

REPORT

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RAPPORT

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Packaging - Recommendations for conducting
life-cycle inventory analysis of packaging systems

Emballage - Recommandations
relatives à l'inventaire de l'analyse
du cycle de vie des systèmes
d'emballage

Verpackung - Empfehlungen für die
Durchführung von
Lebensweg-Sachbilanz-Erstellungen
von Verpackungs-Systemen

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Foreword

This document is a CEN Report for conducting life-cycle inventory analysis of packaging systems.

The CEN Working group, CEN/TC 261/SC 4/WG 1/TG 2, has been dealing with the aspects of life-cycle inventory analysis specific to packaging. This CEN report is the result of a series of meetings, discussions and written proposals of this Working Group.

The ISO/TC 207 meeting of November 1993 was one of the first meetings to initiate an ISO standard on life cycle assessment. The scope of the ISO work is to standardise in the field of life cycle assessment as a tool for environmental management of product and service systems.

The Society of Environmental Toxicology and Chemistry (SETAC) is a professional society that was founded in 1979 to provide a forum for individuals, scientists and institutions (authorities, industry and public interest groups) to help research and education in environmental problem solving. SETAC has held several workshops on life cycle assessment, and experts from all over the world have participated in these workshops.

SETAC has published a guideline document on life-cycle assessment, "Guidelines for Life-Cycle Assessment : A 'Code of Practice' " (Consoli, F et al., 1993), based on the considered opinion of 50 experts from 13 countries in a 4-day workshop held in Portugal in April 1993 (In the following text, the SETAC "Guidelines for Life-Cycle Assessment : A 'Code of Practice' " (Consoli, F et al., 1993) will be referred to as "The SETAC Code of Practice" to make it simple).

The members of TG2 have decided to adopt the SETAC 'Code of Practice' (see Annex A) as the base guideline document for this CEN report which focused on the clarification, where necessary, of aspects of life-cycle inventory analysis specific to packaging systems that were judged not to be adequately addressed by the SETAC Code of Practice. It should be emphasised that the purpose of this Code was never to serve as a quasi-authoritative scientific standard intended to supersede any international standard but more to represent the views of a body of experts brought together to discuss and propose 'best practice' guidelines for those working in the field. SETAC is a private organisation with no power in respect of writing standards. It is expected that the ISO work will be based on the principles in the SETAC 'Code of Practice'.

CEN/TC 261/SC 4/WG 1/TG 2 gratefully acknowledges the acceptance by SETAC of using Consoli F. et al. (1993) as the base guideline document and definitions on life-cycle specific terms from Fava, J.A. et al., Editors, (1991).

It has been decided to give this document the status of a CEN report. This report should be evaluated frequently according to the development in SETAC, ISO and the European Commission.

0 Introduction

0.1 Background

Packaging is one of the points of focus in the debate about solid waste arisings. One of the tools which has been used to indicate the environmental burdens of packaging systems is life-cycle inventory analysis (LCI). This has led to an increasing demand from the packaging industry, trade bodies and users for an authoritative set of guidelines for conducting life-cycle inventory analysis of packaging systems.

0.2 Restrictions

This CEN report deals with the goal definition, scope and life-cycle inventory analysis as defined by SETAC (see 1 and 2 of Figure A.1). Evaluation of the life-cycle inventory, i.e. life-cycle impact assessment, is not considered.

NOTE : Bibliographical references in annex C.

1 Scope

The scope of this CEN report is to establish a set of guidelines of best practice for undertaking those aspects of life-cycle inventory analysis specific to packaging systems.

In the field of life-cycle assessment (LCA) development and research are ongoing in various areas. The methodology of life-cycle assessment is under continuous progression. Hence, this CEN report, which contains basic advice on the methodology of life-cycle inventory analysis, only serves as a guide to conducting inventory analysis of the life-cycle of packaging systems.

2 Definitions

For the purposes of this CEN report, the following definitions apply :

This section defines the terms used in this report. It should be noted that the life-cycle inventory analysis specific terms are based on definitions given in the SETAC document, Fava et al., Editors (1991), while the packaging specific terms are based on definitions by CEN/TC 261/SC 4/WG 1 (Draft standard of May 1994) Packaging and the environment Terminology and in the EU Council Directive on Packaging and Packaging Waste (94/62/EC).

NOTE : The definitions based on the European draft standard can be changed when this document is finalised.