

Posters

MONDAY, SEPTEMBER 4

09.00 am – 05.30 pm

LOCATION: POSTER AREA,
CONFERENCE MAIN HALL

LCM for transport and mobility

CHAIRS: **Stephan Krinke** - Volkswagen AG
 Christoph Herrmann - Technical University of Braunschweig

MO-178-1 **Life-cycle performance of kerosene produced through biomass gasification and Fischer-Tropsch synthesis**
Diego Iribarren¹, Mario Martín-Gamboa¹, Pedro L. Cruz¹, Laura C. Delgado-Casado¹, Javier Dufour^{1,2}

¹Systems Analysis Unit, Instituto IMDEA Energía, Spain ²Chemical and Environmental Engineering Group, Rey Juan Carlos University, Spain

MO-220-2 **Lessons Learned from International Best Practices in Sustainable Maritime Transport: Potential Technology and System Adaptation for Life Cycle Management of Maritime Transport in Emerging Economies**
Trakarn Prapasongsa¹, Jun Ren², Wonsiri Punurai¹, Jin Wang², Yasothorn Sapsathiarn¹, Teraphan Ornthamarath¹

¹Department of Civil and Environmental Engineering, Faculty of Engineering, Mahidol University, Nakhon Pathom, Thailand ²Liverpool Logistics, Offshore and Marine (LOOM) Research Institute, Department of Maritime and Mechanical Engineering, Faculty of Engineering and Technology, Liverpool John Moores University, Liverpool, United Kingdom

MO-294-3 **Life Cycle Analysis for DI-CNG vehicles**
Joachim KIEFER

Delphi Automotive Systems Luxembourg, Luxembourg

MO-302-4 **Marketing the Cycle: Challenges and opportunities for car parts dismantling and reuse**
Matthias Kalverkamp, Alexandra Pehlken

University of Oldenburg, Germany

MO-399-5 **WOOD FIBRES-REINFORCED POLYMER APPLICATION TO ENHANCE SUSTAINABILITY PURPOSES FOR AUTOMOTIVE SECTOR**

Silvia Maltese^{1,2}, Laura Zanchi³, Massimo Delogu³, Alessandra Bonoli², Rubina Riccomagno¹

¹Magneti Marelli, Italy ²University of Bologna ³University of Florence

- MO-415-6 **Life Cycle Assessment of intermodal freight transport in Belgium**
Angel Luis Merchan, Sandra Belboom, Angelique Leonard
University of Liege, Belgium
- MO-482-7 **Do Tire Studs in Cars Save or Take Lives? A Life Cycle Assessment on Human Health Impacts**
Anna Furberg, Rickard Arvidsson, Sverker Molander
Chalmers University of Technology, Sweden
- MO-513-8 **Transport of goods in the urban logistic: comparative LCA of electric, CNG and Diesel light duty vehicles**
Benedetta Marmiroli^{1,2}, Laura Caretoni¹, Mattia Venditti², Ezio Spessa², Giovanni Dotelli¹
¹Politecnico di Milano, Italy ²Politecnico di Torino, Italy
- MO-522-9 **GHG emissions reductions linked to introducing electric mobility in the city of Lima (Peru)**
Ramzy Kahhat¹, Ian Vazquez-Rowe¹, Samy Garcia-Torres¹, Ursula Cardenas Mamani¹, Renata Mele², Angelo Facchini³
*¹Pontificia Universidad Catolica del Peru, Peru ²Enel Foundation. Rome, Italy
³IMT School for Advanced Studies Lucca, Lucca, Italy*
- MO-542-10 **Sustainability indexes for logistics: How to bring LCA perspective to KPIs for different business units in different regions of the world – A BASF experience**
Marcela Porto Costa¹, Bruce W. Uhlman², Juliana Maria da Silva¹, Mariana Dondeo Nazar³, Daniela Elias Ascar³
*¹Fundação Espaço ECO/ BASF S.A, Brazil ²BASF United States of America
³BASF S.A Brazil*
- MO-573-11 **Life Cycle Costing of Recycling Strategies for Rare Earth Permanent Magnet Motors**
Gwendolyn Bailey, Karel Van Acker, Wim DeWulf
KU LEUVEN, Belgium

MO-605-12 **Environmental repercussions of metal additive manufacturing technologies and consequences for LCM in space and aerospace industry: a life cycle assessment review**

Johan Berg Pettersen¹, Marit Bjørnbet Moe¹, Håvard Bergsdal², Eduardo João Silva³, Jonathan Ouziel⁴

¹Sintef Raufoss Manufacturing ²Asplan Viak ³ISQ ⁴Airbus Safran Launchers

MO-611-13 **Project to Lead Eco-design Integration with Aerospace Development and Engineering Systems**

Luca Petruccelli¹, Andrew Clifton², James Goddin¹, Kim Marshall¹

¹Granta Design, United Kingdom ²Rolls-Royce plc

Life Cycle Management of Energy and Energy Transitions - Managing the complexity of today's and future energy systems with a life cycle focus: Challenges and methodological solutions

CHAIRS: **Karin Treyer** - *Paul Sherrer Institute*
Alicia Boyano-Larriba - *European Commission - Joint Research Centre*
Roberto Turconi - *ArcelorMittal*

MO-180-14 **A life-cycle perspective in energy systems modelling: nuclear extension scenarios for Spain**
Diego García-Gusano¹, **Mario Martín-Gamboa**¹, **Diego Iribarren**¹, **Javier Dufour**^{1,2}

¹*Systems Analysis Unit, Instituto IMDEA Energía, Spain* ²*Chemical and Environmental Engineering Group, Rey Juan Carlos University, Spain*

MO-182-15 **Addressing the key drivers of regional energy consumption of the manufacturing industry in Japan**
Ken'ichi Matsumoto¹, **Yosuke Shigetomi**¹, **Tomoki Ehara**², **Yuki Ochi**², **Yuki Ogawa**², **Hiroto Shiraki**³, **Yuki Yamamoto**¹

¹*Nagasaki University, Japan* ²*E-Konzal, Japan* ³*The University of Shiga Prefecture, Japan*

MO-212-16 **Dynamic life cycle assessment for microalgae production coupled to photovoltaic panels**
Marjorie Morales, **Olivier Bernard**

INRIA (Institut National de Recherche en Informatique et en Automatique), BIOCORE team, France

MO-241-17 **Life cycle assessment of prospective energy scenarios for 2030 in an insular context: Guadeloupe case study**
Paula Pérez-López¹, **Romain Besseau**¹, **Mathilde Marchand**², **Frédéric Amblard**³, **Isabelle Blanc**¹

¹*MINES ParisTech, PSL Research University, France* ²*Transvalor S.A., France* ³*École Polytechnique Fédérale de Lausanne (EPFL), Switzerland*

MO-279-18 **Integrating Life Cycle Management to Improve Industrial Energy Efficiency**
Jun-Ki Choi, **Daniel Kelley**, **Kelly Kissock**

University of Dayton, United States of America

MO-308-19 **Positive or negative? Consequential life cycle assessment of lithium-ion and lithium metal polymer stationary batteries in Switzerland**

Laurent Vandepaer¹, Julie Cloutier², Christian Bauer³, Ben Amor⁴

¹Université de Sherbrooke, Paul Scherrer Institut ²Institut de recherche d'Hydro-Québec ³Paul Scherrer Institut ⁴Université de Sherbrooke

MO-309-20 **Prospective marginal electricity supply mixes for consequential life cycle assessments**

Laurent Vandepaer¹, Chris Mutel², Karin Treyer², Christian Bauer², Ben Amor³

¹Université de Sherbrooke ²Paul Scherrer Institut ³Université de Sherbrooke

MO-329-21 **Incorporating resilient solutions in long-range energy planning for developing countries: case study of Uganda**

Jacek Stankiewicz¹, Francesco Gardumi², Dimitrios Mentis², Mark Howells², Eduardo Zepeda³, Yann Loic Tanvez⁴

¹Boson Energy, Luxembourg ²Royal Institute of Technology (KTH), Sweden ³OpTIMUS ⁴World Bank

MO-397-22 **Understanding LCA practise and knowledge production in the Swedish Biofuel Industry**

David Lazarevic¹, Katarina Buhr², Michael Martin², Johan Torén³, Tomas Ekvall²

¹Finnish Environment Institute SYKE ²KTH - Royal Institute of Technology ³IVL Swedish Environmental Research Institute ⁴RISE Research Institutes of Sweden

MO-403-23 **Ecological driven Energy Management: how to build up the active load shifting in LCA**

Cornelia Petermann¹, Stefan Bschorer², Jörn Guder¹, Jens-Christian Holst^{1, 2}, Maren Kuschke², Kai Strunz²

¹Siemens AG, Germany ²Technical University of Berlin

MO-548-24 **Prospective LCA applied to energy scenarios: methodology and case studies**

Jade GARCIA¹, Florent QUERINI², Frédérique BOUVART³, Emmanuel HACHE³, Philippe OSSET¹

¹SCORE LCA, France ²ECOSTATIS, France ³IFPEN, France

MO-569-25 **Designing sustainable biorefineries: insights from life cycle assessment**

Xun Liao, Ayse Dilan, François Maréchal

EPFL, Switzerland

MO-585-26 **YEARLY LIFE CYCLE INVENTORY OF THE ELECTRICITY PRODUCTION AND DISTRIBUTION IN CHILE: THE EVIDENCES OF THE TIME EFFECT**

Mabel Vega, Claudio Zaror

Department of Chemical Engineering, University of Concepcion, Chile

MO-589-27 **From attributional to consequential life cycle assessment: data conversion and modelling of an organic photovoltaic portable charger**

Edis Glogic^{1,3}, Steffi Weyand², Dieuwertje Schrijvers³, Steven Young¹, Guido Sonnemann³, Liselotte Schebek²

¹University of Waterloo ²Technische Universität Darmstadt ³University of Bordeaux

MO-607-28 **Life cycle assessment of hydrogen production: Power to hydrogen vs Hydrocarbon reformation**

Xun Liao¹, Ligang Wang², François Maréchal²

¹EPFL Switzerland, Quantis ²EPFL Switzerland

Using LCA and EPD in Public Procurement within the construction section

CHAIRS: Kristian Jelse - *EPD International*
Kristof Peerens - *3M*

MO-188-29 **Modelling solutions for implementing life cycle environmental impacts in road construction in the procurement process: A case study in Norway**
Reyn O'Born

University of Agder

MO-282-30 **Evaluation of competitive design alternatives by the pre-verified LCA-tools**
Larissa Strömberg, Kristine Ek

NCC, Sweden

MO-357-31 **How are Environmental Product Declarations used in practice? Perspectives of the Austrian construction sector.**
Gregor Schrank¹, Tobias Stern², Franziska Hesser³

¹*University of Natural Resources and Life Sciences, Vienna, Austria* ²*Karl Franzens University Graz, Austria* ³*Kompetenzzentrum Holz GmbH, Austria*

MO-394-32 **Granularity in Environmental Product Declaration Development for Steel Construction Products**
Kirstine Schiebel¹, Sonny Crews², Simon Aumonier¹

¹*Environmental Resources Management (ERM)* ²*Gerdau Long Steel North America*

MO-444-33 **Limiting the complexity of data entries while maintaining robustness of the LCA model**
Jori Coustillas

PRé Consultants, Netherlands, The

MO-448-34 **LCA for a glass wool producer: from site LCA to improvements associated with the choice raw materials and the final product use phase.**

Saïcha Gerbinet¹, Vincent Briard², Jean-Pierre Pigeolet², Carl Hampson², Sandra Belboom¹, Sylvie Gros Lambert¹, Angel Merchan¹, Angélique Léonard¹

¹*University of Liège, Belgium* ²*Knauf Insulation*

Modelling mobility systems today and in the future

CHAIRS: Christopher Lucien Mutel - *Paul Scherrer Institute*
Jens-Christian Holst - *Siemens AG*

MO-231-35 **Electric Cars in the Energy Accumulation and Power Deficit Prevention System**

Kazimierz Bieliński, Józef Flizikowski, Andrzej Tomporowski, Adam Mroziński, Robert Kasner

University of Science and Technology in Bydgoszcz, Poland

MO-376-36 **Achieving the shift to low-emission mobility through the deployment of seaweed feedstocks**

Jonna Meyhoff Fry, Simon Aumonier

Environmental Resources Management, United Kingdom

MO-440-37 **Environmental assessment of the recovery of scarce technology metals from End-of-Life Vehicles**

Arthur Haarman, Roland Hischer, Rolf Widmer

Empa, Switzerland

MO-565-38 **Prioritising LCA data updates through contribution and discernibility analysis: A case study of the Swiss transport sector**

Didier Beloin-Saint-Pierre¹, David Turner¹, Brian Cox², Christian Bauer², Marcel Gauch¹, Roland Hischer¹

¹Empa, Switzerland ²PSI, Switzerland

MO-592-39 **Life cycle assessment of fossil vs. electric mobility: what we know and what we don't know?**

Xun Liao¹, Denis Bochatay²

¹EPFL Switzerland, ²Quantis

Potentials and limitations of combined life cycle approaches and multi-dimensional assessment

CHAIRS: **Johanna Kristina Berlin** - *RISE Research Institutes of Sweden*
 Diego Iribarren - *IMDEA Energy*

MO-159-40 **Integrating Urban Metabolism Analysis concept in the Environmental Assessment of Santiago de Compostela (Spain)**

Sara Gonzalez-Garcia¹, **Pedro Villanueva-Rey**^{1,2}, **Fernando García-Guaita**¹, **Gumersindo Feijoo**¹, **María Teresa Moreira**¹

¹*Dept. of Chemical Engineering, Institute of Technology, University of Santiago de Compostela, 15782 Santiago de Compostela, Spain* ²*Centre of Environmental and Marine Studies (CESAM), Department of Environment and Planning, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal.*

MO-171-41 **Assessing the eco-efficiency of fisheries: combined application of life cycle assessment and data envelopment analysis in the Cantabrian purse seining fleet**

Jara Laso¹, **Ian Vazquez-Rowe**², **María Margallo**¹, **Isabel Garcia-Herrero**¹, **Angel Iribarren**¹, **Ruben Aldaco**¹

¹*Universidad de Cantabria, Avda. de los Castros s/n 39005 Santander, Spain*
²*Pontificia Universidad Católica del Perú, Departamento de Ingeniería, Red Peruana Ciclo de Vida. Avenida Universitaria 1801, San Miguel L0032, Lima, Perú*

MO-172-42 **Good practices in food waste management. Integrating economic, social and environmental criteria**

Isabel Noya, **Sara González-García**, **Gumersindo Feijoo**, **María Teresa Moreira**, **Pedro Villanueva-Rey**

University of Santiago de Compostela, Spain

MO-179-43 **Combined use of Data Envelopment Analysis and Life Cycle Assessment for gradual operational and environmental benchmarking in terms of continuous improvement**

Diego Iribarren¹, **Cristina Álvarez-Rodríguez**², **Mario Martín-Gamboa**¹, **Ian Vázquez-Rowe**³, **Yago Lorenzo-Toja**⁴, **Javier Dufour**^{1,2}

¹*Systems Analysis Unit, Instituto IMDEA Energía, Spain* ²*Chemical and Environmental Engineering Group, Rey Juan Carlos University, Spain*
³*Peruvian LCA Network, Department of Engineering, Pontificia Universidad Católica del Perú, Peru* ⁴*Department of Chemical Engineering, University of Santiago de Compostela, Spain*

- MO-215-44 **Propagating uncertainty in life cycle sustainability assessment into decision-making problems: a multiple criteria decision aid approach**
Breno Barros Telles do Carmo^{1,2}, **Manuele Margni**^{1,2}, **Pierre Baptiste**¹
¹Polytechnique Montréal, Canada ²CIRAIG, Montréal
- MO-266-45 **Integrated LCA approach applied to nanomaterials**
Clara Valente, **John Baxter**, **Andreas Brekke**
Ostfold Research AS, Norway
- MO-293-46 **Why hybridise? Pitfalls and potential of integrating life cycle tools**
Greg Peters^{1,2}, **Yumi Kobayashi**³, **Nicholas Ashbolt**⁴, **Stuart Khan**²
¹Chalmers University of Technology, Sweden ²University of New South Wales, Australia ³Universidade Federal do Espírito Santo, Brazil ⁴University of Alberta, Canada
- MO-295-47 **Social Hotspot analysis of a Boiler: pros and cons of the implementation.**
Francesco Guarino¹, **Marzia Traverso**², **Sonia Longo**¹, **Maurizio Cellura**¹
¹University of Palermo, Italy ²Italian Association Network of LCA, Italy
- MO-335-48 **Potentials and limitations of combined life cycle approaches and multi-dimensional assessment**
SURJYA NARAYANA PATI
NICE, India
- MO-361-49 **Cherry picking in interdisciplinary policy assessment?**
Tomas Ekvall
IVL Swedish Environmental Research Institute, Sweden
- MO-393-50 **A critical review of existing water accounting methodologies**
Marlinde Knoope^{1,2}, **Catherine Price**¹, **Christoph Balzer**¹, **Ernst Worrell**²
¹Shell, United Kingdom ²Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands
- MO-412-51 **Combination of material flow analysis and life cycle assessment for the evaluation of the plastics packaging waste management system in Austria.**
Emile Van Eygen, **David Laner**, **Johann Fellner**
TU Wien, Austria

MO-413-52 **Coupling the assessment of environmental performance and air quality in residential buildings in a decision making support tool**

Alice Micolier^{1,2}, **Philippe Loubet**¹, **Franck Taillandier**², **Guido Sonnemann**¹

¹CyVi, ISM, Université de Bordeaux, France ²GCE, I2M, Université de Bordeaux, France

MO-425-53 **Early-stage LCA and EHS screening using in vivo zebrafish assays to assist green design: a case study of cellulose nanocrystal foam**

Li Shen¹, **Lianghui Tan**¹, **Steven Mandley**¹, **Willie Peijnenburg**², **Susanne Waaijers**², **Danniel Giesen**³, **Jessica Legradi**⁴

¹Utrecht University, Netherlands, The ²National Institute of Public Health and the Environment, Netherlands, The ³Deltares, Netherlands, The ⁴Vrije Universiteit Amsterdam, Netherlands, The

MO-532-54 **Hotspots Analysis for Promoting Circular Economy**

Yasushi Kondo¹, **Koichi Tachio**²

¹Waseda University, Japan ²Japan Environmental Sanitation Center, Japan

MO-537-55 **RELCA: a REgional Life Cycle inventory Approach for biobased networks**

Sinèad O'Keeffe¹, **Alberto Bezama**¹, **Daniela Thrän**^{1,2}

¹Helmholtz Centre for Environmental Research (UFZ), Department of Bioenergy, Permoserstraße 15, 04318 Leipzig, Germany ²Deutsches Biomasseforschungszentrum (DBFZ), Bioenergy Systems Department, Torgauer Straße 116, 04347 Leipzig, Germany

MO-544-56 **Application of absolute consumption and consumer satisfaction as a unit of measurement in eco-efficiency: a case with book reading activity**

Eri Amasawa, **Tomohiko Ihara**, **Keisuke Hanaki**

The University of Tokyo, Japan

MO-558-57 **Multi-dimensional assessment perspectives for sustainable development: A case study of sericulture**

Jitti Mungkalasiri, **Ruthairat Wisansuwannakorn**, **Nongnuch Poolsawad**

MTEC, National Science and Technology Development Agency, Thailand

MO-586-58 **Evaluation of Product Impacts on Biodiversity in the context of sustainable production: The Product Biodiversity Footprint project**

Caroline Catalan, Suzanne Rabaud, Hugo Anest, Benjamin Lévêque, Guillaume Neveux

I Care & Consult, France

MO-596-59 **Towards better life cycle approaches through combined use of system-based methodologies: a case study of interrelationships among environmental sustainability, food systems and diet**

Tianchu Lu, Anthony Halog

The University of Queensland, Australia

MO-613-60 **SUPPLY RISK ASSESSMENT AND MATERIAL SYSTEM ANALYSIS APPROACHES TO INTEGRATE THE CRITICALITY ISSUE IN PRODUCT LIFE CYCLE ASSESSMENT**

Augustin Chanoine, Mariane Planchon, Olivier Jan

Deloitte, France

Environmental assessment of energy related products and energy systems across their life cycle

CHAIRS: **Nieves Espinosa** - *Universidad Politecnica de Cartagena*
Anders Arvesen - *Norwegian University of Science and Technology*

MO-186-61 **Wooden Mounting Systems: How to Reduce Environmental Impacts of Building Integrated Photovoltaic Power Plants**
Tobias Steinegger, René Itten, Matthias Stucki

Zurich University of Applied Sciences, Institute of Natural Resource Sciences, Switzerland

MO-195-62 **Life Cycle Assessment in Early Stages of Technology Development. A Case for Rural Electrification**
Ana Paulina Gual Rojas¹, Kas Hemmes², Valentina Prado¹

¹Leiden University, Netherlands, The ²Delft University of Technology

MO-205-63 **Managing choices of energyware by monetized impacts and resource values.**
Bengt Steen

Chalmers University of Technology, Sweden

MO-207-64 **High Efficient 3rd Generation Multi-Junction Solar Cells Using Silicon Heterojunction and Perovskite Technology: Life Cycle Based Environmental Impacts**
René Itten, Matthias Stucki

Zurich University of Applied Sciences, Institute of Natural Resource Sciences, Wädenswil, Switzerland

MO-218-65 **VARIOUS ASPECTS OF MANAGEMENT OF PHOTOVOLTAIC POWER PLANT COMPONENTS**
Izabela Piasecka¹, Zbigniew Kłos²

¹University of Science and Technology in Bydgoszcz, Poland ²Poznan University of Technology, Poland

MO-221-66 **POSTER SPOTLIGHT - A Dream comes true - Use of CO2 for the production of plastics**
Birgit Himmelreich

Covestro Deutschland AG, Germany

- MO-229-67 **Evaluation of benefits and ecological expenditures in wind power plant life cycle**
Józef Flizikowski, Andrzej Tomporowski, Robert Kasner, Weronika Kruszelnicka
University of Science and Technology in Bydgoszcz, Poland
- MO-250-68 **POSTER SPOTLIGHT - Is it useful to improve modeling of usage scenario to improve the environmental footprint of energy consumption product?**
Charlotte Heslouin^{1,2,3}, Lionel Pourcheresse¹, André Stumpf¹, Véronique Perrot Bernardet², Alain Cornier², Nicolas Perry³
¹Carrier Transicold Industries, 810 Route de Paris, FR-76520 Franqueville Saint Pierre ²Arts et Métiers Paristech - Institut de Chambéry, Savoie Technolac, BP 50295, F-73375 Le Bourget du Lac, Fr ³Arts et Métiers ParisTech, I2M, UMR 5295, F-33400 Talence, Fr
- MO-269-69 **Comparative assessment of the environmental impacts of innovative technical solutions intended to optimise the offshore wind farm lifecycle**
R Camilla Thomson¹, Maria del Mar Pintor Escobar², Carlo Paulotto², Gareth Harrison¹
¹University of Edinburgh, United Kingdom ²Acciona Infraestructuras S. A., Spain
- MO-391-70 **Robust Model for Building Thermal Insulation Planning Based on Life Cycle Assessment**
Menghua Sun, Alvin Wei Liang Ee, Harn Wei Kua, Tsan Sheng, Adam Ng, William Benjamin Haskell
National University of Singapore, Singapore
- MO-400-71 **ENVIRONMENTAL IMPACTS OF BIOMASS-TO-ENERGY CONVERSION TECHNOLOGIES: GRATE BOILERS AND FLUIDIZED BED BOILERS**
Tamiris Pacheco Costa, Paula Quinteiro, Luis Tarelho, Luís Arroja, Ana Cláudia Dias
University of Aveiro, Portugal
- MO-405-72 **Life Cycle Assessment of flexible printed batteries for innovative power applications**
Carme Hidalgo, Ariadna Claret, Marta Escamilla, Maria Rosa Riera
LEITAT, Spain

MO-431-73 **CONSEQUENTIAL LCA APPROACHES APPLIED TO SECOND GENERATION BIOMETHANE**

Camille Jeandaux, Anne Prieur-Vernat

ENGIE, France

MO-459-74 **Reducing industrial emissions: a technology-driven assessment model on the example of the Chinese cement sector**

Katrin Mueller ¹, Florian Ansgar Jaeger ¹, Alexander Cremer ², Zhou Zheng ³, Xu Hua ³

¹Siemens AG, Germany ²Technical University of Berlin, Germany ³Siemens Ltd, China

MO-469-75 **Environmental impact and social influence of an European underground research infrastructure related to Advanced Adiabatic Compressed Air Energy Storage (AA-CAES): RICAS2020 PROJECT.**

Ariadna Claret, Maria Rosa Riera, Gertri Ferrer, Marta Escamilla

LEITAT Technological Center

MO-514-76 **POSTER SPOTLIGHT - Design accompanying Life Cycle Assessment for the development of new energy-efficient window concepts**

Almut Schmidt ¹, Lingqi Su ², Mathias Fraaß ², Lothar Wondraczek ³

¹EurA AG, Germany ²Beuth University of Applied Sciences, Germany ³Friedrich Schiller University Jena, Germany

MO-523-77 **Exploring future scenarios of ethanol demand in Brazil and their land-use implications**

Milton Aurelio Uba de Andrade Junior, Anthony Halog

The University of Queensland

MO-560-78 **life-cycle greenhouse gas emissions and cost of an emerging CO₂-mineralisation technology**

Wenjie Liao

Sichuan University, China, People's Republic of

- MO-566-79 **POSTER SPOTLIGHT - Consequential life cycle assessment of an organic photovoltaic portable solar charger applied in the context of European electricity mixes**
Steffi Weyand¹, Edis Glogic^{2,3}, Guido Sonnemann², Liselotte Schebek¹, Steven B Young³
- ¹Technische Universität Darmstadt, Germany ²University Bordeaux, France
³University of Waterloo, Ontario, Canada
- MO-567-80 **POSTER SPOTLIGHT - Geographical resolution of LCI data on electricity production – the level of detail needed**
Tereza Lévová, Lucia Valsasina
- ecoinvent Centre, Switzerland*
- MO-575-81 **Environmental assessment of bioenergy on the example of pilot projects using solid biomass**
Silvia Scherhauser¹, Gudrun Obersteiner¹, Yannis Fallas², Pol Arranz-Piera³, Göran Gustavsson⁴, Uwe Kies⁵
- ¹University of Natural Resources and Life Sciences, BOKU Vienna, Austria
²Cluster of Bioenergy and Environment of Western Macedonia, Kozani, Greece
³Universitat Politècnica de Catalunya, Barcelona, Spain
⁴Energikontor Sydost, Sweden
⁵Wald-Zentrum / International Institute of Forestry and Wood Industries e.V., Münster, Germany
- MO-580-82 **Wind Shields: Wind Farms Reduce Growth Stress for Vegetation in Steppe Areas**
Pia Wiche
- Ecoe, Chile*
- MO-582-83 **Carbon capture and storage (CCS) in a life cycle perspective based on a new damage-based LCA weighting method**
FREDRIK MOLTU JOHNSEN¹, SØREN LØKKE²
- ¹Østfoldforskning AS, Norway ²The Danish Centre for Environmental Assessment, Aalborg University, Denmark
- MO-587-84 **Environmental impacts of electricity self-consumption in residential buildings: Case study of organic photovoltaic battery systems in Denmark**
Marios D. Chatzisideris¹, Alexis Laurent², Michael Z. Hauschild², Frederik C. Krebs¹
- ¹Department of Energy Conversion and Storage, DTU Technical University of Denmark, Denmark
²Department of Management Engineering, DTU Technical University of Denmark, Denmark

Management of construction waste: LCA and complex system modeling

CHAIRS: Anne Ventura - *Université de Nantes*
Maxime Trocmé - *Vinci*

MO-192-85 **Can LCA tool alone conduct environmental performances of circular economy in construction sector? A case study of cement concrete demolition waste management**

Marjan Mousavi¹, Anne Ventura², Nicolas Antheaume³

¹*Université de Nantes, Research Institute in Civil Engineering and Mechanics, Chair civil engineering and eco-construction, IUT Saint-Nazaire, France*

²*Université de Nantes, Research Institute in Civil Engineering and Mechanics, Chair civil engineering and eco-construction, IUT Saint-Nazaire, France*

³*University of Nantes*

MO-280-86 **Modeling end-of-life pathways of construction and demolition debris in the United States**

Briana Niblick¹, Wesley W. Ingwersen¹, Pradeep Jain², Justin L. Smith², Timothy G. Townsend², Ashley Edelen³, David E. Meyer¹

¹*Office of Research and Development, National Risk Management Research Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268, USA* ²*Innovative Waste Consulting Services LLC, Gainesville, Florida 32605, USA* ³*Oak Ridge Institute for Science and Education (ORISE), Cincinnati, Ohio 45268, USA*

MO-385-87 **Towards a tool to account for local specificities of raw materials and waste flows in the LCA of buildings, in order to support the circular economy in the construction sector**

Nicoleta SCHIOPU¹, Antoine BEYLOT², Adélaïde MAILHAC¹, Pascale MICHEL², Manuel BAZZANA¹, Sébastien COLIN², Daniel MONFORT CLIMENT², Romain BONNET³, Nathalie SEMENT⁴, Anne – Sophie PERRISSIN FABERT⁴

¹*Université Paris-Est, Centre Scientifique et Technique du Bâtiment (CSTB), France* ²*BRGM, France* ³*Bouygues Construction, France* ⁴*Association HQE France GBC, France*

MO-525-88 **LCM of construction waste towards circular economy of buildings: VALDEM project**

Aubin ROY¹, Naeem ADIBI¹, Vanessa PASQUET¹, Sylvie GROSLAMBERT², Angélique LEONARD²

¹*Plateforme [avniR] by cd2e, (Rue de Bourgogne - Base 11/19 - 62750 Loos-en-Gohelle, France).* ²*University of Liège, Chemical Engineering – PEPs (Agora - Bat B6 - Sart Tilman - 4000 Liege – Belgium).*

MO-564-89 **Combining social, environmental and economic analysis to stimulate high-grade recycling of Construction & Demolition Waste**

Andrea Di Maria, Johan Eyckmans, Karel Van Acker

KU Leuven, Belgium

MO-597-90 **Carbonation: its implication on global warming potentials of cement**

Xun Liao

EPFL Switzerland

Posters

TUESDAY, SEPTEMBER 5

09.00 am – 05.30 pm

LOCATION: POSTER AREA,
CONFERENCE MAIN HALL

**Implementation and management of life cycle approaches in business –
Challenges, opportunities, business learnings and best practice**

CHAIRS: **Lena Landström** - *Vattenfall and Swedish Life Cycle Center*
 Sara Palander - *Swedish Life Cycle Center/Chalmers University
of Technology*

TU-206-1 **From B2B communication to B2B value-adding engagement
and partnerships for sustainability in the wind power sector**
Jonas Pagh Jensen¹, **Kristen Skelton**¹, **Gwenyth Jones**², **Sam Levine**²,
Sion Burnette², **Stephen P. Williams**²

¹Aalborg University, Denmark & Siemens Wind Power, Denmark ²Bard
College, New York, United States

TU-219-2 **Lessons learnt from benchmarking Irish dairy processing
with LCA**
Mingjia Yan

University College Dublin, Ireland

TU-233-3 **The development of a company level carbon footprint tool in
Norway**
Hogne Nersund Larsen, **Christian Solli**

Asplan Viak AS, Norway

TU-334-4 **Data Uncertainty and Challenges in the Landscape of EU
Waste and Recycling Reporting**
Clayton Burger, **Alexandra Pehlken**, **Andreas Solsbach**

University of Oldenburg, Germany

TU-342-5 **Defining and communicating regional carbon neutral policy
targets**
Maartje Sevenster¹, **Bruce Edgerton**²

¹Sevenster Environmental, Australia ²Australian Capital Territory Government,
Waste Policy

TU-381-6 **The EU minerals industry, an example of integrated
innovation and along the entire value chain**
Olivier Muller¹, **David Moseley**², **Aurela Shtiza**³, **Christian Binder**⁴,
Michael Morris², **Robert Pardemann**⁴

¹PwC, France ²Imerys ³IMA Europe ⁴Outotec

- TU-449-7 **Methodologies, tools and indicators for cross-sectorial sustainability assessment in process industry – recommendations**
Tiina Pajula¹, Amy Peace², Dana Kralisch³
¹VTT Technical Research Centre of Finland Ltd, Finland ²Britest Ltd, England
³Friedrich-Schiller-University Jena, Germany
- TU-462-8 **A sectoral approach to integrating Environmental Management with Life Cycle Thinking**
Lee Brankley¹, Ayhan Tugrul¹, Jane Anderson², David Knight³
¹CARES, United Kingdom ²Thinkstep, United Kingdom ³One Planet, United Kingdom
- TU-472-9 **Measuring companies' readiness for Circular Economy: a self-assessment online tool**
Daniela C. A. Pigosso, Tim C. McAloone
Technical University of Denmark, Denmark
- TU-517-10 **Carbon footprint as a first step towards LCA usage**
Wladimir Motta
IBICT, Brazil
- TU-520-11 **Implementation of LCM along the value chain**
Fritz Balkau, Guido Sonnemann
individual, France
- TU-527-12 **REFLECTION ON LCM IMPLEMENTATION IN SMES: RESULTS OF LIFE CYCLE IN PRACTICE (LCIP) PROJECT**
Aubin ROY¹, Vanessa PASQUET¹, Naeem ADIBI¹, Alice SALAMON¹, Crisina ROCHA², Jorge ALEXENDRE², Isabel GONZALES², Pierre ECHARD³, Séverinne COPPEE³, Eugenia ATIN⁴, Raquel SERRANO⁴
¹Plateforme [avniR] by cd2e, (Rue de Bourgogne - Base 11/19 - 62750 Loos-en-Gohelle, France). ²Laboratório Nacional de Energia e Geologia, (Lisboa, Portugal). ³Greenwinn, (Gosselies, Belgium). ⁴Prospektiker, (San Sebastian, Spain).
- TU-528-13 **Can environmental labeling contribute to the effective use of LCA?**
Wladimir Motta
IBICT, Brazil

TU-594-14 **Engagement of sectoral organizations through Life Cycle Thinking: Success studies cases**
Juliana Maria da Silva, Marcela Porto Costa

Fundação Espaço ECO/ BASF S.A, Brazil

TU-604-15 **LCA as the tool to measure progress towards the Sustainable Development Goals**
Mark Jacob Goedkoop, Elsa Valencia Martinez, Ilonka de Beer

PRé Consultants B.V., Netherlands, The

TU-615-16 **Implementing LCM all along the supply chain: from compliance to collaborative value creation**
Aubin ROY¹, Naeem ADIBI¹, Vanessa PASQUET¹, Stéphane MOREL²

¹Plateforme [avniR] by cd2e, (Rue de Bourgogne - Base 11/19 - 62750 Loos-en-Gohelle, France). ²Renault (1 Avenue du Golf, 78280 Guyancourt, France).

Raw materials supply chains in the light of the circular economy

CHAIRS: **Jo Dewulf** - *Ghent University*
 Johannes Drielsma - *EUROMINES*

TU-158-17 **Circular economy: Recycling glass fibre reinforced composites (GRP) according to EN 15804 Module D (End-of-Life) through applied LCA scenarios**
Victor Vladimirov

HOBAS Pipes International, Austria and Technical University for Civil Engineering Doctoral School, Bucharest

TU-183-18 **Circular supplies fueling wine sector**
Pedro Villanueva-Rey^{1,2}, **Paula Quinteiro**², **Luis Arroja**², **Ana Cláudia Dias**²

¹University of Santiago de Compostela, Spain ²University of Aveiro, Portugal

TU-216-19 **Assessing selected metals flows in France and their recycling potential**
Amelie THEVENOT¹, **Philippe LOUBET**², **Guido SONNEMANN**¹, **Jacques VILLENEUVE**³

¹University of Bordeaux, France ²ENSCBP Bordeaux INP, France ³French Geological Survey, France

TU-223-20 **Carbon cycles in urban vertical farming from a circular economy approach**
Pere Llorach-Massana^{1,2}, **Javier Peña**², **Joan Rieradevall**¹, **J. Ignacio Montero**^{3,1}

¹Sostenipra Research Group (SGR 01412), Institute of Environmental Sciences and Technology (ICTA), Z Building, Universitat Autònoma de Barcelona (UAB), Campus UAB, 08193 Bellaterra, Barcelona, Spain ²ELISAVA Barcelona School of Design and Engineering. La Rambla 30-32. 08002 Barcelona, Spain ³Institute of Food and Agricultural Research (IRTA), Carretera de Cabriels, km 2, 08348 Barcelona, Spain

TU-247-21 **Raw material potential for biopolymers in Europe**
Andrea Thorenz, **Lars Wietschel**, **Axel Tuma**

University Augsburg, Germany

- TU-283-22 **Industrial by-products and the circular economy: Optimising emerging technologies for valorisation of bauxite residue using LCA**
Peter James Joyce¹, Tobias Hertel², Yiannis Pontikes², Anna Björklund¹
¹KTH, Sweden ²KU Leuven, Belgium
- TU-288-23 **The Development of a Material Circularity Indicator software tool**
Luca Petruccelli¹, Conny Bakker², Claes Fredriksson¹, Wendela Huisman²
¹Granta Design, United Kingdom ²Delft University of Technology, Netherlands
- TU-298-24 **Circularity through industrial symbiosis: Drivers, obstacles and effects of introducing secondary raw materials in construction products**
Lisa Bolin¹, Ozge Yilmaz², Rickard Fornell¹, Emma Rex¹
¹SP Technical Research Institute of Sweden ²Ekodenge AŞ, Turkey
- TU-313-25 **Integrated method to assess resource use in the context of sustainable development (ESSENZ +)**
Vanessa Bach¹, Martin Henßler², Markus Berger¹, Klaus Ruhland², Laura Schneider¹, Matthias Finkbeiner¹
¹Technische Universität Berlin, Chair of Sustainable Engineering, Germany
²Daimler AG, Group Environmental Protection, Stuttgart 70546, Germany
- TU-328-26 **Ecolonomy, Econology or The genesis of a massive weapon of construction**
RAPHAEL PETIT
ECS-3.COM, Ukraine
- TU-340-27 **BLUBOX: Integrated Plant for Mixed Lamp and Flat Screen Recycling**
Guilhem Grimaud^{1,2}, Andreas Krebs³, Nicolas Perry², Bertrand Laratte^{2,4}
¹MTB Recycling, France ²Arts & Métiers ParisTech, I2M, UMR 5295, Talence, France ³BLUBOX Trading AG, 5708 Birrwil, Switzerland ⁴APESA, 23 Rue Héléne Boucher, 40220 Tarnos
- TU-346-28 **GLOBAL RESOURCE INDICATOR FOR LIFE CYCLE IMPACT ASSESSMENT: APPLIED IN WIND TURBINE CASE STUDY**
Naeem ADIBI^{1,2}, Zoubeir LAFHAJ², Jerome PAYET^{3,4}
¹[avniR] - cd2e, France ²Ecole Centrale de Lille, France ³Ecole Polytechnique Fédérale de Lausanne, Switzerland ⁴Cycleco, France

- TU-379-29 **Supporting the transition towards a more circular economy: opportunities in the built environment**
Elisabeth Keijzer ¹, Jacco Verstraeten-Jochensen ¹, Vigil Yangjinqi Yu ^{1,2}, Peter Kuindersma ¹, Sanne van Leeuwen ¹, Suzanne de Vos-Effting ¹
¹TNO, The Netherlands ²Ellen MacArthur Foundation, United Kingdom
- TU-411-30 **Life-cycle based data management tools for sustainable aggregates planning**
Silvia Bobba ¹, Valbusa Michele ², Alessandro Moltre ², Gian Andrea Blengini ^{1,3}, Erwin M. Shau ³
¹Politecnico di Torino, Italy ²Provincia Autonoma di Trento ³Joint Research Centre, European Commission
- TU-435-31 **Life cycle management for cobalt in the context of the circular economy**
Jonna Meyhoff Fry ¹, Carol-lynn M. Pettit ², Simon Aumonier ¹
¹Environmental Resources Management, United Kingdom ²Cobalt Development Institute, United Kingdom
- TU-452-32 **Identification and Assessment of Second Life Applications of Permanent Magnets from Wind Power Plants**
Dennis Goldner, Anika Regett
Forschungsstelle für Energiewirtschaft e.V., Germany
- TU-506-33 **Circular Economy and LCA Allocation methods: The Case Study of Plastics Recycling in Brazil.**
Marina Santa Rosa Rocha, Rafael Freitas Funcia Lemme, Anna Bernstad Saraiva Schott, Alba Cánovas Creus, Rogerio de Aragão Bastos do Valle
Universidade Federal do Rio de Janeiro
- TU-535-34 **Towards an improved life-cycle modelling method for recycling: A case study on steel making**
Zhilan Jiang ^{1,2}, Hongtao Wang ¹, Wenjie Liao ¹
¹Sichuan University, China, People's Republic of ²IKE Environmental Technology Co., Ltd
- TU-550-35 **Characterizing global supply chains for responsible management of four metals**
Steven Young
University of Waterloo, Canada

- TU-584-36 **Redesign of manufacturing processes by LCA - case of DMSO solvent recovery**
Klara Szita Tóthné¹, Anett Zajáros², Károly Matolcsy², Daniel Horváth³
¹retired, Hungary ²ÉMI Nonprofit Ltd ³S-Metalltech Ltd.
- TU-593-37 **Consequential LCA as a tool for a sustainability assessment in an industrial context – A case study on the recycling of rare earth elements from fluorescent lamps**
Dieuwertje Schrijvers^{1,2}, Philippe Loubet^{2,3}, Guido Sonnemann^{1,2}
¹University of Bordeaux, ISM, UMR 5255, France ²CNRS, ISM, UMR 5255, France ³Bordeaux INP - ENSCBP, ISM, UMR 5255, 33607 Pessac, France
- TU-625-38 **Copper's critical role in the Circular Economy: Current and future contributions**
Andrea J Vaccari¹, Ladji Tikana², Géraud Servin³
¹International Copper Association, Ltd, United States of America ²Deutsches Kupferinstitut Berufsverband e.V., Germany ³International Copper Association c/o European Copper Institute, Belgium

LCM and Circular Economy Challenges for the textile sector

CHAIRS: **Keith James** - *WRAP*
 Julian Lings - *The North Face*

TU-227-39 **Environmental analysis of the best available finishing products to provide water, oil and dirt repellency in the textile sector. A Life Cycle Assessment approach.**
Julio Fierro, Cristina Martínez

Centro Tecnológico de Investigación Multisectorial (CETIM), Spain

TU-406-40 **Life Cycle Assessment of Organic & BCI Cotton: A Comparative Study of Cotton Cultivation Practices in India**
Praganesh Shah ¹, Abhishek Bansal ¹, Rajesh Singh ²

¹Arvind Limited ²thinkstep Sustainability Solutions Pvt. Ltd., India

TU-591-41 **Flax clothes study: Definition of the use tipping point using LCA**
Romain Benkirane ^{1,2}, Sébastien Thomassey ^{1,2}, Ludovic Koehl ^{1,2}, Anne Perwuelz ^{1,2}

¹ENSAIT, France ²Université Lille, France

Sustainability of bio-based products: linking Life Cycle Thinking with standards, certification and labelling schemes

CHAIRS: **Mauro Cordella** - *European Commission, JRC-IPTS*
Oliver Wolf - *European Commission*

TU-487-42 POSTER SPOTLIGHT - Sustainability assessment of the Portuguese forest sector

Ana Dias¹, **Paula Quinteiro**¹, **Tamíris Costa**¹, **Luis Arroja**¹, **Érica Castanheira**², **Rita Garcia**², **Pedro Marques**², **João Malça**², **Fausto Freire**²

¹*Centre for Environmental and Marine Studies (CESAM) & Department of Environment and Planning, University of Aveiro, 3810-193 Aveiro, Portugal*

²*ADAI-LAETA, Department of Mechanical Engineering, University of Coimbra, Polo II Campus, Rua Luís Reis Santos, 3030-788 Coimbra, Portugal*

Using LCM to create shared value through healthcare and pharmaceutical supply chains

CHAIRS: **Wouter De Soete** - *Ghent University*
 Keith Moore - *Coalition for Sustainable Pharmaceuticals and Medical Devices*

TU-209-43 **Life cycle assessment of core-shell iron oxide nanoparticles for diagnostics**

Peter Weyell¹, Franziska Böhm¹, Christian Bergemann², Cordula Grüttner³, Heinz-Dieter Kurland⁴, Frank Müller⁴, Dana Kralisch¹

¹Friedrich-Schiller-University, Department of Pharmaceutical Technology, Lessingstrasse 8, 07743 Jena, Germany ²chemicell GmbH, Eresburgstrasse 22-23, 12103 Berlin, Germany ³micromod Partikeltechnologie GmbH, Friedrich-Barnewitz-Strasse 4, 18119 Rostock, Germany ⁴Friedrich-Schiller-University Jena, Otto Schott Institute of Materials Research (OSIM), Löbdergraben 32, 07743 Jena, Germany

TU-432-44 **LCM as a tool to calculate the environmental performance of the intensification of pharmaceutical processes**

Carme Hidalgo, Marta Escamilla, Laia Puigmal, Maria Rosa Riera

LEITAT Technological Center, Spain

TU-627-45 **The Centre of Excellence in Sustainable Pharmaceutical Engineering (CESPE) and its Role in Healthcare and Pharmaceutical Value Chains**

Wouter De Soete, Thomas De Beer, Jo Dewulf

Ghent University, Belgium

TU-628-46 **Life Cycle Innovation within Resource Efficient Value Chains: the Sustainability Support and Information Centre (SSIC)**

Wouter De Soete

Ghent University, Belgium

Best practices for Sustainable Design: integrating LCM into the innovation processes

CHAIRS: Daniela C. A. Pigosso - *Technical University of Denmark*
Tammy Ayers - *Steelcase*

TU-160-47 Life cycle assessment of new construction materials based on geopolymers obtained from industrial waste

Rocio Pena¹, Paula Villar¹, Lorena Freire¹, M. Aguirre², Alejandro Souto³

¹AIMEN, Spain ²OHL. S.A ³FerroAtlántica S.A

TU-267-48 Circular economy and life cycle management – complementary systems

Lise Lyngfelt Molander, Margarida Gama

thinkstep

TU-274-49 Introducing eco-ideation and creativity techniques to extend the applications of cork in the building sector from an environmental approach

Jorge Sierra-Pérez^{1,2}, Jesús Boschmonart-Rives^{1,3}, Xavier Gabarrell^{1,4}

¹Sostenipra (ICTA – IRTA - Inèdit Innovació SL) 2014 SGR 1412. Institute of Environmental Science and Technology (ICTA), Unidad de excelencia «María de Maeztu» (MDM-2015-0552), Universitat Autònoma de Barcelona (UAB), 08193 – Cerdanyola del Vallès (Bellaterra), Barcelona, Spain. ²Centro Universitario de la Defensa. Ctra. de Huesca s/n, 50.090, Zaragoza, Spain ³Inèdit Innovació, S.L. Parc de Recerca de la Universitat Autònoma de Barcelona (UAB), 08193 – Cerdanyola del Vallès (Bellaterra), Barcelona, Spain ⁴Department of Environmental, Biological and Chemical Engineering (XBR), Universitat Autònoma de Barcelona (UAB), 08193 – Cerdanyola del Vallès (Bellaterra), Barcelona, Spain

TU-366-50 A synthesis of optimization approaches for LCA-integrated industrial process modeling: application to potable water production plants

Florin Capitanescu, Antonino Marvuglia, Enrico Benetto

Luxembourg Institute of Science and Technology (LIST), Luxembourg

- TU-375-51 To Transport Waste or Transport Recycling Plant: Insights from Life-Cycle Analysis**
Guilhem Grimaud^{1,2}, **Nicolas Perry**², **Bertrand Laratte**^{2,3}
¹MTB Recycling, Trept, France ²Arts & Métiers ParisTech, I2M, UMR 5295, Talence, France ³APESA, 23 Rue Hélène Boucher 40220 Tarnos
- TU-377-52 Modular Smartphones: Design Strategies Driven by Life Cycle Assessment Evidence**
Karsten Schischke¹, **Marina Proske**¹, **Miquel Ballester Salvà**², **Laura Gerritsen**², **Nikolai Richter**¹, **Nils F. Nissen**¹, **Klaus-Dieter Lang**^{1,3}, **Christian Clemm**³
¹Fraunhofer IZM, Germany ²Fairphone B.V., The Netherlands ³Technische Universität Berlin, Germany
- TU-439-53 Using an original eco-innovation methodology to integrate LCM into the innovation processes of new energy technologies R&D: OpenGreen®.**
Elise MONNIER (NAVEAUX)⁽¹⁾, **Hélène TEULON**², **Quentin BEZIER**²
¹CEA Tech, Laboratory of Innovation for new Technologies for Energy and Nanomaterials (LITEN), Grenoble, France ²Gingko 21 - 1, rue Konrad Adenauer 91300 Massy Palaiseau, France, +33 (0)9 86 29 15 05
- TU-474-54 Best practices for Sustainable Design: integrating LCM into the innovation processes**
SURJYA NARAYANA PATI
NICE, India
- TU-480-55 Innovation through design of more sustainable systems: eco-innovations arising from LCA**
Wladmir Motta
IBICT, Brazil
- TU-571-56 Plastic End-of-Life: Managing material choice without another impact category indicator**
Takunda Yeukai Chitaka, **Clare Rodseth**, **Harro von Blottnitz**
Chemical Engineering Department, University of Cape Town, South Africa

TU-602-57 **THE DESIGN OF A BIOBASED INSULATING MATERIAL FOR CONSTRUCTION IN CHILE**

Mabel Vega¹, **Claudia Muñoz**^{2,3}, **Ariel Bobadilla**^{2,3}

¹*Department of Chemical Engineering, University of Concepcion, Chile*

²*Department of Construction Sciences, University of Biobío, Chile* ³*Research Centre of Construction Sciences, University of Biobío, Chile*

TU-630-58 **Integrated innovation and sustainability analysis of disinfection technologies. Integration of market and environmental perspectives.**

Philipp Preiss

Institute for Industrial Ecology (INEC), Hochschule Pforzheim, Germany

TU-634-59 **Integrating LCA in a modelling framework for Ecodesign of bio-chemical-processes**

Ligia Barna, **Aras Ahmadi**

INSA Toulouse, France

Bio-based materials within the circular economy: opportunities and challenges?

CHAIRS: **Birgit Brunklaus** - *RISE Research Institutes of Sweden*
 Ellen Riise - *SCA (Swedish Cellulose Company)*

TU-166-60 **Framework for the assessment of renewable raw materials**
Michal Kulak, Sarah Sim, Carina Mueller, Giles Rigarlsford, Lau Tambjerg,
Tirma Garcia-Suarez, Edward Price, Philip McKeown, Henry King

Unilever, United Kingdom

TU-256-61 **Estimating the emission mitigation potential of using wood
as building construction material: a case study comparing
Germany and Indonesia**
Rio Aryapratama, Stefan Pauliuk

*Industrial Ecology Research Group, Faculty of Environment and Natural
Resources, University of Freiburg, Germany*

TU-497-62 **Supply Chain Life Cycle Management of Bio-based PE**
Yuki Hamilton Onda Kabe, Luiz Gustavo Ortega

Braskem, Brazil

TU-534-63 **One model for all approaches – Integrated Life Cycle
Sustainability Assessment within the early design phase of
2nd generation bio-refinery for downstream production of
bio-plastics**

Michael Bruns, Marten Stock, Mieke Klein, Andreas Genest

ifu hamburg, Germany

TU-547-64 **Environmental assessment of fiberboards made from
coconut residues**
Ana Lucia Feitosa Freire¹, **Celso Pires Araújo Júnior**², **Morsyleide Freitas
Rosa**³, **José Adolfo Almeida Neto**⁴, **Maria Cléa Brito Figueirêdo**⁵

¹*Federal Institute of Education, Science and Technology of Ceará, Brazil*

²*Federal University of Ceará, Brazil* ³*Embrapa Tropical Agroindustry, Brazil*

⁴*State University of Santa Cruz, Brazil* ⁵*Embrapa Tropical Agroindustry, Brazil*

Improving interpretation, presentation and visualisation of LCA studies for decision making support

CHAIRS: **Serenella Sala** - *European Commission - Joint research centre*
 Jessica Andreasson - *Volvo Car Corporation*

TU-174-65 **Decision in LCA: a new approach introducing economic actors and sensitivity analysis**
Anne Ventura

Research Institute in Civil Engineering and Mechanics (GeM) UMR 6183, UBL (Université Bretagne Loire), Université de Nantes, Chair in civil engineering and eco-construction

TU-177-66 **Applied Sustainability in Industry: The BASF Eco-Efficiency Toolbox for Decision-Making and Marketing Support**
Anahí Patricia Grosse-Sommer, Thomas H Gruenenwald, Nicola S Paczkowski, Peter R Saling, Richard N van Gelder

BASF SE, Germany

TU-253-67 **Gamification in LCA: A test case for an agricultural application.**
Markus Frank¹, **Torsten Rehl**², Sebastian Schulze², Andreas Durst², Richard van Gelder¹

¹*BASF SE, Germany* ²*RIFCON GmbH, Germany*

TU-254-68 **Target group oriented and goal dependent impact assessment and interpretation in LCA: The example of the agri-food sector**
Thomas Jan Nemecek, Andreas Roesch, Maria Bystricky, Gérard Gaillard

Agroscope, Switzerland

TU-257-69 **Addressing the green water scarcity footprint of eucalypt production in Portugal**
Paula Sofia Quinteiro¹, Sandra Rafael¹, Pedro Villanueva-Rey², Myriam Lopes¹, Luís Arroja¹, Ana Cláudia Dias¹

¹*University of Aveiro, Portugal* ²*University of Santiago de Compostela, Spain*

TU-272-70 **Arctic life cycle impact assessment – gaps in high north LCA**
Johan Berg Pettersen, Xingqiang Song

UiT - The Arctic University of Norway, Norway

- TU-353-71 **Interpreting and communicating LCA results in models with high variability and uncertainty – the wider impact of the AQUAVALENS project**
Carmen M Torres-Costa, Francesc Castells, Maria José Figueras
Universitat Rovira i Virgili, Spain
- TU-421-72 **Assessment of biodiversity in LCA – a novel approach to an elusive impact category**
Torsten Rehl¹, Sebastian Schulze¹, Andreas Durst¹, Richard van Gelder², Markus Frank², Anita Hallmann³
¹Rifcon GmbH, Germany ²BASF SE, Germany ³thinkstep AG, Germany
- TU-427-73 **Automation of Life Cycle Assessment by combining energy management data and material information on the example of the automotive industry**
Andreas Schifflleitner¹, Martina Prox², Jan Hedemann²
¹iPoint-Austria GmbH, Austria ²ifu Hamburg GmbH, Germany
- TU-446-74 **From scientific knowledge to business practice: how to bridge the LCA reporting strategy gap?**
Monia Niero, Alexandra Bonou, Stig I Olsen
Technical University of Denmark, Denmark
- TU-489-75 **Credible LCA Communications: the yellow brick road to building budget and buy-in**
Carole Dubois, Lori Gustavus, Sarah Mandlebaum, Natalia Stepanova
Quantis
- TU-496-76 **A Social Life Cycle Metrics guideline for Chemical Products**
Olivier Muller¹, Andrea Brown², Jacobine das Gupta³, Pierre Coers⁴, Juliette Lefebure¹
¹PwC, France ²WBCSD ³DSM ⁴Solvay
- TU-498-77 **What LCA Information to Communicate to Decision Makers?**
Yuki Hamilton Onda Kabe, Luiz Gustavo Ortega, Kajiura Gustavo
Braskem, Brazil

- TU-509-78 **Early phase design tool for non-LCA experts: a case study of integrating environmental assessment in the development of novel processing technology in food industry**
Christoffer Krewer, Jennifer Davis, Anna Woodhouse, Karin Östergren, Emma Holtz
RISE Research Institutes of Sweden, Sweden
- TU-510-79 **Tools and its key elements for presenting results of LCA studies for Civil Society**
Julia Paglerani Monteiro de Andrade, Marcela Porto Costa, Rafael Selvaggio Viñas, Juliana Maria da Silva
Fundação Espaço ECO/ BASF S.A, Brazil
- TU-533-80 **Using Life Cycle Knowledge to Inform and Inspire Action**
Sanjeevan Bajaj, Archana Datta
FICCI, India
- TU-539-81 **Tailoring LCA results in monetary terms for decision support**
Tomas Ekvall¹, Lisbeth Dahllöf¹, Klas Hallberg², Rebecka Hallén Jorquera³, Maria Lindblad¹, Ellen Riise⁴, Mia Romare¹, Bengt Steen⁵
¹IVL Swedish Environmental Research Institute, Sweden ²AkzoNobel
³Swedish Life Cycle Center, Chalmers University of Technology ⁴SCA
⁵Chalmers University of Technology
- TU-583-82 **Datavisualization: Bringing right information for right decision**
Florent Blondin
Environmental Picture, France

Sustainable Design of Complex Systems, Products and Services with Users integration into design

CHAIRS: **Nicolas Perry - ENSAM - I2M**
 Julien Garcia - Groupe PSA

TU-162-83 Sustainability requirements in product design: sources and inclusion.

Zbigniew Kłos, Koper Krzysztof

Poznan University of Technology, Poland

TU-196-84 Life Cycle Assessment in Early Stages of Technology Development. A Case for Rural Electrification

Ana Paulina Gual Rojas¹, Kas Hemmes², Valentina Prado¹

¹Leiden University, Netherlands, The ²Delft University of Technology

TU-200-85 Flexible LCA for flexible packaging – this semi-automated tool is paving the way to efficient, accurate and flexible LCA calculation

Thomas Greigeritsch¹, Therese Daxner²

¹Constantia Flexibles International GmbH ²Daxner & Merl GmbH

TU-246-86 Integration of environmental performance of usage in all the value chain of product.

Charlotte Heslouin^{1,2,3}, Lionel Pourcheresse¹, André Stumpf¹, Véronique Perrot Bernardet², Alain Cornier², Nicolas Perry³

¹Carrier Transicold Industries, 810 Route de Paris, FR-76520 Franqueville Saint Pierre ²Arts et Métiers Paristech - Institut de Chambéry, Savoie Technolac, BP 50295, F-73375 Le Bourget du Lac, Fr ³Arts et Métiers ParisTech, I2M, UMR 5295, F-33400 Talence, Fr

TU-270-87 Development of an Environmental Evaluation Tool in the Transport Sector and its Impact on Decision-Making in the Early Stages of Design

Sergio Andres Brambila Macias¹, Lisbeth Dahllöf^{2,3}, Karin Eriksson³, Tomohiko Sakao¹

¹Linköping University, Sweden ²IVL Swedish Environmental Research Institute

³Volvo Group Trucks Technology

- TU-323-88 **Comparison of attributional and consequential life cycle assessment applied to urban projects**
Bruno Peupartier¹, Charlotte Roux¹, Natalia Kotelnikova², Fabien Leurent²
¹ARMINES, France ²Ecole des Ponts ParisTech
- TU-333-89 **A framework for environmental life-cycle screening**
Christine Roxanne Hung¹, Linda Ager-Wick Ellingsen¹, Guillaume Majeau-Bettez^{1,2}, Anders Hammer Strømman¹
¹Norwegian University of Science and Technology (NTNU), Norway ²CIRAIG, École Polytechnique de Montréal, Canada
- TU-339-90 **The Integration of Life Cycle Assessment and Product Life Cycle Management – the next step in sustainable product design?**
Johannes Auer^{1,2}, Michael Betz³, Harald Florin³
¹Siemens AG, Process Industries and Drives Division, 90475 Nuremberg, Germany ²Department of Management Engineering, Technical University of Denmark, Kongens Lyngby, Denmark ³Material Compliance Management, Business Development, thinkstep AG, Stuttgart, Germany
- TU-341-91 **Exploring the circularity of new product-service business models: the case of Tarkett**
François Saunier¹, Manuele Margni¹, Sophie Bernard², Russel Bennett³
¹CIRAIG, Polytechnique Montréal, Canada ²Polytechnique Montréal, Canada ³Tarkett North America
- TU-356-92 **Considering space debris related impacts into the LCA framework**
Maury Thibaut^{1,2}, Loubet Philippe¹, Ouziel Jonathan², Saint-Amand Maud², Sonnemann Guido¹
¹The CyVi group, University of Bordeaux ²Airbus Safran Launchers, Design for Environment
- TU-576-93 **Barriers for implementation Eco-design process in sustainable manufacturing using design structure matrix: A case of Finnish pulp and paper industry**
Shqipe Buzuku¹, Usama Awan¹, Andrzej Kraslawski^{1,2}
¹Lappeenranta University of Technology, Finland ²Lodz University of Technology, Poland

TU-599-94 **Sustainable fair trade: Unleashing consumer power with decentralised network technology**

Bo Pedersen Weidema¹, Manuel Klarmann ²

¹*Aalborg University, Denmark* ²*Eaternity, Zurich, Switzerland*

Improving the life cycle performance of chemical products and materials through data exchange along the value chain

CHAIRS: **Guido Sonnemann** - *University of Bordeaux*
 Carmen Alvarado Ascencio - *AkzoNobel*

TU-152-95 **Life cycle atom economy – a case of dimethyl sulfate production**
 Hsien H KHOO

Institute of Chemical and Engineering Sciences, Singapore

TU-153-96 **Environmental analysis of β -Galactosidase enzyme production from a LCA approach**
 Sara Feijoo, Sara Gonzalez-Garcia, Juan Lema, Gumersindo Feijoo, María Teresa Moreira

University of Santiago de Compostela, Spain

TU-163-97 **LCA applied to a new Glycerol Biorefinery approach to produce high quality products**
 Erasmó CADENA¹, Kathleen MEISEL², Pierre RIGAULT¹, Jose GUTIERREZ¹, Antonio BARONA¹

¹VERTECH GROUP, France ²DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Germany

TU-165-98 **Quantifying environmental impacts associated to sodium alginate extraction from seaweed**
 Pedro Villanueva-Rey¹, Paula Pérez-López^{1,2}, Stephen K Herbert³, Gumersindo Feijoo¹, Maria Teresa Moreira¹

¹Department of Chemical Engineering, Institute of Technology, University of Santiago de Compostela. 15782 - Santiago de Compostela, Spain ²MINES ParisTech, PSL Research University, Centre Observation, Impacts, Energie (O.I.E.), France ³Office of Basic Energy Sciences SC-22.1/Germantown Building, U.S. Department of Energy. 1000 Independence Avenue, SW, Washington, D.C (United States)

TU-252-99 **Supplier Engagement in the Together for Sustainability Program from Life Cycle Thinking: BASF's Experience in Brazil**
 Táísa Cecília de Lima Caires¹, Rodolfo Walder Viana¹, Adriano Maia Oliveira², Ana Ingrid Almanca²

¹Espaço ECO Foundation, Brazil ²BASF SA, Brazil

TU-259-100 **From sustainability assessments to value proposition. Case study: bio-based solvents for agrochemicals**
Ivana Dencic, Ana Morao, Diana Visser

Corbion Purac, Netherlands, The

TU-401-101 **IMPROVEMENT THE LIFE CYCLE PERFORMANCE OF THE UREA THROUGH THE COATING IN A SPOUTED BED**
Tamiris Pacheco Costa¹, Ana Cláudia Dias¹, Gabriela Silveira da Rosa²

¹University of Aveiro, Portugal ²Federal University of Pampa, Brazil

TU-505-102 **Traceability of sustainable materials and manufactured products**
Andreas Ciroth¹, Jutta Hildenbrand², Christoffer Krewer³

¹GreenDelta, Germany ²Swerea IVF, Sweden ³RISE Agrifood and Bioscience, Sweden

TU-606-103 **Life cycle assessment of space propellants and high-energetic chemicals: data barriers, solutions, uncertainty and confidentiality in an LCI database**
Johan Berg Pettersen¹, Håvard Bergsdal², Eduardo João Silva³, Jonathan Ouziel⁴

¹Sintef Raufoss Manufacturing ²Asplan Viak ³ISQ ⁴Airbus Safran Launchers

Posters

WEDNESDAY, SEPTEMBER 6

09.00 am – 05.30 pm

LOCATION: POSTER AREA,
CONFERENCE MAIN HALL

Integrating the concept of Planetary Boundaries into decision making processes

CHAIRS: **Marcial Vargas-Gonzalez - *Quantis***
 Michal Kulak - *Unilever*

WE-447-1 European and global consumption: to which extent are they surpassing planetary boundaries?

Serenella Sala, Lorenzo Benini, Eleonora Crenna, Michela Secchi

European Commission - Joint Research Centre, Italy

Greening agri-food value chains in emerging economies

CHAIRS: **Matthias Stucki** - *Zurich University of Applied Sciences*
Anél Blignaut - *South African Fruit and Wine Industry Initiative*
Confronting Climate Change (CCC)

WE-230-2 **Sustainable Management Program: generating value in sustainability for small and medium-sized farmers in Brazil**
Sara Juarez Sales, Camila Daniele Honório Marques, Tiago Egydio Barreto, Bruno Comelatto Frizzarin, Taisa Cecilia de Lima Caires

Espaco ECO Foundation, Brazil

WE-243-3 **Making the transition to sustainable practices through life cycle management: the case of oil palm fertilization in Indonesia**

Kiyotada Hayashi ¹, Naoki Makino ², Vita Dhian Lelyana ³, Koichi Shobatake ², Erwinsyah - ³

¹*National Agriculture and Food Research Organization, Japan* ²*TCO2 Co., Ltd.*

³*Indonesian Oil Palm Research Institute*

WE-264-4 **Greening of agri-food value chains with insect composting of biowastes in emerging economies**
Sergiy Smetana ¹, Moritz Gold ^{2,3}, Giancarlo Raschio ⁴, Alexander Mathys ²

¹*German Institute of Food Technologies (DIL-e.V.), QuakenbrückGermany*

²*Sustainable Food Processing Laboratory, ETH Zurich, Zurich, Switzerland*

³*Swiss Federal Institute of Aquatic Sciences and Technology (Eawag),*

Dübendorf, Switzerland ⁴*Ecosystem Services LLC, Lima, Peru*

WE-292-5 **Brazilian Sustainable Farm Award: evaluation and value chain engagement**

Marcela P. Costa ¹, Renato B. Arcas ¹, Sueli O. Oliveira ¹, Thais Fontes ², Aline Aguiar ², Fabio L. Guido ³, Viviane Taguchi ⁴

¹*Fundação Espaço ECO/ BASF S.A, Brazil* ²*Rabobank, Brazil* ³*WWF, Brazil*

⁴*Globo Rural - Ed.Globo, Brazil*

WE-311-6 **LCA of the packaging used in lychee production in Sul de Minas, Brazil**

Andrea Franco Pereira ¹, Alfredo Jefferson de Oliveira ²

¹*Universidade Federal de Minas Gerais, Brazil* ²*Pontifícia Universidade*

Católica do Rio de Janeiro, Brazil

- WE-470-7 **Life cycle assessment of animal protein produced in Brazil: impact of the carbon footprint in the value chain**
Alexandre Yorikuni Kavati¹, **Claudia Veiga Jardim**¹, **Beatriz Cristina Koszka Kiss**², **Matheus Fernandes**²
- ¹JBS S.A. ²Center for Sustainability Studies (FGVces) of the São Paulo School of Business Administration, Getulio Vargas Foundation (FGV EAESP)
- WE-475-8 **Comparative Life Cycle Assessment of Vegetable Cultivation Utilizing Food Waste Compost: A Case Study of Suburban Farming**
Naoki Yoshikawa, **Tomoya Matsuda**, **Koji Amano**
- Ritsumeikan University, Japan*
- WE-502-9 **Certified sustainable palm oil – what are the benefits? Is it a way forward for greening agri-food value chains in emerging economies?**
Jannick Schmidt, **Michele De Rosa**
- 2.-0 LCA consultants, Denmark*
- WE-551-10 **Alternatives to reduce environmental impacts in the Brazilian melon production**
Tayane de Lima Santos¹, **Ana Barbara Araujo Nunes**², **Viviane da Silva Barros**³, **Vanderlise Giongo**⁴, **Maria Cléa Brito Figueirêdo**⁵
- ¹Federal University of Ceará, Brazil ²Federal University of Ceará, Brazil
³Embrapa Tropical Agroindustry, Brazil ⁴Embrapa Semi-arid, Brazil ⁵Embrapa Tropical Agroindustry, Brazil
- WE-556-11 **Sustainability of Agri-Food Products: Case Studies of Oil Palm, Cassava, Sugarcane, and Maize Value Chains in Thailand**
Papitchaya Utanun, **Saowalak Olarnrithinun**, **Thumrongrut Mungcharoen**
- National Science and Technology Development Agency, Thailand*

Trends in life cycle thinking in regional development: methodological advances and challenges for the future

CHAIRS: **Ian Vazquez Rowe** - *Pontificia Universidad Católica del Perú*
 Valentina Prado - *Leiden University*

WE-185-12 **Municipal solid waste management assessment in Galicia (NW Spain) throughout a self-sufficiency management indicator**

Pedro Villanueva-Rey^{1,2}, Sara Gonzalez-Garcia¹, Gumersindo Feijoo¹, Maite Moreira¹

¹University of Santiago de Compostela, Spain ²University of Aveiro, Portugal

WE-187-13 **Sustainable Consumption and its different terminologies**
Roni Severis¹, Flavio Simioni², **Rodrigo Alvarenga**³

¹UDESC (Brazil) ²UDESC (Brazil) ³UDESC (Brazil) / Ghent University (Belgium)

WE-191-14 **Implementing Life Cycle Perspective on Environmental Impact Assessment process in Brazil**

Maycon Hamann¹, **Rodrigo Alvarenga**²

¹UDESC (Brazil) ²UDESC (Brazil) / Ghent University (Belgium)

WE-363-15 **The Ecological Scarcity Method: Approach for international application**

Nadine Jansky¹, Liselotte Schebek¹, Karina Fries², Steffen Wellge³

¹Technische Universität Darmstadt, Germany ²Fraunhofer-Institut für Silicatforschung ³Volkswagen Group Research Environment

WE-370-16 **Life Cycle Approaches for Zero Emission Neighbourhood Concepts**

Carine Lausset, Anders Hammer Strømman, Annemie Wyckmans, Helge Brattebø

Norwegian University of Science and Technology (NTNU), Norway

WE-443-17 **Integrated climate change and biodiversity impacts following forest harvest operations in Norway**

Cristina-Maria Iordan, Francesca Verones, Francesco Cherubini

Norwegian University of Science and Technology, Norway

WE-504-18 **The Brazilian LCA Programme and LCA promotion**
Tiago Emmanuel Nunes Braga ¹, Cecília Leite ¹, Gil Anderi ², Cassia Marie L. Ugaya ³, Marília Folegatti Matsuura ⁴, Maria Aparecida Martinelli ⁵, Maria Teresa Rezende ⁵

¹IBICT, Brazil ²USP, Brazil ³UTFPR, Brazil ⁴Embrapa, Brazil ⁵Inmetro, Brazil

WE-507-19 **Towards a harmonized communication of products' social impacts.**

Marzia Traverso ¹, Catherine Benoit-Norris ², Faycal Boureima ³, Bettina Heller ³, Ian Fenn ³

¹Joint Research Center of the European Commission ²New Earth ³United Nation Environment Programme

WE-577-20 **Plans to establish Chinese LCA platform for business in China**

Hongtao Wang ^{1,3}, Boyang Li ², Xiaoguang Chi ³, Qiang Fu ³, Wenjie Liao ¹, Li Zhang ⁴, Zhilan Jiang ⁴

¹Sichuan University, China, People's Republic of ²China Center for Information Industry Development (CCID) ³Beijing Association of Green Design and Green Manufacturing Promotion (GDGM) ⁴IKE Environmental Technology Co. Ltd.

WE-595-21 **Certified gold: what does it mean?**
Steven Young

University of Waterloo, Canada

Turning the lens around: LCA Success Stories “outside-in”

CHAIRS: Eric Mieras - *PRe Sustainability*
Alain Wathelet - *Solvay*

WE-321-22 **Inclusion of LCA as a strategic theme in the Brazilian company Duratex**

Fernanda Bueno Marcondes Vieira Miranda¹, **Matheus Henrique Novo Fernandes**², **Beatriz Cristina Koszka Kiss**², **Ricardo Dinato**²

¹*Duratex S.A.* ²*Center for Sustainability Studies (FGVces) of the São Paulo School of Business Administration, Getulio Vargas Foundation (FGV EAESP), Brazil*

WE-387-23 **Implementing a sustainable strategy on the complete life-cycle: a manufacturer and a take-back system present operational projects supported by LCA**

Ingrid Tams¹, **Thomas Van Nieuwenhuysse**², **Pierre-Marie Assimon**²

¹*Groupe SEB, France* ²*Eco-systèmes, France*

I have a dream: Open Marketplace for Life Cycle approaches!

CHAIRS: **Mark Jacob Goedkoop - PRé Consultants B.V.**
 Peter Rudolf Saling - BASF SE

WE-347-24 **PlasticsEurope experience and perspectives in developing datasets for the LCA community**
guy castelan

PlasticsEurope, France

WE-392-25 **UNEP/SETAC Initiative technical support on data review and conformance: a summary of learnings**
Bruce Vigon ¹, Guido Sonnemann ², Anne Asselin ³, Andreas Ciroth ⁴, Tim Grant ⁵, Cristobal Loyola ⁶, Nongnuch Poolsawad ⁷, Jitti Mungkalasiri ⁷

¹SETAC, Pensacola, Florida, USA ²University of Bordeaux, France ³Consultant, Paris area, France ⁴Greendelta, Berlin, Germany ⁵Australian Life Cycle Society, Australia ⁶Regenerativa, Santiago, Chile ⁷National Metal and Materials Technology Center (MTEC), Bangkok, Thailand

WE-419-26 **Data-based compliance management for sustainable supply chains – Current approaches and concepts for the circular economy**
Andreas Schifflleitner ¹, Rupert J. Baumgartner ², Josef-Peter Schöggl ², Morgane M.C. Fritz ²

¹iPoint-Austria GmbH, Austria ²University of Graz Institute of Systems Sciences, Innovation and Sustainability Research

WE-430-27 **Mainstreaming Life Cycle approaches through the collaborative platform [avniR]**
Alice Salamon ¹, Vanessa Pasquet ¹, Aubin ROY ¹, Clémence DUBOIS ², Christian TRAISNEL ², Victor FERREIRA ², Naeem ADIBI ¹

¹[avniR] Platform by cd2e, France ²cd2e, France

WE-436-28 **On the road towards smart use of LCA data - A Swedish national strategy to provide reference data in key areas**
Carl Karheiding ¹, Sara Palander ¹, Christoffer Krewer ², Johan Tivander ³, Lisa Hallberg ⁴, Sven-Olof Ryding ⁵

¹Chalmers University of Technology/Swedish Life Cycle Center, Sweden ²RISE Research Institutes of Sweden AB ³Chalmers University of Technology ⁴IVL Swedish Environmental Research Institute ⁵Swedish Environmental Protection Agency

- WE-456-29 **A shared and recognised support data standard as a necessary first step towards exchange of LCA data and information.**
Yves Loerincik, Christophe Porté, Clémentine Maurice, Rainer Zah
Quantis
- WE-464-30 **Carbon footprint assessment of a wind power plant in Brazil: enhancing product value and life cycle management at Copel**
Murilo Agio Nerone ¹, Raquele Cristina Moretti de Souza ¹, Matheus Fernandes ², Beatriz Cristina Koszka Kiss ², Ricardo Dinato ²
¹Companhia Paranaense de Energia - COPEL ²Center for Sustainability Studies (FGVces) of the São Paulo School of Business Administration, Getulio Vargas Foundation (FGV EAESP)
- WE-490-31 **Highly aggregated vs. specific granularity – A database and software independent LCA modeling approach: An analysis and solution for copper inventory data**
Ladji Tikana ¹, Michael Spielmann ², Diana Eggers ²
¹Deutsches Kupferinstitut Berufsverband e.V ²Quantis Deutschland
- WE-540-32 **A system for sharing life cycle models - implications**
Andreas Ciroth, Greve Sebastian, Srocka Michael
GreenDelta, Germany
- WE-619-33 **Collaborative Life Cycle Activities (Co-LCA) to create Shared Meta-Analysis Dataset**
Stéphane Morel ¹, Franck Aggeri ²
¹RENAULT, France ²MINES Paristech, Paris, France
- WE-681-34 **Roadmap Item: Inventory Model Description and Revision**
Brandon Kuczenski ¹, Antonino Marvuglia ², Wesley W. Ingwersen ³, Barclay Satterfield ⁴, David P. Evers ⁵, Christoph Koffler ⁶, Tomás Navarrete ², Lise Laurin ⁷
¹University of California, Santa Barbara ²Luxembourg Institute of Science and Technology ³US Environmental Protection Agency ⁴Eastman Chemical Company ⁵Hexion Inc. ⁶thinkstep Inc. ⁷EarthShift Global

Food waste management (sector) in a circular economy (discussion panel)

CHAIRS: **Nicole Unger** - *University of Natural Resources and Life Sciences, Vienna (BOKU)*
Francesco Razza - *Novamont*

WE-170-35 Contributing to measure the food circular economy: eco-nutrient footprint of a food production system

Isabel Garcia-Herrero¹, **Jara Laso**¹, **Maria Margallo**¹, **Pere Fullana**², **Alba Bala**², **Ian Vázquez-Rowe**³, **Cristina Gazulla**⁴, **M.J. González**¹, **Ainoa Quiñones**¹, **Maria Jesús Durá**¹, **Carmen Sarabia**¹, **R. Abajos**¹, **Angel Irabien**¹, **Ruben Aldaco**¹

¹*Universidad de Cantabria, Avda. de los Castros s/n 39005 Santander, Spain*

²*UNESCO Chair in Life Cycle and Climate Change, Escola Superior de Comerç Internacional (ESCI), Universitat Pompeu Fabra (UPF), Passeig Pujades 1, 08003 Barcelona, Spain* ³*Pontificia Universidad Católica del Perú, Departamento de Ingeniería, Red Peruana Ciclo de Vida. Avenida Universitaria 1801, San Miguel L0032, Lima, Perú* ⁴*Lavola Cosostenibilidad. Rbla. Catalunya, 6, 08007 Barcelona, Spain*

WE-236-36 Environmental impact of food waste treatment in an EcoCleaner, a portable accelerated composter **Sylvie Gros Lambert**¹, **Angélique Léonard**¹, **Sébastien Finet**²

¹*Université de Liège, Belgium* ²*Biowaste Recycling*

Life Cycle Approaches to Sustainable Regional Development

CHAIRS: Fritz Balkau - *individual*
Timothy Grant - *Life Cycle Australia*

WE-268-37 **Life Cycle Assessment of Water Treatment Processes - A tool for environmental decision-making in municipal water purification**

Alexander Adam Sobczyszyn Borg, Jon Brandt

Asplan Viak AS, Norway

WE-437-38 **A life cycle approach to support decent housing development in India**

Alessio Mastrucci, Narasimha Rao

International Institute for Applied Systems Analysis (IIASA), Austria

WE-458-39 **Promoting Material Flow Cost Accounting to enable SMEs to contribute to Sustainable Regional Development**

Mieke Klein, Andreas Genest, Michael Bruns, Marten Stock

ifu Hamburg GmbH, Germany

WE-486-40 **The Energy-Water-Food Nexus of Biodiesel Production in Thailand**

Worayut Saibuatrong^{1,2}, Thumrongrut Mungcharoen³, Viganda Varabuntoonvit^{1,2}

¹Chemical Engineering Department, Faculty of Engineering, Kasetsart University, Bangkok 10900, Thailand ²The Center of Excellence on Petrochemical and Materials Technology, Chulalongkorn University Research Building, Phayathai Rd., Bangkok 10330, Thailand ³Energy and Environment Cluster and Director of Sustainable Environment Program, National Science and Technology Development Agency (NSTDA), Pathum Thani 12120, Thailand

WE-515-41 **ICVAQUA, a project towards sustainability in the sector of aquatic products in the Hauts de France Region**

Pierrette ETHUIN¹, Julie MANCINI², Thierry GRARD¹, Jérôme PAYET³

¹Université du Littoral Côte d'Opale, France ²Pôle Aquimer, France ³Cycleco, France

WE-554-42 **Adapting regional indicators to Sustainable Development Goals - a framework to accelerate adoption in regions**
Pia Wiche¹, Adriana Zacarías², Juan Bello², Francesco Gaetani²

¹Ecoe, Chile ²UN Environment, Panama