

Soil quality indicators in LCA

An ALCAS Roundtable and Webinar

This 2-day workshop will explore indicators and assessment methods for representing soil qualities in environmental life cycle assessment (LCA). Soil health and productivity are important environmental values for Australia, but are currently not captured in the environmental profiles of products and production systems. The workshop will be a start to filling this gap by reviewing appropriate indicators (soil carbon, acidity, salinity, erosion etc.) and considering how inventory can be developed for their integration into LCA. Outcomes from the workshop will feed into a CSIRO project which will develop the ideas further. Soil scientists from Australia and overseas will contribute to the workshop, providing the opportunity for advanced dialogue on this topic. The workshop will be most suited to those with experience in soil function and LCA, and with an interest in contributing to this topic.

The workshop is kindly sponsored by the Grains Research and Development Corporation (GRDC).

Date / time: 8th-9th April, 2014

Cost: Free

Venue:

Christian Laboratory Seminar Room
CSIRO Land and Water, Black Mountain
Christian Rd (off Clunies Ross St) Canberra
See map over page
Participants to sign in at reception, just outside the seminar room.

Webinar:

Details on how to join the Roundtable by webinar (GoToWebinar) will be provided after registration.

Register you attendance by contacting:

To: Marguerite Renouf,
Life Cycle Strategies (LCS)
marguerite@lifecycles.com.au
(0478) 220 551
By: Tue 1st April 2014
Please advise if you'll attend in person or by webinar.

Catering:

Lunch and teas provided for Day 1.
Self-purchase of lunch at the CSIRO Discovery Centre for Day 2.

Getting there:

On foot: A 20-30 minute walk from the city.

By car: Parking is in front and on the Northern side of the building.

Public transport: Take Buses 313/315/318 (North-bound) 3 stops from the London Circuit Legislative Assembly Building in the City.

PROGRAM

DAY 1 - Indicators of soil qualities and function

10:30-11:00 Meet and greet over morning tea

11:00-12:30 Setting the scene (Sandra Eady /Tim Grant)

Introduction to LCA for the soil science audience

- overview of LCA and its applications, with particular reference to agriculture LCA
- background to the LCA process (elementary flows, cause and effect pathways, impact assessment)
- soil indicators in the context of LCA

12:30-1:00 Lunch

1:00-3:00 International developments in soil indicators (Miguel Brandão)

- use of soil indicators by the international LCA community
- update on how impact assessment methods capture soil-related inventory
- update of international frameworks with reference to soil indicators
- steps for ensuring new approaches are consistent with these

3:00-3:30 Afternoon tea

3:30-5:00 Discussion session (Mike Grundy)

- What indicators of soil qualities and function are important?
- Which can feasibly be quantified at the scale needed for life cycle inventory?

*5:30-6:30 Web hook-up with participants from Europe, Asia (AEST, UTC+10hrs)

DAY 2 – Developing soil-related inventory for LCA

*8:00-9:00 Web hook-up with participants from NZ, US, Canada (AEST, UTC+10hrs)

9:00-9:30 Report on international engagement (Marguerite Renouf)

9:30-10:30 Models for generating inventory data

- soil organic matter (contributions from Raphael Viscarra Rossel, Enli Wang, Ryan Farquharson, CSIRO)

10:30-11:00 Morning tea

11:00-12:30 Models for generating inventory data cont.

- soil erosion (contributions from Adrian Chappell, CSIRO)
- other soil characteristics (acidity etc.) (TBA)

12:30-1:00 Lunch

1:00-3:00 Discussion session (facilitated by Marguerite Renouf)

- Where to from here?

* These sessions are separate to the main program, and attendance is optional for participants.

Presenters and contributors:

Sandra Eady, Principal Research Scientist, CSIRO Animal, Food and Health Sciences



Sandra is a senior member of the Sustainable Agriculture Flagship working on science to support policy frameworks for agriculture and greenhouse gas abatement. She recently led the AusAgLCI project that developed LCI data for Australian agricultural processes.

Tim Grant, Director, Life Cycle Strategies



Tim is an LCA specialist and driving force in the development and ongoing operation of AusAgLCI database for Australian agricultural commodities.

Miguel Brandão, Senior Lecturer, Massey University, New Zealand Life Cycle Management Centre



Miguel has been working on LCA of land-use systems during the last 8 years, at the Centre for Environmental Strategy of the University of Surrey (Guildford, UK), at the Joint Research Centre of the European Commission (Ispra, Italy), and subsequently at the International Life Cycle Academy.

Mike Grundy, CSIRO Land and Water



Mike has recently established the new Landscape Systems and Trends Theme within the equally new Sustainable Agriculture Flagship. He has a long-standing personal research interest in spatial soil science and its application to agricultural and forest production, environmental protection and systems approaches to complex problems – and has led major multi-disciplinary natural resource assessment activities for nearly 20 years.

Marguerite Renouf (Workshop facilitator), Senior Scientist, Life Cycle Strategies and Adjunct Lecturer, UQ



Marguerite has chaired the Agriculture Sector Working Group of the Australia Life Cycle Inventory (AusLCI) database initiative since 2008, has also contributed LCI data sets for agricultural commodities to the AusLCI database.

