



Erasmus+



PIEMONTE - GALICIA



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“UP-FARMING - Updating sustainability application and communication in the livestock farming sector”

(Programme Erasmus+ - Action KA210 - VET Project n° 2021-2-IT01-KA210-VET-000048980 OID E10271210 - CUP G19J21015470006)

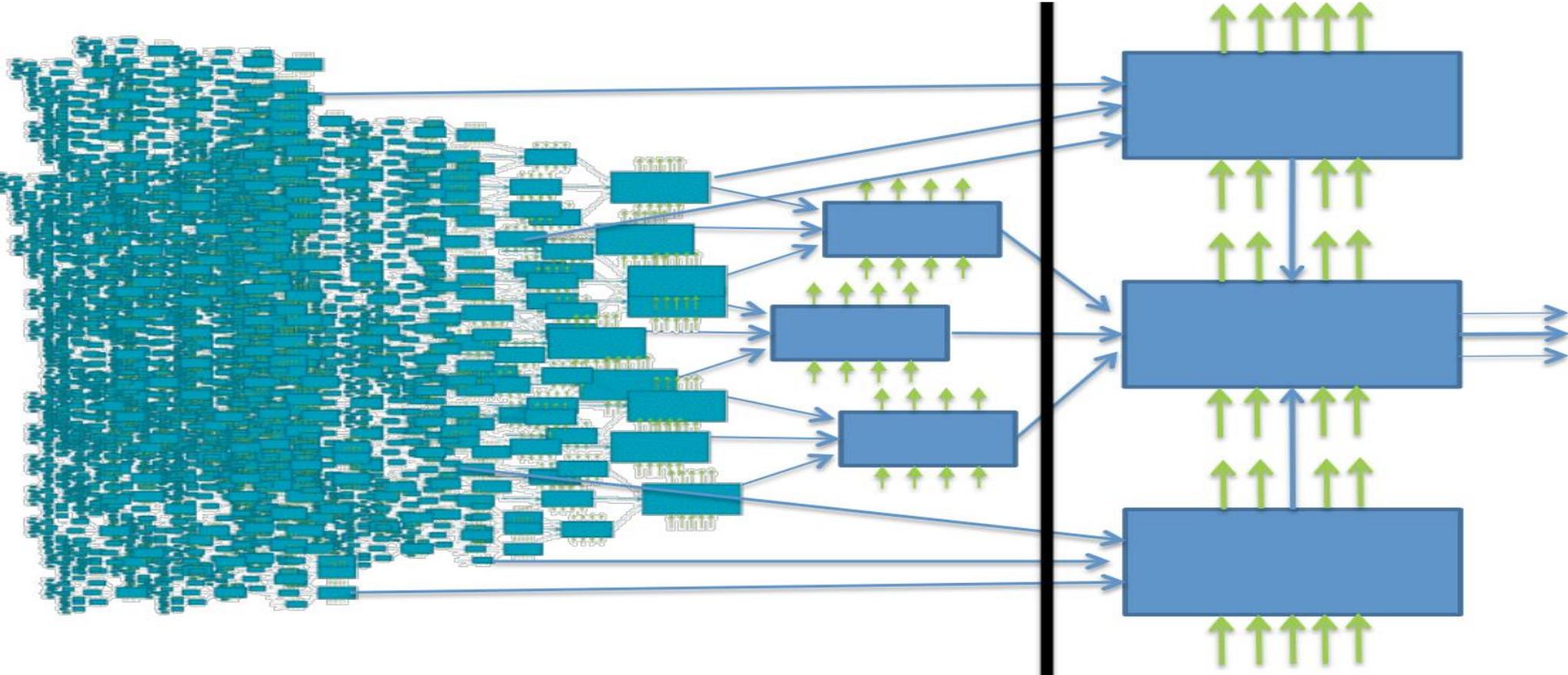
Tools and methods

Simone Blanc

Content

- *Need for LCA software*
- *LCA software – Life cycle inventories (LCI)*
- *LCA software – Life cycle impact assessment (LCIA)*
- *Conclusion*

LCA software



Generic life cycle inventory database

Background information

Specific data

Foreground information

LCA software

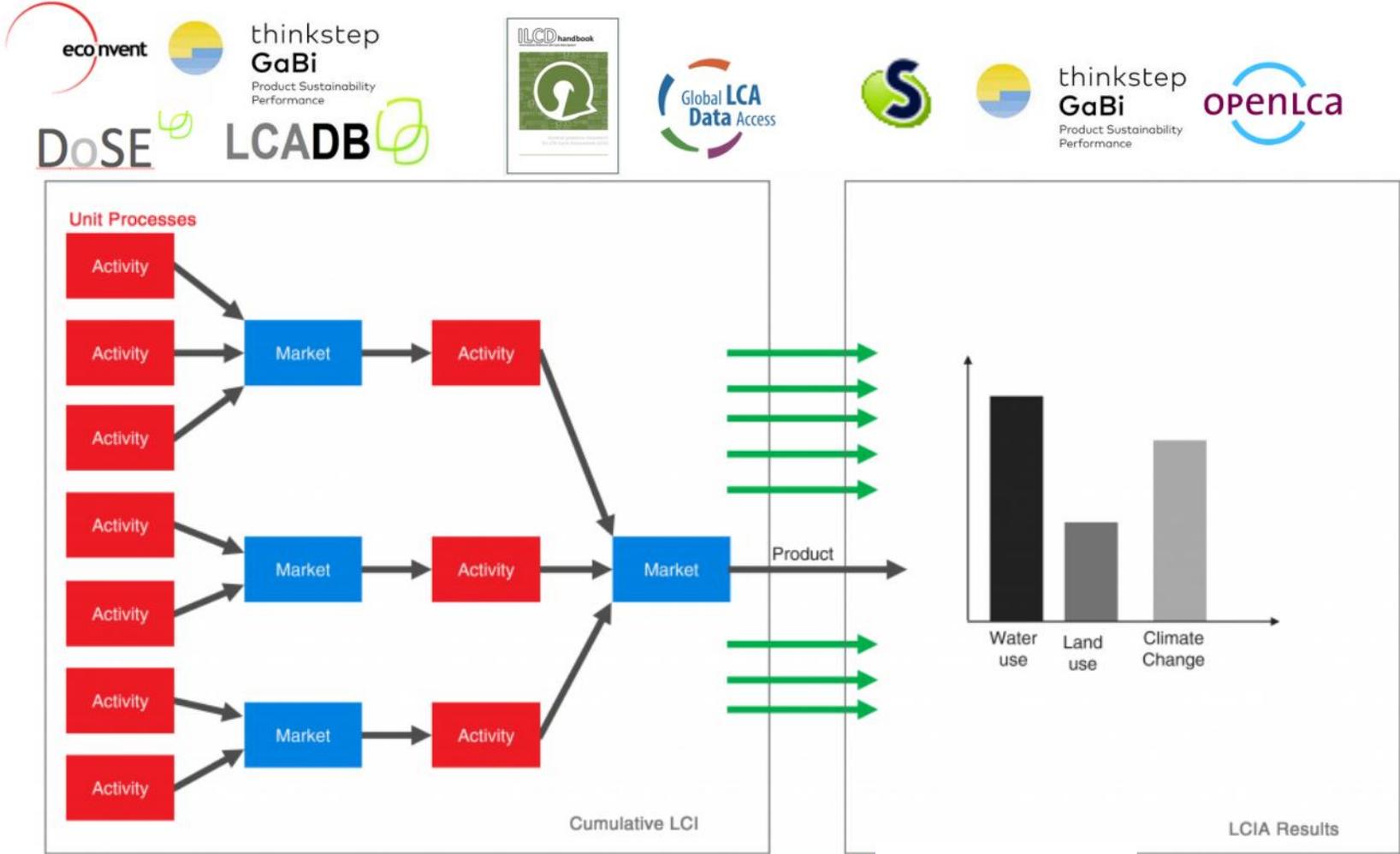
LCA inventories = 1,000 substances



Indicators

A software is needed **to manage datasets** for each of the element of the
life cycle in our system

LCA software



Life cycle inventory (LCI)

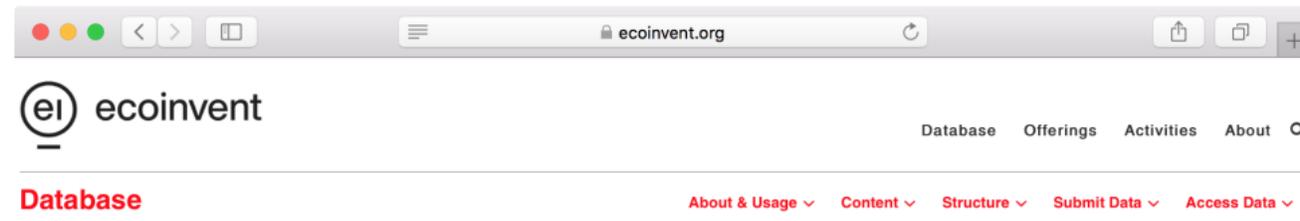
Life cycle impact assessment (LCIA)

LCA software - LCI



Ecoinvent

It is a repository covering a diverse range of sectors on global and regional level. It currently contains more than **18,000 activities**, otherwise referred to as 'datasets', modelling human activities or processes.



Home / ecoinvent Database / Activities & Products

Activities & Products

The ecoinvent database is a library of activities representing industrial or agricultural processes, each generating a resulting product. Each of these activities can also be called a **unit process (UPR)**. More than 18,000 processes covering around 4,000 distinct products across all **economic sectors** are included in the latest version of the ecoinvent database.

[Database Overview](#)

[Activities](#)

[Types of Activities](#)

[Products](#)

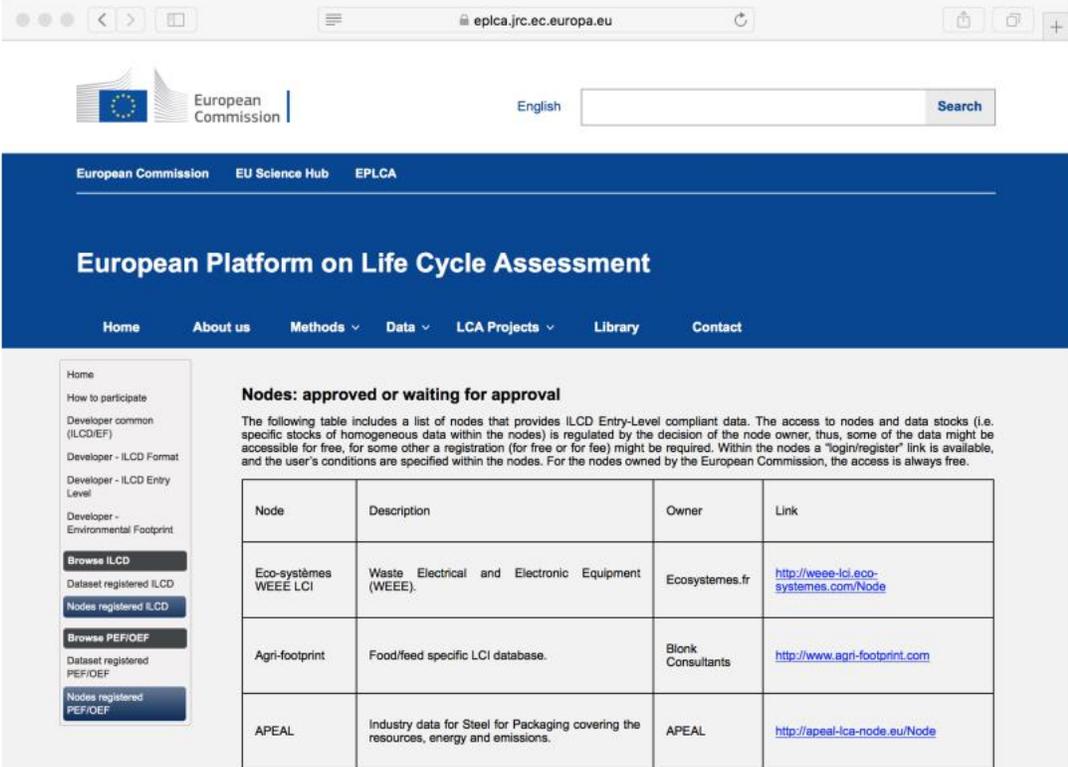
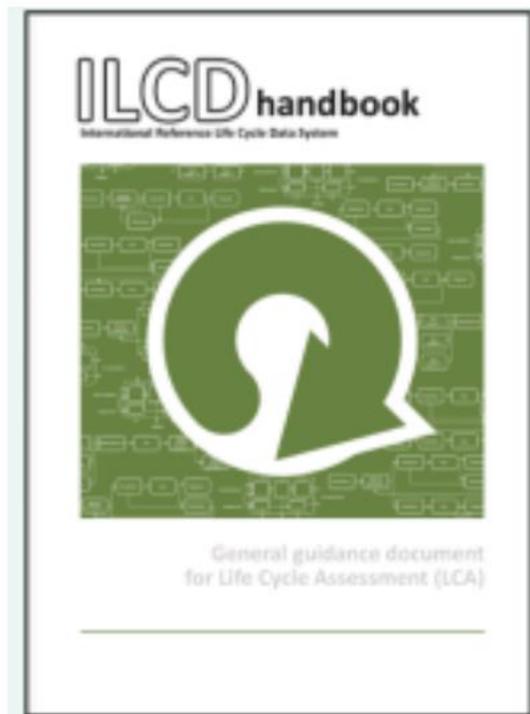
[Types of Products](#)



LCA software - LCI

ILCD

The **International Reference Life Cycle Data System (ILCD)** format got developed to support the European Reference Life Cycle Database (ELCD). The ELCD discontinued by the 29th June 2018.



Nodes: approved or waiting for approval

The following table includes a list of nodes that provides ILCD Entry-Level compliant data. The access to nodes and data stocks (i.e. specific stocks of homogeneous data within the nodes) is regulated by the decision of the node owner, thus, some of the data might be accessible for free, for some other a registration (for free or for fee) might be required. Within the nodes a "login/register" link is available, and the user's conditions are specified within the nodes. For the nodes owned by the European Commission, the access is always free.

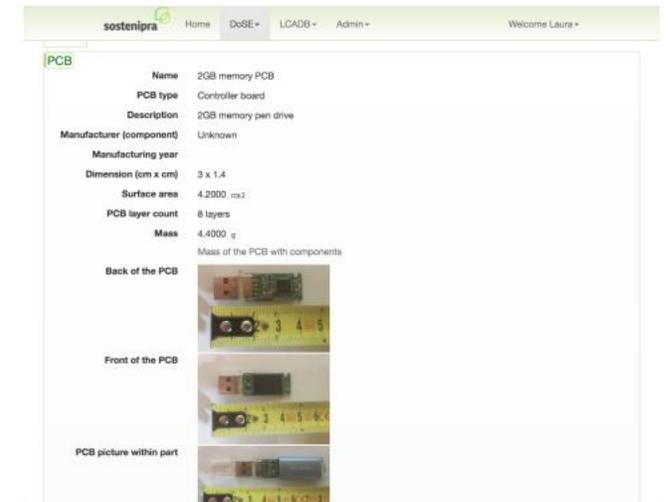
Node	Description	Owner	Link
Eco-systèmes WEEE LCI	Waste Electrical and Electronic Equipment (WEEE).	Ecosystemes.fr	http://weee-lci.eco-systemes.com/Node
Agri-footprint	Food/feed specific LCI database.	Blonk Consultants	http://www.agri-footprint.com
APEAL	Industry data for Steel for Packaging covering the resources, energy and emissions.	APEAL	http://apeal-lca-node.eu/Node

LCA software - LCI

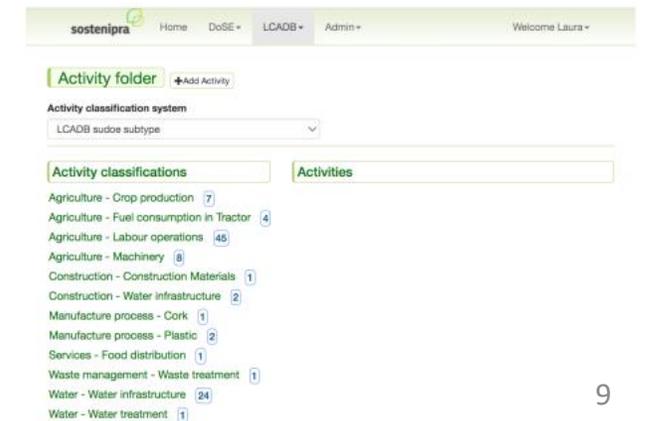
DoSE and LCADB



Database of
semiconductors and other
components



Life Cycle Inventories



LCA software - LCI



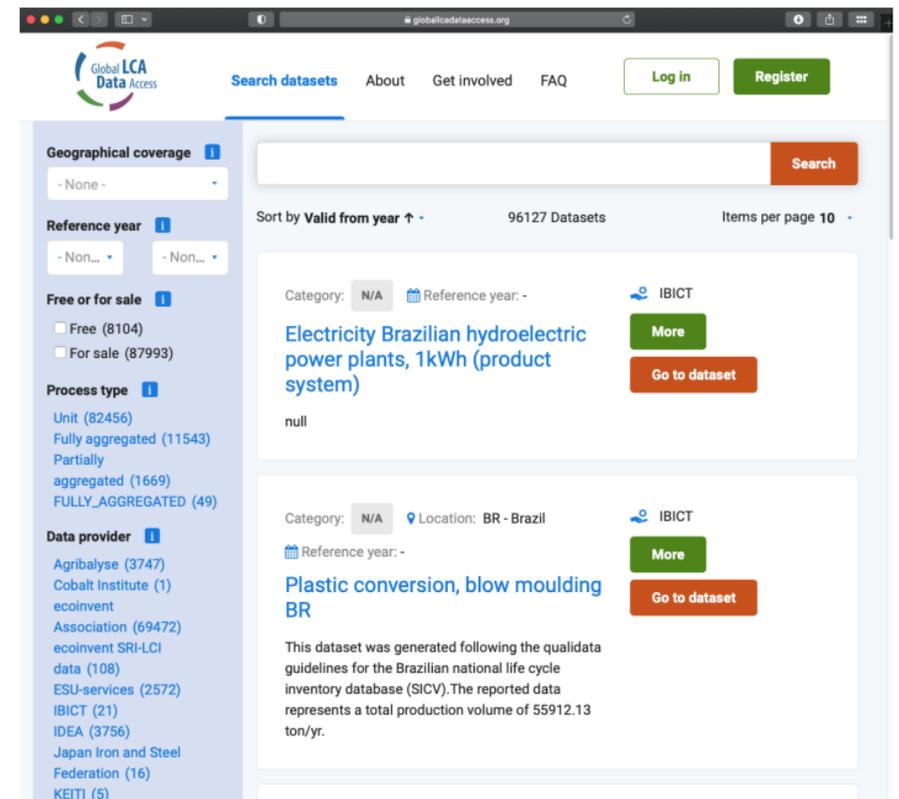
GLAD

The Global LCA Data Access network (GLAD) is the largest directory of Life Cycle Assessment (LCA) datasets, from independent LCA database providers, from around the world.

GLAD itself is **not an LCI database** and it does not store datasets. It is a directory of various LCA datasets which are offered by data providers from around the globe, for free or against a commercial license fee.

GLAD is an **open-source** project.

Single interface to search for LCI datasets.



LCA software - LCIA



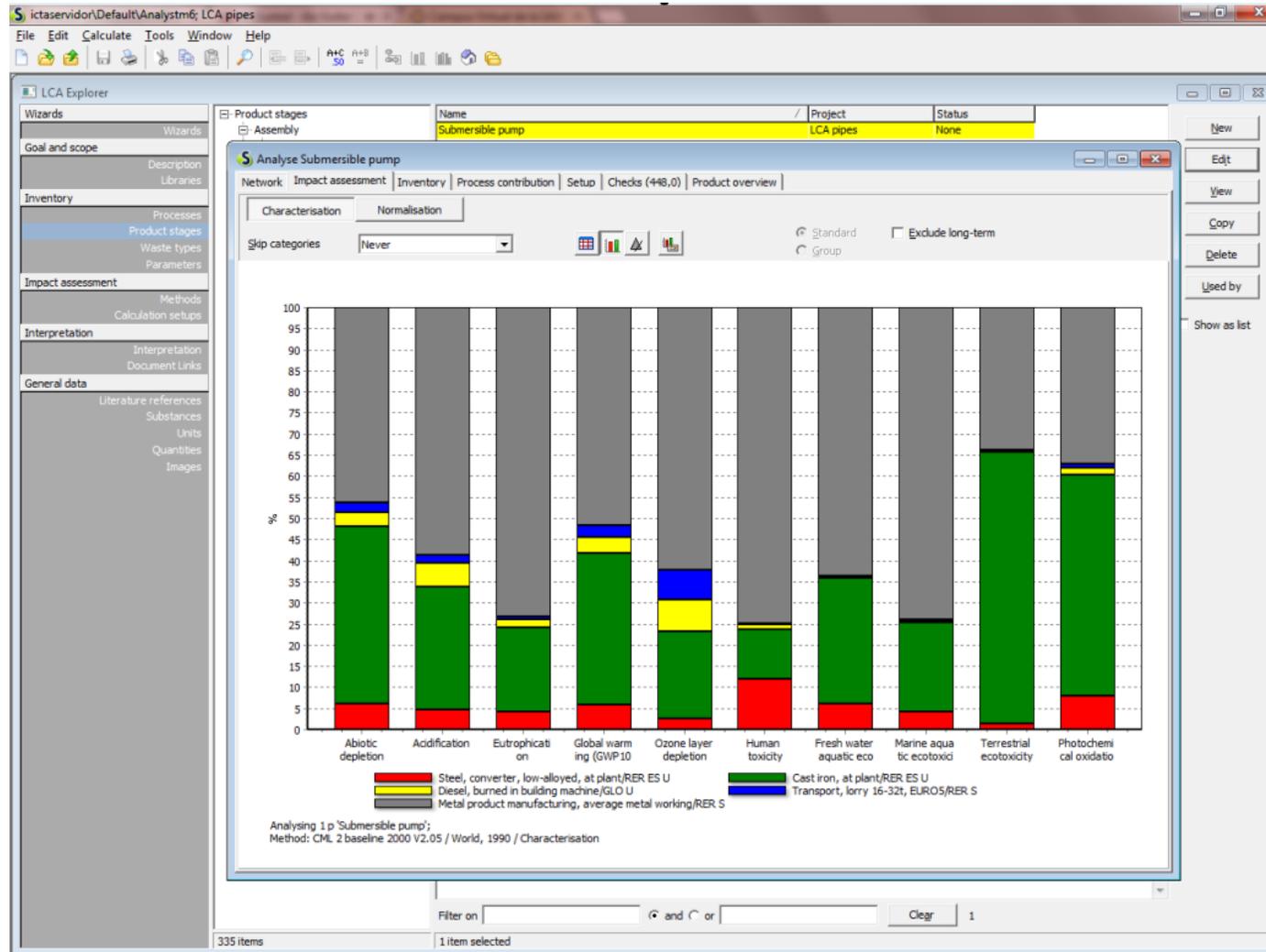
Simapro

- Developer: PRé Consultants: ww.pre.nl
- Current version: SimaPro 8.
- Databases: US LCI, ELCD, ecoinvent v3 and LCAfood DK

- **Pros:** The most used software in the LCA community. Robust and tested software.
- **Cons:** only works with Windows, software requirements.

LCA software - LCIA

Simapro

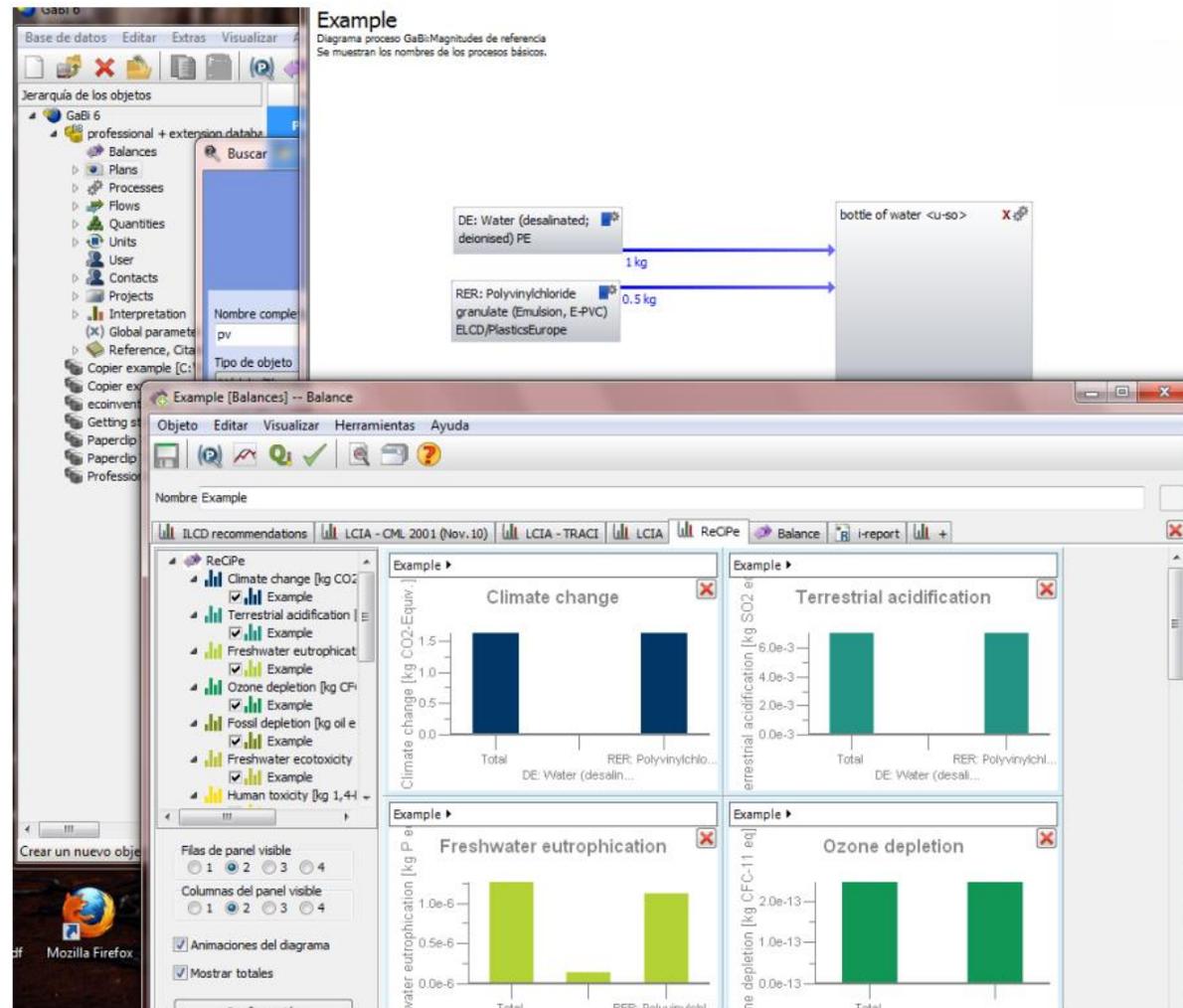


GaBi

- Developer: Thinkstep
- Current version: GaBi 6
- Databases: Own dataset: professional & 14 sector extensions; Educational; U.S. LCI database; Data on demand; ecoinvent 3
- **Pros:** Methods are constantly being updated, creation of reports, graphic modelling of process networks
- **Cons:** Gabi's tools have independent updating system

LCA software - LCIA

GaBi



LCA software



OpenLCA

openLCA 1.4

- <http://www.openlca.org/>
- Free software, developer: GreenDelta GmbH

- **Pros:** Mac OS, Windows, and Linux; Completely open source; graphic modeling of process networks
- **Cons:** you have to pay separately LCI databases (Ecoinvent, GaBi)

LCA software

OpenLCA

