

# DIN EN 17472:2022-09 (E)

## Sustainability of construction works - Sustainability assessment of civil engineering works - Calculation methods

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
Introduction .....		5
1	Scope .....	8
2	Normative references .....	8
3	Terms and definitions .....	9
4	Abbreviations .....	23
5	The process for the assessment .....	23
6	Purpose of the assessment .....	24
7	Specification of the object of assessment .....	25
7.1	General .....	25
7.2	Functional equivalent .....	25
7.3	Reference study period .....	27
7.4	System boundary .....	28
7.5	Civil engineering works' model .....	36
7.6	Additional functions .....	37
8	Scenarios for defining the civil engineering works life cycle .....	38
8.1	General .....	38
8.2	Requirements for scenarios .....	39
8.3	Scenarios for the pre-construction stage (Module A0) .....	39
8.4	Scenarios for the product stage (Modules A1, A2 and A3) .....	39
8.5	Scenarios for the construction process stage (Modules A4 and A5) .....	39
8.6	Scenarios for use stage (Modules B1-B8) .....	40
8.7	Scenarios for the end of life stage (Modules C1 to C4) .....	42
8.8	Scenarios for benefits and loads beyond the system boundary (Module D) .....	43
9	Quantification of materials and products .....	43
9.1	General .....	43
9.2	Specification net amount .....	43
9.3	Specification gross amount .....	44
10	Data for the assessment .....	45
10.1	General .....	45
10.2	Data quality .....	46
10.3	Selection of environmental data .....	46
10.4	Selection of social data .....	47
10.5	Selection of economic data .....	48
11	Methods for assessment of environmental, economic and social performance .....	49
11.1	General .....	49
11.2	Environmental performance .....	51
11.3	Social performance .....	60
11.4	Economic performance .....	83

11.5	Management mechanisms .....	90
12	Reporting and communication .....	91
12.1	General .....	91
12.2	Information on the assessment .....	91
12.3	Statement of boundaries, scenarios used, and additional functions considered in the assessment .....	92
12.4	Data sources .....	92
12.5	Communication of assessment results .....	92
13	Verification of results .....	94
Annex A (informative) Energy use - case studies .....		95
A.1	General .....	95
A.2	Study case: hydroelectric power plant .....	95
A.2.1	Description of the civil engineering works .....	95
A.2.2	Description of the energy production and consumption unit(s) .....	95
A.2.3	Scenario and boundary limit for the assessment .....	95
Annex B (informative) Noise emissions calculation .....		97
Annex C (informative) Examples of climate change impacts .....		98
Annex D (informative) Websites with European climate scenarios .....		101
Annex E (informative) List of indicators in this document .....		102
Bibliography .....		116