

European Platform on Life Cycle Assessment

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Welcome

The focus of the work of the European Platform on LCA during the first 9 months of 2008 was directed on closely supervising the development of the deliverables of this project. In parallel, continued scientific and technical support has been provided to European policy developments (e.g. the Sustainable Consumption and Production

(SCP) Action Plan, the revision of the EU Ecolabel and EMAS regulations, the new Green Public Procurement Communication, and others).

In this rather comprehensive 9th newsletter you can read more about progress of the work and deliverables of the European Platform on LCA. This is complemented by information on recent developments in Life Cycle Thinking in European policy and research.

The first topic however is of broader, global scope – the work towards an internationally agreed system for good practice in LCA and consistent and quality-assured LCA data and studies:

European Platform on LCA - update

Towards the International Reference Life Cycle Data System (ILCD)

Policy background

Environmental policies and instruments that are based on Life Cycle Thinking (LCT) are closely interrelated as they necessarily relate directly or indirectly to the same goods and services: The life cycles of all goods and services are closely and globally interrelated as they form part of each other, including via the trade of raw materials and manufactured goods on the global markets. The product-related environmental policies and instruments have to provide quality-assured and compatible messages to ensure effective and efficient improvements in the private sector and by consumers. Equally the many private sector based e.g. EPD schemes and e.g. Ecolabel initiatives should be compatible. Inconsistencies due to differences in underlying data and methods would result in conflicting demands and extensive additional costs for data collection, calculation, documentation, review and reporting, i.e. unnecessary burdens on business and governments and ultimately all citizens.

Common needs globally

Recognizing the global dimension of sustainable production and consumption and the common interest in good quality and consistency of life cycle information for robust decision support, the idea was born to work together among the many on-going national and regional LCA projects with the aim of developing a common internationally coordinated guidance, the International Reference Life Cycle Data System (ILCD). In this context a first meeting of representatives of a number of National LCA projects was held during the workshop “LCA for APEC member economies” in March 2008 in Tokyo. In May 2008 the concept has been presented and discussed with European LCA

experts at the SETAC Europe Annual Meeting in Warsaw in May. Invited consultations on the first drafts have been held from May to June. Public consultations and peer reviews will be held on the advanced drafts.

The International Reference Life Cycle Data System (ILCD)

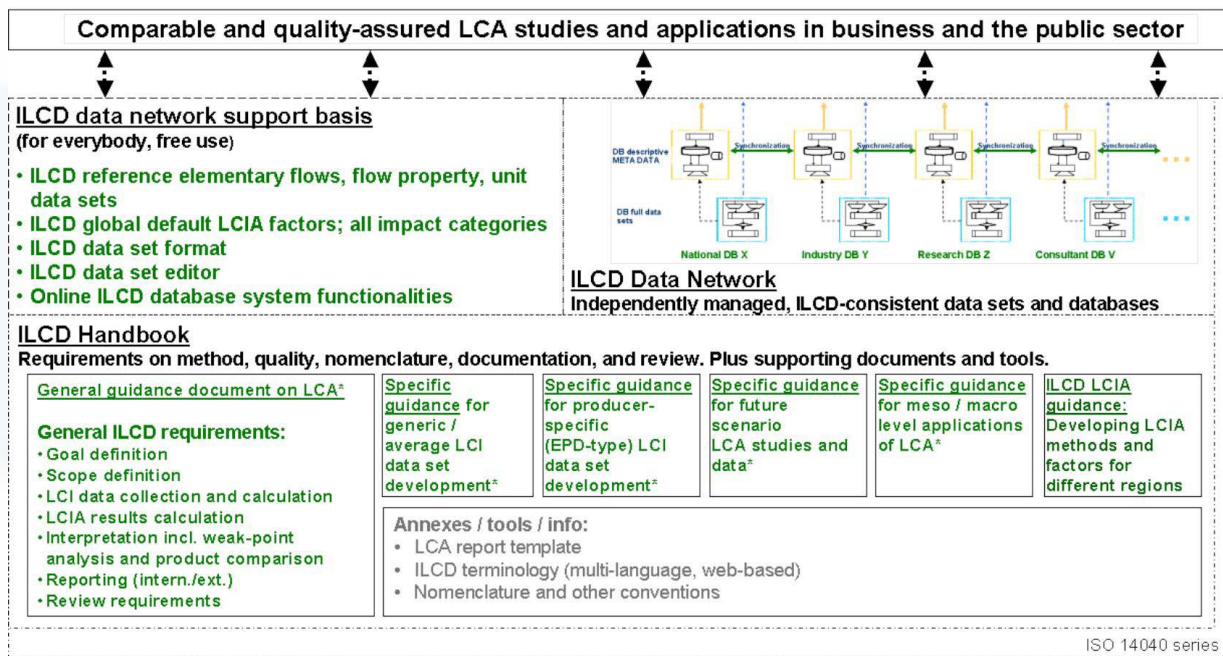
The ILCD System addresses the whole range of life cycle related approaches and applications, taking a global perspective. It consists of the ILCD Handbook and the ILCD Data Network:

The **ILCD Handbook** is a series of technical guidance documents to the ISO 14040 series, including LCA method recommendations, recommended global default LCIA methods and factors, a detailed review frame, reporting templates etc. It will serve as the basis from authoritative bodies for comparable and quality-assured LCA studies and applications in business and the public sector.

The **ILCD Data Network** is a network of independently managed and published Life Cycle Inventory data sets that every data developer can join and publish data at own conditions (e.g. free of charge, upon registration, for fee, etc.). As a common basis, the data will be based on the ILCD Handbook, to ensure quality and consistency.

The ILCD System will be complemented by supporting annexes and tools including a multi-language terminology, a comprehensive set of elementary flows, unit conversion data sets, etc.. For more information please visit our website http://lca.jrc.ec.europa.eu/EPLCA/Deliverables/ILCD_datanetwork.htm

Draft: The “International Reference Life Cycle Data System” (ILCD) for good practice in LCA



* fully covers Carbon footprint, Primary Energy consumption, and similar indicators

The further development, finalization, and publication of the ILCD System will be done in consultation among the international co-operation partners on good practice in LCA (i.e. the National LCA projects of Australia, Brazil, China, the European Union, Japan, Malaysia, and Thailand), UNEP, and with Advisory Group members from presently 15 EU-level industry associations and 21 LCA research / consultancy organisations.

Cooperation agreements signed with UNEP, Brazil, China, and Malaysia

Collaboration agreement between JRC and UNEP

The European Platform on LCA has the overall objective to support good practice in LCA, by developing in international coordination a series of technical guidance documents on life cycle inventory (LCI) and impact assessment (LCIA) and by improving the availability of quality-assured and consistent LCI and LCIA data. Supporting this, on January 29th 2008, a high-level Collaboration Agreement between the JRC and UNEP was signed. This agreement specifies, among others, the relationship between the European Commission's JRC and UNEP as follows:



"Support UNEP in its activities on sustainable consumption and production, in particular the Life Cycle Initiative and the International Panel on Sustainable Use of Natural Resources, through the recommended methodological guidelines and reference data of the European Platform on Life Cycle Assessment (LCA), striving for consistency at the global as well as European scales."

Memoranda of Understanding between JRC and National LCA projects of Brazil, China, and Malaysia

Contacts have been taken up also with relevant National LCA projects, to establish bilateral Memoranda of Understanding to cooperate on development of deliverables.

By establishing the MoU, the parties ...

"... recognize LCA as one of the most advanced approaches for supporting life cycle thinking in the context of sustainable production and consumption.

... at the same time agree on the need for better harmonization of LCA methods, as well as for high quality, independently reviewed and easy to use consistent LCI data and LCIA methods for better practice, broader use, and wider acceptance in business, government, and academia and whereas the parties express their will to work together towards this end."

While leaving full flexibility to all partners, this cooperation is expected to be a substantial support to improve quality and consistency of LCI data sets and other LCA work, on a global basis.

In 2008, 3 new MoUs have been signed between the European Platform on LCA and the National LCA project in China, coordinated by the **China National Institute of Standardisation (CNIS)**, and with the National LCA project of Malaysia, coordinated by **SIRIM Berhard**.

Furthermore, a Collaboration Agreement has been signed with the **Brazilian Institute for Information in Science and Technology (IBICT)**, coordinating the Brazilian National LCA project.



These three new co-operation partners add to the existing ones, namely the National LCA projects of Japan, coordinated by the Japanese Environmental Management Association for Industry – JEMAI together with the National Institute of Advanced Industrial Science and Technology – AIST, and the National LCA project of Thailand, coordinated by the National Metals and Materials Technology Centre (MTEC).



European Business Advisory Group – five new associations have joined

With the **European Cement Association (CEMBUREAU)**, the **Voice of the European Gypsum Industry (EUROGYPSUM)**, the **Sustainable Landfill Foundation (SLF)**, and the **Lead Development Association International (LDAI)**, and the **Tiles and Bricks of Europe (TBE)** 5 new EU-level industry associations have joined the Business Advisory Group:



In context of this cooperation, CEMBUREAU will make available or approve LCI data sets for cement products, EUROGYPSUM for gypsum and gypsum products, SLF will work on LCI data sets for waste disposal in landfill, LDAI will make available or approve LCI data sets for lead, and TBE for bricks.

As members of the Advisory Group these organisations are invited to contribute with their expertise to the development of the other deliverables of the project.

We welcome these pro-active associations that join ACE, ACEA, CEWEP, EEA, ECI, EUROFER, FEFCO, IMA-Europe, MARCOGAZ, and PlasticsEurope, further strengthening the quality of the ELCD database with industry data.



Progress in the Platform's deliverables

Drafts of the following deliverables are stepwise made accessible online; see <http://lca.jrc.ec.europa.eu/EPLCA/deliverables.htm>.

Technical guidance documents on LCA

Invited consultation of the first draft guidance documents of the International Reference Life Cycle Data System (ILCD) Handbook on good practice in LCA work has

taken place among the National LCA projects of Australia, Brazil, China, Japan, Malaysia, and Thailand, UNEP, services of the European Commission, representatives of the 27 EU Member State, and the Advisory Groups of European Business Associations and of globally leading LCA software and database developers and LCIA method developers.

Subsequent public stakeholder consultation and peer review are foreseen subsequently based on agreed operating procedures. After integration with the other deliverables of the ILCD system, the outcome will be an online accessible and usable, goal-dependent guidance to the ISO 14040 series.

Recommended LCIA methods and factors

The project "Recommended LCIA methods and factors" makes progress: the first draft deliverables towards a recommended LCIA scope, framework, models and impact factors have been consulted. These recommendations strongly build on established impact assessment approaches and models towards recommended best practice. They take into account the global nature of life cycles and the necessity to first have globally applicable recommendations. The further advanced drafts will undergo a subsequent public stakeholder consultation and peer review.

Review schemes and certification frame for LCA

In the context of the ILCD System and via an ongoing support contract, a "Technical review guidance for LCA embedded into an accredited certification scheme" has been drafted. The deliverables include review schemes for different goal-situations and for a number of specific LCA applications (EPDs, identification of Type I Ecolabel criteria, Calculation of indirect effects in Environmental Management Systems / reports), as well as for review of LCIA methods and factors. A detailed reviewer qualification has been worked out that is foreseen to be used a LCA reviewer registration. The draft of the review guidance and certification scheme will be consulted and reviewed as detailed for the other ILCD deliverables above.

Multi-language online terminology for LCA

Drafts have been prepared for a multi-language online Terminology for LCA. This work is done in an IT collaboration with the Brazilian IBICT / the University of Brasilia as well as the German FZK-IAI. The terminology will cover all relevant terms, building on ISO definitions as far as available, in a hierarchy of terms, include cross-references and examples. Based on an advanced English language version that is foreseen to be developed in cooperation among the partners of the ILCD System, translation into other languages and implementation via e.g. a web-ontology is planned.

Data documentation and exchange format and editor

Based on the earlier version of the ELCD reference format version 1.0.1, and the input and feedback collected via the public stakeholder consultations and meetings, a further developed version has been defined for the ILCD. This one is presently being implemented by the German FZK-IAI, in coordination with the EC and the Brazilian IBICT. Its use for the ILCD Data Network will be discussed among the ILCD partners.

Similarly, the existing ELCD data set editor will be further developed to yield the ILCD data set editor. A functionality for migration of ELCD 1.0.1 formatted data sets to the proposed ILCD format will be included, as well as a number of other functions such as e.g. for verifying completeness of documentation, a conversion function for displaying the data sets in web-browsers, a selector for switching between different language variants of a data set, etc.

Work is ongoing in relation to demonstration and testing the compatibility of the proposed format for the ILCD in relation to the most widely used LCA software tools, as well as against other important database formats and implementations of the ISO TS 14048 Standard. The outcome will be subject to stakeholder consultation and peer reviewed, as a basis contributing to agreement on the ILCD reference format.

European ELCD database enhancement

With an exclusively European scope and complementary to other sources of data that will eventually be in the ILCD Network, the on-going project "ELCD database enhancement" is updating and extending the presently 115 LCI data sets to about 350. Related data collection and documentation is ongoing in front-running European industry: 15 EU-level associations have already formally established the cooperation via an MoU (see more above). Discussions are on-going with further 15 EU-level associations, a number of these already expressed their interest to subsequently make available LCI data sets in order to appropriately represent the products of their industries in future LCA studies with up-to-date and quality data. Final delivery of the enhanced database - is foreseen for end of 2008. In a future step the ELCD data sets are foreseen to be stepwise adjusted, in close cooperation with European industry, to meet the ILCD Handbook requirements.

Update of the online LCA Resources Directory

The LCA Resources Directory at <http://lca.jrc.ec.europa.eu/lcainfohub/directory.vm> has been updated. It provides well-structured, detailed, and independently checked information on in between **28 LCA databases, 51 LCA tools, and 126 life cycle service providers** on all five continents. The whole LCA Info Hub - that also hosts the ELCD core database - receives about 2500 different visitors per month. In case you would like to also announce your LCA-related services, tool or database via this cost-free Directory, please send us a brief email to LCA@JRC.it.

Life cycle discussion and info mailing list "LCT Forum"

Since September 2007, the new, independent LCT Forum is up and running: It offers you an easy-to-use know-how and experience exchange platform for practitioners to support business, public administrations and the wider life cycle practitioners' community.

Do you have any questions on EPDs, Carbon footprint, LCA methods, or LCI data? Put your questions to the LCT Forum, reply to questions of others, or announce open positions and conferences, and link up to the global life cycle expertise.

In addition to act as an open expert pool for your questions, the LCT forum provides you with:

- **job-postings**
- **news on life cycle related policies developments and stakeholder consultations (e.g. on SCP, IPP, EuP, EMAS, Eco-label, ELV etc.)**
- **news on other life cycle applications and instruments (e.g. on EPDs, GPP, CDM/JI, Carbon footprint, etc.)**
- **calls for tender of R&D and others**
- **announcement of life cycle related conferences.**

More information and how to subscribe at: <http://lca.jrc.ec.europa.eu/EPLCA/mailing.htm>

Meetings, visitors, presentations

From December 2007 to including September 2008, staff of the European Platform on LCA organised or participated in many meetings including the following ones:

15 September 2008 Participation and presentation in the FP7 Environmental technologies Work Programme 2009 Info Day [see the slides of the presentation](#). This one-day event, organized by European Commission DG RTD, provided information on the various topics of the next call for proposals in the activity area of related to Environmental Technologies, within the Environment (including Climate Change) theme

10 September 2008: Participation in the Steering Committee meeting in Washington of the “GHG Protocol Initiative on Product and Supply Chain Accounting and Reporting Standard”, including representatives from WRI, WBCSD, US EPA, UNEP/SETAC, Carbon Trust, ISO TC207, General Electric, Dow and others from industry, academia and NGOs.

19-20 June 2008: Participation in the 11th EIONET workshop on Resource and Waste Management, organised by the European Environmental Agency together with the European Topic Centre on Resource and Waste. The workshop served to inform and update Member States representatives about new policies and activities concerning Sustainable Consumption and Production (SCP) and waste management. JRC staff presented the activities on Life Cycle Thinking in application on waste management and in SCP implementation in support of DG ENV and the new Data Centres on Products, Waste, and Resources.

3 June 2008: Participation in a meeting in Brussels with DG Environment, Eurostat, European Environment Agency and external experts to discuss the results of a study published by DG ENV that recommends the Ecological Footprint as one useful component along with the LCA-based Environmentally-weighted Material Consumption (EMC) and other two methods in a draft basket of indicators for assessing progress on the EUs Thematic Strategy on Natural Resources. Staff of the European Platform on LCA presented the JRC approach under development to provide life cycle based monitoring indicators for the new Data Centres on Resources, Products and Waste.

26-29 May 2008: Participation and presentation in the SETAC Europe Annual Meeting conference in Warsaw (Poland); see the [slides of the presentation](#) and the [poster](#). A workshop was organised to present the concept of the International Reference Life Cycle Data System (ILCD) and its draft components to European LCA experts for obtaining feedback. The [slides and minutes of the workshop](#) are accessible online.

20 May 2008: Meeting in Ispra with a high level Thai delegation including the General Director of the Department of Industry works of the Ministry of Industry, Mr. Rachada Singalavanija, and the Vice President of Thailand Environment Institute, Dr. Chaiyod Bunyagidj. Discussion with the new JRC-IES Director Prof. Dr. Leendert Hordijk on the Integration of Life Cycle Thinking into environmental policies, exchanging European and Thai experiences, and about a possibly further deepened collaboration between Thailand and Europe in the area of LCA. See also <http://www.thaigdn.net> for the Thai green design network with over 30 partner organisations.

21 April 2008: Reporting of the progress of the European Platform on LCA to the EU Member States and key stakeholder organisations in the 6-monthly IPP Regular Meeting in Brussels.

14 April 2008: Logistic support and participation in an expert workshop at the JRC in Ispra to discuss the ongoing DG Environment project for the development of a carbon measurement toolkit targeted at applicants for the EU Ecolabel, the EU Eco-labeling Board, and the Commission. About 30 international experts in Life Cycle Assessment (LCA) and product environment labeling from government and business attended the workshop and provided useful inputs to the debate. The final version of the toolkit is due by July/August 2008. See also <http://www.msr.se/en/About-us/Projects/Project-carbon-footprint/>.

3 April 2008: Presentation on the European Platform on LCA at a stakeholder workshop in Brussels in the context of the FP6 CALCAS project. The workshop was held to get inputs from stakeholders of different domains (business, policy making, NGOs) in order to identify user needs within the development of new sustainability assessment methods.

6-7 March 2008: Participation as invited speaker to the workshop on “LCA for APEC Member Economies” in Tokyo (Japan), organised by AIST. Presentation of an overview of European LCA databases and of the draft concept for the International Reference Life Cycle Data System (ILCD). See also <http://unit.aist.go.jp/lca-center/asianetwork/6-apecsympo/index.html>.

8 February 2008: Visit of the Head of the Renewable Energy unit of the International Energy Agency (IEA) Paolo Frankl to the Ispra site of the JRC. Discussions about possible collaboration with the JRC, IES and IE Renewable Energy units and with the European Platform on LCA.

22 January 2008: Meeting with representatives of the International EPD System to discuss about possible interaction and collaboration with the European Platform on LCA.

LCT in European Policy and Research – news

Sustainable Consumption and Production Action Plan (SCP) – proposals published

The renewed European Sustainable Development Strategy (EU SDS) identifies Sustainable Consumption and Production (SCP) as one of the key issues to be addressed in the context of the EU's long-standing commitment to meet the challenges of sustainable development.

SCP aims to *"promote sustainable consumption and production by addressing social and economic development within the carrying capacity of ecosystems and decoupling economic growth from environmental degradation"*. In this context, the Commission has proposed a European action plan. This will help to identify and overcome barriers for SCP, to ensure better coherence between the different related policy areas and to raise awareness among citizens and change unsustainable consumption habits. It will build upon ongoing initiatives and instruments, both at EU and international level.

Building blocks for a European SCP policy are amongst others:

- Thematic Strategy on Sustainable Use of Natural Resources
- Thematic Strategy on Waste Prevention and Recycling
- Integrated Product Policy (IPP)
- Eco-Management and Audit Scheme (EMAS)
- Eco-label Scheme
- Environmental technology Action Plan (ETAP)
- Green Public Procurement (GPP)
- Eco-design of Energy Using Product Directive (EuP)
- European Compliance Assistance Programme - Environment & SMEs

After extensive consultation, the Commission proposal of the Action Plan has been published, see http://ec.europa.eu/environment/eussd/escp_en.htm .

A “lead market initiative” for Europe

A European Commission’s Communication on a “lead market initiative for Europe” has been published in December 2007 (ref. COM(2007)860). The Lead Market Initiative for Europe will foster the emergence of so-called lead markets of high economic and societal value.

The Council endorsed the Commission’s proposal to launch a lead market initiative to develop an appropriate approach in a limited number of potential lead markets, recognising the importance of identify emerging markets at an early stage and establish favourable market conditions by concerted action of public authorities.

On the basis of extensive stakeholder consultations, **six markets** have been identified against a set of objective criteria: **eHealth, protective textiles, sustainable construction, recycling, bio-based materials, and renewable energies**. These markets are highly innovative, respond to customers’ needs, have a strong technological and industrial base in Europe and depend more than other markets on the creation of favourable framework conditions through public policy measures.

The life cycle approach is clearly seen as a supporting tool for the action plans in particular for some of these lead markets, e.g. construction materials and bio-based materials.

The deliverables of the European Platform on LCA are reported as reference for a possible standardisation process and labelling (ref. SEC (2007)1729).

See <http://ec.europa.eu/enterprise/leadmarket/leadmarket.htm> .

LCA-related FP7 research project calls

On 18 December 2006, the Council adopted decisions establishing the Seventh Framework Programme of the European Community (EC) for research and technological development for the period 2007 to 2013. A **second call for proposals** of the FP7 was **published on 3rd of September 2008**. In the area of cooperation, specific calls have been published concerning the following activity areas:

- Health
- Food, Agriculture and Fisheries, and Biotechnology
- Information and Communication Technologies
- Nanosciences, Nanotechnologies, Materials and new Production Technologies

- Energy
- Environment (including Climate Change)
- Transport (including Aeronautics)
- Socio-economic sciences and Humanities
- Space
- Security

Three of the **LCA related calls for proposals** are listed below:

- **Improved Life Cycle Impact Assessment methods (LCIA)** for better sustainability assessment of technologies: Funding scheme: Small-Medium scale Collaborative Project(s). Community contribution up to 3.5 Million € (see also the related overview presentation of RTD at http://circa.europa.eu/Public/irc/rtd/eesdwatkeact/library?l=/environmental_technologi_2/presentations_infoday/assessment_verification/info_galatolapdf/_EN_1.0_&a=d)
- **Sustainable Biorefineries:** Funding scheme: Collaborative Project(s). Community contribution up to 55 Million € (See also http://circa.europa.eu/Public/irc/rtd/susbioref/library?l=/biorefinery_info/supporting_documents&vm=detailed&sb=Title)
- **Joint Technology Initiatives on Hydrogen and Fuel cells** Funding scheme: Collaborative Project(s). Community contribution up to 28.1 Million € (See also http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.CooperationDetailsCallPage&call_id=172)

Reference is made in these calls to meet the requirements of the International Reference Life Cycle System (ILCD).

In the **first round of calls in 2007** reference to using the deliverables associated with the European Platform on LCA has been made in some specific calls concerning “Nanosciences, Nanotechnologies, Materials and new Production Technologies” and “Environment (including climate change)” related to recycling technologies development, nanomaterials, and sustainability assessment of technologies.

Further information and the new call texts are available at http://ec.europa.eu/research/fp7/home_en.html .

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