



European Platform on Life Cycle Assessment

**Supporting business and government with reference data
and recommended methods for better LCA practice**

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Institute for Environment and Sustainability (IES)**



Agenda

- Background and Overview
- Deliverables / workplan
- ELCD data system
- ELCD data format
- LCA information hub



DG Joint Research Centre: Mission

... to provide customer-driven **scientific and technical support for the conception, development, implementation and monitoring of EU policies.**

As a service of the European Commission, **the JRC functions as a reference centre** of science and technology for the Union.

Close to the policy-making process, it serves the common interest of the Member States, while being **independent of special interests, whether private or national.**



Policy Background Summary

- Sustainable Production and Consumption Action Plan (2007)
- Thematic Strategy on the Prevention and Recycling of Waste (2005)
- Thematic Strategy on the Sustainable Use of Natural Resources (2005)
- Communication on Integrated Product Policy (2003)

- Framework Directive on Waste (*proposed revisions*)
- Directive on Ecodesign for Energy-using products (EuP)
- Strategic Environmental Assessment Directive (*plans / programs*)



Supporting Business and Government in Europe: European Platform on Life Cycle Assessment

Integrated Product Policy (IPP) 2003 Communication

- **LCA - *best framework*** for assessing the potential env. impacts of products
- **debate ongoing about *good practice***
- ***Handbook*** on best practice, based on ***best consensus*** among stakeholders
- ***Platform*** to facilitate communication and exchanges
- ***Directory of LCA databases*** to be updated at regular intervals
- ***Co-ordination*** to make data more accessible and systematically collected



European Platform on LCA

Coordination: DG JRC in close collaboration with DG Environment

Initial phase: 2005 to 2008

Key customers: European Business - EC services - Member states

Deliverables:

- European Reference Life Cycle Data System (ELCD) with Life Cycle Inventory (LCI) data and recommended Life Cycle Impact Assessment (LCIA) factors
- Handbook of recommended LCA methods, guidance and review process
- LCA information hub and communication platform
- Guidance for life cycle thinking in policy making



Benefits of Platform

Increased awareness, acceptance, and application of Life Cycle Thinking and Assessment in industry and government

- Higher consistency and quality of LCA data, methods, & studies
- Increased availability and exchange of information
- Reduced costs e.g. reduction in overlapping consultations among companies, associations, member states, EC
- Clearer research & development focus (e.g. 7th FP)



Five Guiding Principles

- Best attainable stakeholder consensus
- Starting from existing LCA practice and knowledge
- Scientifically robust
- Practical and affordable
- Long-term support to the community



Implementation

- In-house work at DG JRC and DG Environment
- External service contracts
- Stakeholder involvement
 - EC internal steering group and IPP Regular Meeting
 - Advisory groups
 - Public stakeholder consultations



Advisory Groups

"Improve quality and harmonisation status of deliverables before they go to public stakeholder consultation; support dissemination"

- **"EC-internal Steering Group"** and **"IPP Regular Meeting,"**
- **"European Business Advisory Group"** of data providing European-level industry associations (7 members, 13 potential new members)
- **"LCIA Method Developers Advisory Group"** of developers providing their impact factors documented in the ELCD format (5 applications)
- **"LCA Tool and Database Developers Advisory Group"** of tool and database developers, that implement an import/export interface to the ELCD data format into their systems (15 applications)

(International coordination with various National LCA database projects and with UNEP/SETAC LC Initiative sought and partly on-going)



Deliverables - 1

European Reference Life Cycle Data System (ELCD)

- **Core Life Cycle Inventory (LCI) data** of key materials, energy carriers, transport, ... Focus on data quality, consistency, and applicability.
- **Life Cycle Impact Assessment (LCIA) factors** for estimating potential impacts on resource consumption, and pressures on the environment and human health. Focus on scientific robustness, relevance, and practicality.

Handbook of Technical Guidance Documents for LCA

- Series of **technical guidance documents** on best attainable consensus on LCA practice in data collection, modelling, analysis, interpretation, documentation, and review.



Deliverables - 2

LCA Information Hub

- Ease access to data and methods and to facilitate knowledge exchange.
- Internet site:
 - ELCD reference data system
 - Handbook of Technical Guidance Documents
 - Directory of LCA services, tools, databases, and providers

Internal Policy Support



LCI data content of first (non-reference) version of ELCD core database

Materials:

- **Metals:** 3 aluminium, 2 copper, 4 steel, stainless steel, *zinc*
- **Inorganic chemicals:** NaCl, NaOH, HCl, (H₂SO₄)
- **Plastics:** ABS, PA6, PA6.6, PBT, PC, PE, PET, PMMA, PP, PS, PVC in 21 variants / routes
- **Other packaging:** corrugated board, *glass, paper*
- **Construction materials:** 6 wood-based, *cement, glass*

Beta version online

Energy:

- **Electricity:** 26 country-specific mixes plus 2 renewables
- **Fuels:** 8 key fossile fuels
- **Thermal energy:** from 3 key fuel sources

Partner industry associations - with 12 further interested to join

The image shows five logos of partner industry associations: European Aluminium Association, European Copper Institute, Eurofer, FEFCO, and PlasticsEurope (Association of Plastics Manufacturers).

Transport:

- 5 road, 1 rail, 3 water, 2 air in each two variants (w/wo fuel)

End-of-Life Treatment:

- **Incineration:** of 16 materials
- **Land filling:** of household waste and of inert waste



ELCD Data Format

- **LCA data storage and working format**

for ELCD unit process LCI data sets as well as LCI results of product systems, including data documentation, review aspects, link to LCIA, etc.

- **LCA exchange format**

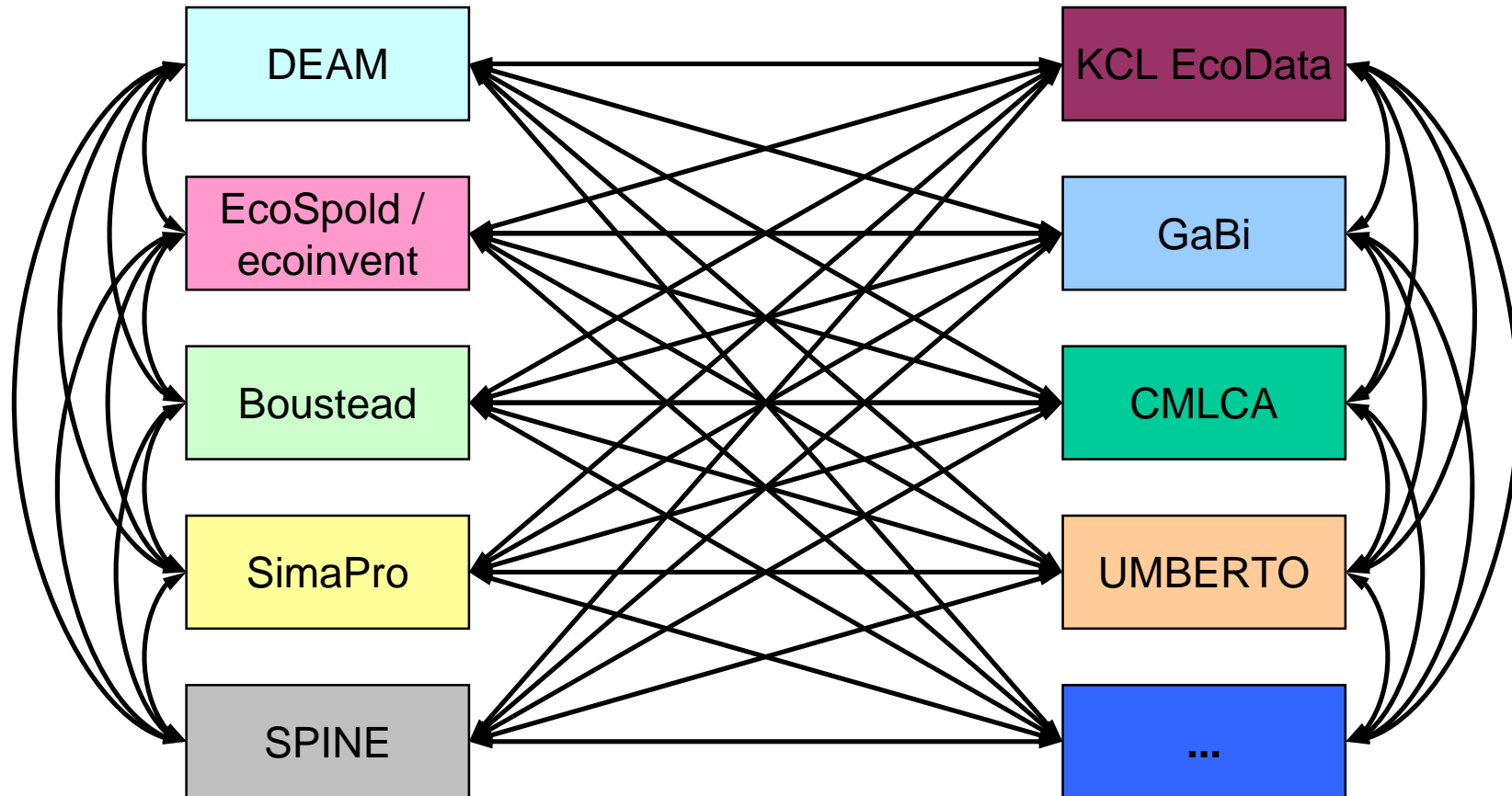
to support exchange (import and export) of **ELCD data sets (LCI and LCIA)** with market relevant LCA databases and software tools

- **Common LCA exchange format**

to be used among widely used LCA tools and databases (for LCA information transfer along the supply-chain)



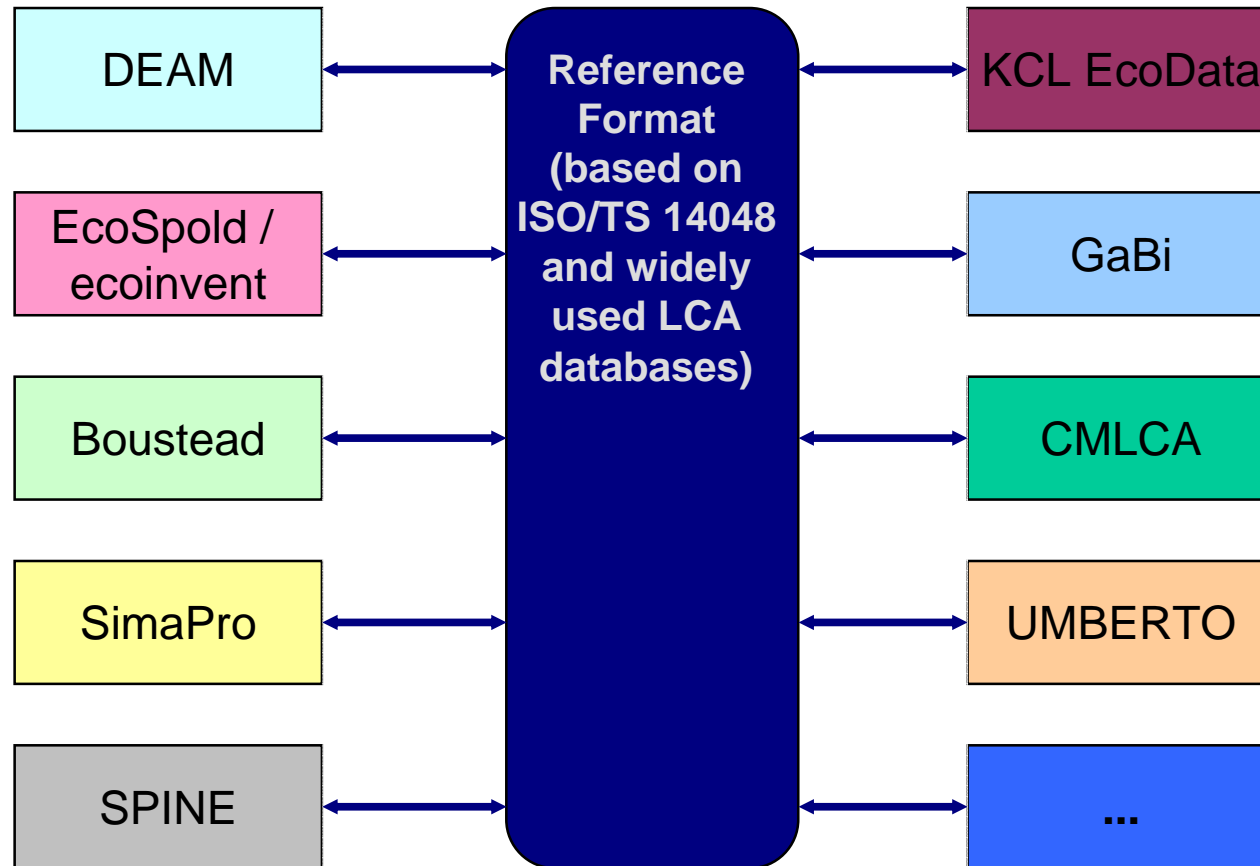
Support efficient LCI data exchange along supply-chain with a common reference LCA format



(On-going development and stakeholder consultation process)



Support efficient LCI data exchange along supply-chain with a common reference LCA format



(On-going development and stakeholder consultation process)



LCA Tools, Services and Data

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List of Services

This page lists LCA services categorized by their service category. If you click on a service name, a description of the service will be displayed and a list of provider of this is shown.

General issues

- [Developing LCA impact assessment methods](#)
- [Review of environmental reports](#)
- [Review of LCA reports](#)

Life cycle costing, social life cycle working environment and joined analysis

- [\(Social\) life cycle working environment analysis \(LCWE\)](#)
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- [Life cycle engineering \(LCE\)](#)
- [Life cycle risk analysis](#)
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- [Total cost of ownership \(TCO\)](#)

Policy making and monitoring

- [Environmental technologies action plan \(ETAP\)](#)
- [Life cycle thinking in policy making](#)
- [Material flow analysis \(MFA\)](#)
- [Monitoring the effects of environmental policy](#)
- [Waste management strategies](#)

Production sites and organisations

- [Benchmarking sites](#)
- [Clean development mechanism \(CDM\)](#)
- [EMAS / ISO 14001](#)
- [Emission trading \(general\)](#)



Further Information: Links

EUROPA - Site on LCA Tools, Services and Data - Microsoft Internet Explorer

Address: <http://lca.jrc.ec.europa.eu/lcainfohub/otherSites.vm>

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Links

Policy activities and instruments referring to life cycle thinking or assessment

Communication on Integrated Product Policy (IPP)
<http://europa.eu.int/comm/environment/ipp/>

Thematic Strategy on The Sustainable Use of Natural Resources (Resources TS)
<http://ec.europa.eu/environment/natres/index.htm>

Thematic Strategy on The Prevention and Recycling of Waste (Waste TS)
<http://ec.europa.eu/environment/waste/strategy.htm>

Environmental Technology Action Plan (ETAP)
<http://ec.europa.eu/environment/etap/index.htm>

Directive 2005/32/EC on the eco-design of Energy-using Products (EuP)
http://europa.eu.int/comm/enterprise/eco_design/

Directive 2002/96/EC Waste Electrical and Electronic Equipment (WEEE)
http://europa.eu.int/comm/environment/waste/weee_index.htm

Directive 2002/95/EC Restrictions of Hazardous Substances (RoHS)
<http://europa.eu.int/comm/environment/waste/index.htm>

Directive 2000/53/EC on end-of-life vehicles (EoL)
http://ec.europa.eu/environment/waste/elv_index.htm

Green (Public) Procurement (GPP):
<http://ec.europa.eu/environment/gpp/index.htm>

Regulation on Eco-labeling; voluntary scheme of the European Eco-label
http://ec.europa.eu/environment/ecolabel/index_en.htm

Eco-Management and Audit Scheme (EMAS)
http://ec.europa.eu/environment/emas/index_en.htm

Directive 2003/87/EC including Greenhouse Gas Emission Trading Scheme (EU ETS)
<http://ec.europa.eu/environment/climat/emission.htm>

Directive 2001/42/EC on Strategic environmental assessment (SEA)
<http://www.eu.int/comm/environment/eia/sea-legalcontext.htm>

Directive 96/61/EC on Integrated Pollution Prevention and Control (IPPC).
<http://ec.europa.eu/environment/ippc/>

Directive 85/337/EEC on Environmental impact assessment (EIA)
<http://ec.europa.eu/environment/eia/home.htm>



Thank you very much for your interest and time.

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