Program of the 16th Discussion Forum "Life Cycle Assessment"
Input-Output Life Cycle Assessment, from Theory to Applications

Whereas conventional process based LCA relies on the identification and quantification of physical flows of energy and matter, IO-LCA is a method based on the monetary flows induced in the economy and through all the supply chain by a product, process or activity. It allows quantifying energy consumption and pollutant releases that are linked to these monetary transactions according to the sectors (industries) to which these transactions are related. The IO table of coefficients is needed to estimate the monetary flows induced throughout the economy by the "ripple effect" emanating from a given sector output. For each sector, average emissions and the energy consumption per economic unit of output are required to assess the total environmental burdens.

The Process LCA can be considered as a more precise method within the limits of the system, as it relies on specific models of products and processes, unlike the IO-LCA which is based on mean values of emissions and energy consumption per economic unit of output for entire sectors of the economy. Nevertheless, Process LCA suffers from excessive cost, time, and information requirements. In addition to that, to define appropriate system's boundaries, covering a sufficient percentage of the overall burden, is a difficult task that is not encountered when using IO-LCA. In fact, IO-LCA automatically allows considering the environmental burdens through all the supply chain, within the entire economy.

Program

09.40   *Registration and coffee*

10.00   *Welcome and Introduction*

Part A: Theory and application of Input-Output LCA

10.10   *1st Plenary session.* Two platform presentations by

   Prof. Gabrielle Antille Gaillard, University of Geneva
   " ***From Input-Output Tables to Modelling Environmental Issues***"

   Prof. Greg Norris, Harvard University
   "An Introduction to Input-Output LCA Theory and Methodology, its Strengths and Weaknesses and a Comparison between Input-Output LCA and Process LCA"

11.15   *Break*

11.45   *1st Short presentation session and discussion on Input-Output*

   Tourane Corbiere, EPFL

   "Evaluating sustainability at the communal level"

   Yves Loerincik

   "Comparison of the impacts of the EPFL computer network using process and input LCA"

12.30   *Midday break and poster presentation*

13.45   *Coffee*

Part B: Combining Input-Output and Process LCA

14.00   *2nd Plenary session.* Two presentations by:

   Sangwon Suh, MScE, Leiden University
   " ***The Hybrid Approach Merging IO and Process LCA***"

   Torsten Marheineke, University of Stuttgart, MMP consultants
   "Performing Entire Life Cycle Inventory Assessment: Input-Output Tables as Background Inventory Data for LCA"

15.00   *2nd Short presentation session and discussion (part 1)*

Moritz Nill, Institut für Energetik und Umwelt D
"Life Cycle Assessment of the PV Power Production Using the Hybrid Approach"
David Shipworth, University of Reading GB
"A Bayesian Hybrid LCA model of stochastic embodied greenhouse gas emissions in construction materials"

15.30   *Break*

15.40   *2nd Short presentation session (part 2)*

16. 00   *General discussion and conclusion*

16.25   *Final announcements*

16.30   End of the Forum