



WORKSHOPS

Monday, March 4, 2019, Rydges Cronulla Beachside, Cronulla, NSW 2230

9:30 AM	12:30 PM	ECE tool and PCA tool – CRCLCL	SimaPro – Life Cycle Strategies	LCACP Test
12:30 PM	1:30 PM	Lunch		
1:30 PM	3:30 PM	eToolLCD – eTool Global	GaBi and LCA - Thinkstep	EPD – EPD Australasia (Session I)
3:30 PM	3:50 PM	Afternoon Tea		
3:50 PM	5:30 PM	mapping biogenic and fossil carbon flows - Thinkstep	GaBi and LCA - Thinkstep (continued)	EPD – EPD Australasia (Session II)

ECE tool: Calculating scope 3 emissions of your project

Instructors: Dr Soo Huey Teh, UNSW Sydney, soohuey.teh@unsw.edu.au

Dan Micevski, UNSW Sydney, d.micevski@unsw.edu.au

Assoc. Prof. Thomas Wiedmann, UNSW Sydney, t.wiedmann@unsw.edu.au

CPD points: 2 Sustainable Development (SD) points

Time slot: 9:30am- 10:30am

Facility requirement: personal laptop with internet access

Prerequisites:

This workshop is suitable for those who are interested in sustainability and carbon footprint accounting of any project. It is suitable for consultants, local and regional governments, researchers and students. As the workshop will use explicit examples from the built environment, it will be particularly interesting for construction companies, architects, designers, planners and developers.

Summary of the Workshop

Objectives:

The Embodied Carbon Explorer (ECE) online tool was created by the Sustainable Assessment Program at UNSW Sydney, supported by the CRC for Low Carbon Living (CRCLCL). The workshop will explore embodied / Scope 3 carbon emissions and how the ECE online tool can be used to attain a greater understanding and management of upstream embodied carbon emissions. It will demonstrate the ECE online tool through a case study related to the built environment to identify major emission contributors in a project's supply chains. It can also be used to check the materiality of embodied (Scope 3) emissions for National Carbon Offset Standard (NCOS) reporting.

Structure:

The workshop will include an introduction of emissions in the built environment, presentation of the ECE tool, step-by-step guide on using the ECE tool, and a feedback session. It will be demonstrated how the tool helps with Scope 3 accounting under the National Carbon Offset Standard (NCOS).

Expected outcomes:

Participants will have access to and be able to use the ECE tool to analyse the embodied carbon emissions incurred in the life cycle of a project (precinct / building / building material / organisation / event). It can be used to understand and manage your project's embodied carbon emissions as well as to report material Scope 3 emissions to the relevant NCOS.

Contents and Teaching Strategies of the Workshop:

- Introduction of emissions in the built environment
- Presentation of the ECE tool
- Step-by-step demonstration of the ECE tool through a case study
- Feedback session

Suggested references:

Commonwealth of Australia. 2017. National Carbon Offset Standard for Buildings. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/88f3280a-ebc9-47f3-8f28-7537dafd7056/files/ncos-buildings.pdf>.

Commonwealth of Australia. 2017. National Carbon Offset Standard for Organisations. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/d24bb1e1-3c93-4a78-98b0-61a8e506821c/files/ncos-organisations.pdf>

Commonwealth of Australia. 2017. National Carbon Offset Standard for Precincts. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/91aadf60-1454-4cde-81dd-587df7cdadd7/files/ncos-precincts.pdf>

Commonwealth of Australia. 2017. National Carbon Offset Standard for Products and Services. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/69279b0f-5056-4309-932c-dc9512c84769/files/ncos-products-and-services.pdf>

Schinabeck, J. & Wiedmann, T. 2014. The Long Road to Zero - Embodied Carbon in the Built Environment. Available: <http://www.thefiftheestate.com.au/spinifex/the-long-road-to-zero-embodied-carbon-in-the-built-environment/69464>

Schinabeck, J., Wiedmann, T. & Lundie, S. 2016. Assessing Embodied Carbon in the Australian Built Environment. Fifth Estate. Available: <http://www.thefiftheestate.com.au/columns/spinifex/assessingembodied-carbon-in-the-australian-built-environment/81887>

Wiedmann, T., Crawford, R., Yu, M., Schinabeck, J. & Teh, S. H. 2017. The “Forgotten” Greenhouse Gas Emissions of Our Built Environment Will Be a Hard Nut to Crack. Fifth Estate. Available: <https://www.thefiftheestate.com.au/columns/spinifex/the-forgotten-greenhouse-gas-emissions-of-our-built-environment-will-be-a-hard-nut-to-crack/92169>

PCA tool: Precinct Carbon Assessment Tool for evaluating urban development projects

Instructors: Dr Bin Huang, UniSA, Adelaide, bin.huang@unisa.edu.au

Dr Ke Xing, UniSA, Adelaide, ke.xing@unisa.edu.au

Adj. A/Prof. Stephen Pullen, UniSA, Adelaide, stephen.pullen@unisa.edu.au

CPD points: 2 Sustainable Development (SD) points

Time slot: 11:00am- 12:30pm

Facility requirement: personal laptop with internet access

Prerequisites:

This workshop is for those who are interested in sustainability and life-cycle carbon footprint accounting of urban development projects, suitable for consultants, local and regional governments, researchers and students. As the workshop will use explicit examples from the built environment, it will be particularly interesting for construction companies, architects, designers, planners and developers.

Summary of the Workshop

Objectives:

The Precinct Carbon Assessment (PCA) Tool is developed at the University of South Australia as part of the “Integrated Carbon Metrics Project (RP2007)” funded by the CRC Low Carbon Living (CRCLCL). The main focus of the PCA tool is to examine the whole life cycle of carbon signature of buildings and infrastructure at a precinct scale and to calculate different low carbon scenarios, including travel modes and renewable energy systems.

The workshop will demonstrate how the PCA tool can be used to analyse the ‘carbon fabric’ of the built environment across different urban settings and to assess the life cycle carbon performance of buildings and precincts. Through a case study, it will also demonstrate how the tool can be applied to:

- Support both highly aggregated and in-detail assessment of operational and embodied carbon of buildings and building appliances, infrastructure (transport, water and waste), travel, and discrete energy generation and storage units;
- Identify and quantify the effects of occupancy and morphological factors on precinct carbon profile;
- Assess the offset potential of climate rendering and green energy systems at the precinct scale;
- Analyse of different precinct scenarios; and
- Produce outcomes to support National Carbon Offset Standard (NCOS) reporting.

Structure:

The workshop will include an introduction of the precinct carbon assessment methodology, presentation of the PCA tool, step-by-step guide on using the PCA tool, and a feedback session. It will be demonstrated how the tool helps with carbon accounting under the NCOS for Precincts.

Expected outcomes:

Participants will have access to and be able to use the PCA tool to analyse the operational and the embodied carbon emissions incurred in the life cycle of a precinct project. It can be used to evaluate and manage the total carbon footprint for the whole project as well as objects to report results to the relevant NCOS.

Contents and Teaching Strategies of the Workshop:

- Introduction of methodology
- Presentation of the PCA tool
- Step-by-step demonstration and user experience of the PCA tool through a case study
- Feedback session

Suggested references:

Commonwealth of Australia. 2017. National Carbon Offset Standard for Buildings. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/88f3280a-ebc9-47f3-8f28-7537dafd7056/files/ncos-buildings.pdf>.

Commonwealth of Australia. 2017. National Carbon Offset Standard for Organisations. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/d24bb1e1-3c93-4a78-98b0-61a8e506821c/files/ncos-organisations.pdf>

Commonwealth of Australia. 2017. National Carbon Offset Standard for Precincts. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/91aadf60-1454-4cde-81dd-587df7cdadd7/files/ncos-precincts.pdf>

Commonwealth of Australia. 2017. National Carbon Offset Standard for Products and Services. Commonwealth of Australia, Canberra, Australia. Available: <http://www.environment.gov.au/system/files/resources/69279b0f-5056-4309-932c-dc9512c84769/files/ncos-products-and-services.pdf>

SimaPro Training

Instructor: Tim Grant, Life Cycle Strategies, Tim@lifecycles.com.au

CPD points: 2 Sustainable Development (SD) points

Time slot: 09:30am- 12:30pm

Facility requirement: personal laptop with internet access

Summary of the Workshop

SimaPro has been the world's leading life cycle assessment (LCA) software package for 25 years. It is trusted by industry and academics in more than 80 countries.

When it comes to solid sustainable decision-making, you need both the right facts and the right way of communicating these facts. SimaPro contains the latest in science-based methods and databases. A wide variety of add-ons and reporting features makes it easy to be fully conscious of the choices you make in doing your LCA studies and to address the concerns of your colleagues. This way, the departments in your company can actually use the insights you provide to change your products' life cycle for the better and improve your company's positive impact.

This workshop is going to give LCA practitioners the instructions on the new online SimaPro suite, which will help effectively apply LCA expertise to drive change – to provide the facts needed to create sustainable value.

eToolLCD – Lifecycle design software for environmentally friendly buildings and infrastructure

Instructors: Ms. Maryia Perthen, eTool Global, Maryia.perthen@etoolglobal.com

Ms. Fei Ngeow, eTool Global, fei.ngeow@etoolglobal.com

CPD points: 2 Sustainable Development (SD) points

Time slot: 1:30pm – 3:30pm

Facility requirement: personal laptop with internet access

Prerequisites:

Basic understanding LCA methodology preferred

Summary of the Workshop

Objectives:

The workshop is designed to demonstrate the features of the eToolLCD software and to provide a basic understanding of how to conduct a whole project LCA-model using the eToolLCD software.

Structure:

- eTool Company introduction.
- Introduction of the software and its current application: Compliance to International Standards, LCA credit in Sustainability Rating Schemes (BREEAM, Green Star, LEED, LBC, ISCA), LCA in Planning Policy.
- Demonstration: LCA software as a design tool, global data base, design navigator, revit-plugin, automated reports, integrated LCA and LCC, inter-company collaboration with the Enterprise feature.
- Case studies for the building and the infrastructure sectors.

Expected outcomes:

Upon completion of eToolLCD workshop, you will get an overall update of the main motivation for whole project LCA use, understanding of the eToolLCD interface, get familiar with the main software features, learn how to build an LCA model using the eToolLCD software. You will also be awarded a certificate of attendance at the end of training.

Contents and Teaching Strategies of the Workshop:

You will be guided through the eToolLCD software interface and modelling practices to ensure understanding of the software.

Free LCA and GaBi Jump Start Training

Instructors: Ben Fisher & Gaya Gamage, Thinkstep, Matthias.nebel@thinkstep.com

CPD points: 2 Sustainable Development (SD) points

Time slot: 1.30pm to 5.30pm

Facility requirement: personal Windows-based laptop with internet access and a time-limited GaBi training license will be provided in advance of the training

Prerequisites:

A basic understanding of Life Cycle Assessment would be beneficial.

Summary of the Workshop

Objectives:

Do you want to assess the environmental impacts of a product or process across its full life cycle? Discover how GaBi's visual approach to Life Cycle Assessment (LCA) supports decision-making and enables you to quickly implement high impact sustainability initiatives.

Structure:

Hands-on workshop

Expected outcomes:

Understand how GaBi transforms data into sustainability metrics that support decision-making and enable you to quickly implement high impact sustainability initiatives.

Contents and Teaching Strategies of the Workshop:

Quickly and efficiently learn the core functionalities of the award winning GaBi software. Understand the extensive database at your fingertips, and gain confidence in your ability to build models to support life cycle assessment and business decisions. Learn tips and techniques from our experts which will save you time, effort and improve the quality of your LCA projects.

- Understand GaBi's modular and intuitive process-based approach to modelling the life cycle of a product from cradle-to-grave.
- Have confidence to build a simple product model to evaluate life cycle impacts in various impact categories (e.g. carbon, water, energy, emissions, waste, etc.)
- Have confidence to assess simple scenarios using parameters.
- Be familiar with common life cycle impact assessment methods
- Understand how GaBi's dashboards can be used to quickly analyse results.

Suggested references:

<http://www.gabi-software.com/new-zealand/index/>

Environmental Product Declarations (EPDs)

Instructors: Stephen Mitchell, EPD Australasia, chair@epd-australasia.com;
Jonas Bengtsson – Edge Environment;
Barbara Nebel – thinkstep ANZ;
Rob Rouwette – Start2See

CPD points: 2 Sustainable Development (SD) points

Time slot: 1:30pm – 3:30pm

Facility requirement: none

Introduction:

This workshop is for those interested in Environmental Product Declarations and their application within and an organisation and in the marketplace.

EPDs are public summaries of a Life Cycle Assessments of a product or service. This workshop will explain how they are developed and the value they have to business - internally and externally - within the context of production, and the use of products – particularly in building and infrastructure design and construction. This workshop is suitable for anyone with technical or marketing responsibilities within a business, ESD consultants, government regulators, as well as researchers and students. No specific pre-knowledge or skills are required.

Summary of the Workshop

Objectives:

- Understanding the value that EPDs have internally and in the marketplace for business
- Understanding what an EPD is (and isn't) including relevant standards and rules

Structure:

Part 1: Creating Business Value through EPDs

Stephen Mitchell - EPD Australasia

Jonas Bengtsson - Edge Environment

Part 2: How to Read and Use EPDs

Stephen Mitchell - EPD Australasia

Barbara Nebel - thinkstep

Rob Rouwette - Start2See

Expected outcomes:

- EPDs: what are they and what they aren't - including relevant international standards
- The environmental impacts included in an EPD
- Examples of basic comparison between functional units
- Why (and how) companies use EPDs
- International scope of EPDs
- Overview of how EPDs are being used by third-parties (e.g. within GBCA and ISCA rating systems)

Contents and Teaching Strategies of the Workshop:

4 x 20 minute presentations with specialised speakers. Each followed by a moderated Q&A session.

Managing carbon's identity crisis: mapping biogenic and fossil carbon flows for bio-based products

Instructors: Barbara Nebel or Emily Townsend, Thinkstep, Matthias.nebel@thinkstep.com

CPD points: 2 Sustainable Development (SD) points

Time slot: 3:50pm – 5:30pm

Facility requirement: none

Prerequisites:

Basic understanding of product carbon footprinting and life cycle thinking.

Summary of the Workshop

Objectives:

- Learn how to model biogenic carbon flows at a product level in compliance with relevant standards, both international (ISO 21930 and ISO 14067) and European (EN 15804, EN 16449, EN 16485 and PAS 2050).
- Apply these insights to map out biogenic and fossil carbon flows across the life cycle of bio-based products (wood and tissue paper) within the Australian context.
- Understand how these flows should be mapped across a full suite of end-of-life options: reuse, recycling, composting, landfill, wastewater treatment and incineration.

Structure:

Hands-on workshop

- Introduction to biogenic and fossil carbon.
- Overview of the carbon accounting rules within relevant international and European standards.
- Workshop to apply the rules to different end-of-life options using real-life product case studies.
- Feedback round to share experiences and insights.

Expected outcomes:

- Gain a solid foundation in modelling fossil and biogenic carbon flows through a product's life cycle, from the initial growth of the biomass to the product's end-of-life.
- Learn how to model biogenic carbon flows for end-of-life options that are often either not included within standard life cycle inventory (LCI) databases, or which are poorly represented by using average data from these standard databases.

Contents and Teaching Strategies of the Workshop:

- Presentation of key concepts.
- Guided workshop for participants to test out their understanding of carbon flows for bio-based products, from growth of biomass to end-of-life.
- Feedback round to share insights.

Suggested references:

The following references will be drawn on, but are not expected to be read in advance:

- EN 15804:2012+A1:2013. Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products. Brussels: European Committee for Standardization.
- EN 16449:2014. Wood and wood-based products – Calculation of the biogenic carbon content of wood and conversion to carbon dioxide. Brussels: European Committee for Standardization.
- EN 16485:2014. Round and sawn timber. Environmental Product Declarations. Product category rules for wood and wood-based products for use in construction. Brussels: European Committee for Standardization.
- PAS 2050:2011. Specification for the assessment of the life cycle greenhouse gas emissions of goods and services. London: British Standards Institution.
- ISO 14067:2018. Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification. Geneva: International Organization for Standardization.
- ISO 21930:2017. Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services. Geneva: International Organization for Standardization.