



BSI Standards Publication

**Environmental management — Life cycle
assessment — Principles, requirements
and guidelines for normalization,
weighting and interpretation**

National foreword

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Environmental management — Life cycle assessment — Principles, requirements and guidelines for normalization, weighting and interpretation

*Management Environnemental — Analyse du cycle de vie —
Principes, exigences et lignes directrices pour la normalisation, la
pondération et l'interprétation*



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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principles	2
5 General requirements and guidance	2
6 Normalization	3
6.1 General	3
6.2 Limitations	4
7 Weighting	5
7.1 General	5
7.2 Different approaches to weighting	6
7.2.1 General	6
7.2.2 Distance-to-target weighting	6
7.2.3 Panel-based weighting	6
7.2.4 Monetary valuation	7
7.3 Weighting at different points along the environmental mechanism	7
7.4 Limitations in weighting	7
7.4.1 General	7
7.4.2 Uncertainty in weighting	8
7.4.3 Potential shift of importance of impact between life cycle stages and environmental impacts	8
7.4.4 Distance-to-target weighting	8
7.4.5 Panel-based weighting	8
7.4.6 Monetary valuation	8
7.4.7 Weighting factors change over time	8
8 Documentation and reporting requirements for normalization and weighting	9
9 Interpretation of life cycle assessment results	9
9.1 General	9
9.2 Identification of significant issues	10
9.3 Completeness checks	10
9.4 Consistency checks	10
9.5 Sensitivity checks	11
9.6 Uncertainty	11
9.7 Limitations	11
9.8 Conclusions and recommendations	11
Bibliography	13

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The United Nations Sustainable Development Goals (SDGs)^[3] identify the need for transition toward sustainable patterns of consumption and production. Life cycle assessment (LCA) can support this goal with a quantitative approach to evaluating the environmental impacts of products from raw material acquisition to end-of-life treatment (disposal, recycling, etc). It can help with the identification of improvement potentials of measures to achieving SDGs and can compare alternative approaches on product, company and country levels.

NOTE The term “environmental impact” is always used in the sense of potential environmental impact.

LCA studies can help to identify ways of improving resource and energy efficiency, avoiding releases to the environment, and developing a circular economy. LCA can also help identify and evaluate trade-offs between different environmental aspects and life cycle stages.

[ISO 14040](#) and [ISO 14044](#) are the generic environmental management standards for LCA. These standards provide principles, requirements and guidelines for the four phases of an LCA: goal and scope definition, life cycle inventory analysis, impact assessment and interpretation.

Normalization and weighting are optional elements of life cycle impact assessment (LCIA). These elements can support the interpretation of the assessed life cycle impact category indicator results, also known as the “LCIA profile”.

Presently, LCA results are interpreted through a variety of different methods and approaches. A consistent approach to the interpretation of LCA results can be helpful, especially considering the growth in LCA applications, such as:

- LCA-based regulations, e.g. greenhouse gas reporting;
- national programmes for LCA-based environmental statements, e.g. environmental labelling;
- use of LCA to support public and private sector procurement, e.g. environmental product declarations (EPDs), footprint communication.

Through providing additional principles, requirements and guidelines applicable to normalization, weighting and interpretation of LCA results, this document:

- improves the credibility of LCA results;
- increases the use of LCA results in decision-making related to environmental management;
- increases the number of LCA studies and applications;
- improves the interpretation phase of LCA.

In this way, this document aims to increase the contribution of LCA to advancing sustainable consumption and production patterns.

In this document, the following verbal forms are used:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability.