

Technical Helpdesk for National LCA Databases

Training on Data Acquisition and Dataset Development – Part 1 – Relationship of data to (national) databases and LCA software

Content from: Andreas Ciroth, GreenDelta

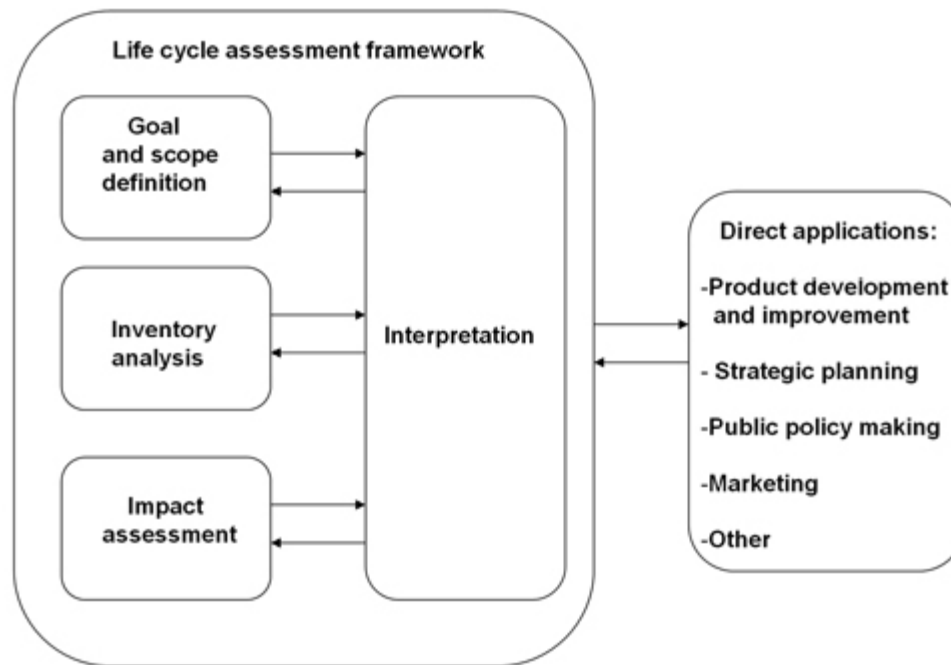
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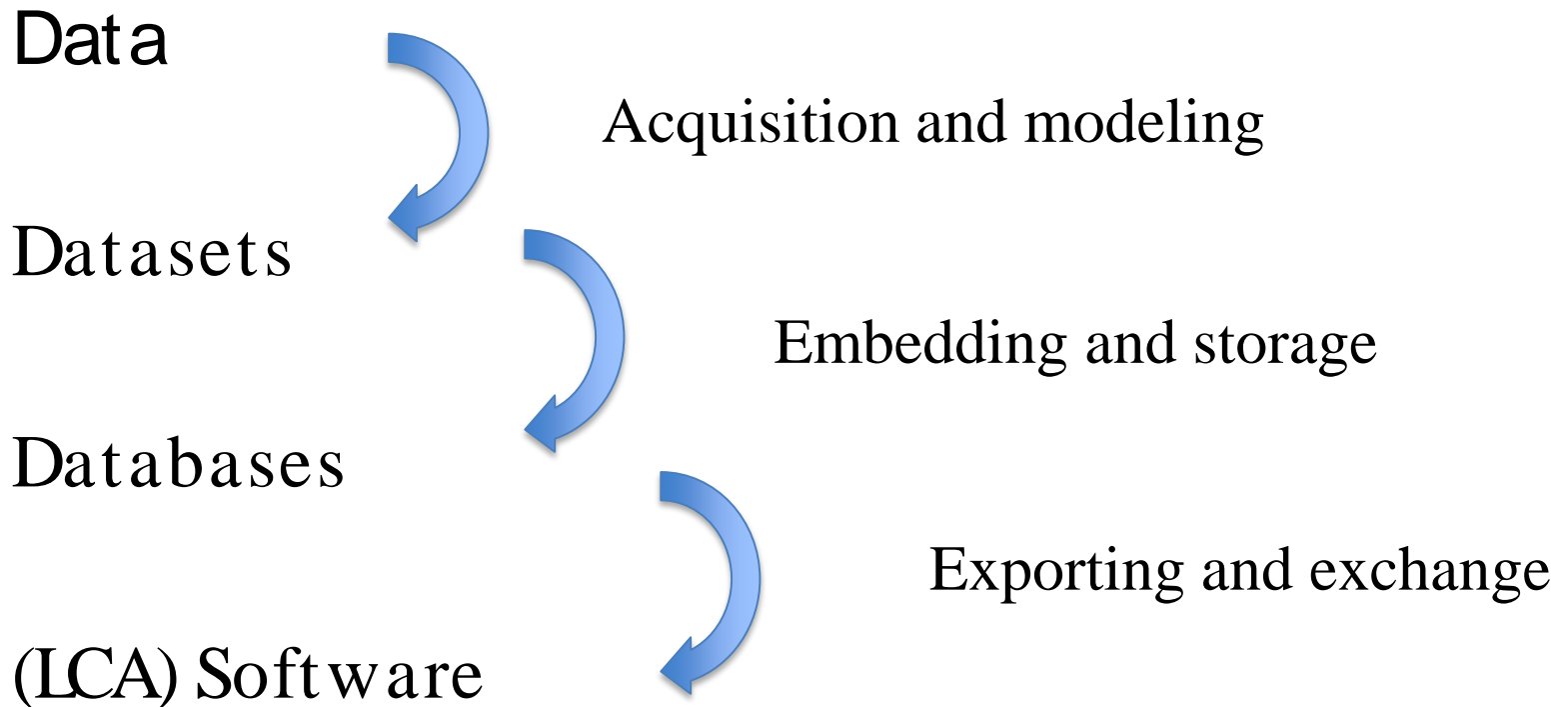
Relationship of data to (national) databases and LCA software

(Life Cycle Assessment)



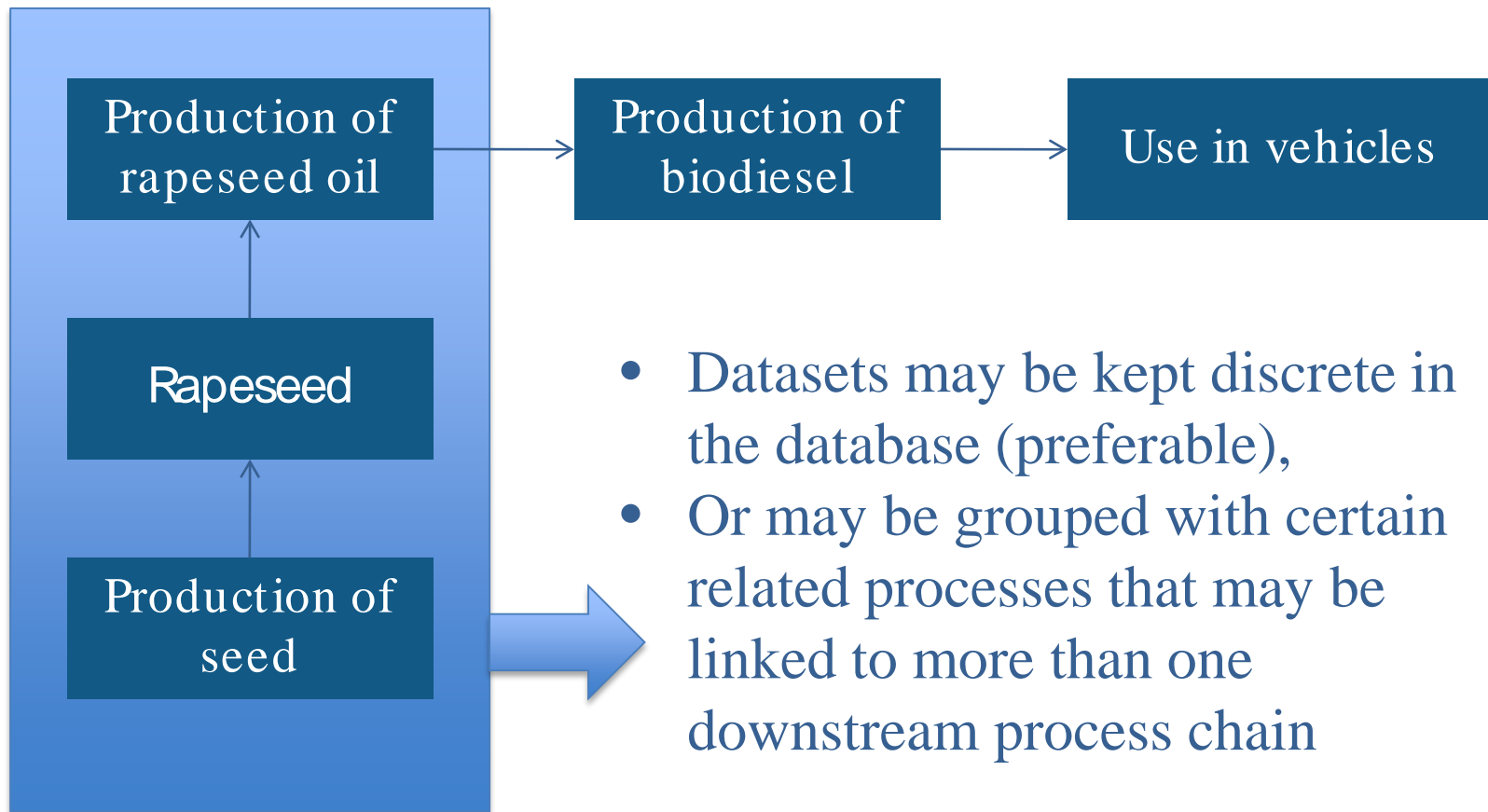
ISO 14040, 2006

Relationship of data to (national) databases and LCA software



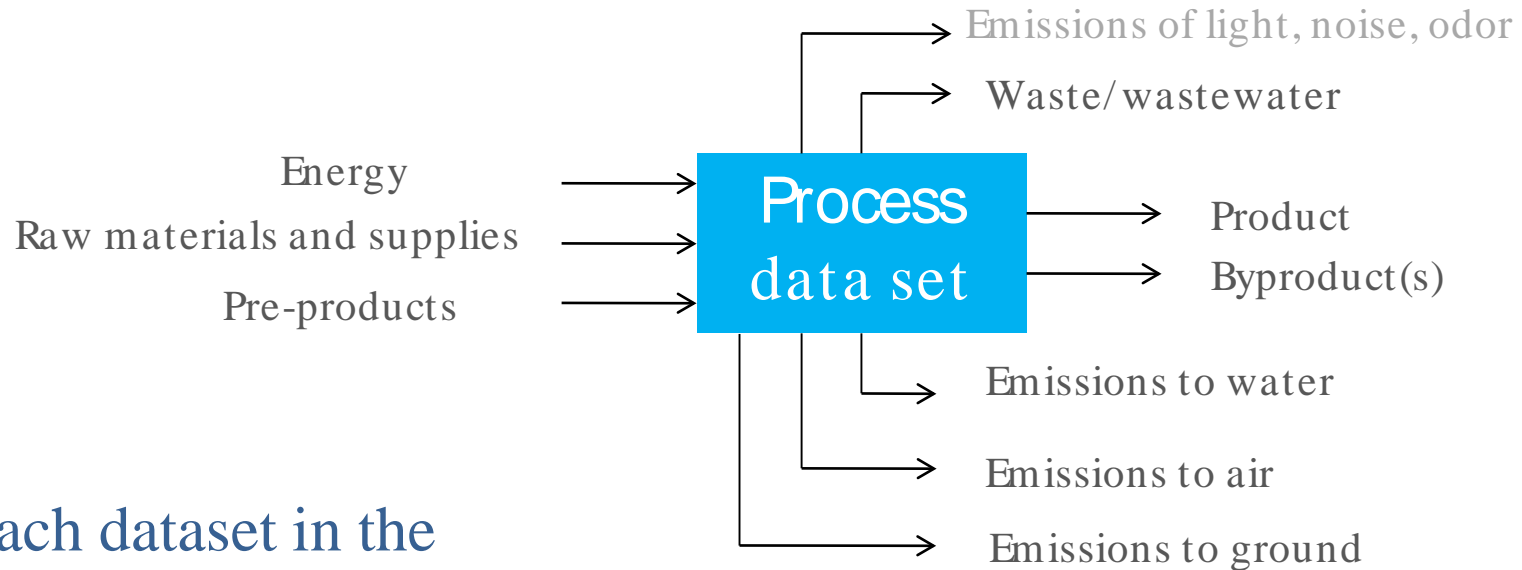
Relationship of data to (national) databases and LCA software:

datasets in a supply chain



Relationship of data to (national) databases and LCA software:

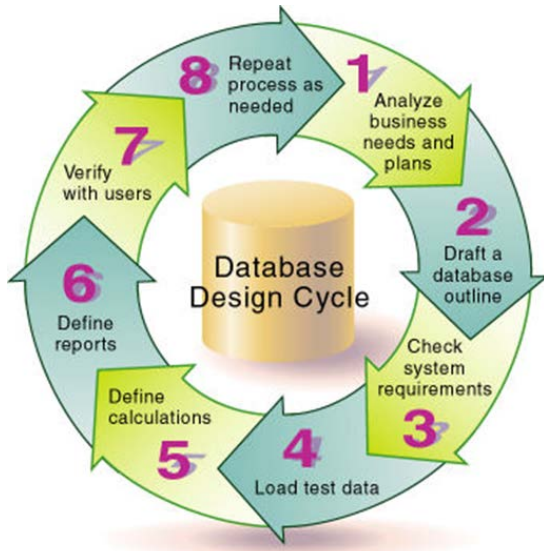
datasets



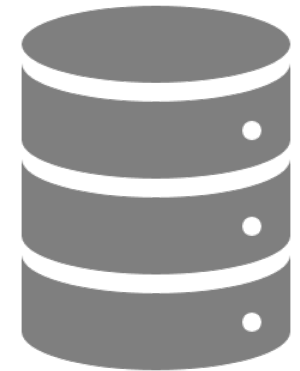
Each dataset in the database should be complete (inputs and outputs) and balanced (material and energy)

Relationship of data to (national) databases and LCA software:

database



- Databases are storage locations for data
- Traditional databases store data in one of two ways –
 - ✓ Flat file – all information, including meta-data, about a database object is contained in one place, termed a “record”, or
 - ✓ Relational – individual attributes are grouped into tables and “related” through a common parameter such as a process name.
- Newer approaches are called “data repositories, curated collections of files that can be downloaded by users

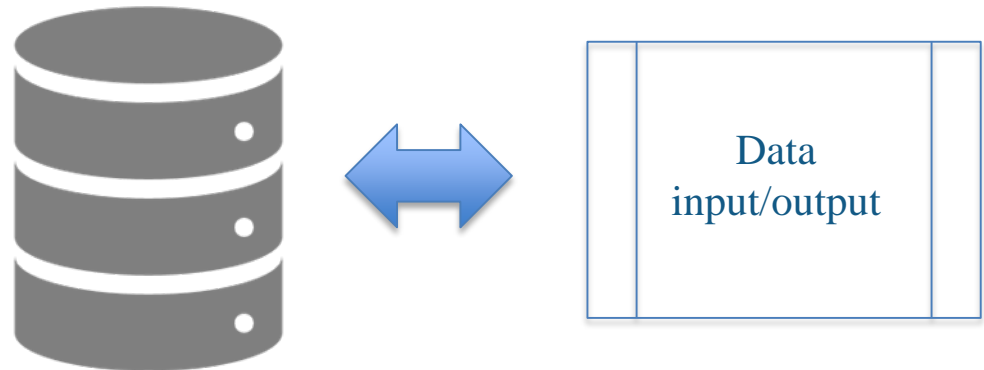


The most convenient databases from a user perspective are web-based.

Relationship of data to (national) databases and LCA software:

LCA/ LCI database characteristics

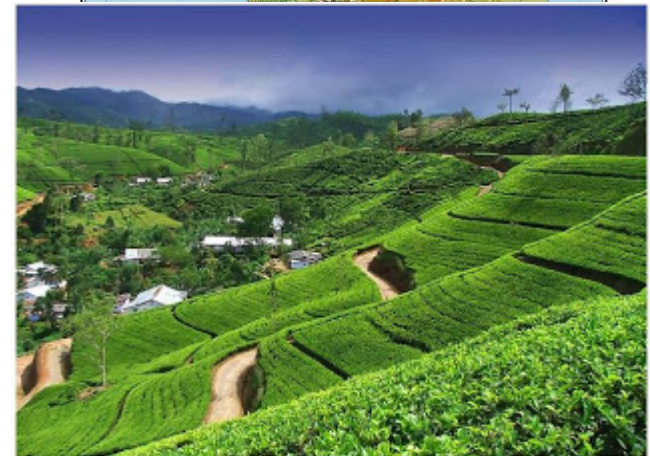
- Comprehensive input/output flows for datasets
- Consistent modeling approach and flow nomenclature
- Complete and consistent dataset documentation
- Often, capability beyond storing data, e.g. data collection and submittal support, review, aggregated process creation, ...



Relationship of data to (national) databases and LCA software:

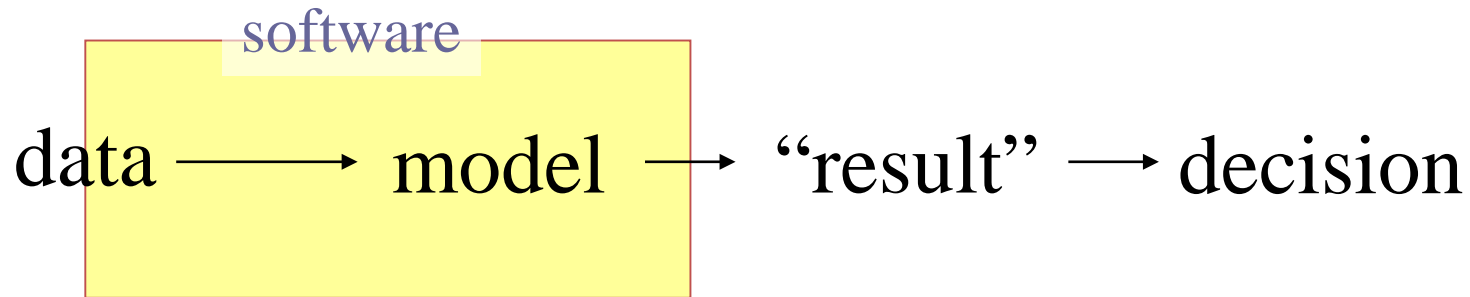
LCA/ LCI database characteristics

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- Consistent modeling approach and flow nomenclature
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- Often, capability beyond storing data, e.g. data collection and submittal support, review, aggregated process creation, ...
- **National database:** (often) contains reference datasets, representative for a country



Relationship of data to (national) databases and LCA software:

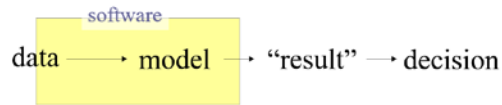
LCA software



Groth, A.: A new open source LCA software, EcoBalance conference, presentation, Tsukuba, 2006

Relationship of data to (national) databases and LCA software:

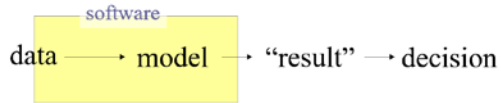
LCA software



- LCA Software works with databases, and makes the database much more useful for modeling and decision support and application
- There are many different LCA software packages; four are mainly important:
 - SimaPro
 - GaBi
 - openLCA
 - (Umberto)
- When developing a database, always consider its use in software!

Relationship of data to (national) databases and LCA software:

LCA software

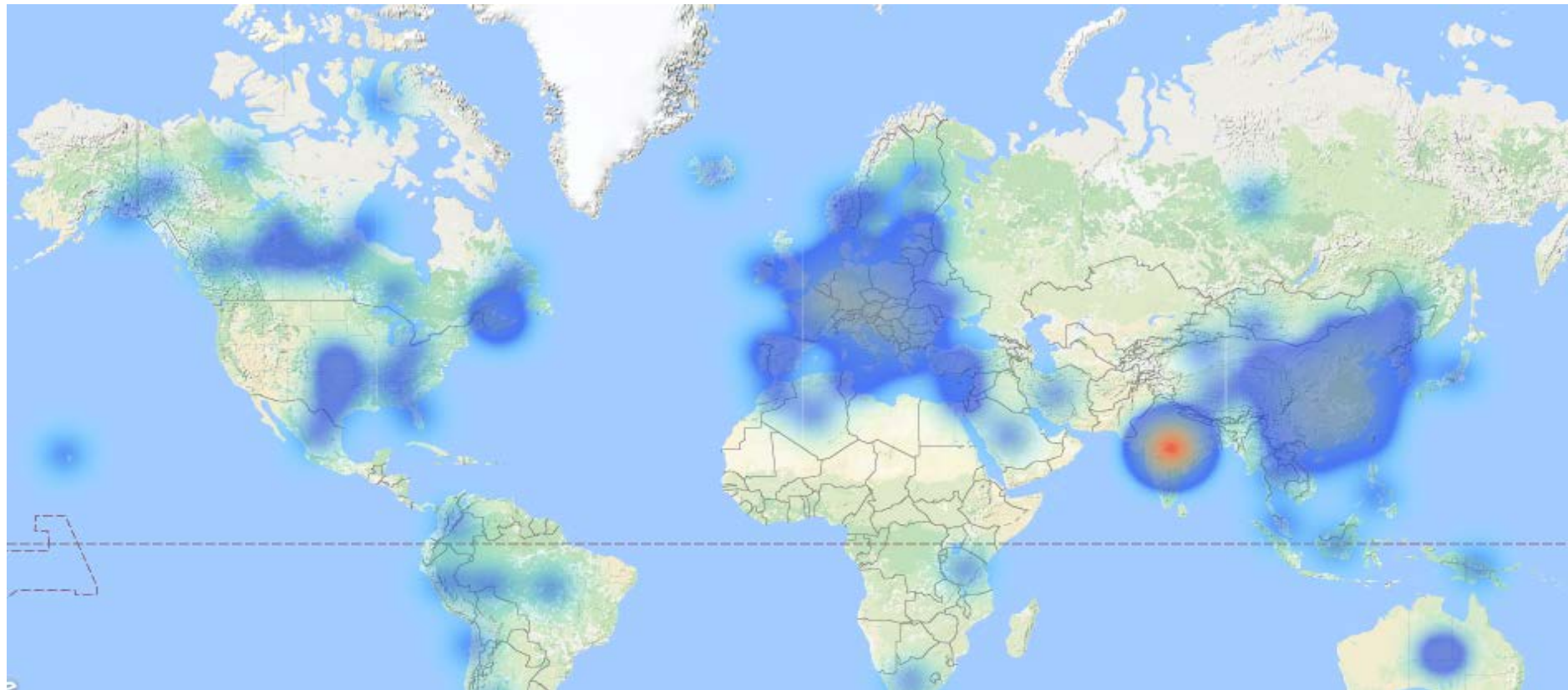


- LCA Software works with databases, and makes the database much more useful for modeling and decision support and application
 - Identify the main drivers along the supply chain
 - Make comparisons
 - Perform sensitivity analyses
 - Create and add user-specific datasets
 - ...

Relationship of data to (national) databases and LCA software:

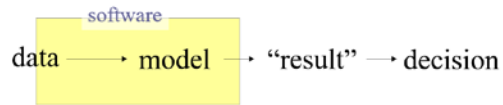
LCA software

- Rice production India, ecoinvent 3.3.cut-off, ReCiPe LCIA method, human health – human toxicity

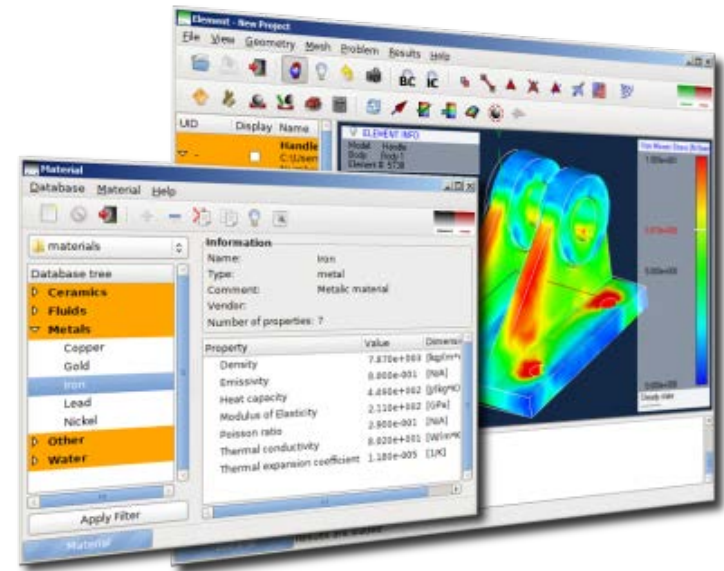


Relationship of data to (national) databases and LCA software:

LCA software



- When developing a database, consider how it would be used in software!
- Ideally, not only one but several broadly used LCA software systems should be considered



For helpdesk assistance –

- **Become a Helpdesk member:**
 - To access the Helpdesk exchange space (or any other Clearinghouse area), you will need to create an account in the Clearinghouse (www.spcclearinghouse.org):
 - Toward the bottom of the homepage you will see a button labeled ‘Join the Community now’. Click on this link and open a form to allow you to create a login and profile.
 - Once logged in, you can modify or update your profile or explore the various SCP topic areas.
 - Go to ‘About’ and then to ‘Exchange Spaces’ where you will see Lifecycle Approaches in the drop down menu and one menu level below that is the Technical Helpdesk.
 - The Technical Helpdesk space will be available to any visitor, logged in or not. Without being logged in and joining the helpdesk space, any visitor can look at the various sections of the helpdesk space, but cannot contribute any content.
 - In order to become a member of the helpdesk space, on the homepage under the summary, is “Request space membership”. Click here, you will automatically be given rights of a members to contribute content, since it is a public group.
 - For your next login, you go directly to <http://spaces.spcclearinghouse.org/> and then choose the Technical Helpdesk space in the dropdown list.
- **Helpdesk Manager - Bruce Vigon, Consultant to SETAC,**
- **Helpdesk Coordinator – Kristina Bowers, UN Environment, Economy Division**