



EUROPEN Guidelines on how to communicate LCA environmental information, Business-to-Business, through the packaging supply chain

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Introduction & background

EUROPEN - the European Organization for Packaging and the Environment - is the only pan-European organisation dedicated exclusively to issues concerning packaging and the environment, with membership open to all partners in the packaging value chain, being the producers of packaging materials, the converters and the brand owners using the packaging materials.

This initiative reflects the willingness of EUROPEN members to work together up and down the packaging supply chain with the aim to better compare, interpret and communicate LCA environmental information, in a meaningful manner.

In specific, this document presents recommendations on how to communicate LCA environmental information which assesses the full life cycle of packaging, including raw material extraction and manufacturing, packaging manufacturing, packing and filling, distribution, use phase and end-of-life. Indeed packaging does not exist without product. Therefore, it is also important to consider the product, especially when packaging has an effect on product quality, waste, damage. Environmental impacts related to waste differentials should be clearly communicated.

In order to meet expectations, it is highly recommended that B2B communication of LCA environmental information is supported by comprehensive explanation(s). To achieve this goal, common and harmonised calculation rules should be established to ensure result comparison and that communication is relevant, appropriately understood and interpreted. Harmonization of calculation rules can be ensured by providing (1) a clear description of packaging and its specifications (2) production steps (3) representative use phase conditions (4) packaging end-of-life options. It is strongly recommended to perform LCA's following the ISO 14040-14044 Standard series in order to ensure consistency and comparability when communicating environmental information.

This integrated approach will enable meaningful comparisons between packaging materials fulfilling the same function within a particular packaging supply chain.

Objectives

The overall goal of communicating environmental information from LCA's, in a B2B environment, is to encourage the demand and supply of those packaging systems that cause less stress on the environment, providing verifiable, accurate and non-misleading information.

The objectives of communicating environmental information are to:

- Provide LCA-based information and additional information on the environmental aspects and impacts of packaging over their life cycle;
- Assist purchasers and users to make informed comparisons between packaging;
- Promote continuous improvement of environmental performance;
- Encourage supply chain partners to work together and identify what should be considered in LCA and communicated.

Guidelines

Guiding Principle:

All relevant environmental aspects of the packaging life cycle should be taken into consideration and become part of the communication. If the identified aspects do not cover all stages of the life cycle then this should be stated and justified, through a correct description of project scope.

Life cycle based studies should follow principles, framework, methodologies and practices established by the ISO Standards 14040-14044. When parties communicating environmental information want to claim “LCA results” the study should comply with ISO 14040/14044 and a third party report will have to be issued to support communication in the packaging supply chain. In case of a comparative assertion a critical review is required in addition.

To ensure that environmental information from a LCA is communicated in a meaningful way, it is suggested to follow these three Guidelines:

1. Encourage involvement, dialogue, sharing of information between supply chain partners, and ensure use of a common language (cf Global Protocol on Packaging Sustainability - GPPS) ¹ around packaging. This will help partners to define the packaging system & what is to be included in the envisaged LCA
2. Ensure comparability between environmental information by referencing explicitly the methodologies behind the indicators or parameters reported. For instance, protocols such as the GPPS provide indicators and metrics for packaging and sustainability that should be considered when communicating on products.
3. Communicate environmental information in a transparent way

1. Involve interested partners to define the packaging system & what is to be included in LCA

A recommended way to avoid misunderstanding or misinterpretation of communication based on LCA, is aiming to include an open, voluntary, participatory consultation with interested partners. Reasonable efforts should be made to achieve a consensus throughout the process. Commercial confidentiality and competition law should be respected throughout this process.

The interested partners may include, but are not limited to, material suppliers, manufacturers, trade associations, purchasers, B2B users. The partner who wishes to communicate LCA environmental information shall encourage stakeholder consultations, and ensure credibility and transparency during the entire process of defining product, process, supply chain characteristics, LCI and LCA boundaries.

If competitive packaging systems are being considered and compared for the same application purpose, consultation should also take place. In most cases it is not realistic to involve direct competition in comparative studies. Hence, comparisons with competitive products can be made by involving industrial sector panels or by having access to reliable well documented information.

¹ In September 2011, the Consumer Goods Forum launched the Global Protocol on Packaging and Sustainability (GPPS) to enable the packaging supply chain to better assess the relative sustainability of packaging by creating one common language. The Protocol is partly based on earlier packaging sustainability guidelines developed by the EUROPEN with ECR Europe. More info on: <http://globalpackaging.mycgforum.com/>

The partner who wishes to communicate should encourage harmonization of specifications and process a definition for a particular packaging throughout the supply chain. Involved partners should aim to agree on the goal and scope of the LCA-based packaging information and which additional environmental information (e.g. water usage and energy consumption) should be provided. Stages included in Life Cycle Assessment and considered environmental impact parameters should also be communicated clearly.

Although the scope of this guidance document is not extended to business-to-Consumer (B2C), it is suggested to identify consumer needs and clearly communicate them when making B2B environmental claims.

2. Clarity on comparability

Communication is intended to assist a purchaser of packaging to compare the environmental performance of a particular packaging on a life cycle basis. Therefore comparability is critical to fit the purpose. The information provided for this comparison should be transparent and inclusive in order to allow the purchaser to understand the limitations of comparability. But full comparability is in most cases impossible to reach, since two packaging materials will always have different attributes/performances at different stages of the supply chain. Consequently, it is important to provide information about possible areas of incompatibility, i.e. products which do not deliver the same performance, life cycle stages which have been omitted and might significantly change results and consequently the information communicated.

The below checklist will help the communicating partner to ensure that LCA environmental information for different packaging materials is actually comparable and by inference will also identify areas of incompatibility:

- Identical packaging deliverables (function, technical performance and use), with primary focus on essential attributes; Too many attributes limit the possibility to compare different products.
- Functional unit, system boundary and criteria for inclusion of inputs and outputs should be identical for all products being compared.
- Quantitative and robust data from reliable databases or source.
- For the inventory analysis, usage of equivalent data collection method, identical calculation procedures, equivalent material and energy flows are recommended.
- Identical impact category selection and calculation rules, if applied.
- Identical predetermined parameters for reporting of LCA data (inventory data categories and impact category indicators).
- Equivalent materials and substances to be declared (e.g. information about product content).
- Communication based on an LCA which does not cover all life cycle stages should be avoided. If this is not possible, ensure that omissions are acceptable and made transparent, in particular for comparisons.
- If some stages of the life cycle are omitted, related environmental impacts should not have a significant effect the overall outcome of LCA (below 5% of total impact). This should be clearly communicated.
- Equivalent period of validity
- Equivalent uncertainty around provided data. If some data are more uncertain, sensitivity analysis is recommended and results should be communicated.

Although clarity on comparability might be ensured for a specific LCA, the conclusions may differ from previous ones, conducted on packaging materials for similar applications. The communicating party shall try and refer to these antecedents and state compatibility criteria differences between studies.

3. Communicate LCA results in a transparent way

The partner should ensure that the communication can be understood and correctly interpreted by any person interested in the information. To ensure transparency and avoid misunderstanding of environmental information from a LCA, it is recommended to provide the following information:

- General description of company/party that communicates
- Reasons why it wants to communicate
- General and environmental mission of the company
- Guiding principles of environmental policy of the company
- Description of product, its components, bill of materials
- List of environmental impact indicators (considered impact categories, energy content, resource consumption, waste, others, ...)
- Technical, distribution and consumer requirements of the product
- Description of production process & raw materials involved, including content declaration covering materials and substances to be declared (e.g. information about product content, including specification of materials and substances that can adversely affect human health and the environment, in all stages of the life cycle)
- Clear detailed description of functional unit, specifications & relevant test methods
- Clear indication whether the declaration applies to the product, or only to a part of a product (e.g. packaging), or to an element of a supply chain, or service
- System boundaries,
- Scenario description: Origin of materials, Electrical grid, transportation scheme, end-of-life
- Time scale (when the primary data was collected), period of validity, date of publication
- Life cycle boundaries (what is not included in the LCA), data from LCA, LCI, information modules on production process & flow.
- Boundaries with environment and other systems
- If relevant, identify/declare incompatibility areas in LCA's being considered
- Territorial confinement
- Allocation rules
- Origin & quality of data (determine primary data)
- Selection of environmental impact indicators and reason for selection. The most important environmental impacts to consider in communication are:
 - Consumption of resources, including energy, water and renewable resources, and emissions to air, water and soil;
 - Indicator results of life cycle impact assessment (LCIA). Ensure that the following are covered: Climate change, depletion of the stratospheric ozone layer, acidification of land and water sources, eutrophication, formation of photochemical oxidants, depletion of fossil energy resources, and depletion of mineral resources, toxicity (human & ecological).
- Other data such as quantities and types of waste and clear description of end-of-life scenarios
- Additional environmental information
- Provide bibliography that supports the above additional environmental information

This should be considered a summary of requirements to communicate environmental information from a LCA effectively and in a transparent manner. For more details please refer to third party report requirements in ISO14044 and the requirements of ISO14025 for different forms of B2B communications.

There are no obligations to declare proprietary information related to materials, substances and processes covered by intellectual property rights or similar legal restrictions.

Useful reference documents/links (non-exhaustive list)

1. ISO Standards:
 - ISO 9001: Quality management systems
 - ISO 14001: Environmental management systems
 - ISO 14040, LCA: Principles and Procedures
 - ISO 14044, LCA: Requirements and Guidelines
 - ISO 14025: Type III Environmental Declarations
2. Global Protocol on Packaging Sustainability (GPPS): <http://globalpackaging.mycgforum.com/>
3. European Food & Drink Sustainable Consumption and Production (SCP) Round Table, WG2 report on 'Communicating environmental performance along the food chain' on www.food-scp.eu
4. Environmental Product Declaration and Product Category Rules:
<http://www.environdec.com/>
5. Unfair Commercial Practices Directive (UCPD)