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Förpackningar – Rapport gällande kriterier och metoder för livscykelanalys

Packaging – Report on criteria and methodologies for life cycle analysis of packaging

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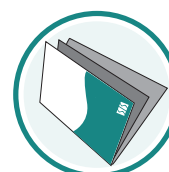
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This document supersedes SIS-CEN/CR 13910:2000, edition 1.

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TECHNICAL REPORT

CEN/TR 13910

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

August 2010

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Supersedes CR 13910:2000

English Version

Packaging - Report on criteria and methodologies for life cycle analysis of packaging

Emballage - Rapport sur les critères et méthodologies pour l'analyse du cycle de vie des emballages

Verpackung - Bericht über die Kriterien und Methodik von Ökobilanzen für Verpackungen

This Technical Report was approved by CEN on 19 June 2010. It has been drawn up by the Technical Committee CEN/TC 261.

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Foreword

This document (CEN/TR 13910:2010) has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

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This Technical Report defines and describes how to apply Life Cycle Assessment (LCA) to packaging and distribution systems. The expression "Life Cycle Analysis", applied in the EU Packaging Directive, is in this report considered as identical to the concept of "Life Cycle Assessment" in the EN ISO 14040 standards.

This Technical Report has been prepared by the CEN Working Group, CEN/TC 261/SC 4/WG 1/TG 1, which has been considering the aspects of life cycle assessment specific to packaging, in order to fulfil the "Mandate 200 rev.3 to CEN for Standardisation and a study related to packaging and packaging waste", requested by the EU Commission.

Introduction

Packaging is an integral part of modern society providing means for protection, presentation, information and distribution of products to industry, trade and consumers.

In 1994 the European Parliament and the European Council adopted a Directive on Packaging and Packaging Waste, covering all types of packaging placed on the market in the European Community and all packaging waste, whether used or released at the industrial, commercial, office, shop, service, household level or at any other level, regardless of the material used.

The Directive aims to harmonise national measures concerning the management of packaging and packaging waste in order to, on the one hand, prevent any impact thereof on the environment of all Member States, as well as of third countries, or to reduce such impact, thus providing a high level of environmental protection, and, on the other hand, to ensure the functioning of the internal market and to avoid obstacles to trade, and the distortion and restriction of competition within the European Community. The two objectives are on an equal footing.

Article 10 of the Directive states that the European Commission shall promote the preparation of European standards relating to the essential requirements referred to in Annex II of the Directive and, in particular, the preparation of European Standards relating to, among others:

- criteria and methodologies for life-cycle analysis of packaging.

The present Technical Report covers the work of CEN to meet that requirement.

1 Scope

This Technical Report establishes a set of best practice guidelines for undertaking those aspects of life cycle assessment specific to packaging and distribution systems.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 14040:2006, *Environmental management — Life cycle assessment — Principles and framework (ISO 14040:2006)*

EN ISO 14044:2006, *Environmental management — Life cycle assessment — Requirements and guidelines (ISO 14044:2006)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

This section defines the LCA and packaging specific terms used in this report. The LCA terms are based on definitions given in EN ISO 14040:2006, and the packaging terms are based on definitions in the European Parliament and the Council Directive on Packaging and Packaging Waste (94/62/EC) and terms and definitions referred to in EN 13193 unless stated otherwise.

3.1

life cycle assessment

LCA

compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle

3.2

life cycle inventory analysis

LCI

phase of life cycle assessment involving the compilation and quantification of inputs and outputs, for a product throughout its life cycle

3.3

life cycle impact assessment

LCIA

phase of life cycle assessment aimed at understanding and evaluating the magnitude and significance of the potential environmental impacts for a product system throughout the life cycle of the product

3.4

life cycle interpretation

phase of life cycle assessment in which the findings of either the inventory analysis or the impact assessment, or both, are evaluated in relation to the defined goal and scope in order to reach conclusions and recommendations

3.5

packaging

all items made of any material of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer

NOTE In this report the goods are referred to as "packaged product" or just "product", in order to distinguish it from the packaging.

3.6

sales packaging

primary packaging

packaging conceived so as to constitute a sales unit to the final user or consumer at the point of purchase

3.7

grouped packaging

secondary packaging

packaging conceived so as to constitute at the point of purchase a grouping of a certain number of sales units whether the latter is sold as such to the final user or consumer or whether it serves only as a means to replenish the shelves at the point of sale

NOTE It can be removed from the product without affecting its characteristics.

3.8

transport packaging

tertiary packaging

packaging conceived so as to facilitate handling and transport of a number of sales units or grouped packaging in order to prevent physical handling and transport damage

NOTE Transport packaging does not include road, rail, ship and air containers.

3.9

used packaging

packaging or packaging material remaining after the removal of the product it contained

3.10

distribution system

necessary physical arrangements (packing, storage, transport and merchandising) to bring a product from its manufacturing stage, to its final stage of consumption/use

3.11

collection system

necessary physical arrangements (sorting, collecting, transport and storage) to bring used packaging from the point of consumption to the point of reuse, recovery or final disposal

3.12

functional unit of packaging

quantified performance of a product system of packaging, for use as a reference unit in an LCA study

3.13

carbon footprint

overall amount, expressed in terms of CO₂ equivalents, of carbon dioxide (CO₂) and other greenhouse gas (GHG) emissions associated with a product, using LCA methodology

NOTE Carbon footprint essentially coincides with the impact category that has generally been referred to under the name "global warming potential" (GWP) in most LCAs to date. Both terms are meant as a measure of the potential contribution to the global phenomenon of climate change, which may also include regional side-effects such as storms and local cooling.

3.14

critical review

process intended to ensure consistency between a life cycle assessment and the principles and requirements of the standards on life cycle assessment

3.15

interested party

individual or group concerned with or affected by the environmental performance of a product system, or by the results of the life cycle assessment

3.16

allocation

partitioning the input or output flows of a process or a product system between the product system under study and one or more other product systems

4 Criteria and methodology for life cycle assessment of packaging

4.1 General

According to EN ISO 14040, an LCA shall include the following phases: definition of goal and scope, inventory analysis, impact assessment and interpretation of results, as illustrated in Figure 1, below.

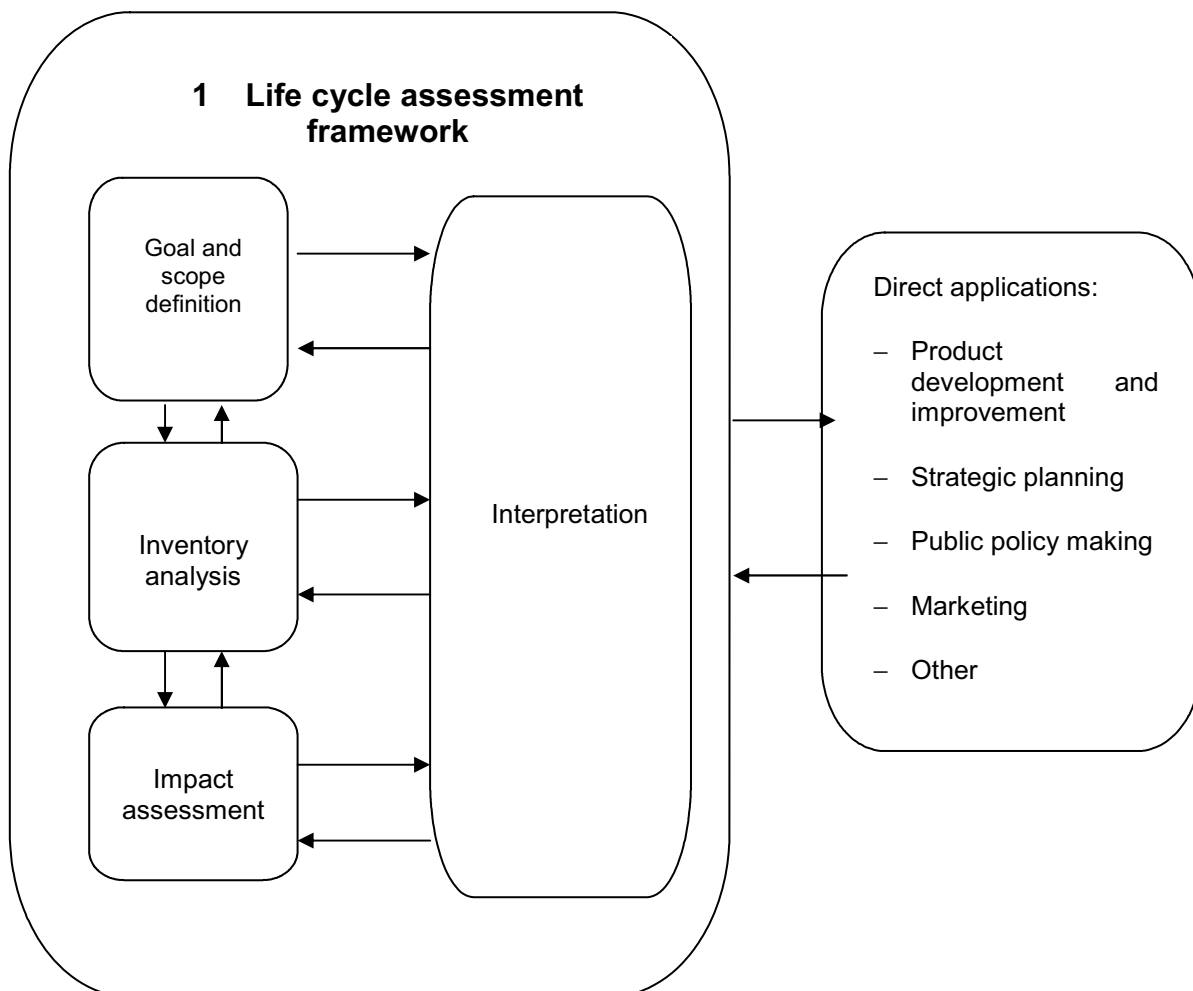


Figure 1 — Phases of an LCA