

# **ECOINVENT 2000**

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Centre for Life Cycle Inventories  
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# **ECOINVENT 2000**

## **Overview**

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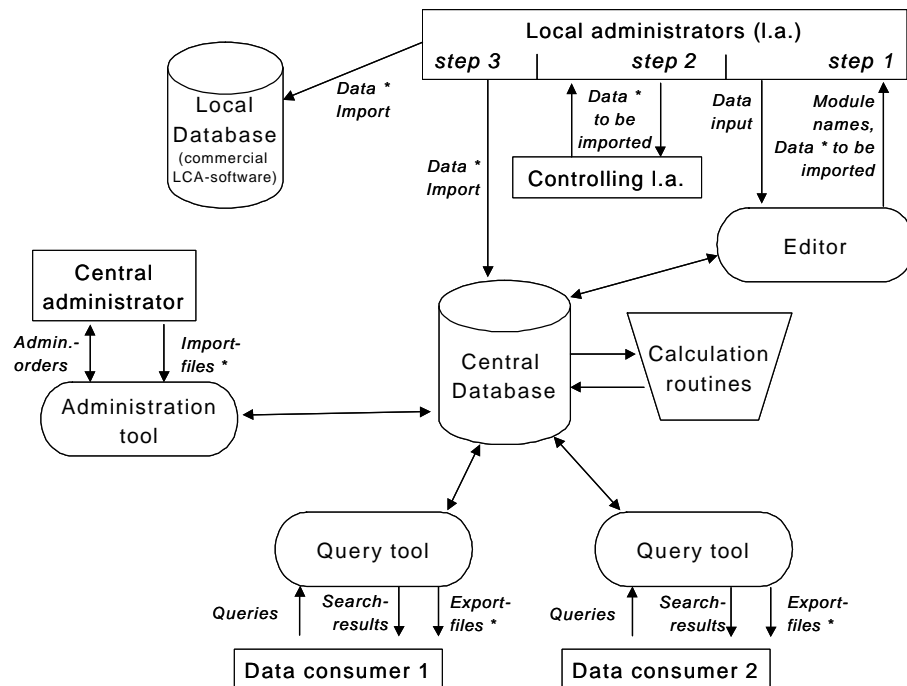
## The goal

Within the ETH domain several databases for Life Cycle Assessment exist. Data for energy systems have been compiled by ETH Zürich and PSI Villigen, EMPA Dübendorf is specialised on Life Cycle Inventories for building materials, EMPA St. Gallen works on consumer goods such as packaging materials, detergents and communication means and EAWAG uses and generates LCI data while performing substance flow analyses. ECOINVENT 2000 aims at harmonising these databases by establishing one common, centralised database for Life Cycle Inventory data.

## The product

ECOINVENT 2000 consists of the following parts (see Figure 1):

- **The central database:**  
The central database contains Life Cycle Inventory data on energy systems, transport systems, waste treatment systems, chemicals, building materials, *et cetera*, and Life Cycle Impact Assessment methods such as the Swiss Ecological Scarcity 1997, Eco-indicator 99 or the CML characterisation scheme. The database is located on a server and accessible via Internet.
- **Calculation routine (ECOCALC):**  
Data will be supplied as non-terminated unit processes. The computation of cumulative inventory results is performed with powerful calculation routines related to the central database. Calculations shall include cumulative uncertainty ranges.



**Figure 1: The basic structure of ECOINVENT 2000**  
 \*: Data in ECOSPOLD-Format  
 l.a.: Local administrator

- **Local databases:**  
Commercially available LCA-software such as EMIS, Gabi, LCAit, SimaPro, Team, Umberto and others are used as local databases. These local databases are suited for an implementation and use of ECOINVENT 2000 data. ECOSPOLD data exchange format (or the SPOLD 99-format) is recommended.
- **Administration tool (ECOADMIN):**  
The administration tool supports the integration of datasets delivered by the co-operating institutes into the central database. It helps to verify the completeness of datasets, calculates Inventories and (weighted) Category Indicator Results and ensures the accessibility for clients respecting the users' rights.
- **Query tool (ECOQUERY):**  
The Query tool is used to interrogate the database and to download datasets from the central database. It enables the search for individual processes, for certain economic sectors (transport or energy sector) or for data from a certain institute. General information about the processes (technology, age, geographic coverage, *et cetera*) is accessible to everybody whereas the quantitative LCI data is only accessible for registered members of ECOINVENT 2000.
- **Data exchange format (ECOSPOLD):**  
The data exchange format lists all data fields that need to be completed when data is imported into the central database for the first time. It takes pattern from the international SPOLD data exchange format. Some of the data fields are mandatory, i.e. information *must* be provided. Among other features, the data exchange format allows for specifying upper and lower estimates as well as the probability distribution.
- **Editor (ECOEDITOR):**  
The editor is used by the local administrators to create new datasets and to change, enlarge or delete existing datasets. The editor administrates the module names (via a direct link to the central database, where the index of module names is placed), ensures the use of the actual list of names when compiling new inventories and includes a unit converter. The editor acts as the interface between the local administrator and the central database and generates files in the ECOSPOLD data format.

## The references

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