Interacting with the ILCD data network from an LCA software - the example of openLCA

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Agenda

1. Background: ILCD & openLCA
2. Connecting the ILCD database network with LCA software
   a. Why – benefits?
   b. Principle
   c. Extensions
3. Practical use case: The German BioEnergieDat project
4. Outlook & discussion
1. ILCD & openLCA
ILCD: International reference Life Cycle Data network

Meeting among LCA tool and developers on
“The International Reference Life Cycle Data System’ (ILCD)
- IT implementation”
Ispra, Italy, November 19th 2008

European Reference Life Cycle Database (ELCD)
and EU policy related needs on the ILCD

Marc-Andree Wolf, David Pennington, Rana Pant, Kirana Chomkhamsri, Ugo Pretato
European Commission,
ILCD: International reference Life Cycle Data network

- ILCD (ex ELCD) data format
- Tools (editor, …)
- Handbooks
- Databases
- (…)
ILCD: International reference Life Cycle Data network

- ILCD (ex ELCD) data format
- Tools (editor, …)
- Handbooks
- Databases
  - ELCD database, JRC, Ispra
  - Other countries: Brazil, Malaysia, Thailand, …
  - Database as such not bound to countries or governments
ELCD database as one example

<table>
<thead>
<tr>
<th>Location</th>
<th>Name of Process or LCI result set</th>
<th>Category</th>
<th>Reference year</th>
<th>Parameterised?</th>
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<tr>
<td>DE</td>
<td>Pine log with bark; reforested managed forest; production mix entry to saw mill; at plant 44% water content</td>
<td>Materials productionWood</td>
<td>2005</td>
<td>no</td>
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<tr>
<td>DE</td>
<td>Pine wood; timber production mix entry to saw mill; 40% water content</td>
<td>Materials productionWood</td>
<td>2005</td>
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<td>DE</td>
<td>Spruce log with bark; reforested managed forest; production mix entry to saw mill; at plant 44% water content</td>
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openLCA: free and open source, professional Life Cycle Assessment software

Websites:

- [www.openlca.org](http://www.openlca.org) project website
- [www.sourceforge.net/projects/openlca](http://www.sourceforge.net/projects/openlca) download site
- [www.openlca.org/documentation](http://www.openlca.org/documentation) wiki documentation
> 2500 Downloads 2011!
## Downloads Statistics

**Date Range:** 2011-01-01 to 2011-08-11

- **Total Downloads:** 2,526

### Top Country
- **France**
  - 14% of downloaders
  - 362 downloads

### Top OS
- **Windows**
  - 81% of downloaders
  - 2,014 downloads

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<td>India</td>
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openLCA large system view
2. Connecting the ILCD database network with LCA software
Connecting the ICLD database with LCA software – benefits

• Web-database is always available
• Contains data sets in a form that fits to the local database of the user
• Upload of datasets to the database is also possible

→ Smarter than exchanging single data sets
→ Fewer / no import problems (!)
→ In the long run, data market place possible
Connecting the ICLD database* with LCA software – benefits

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*also called „SODA4LCA“ (service oriented database application)
Connecting the ICLD database with LCA software – principle

openLCA
LCA software

openLCA
local database

web browser

protocols &
web service

BioEnergieDat
online database

Connecting the ICLD database with LCA software – extensions

- ILCD database is available also „outside of“ JRC → you can create an own ILCD database (such as the BioEnergieDat case)

- There is the idea to connect the different ILCD-type databases → a connection to one database offers connections to others (but of course, sensitivity issues)
Connecting the ICLD database with LCA software – extensions
3. Practical case:
The German BioEnergieDat project
The BioEnergieDat project
The BioEnergieDat project

launched September 2010 with the aim to
1. provide datasets for a consistent Life Cycle Assessment of bioenergy options, and to
2. develop a modelling software and database for efficient life cycle assessment modelling and data exchange (www.bioenergiedat.de).

The modelling software will be open source and freely available and be created based on openLCA; the database will be created based, technically, on the ELCD database of the European Commission (http://lca.jrc.ec.europa.eu/lcainfohub/datasetArea.vm).
Connecting to the database – a practical demonstration
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4. Outlook, discussion
Summary, outlook, and discussion

- We have implemented a direct connection between the LCA software openLCA and a database of the ILCD network.
- This connection allows uploading and downloading datasets, directly.
- This makes data exchange much smarter than before.
- It is currently used, and was implemented within, a German research project on bioenergy data sets.
Summary, outlook, and discussion, 2

- In principle, this connection to one ILCD database opens a connection to all other different ILCD databases.
- ILCD databases can be located on the web, as the ELCD database, but also local, or in an intranet.
- BioEnergieDat project partners seek to establish a long term system based on the current implementation (lead: GreenDeltaTC).
- If you have interest → please contact us!
Vielen Dank.

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www.greendeltatc.com