TECHNICAL REPORT

ISO/TR 14049

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Environmental management — Life cycle assessment — Examples of application of ISO 14041 to goal and scope definition and inventory analysis

Management environnemental — Analyse du cycle de vie — Exemples d'application de l'ISO 14041 traitant de la définition de l'objectif et du champ d'étude et analyse de l'inventaire

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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 3.

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is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

ISO/TR 14049 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment.*

Introduction

The heightened awareness of the importance of environmental protection, and the possible impacts associated with products manufactured and consumed, has increased the interest in the development of methods to better comprehend and reduce these impacts. One of the techniques being developed for this purpose is Life Cycle Assessment (LCA). To facilitate a harmonized approach, a family of standards on life cycle assessment (LCA), including ISO 14040, ISO 14041, ISO 14042 and ISO 14043 and this document are being developed by ISO. These International Standards describe principles of conducting and reporting LCA studies with certain minimal requirements.

This Technical Report provides supplemental information to the International Standard, ISO 14041, *Environmental management - Life cycle assessment - Goal and scope definition and life cycle inventory analysis*, based on several examples on key areas of the Standard in order to enhance the understanding of the requirements of the standard.

Methodological requirements for conducting LCA studies are provided in the following International Standards concerning the various phases of LCA:

— ISO 14040: *Environmental management - Life cycle assessment - Principles and framework.*

— ISO 14041: *Environmental management - Life cycle assessment - Goal and scope definition and inventory analysis.*

— ISO 14042: *Environmental management - Life cycle assessment - Life cycle impact assessment*.

— ISO 14043: *Environmental management - Life cycle assessment - Life cycle interpretation*.

Environmental management — Life cycle assessment — Examples of application of ISO 14041 to goal and scope definition and inventory analysis

1 Scope

This Technical Report provides examples about practices in carrying out an Life Cycle Inventory analysis (LCI) as a means of satisfying certain provisions of ISO 14041. These examples are only a sample of the possible cases satisfying the provisions of the standard. They should be read as offering “a way” or “ways” rather than the “unique way” of applying the standard. Also they reflect only certain portions of an LCI study.

It should be noted that the examples presented in this Technical Report are not exclusive and that many other examples exist to illustrate the methodological issues described. The examples are only portions of a complete LCI study.

2 Technical Introduction

The examples focus on six key areas of ISO 14041 as indicated in Table 1.

In some key areas there is more than one example. The reason is that in many cases more than one practice exists. The decision about the application of one or the other practices is goal dependent and can vary e.g. from the product system under investigation or in the stages over the life cycle. The examples are described in the context of the corresponding provisions of the standard and with the specific use.

In the description of the different cases, whenever possible, the following structure has been adopted :

– Context of the standard

– Overview

– Description of the examples