INTERNATIONAL STANDARD

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Sustainability in building construction — Environmental declaration of building products

Bâtiments et ouvrages construits — Développement durable dans la construction — Déclaration environnementale des produits de construction

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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 21930 was prepared by Technical Committee ISO/TC 59, *Building construction*, Subcommittee SC 17, *Sustainability in building construction*.

Introduction

Designers of buildings, manufacturers of building products, users of buildings, owners of buildings and others active in the building and construction sector are increasingly demanding information that enables them to make decisions to address environmental impacts of buildings and other construction works. These demands are currently being addressed only through various national initiatives applying a variety of approaches.

It is essential that there be uniformity in the means of expressing environmental product declarations. This includes having a consistent way of arriving at the declaration that is based on basic life-cycle inventory data and additional information not based on life-cycle assessment (LCA). The user expects non-biased information, which is expected be consistent with the best current practice and understanding over the lifetime of the standard.

According to the set of four International Standards dealing with environmental labelling, (ISO 14020, ISO 14021, ISO 14024 and ISO 14025), environmental labels and declarations are divided into three principal types:

— General principles: ISO 14020;

— Self-declared environmental claims, type II environmental labelling (ISO 14021);

— Principles and procedures of environmental labels and declarations, types I and III environmental labelling (ISO 14024 and ISO 14025).

This International Standard is one in a suite of International Standards dealing with sustainability in building construction that includes the following:

a) ISO 15392 Sustainability in building construction — General principles;

b) ISO 21932 Buildings and constructed assets — Sustainability in building construction — Terminology;

c) ISO/TS 21929-1 Sustainability in building construction — Sustainability indicators — Part 1: Framework for development of indicators for buildings;

d) ISO 21930 Sustainability in building construction — Environmental declaration of building products;

e) ISO/TS 21931-1 Sustainability in building construction — Framework for methods of assessment for environmental performance of construction works — Part 1: Buildings.

Unlike the International Standards listed in a), b), c) and e), ISO 21930 (this International Standard) deals only with environmental impacts and aspects and excludes consideration of the social and economic aspects of sustainability. The relationship among the International Standards is elaborated in Figure 1.

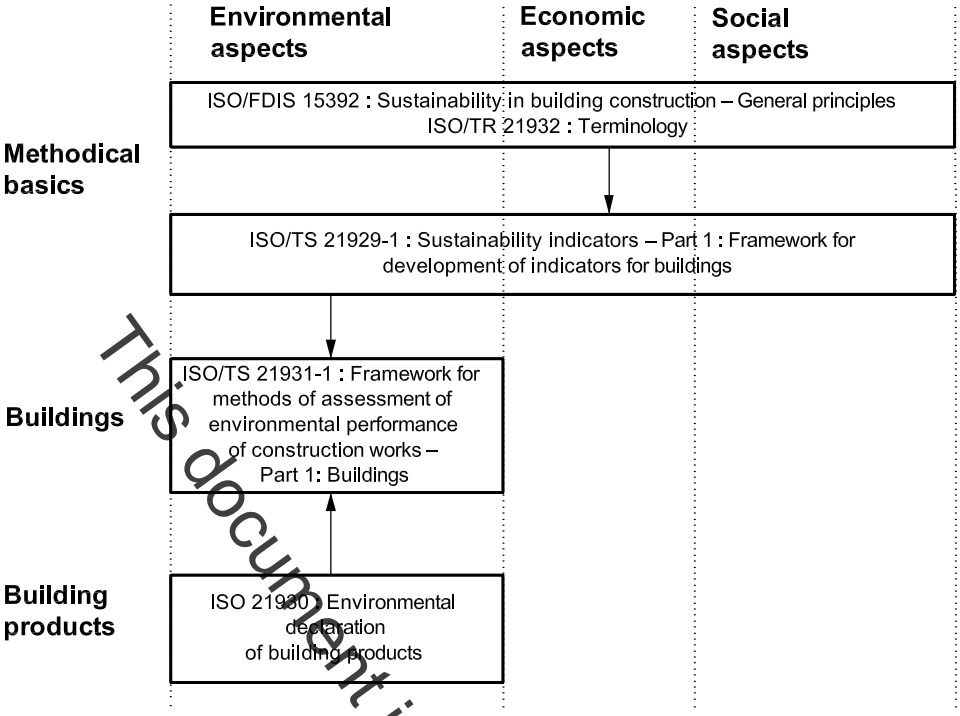

Figure 1 — Suite of related International Standards for sustainability in building construction and construction works

The purpose of this International Standard is to describe the principles and framework for environmental declaration of building products, including consideration of the reference service life of the building products, seen over a building's life cycle. This International Standard is expected to form the basis for type III environmental declaration programmes leading to type III environmental declarations of building products as described in ISO 14025.

Sustainability in building construction — Environmental declaration of building products

1 Scope

This International Standard provides the principles and requirements for type III environmental declarations (EPD) of building products.

This International Standard contains specifications and requirements for the EPD of building products. Where this International Standard contains more specific requirements, it complements ISO 14025 for the EPD of building products.

This International Standard provides a framework for and the basic requirements for product category rules (PCR) as defined in ISO 14025 for type III environmental declarations of building products. Type III environmental declarations for building products, as described in this International Standard, are primarily intended for use in business-to-business communication, but their use in business-to-consumer communication under certain conditions is not precluded.

This International Standard does not define requirements for developing type III environmental declaration programmes. Requirements for type III environmental declaration programmes are found in ISO 14025.

The working environment is not included in this International Standard because it is normally a subject for national legislation.

NOTE In this International Standard, EPD is an abbreviation used to represent both the single and plural full form designation of “environmental product declaration”, which is intended to be synonymous with the designation “type III environmental declaration”. In the practice of developing EPD, programmes or their declarations are referred to by various names such as eco-leaf, eco-profile, environmental declaration of product, environmental product declaration (EPD), and environmental profile.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6707-1, *Building and civil engineering — Vocabulary — Part 1: General terms*

ISO 14001, *Environmental management systems — Requirements with guidance for use*

ISO 14020:2000, *Environmental labels and declarations — General principles*

ISO 14025:2006, *Environmental labels and declarations — Type III environmental declarations — Principles and procedures*

ISO 14040, *Environmental management — Life cycle assessment — Principles and framework*

ISO 14044:2006, *Environmental management — Life cycle assessment — Requirements and guidelines*

ISO 14050, *Environmental management — Vocabulary*

ISO 15392, *Sustainability in building construction — General principles*

ISO 15686-1, *Buildings and constructed assets — Service life planning — Part 1: General principles*

ISO 15686-8, *Buildings and constructed assets — Service life planning — Part 8: Reference service life and service-life estimation*

ISO/TS 21931-1, *Sustainability in building construction — Framework for methods of assessment for environmental performance of construction works — Part 1: Buildings*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6707-1, ISO 14001, ISO 14025, ISO 14040 and ISO 14050, and the following apply.

NOTE The terms and definitions in ISO 21932, under preparation at the publication date of this International Standard, will apply when the document is available.

3.1
ancillary product
complementary product
building product (3.2) that enables another building product to fulfil its purpose in the intended application

EXAMPLE Fasteners used to attached structural panels to framing members.

3.2
building product
goods or services used during the life cycle of a building or other construction works

[Adapted from ISO 6707-1 and ISO 14021]

NOTE 1 In this International Standard, the term “product” used alone relates not only to goods or product systems but can also include service systems. In either case, the declaration is presented in a manner that clearly indicates whether the declaration applies to goods, or to only a part of the goods or packaging, or to an element of service. This is discussed in ISO 14025:2006, 7.2.2.

NOTE 2 The manufacturing or processing of goods used as building products can take place at the factory or on the construction site.

NOTE 3 The use of services can occur at any stage of the life cycle of the building or other construction works.

NOTE 4 It is possible to have an **EPD** (3.16) for a material, a building product, a component, an assembly and/or a building element. The EPD of a component, assembly or building element can incorporate the results of the EPD of all the assembled materials and building products. This is described in ISO 14025:2006, 5.4.

3.3
characterization factor
factor derived from a characterization model which is applied to convert an assigned life-cycle inventory analysis (LCI) result to the common unit of the category indicator

[Adapted from ISO 14044]

3.4
declared unit
quantity of a **building product** (3.2) for use as a reference unit in an **EPD** (3.16), based on LCA, for the expression of environmental information needed in **information modules** (3.7)

EXAMPLES Mass (kilogram), volume (cubic metre).

NOTE The declared unit is used where the function and the reference scenario for the whole life cycle, on the building level, cannot be stated.

