



SLOVENSKI STANDARD

SIST EN 15978:2026

01-junij-2026

Nadomešča:
SIST EN 15978:2011

Trajnostnost gradbenih objektov - Vrednotenje učinkov ravnanja z okoljem v stavbah - Zahteve in navodilo

Sustainability of construction works - Assessment of environmental performance of buildings - Requirements and guidance

Nachhaltigkeit von Bauwerken - Bewertung der Umweltleistung von Gebäuden - Anforderungen und Anleitungen

Contribution des ouvrages de construction au développement durable - Évaluation de la performance environnementale des bâtiments - Exigences et recommandations

Ta slovenski standard je istoveten z: EN 15978:2026

ICS:

13.020.20	Okoljska ekonomija. Trajnostnost	Environmental economics. Sustainability
91.040.01	Stavbe na splošno	Buildings in general

SIST EN 15978:2026 **en,fr,de**

Sample Document

get full document from standards.iteh.ai

EUROPEAN STANDARD

EN 15978

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2026

ICS 91.040.99

Supersedes EN 15978:2011

English Version

Sustainability of construction works - Assessment of environmental performance of buildings - Requirements and guidance

Contribution des ouvrages de construction au développement durable - Évaluation de la performance environnementale des bâtiments - Exigences et recommandations

Nachhaltigkeit von Bauwerken - Bewertung der Umwelleistung von Gebäuden - Methodik

This European Standard was approved by CEN on 24 November 2025.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2026 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 15978:2026 E

Contents	Page
European foreword	6
Introduction	8
1 Scope	13
2 Normative references	13
3 Terms and definitions	14
4 Abbreviations	25
5 The assessment process	26
6 Intended application of assessment	28
7 Level of granularity of assessment and relevant data needs	29
7.1 General.....	29
7.2 Data Needs and data quality	30
7.2.1 General.....	30
7.2.2 Type 1 - assessment using early building model in concept design	30
7.2.3 Type 2 - assessment using a building model in building permit design	30
7.2.4 Type 3 - assessment using the “as designed” building model.....	30
7.2.5 Type 4 - assessment using a fully detailed “as designed” or ‘as built’ building model	31
7.3 Using Environmental Product Declaration(s) - EPD.....	31
7.4 Quantification specific to operational energy use	31
7.5 Quantification specific to operational water use	32
8 Specification of the object of assessment	32
8.1 General.....	32
8.2 Functional equivalent	33
8.3 Reference study period.....	34
8.4 System boundary	35
8.4.1 General.....	35
8.4.2 Modules A1 to A3 - Boundary of the Product Stage	39
8.4.3 Modules A4 and A5 - Boundaries of the Construction Process Stage.....	39
8.4.4 Modules B1 - B8 - Boundaries of the use stage.....	41
8.4.5 Boundary of the End of Life (EoL) stage of the building (Modules C1-C4)	59
8.4.6 Boundary for the benefits and loads beyond the system boundary (Module D)	61
8.5 Building model for performance assessment.....	62
8.5.1 General.....	62
8.5.2 Description of the building model and classification of its parts.....	63
8.6 Quantification of the building elements and their life cycle	66
8.6.1 General.....	66
8.6.2 Type 1 Assessment using early building model in concept design.....	67
8.6.3 Type 2 Assessment using a building model in building permit design	67
8.6.4 Type 3 Assessment using the “as designed” building model.....	68
8.6.5 Type 4 Assessment using a fully detailed ‘as built’ building model	68
8.6.6 The frequency of replacements	68
9 Scenarios for describing and defining the building life cycle	69
9.1 General.....	69
9.2 Requirements for scenarios.....	69
9.2.1 General.....	69

9.2.2	Addressing technical progress and performance improvement during the building life cycle.....	71
9.3	Time-related characteristics and associated scenarios for maintenance, repair, replacements, and other periodic operations.....	71
9.3.1	General	71
9.4	Scenarios for climate conditions.....	71
9.5	Scenarios for the pre-construction stage (module A0).....	72
9.6	Scenarios for the product stage (modules A1 to A3)	72
9.7	Scenarios for the construction process stage (modules A4-A5).....	72
9.8	Scenarios for Use Stage (modules B1 to B8)	73
9.8.1	General	73
9.8.2	Scenario related to use stage (except energy and water) - module B1.....	73
9.8.3	Scenarios for maintenance, repair, replacement - modules B2, B3 and B4	73
9.8.4	Scenarios for refurbishment - module B5	74
9.8.5	Scenarios for operational energy use - module B6.....	74
9.8.6	Scenarios for operational water use (module B7).....	75
9.8.7	Scenarios for the building related users' activities (module B8).....	75
9.9	Scenarios for the End-of-Life stage (modules C1 to C4).....	76
9.9.1	General	76
9.9.2	Scenarios for deconstruction - module C1.....	77
9.9.3	Scenarios for transport - module C2.....	77
9.9.4	Scenarios for waste processing for reuse, recycling and energy recovery - module C3	77
9.9.5	Scenarios for disposal - Module C4.....	77
9.10	Scenarios for benefits and loads beyond the system boundary - module D.....	77
10	Calculation of the environmental indicators.....	78
10.1	Environmental impacts and aspects and related indicators	78
10.1.1	General	78
10.1.2	Indicators describing environmental impacts.....	78
10.1.3	Indicators describing resource use.....	81
10.1.4	Information on biogenic carbon content	82
10.1.5	Indicators describing additional environmental information.....	83
10.1.6	Additional information on carbon storage.....	83
10.1.7	Optional information on use of primary raw materials	84
10.2	Environmental aspects relating to the local environment	84
10.2.1	General	84
10.2.2	Purpose of measurement - objectives and benefits	85
10.2.3	Indicator description and methodology.....	85
10.2.4	Output.....	86
10.2.5	Evidence.....	86
11	Verification of results.....	86
12	Additional information on end-of-life scenarios.....	87
12.1	General	87
13	The Assessment Report.....	87
13.1	General	87
13.2	General information on the assessment	88
13.3	General information on the assessment	88
13.4	Statement of boundaries and scenarios used in the assessment	89
13.5	Statement regarding the building model description.....	90
13.6	Data sources, types and quality	90
13.7	List of indicators used for assessment and expression of results.....	90

EN 15978:2026 (E)

13.8	Specific information in the assessment report	91
14	Communication of assessment results	92
	Annex A (normative) Building integrated and site generated energy reporting	93
A.1	General	93
A.2	Approach A	93
A.3	Approach B	94
A.4	Documentation and reporting of background information	94
A.5	Illustrative example of reporting impacts under Approaches A and B	97
A.6	Energy use and exported energy scenarios (following Approach A)	102
A.6.1	General	102
A.6.2	Case 1	102
A.6.3	Case 2	102
A.6.4	Case 3	103
A.6.5	Case 4	104
	Annex B (informative) Information describing environmental aspects and impacts to local environment	106
B.1	General	106
B.2	Local land use and land use change	106
B.2.1	General	106
B.2.2	Quality of building land and sealing on construction site area	106
B.3	Local emissions to outdoor air, soil and ground and surface water	108
B.3.1	General	108
B.3.2	Purpose of measurement – objectives and benefits	108
B.3.3	Indicator description	109
B.3.4	Output	109
B.3.5	Evidence	109
	Annex C (informative) Additional information on end-of-life scenarios	111
C.1	General	111
C.2	Purpose	111
C.3	Coverage of the additional information on ease of disassembly and the recycling and reuse potential at the end – of -life stage	111
C.4	Scenarios	112
C.5	Object of assessment	112
C.6	Bill of materials/ quantities	113
C.7	Ease of disassembly	113
C.7.1	Purpose of measurement -objectives and benefits	113
C.7.2	Indicator description and methodology	113

C.7.3	Result (Unit, Dimension, Measures, Checklist).....	113
C.7.4	Evidence and documentation.....	114
C.8	Reuse and recycling potential of dismantled building products and components .	114
C.8.1	Purpose of measurement - objectives and benefits	114
C.8.2	Indicator description and methodology.....	114
C.8.3	Result (Unit, Dimension, Measures, Checklist).....	118
C.9	Additional options to model EoL at building level - how to create alternative scenarios and what are the consequences	118
C.9.1	General	118
C.9.2	Context and use cases.....	119
	Annex D (informative) A-deviations	122
	Bibliography	124

Sample Document

get full document from standards.iteh.ai

EN 15978:2026 (E)**European foreword**

This document (EN 15978:2026) has been prepared by Technical Committee CEN/TC 350 “Sustainability of construction works”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2026, and conflicting national standards shall be withdrawn at the latest by March 2028.

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

This document supersedes EN 15978:2011.

In relation to EN 15978:2011, the following changes have been made:

- environmental impact indicators have been aligned with EN 15804:2012+A2:2019;
- EN 15978 has been aligned with EN 15643 regarding modules B8 and D1 and D2;
- use of baseline and future prospect scenarios have been described;
- requirements and recommendations have been provided for different design stages;
- system boundaries of module B7 “Operational Water Use” (B7.1, B7.2, B7.3 and B7.4) have been provided in a detailed way similar to module B6 “Operational Energy Use” (B6.1, B6.2 and B6.3);
- the assignment of activities between B4 (Replacement) and B5 (Refurbishment) has been clarified;
- two approaches for the reporting of energy generated in, at or near the building have been described in subclause 8.4.4.6.4 and Annex A to improve transparency:
 - approach A as in EN 15978:2011 and
 - approach B where a proportion of the embodied impacts of the energy production appliances that export energy are outside the system boundary of the building together with their operational impacts and these are reported as additional information
- impacts resulting from the user’s activities may be declared optionally in Module B8, including impacts of commuting of users;
- to ensure that all on-site activities are considered, a separate sub-module A5.1 has been introduced to account for deconstruction of existing construction works in the case of refurbishment projects with the benefits and loads beyond the system boundary in module D1;
- additional information on end-of-life scenarios are included in the informative text in subclause 12 and in Annex C;
- information concerning environmental aspects at the local environment level is in the informative text in 10.2 and Annex B.

This document includes A-deviation from France as the French regulation is in conflict with the specific requirements defined in 8.4.1 and 10.1.6.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Sample Document

get full document from standards.iteh.ai

EN 15978:2026 (E)

Introduction

The purpose of this document is to provide requirements and guidance for the assessment of the environmental performance of new and existing buildings.

This document is part of a suite of European Standards, Technical Specifications and Technical Reports for the assessment of the environmental performance of buildings that together support quantification of the contribution of the assessed building to sustainable construction and sustainable development.

The environmental performance of a building is only one aspect of its sustainability. The social and economic performance of the building are also aspects of sustainability that should be assessed as part of a sustainability assessment. These are described in the framework standard (EN 15643).

NOTE 1 The environmental performance assessment at building level requires information from products and services such as EPD or DoPC according to EN 15804:2012+A2:2019 or generic data according to EN 15941.

The evaluation of technical and functional performance is beyond the scope of this document. Technical and functional characteristics are taken into account here by reference to the functional equivalent, which also forms a basis for comparison of the results of assessments.

This document is intended to support the assessment of the environmental performance of a building and its documentation that can be used in decision-making process. The assessment results are based on scenarios, which affect the environmental performance of the building. Such scenarios are uncertain, for example, there may be new processes and/or technologies or future changes in operation, and this could affect the assessment result. Figure 1 illustrates how the assessment of the environmental performance takes place within the concept of the sustainability assessment of buildings.

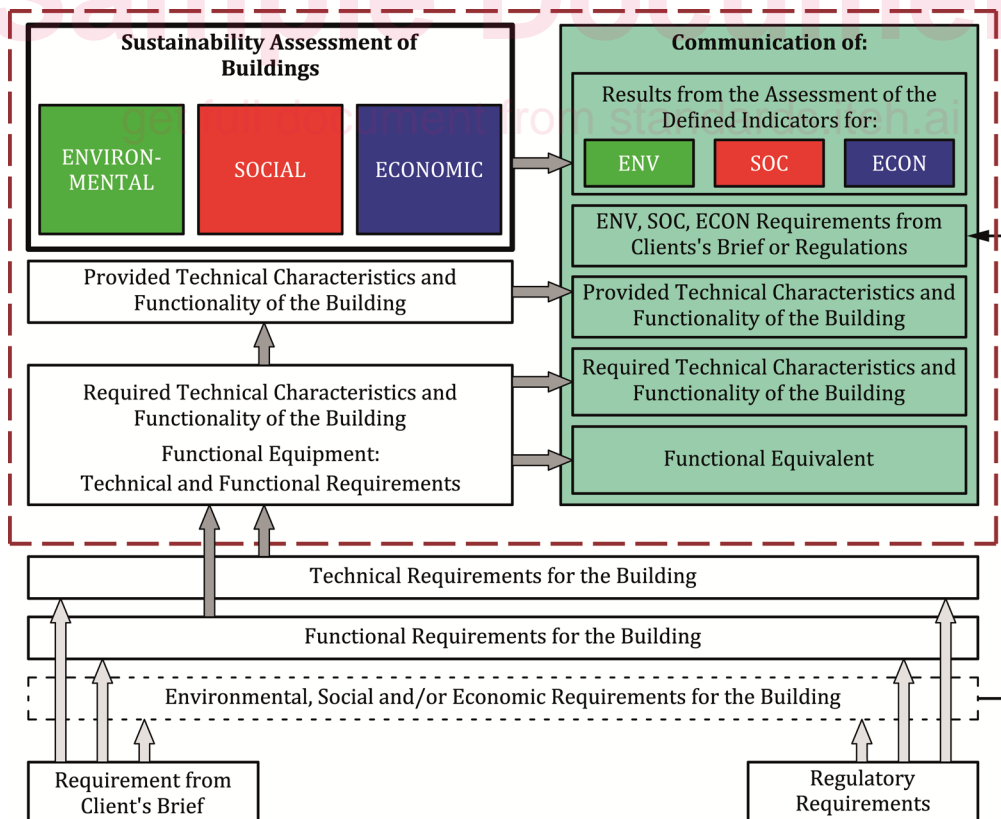


Figure 1 — Concept of sustainability assessment of buildings

NOTE 2 The outer box with the red dotted line represents the area standardized by CEN/TC 350.

In this document, the assessment method for the quantitative evaluation of the environmental performance of the building is based on a life cycle approach. The general requirements for sustainability assessment of buildings are described in EN 15643 (the general framework standard). Other standards developed by CEN/TC 350 in this area, and how they are related to this European Standard, are shown in Figure 2.

Framework level	<i>Sustainability Assessment of Construction Works</i>			<i>Technical characteristics</i>	<i>Functionality</i>
	EN 15643:2021 Sustainability of Construction Works – Framework for Assessment of Buildings and Civil Engineering Works			<i>Service Life Planning - Principles</i> ISO 15686-1	
Works level	EN 15978:2025 Assessment of Environmental Performance of Buildings	EN 16309:2014 Assessment of Social Performance of Buildings	EN 16627:2015 Assessment of Economic Performance of Buildings	<i>EN ISO 52000-1</i> <i>Energy Performance of Buildings</i>	
	EN 17680:2023 Evaluation of the Potential for Sustainable Refurbishment of Buildings				
	EN 17472:2022 Sustainability Assessment of Civil Engineering Works			<i>Service Life Prediction Procedures</i> ISO 15686-2,	
	EN 15941:2024 Data Quality for Construction Works and Products			<i>Feedback from Practice</i> ISO 15686-7,	
Product level	EN 15804+A2:2019 Environmental Product Declarations - Core Rules			<i>Reference Service Life & Service Life Estimation</i> ISO 15686-8	
	EN 17672:2022 Rules for B-to-C Communication				
	EN 15942:2021 Rules for B-to-B Communication				
	EN ISO 22057:2022 Data Templates for EPDs in BIM				

Figure 2 — Standards of CEN/TC 350

EN ISO 52000-1, in common with all EPB standards, provide input data to the calculations relating to environmental impacts and aspects caused by operational energy use according to EN 15978. EPB standards provide also a certain flexibility with regard to the methods, the required input data and references to other EPB standards. For the use of EN ISO 52000-1, informative default choices are provided in EN ISO 52000-1:2017, Annex B. As EPB standards are used in the context of national or regional legal requirements, mandatory choices can be given at national or regional level for such specific applications.

NOTE 3 This document supports the assessment of buildings within the Level(s) Framework (see Bibliography) for macro-objectives 1, (Greenhouse gas emissions along a building's life cycle), 2 (Resource efficient and circular material life cycles) and 3 (Efficient use of water resources). Other standards from CEN/TC350 can also support Level(s) macro-objectives: for instance, EN 16309 for objective 4 (Healthy and comfortable spaces) and for objective 5 (Adaptation and resilience to climate change), and EN 16627 for macro-objective 6 (Optimized life cycle cost and value).

NOTE 4 Level(s), is a common European approach to assess and report on the sustainability of buildings. Using existing standards, the voluntary Level(s) framework provides a common language for building sustainability, see Bibliography

Buildings and constructed assets have an impact on sustainable development. Therefore, the internationally recognized Sustainable Development Goals (SDGs) formulated by the United Nations also

EN 15978:2026 (E)

apply to the construction and real estate industry. The construction of sustainable and resilient buildings is required as part of targets towards sustainable cities and communities formulated in SDG 11, as is an efficient use of natural resource and a substantial reduction of waste generation through prevention, reduction, and reuse formulated in SDG12. These goals are closely interrelated with the other SDGs. Both providers and buyers of real estate need clear characteristics and assessment criteria in order to assess and communicate the contribution of buildings to sustainable development. Currently the main sustainability target in the construction and real estate sector is to tackle climate change, among other SDGs. This standard is contributing directly or is un-directly linked to all SDGs.

Assessments based on the requirements of this document can be used to demonstrate whether the development and use of an assessed building has the potential to contribute to United Nations SDG Goals 11, 12 and 13, and other SDGs such as 6, 7 and 8 (Figure 3).

Sample Document

get full document from standards.iteh.ai

Sample Document

get full document from standards.iteh.ai



Figure 3 — Sustainable Development Goals (SDGs) formulated by the United Nations, particularly relevant to the environmental performance of buildings and constructed assets

1 Scope

This document specifies the calculation method, based on Life Cycle Assessment (LCA) and other quantified environmental information, to assess the environmental performance of a building and its site, during whole life cycle, based on a building life cycle model. It also establishes a system for the reporting and communication of the outcome of the assessment.

The document gives:

- the description of the object of assessment based on the functional equivalent;
- the system boundary that applies at the building level;
- calculation rules and procedure to be used to compile and assess the life cycle inventory and life cycle environmental impacts of buildings;
- the list of indicators and procedures for the calculation of these indicators;
- demand for information concerning building generated energy reporting;
- the requirements for the data necessary for the calculation;
- provides recommendations on how to assess aspects at the local environment level; and
- the requirements for presentation of the results in reporting and communication.

The approach to the assessment covers all stages of the building life cycle and is based on data obtained from Environmental Product Declarations (EPD) and their “information modules” (EN 15804:2012+A2:2019), generic data according to EN 15941 and other data and information necessary and relevant for carrying out the assessment. The assessment includes all building related construction products, processes and services, used over the life cycle of the building.

The document is applicable to new, existing buildings and buildings undergoing refurbishment or any other kind of activity to extend its service life. Environmental impacts and aspects that are not related to the building are outside the scope of this standard. Methodologies for and approaches to the interpretation and the making of value judgments of the results of the assessment are outside the scope of this document.

The document also provides the methodological basis and assessment rules to support the achievement of environment related macro-objectives in Europe and instruments such as the European reporting framework Level(s).

NOTE More information on the European reporting framework Level(s) can be found at Level(s) (europa.eu).

Informative Annexes B and C provide non-LCA information covering environmental aspects at the local environment level and additional information on end-of-life scenarios.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 15316-4-5, *Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-5: District heating and cooling, Module M3-8-5, M4-8-5, M8-8-5, M11-8-5*