SLOVENSKI PREDSTANDARD

oSIST prEN ISO 14040:2005

maj 2005

Ravnanje z okoljem - Ocenjevanje življenjskega cikla - Načela in okviri (ISO/DIS 14040:2005)

Environmental management - Life cycle assessment - Principles and framework (ISO/DIS 14040:2005)

ICS 13.020.10; 13.020.60

Referenčna številka
oSIST prEN ISO 14040:2005(en)

EUROPEAN STANDARD

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Will supersede EN ISO 14040:1997, EN ISO 14041:1998, EN ISO 14042:2000, EN ISO 14043:2000

English version

Environmental management - Life cycle assessment - Principles and framework (ISO/DIS 14040:2005)

Management environnemental - Analyse du cycle de vie - Principes et cadre (ISO/DIS 14040:2005)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/SS S26.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. prEN ISO 14040:2005: E

Foreword

This document (prEN ISO 14040:2005) has been prepared by Technical Committee ISO/TC 207 "Environmental management" in collaboration with CMC.

This document is currently submitted to the parallel Enquiry.

This document will supersede EN ISO 14040:1997, EN ISO 14041:1998, EN ISO 14042:2000, EN ISO 14043:2000.

Endorsement notice

The text of ISO 14040:2005 has been approved by CEN as prEN ISO 14040:2005 without any modifications.

DRAFT INTERNATIONAL STANDARD ISO/DIS 14040

ISO/TC **207**/SC **5** Secretariat: **AFNOR**

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Environmental management — Life cycle assessment — Principles and framework

Management environnemental — Analyse du cycle de vie — Principes et cadre

[Revision of first edition (ISO 14040:1997)]

ICS 13.020.10; 13.020.60

ISO/CEN PARALLEL ENQUIRY

The CEN Secretary-General has advised the ISO Secretary-General that this ISO/DIS covers a subject of interest to European standardization. **In accordance with the ISO-lead mode of collaboration as defined in the Vienna Agreement, consultation on this ISO/DIS has the same effect for CEN members as would a CEN enquiry on a draft European Standard.** Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month FDIS vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14040 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 14040:1997, ISO 14041:1999, ISO 14042:2000, ISO 14043:2000), which have been technically revised.

Introduction

The increased awareness of the importance of environmental protection, and the possible impacts associated with products[1)], both manufactured and consumed, has increased the interest in the development of methods to better understand and address these impacts. One of the techniques being developed for this purpose is Life Cycle Assessment (LCA).

LCA can assist in

— identifying opportunities to improve the environmental performance of products at various points in their life cycle;

— informing decision-makers in industry, governmental or non-governmental organizations (e.g. strategic planning, priority setting, product or process design or redesign);

— selection of relevant indicators of environmental performance, including measurement techniques; and

— marketing (e.g. an environmental claim, ecolabelling scheme or environmental product declaration).

For practitioners of LCA, ISO 14044 details the requirements for the conduct of LCA studies and LCI studies.

LCA address the environmental aspects and potential environmental impacts[2)] (e.g. resource use and environmental consequences of releases) throughout a product's life cycle from raw material acquisition through production, use, end-of-life treatment and disposal (i.e. cradle-to-grave).

There are four phases in an LCA study: The goal and scope definition phase, the inventory analysis phase, the impact assessment phase and the interpretation phase.

The scope, system boundary and level of detail of an LCA depend on the subject and intended use of the study. The depth and breadth of LCA may differ considerably depending on the goal of a particular LCA.

The life cycle inventory analysis phase (LCI phase) is the second phase of LCA. It is an inventory of input/output data with respect to the system being studied. It involves the collection of the data necessary to meet the goals of the defined study

The life cycle impact assessment phase (LCIA) is the third phase of the LCA. The purpose of LCIA is to provide additional information to help assess a product system's LCI results to better understand their environmental significance.

Life cycle interpretation is the final phase of the LCA procedure, in which the results of an LCI and/or ~~of~~ an LCIA, or both, are summarized and discussed as a basis for conclusions, recommendations and decision-making in accordance with the goal and scope definition.

There are cases where the goal and scope definition of an LCA may be satisfied by performing only an inventory analysis and an interpretation. This is usually referred to as an LCI study.

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1) In this International Standard, the term "product" used alone not only includes product systems but also service systems.

2) The "potential environmental impacts" are relative expressions, as they are related to the functional unit of a product system.

This standard covers two types of studies: Life Cycle Assessment studies (LCA studies) and Life Cycle Inventory studies (LCI studies). LCI studies are similar to LCA studies but lack the LCIA phase. LCI studies should not be confused with the LCI phase.

Generally, the information developed in an LCA or LCI study can be used as part of a much more comprehensive decision process. Comparing the results of different LCA or LCI studies is only possible if the assumptions and context of each study are equivalent. These assumptions are explicitly stated for reasons of transparency.

LCA is one of several environmental management techniques (e.g. risk assessment, environmental performance evaluation, environmental auditing, and environmental impact assessment) and may not be the most appropriate technique to use in all situations. LCA typically does not address the economic or social aspects of a product, but the life cycle approach and methodologies described in this International Standard can be applied on these other aspects.