

International Reference Life Cycle Data System (ILCD)

Consistent and quality-assured data, methods and assessments for sustainable consumption and production in the public and private sectors

Sustainable consumption and production is essential. To achieve this, we must consider the environmental implications of the whole supply-chain of our goods and services (products), their use, and waste management, i.e. their entire life cycle. The International Reference Life Cycle Data System (ILCD) provides governments and the private sector with a basis to assure quality, consistency and the availability of life cycle based methods and data.

What is the ILCD?

The International Reference Life Cycle Data System (ILCD) consists primarily of a Handbook and Data Network:

The **ILCD Handbook** is a series of technical guidance documents that provide the basis for consistent and quality-assured life cycle data, methods and assessments.

The **ILCD Data Network** supports the increased availability and access to quality assured life cycle data, worldwide, building on the ILCD Handbook.

Why is the ILCD essential?

Life Cycle Assessment (LCA) facilitates green design, communication of benefits through eco-labels including carbon footprints, as well as the comparison of alternative products. It is therefore essential that the growing number of public and private sector schemes are coherent and quality-assured.

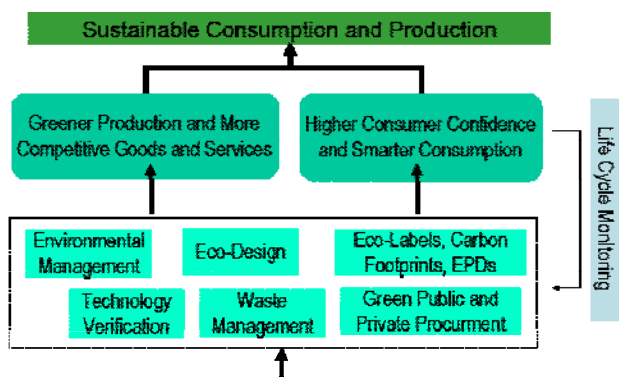


Figure 1 Life Cycle-based instruments towards Sustainable Consumption and Production

To support reliable decision making in public policy and business, the availability, exchange and use of consistent and quality-assured life cycle data, methods and studies, in line with the ISO 14040-44, is crucial (see Figure 1). The main focus is the environmental pillar of sustainability, which includes human health aspects and the availability of natural resources (see Figure 2).

Recognizing mutual national and regional needs as well as the necessity to work together also with the private sector, the International Reference Life Cycle Data System (ILCD) was initiated. It will be the basis for many pro-active authorities and front-running businesses to assure quality and coherence.

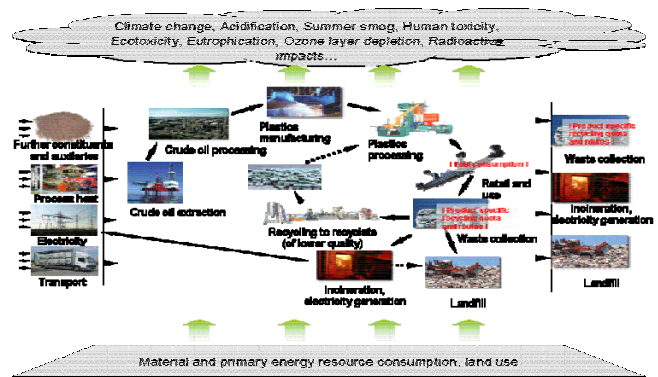


Figure 2 Life Cycle Assessment of products: example of a plastic part

Since 1997, Life Cycle Assessment (LCA) is an internationally standardised method and management tool (ISO 14040 series). LCA helps quantify the emissions, resources consumed and environmental and health impacts that are associated with products (goods and services).

LCAs take into account the product's full life cycle: from the extraction of resources, production, use, and recycling, to the disposal of wastes. Indicators help quantify the contributions to environmental and health impacts such as e.g. climate change, smog, acidification, and cancer effects as well as the resources consumed and their scarcity (see Figure 2).

Taking a life cycle perspective avoids resolving one problem while creating another. It helps to avoid shifting of burdens among the various environmental and health impacts, from one stage of the life cycle to another, from one country to the next, and from the present generation to future ones.

ILCD Handbook

The ILCD Handbook is a series of technical guidance documents, in line with the ISO 14040 and 14044 standards. This Handbook - along with supporting tools and documents - provides the basis for ensuring consistency and quality across LCA data, methods, and assessments for all applications.

Specific guidance documents address:

- Life cycle emission /resource data development,
- Appropriate impact assessment models,
- Critical review of data and assessments, and
- Robust documentation.

ILCD Data Network

The ILCD Data Network provides a registry of Life Cycle Inventory (emissions and resource use) data sets. This is complemented by a web-server database application for free use by all data providers. Where a high level of quality and consistency is required, this is assured through use of data that are compliant with the ILCD Handbook, which includes independent third party review requirements.

The ILCD Data Network is open to all providers, from business, national LCA projects, research projects, consultants, and others. They maintain their own databases and give access to data via their own servers based on their own license conditions.

Development and consultation

The ILCD has been developed through a series of iterative consultations; see Figure 3. This assures best-attainable consensus, reflecting best available practice.



Figure 3: International Reference Life Cycle Data System (ILCD) development and consultation steps

Consultation & Consensus Building

Through formal agreements, the following organisations have been involved in consultation steps:¹

- United Nations Environment Program (UNEP)
- World Business Council for Sustainable Development (WBCSD)
- The European Union's 27 Member States
- European Commission
- Formal Advisory Group of European-level Business Associations (~15 members)
- Formal Advisory Group of LCA Software and Database developers (~15 members)
- Formal Advisory Group Life Cycle Impact Assessment Method developers (~9 members)
- Brazilian Institute for Informatics in Science and Technology (IBICT)
- China National Institute for Standardization (CNIS) and Sichuan University, Chengdu, China
- Japan Environmental Management Association for Industry (JEMAI) and Research Center for Life Cycle Assessment (AIST)
- SIRIM-Berhad, Malaysia
- National Metal and Material Technology Center (MTEC), Focus Center on Life Cycle Assessment and EcoProduct Development, Thailand

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¹ Involvement in consultation steps does not necessarily indicate that the organisation agrees with or endorses the results.