanie Guiton¹, Philippe Dieumegard²
¹Public Research Centre Henri Tudor, Luxembourg; ²Chemolux / McBride Group, Luxembourg

04.15 pm Chemical management development in the automotive industry – The experiences from Volvo and the connection with LCA

LISBETH DAHLLÖF
Volvo ATR, Sweden

04.30 pm Life cycle analysis of façade coating systems containing manufactured nanomaterials

ROLAND HISCHIER
Empa, Switzerland

04.45 pm Discussion



PREPARING FOR RIGHT PRICES

LOCATION: BREV 2

CHAIRS: BENGT STEEN, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
PHILIPP PREISS, UNIVERSITÄT STUTTGART, GERMANY

03.30 pm Environmental damage costs vs. environmental taxes, subsidies and internal costs

PHILIPP PREISS

Universität Stuttgart, Germany

03.45 pm Conceptual challenges for internalising externalities

MIGUEL BRANDAO¹, Bo Weidema²

¹International Life Cycle Academy, Spain; ²Aalborg University, Denmark

04.00 pm Corporations' externalities and life cycle assessment (LCA)

BIRGITTE HOLT ANDERSEN¹, Martha Emneus²

¹CWare, Belgium; ²Applied Economics and Health Research, Denmark

04.15 pm The disproportionate cost principle under variable environmental and technical settings

TILL M. BACHMANN, Jonathan van der Kamp

European Institute for Energy Research, Germany

04.30 pm A new set of valuation factors for LCA and LCC based on damage costs – Ecovalue 2012

GÖRAN FINNVEDEN, Cecilia Håkansson, Maria Noring

KTH Royal Institute of Technology, Sweden

04.45 pm Discussion and poster highlight

LCA HIGHLIGHTS: PECHAKUCHA

LOCATION: BREV 3

CHAIRS: CLAUDIA PEÑA, CHILEAN NETWORK OF LCA / UNIVERSITY OF CONCEPCIÓN, CHILE
CARL VADENBO, ETH ZURICH, SWITZERLAND

This session provides a fast-paced overview of different LCA applications in research and industry. All presentations are 6 min and 40 second long. Most presentation use a presentation style called PechaKucha.

03.30 pm The effectiveness of water footprint reduction and trade-off among environmental categories in the introduction of innovative packaging system for ready meal

MASAHARU MOTOSHITA¹, Kiyotaka Tahara¹, Norihiro Itsubo², Atsushi Inaba³

¹National Institute of Advanced Industrial Science and Technology, Japan; ²Tokyo City University, Japan; ³Kogakuin University, Japan

Freshwater assessment in LCA: A case study of specific automotive components

MIRIAM MORENO PASTOR¹, Kai-Olaf Hinrichsen², Volkmar Wagner¹, Marzia Traverso¹, Juliane Kluge¹, Stefan Brattig¹

¹BMW Group, Germany; ²Technische Universität München, Germany

Hedging the bet: Introducing biocrops in the Luxembourgish agricultural system

IAN VÁZQUEZ-ROWE, Antonino Marvuglia, Sameer Rege, Enrico Benetto
CRP Henri Tudor, Luxembourg

Sustainable assessment of products / biomass materials

KENJI OHASHI

Shiseido Co., LTD., Japan

Life cycle global warming potential assessment of seaweed-based bioethanol

Kyung A Jung², SEONG-RIN LIM¹, Jong Moon Park²

¹Kangwon National University, Korea; ²POSTECH, South Korea



Evaluation of the ceramic block lifecycle with focus on social housing

Maria Cecilia Santos, ARNALDO CARDIM

Polytechnic School of Pernambuco – University of Pernambuco, Brazil

Innovative design of packaging in the food sector to reach higher sustainability

Luca Zampori, GIOVANNI DOTELLI

Politecnico di Milano, Italy

Estimating the potential climate benefit of material recycling – Data review and recommendations

KARL HILLMAN

University of Gävle, Sweden

GWP benefits from paper and board recycling with consequential LCA: Spanish case study considering the interaction with global markets

EVA SEVIGNE ITOIZ¹, Carles M. Gasol², Joan Rieradevall¹, Xavier Gabarrell¹

¹Universitat Autònoma de Barcelona; ²Inedit Innovació S.L. Spain

Environmental evaluation of different wastewater treatment systems: Activated sludge, trickling filter, UASB and stabilization ponds in Latin American and the Caribbean

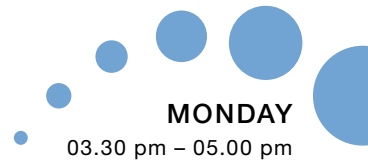
FLOR HERNANDEZ, Leonor Patricia Güereca, Adalberto Noyola

Universidad Nacional Autónoma de México, Mexico

LCA of nanofiltration treatment of pulp processing water

JAN PAUL LINDNER¹, Florian Gehring¹, Andreas Gruner²

¹University of Stuttgart, Germany; ²Zellstoff Stendal, Germany

[illegible]

Posters

MONDAY, AUGUST 26

08.00 am – 05.00 pm

LOCATION: POSTER AREA,
GROUND FLOOR

BUSINESS STRATEGY AND LCM

CHAIRS: SARAH MCLAREN, MASSEY UNIVERSITY, NEW ZEALAND

LENNART SWANSTRÖM, ABB AB CORPORATE RESEARCH, SWEDEN

M1 Nokia's product life cycle assessment over the years, including challenges and key findings

ILONA SANTAVAARA

Nokia, Finland

M2 A life cycle approach that unleashes business opportunities: Johnson & Johnson's EARTHWARDS™ System

JAMES FAVA¹, Al Iannuzzi²

¹PE International, United States of America; ²Johnson & Johnson, United States of America

M3 How to transform SME strategy into LCM?

PHILIPPE SCHIESSER¹, Sylvain Grelet¹, Joël Porcher², Thierry Ramon²

¹ECOEFF, France; ²CCIP, France

M4 Integration of strategic planning and life cycle management: A discussion based on a literature review

FABIO PUGLIERI, Diego Rodrigues Iritani, Aldo Roberto Ometto

Engineering School of Sao Carlos, University of Sao Paulo, Brazil

M5 Organizing for sustainable product chains of a multinational corporation: Life cycle management in practice

HANNA NILSSON, Henrikke Baumann

Chalmers University of Technology, Sweden

M6 Towards a framework of life cycle management (LCM)

IOANNIS MASTORIS, Steve Evans, Dai Morgan

University of Cambridge, United Kingdom

M7 How a corporate policy for sustainability is embedded and implemented throughout the business organization

MARIA NORELL, Caterina Camerani

AkzoNobel, Sweden



THE ROLE OF COMMUNICATION IN LCM

CHAIRS: CHRISTINA SCANDELIUS, BRUNEL BUSINESS SCHOOL, UNITED KINGDOM
JOHAN WIDHEDEN, AKZONOBEL, SWEDEN

M9 Cross-media training concepts for the swift knowledge transfer of complex life-cycle-assessment guidelines for electric vehicles

Martina Prox, Marten Stock, MIEKE KLEIN, Tobias Viere, Alexander Scheibner, Martin Otto Paul Ramacher
ifu Hamburg GmbH, Germany

M10 Interactive way to learn about life cycle thinking and assessment

JEAN-PIERRE THERET
Dassault Systèmes, France

M11 Calculating the carbon footprint of eco-schools

HOGNE NERSUND LARSEN¹, Carine Grossrieder¹, Christine Hung¹, Jan Brataas²
¹MISA AS, Norway; ²FEE, Norway

M12 Food consumers LCA: From consumers' survey to environmental impact assessment

SAIOA RAMOS, Maruxa Garcia-Quiroga, Jaime Zufia
AZTI-Tecnalia, Spain

M13 Scientific disclosure of life cycle assessment in Brazil

WLADMIR HENRIQUES MOTTA
Faculdade SENAI / CETIQT, Brazil

M14 The environmental footprint calculator from Volvo Trucks

Lisbeth Dahllöf¹, LARS MÅRTENSSON²
¹Volvo Group Trucks Technology, Sweden; ²Volvo Trucks, Sweden

M15 Qualitative environmental evaluation of process industries using LCA based environmental indicators

KISHORE CHENNA, Radhika A
Rastriya Ispat Nigam LTD, India

PREPARING FOR RIGHT PRICES

CHAIRS: BENGT STEEN, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
PHILIPP PREISS, UNIVERSITÄT STUTTGART, GERMANY

M16 A tool for calculating external costs and efficiency of freight transport systems

ERIK FRIDELL¹, Dan Andersson²

¹IVL Swedish Environmental Research Institute, Sweden; ²Chalmers University of Technology, Sweden

M17 Estimating monetary values of the companies' activities for preserving ecosystem

AKITO ASAKI, Kayo Murakami, Norihiro Itsubo

Tokyo city university, Japan

M18 Factors influencing future environmental economics of companies

BENGT STEEN

Chalmers University of Technology, Sweden

M19 Opportunities and barriers for companies to consider “right prices”

SARA PALANDER¹, Maria Lindblad²

¹The Swedish Life Cycle Center CPM, Sweden; ²IVL Swedish Environmental Research Institute, Sweden

LCA CRITICAL REVIEW

CHAIRS: MARY ANN CURRAN, BAMAC LTD., UNITED STATES OF AMERICA
STEVEN B YOUNG, UNIVERSITY OF WATERLOO, CANADA

M20 LCA critical review experiences and suggestions for improvement

FREDY DINKEL, Cornelia Stettler, Emil Franov

Carbotech AG, Switzerland



LCA HIGHLIGHTS: PECHAKUCHA

CHAIRS: CLAUDIA PEÑA, CHILEAN NETWORK OF LCA / UNIVERSITY OF CONCEPCIÓN, CHILE
CARL VADENBO, ETH ZURICH, SWITZERLAND

- M21 LCA of membrane bioreactors for wastewater treatment**
Gonzalo Rodriguez-Garcia, Carolina Alfonsín, Almudena Hospido, Maria Teresa Moreira, GUMERSINDO FEIJOO
University of Santiago de Compostela, Spain
- M22 Life cycle assessment of an adhesive for the laying of backed clay**
Anna Maria Ferrari¹, MARTINA PINI¹, Rosangela Spinelli¹, Paolo Neri²
¹University of Modena and Reggio Emilia, Italy; ²LCA-Lab srl spin off ENEA, Italy
- M23 Modeling of municipal solid waste (MSW) incineration in Spain and Portugal**
Maria Margallo¹, RUBEN ALDACO¹, Alba Bala², Pere Fullana², Angel Irabien¹
¹Universidad de Cantabria, Spain; ²Universitat Pompeu Fabra, Spain
- M26 Assessment of the environmental performance effects associated with the replacement of ethylene from fossil by renewable resource in GPPS production**
ADRIANA PETRELLA HANSEN, Luiz Kulay
University of Sao Paulo, Brazil
- M27 The life cycle assessment of three types of primary drugs packaging**
ROSA PINO OTIN¹, Esther Roldan García¹, Natalia Loste Montoya¹, Rita Puig Vidal²
¹Universidad San Jorge, Spain; ²Universidad Politécnica de Cataluña, Spain
- M28 Modelling recycling, energy recovery and reuse in LCA**
MARC-ANDREE WOLF¹, Kirana Chomkhamsri¹, Fulvio Ardente²
¹maki consulting, Germany; ²University of Palermo, Italy
- M29 Life cycle assessment of beneficial use of industry waste and domestic waste for cement production in China**
YU LIU, Zuoren Nie, Suping Cui, Zhihong Wang, Xianzheng Gong, Feng Gao
Beijing University of Technology, China

- M30 Eco-efficiency modeling based on life cycle assessment**
DOROTA BURCHART-KOROL, Jerzy Korol, Piotr Krawczyk, Krystyna Czaplicka-Kolarz
Central Mining Institute, Poland
- M31 Life cycle analysis of the recycling of plastics from WEEE**
Patrick A. Wäger, ROLAND HISCHIER
Empa, Switzerland
- M32 Ecological food products – New roles and responsibilities for retailers**
Birgit Brunklaus¹, MICHAELA RAAB²
¹Chalmers University of Technology, Sweden; ²Johannes Kepler University, Austria
- M33 Comparative life cycle assessment of the use of recovered glass in glass packaging for food use**
Esther Roldán García¹, M^a ROSA PINO OTÍN¹, Alba Bala Gala², Pere Fullana I Palmer²
¹Universidad San Jorge, Spain; ²Universitat Pompeu Fabra, Spain.
- M34 Influence of remanufacturing on life cycle steps: Air compressor study case in Brazil**
Guilherme Marcelo Zanghelini, Edivan Cherubini, SEBASTIÃO ROBERTO SOARES
CICLOG / Universidade Federal de Santa Catarina, Brazil
- M35 Alternatives comparison for the production of aluminum sulfate in the company electrochemical Sagua La Grande**
ELENA ROSA¹, Carlos Perez², Mayra Morales¹, Ana Contreras¹, Ronaldo Santos¹
¹Universidad Central de Las Villas, Cuba; ²Empresa Electroquímica de Sagua La Grande, Cuba
- M36 Biosynfuel production via slow or fast pyrolysis? A life-cycle energy demand and global warming approach**
Jens Frederik Peters¹, DIEGO IRIBARREN¹, Javier Dufour^{1,2}
¹Instituto IMDEA Energía, Spain; ²Rey Juan Carlos University, Spain
- M37 Life cycle assessment of new bio-hardboards using a laccase activated system**
Sara Gonzalez Garcia¹, Gumersindo Feijoo¹, Carol Heathcote², Andreas Kandelbauer²,
MARÍA TERESA MOREIRA¹
¹University of Santiago de Compostela, Spain; ²Kompetenzzentrum Holz, WOOD Carinthian Competence Centre, Austria



- M38 Lessons learned from a critical review of ten LCAs comparing disposable cups**
 JOSÉ POTTING^{1,2}, Eugenie Van der Harst¹
¹Wageningen University and Research, Netherlands; ²KTH Royal Institute of Technology, Sweden
- M39 Towards meaningful use of disability adjusted life years (DALYs) as a common metric in life cycle assessment and quantitative risk assessment**
 Greg Peters^{1,2}, Stuart Khan², YUMI KOBAYASHI²
¹Chalmers University of Technology, Sweden; ²University of New South Wales, Australia
- M40 Toward a structured functional unit definition framework to limit LCA results variability**
 FRANÇOIS CLUZEL, Yann Leroy, Yannou Bernard
Ecole Centrale Paris, France

APPLICATION OF LIFE CYCLE APPROACH IN ENVIRONMENTAL POLICY

CHAIRS: EVA AHLNER, SWEDISH EPA, SWEDEN

PAVEL MISIGA, EUROPEAN COMMISSION, BELGIUM

- M41 Assessment of major electricity generation technologies based on different energy indicators**
 INGUNN SAUR MODAHL¹, Hanne Lerche Raadal¹, Tor Haakon Bakken², Luc Gagnon³
¹Ostfold Research, Norway; ²Sintef Energy Research, Norway; ³Energy and Climate Change consultant, Canada
- M42 Consequential life cycle assessment of end-of-life wood particleboards management system for public policy-making support**
 MÉLANIE GUITON¹, Daryna Panasiuk¹, Enrico Benetto¹, Edouard Carteron², Sébastien Zinck²
¹CRP Henri Tudor, Luxembourg; ²Steelcase International WorkLab, France
- M43 Determination of the public transport policies for Eskisehir city through life cycle assessment**
 Mufide Banar, ALP ÖZDEMİR, Zerrin Cokaygil, Aysun Özkan
Anadolu University, Turkey
- M44 Import vs. domestic production of agricultural products: The role of origin for the environmental performance of food**
 Maria Bystricky, Thomas Nemecek, GÉRARD GAILLARD
Agroscope Reckenholz-Tänikon, Switzerland

- M45 Using LCA as a tool to regulate biofuels – A consideration of uncertainties in cultivation**
 SERINA AHLGREN, Elin Rööf
Swedish University of Agricultural Sciences, Sweden
- M46 Implementation of the ecological scarcity method for the Russian Federation and Germany**
 Marina Grinberg, Robert Ackermann, MATTHIAS FINKBEINER
Technische Universität Berlin, Germany
- M47 LCA in biofuel regulations: Comparing the US & EU approaches**
 CHRISTINE RICHARDSON¹, Sophie Boreux², Frédérick Bernard², Christian Nissing¹, Sébastien Soleille³, Nathalie Girault¹
¹TOTAL New Energies, France; ²TOTAL Refining & Chemicals, France; ³TOTAL Marketing & Services, France
- M48 Potential ecotoxicity impact induced by plant protection products in Finnish crop farming**
 KATI RÄSÄNEN¹, Tuomas Mattila², Petri Porvari², Sirpa Kurppa¹, Kari Tiilikkala¹
¹MTT Agrifood Research Finland, Finland; ²Finnish Environment Institute SYKE, Finland
- M49 Scoping of life cycle assessment studies: A missed opportunity?**
 SARAH MCLAREN
Massey University, New Zealand

CHEMICAL ASSESSMENT

CHAIRS: SVERKER MOLANDER, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
 PETER SALING, BASF SE, GERMANY

- M50 Biocide treated articles – Assessing knowledge**
 HANNA LJUNGKVIST¹, Jenny Westerdahl¹, Helena Strehlenert¹, Eliana Alvarez¹, Kristin Fransson²
¹IVL Swedish Environmental Research Institute, Sweden; ²Chalmers University of Technology, Sweden



Schedule

TUESDAY, AUGUST 27

08.30 am – 10.00 am

COFFEE BREAK AND POSTER SESSION

10.00 am – 10.30 am

EXPLORING CHALLENGES AND OPPORTUNITIES OF LCM AND LCA – INDUSTRY CASES

LOCATION: DROTTNING 1

CHAIRS: ANDREAS UIHLEIN, SCA, GERMANY
ERIKA KLOOW, TETRA PAK, SWEDEN

08.30 am **Going beyond company emissions reduction – How SKF is using life cycle thinking to build an effective climate strategy**
HELENA INGEMARSON
SKF Group

08.45 am **Promoting energy savings and GHG mitigation through industrial supply chain initiatives**
GIEL LINTHORST
Ecofys Netherlands, Netherlands

09.00 am **Incorporation of life cycle management in producing dicalcium phosphate: A Brazilian experience**
HENRIQUE MIGUEL MATINHO, Luiz Kulay
University of Sao Paulo, Brazil

09.15 am **How can collaborative-design tools involve stakeholders to enhance dialogue, increase reliability and overall benefits of LCA implementation? The electric vehicle assessment case study**
STEPHANE MOREL
Renault sas, France

09.30 am **A framework visualising challenges and enablers to successful LCM uptake in primary industry sectors**
HELENE STERZIK^{1,2,3}, Sarah McLaren^{1,2}, Anthony Hume^{2,3}, James E McDevitt^{2,4}, Elena V Garnevska¹
¹Massey University, New Zealand; ²New Zealand Life Cycle Management Centre, New Zealand; ³Landcare Research, New Zealand; ⁴Scion, New Zealand

09.45 am **Changes in environmental impacts over time in a developing industry. The Information and Communication Technology (ICT) sectors environmental impact between 1990 and 2010 from a life cycle perspective.**
DAG LUNDÉN¹, Jens Malmödin²
¹TeliaSonera, Sweden; ²Ericsson, Sweden



CURRENT DEVELOPMENTS IN LIFE CYCLE BASED LABELING

LOCATION: DROTTNING 2

CHAIRS: JEPPE FRYDENDAL, ECOLABELLING DENMARK, DENMARK
MICHELE GALATOLA, EUROPEAN COMMISSION, BELGIUM

08.30 am The use of LCA-based eco-labels in the IT-Industry

MARKUS GLOETZEL

Carl von Ossietzky Universität Oldenburg, Germany

08.45 am Environmental effects of type I ecolabelling – A number of semi quantitative examples

Lisbeth Engel Hansen, JEPPE FRYDENDAL

Ecolabelling Denmark, Denmark

09.00 am Environmental labelling of adsorbent hygiene products – Insights and preliminary outcomes from the EU ecolabel criteria development process

MAURO CORDELLA¹, Oliver Wolf¹, Matthias Schulz², Iris Bauer³, Anja Lehmann³

¹European Commission, Spain; ²DEKRA Consulting, Germany; ³PE International, Germany

09.15 am “Green power” purchase applied for environmental reporting and marketing

HANNE LERCHE RAADAL

Ostfold Research, Norway

09.30 am Combining type I and type III eco-labels: A successful experience in the wine sector

CRISTINA GAZULLA¹, Viviana Carrillo², Flora D’Souza², Alexander Liedke², Yolanda Núñez³, Lorena Pereda³, Rocío Clemente³, Marta López³, Jesús Ángel Díez⁴, Soledad Gómez⁴, Marta Cano⁴

¹Unesco Chair in Life Cycle and Climate Change, Spain; ²PE International, Germany; ³Fundación Centro Tecnológico de Miranda de Ebro, Spain; ⁴Fundación del Patrimonio Natural de Castilla y León, Spain

09.45 am Introduction to round table on current developments in life cycle based labeling and declarations

ANNELI RAFIQ

GEDnet

ECODESIGN

LOCATION: BREV 1 AND 2

CHAIRS: PHILIPPE SCHISSER, ECOEFF, FRANCE
ANNA KARIN JÖNBRINK, SWEREA IVF AB, SWEDEN

The Ecodesign session is a workshop that explores the reality of ecodesign worldwide. The session highlight issues like: How to build a new economy based on sustainable development? How to respond to all human needs worldwide, and escape the socio-cultural domination of esthetics and mass consumption? How to integrate the consumer as a designer in the process of production of goods? Four speakers will present different suggestions and the session will end with a concluding debate.

08.30 am Introduction of the topic: Design and environment, an evolution of common integration

PHILIPPE SCHIESSER
CEO, ECOEFF, France

An example about a complete ecodesign applied case study

JOAKIM HEDELIN
Technical director, Hultafors Group, Sweden

Five Spanish ecodesigned products by our contributors

ESTHER SANYÉ
Universitat Autònoma de Barcelona, Spain

Ecodesign in the Swedish industry today and tomorrow

ANNA KARIN JÖNBRINK
Swerea IVF, Sweden

A fab lab for a zero waste design workshop

PHILIPPE SCHIESSER
APEDEC, France

Debate / additional questions / conclusion



METRICS BEHIND THE MANAGEMENT OF SUPPLY CHAINS

LOCATION: BREV 3

CHAIRS: MARK GOEDKOOP, PRÉ CONSULTANTS BV, NETHERLANDS
NICOLE UNGER, UNILEVER, UNITED KINGDOM

08.30 am Sustainability at Teijin Aramid: Providing and increasing customer value throughout the life cycle

HARRIE BOSMAN¹, Max Sonnen²

¹Teijin Aramid BV, Netherlands; ²Ecomatters B.V., Netherlands

08.45 am The eco-premium solutions methodology – How life cycle assessment contributes to sustainable product management

JOHANNA MARTINSSON, Eva Österberg, Karin Andersson Halldén, Johan Widheden

AkzoNobel, Sweden

09.00 am Round table for social metrics: An industry led initiative to harmonize approaches and improve social sustainability

JOÃO FONTES, Simon Evitts, Mark Goedkoop

PRé, Netherlands

09.15 am Application of different types of sustainability evaluation tools to support decision-making processes

PETER SALING

BASF SE, Germany

09.30 am Poster highlight

09.45 am Discussion

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Schedule

TUESDAY, AUGUST 27

10.30 am – 12.00 pm

LUNCH AND POSTER SESSION

12.00 pm – 01.30 pm

THEMATIC LUNCH SESSION

12.20 pm – 01.15 pm

MANAGEMENT OF GREEN PRODUCT PORTFOLIOS

Hosted by SKF and WWF

ROLES AND RESPONSIBILITIES IN BUILDING AND CONSTRUCTION

LOCATION: DROTTNING 1

CHAIRS: HOLGER WALLBAUM, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
MICHAEL SCHARPF, HOLCIM TECHNOLOGY LTD, SWITZERLAND

- 10.30 am How France's Bourgogne district has fostered the development of life-cycle optimized buildings involving all stakeholders**
Marion Sie¹, JÉRÔME PAYET¹, Dominique Marie²
¹Cycleco, France; ²Bourgogne district, France
- 10.45 am Quantifying the value of building reuse**
Amanda Pike¹, Jon Dettling¹, SÉBASTIEN HUMBERT²
¹Quantis, United States; ²Quantis, Switzerland
- 11.00 am The Swiss platform of life cycle assessment data in the building sector – Connecting industry, administration, builders and research**
ROLF FRISCHKNECHT¹, Reinhard Friedli², Heinrich Gugerli³
¹treeze Ltd., Switzerland; ²Swiss Federal Office for Construction and Logistics, BBL, Switzerland; ³City of Zurich, Switzerland
- 11.15 am Challenges for the use of life cycle assessment as a decision-making tool in building design – The Wälluden case study**
DIEGO FERNANDO PEÑALOZA, Per-Erik Eriksson, Joakim Norén
SP Swedish technical Research Institute, Sweden
- 11.30 am LCA in construction works as a powerful decision making tool. ACCIONA Infrastructure's expertise**
ROCÍO FERNÁNDEZ, Edith Guedella, Antonio Jose Sanchez, Ignacio Calvo
ACCIONA Infrastructure, Spain
- 11.45 am Life cycle inventory of construction of hydroelectric dam in Chile**
MABEL VEGA, Claudio Zaror, Claudia Peña, Carolina Scarinci
University of Concepcion, Chile



CURRENT DEVELOPMENTS IN LIFE CYCLE BASED DECLARATIONS

LOCATION: DROTTNING 2

CHAIRS: JEPPE FRYDENDAL, ECOLABELLING DENMARK, DENMARK
MICHELE GALATOLA, EUROPEAN COMMISSION, BELGIUM

10.30 am Barilla EPD process system to increase reliability, comparability and communicability of LCA studies

Assunta Filareto¹, Luca Ruini², MASSIMO MARINO¹, Ferri Rossella²
¹Life Cycle Engineering, Italy; ²Barilla G. R. Fratelli S.p.A, Italy

10.45 am Product category rule (PCR) to support light-weighting of materials in automotive parts

STEVEN B YOUNG¹, Lindita Bushi², Alain Dubreuil³
¹University of Waterloo, Canada; ²ATHENA Sustainable Materials Institute, Canada; ³Independent professional, Canada

11.00 am Are todays EPDs helpful for decision making? Suggestions for optimization of EPDs

CORNELIA STETTLER, Fredy Dinkel
Carbotech AG, Switzerland

11.15 am Environmental product declarations – from B2B to B2C

JOAKIM THORNÉUS
Swedish Environmental Management Council, Sweden

11.30 am A universal footprint definition: A critical next step to support widespread communication of LCA data

BRADLEY GEORGE RIDOUTT¹, Stephan Pfister²
¹CSIRO, Australia; ²ETH Zurich, Switzerland

11.45 am Developing scientifically-sound product environmental footprint category rules: Development options, challenges and implications

ERWIN M. SCHAU, Karen Allacker, Camillo De Camillis, Rana Pant
European Commission, Joint Research Centre, Italy

MANAGEMENT OF GREEN PRODUCT PORTFOLIOS: PANEL

LOCATION: BREV 1 AND 2

CHAIRS: BIRGER LÖFGREN, SKF, SWEDEN
STEFAN HENNINGSSON, WWF INTERNATIONAL, SWEDEN

An increasing number of companies have established green product portfolios that are claimed, by the company, to have superior environmental performance. The portfolio's economic development, in terms of e.g. total sales, can be followed and targeted. In some cases environmental performance is also targeted and third party verified.

This session will be arranged as a panel discussion focusing on practical experiences related to the management of environmental product portfolios and the verification of environmental benefit claims from these in absence of an internationally agreed standard.

MODERATOR:

Stefan Henningsson, Senior Adviser Climate Innovation, WWF International

PANEL:

Annemarie Kerkhof, Senior Consultant, Ecofys

Annemarie Nina Grandke, Corporate Sustainability Office, Strategy & Environmental Portfolio, Siemens

Magnus Rosén, Portfolio Manager, Corporate Sustainability at SKF

Åse Bäckström, Head of KPMG Sweden Climate Change & Sustainability and Chair of FAR Sustainability Working Party

Henrik Sundström, VP Group Sustainability Affairs, Electrolux

Marie Baumgarts, Head of Corporate Responsibility at Tele2 and Member of Global e-Sustainability Initiative

Klas Hallberg, Manager Sustainable Management, AkzoNobel

Laura Draucker, Sustainability Manager and Senior Associate at World Resources Institute



DATABASES AND CAPACITY BUILDING

LOCATION: BREV 3

CHAIRS: GUIDO SONNEMANN, UNIVERSITY OF BORDEAUX, FRANCE
SONIA VALDIVIA, UNITED NATIONS ENVIRONMENT PROGRAMME, FRANCE
BRUCE VIGON, SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY, UNITED STATES OF AMERICA

10.30 am Global guidance principles on LCA databases: Outreach and training activities worldwide and multi-region collaboration for consistent LCA data

Guido Sonnemann^{1,2}, Bruce Vigon^{1,3}, Sonia Valdivia^{1,4}

¹UNEP/SETAC Life Cycle Initiative; ²University of Bordeaux, France; ³Society of Environmental Toxicology and Chemistry, United States of America; ⁴United Nations Environment Programme, France

10.40 am The world food LCA database project: Towards more accurate food datasets

JENS LANSCHÉ¹, Thomas Nemecek¹, Gérard Gaillard¹, An De Schryver², Laura Peano², Sébastien Humbert², Yves Loerincik²

¹Agroscope Reckenholz Tänikon Research Station ART, Switzerland; ²Quantis, Switzerland

10.50 am Life cycle sustainability assessment: New challenges for databases

CASSIA MARIA LIE UGAYA¹, Sonia Valdivia²

¹UTFPR, Brazil; ²United Nations Environment Programme, France

11.00 am The Mexican life cycle inventory database – Mexicaniuh

NYDIA SUPPEN, Reynaldo Felix

Center for LCA and Sustainable Design, Mexico

11.10 am Chilean food & agriculture database using UNEP/SETAC Shonan principles

CRISTIAN EMHART GARCIA¹, Alejandro Florenzano¹, Jonas Bengtsson²

¹Fundación Chile, Chile; ²Edge Environment, Australia

11.20 am Development of new version of inventory database for environmental analysis (IDEA)

KIYOTAKA TAHARA¹, Masaharu Motoshita¹, Atsushi Inaba²

¹National Institute of Advanced Industrial Science and Technology, Japan; ²Kogakuin University, Japan

11.30 am Methodological choices for an LCI database of French agricultural products

Thibault Salou¹, Peter Koch², Jerome Mousset³, GERARD GAILLARD², Hayo van der Werf¹

¹INRA, France; ²Agroscope, Switzerland; ³ADEME, France

11.40 am Data quality assessment of LCI datasets – Testing the ISO, ILCD entry- level and PEF requirements on some ELCD datasets

KIRSTEN BIEMANN¹, Marco Recchioni², Fabrice Mathieux²

¹Karlsruhe Institute of Technology, Germany; ²Joint Research Centre, European Commission, Ispra, Italy



Schedule

TUESDAY, AUGUST 27

01.30 pm – 03.00 pm

COFFEE BREAK AND POSTER SESSION

03.00 pm – 03.30 pm

SUSTAINABLE PRODUCT CHAINS – THE ROLE AND RESPONSIBILITIES OF RETAILERS**LOCATION:** DROTTNING 1**CHAIRS:** BEATRICE KOGG, LUND UNIVERSITY, SWEDEN**01.30 pm The Retailer – Janus caught in a multistakeholder trap? A qualitative analysis of the Austrian food retailing sector from a NGO perspective**

KEWIN COMPLOI, Martin Wildenberg, Anna Geiger

*GLOBAL 2000, Austria***01.45 pm Responsibility in the supply chain – Looking at standards, certifications and the role of third party service providers from a supply chain management perspective**

Beatrice Kogg, OLGA CHKANIKOVA

*Lund University, Sweden***02.00 pm Small supplier development program: Implementing Wal-Mart's sustainability index for 12 small suppliers from Walmart Chile**CRISTIAN EMHART GARCIA¹, Alejandro Florenzano¹, Catalina Giraldo¹, Jonas Bengtsson²*¹Fundación Chile, Chile; ²Edge Environment, Australia***02.15 pm Environmental improvement actions by retailers**JOHANNA BERLIN¹, Birgit Brunklaus²*¹SP Technical Research Institute of Sweden, Sweden; ²Chalmers University of Technology, Sweden***02.30 pm Looking back at the French environmental footprinting experimentation: How innovative LCA web tools can facilitate the integration of life-cycle approaches in retailers' decision making**JÉRÔME PAYET^{1,2}, Isabelle Radtke¹*¹CYCLECO, France; ²ENAC – SIE; Ecole Polytechnique Fédérale de Lausanne, Switzerland***02.45 pm Concluding discussion**

INNOVATION AND PRODUCT DEVELOPMENT

LOCATION: DROTTNING 2

CHAIRS: ALEJANDRO CHACÓN, ECODISEÑO.CL, CHILE
RUBÉN CARNERERO, INGURUMENAREN KIDEAK INGENIERÍA S.L., SPAIN

01.30 pm Realization of LCA in business – Life cycle simulation models for product or technology design

JULIAN MARUSCHKE, Matthias Harsch, Judith Schnaiter
LCS Life Cycle Simulation GmbH, Germany

01.45 pm Impact of LCA results in eco design of lift systems

FREDY DINKEL, Cornelia Stettler
Carbotech AG, Switzerland

02.00 pm Design for the environment applied to the office furniture sector: The approach of Steelcase

SEBASTIEN ZINCK, Edouard Carteron, Raphael Stermann
Steelcase, Europe

02.15 pm Integration LCA with eco design tools (CAD and PLM)

JEAN-PIERRE THERET¹, Damien Evrard³, François Witte², Mario Fliegner⁴, Michael Srocka⁵, Peggy Zwolinski³, Yannick Le Guern², Andreas Ciroth⁵
¹Dassault Systèmes, France; ²BIO Intelligence Service, France; ³G-SCOP Laboratory, University of Grenoble, France; ⁴pernexas GmbH, Germany; ⁵GreenDelta, Germany

02.30 pm Target the use phase! Design for sustainable behavior

MARIANNE KARLSSON, Sara Renström, Anneli Selvefors, Helena Strömberg, Ulrike Rahe
Chalmers University of Technology, Sweden

02.45 pm Creating actionable knowledge in development of more sustainable products

GUNILLA CLANCY¹, Morgan Fröling², Magdalena Svanström¹
¹Chalmers University of Technology, Sweden; ²Mid Sweden University, Sweden

**CURRENT DEVELOPMENTS IN LIFE CYCLE BASED LABELING AND DECLARATIONS:
ROUND TABLE**

LOCATION: BREV 1 AND 2

CHAIRS: BJÖRN-ERIK LÖNN, NORDIC ECOLABELLING BOARD, NORWAY
ANNELI RAFIQ, GEDNET, SWEDEN
LIAZZAT RABBIOSI, UNITED NATIONS ENVIRONMENT PROGRAMME, FRANCE

Ecolabels and environmental product declarations are voluntary schemes and can be used by companies to communicate about the environmental performance of their products. Today many different labeling and declaration schemes are developed.

The main focus of this session will be on current developments in this area and especially on experience from companies using ecolabels and environmental product declarations in their communication. This session has a round table discussion setting and thus offers space for discussions.



GOVERNANCE OF CRITICAL RAW MATERIALS

LOCATION: BREV 3

CHAIRS: MARIA LJUNGGREN SÖDERMAN, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
STEVEN B YOUNG, UNIVERSITY OF WATERLOO, CANADA

01.30 pm Tracking environmental impacts in global product chains – Rare earth metals and other critical metals used in the cleantech industry

Alina Pathan¹, Alain Schilli³, Jens Johansson², IIVO VEHVILÄINEN¹, Anna Larsson², Jürg Hutter³
¹Gaia Consulting Oy, Finland; ²U&We AB; ³Gaia Global SA, Switzerland

01.45 pm Life cycle assessment and criticality of raw material: Relationship and potential synergies

LUCIA MANCINI, Serenella Sala, Fulvio Ardente, Malgorzata Goralczyk, David Pennington
European Commission – Joint Research Centre, Italy

02.00 pm Assured supply chains as a mechanism to manage critical materials

STEVEN B YOUNG, Zhe Yuan
University of Waterloo, Canada

02.15 pm Investigating the potential for rare earth element resource efficiency improvements in permanent magnet motors through an extension of the electric motor product group regulation under the EU ecodesign directive

Erika Machacek, CARL DALHAMMAR
Lund University, Sweden

02.30 pm Efficient use of critical metals in the automotive industry – Identification, reuse and recovery

ALEXANDRA PEHLKEN¹, Chen Ming², Jorge Marx Gómez¹, Kerstin Kuchta³
¹Carl von Ossietzky University Oldenburg, Germany; ²Shanghai Jiao Tong University, China; ³TU Hamburg Harburg, Germany

02.45 pm Recovery of critical metals from end of life electronic equipment: Current state and action options

Patrick A. Wäger, Rolf Widmer, ELIETTE RESTREPO, Sandra Müller, Heinz Böni
Empa, Switzerland

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Schedule

TUESDAY, AUGUST 27

03.30 pm – 05.00 pm

SUSTAINABILITY DATA EXCHANGE**LOCATION:** DROTTNING 1

CHAIRS: TOMAS BLEY, IPOINTE-SYSTEMS, GERMANY
 MAX SONNEN, ECOMATTERS B.V., NETHERLANDS
 RAUL CARLSON, VIKTORIA INSTITUTE, SWEDEN

03.30 pm Carbon management along the supply chain at Siemens

Karin Uebelhoer, Birgit Heftrich, JENS-CHRISTIAN HOLST, Joern Guder
Siemens AG, Germany

03.45 pm Managing sustainable production through business process-driven information system design

RAUL CARLSON¹, Lennart Swanström², Richard Watson³, Thomas Baumgartner⁴

¹Viktoria institute, Sweden; ²ABB Corporate Research, Sweden; ³The University of Georgia, USA;

⁴ABB Ltd, Switzerland

04.00 pm Collaboration and data exchange via the open LCA data hub and framework: Practical experiences

ANDREAS CIROTH, Srocka Michael, Köster Georg
GreenDelta, Germany

04.15 pm State-of-the-art and requirements for collecting and managing sustainability data along today's supply chains

Gregor Grambow¹, Nicolas Mundbrod¹, Vivian Steller¹, Manfred Reichert¹, ANDREAS SCHIFFLEITNER²,
 Thomas Bley³, Christian Feick³

¹Ulm University, Germany; ²KERP, Austria; ³IPoint-systems, Germany

04.30 pm Integrated solution for life cycle environmental information management

Yongguang Zhu¹, Ping Hou¹, HONGTAO WANG²

¹IKE Environmental Technology Ltd. Co, China, ²Sichuan University, China,

04.45 pm Discussion and poster highlight

INNOVATION AND PRODUCT DEVELOPMENT: INTERACTIVE

LOCATION: DROTTNING 2

CHAIRS: NIKI BEY, TECHNICAL UNIVERSITY OF DENMARK, DENMARK
MATTIAS LINDAHL, LINKÖPING UNIVERSITY, SWEDEN

In this session all presentations are five minutes long and conclude with a five minutes long question time. The question time is led by one of the other presenters.

03.30 pm Introduction

Tools for sustainable product development: Experience and requirements from the vehicle manufacturing industry in Sweden

SOFIA POULIKIDOU

KTH, Royal Institute of Technology, Sweden

Barriers for implementing eco innovation in design for environment: Outputs of different eco-design projects

ESTHER SANYÉ-MENGUAL¹, Sara González-García², Raul Garcia Lozano^{1,3}, Maria Teresa Moreira², Gumersindo Feijoo², Xavier Gabarrell¹, Joan Rieradevall¹

¹Universitat Autònoma de Barcelona, Spain; ²University of Santiago de Compostela, Spain; ³Inèdit Innovació, Spain

Assessing the sustainability of new product developments at Tata Steel

NICK COLEMAN, Louis Brimacombe, Allan Griffin, Peter Hodgson, Graeme Peacock, Mark Goodenough
Tata Steel, United Kingdom

Understanding the implication of an environmental strategy adoption

MIRIAM KOZEMJAKIN DA SILVA¹, Romain Allais^{1,2}, Tatiana Reyes¹, Sébastien Remy¹, Lionel Roucoules²

¹Université de technologie de Troyes, France; ²Arts et Metiers ParisTech, France

Life cycle management in product design: A comparative analysis of industry practices

Kristen Skelton¹, ANNA PATTIS²

¹Siemens Wind Power, Aalborg University, Denmark; ²Grundfos Holding A/S, Denmark

A decision support method for new materials during early innovation phase to find sustainable applications on the example of cellulose nanofibre reinforced composite

FABIANO PICCINNO

Empa, Switzerland

Discussion

TRADE ASSOCIATIONS – DRIVERS FOR LCM?**LOCATION:** BREV 1**CHAIRS:** PIERRE CONRATH, EDANA, BELGIUM
ELLEN RIISE, SCA HYGIENE PRODUCTS, SWEDEN**03.30 pm Titanium producers promoting life cycle thinking**CARINA MARIA ALLES¹, Robert Bird², Paul Jean Anselme³¹DuPont, Switzerland; ²Huntsman Pigments, United Kingdom; ³Titanium Dioxide Manufacturers Association, Belgium**03.45 pm A new vision and a blue book: Sustainability activities of the European chemical industry**VÉRONIQUE GARNY¹, Peter White²¹Cefic – The European Chemical Industry Council, Belgium; ²Procter & Gamble, United Kingdom**04.00 pm EDANA – Trade association as early driver for life cycle initiatives engaging the supply chain**ELLEN RIISE¹, Gert van Hoof¹¹, Diana Heelis³, Pierre Conrath¹⁵, Marta Alonso², Magnus Bodmer⁵, Klaus Dieter Hörner⁴, David E James⁶, Jose Miralles⁷, Christophe Morel-Fourrier⁸, Sophie Perrine⁹, Serge Simon¹⁰, Bart Waterschoot¹², Rainer Wendland¹³, Anna Maija Wessman¹⁴¹SCA Hygiene Products AB, Sweden; ²Laboratorios Indas S.A.U, Spain; ³Kimberly-Clark Europe Ltd., United Kingdom; ⁴BASF SE Care Chemicals Division, Germany; ⁵Paul Hartmann AG, Germany; ⁶Nice-Pak International Ltd., United Kingdom; ⁷Arbora & Ausonia S.L.U., Spain; ⁸Bostik, France; ⁹Johnson & Johnson Consumer France; ¹⁰Total Refining & Chemicals Research Feluy, Belgium; ¹¹Procter & Gamble Eurocor NV/SA; ¹²Ontex BVBA, Belgium; ¹³Evonik Industries AG, Germany; ¹⁴Ahlstrom Corporation, Finland; ¹⁵EDANA, Belgium**04.15 pm Sustainability at CEPE: Pre-competitive cooperation resulting in an industry standard coatings LCI database**

MAX SONNEN

Ecomatters B.V., Netherlands

04.30 pm PlasticsEurope eco-profiles – Progress with an ambitious programIVO MERSIOWSKY¹, Guy Castelan²¹DEKRA Consulting GmbH, Germany; ²PlasticsEurope aisbl, France**04.45 pm Choice of background database in constructing cradle-to-gate LCI for public dissemination: Case of the World Steel datasets**PASCAL LESAGE¹, Clare Broadbent², Réjean Samson¹¹CIRAIG – Polytechnique Montréal, Canada; ²World Steel Association, Belgium

ROLES AND RESPONSIBILITIES IN THE MOBILITY SECTOR

LOCATION: BREV 2

CHAIRS: STEPHAN KRINKE, VOLKSWAGEN AG, GERMANY
CHRISTOPH HERRMANN, TU BRAUNSCHWEIG, GERMANY

03.30 pm Implementing the life cycle approach at Volkswagen

JENS WARSEN
Volkswagen AG, Germany

03.45 pm Definition and influence of functional unit in LCA of electric and plug-in hybrid vehicles applied to implantation scenarios

FLORENT QUERINI, Enrico Benetto
Public Research Centre (CRP) Henri Tudor, Luxembourg

04.00 pm Life cycle management of Z-Bee – An electric 3-wheeler made of polymer composites

MAGDALENA SZPIEG¹, Sandra Roos^{2,3}
¹Swerea SICOMP AB, Sweden; ²Swerea IVF AB, Sweden; ³Chalmers University of Technology, Sweden

04.15 pm A comprehensive approach of sustainability assessment of product in the automobile sector: Challenges and benefits

MARZIA TRAVERSO, Volkmar Wagner, Ben Trouvay, Juliane Kluge, Ferdinand Geckeler,
Stefan Brattig
BMW Group, Germany

04.30 pm Making public transportation more sustainable – A sophisticated LCA & LCC model for assessing bus based public transport

MICHAEL FALTENBACHER¹, Markus Wiedemann²
¹PE International, Germany; ²Stuttgarter Strassenbahnen AG Germany

04.45 pm Advanced process materials for the automotive industry enable light-weight solutions

CLARA FIUZA¹, Mark Schneider¹, Pascal Obringer², Matthias Hofmann-Kamensky¹
¹Sika Services AG, Switzerland; ²Sika Schweiz AG, Switzerland

MANAGEMENT OF NATURAL RESOURCES – ABIOTIC**LOCATION:** BREV 3**CHAIRS:** NYDIA SUPPEN, CENTER FOR LCA AND SUSTAINABLE DESIGN, MEXICO
ANDERS HAMMER STRØMMAN, NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, NORWAY**03.30 pm Abiotic resources use life-cycle impact assessment based on resource dissipation and competition between users**Vincent De Bruille¹, Cécile Bulle¹, Caroline Gaudreault², Thomas Dandres¹, MANUELE MARGNI¹, Réjean Samson¹¹CIRAIG – Polytechnique Montreal, Canada; ²NCASI – Canada**03.45 pm Water availability footprint of electricity production**ANNE PRIEUR VERNAT¹, Jan Mertens²¹GDF SUEZ – Crigen, France; ²GDF SUEZ – Laborelec, Belgium**04.00 pm Setting recycling targets for metals in a Li battery**BENGT STEEN¹, Stefan Allard¹, Christian Ekberg¹, Viktor Ekermo², Christer Forsgren³, Sravya Kosaraju¹¹Chalmers University of Technology, Sweden; ²ETC Batteries and Fuel Cells Sweden, Sweden; ³Stena Metall, Sweden**04.15 pm Development global damage factors of resource consumption**TAKESHI MATSUDA¹, Ryota Ii¹, Norihiro Itsubo²¹Pacific Consultants CO., LTD., Japan; ²Tokyo City University, Japan**04.30 pm Core elements for the regionalised assessment of abiotic resource use exemplified by water and metals – Theory and practicability from a life cycle perspective**

STEFANIE MARKWARDT, Christoph Lauwigi

IFEU, Germany

04.45 pm Assessing abiotic resource scarcity with LCA

TOMMIE PONSIOEN, Marisa Vieira, Mark Goedkoop

PRé Consultants, Netherlands



Posters

TUESDAY, AUGUST 27

08.00 am – 05.00 pm

**LOCATION: POSTER AREA,
GROUND FLOOR**

METRICS BEHIND THE MANAGEMENT OF SUPPLY CHAINS

CHAIRS: MARK GOEDKOOP, PRÉ CONSULTANTS BV, NETHERLANDS
NICOLE UNGER, UNILEVER, UNITED KINGDOM

- T1 Approach and challenges of SLCA in an automotive company**
HANNAH KARLEWSKI¹, Klaus Ruhland¹, Matthias Finkbeiner²
¹Daimler AG, Germany; ²TU Berlin, Germany
- T2 One, two, we – A programme for environmentally friendly canteen meals**
NIELS JUNGBLUTH, Karin Flury
ESU-services Ltd., Switzerland
- T3 Assessment of greenhouse gas emissions from flour – A tool customized for a milling company**
KATARINA LORENTZON¹, Maria Berglund¹, Magdalena Wallman¹, Christoffer Krewer¹, Lovisa Olsson²,
Matilda Olsson², Johan Bäcklund²
¹SIK the Swedish Institute for Food and Biotechnology, Sweden; ²Berte Qvarn, Sweden
- T4 Application of a new allocation approach for steel industry by-products to improve transparency, communication and lifecycle thinking in the construction sector**
CLARE BROADBENT¹, Nick Avery², Iain Millar²
¹World Steel Association, Belgium; ²Tata Steel, United Kingdom

DATABASES AND CAPACITY BUILDING

- CHAIRS:** GUIDO W. SONNEMANN, UNIVERSITY OF BORDEAUX, FRANCE
SONIA VALDIVIA, UNITED NATIONS ENVIRONMENT PROGRAMME, FRANCE
BRUCE VIGON, SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY, UNITED STATES OF AMERICA
- T5 Development of water inventory database and applications to product life cycle to Japanese products**
YUYA ONO, Norihiro Itsubo
Tokyo City University, Japan



- T6 LCADB.sudoe: Life cycle inventories database of the southwest of Europe**
 GASOL CARLES¹, Sanyé Esther², Rieradevall Joan², Anton Assumpcio³, Cyril Arnoult⁴, Bellon Veronique⁵, Pradel Marylis⁵, Lardon Laurent³, Roux Philippe⁵, Dias Ana Claudia⁶, Arroja Luis⁶, Rigola Miquel⁷, Morera Serni⁷, Comas Joaquim⁷, Artola Adriana², Villalba Gara²
¹Inèdit Innovació, Spain; ²Universitat Autònoma de Barcelona, Spain; ³Institut de Recerca i Tecnologia Agroalimentaria (IRTA), Spain; ⁴Supagro, France; ⁵IRSTEA, France; ⁶Universidade de Aveiro, Portugal; ⁷Universitat de Girona, Spain
- T7 Life cycle inventory database development: The Brazilian experience**
 CELINA LAMB, Silvia Palma-Rojas, Nilce Nass
Brazilian Institute of Information in Science and Technology, Brazil
- T8 French environmental footprinting – Development of the French national database for textile**
 JÉRÔME PAYET, Sandrine Pestel
Cycleco, France

SUSTAINABILITY DATA EXCHANGE

- CHAIRS:** THOMAS BLEY, IPOINTE-SYSTEMS, GERMANY
 MAX SONNEN, ECOMATTERS B.V., NETHERLANDS
 RAUL CARLSON, VIKTORIA INSTITUTE, SWEDEN
- T9 Global alignment of approaches for product sustainability information: A key flagship program of phase 3 of the UNEP/SETAC life cycle initiative**
 JAMES FAVA¹, Philip Strothmann²
¹PE International, United States of America; ²United Nations Environment Programme, Germany
- T10 Implementation of LCA data exchange system: Achievements and challenges**
 KATSUYUKI NAKANO¹, Wataru Koike¹, Takuma Sugimoto², Kiyotaka Tahara³
¹Japan Environmental Management Association for Industry, Japan; ²aegif, Japan; ³National Institute of Advanced Industrial Science and Technology, Japan
- T11 Development of a web platform for the use of the USEtox model in LCIA**
 Emmanuel Maillard, JÉRÔME PAYET, Cedric Roussel, Odilon Hugonnot
Cycleco, France

CURRENT DEVELOPMENTS IN LIFE CYCLE BASED LABELING

CHAIRS: JEPPE FRYDENDAL, ECOLABELLING DENMARK, DENMARK
MICHELE GALATOLA, EUROPEAN COMMISSION, BELGIUM

T12 Mexico: Ecolabeling experiences and future development

NYDIA SUPPEN, Luz Aida Martinez
Center for LCA and Sustainable Design, Mexico

T13 Developing climate certification for food in Sweden

ULF SONESSON¹, Anna Richert²
¹SIK the Swedish Institute for Food and Biotechnology; Sweden; ²Svenskt Sigill, Sweden

T14 Labelling in the electronics sector: Is EPEAT the answer?

CHRISTINA BOCHER¹, Sean Nicholson²
¹DEKRA Consulting GmbH, Germany; ²Microsoft, United Kingdom

CURRENT DEVELOPMENTS IN LIFE CYCLE BASED DECLARATIONS

CHAIRS: JEPPE FRYDENDAL, ECOLABELLING DENMARK, DENMARK
MICHELE GALATOLA, EUROPEAN COMMISSION, BELGIUM

T15 Automating EPDs for food: A beer example

RITA C. SCHENCK, Seth Lalonde, Neil Huizenga
IERE, United States of America

T16 Environmental product declaration of copper cathode and concentrates

CLAUDIA PEÑA¹, Claudio Zaror³, Joakim Thornéus², Carolina Scarinci¹, Mabel Vega³
¹Research Centre of Mining and Metallurgy, Sweden; ²The International EPD System, Sweden; ³University of Concepción, Chile

T17 French environmental footprinting of food products – Facilitating access of SME's to environmental footprinting of products

JEROME PAYET^{1,2}, Cedric Roussel³, Sergio Rupena³
¹École polytechnique fédérale de Lausanne, Switzerland; ²CYCLeco, France; ³Tools for Environment, Switzerland

T18 Life cycle based assessment for agricultural products: An Austrian best practice

MARTIN WILDENBERG, Kewin Comploi, Dominik Frieling, Tanja Altaparmakova, Anna Geiger
GLOBAL 2000, Austria



- T19 The Industry views on the policy and development of carbon labeling in Taiwan**
 LUNG-CHIEH LIN¹, Dasdy Chia-Pei Lin², Chao-Chi Chen², Wei-Sheng Yen², Chen-Cheng Liu², Wen-Shing Lee¹
¹National Taipei University of Technology, Taiwan; ²Plastics Industry Development Center, Taiwan
- T20 Science, LCM and communication tools for harmonised environmental and social sustainability in the European food and drink chain – The SENSE project**
 Anna Aronsson¹, BIRGIT LANDQUIST¹, Ulf Sonesson¹, Aintzane Esturo², Jaime Zufia², Thorkild Nielsen³, Erling Larsen⁴, Guðrún Ólafsdóttir⁵, David Barling⁶, Niels Jungbluth⁷, Begoña Perez-Villarreal²
¹SIK the Swedish Institute for Food and Biotechnology, Sweden; ²AZTI Tecnalia, Spain; ³Aalborg University Centre, Denmark; ⁴DTU-Aqua, Denmark; ⁵University of Iceland, Iceland; ⁶The City University London, UK; ⁷ESU-services Ltd., Switzerland
- T21 Towards the sustainability product declaration**
 MASSIMO MARINO, Joakim Thornéus
The International EPD System, Sweden

INNOVATION AND PRODUCT DEVELOPMENT

- CHAIRS:** ALEJANDRO CHACÓN, ECODISEÑO.CL, CHILE
 RUBÉN CARNERERO, INGURUMENAREN KIDEAK INGENIERÍA S.L., SPAIN
- T22 Innovative product design and recycling: Comparative sustainability assessment of the building material POLLI-Brick**
 Jannis Paul Hegenwald, Robert Ackermann, Matthias Finkbeiner, SABRINA NEUGEBAUER
Technische Universität Berlin, Germany
- T23 LCA, ecodesign and ethics for a complete revised coffee cycle: A taste of innovation**
 PHILIPPE SCHIESSER¹, Sylvain Grelet¹, Delphine Brudoux², Jean-Pierre Blanc²
¹ECOEFF, France; ²Malongo, France
- T24 Bio-based engineering plastics a tool to reduce carbon footprint**
 LINNEA TERES PETERSSON¹, Harald Martini¹, Matteo Chiaravalli², Valter Patrino², Ulrika Överstam¹, Lennart Swanström¹
¹ABB Corporate Research, Sweden; ²ABB S.p.A., Italy

INNOVATION AND PRODUCT DEVELOPMENT: INTERACTIVE

CHAIRS: NIKI BEY, THE TECHNICAL UNIVERSITY OF DENMARK, DENMARK
MATTIAS LINDAHL, LINKÖPING UNIVERSITY, SWEDEN

T25 Enabling eco-innovations – A framework for sustainable product development

JUTTA HILDENBRAND, Ida Gremyr, Hendry Raharjo, Steven Sarasini
Chalmers University of Technology, Sweden

T26 Life cycle management in a novel consumer product: Self-chilling beverage cans

NOEMI ARENA^{1,2}, Jacquetta Lee¹, Roland Clift¹, Norman Kirkby¹, Mitchell Joseph³, Mark Sillince²
¹University of Surrey, United Kingdom; ²Joseph Global Interests Ltd. United Kingdom; ³Joseph Company International, United States of America

T27 A practical method for DfE at Volvo Penta

Lisbeth Dahllöf¹, EVA AXELSSON²
¹Volvo ATR, Sweden; ²Volvo Penta, Sweden

GOVERNANCE OF CRITICAL RAW MATERIALS

CHAIRS: MARIA LJUNGGREN SÖDERMAN, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
STEVEN B YOUNG, UNIVERSITY OF WATERLOO, CANADA

T30 Dynamic substance flow analysis of neodymium and dysprosium associated with Nd magnets in Japan

NOBUO SEKINE, Ichiro Daigo, Yasunari Matsuno, Yoshikazu Goto
The University of Tokyo, Japan

T31 Historic and future flows of critical materials resulting from deployment of photovoltaics

TILL ZIMMERMANN, Stefan Gößling-Reisemann
University of Bremen, Germany

T32 Life cycle assessment of rare earths under consideration of new supply trends

Roberta Stefanie Graf¹, Michael Held², JAN PAUL LINDNER²
¹University of Stuttgart, Germany; ²Fraunhofer Institute for Building Physics IBP, Germany



MANAGEMENT OF NATURAL RESOURCES – ABIOTIC

CHAIRS: NYDIA SUPPEN, CENTER FOR LCA AND SUSTAINABLE DESIGN, MEXICO

ANDERS HAMMER STRØMMAN, NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, NORWAY

- T33 Assessing the direct and indirect costs of depleting petroleum resources using energy forecast modelling**
Farshid Fatemi, Cecile Bulle, MANUELE MARGNI
¹CIRAIG, Ecole Polytechnique de Montreal, Canada
- T34 Dynamic modeling of World Steel cycle toward 2050**
NIINA FUJITSUKA¹, Ichiro Daigo¹, Yoshikazu Goto¹, Ken Nakajima², Yasunari Matsuno¹
¹the University of Tokyo, Japan; ²National Institute for Environmental Studies, Japan
- T35 LCA of innovative technologies: Bioelectrochemical systems for metals recovery from metallurgical waste streams**
ANTONINO MARVUGLIA¹, Elorri Igos¹, Enrico Benetto¹, Alex Cornelissen¹, Martijn Bijmans², Jaakko Puhakka³, Mark Dopson⁴, Steve Tennison⁵, Adriaan Jeremiasse⁶, Fransisco Fabregat⁷
¹Public Research Centre Henri Tudor, Luxembourg; ²Wetsus, Centre of excellence for sustainable water technology, Netherlands; ³Tampere University of Technology, Finland; ⁴Linnaeus University, Sweden; ⁵MAST Carbon International Ltd., United Kingdom; ⁶MAGNETO special anodes B.V., Netherlands; ⁷University Jaume I, Spain
- T36 LCA of potentially breakthrough technologies: Novel bio-electrochemically assisted system for nutrients recovery from urine**
ELORRI IGOS¹, Antonino Marvuglia¹, Enrico Benetto¹, Alex Cornelissen¹, Martijn Bijmans², Madalena Alves³, Adriaan Jeremiasse⁴, Brendo Meulman⁵, Steve Tennison⁶, Francisco Muñoz⁷
¹Public Research Centre Henri Tudor, Luxembourg; ²Wetsus, Centre of excellence for sustainable water technology, Netherlands; ³Universidade do Minho, Portugal; ⁴MAGNETO special anodes B.V., Netherlands; ⁵DeSaH B.V., Netherlands; ⁶MAST Carbon International Ltd., United Kingdom; ⁷Abengoa Water, Spain
- T37 Estimation of in-use stock and future demand of steel for world railway**
NAOKI TOGAWA, Yasunari Matsuno
The University of Tokyo, Japan
- T38 Life cycle assessment of phosphorous recovery from sewage sludge**
Birgitte Lilholt Sørensen, OLE DALL
University of Southern Denmark, Denmark

EXPLORING CHALLENGES AND OPPORTUNITIES OF LCM AND LCA – INDUSTRY CASES

CHAIRS: ANDREAS UIHLEIN, SCA, GERMANY
ERIKA KLOOW, TETRA PAK, SWEDEN

T39 Business strategies and practices toward conflict-free metal supply

STEVEN B YOUNG
University of Waterloo, Canada

T40 PepsiCo Europe's experience with a GHG hotspot analysis

Jenny Bell¹, Xana Villa Garcia², BARBARA HERMANN¹, Will Schreiber², Samantha Gue¹
¹PepsiCo Europe, United Kingdom; ²Best Foot Forward, United Kingdom

ROLES AND RESPONSIBILITIES IN BUILDING AND CONSTRUCTION

CHAIRS: HOLGER WALLBAUM, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
MICHAEL SCHARPF, HOLCIM TECHNOLOGY LTD, SWITZERLAND

T41 Exploring the regulative drivers and barriers for low impact building materials in the UK

NATASHA N WATSON
University of Bath / IDC in Systems / Buro Happold Ltd., United Kingdom

T42 Passive housing – New roles and responsibilities for the building chain

BIRGIT BRUNKLAUS, Henrikke Baumann
Chalmers University of Technology, Sweden

T43 LCA-supported policies for the energy consumption reduction in the building sector: The Italian Alessandria province case study

GIOVANNI DOTELLI¹, Marco Borgarello², Francesca Carrara²
¹Politecnico di Milano, Italy; ²RSE, Ricerca Sistema Energetico, Italy

T44 Life cycle assessment of fire retardant treated wooden claddings

SELAMAWIT MAMO FUFA, Rolf André Bohne
Norwegian University of Science and Technology, Norway

T45 Life cycle assessment of Norwegian standard road tunnel

LIZHEN HUANG, Rolf André Bohne, Amund Bruland, Astrid Salomonsen
Norwegian University of Science and Technology, Norway



T46 Use of life cycle thinking for environmental impact assessment of building materials: New developments of LEED certification system.

CRISTIANE BUENO, João Adriano Rossignolo, Aldo Roberto Ometto
University of Sao Paulo, Brazil

ROLES AND RESPONSIBILITIES IN THE MOBILITY SECTOR

CHAIRS: STEPHAN KRINKE, VOLKSWAGEN AG, GERMANY
CHRISTOPH HERRMANN, TU BRAUNSCHWEIG, GERMANY

T47 Key methodological aspects for the assessment of surface freight transport activities in a LCA analysis

Jorge Leon, ANTONIO DOBON, Mercedes Hortal
ITENE, Spain

T48 Life cycle assessment of electric vehicles – recent insights and developments

ANDERS HAMMER STRØMMAN, Guillaume Majeau-Bettez, Linda Ager-Wick Ellingsen, Bhawna Singh, Troy Hawkins
Norwegian University of Science and Technology, Norway

T49 Methodical approach for C-LCA for the analysis of electric vehicle charging strategies affecting the short-term electricity generation

EVA SZCZECZOWICZ, Stephan Rath, Thomas Helmschrott
RWTH Aachen University, Germany

T50 Promoting sustainable mobility through the ecodesign of multifunctional urban infrastructures in the context of smart cities

JOAN-MANUEL F. MENDOZA¹, Esther Sanyé-Mengual¹, Sara Angrill¹, Sara Gonzalez-Garcia², Raul Garcia-Lozano³, Gumersindo Feijoo², Maite Moreira², Alejandro Josa⁴, Xavier Gabarrell^{1,3}, Joan Rieradevall^{1,3}
¹Universitat Autònoma de Barcelona, Spain; ²University of Santiago de Compostela, Spain; ³Inèdit Innovació, S.L. Parc de Recerca de la UAB, Spain; ⁴Technical University of Catalonia-Barcelona Tech, Spain

T51 Tools and responsibilities for planning in the mobility sector

HÅVARD BERGSDAL, Johan Berg Pettersen
MiSA AS, Norway

**T52 Introducing a Pigovian taxation model for road sector vehicles: Based on life cycle management
– A Sri Lankan case study**

CHALAKA ASVITH FERNANDO
University of Moratuwa, Sri Lanka

Schedule

WEDNESDAY, AUGUST 28

08.30 am – 10.00 am

COFFEE BREAK AND POSTER SESSION

10.00 am – 10.30 am

BROADENING THE SCOPE OF LCA – LCSA

LOCATION: DROTTNING 1

CHAIRS: JEROEN GUINÉE, LEIDEN UNIVERSITY, NETHERLANDS
MARTIN K. PATEL, UTRECHT UNIVERSITY, NETHERLANDS

08.30 am Integrated data collection for life cycle sustainability assessment (LCSA) of selected Asian aquaculture systems

Patrik Henriksson, JEROEN GUINÉE
Leiden University, Netherlands

08.45 am Social assessment of technologies: The innovative approach of PROSUITE

JOÃO FONTES¹, Piet Sellke², Andreas Ciroth³, Andrea Ramírez⁴
¹PRé, Netherlands; ²Dialogik, Germany; ³GreenDeltaTC, Germany; ⁴Utrecht University, Netherlands

09.00 am Life cycle sustainability assessment for large scale projects in manufacturing and plant industries

ANGELO MARINO HUBER, Heinz Karl Prammer
Johannes Kepler University, Austria

09.15 am Use of multi criteria decision analysis to support life cycle sustainability assessment: An analysis of the appropriateness of the available methods

MARCO CINELLI, Stuart Coles, Kerry Kirwan
University of Warwick, United Kingdom

09.30 am Gaps in assessing sustainability and proposal of a tiered approach

SABRINA NEUGEBAUER, Ya-Ju Chang, Matthias Finkbeiner
TU Berlin, Germany

09.45 am Multi-criteria assessment model for carbon capture and storage systems

ERIK SKONTORP HOGNES, Amy L. Brunsfold, Jana P. Jakobsen, Simon Roussanaly
SINTEF Trondheim, Norway



END OF LIFE MANAGEMENT

LOCATION: DROTTNING 2

CHAIRS: LAURA CUTAIA, ENEA, ITALY
CHRISTER FORSGREN, STENA RECYCLING INTERNATIONAL, SWEDEN

08.30 am Potential benefits of using downstream MFA as a management tool at the company level

DEREK DIENER, Anne-Marie Tillman
Chalmers University of Technology, Sweden

08.45 am Tracing the destination of materials over time across final products: A hybrid input-output approach with application to ferrous materials embedded in motor vehicles

SHINICHIRO NAKAMURA¹, Shigemi Kagawa², Yasushi Kondo¹, Kazuyo Matsubae³, Kenichi Nakajima⁴, Tetsuya Nagasaka³
¹Waseda University, Japan; ²Kyushu University, Japan; ³Tohoku University, Japan; ⁴National Institute of Environmental Studies, Japan

09.00 am Screening the losses of scarce metals in vehicle recycling

MARIA H LJUNGGREN SÖDERMAN, Magnus Andersson
Chalmers University of Technology, Sweden

09.15 am How to deal with the end-of-life of bio-based plastics in a LCA: Current challenges and proposals

ANTONIO DOBON, Anne Sophie Le Meur, Mercedes Hortal
Packaging, Transport and Logistics Research Center, Spain

09.30 am Sustainable valorization of piggery wastes for resource efficiency and greener environment

IFE KEHINDE ADEWUMI^{1,2,3}, Adeyinka Adebayo², Wemimo Oluwasola^{2,3}, Adesuji Adejuwon², Oswald Olatunbosun⁴
¹Niger Delta University, Nigeria; ²Obafemi Awolowo University, Nigeria; ³Greener Environment Management/Support (GEMS), Nigeria; ⁴Oke-Aro Piggery Farm Estate, Nigeria

09.45 am Conception of an automated plant for the disassembly of lithium-ion batteries

Michael Weyrich, NIRUGAA NATKUNARAJAH
University of Siegen, Germany

LCM AND DECISION MAKING – WHAT WE HAVE LEARNT

LOCATION: BREV 1 AND 2

CHAIRS: JIM PETRIE, UNIVERSITY OF SYDNEY, AUSTRALIA
JAMES FAVA, PE INTERNATIONAL, UNITED STATES OF AMERICA

08.30 am Choosing the right LCA modelling perspective depending on the decision-context: A decision-tree approach

ENRICO BENETTO¹, Mélanie Guiton¹, Antonino Marvuglia¹, Ian Vázquez-Rowe¹, Elorri Igos¹, Sameer Rege¹, Emil Popovici¹, Jade Garcia²

¹Public Research Centre Henri Tudor, Luxembourg; ²SCORE LCA, France

08.45 am Spread in LCA results from using multiple data sets and modelling choices: A case study of disposable PS cups

EUGENIE VAN DER HARST¹, José Potting^{1,2}

¹Wageningen University and Research, Netherlands, ²KTH Royal Institute of Technology, Sweden

09.00 am An approach to integrate LCA-based models into the early stages of an eco-design process for buildings

YANN LEROY¹, François Cluzel¹, Toufic Zaraket¹, Sébastien Lasvaux², Maia Bentos¹

¹Ecole Centrale Paris, France; ²Centre Scientifique et Technique du Bâtiment, France

09.15 am Developing a roadmap for the coal industry in South Africa

BRETT COHEN

The Green House, South Africa

09.30 am Data provision and use in LCM: Responsibilities of stakeholders concerning adequate data

MARTIN BAITZ

PE International, Germany

09.45 am Discussion



MANAGEMENT OF NATURAL RESOURCES – BIOTIC

LOCATION: BREV 3

CHAIRS: GEORGE AFRANE, UNIVERSITY OF GHANA, GHANA
SARAH MCLAREN, MASSEY UNIVERSITY, NEW ZEALAND

08.30 am Global warming and bioenergy

ANDERS HAMMER STRØMMAN, Francesco Cherubini, Ryan Bright
Norwegian University of Science and Technology, Norway

08.45 am Analysis of activities along the cocoa supply chain in Ghana and their effect on the sustainability matrix of the industry

GEORGE AFRANE¹, Henrikke Baumann²
¹University of Ghana, Ghana; ²Chalmers University of Technology, Sweden

09.00 am Environmental assessment of biogas plant in Nepal

PRADIP GAUTAM
ParaCon Private Limited, Nepal

09.15 am Increasing the sustainability of durum wheat cultivation through a life cycle assessment approach

Luca Ruini¹, Filippo Sessa², MASSIMO MARINO², Pierluigi Meriggi³, Matteo Ruggeri⁴
¹Barilla, Italy; ²Life Cycle Engineering, Italy; ³Horta, Italy; ⁴Università Cattolica del Sacro Cuore, Italy

09.30 am Reducing impacts of forestry – The fallacy of low-intensity management

BO WEIDEMA
Aalborg University, Denmark / The ecoinvent Centre, Switzerland

09.45 am Who needs to know what about energy use? The palm oil biofuel case

MAGDALENA SVANSTRÖM¹, Rickard Arvidsson¹, Kristin Fransson¹, Morgan Fröling², Sverker Molander¹
¹Chalmers University of Technology, Sweden; ²Mid Sweden University, Sweden

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Schedule

WEDNESDAY, AUGUST 28

10.30 am – 12.00 pm

LUNCH AND POSTER SESSION

12.00 pm – 01.30 pm

THEMATIC LUNCH SESSION

12.20 pm – 01.15 pm

**CHALMERS AREAS OF ADVANCE
– CROSS-BORDER RESEARCH AND OUTREACH**
Hosted by Chalmers University of Technology

BROADENING THE SCOPE OF LIFE CYCLE APPROACHES

LOCATION: DROTTNING 1

CHAIRS: ANDREAS CIROTH, GREENDELTA, GERMANY
YASUHIRO FUKUSHIMA, NATIONAL CHENG KUNG UNIVERSITY, TAIWAN

10.30 am An environmental assessment framework with systematic regional and time scenarios

Thomas Gibon, EDGAR HERTWICH, Richard Wood
Norwegian University of Science and Technology, Norway

10.45 am How can temporal considerations open new opportunities for LCA industry applications?

Didier Beloin-Saint-Pierre¹, Annie Levasseur², Ariane Pinsonnault², Manuele Margni², ISABELLE BLANC¹
¹MINES ParisTech, France; ²CIRAIG, Polytechnique de Montréal, Canada

11.00 am Expanding life cycle assessment methodology to capture induced impacts in the built environment

JOHN ERIK ANDERSON
University Munich, Germany

11.15 am Applying agent-based modelling for consequential life cycle assessment of agro-systems: Challenges, strategies and assets

ANTONINO MARVUGLIA, Sameer Rege, Ian Vázquez-Rowe, Enrico Benetto
Public Research Centre Henri Tudor, Luxembourg

11.30 am Needs of an integrated assessment of road construction and maintenance considering damages from extreme climate events in developing tropical area

YASUHIRO FUKUSHIMA, Shih-Hsien Yang, Fitria Fitria
National Cheng Kung University, Taiwan

11.45 am Life cycle assessment (LCA) of nanomaterials: A comprehensive approach.

CARME HIDALGO, Gemma Janer, Socorro Vázquez-Campos, David González, Ezequiel Mas, Elisabet Fernández-Rosas, Gemma Vilar, Marta Escamilla
Leitat Technological Center, Spain



SUSTAINABLE PRODUCTION 1

LOCATION: DROTTNING 2

CHAIRS: BJÖRN JOHANSSON, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
MAHESH MANI, UNIVERSITY OF MARYLAND, UNITED STATES OF AMERICA

10.30 am Tolerance optimization for economic and ecological sustainability using RD&T

STEVEN HOFFENSON, Andreas Dagman, Rikard Söderberg, Bengt Steen
Chalmers University of Technology, Sweden

10.45 am Information structure for manufacturing sustainability assessment: STEP for LCA

Yaoyao Fiona Zhao¹, NICOLAS PERRY², Hery Andrianakaja³
¹McGill University, Canada; ²I2M – Arts et Metiers ParisTech, France; ³I2M – U-Bordeaux, France

11.00 am A cradle-to-gate life cycle assessment of an industry cluster of five chemical companies

FRIDA RØYNE¹, Johanna Berlin¹, Emma Ringström², Ana Martha Coutiño²
¹SP Technical Research Institute of Sweden, Sweden; ²AkzoNobel Sustainability, Sweden

11.15 am Managing environmental sustainability in the textile supply chain

MIREILLE CHLOÉ FAIST EMMENEGGER¹, Katharina Meyer², Michela Gioacchini², Daniele Massetti²,
Heinz Zeller², Rainer Zah¹
¹Empa, Switzerland; ²Hugo Boss Tricino SA, Switzerland

11.30 am Methodological issues in LCA of wastewater treatment combined with PHA biopolymer production

SARA HEIMERSSON¹, Magdalena Svanström¹, Fernando Morgan-Sagastume², Gregory Peters¹,
Alan Werker²
¹Chalmers University of Technology, Sweden; ²AnoxKaldes, Sweden

11.45 am Operationalising sustainability aspects for production development

JUTTA HILDENBRAND, Anne-Marie Tillman
Chalmers University of Technology, Sweden

EXPLORING CHALLENGES AND OPPORTUNITIES OF LCM AND LCA FOR THE INDUSTRY: PANEL

LOCATION: BREV 1 AND 2

CHAIRS: MARTINA PROX, IFU INSTITUT FUER UMWELTINFORMATIK HAMBURG GMBH, GERMANY
MIEKE KLEIN, IFU INSTITUT FUER UMWELTINFORMATIK HAMBURG GMBH, GERMANY

The topic “Exploring challenges and opportunities of LCM and LCA” is addressed in three sessions during the conference, forming a track of presentations, panel debate and round table discussions. Visit these three sessions and bring experiences and thoughts from one to another. Questions and ideas from earlier sessions will introduce the final round table session where there will be room for joint and interactive discussions. The session chairs hope that this will lead to an inspiring overall exploration of challenges and opportunities of LCM and LCA!

10.30 am **A product chain organization study of certified cocoa supply**

George Afrane¹, Rickard Arvidsson², HENRIKKE BAUMANN^{2,3}, Josefin Borg², Emma Keller⁴, Llorenç Mila-i-Canals⁴, Julie K Selmer²

¹University of Accra, Ghana; ²Chalmers University of Technology, Sweden; ³Erasmus University Rotterdam, Netherlands; ⁴Unilever, United Kingdom

10.45 am **The benefits of applying project management tools to life cycle assessments**

SUSANNE VEITH¹, Carina Alles², Ivo Mersiowsky³, Debbra Johnson⁴

¹DuPont Engineering & Research Technology, Belgium; ²DuPont International Operations Sarl, Switzerland; ³DEKRA Consulting GmbH, Germany; ⁴DuPont Sustainable Solutions, United States of America

11.00 am **Using water footprinting on a regular basis – Problems and current developments from an industry perspective**

ANDREAS UIHLEIN¹, Ellen Riise²

¹SCA, Germany, ²SCA Hygiene Products, Sweden

11.15 am **Panel discussion**



FOOD WASTE IN A VALUE CHAIN PERSPECTIVE 1

LOCATION: BREV 3

CHAIRS: OLE JØRGEN HANSEN, OSTFOLD RESEARCH, NORWAY
CLEMENTINE O'CONNOR, BIO INTELLIGENCE SERVICE, FRANCE

10.30 am Food waste in the supply chain – Impacts on the product carbon footprint

EVELI SOODE¹, Paul Lampert², Gabriele Weber-Blaschke¹

¹Technische Universität München, Germany; ²Weihenstephan-Triesdorf University of Applied Sciences, Germany

10.45 am Food waste prevention: The challenge of making appropriate definitional and methodological choices for quantifying food waste levels

KARIN ÖSTERGREN¹, Gina Anderson², Sophie Eastreal³, Jenny Gustavsson¹, Ole Jørgen Hanssen⁴, Graham Moates⁵, Hanne Møller⁴, Alessandro Politano⁶, Tom Quested³, Barbara Redlingshofer⁷, Felicitas Schneider⁸, Kirsi Silvennoinen⁹, Åsa Stenmarck¹⁰, Han Soethoudt¹¹, Keith Waldron⁵

¹SIK The Swedish Institute for Food and Biotechnology, Sweden; ²BIO Intelligence Service, France; ³WRAP Waste & Resources Action Programme, United Kingdom; ⁴Ostfoldforskning, Norway; ⁵Institute of Food Research, United Kingdom; ⁶University of Bologna, Italy; ⁷INRA Institute National de la Recherche Agronomique, France; ⁸BOKU Universität für Bodenkultur Wien, Austria; ⁹MTT Agrifood Research, Finland; ¹⁰IVL Swedish Environmental Institute, Sweden; ¹¹Wageningen UR, Netherlands

11.00 am The role of cities in preventing food waste

CLEMENTINE O'CONNOR

BIO Intelligence Service, France

11.15 am Ecological food waste – Comparing small and large food retailers

BIRGIT BRUNKLAUS¹, Johanna Berlin²

¹Chalmers University of Technology, Sweden; ²SP Technical Research Institute of Sweden, Sweden

11.30 am Discussion

11.45 am Poster highlight

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Schedule

WEDNESDAY, AUGUST 28

01.30 pm – 02.30 pm

MANAGEMENT OF SEAFOOD AND FISHERIES

LOCATION: DROTTNING 1

CHAIRS: IAN VÁZQUEZ-ROWE, CRP HENRI TUDOR, LUXEMBOURG
FRIEDERIKE ZIEGLER, SIK THE SWEDISH INSTITUTE FOR FOOD AND BIOTECHNOLOGY, SWEDEN

01.30 pm **Poster highlight**

01.40 pm **Life cycle thinking as a tool to better inform fisheries management**

SARA HORNBERG

SIK The Swedish Institute for Food and Biotechnology, Sweden / The University of Gothenburg, Sweden

01.50 pm **Anchors aweigh: The application of consequential LCA perspective in fishing systems**

IAN VÁZQUEZ-ROWE, Enrico Benetto

CRP Henri Tudor, Luxembourg

02.00 pm **The influence of fisheries management on the fuel efficiency of demersal trawl fisheries in Sweden**

FRIEDERIKE ZIEGLER, Sara Hornborg

SIK The Swedish Institute for Food and Biotechnology, Sweden

02.10 pm **From life-cycle research to living and cycling research: A case in UK seafood.**

ANGUS GARRETT

Seafish, United Kingdom

02.20 pm **Discussion**



SUSTAINABLE PRODUCTION 2

LOCATION: DROTTNING 2

CHAIRS: BJÖRN JOHANSSON, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
PER HANARP, VOLVO GROUP, SWEDEN

01.30 pm Wrought-to-wrought Strategies: Economic and ecological aspects regarding aluminium recycling

JOHANNE HAMMERVOLD, Johan Pettersen
Misa AS, Norway

01.45 pm Waste prevention in the photovoltaic sector by industrial symbiosis

Silvia Scherhauser, Peter Beigl, GUDRUN OBERSTEINER
University of Natural Resources and Life Sciences Vienna, Austria

02.00 pm Making viable the recycling of carbon fiber/thermoset matrix composites: First elements of study

Marion Prinçaud¹, Stéphane Pompidou², Hery Andriankaja², Guido Sonnemann¹, NICOLAS PERRY³
¹University Bordeaux, ISM, France; ²University Bordeaux, I2M, France.; ³Arts et Metiers ParisTech, I2M, France

02.15 pm Green KPIs as drivers for environmental improvements on shop floor level – A case study at ABB

LINNEA PETERSSON¹, Lennart Swanström¹, Monica Bellgran²
¹ABB AB, Corporate Research, Sweden; ²Mälardalen University, Sweden

EXPLORING CHALLENGES AND OPPORTUNITIES OF LCM AND LCA FOR THE INDUSTRY: ROUND TABLE

LOCATION: BREV 1 AND 2

CHAIRS: ÅSA MOBERG, KTH ROYAL INSTITUTE OF TECHNOLOGY, SWEDEN

The topic “Exploring challenges and opportunities of LCM and LCA” is addressed in three sessions during the conference, forming a track of presentations, panel debate and round table discussions. Visit these three sessions and bring experiences and thoughts from one to another. Questions and ideas from earlier sessions will introduce the final round table session where there will be room for joint and interactive discussions. The session chairs hope that this will lead to an inspiring overall exploration of challenges and opportunities of LCM and LCA!

FOOD WASTE IN A VALUE CHAIN PERSPECTIVE 2

LOCATION: BREV 3

CHAIRS: OLE JØRGEN HANSSEN, OSTFOLD RESEARCH, NORWAY
CLEMENTINE O’CONNOR, BIO INTELLIGENCE SERVICE, FRANCE

01.30 pm Food waste volume and composition in Helsinki region households

KIRSI SILVENNOINEN

MTT Agrifood Research Finland, Finland

01.45 pm Food losses in the life cycle of lasagne Bolognese: Ready-to-serve vs. home-made

KARIN FLURY¹, Niels Jungbluth¹, Graham Houlder²

¹ESU-services, Switzerland; ²EAFA – European Aluminium Foil Association e.V., Germany

02.00 pm Prevention of food waste in a value chain approach

Hanne Møller, Andreas Brekke, Ole Jørgen Hanssen, ERIK SVANES

Ostfold Research, Norway

02.15 pm The influence of food packaging sizes on household food waste and environmental impacts

HANNA HARTIKAINEN, Juha-Matti Katajajuuri, Karetta Timonen

MTT Agrifood Research Finland, Finland



Schedule

WEDNESDAY, AUGUST 28

02.45 pm – 03.45 pm

FARWELL COFFEE

03.45 pm – 04.15 pm

EXCURSION

04.15 pm – 06.15 pm

**VISIT TO A METAL SCRAP
RECYCLING FACILITY**

Hosted by Stena International Recycling

PLENARY SESSION: CLOSING CEREMONY

LOCATION: DROTTNING 1 AND 2

MODERATOR: SUSAN ILIEFSKI-JANOLS

02.45 pm **Introduction and sum up**

Susan Iliefski-Janols

SCA Hygiene Products

Beyond Zero – Bringing life cycle management to life in SKF

Rob Jenkinson

Director of Corporate Sustainability SKF

Sustainability reporting as a key in LCM – the role of GRI

Teresa Fogelberg

GRI's Deputy Chief Executive

Thank you all

Emma Rex

Chair of LCM 2013

Welcome to LCM 2015

Guido Sonnemann

Organizing committee LCM 2015



Posters

WEDNESDAY, AUGUST 28

08.00 am – 04.15 pm

LOCATION: POSTER AREA,
GROUND FLOOR

BROADENING THE SCOPE OF LCA – LCSA

CHAIRS: JEROEN GUINÉE, LEIDEN UNIVERSITY, NETHERLANDS
MARTIN K. PATEL, UTRECHT UNIVERSITY, NETHERLANDS

W1 S-LCA: Statistical evaluation of social subcategories and human rights

CASSIA MARIA LIE UGAYa, Leandro Alves dos Santos, Leticia Costa
UTFPR, Brazil

W2 Sustainability assessment for wood product value chains: A case study of paper production

CHRISTEL LUBENAU¹, Remigius Hammerl², Stefan Friedrich², Gabriele Weber-Blaschke¹, Klaus Richter¹
¹Technische Universität München, Germany; ²Bayerische Landesanstalt für Wald und Forstwirtschaft, Germany

W3 Broaden the scope of LCA: What does it mean?

Andreas Brekke, CLARA VALENTE
Ostfold Research, Norway

W4 How can fossil fuel based public bus transport systems become a sustainable solution for Swedish medium-sized cities?

SVEN BORÉN, Lisiana Nurhadi, Henrik Ny
Blekinge Institute of Technology, Sweden

W5 Results of an economic assessment using Hybrid-IO analysis for the life-cycle impacts of prospective technologies

Richard Wood, Edgar Hertwich, THOMAS GIBON
NTNU, Norway

W6 Development of methodology to quantify environmental, economic and social impacts related to agricultural production

NAOKI YOSHIKAWA, Koji Amano, Koji Shimada
Ritsumeikan University, Japan

W7 Sustainable tourism: Outlook on issues and analysis

Markku Kankkunen¹, Oksana Korshunova², ALEXANDER ALEXANDROVICH VORONOV³
¹Savonlinna City Administration, Finland; ²Saint-Petersburg Gymnasium 32, Russia; ³Saint-Petersburg University of Economics, Russia



W8 Life cycle sustainability assessment (LCSA) comparison of modern bikes

Ya-Ju Chang, SABRINA NEUGEBAUER, Matthias Finkbeiner

Technische Universität Berlin, Germany

BROADENING THE SCOPE OF LIFE CYCLE APPROACHES

CHAIRS: ANDREAS CIROTH, GREENDELTA, GERMAN

YASUHIRO FUKUSHIMA, NATIONAL CHENG KUNG UNIVERSITY, TAIWAN

W10 Bring on the 'soft' sciences: Exploring implications of grounding life cycle methods in three socio-material philosophies

MATHIAS LINDKVIST¹, Henrikke Baumann^{1,2}

¹Chalmers University of Technology, Sweden; ²Erasmus University Rotterdam, Netherlands

W11 From detailed LCA to simplified model: An oriented decision makers approach to assess energy pathways

PIERRYVES PADEY^{1,2}, Denis Le Boulch¹, Isabelle Blanc²

¹EDF, France; ²Mines ParisTech, France

W12 Global warming potential of solar cells: a comparison of static and dynamic LCA

BERTRAND LARATTE, Bertrand Guillaume, Junbeum Kim

University of Technology of Troyes, France

W13 Life cycle assessment of compressed air energy storage (CAES) using a multiregional integrated model

EVERT ALWIN BOUMAN, Martha Marie Øberg, Edgar Hertwich

Norwegian University of Science and Technology, Norway

W14 Unified theory of allocations and constructs in life cycle assessment and input-output analysis

GUILLAUME MAJEAU-BETTEZ, Richard Wood, Anders H. Strømman

Norwegian University of Science and Technology, Norway

W15 Combination of life cycle assessment (LCA) and hazard analysis control critical points (HACCP) in food industry

FERNANDO SARRIA QUESADA¹, Yulexis Meneses Linares², Elena Rosa Dominguez³

¹Grupo LABIOFAM Cuba, Cuba; ²Centro Nacional de Control de la Calidad. Cuba; ³Universidad Central de las Villas, Cuba

SUSTAINABLE PRODUCTION

CHAIRS: BJÖRN JOHANSSON, CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN
MAHESH MANI, UNIVERSITY OF MARYLAND, UNITED STATES OF AMERICA

W16 Evaluation of Brazilian scenarios of reverse logistics of air compressors using the life cycle assessment (LCA) method

VANESSA MESQUITA SANTANA, Edivan Cherubini, Cristiane Maria de Léis, Sebastião Roberto Soares
UFSC, Brazil

W17 Factory of the future – Toward a near-zero environmental footprint in wood panels manufacturing

EMIL POPOVICI¹, Enrico Benetto¹, Giorgio Cerniglia², Marko Becker²
¹CRP Tudor Luxembourg, Luxembourg; ²Kronospan Luxembourg S.A., Luxembourg

W18 LIFE HAProWINE: Wine sustainable production

Yolanda Núñez¹, Marta López¹, Lorena Pereda¹, Rocío Clemente¹, SOLEDAD GÓMEZ², Jesús Angel Díez², Cristina Gazulla³, Viviana Carrillo⁴, Flora D'Souza⁴, Alexander Liedke⁴, Marta Cano²
¹CTME Foundation, Spain; ²Patrimonio Natural de Castilla y León Foundation, Spain; ³Cátedra UNESCO de Ciclo de Vida y Cambio Climático; ⁴PE International

W19 Lightweight materials sustainable production in China and comparative life cycle analysis of autoparts design

FENG GAO, Zuoren Nie, Xianzheng Gong, Zhihong Wang, Suping Cui, Yu Liu
Beijing University of Technology, China

W20 Enhancing the life-cycle environmental performance of an energy system for the coproduction of synthetic biofuels and electricity

DIEGO IRIBARREN¹, Ana Susmozas¹, Javier Dufour^{1,2}
¹Instituto IMDEA Energía, Spain; ²Rey Juan Carlos University, Spain

W21 Study to reduce the carbon emissions resulting from the transition during the operation of production lines

KHALED OSMAN
Syrian Arab Organization for Standardization And Metrology (SASMO), Syrian Arab Republic



EXPLORING CHALLENGES AND OPPORTUNITIES OF LCM AND LCA FOR THE INDUSTRY: PANEL

CHAIRS: MARTINA PROX, IFU INSTITUT FUER UMWELTINFORMATIK HAMBURG GMBH, GERMANY
MIEKE KLEIN, IFU INSTITUT FUER UMWELTINFORMATIK HAMBURG GMBH, GERMANY

W22 Electric mobility as a driver for life cycle management

SEBASTIAN FINKE, Benjamin Bossdorf-Zimmer
Volkswagen AG, Germany

W23 LCA methodology from analysis to actions: some Barilla's examples of improvement projects

Assunta Filareto¹, Luca Ruini², Ferri Rossella², MASSIMO MARINO¹
¹Life Cycle Engineering, Italy; ²Barilla G. R. Fratelli S.p.A, Italy

W24 Life cycle management through business driven sustainability management systems

LENNART SWANSTRÖM¹, Michail Pagounis², Richard Almgren³
¹ABB AB Corporate Research, Sweden; ²ABB Asea Brown Boveri Ltd, Switzerland; ³Linköping University, Sweden

MANAGEMENT OF NATURAL RESOURCES – BIOTIC

CHAIRS: GEORGE AFRANE, UNIVERSITY OF GHANA, GHANA
SARAH MCLAREN, MASSEY UNIVERSITY, NEW ZEALAND

W25 Life cycle assessment, tool for sustainability management

CARLOS NARANJO¹, Oscar Ortiz²
¹Gaia Environmental Services, Colombia; ²Universidad de Pamplona, Colombia

W26 Using life cycle management on farm – How LCI data can help farmers produce more with less

TIMOTHY GRANT¹, Helene Cruyppenninck¹, Sandra Eady², Gonzalo Mata²
¹Life Cycle Strategies Pty Ltd, Australia; ²CSIRO Animal, Food and Health Sciences, Australia

W27 Life Cycle footprinting of U.S. Milk

YING WANG¹, Lindsay Lessard², Sebastian Humbert², Andrew Henderson³, Olivier Jolliet⁴
¹Innovation Center for U.S. Dairy, United States of America; ²Quantis International, Switzerland; ³Univeristy of Texas, United States of America; ⁴University of Michigan, United States of America

W28 Agricultural life cycle assessment (LCA) as a routine exercise in Iran: Opportunities and challengesALI DANESHI¹, Abbas Esmaili-sari¹, Mohamad Daneshi², Henrikke Baumann³¹Tarbiat Modares University, Iran; ²Tehran Pegah factory, Iranian Dairy Industries Co, Iran; ³Chalmers University of Technology, Sweden**W29 Methodology for LCA of biorefineries**SERINA AHLGREN¹, Anna Ekman², Hanna Karlsson¹, Anna Björklund³¹Swedish University of Agricultural Sciences, Sweden; ²Lund University, Sweden; ³KTH, Royal Institute of Technology, Sweden**W30 Clothes made from eucalyptus – Our future?**SANDRA ROOS^{1,2}, Greg Peters²¹Swerea IVF AB, Sweden; ²Chalmers University of Technology, Sweden**W31 Reproduction of land fertility**

VERA PECHENKINA

Krasnoyarsk State Agrarian University, Russia

FOOD WASTE IN A VALUE CHAIN PERSPECTIVE**CHAIRS:** OLE JØRGEN HANSEN, OSTFOLD RESEARCH, NORWAY

CLEMENTINE O'CONNOR, BIO INTELLIGENCE SERVICE, FRANCE

W32 The beauty and the beast – How quality management criteria at supermarkets create foodwasteDOMINIK FRIELING¹, Verena Stricks¹, Martin Wildenberg¹, Felicitas Schneider²¹GLOBAL 2000, Austria; ²University of Natural Resources and Life Sciences, Institute of Waste Management, Vienna**W33 Packaging – From sinner to saint ... in just 20 years: A resource efficiency story about the absolution of packaging as it is increasingly recognized for the role played in helping society to manage the resources used more efficiently**

GRAHAM HOULDER

European Aluminum Foil Association, Flexible Packaging Europe, Germany



- W34 Influence of agro-food waste on sustainable food consumption**
 GABRIELA CLEMENTE, Macarena Pérez-Sánchez, Javier Ribal, Neus Sanjuán, N. Escobar
Universitat Politècnica de València, Spain
- W35 Valorization of meat waste from retail stores**
 INGRID STRID, Mattias Eriksson
Swedish University of Agricultural Sciences, Sweden
- W36 Closing the loop: Feasibility of industrial symbiosis from food processing waste**
 Nadia Mirabella, VALENTINA CASTELLANI, Serenella Sala
University of Milano Bicocca, Italy
- W37 Causes of and strategies for reducing food waste in post farm supply chains**
 INGELA LINDBOM, Jenny Gustavsson, Joakim Forsman, Karin Östergren
SIK the Swedish Institute for Food and Biotechnology, Sweden
- W38 The food waste pilot project – ‘License to Eat’**
 KIRSI SILVENNOINEN, Taija Sinkko
MTT Agrifood Research Finland, Finland

MANAGEMENT OF SEAFOOD AND FISHERIES

- CHAIRS:** IAN VÁZQUEZ-ROWE, CRP HENRI TUDOR, LUXEMBOURG
 FRIEDERIKE ZIEGLER, SIK THE SWEDISH INSTITUTE FOR FOOD AND BIOTECHNOLOGY, SWEDEN
- W41 Life cycle inventory of Asian aquaculture feeds including estimates for dispersion**
 Patrik Henriksson, JEROEN GUINÉE
Leiden University, Netherlands
- W42 Assessing the environmental impact of the fish and seafood consumption patterns in Portugal**
 BELMIRA NETO, Ana Cavadas, António Teixeira, Sara Rodrigues
University of Porto, Portugal
- W43 Collective action to address GHG emissions in seafood – Standards and tool**
 ERIK SKONTORP HOGNES
SINTEF Fisheries and aquaculture, Trondheim, Norway

W44 Variability in fuel efficiency of a north east Atlantic demersal trawl fishery

Evelyn Groen¹, FRIEDERIKE ZIEGLER², Eddie Bokkers², Kine Mari Karlsen³, Linda Veldhuizen², Imke de Boer¹, Kathryn Donnelly³, Veronica Sund², Christoffer Krewer²

¹Wageningen University, Netherlands; ²SIK The Swedish Institute for Food and Biotechnology, Sweden;

³Nofima, Norway

END OF LIFE MANAGEMENT

CHAIRS: LAURA CUTAIA, ENEA, ITALY

CHRISTER FORSGREN, STENA RECYCLING INTERNATIONAL, SWEDEN

W45 Constrains and opportunities in the end of life management of electrical and electronic equipment in Italy

LAURA CUTAIA¹, Claudia Scagliarino², Erika Mancuso¹, Danilo Fontana¹, Mario Jorizzo¹, Loris Pietrelli¹, Claudia Brunori¹, Floriana La Marca²

¹ENEA, Italy; ²University of Rome, Italy

W46 Recycling of glass from end of life vehicles: Environmental impact assessment of different scenarios

SASKIA MARIA MANSHOVEN, Dirk Nelen, An Vercalsteren

VITO, Belgium

W47 End of life management: Life cycle assessment of textile waste treatment by applying recycling techniques

BAHAREH ZAMANI, Magdalena Svanström, Gregory Peters

Chalmers University of Technology, Sweden

W48 Alluring? Feasibility study of an offset plate business model using lithographic aluminium in a closed loop process

AN VERCALSTEREN¹, Veronique Van Hoof¹, Katrien Boonen¹, Marlies Vanhulsel¹, Peter Verschave²

¹VITO, Belgium; ²Agfa Graphics, Belgium

W49 Sustainability assessment of sewage sludge treatment options

ROLF FRISCHKNECHT¹, Sybille Buesser Knoepfel¹, Michèle Baettig²

¹Treeze Ltd., Switzerland; ²Econcept, Switzerland



- W50 Environmental impacts of informal re-use**
 GUDRUN OBERSTEINER, Silvia Scherhauser, Andreas Pertl
University of Natural Resources and Life Sciences, Austria
- W51 Environmental improvement of construction projects by re-use and recycling**
 ANDREAS PERTL, Gudrun Obersteiner
University of Natural Resources and Life Sciences, Austria
- W52 FENIX: A comprehensive on-line tool for evaluating packaging waste management options in Spain and Portugal**
 Alba Bala, Marco Raugei, Pere Fullana i Palmer, CRISTINA GAZULLA
UNESCO, Spain

LCM AND DECISION MAKING – WHAT WE HAVE LEARNT

- CHAIRS:** JIM PETRIE, UNIVERSITY OF SYDNEY, AUSTRALIA
 JAMES FAVA, PE INTERNATIONAL, UNITED STATES OF AMERICA
- W53 The importance of data specificity in climate accounting of waste management systems**
 INGUNN SAUR MODAHL, John Baxter, Kari-Anne Lyng, Silje Arnøy, Hanne Lerche Raadal
Ostfold Research, Norway
- W54 Streamlined carbon footprint computation – A case study in the food industry**
 YIN JIN LEE, Edgar Blanco
Massachusetts Institute of Technology, United States of America
- W55 The life cycle assessment, the carbon footprint and water footprint of a Portuguese wine: Are these complementary or competing decision-supporting tools?**
 BELMIRA A. F. NETO¹, Ana Cláudia Dias², Marina Caldas Machado¹, Leandro Pina²
¹University of Porto, Portugal; ²University of Aveiro, Portugal
- W56 Approaches for active decision making and designing with life cycle assessment: Simplifying/ streamlining, diagramming, and segmented setting of system boundary**
 TOMOHIRO TASAKI
National Institute for Environmental Studies, Japan

W57 Experiences of life cycle assessment methodology in food and chemical industry in Cuba

ELENA ROSA¹, Ana Contreras¹, Ronaldo Santos¹, Nydia Suppen², Mireya Gonzalez², Jo Dewulf³,
Herman Vanlangenhove³

¹Universidad Central de Las Villas, Cuba; ²Centro de Analisis de Cilco de Vida y desarrollo sustentable de Mexico; ³University of Ghent, Belgium

W58 The use of multicriteria analysis – Lessons from sustainability assessment of hygiene products containing new wood-based materials

MAGDALENA SVANSTRÖM, Greg Peters

Chalmers University of Technology, Sweden



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Contact

THE SWEDISH LIFE CYCLE CENTER

Phone: +46 (0) 31 772 56 40

E-mail: cpm@chalmers.se

www.lifecyclecenter.se

LCM 2013 SECRETARIAT

Phone: +46 (0) 31 772 49 61

E-mail: lcm2013@chalmers.se

www.lcm2013.org



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