
**Environmental management — Life cycle
assessment — Illustrative examples on
how to apply ISO 14044 to impact
assessment situations**

*Management environnemental — Analyse du cycle de vie — Exemples
illustrant l'application de l'ISO 14044 à des situations d'évaluation de
l'impact du cycle de vie*



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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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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ISO/TR 14047 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment*.

This second edition cancels and replaces the first edition (ISO/TR 14047:2003), which has been technically revised.

Introduction

The heightened awareness of the importance of environmental protection and the possible environmental significance of a product system¹⁾, have increased the interest in development of methods to better understand this significance. One of the techniques being developed for this purpose is Life Cycle Assessment (LCA).

The life cycle impact assessment (LCIA) is the third phase of life cycle assessment and its purpose is to assess a product system's life cycle inventory analysis (LCI) results to better understand their environmental significance. LCIA models selected environmental issues called impact categories. Through the use of category indicators which help condense and explain the LCI results, LCIA provides a picture of the aggregate emissions or of resource use to reflect their potential environment impacts.

This Technical Report provides examples to support ISO 14044:2006. It uses several examples on key areas of ISO 14044 in order to enhance the understanding of the requirements of the standard.

1) In this Technical Report, the term "product system" also includes service systems.

Environmental management — Life cycle assessment — Illustrative examples on how to apply ISO 14044 to impact assessment situations

1 Scope

The purpose of this Technical Report is to provide examples to illustrate current practice of life cycle impact assessment according to ISO 14044:2006. These examples are only a sample of all possible examples that could satisfy the provisions of ISO 14044. They offer "a way" or "ways" rather than the "unique way" of applying ISO 14044. They reflect the key elements of the life cycle impact assessment (LCIA) phase of the LCA. The examples presented in this Technical Report are not exclusive and other examples exist to illustrate the methodological issues described.

2 Organization of examples in this Technical Report

2.1 Mandatory and optional elements

The general framework of the LCIA phase is composed of several mandatory elements that convert Life Cycle Inventory (LCI) results to indicator results. In addition, there are optional elements for normalization, grouping or weighting of the indicator results and data quality analysis techniques for assisting the interpretation of the results.

2.2 Scope of examples

The examples provided within this Technical Report illustrate and support the methodology specified in ISO 14044:2006, 4.4. The coverage is indicated in Table 1.