



EarthShift

Changing the way we look at natural resources

Toxicity in LCA: working with USEtox One-Day Course

Location: This is an in-person, course held in Portsmouth, NH

2010 Schedule: October 7

Time: One day 9-5 with 1hr lunch break

Cost: \$1400 per person/ per day

Registration: Email the training registration form to training@earthshift.com.

COURSE OBJECTIVES

This training is dedicated to understand and apply the concepts behind toxicity calculations in life cycle impact assessment (LCIA).

DESCRIPTION

This 1 day training gives you an understanding of the model concept behind the handling of toxic emissions in life cycle impact assessment. You will also learn how to calculate toxicity factors in practice with the UNEP/SETAC consensus model [USEtox](#). The training is suitable for those who want to learn more about the concepts and practical implementation of toxicity in their LCA studies.

TOPICS COVERED

You will learn to understand and apply the concepts behind toxicity calculations in life cycle impact assessment (LCIA). The model concepts

used to predict the fate of a chemical in the environment, chemical intake via various human exposure routes, including food and inhalation, and toxic effects towards humans and ecosystems will be explained and discussed. You will also learn about the various model applications in LCIA, data collection strategies to calculate toxicity factors, the calculation of toxicity factors with the UNEP/SETAC consensus toxicity model USEtox, and interpretation of the results.

Concepts of toxicity in LCA: Theory behind the life cycle impact assessment methods for toxicity. Explanation of fate, exposure and effect assessment. Similarities and differences between the toxicity models included in various LCIA methodologies, such as CML2000, IMPACT₂₀₀₂₊, TRACI, and ReCiPe.

Data collection: Which chemical-specific data is required, which databases are available, and how to select the most appropriate input data for the calculation of toxicity factors.

Model application: How to calculate toxicity factors in practice.

TRAINER

The class is taught by Dr Mark Huijbregts who is an Associate Professor at the Radboud University in The Netherlands. He lectures at the university on “Risk Assessment of Chemicals” and “Life Cycle Assessment of Products”. Dr. Huijbregts is also the principal developer of the USES-LCA model suite, and co-developer of the USEtox consensus model. He received his Ph.D in Natural Sciences from the University of Amsterdam on “Uncertainty and variability in environmental life-cycle assessment”.

ORGANIZATION

This is a one day class held in Portsmouth, NH. Lunch is provided. All students are required to bring a laptop which has Internet wireless connection. You will need to install the EPI suite (<http://www.epa.gov/oppt/exposure/pubs/episuitedl.htm>) from the US EPA web site before class and we will send you class documents and the USEtox model.

PREREQUISITES

An analytical background and an understanding of LCA are suggested. The instructor requires all students to read the document on USEtox toxicity model (<http://www.earthshift.com/USEtox.pdf>) before the class.