

## **DF 64: Novel computational approaches in LCA**

March 30, 2017, Zürich (in English)

The basic structure of LCA computations is well established. However, the community of LCA software engineers is growing and more and more advanced analysis and assessment tools are being developed and used. The use, benefits, and potentials of such more advanced tools will be in the focus of this discussion forum. Examples include inventory calculations, integrated assessment, system modelling, database analysis, allocation choices, and spatial and temporal impact assessment. These advanced tools are usually developed for a single research project, and can be difficult to apply more broadly.

This discussion forum is intended to foster the exchange between and among software developers and potential users (LCA practitioners), both to guide future development towards a broader user base, and to allow software developers to benefit from each other. A special focus will be put on freely available tools and methodologies that are of interest to a large audience.

## **DF 65: How suitable is LCA for Nanotechnology Assessment? Overview of current methodological pitfalls and potential solutions**

May 24, 2017, Zürich (in English)

Ten years ago, participants to an international workshop in Washington D.C. on "Nanotechnology and Life Cycle Assessment" concluded that, a priori, the LCA ISO framework is fully suitable for the assessment of nanomaterials and nanoproducts, despite notable shortcomings in the availability of inventory data and missing evaluation instruments for impact assessment. Since then, various actors have worked intensively on these issues with the goal of ensuring that traditional and nano-specific environmental issues can be assessed within a unified, comprehensive and consistent framework.

Based on the outcomes of different research projects, this forum will present currently used approaches in LCA of nanotechnology. The focus of the presentations will be on novel strategies for overcoming current issues related to nano-specific data availability and uncertainty (for the various steps of the LCA framework). Important issues to be discussed at this one-day event include (inter alia) upscaling procedures (e.g. from lab to industrial production scale), modelling of nanoparticle releases into the environment, the quantification of health effects and the potential added value of combined LCA and risk assessment (RA) approaches.

## **DF 66: LCA of Mobility solutions: approaches and findings**

August 30, 2017, Zürich (in English)

Today, passenger and freight transport are causing substantial environmental burdens contributing to global warming and other adverse impacts on human health and ecosystems due to emission of pollutants, noise, etc. Despite of the introduction of cleaner technologies, overall mobility related burdens continue to increase. However, the mobility sector might face substantial changes such as the shift from fossil fuels to electricity and electricity-based fuels or the introduction of autonomous vehicles with yet unknown environmental consequences.

This discussion forum will provide insights into state-of-the-art assessment of mobility – from the individual technology to the system level and covering the environmental, social and economic dimensions. User-friendly tools for the comparative evaluation of mobility options in business and administration, such as mobitool v2.0, will be presented, including case studies from first applications. Furthermore, assessments of large-scale mobility solutions for entire regions will be shown, for the current situation as well as future scenarios, including major technology developments and changes.

## **DF 67: Tracking current and forecasting future land-use impacts of materials from renewable feedstocks**

November 3, 2017, Zürich (in English)

Materials from renewable feedstocks may cause significant environmental impacts due to land use and land use change related to feedstock sourcing. Whilst these impacts are clearly spatially-dependent, spatially-resolved impact assessment is often hampered by lack of data, and in some cases, methods or models. In addition, the location and impacts of production are likely to change in the future, e.g. due to the consequences of climate change and due to sourcing trends in a growing economy and considering geopolitical conditions.

This forum will focus on 1) Methods that can be used to track the current locations of crop production systems in complex supply chains to support spatially resolved impact assessment and 2) Methods and tools to predict future locations of crops in the context of megatrends such as climate change and increasing demand for agricultural raw materials. Advances of methods for spatially resolved consideration of environmental impacts of land use change will also be covered in this LCA forum.

This forum is sponsored by:



### **Fees**

(lunch included, videos and documentation included)

#### **Annual pass (for all fora in 2017)**

Standard fee: 700 CHF

#### **For a single forum**

Standard fee: 300 CHF

Reduced fee: 90 CHF for PhD students and students

Online access: 150 CHF

## Registration

To register for the whole year or a single LCA Discussion Forum, please use the following link:

<https://www.converia.ethz.ch/frontend/index.php?sub=33>

To register you need to create a profile, which is done in very few steps and is self-explanatory. In case you are not able to pay by credit card, please send an e-mail to:

[lcaforum@ethz.ch](mailto:lcaforum@ethz.ch)

with a short notice that you want to receive an invoice instead. Please provide the full invoice address as well as the chosen fee type.

## Call for short presentations

You work on a topic relevant to one of the Discussion Fora in 2017 and wish to present your findings? "Open floor" sessions for short presentations will be available in each forum. Please contact the LCA Discussion Forum secretariat – the sooner the better.

## Contact

For more information and to receive news on the LCA Discussion Forum, please contact the secretariat:

[lcaforum@ethz.ch](mailto:lcaforum@ethz.ch)

## Website

To download the full program and presentations and/or papers of past and future forums:

[www.LCAforum.ch](http://www.LCAforum.ch)



## Mission and organization

### Mission

The LCA Discussion Forum is a platform for an exchange between LCA practitioners working in industry, consulting companies, administrations and LCA scientists. Each LCA forum is dedicated to a specific topic of immediate interest related to

- experiences and challenges with LCA application in industry and administration
- scientific questions in life cycle inventory and life cycle impact assessment methodology development
- dissemination of new scientific findings and results of relevant LCA studies.

Internationally renowned speakers are invited according to the topic to present their work. Each forum offers an "open floor" session for short presentations. The LCA forum is dedicated to people interested in the field of LCA, working in Switzerland and abroad. Its content is defined by its board. Proposals are always welcome.

### Board of the Association

- Stefanie Hellweg, ETHZ/IFU (president)
- Arthur Braunschweig, E2 Management Consulting Ltd.
- Norbert Egli, Federal Office for the Environment (BAFU)
- Rolf Frischknecht, treeze Ltd.
- Roland Hischier, Empa
- Gérard Gaillard, Agroscope Reckenholz-Tänikon (ART)
- Rainer Zah, Quantis



# 2017

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