

# TRAINING COURSE: LIFE CYCLE ASSESSMENT AND SIMAPRO SOFTWARE

7 – 9 September, 2011 | Cape Town

**Life Cycle Assessment (LCA)** is a progressive environmental analysis tool that models the consequences of products and services on the environment over their entire life cycle. LCA encompasses product carbon footprinting, but also looks at wider issues, such as resource use, human health and ecosystem damage. **SimaPro** is a complete LCA software package that allows users to build complex life cycle models in a systematic and transparent way. It offers large integrated databases, easy to interpret results and powerful features to assist with sensitivity analyses.

**The Green House** is offering a 3-day training course covering

- ❖ A thorough grounding in the aims and principles of product carbon footprinting and LCA
- ❖ Practical applications of LCA through hands-on case studies
- ❖ Complex aspects of LCA models showcasing the advanced modelling features of SimaPro.

Depending on your needs and interests you may elect to attend just the first or second day, or both days, to achieve an in-depth understanding of these topics. Those already using or intending to use SimaPro to conduct their LCA studies will benefit from attending the third day.



**SimaPro** is a proven, reliable and flexible tool used by major industries, consultancies and universities, with users in over 80 countries. **The Green House** is a member of the PRé partner network (a global network of LCA consultants and researchers), and offers local sales and support for SimaPro in Southern Africa.

## DAY ONE

### PRODUCT CARBON FOOTPRINTING AND LCA

#### *Objective*

To enable sustainability initiative leaders to explore the use of life cycle thinking to advance sustainability in their organisations, and to be able to understand and interrogate the results of product carbon footprint and LCA studies.

#### *Who should attend?*

Managers and those working in sustainability that wish to understand the basics of product carbon footprinting and LCA; those beginning their own LCA studies.

## DAY TWO

### EFFECTIVE LCA IN SIMAPRO

#### *Objective*

To equip participants with the knowledge and skills to embark on their own LCA study (or product carbon footprint), including data collection strategies, and the ability to generate and interpret results. Insights into the theory will be obtained through a hands-on case study.

#### *Who should attend?*

Those wanting hands-on experience in conducting product carbon footprints and LCAs; those wishing to evaluate or gain experience using SimaPro. Basic knowledge of LCA or attendance of Day 1 is required.

## DAY THREE

### ADVANCED MODELLING WITH SIMAPRO

#### *Objective*

To equip participants with the know-how to incorporate advanced aspects into their life cycle models, such as end of life modelling and uncertainty analyses.

#### *Who should attend?*

Those wishing to construct complex LCA models and/or apply the advanced features of SimaPro. Experience in SimaPro or attendance at Day 2 is required.

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## COURSE INFORMATION

**Location:** The course will be held in Cape Town at The Green House offices:

Ubunye House  
70 Rosmead Avenue  
Kenilworth  
Cape Town

### Pricing:

	Commercial	Academic
One day (excl. VAT)	R 2,880.00	R 2,160.00
Two days (excl. VAT)	R 4,608.00	R 3,456.00
Three days (excl. VAT)	R 6,048.00	R 4,536.00

**Payment:** An invoice will be sent on receipt of a completed registration form. Bank details for The Green House will be provided on the invoice.

**Discount:** Two or more attendees from the same organisation each receive a 10% discount on the training fee (commercial pricing only).

**Cancellation:** A cancellation fee of 50% of the course fee will be levied if registration is cancelled 2 weeks or less prior to the course date. The full course fee will be levied for non-attendance.

**Refreshments:** Tea, coffee and lunch will be served daily during the breaks. The cost is included in the course fee.

**Accommodation in Kenilworth:** Please contact The Green House for recommendations or view <http://www.sa-venues.com/accommodation/kenilworth.php>



**SimaPro Discount:** A 10 – 20% discount on the training fee will be refunded on purchase of a SimaPro licence (size of discount depends on the licence version purchased).

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### COURSE REGISTRATION

Name of attendee:	
Organisation:	
Telephone:	
Email:	
Postal address:	

#### Course registration (please tick):

<input type="checkbox"/>	Day One: Product carbon footprinting and LCA, 7 September 2011
<input type="checkbox"/>	Day Two: Effective LCA in SimaPro, 8 September 2011
<input type="checkbox"/>	Day Three: Advanced modelling with SimaPro, 9 September 2011

#### Do you need a temporary SimaPro license?

For all modules (but particularly Day 2 and 3) participants are required to bring their own laptops. Please tick the options below as appropriate:

<input type="checkbox"/> YES	<input type="checkbox"/> NO	I need a temporary SimaPro license for the training
<input type="checkbox"/> YES	<input type="checkbox"/> NO	I will bring a laptop along to the course

#### Expectations (optional):

Please tell us about your background in LCA and what you expect to learn from the training course

**Please email or fax the completed form to The Green House**

Email: [simapro@tgh.co.za](mailto:simapro@tgh.co.za)

Fax: 086 638 3692

# TRAINING COURSE: LIFE CYCLE ASSESSMENT AND SIMAPRO SOFTWARE

7 – 9 September, 2011 | Cape Town

## Day One

### Product carbon footprinting and LCA

Wednesday, September 7, 2011

8:30am – 5:00pm

#### Session one

What is sustainability? How do we measure it and why do we need a life cycle view? This session will introduce the underlying concepts, and explain the basic terminology and background to these sustainability assessment tools in relation to their key defining bodies (e.g. ISO 14040, PAS 2050, GHG protocol).

#### Session two

How does one go about conducting a product carbon footprint or LCA? This session will take you through the stages of an LCA study, explaining the terminology, methods and requirements at each stage. A relevant South African case study will illustrate each step of the analysis.

#### Session three

From theory to practice: this session will take you from the theory of sustainability assessment to a practical hands-on example. A simple case study will be used to demonstrate the construction of a life cycle model in the SimaPro life cycle software tool.

#### Session four

This session will wrap up the day's learning with a discussion on the particular application of product carbon footprinting and LCA in a South African context. The challenges and future directions of these assessment tools (both locally and internationally) will be discussed.

## Day Two

### Effective LCA in SimaPro

Thursday, September 8, 2011

8:30am – 5:00pm

#### Session one

Goal and scope definition provides the foundation of an LCA study. This session will cover all aspects that need to be considered for a successful study outcome, including the choice of functional unit, system boundaries and allocation rules (how to deal with processes with multiple products). Participants will apply these concepts with respect to the case study that will be developed over the course of the day.

#### Session two

Life cycle inventory analysis (LCI) is the heart of an LCA study. This session will cover the different types of data used to construct the inventory, and how to plan a data collection strategy. Experience in constructing an LCI in SimaPro will be obtained through following the hands-on case study.

#### Session three

Life cycle impact assessment (LCIA) is where emissions and resources associated with a system are translated into environmental impacts. This session will convey the central elements of LCIA (characterisation, normalisation and weighting), provide an overview of the different available LCIA methods and provide guidance on selecting LCIA methods. Hand-on experience in implementing impact assessment in SimaPro will be obtained through continuing the case study.

#### Session four

The final stage of LCA is interpretation – where results are analysed and presented. This session will show how anomaly checks and contribution analyses can easily be carried out in SimaPro. The basic concepts of uncertainty and sensitivity (essential for evaluating the results of an LCA study) will be introduced. These concepts are covered in depth on Day 3.

## Day Three

### Advanced modelling with SimaPro

Friday, September 9, 2011

8:30am – 5:00pm

#### Session one

In this session attendees will learn how to model complex products in SimaPro, such as products disassembled at end of life (with the various sub-assemblies having different end of life options), and products involving more than one life cycle (e.g. packaging). These concepts will be learnt through continuing the hands-on case study from Day 2.

#### Session two

Building on the previous day's introduction to sensitivity and uncertainty, this session will demonstrate the use of parameters in SimaPro. Continuing the case study from Day 2, participants will learn how to conduct smart and efficient sensitivity analyses by applying parameters in their models.

#### Session three

Continuing the uncertainty discussion, this session will cover how to quantitatively assess data uncertainty. A brief introduction to the theory of Monte Carlo analysis will be given (a statistical technique for assessing probabilistic uncertainty) and the use of the Pedigree Matrix to estimate data uncertainty will be explained and demonstrated.

#### Session four

Good data management is essential to successful life cycle modelling. This session will cover good data management practices in SimaPro, including tips for keeping your data clean. The various data exchange options in SimaPro will also be explained should you need to share data with other SimaPro users, or import/export data between software platforms.