

# ecoinvent – Switzerland's life cycle inventory database

In the global context of Sustainable Development (SD) and the Swiss governmental approach of an Integrated Product Policy (IPP), inventories of ecological data of materials and processes gain more and more importance. The project ecoinvent will provide Swiss and European Life Cycle Inventory (LCI) data allowing administration, industry and consultants to calculate complete value-added chains.

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Since the beginning of the 1990s, several institutes within the ETH domain started to establish their own inventory databases for life cycle studies. Due to their often limited scope and the fact that overlapping datasets sometimes based on different sources, inconsistent results did appear. Besides, support and regular actualization of the database are very time consuming activities – often too large for one single institute. In 1998 therefore, under the leadership of

EMPA, the “Swiss Centre for Life Cycle Inventories” was created as a joint initiative of the ETH domain and Swiss Federal Offices to bring together the different efforts in the area of LCA.

In parallel, the project ecoinvent 2000 was initiated aiming at a unified, harmonized, transparent and actualized high quality life-cycle inventory database, valid for Swiss and Western European conditions. Each participating institute is responsible for the data of exactly defined areas based on LCI knowledge already built up within the last decade, with EMPA being responsible for numerous different types of material (Fig. 1).

On the technical side, several software components (Fig. 2) have been defined and developed in close collaboration with a major European LCA software producer. For the communication of the central database with the other components and with commercial LCA software, an open and future-oriented data exchange format based on XML-technology has been developed following international standardization efforts in the area of LCA data exchange (e.g. SPOLD, ISO 14'048).

On this online accessible database, consistent and coherent LCI unit process data are found allowing an easier performance of LCA studies and increasing the credibility and the acceptance of the life cycle results. This high quality of data together with their transparency and the public access are a prerequisite that LCA can support an Integrated Product Policy (IPP) efficiently.

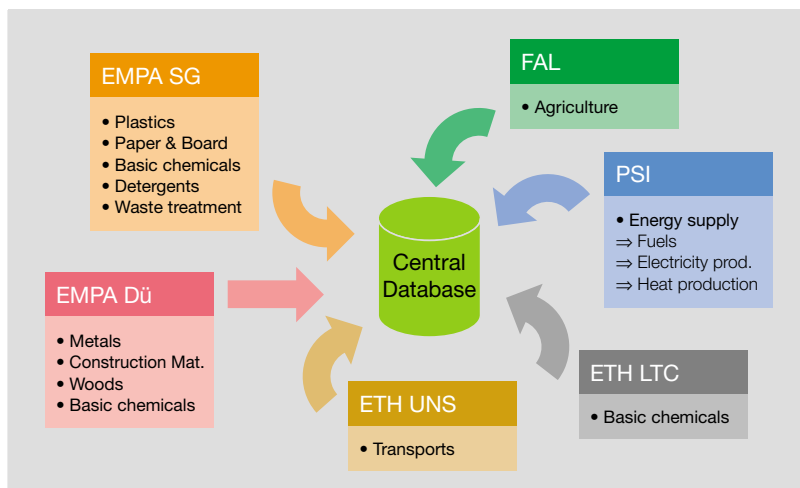


Fig. 1: Content of the database and the respective responsible institute.

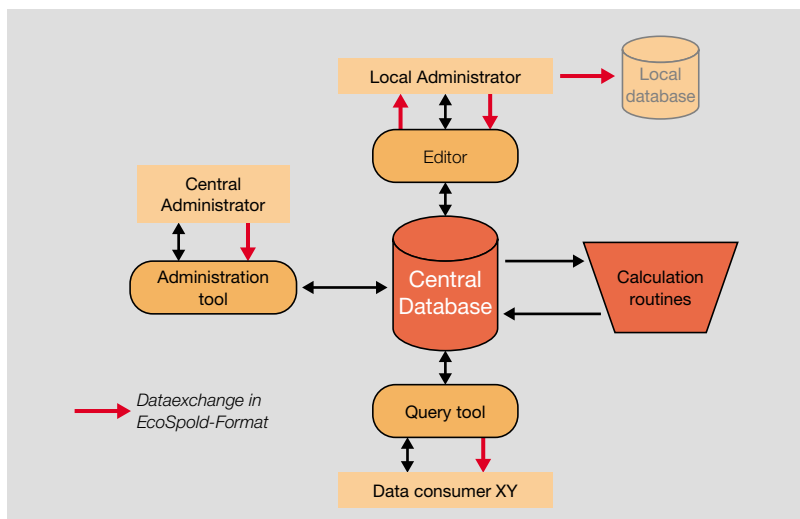


Fig. 2: Components of the technical system of the database ecoinvent.

**Support:** EAWAG, BUWAL, BFE, ASTRA, BBL,  
BLW, Holz-21

**Links:** [www.empa.ch/abt293](http://www.empa.ch/abt293)  
> Environmental and geo-informatics

[www.ecoinvent.ch](http://www.ecoinvent.ch)

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**References:**  
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