
**Sustainability in buildings and civil
engineering works — Framework
for methods of assessment of the
environmental, social and economic
performance of construction
works as a basis for sustainability
assessment —**

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**Part 2:
Civil engineering works**

*Développement durable dans la construction — Cadre
méthodologique de l'évaluation au sens du développement durable
des performances environnementales, sociales et économiques des
ouvrages de construction —*

Partie 2: Ouvrages de génie civil



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Foreword

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Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

It is important to measure and understand the sustainability performance of civil engineering works in order to assess, communicate and improve their potential impacts on sustainable development.

This document establishes a framework for methods of assessment of the sustainability performance of civil engineering works and related external works, which is a central part of the process. The sustainability performance assessment evaluates aspects and impacts to assess the environmental, social and economic performance of civil engineering works using qualitative and quantitative indicators measured without value judgements. One of the primary purposes of this document is to improve the quality of the methods of assessment, which can enable greater comparability of the results of assessments. Such assessments can be used for benchmarking performance and monitoring progress towards improvement of performance.

Although there are not as many assessment methods for civil engineering works as there are for buildings, some can be found. The existence of these methods indicates a trend towards construction that contributes to sustainable development, whose main objectives are to minimize negative impacts and maximize positive direct and indirect impacts on sustainability, especially through a focus on

- use of resources (materials, water and energy) and waste generation,
- discharges into water, atmosphere and soil,
- biodiversity and ecosystems,
- social impacts, throughout the value chain, and
- innovative and proactive approach towards selecting the most beneficial and economical alternatives.

Methods of assessment of the sustainability performance of civil engineering works provide a basis for demonstrating and communicating the result of efforts to improve sustainability performance in construction works. The methods typically establish a means of assessing a broad range of considerations related to sustainability against explicitly declared criteria, and give a summary of sustainability performance.

Methods of assessment of the sustainability performance of civil engineering works provide:

- a common and verifiable set of references, so that civil engineering works owners, striving for increasing their beneficial contribution to sustainable development, have a means of measuring, evaluating and demonstrating that effort;
- a reference, for use as a common basis, by which the civil engineering works owners/managers, design teams, contractors and suppliers can formulate effective strategies regarding the design, construction and operation of civil engineering works, with the intent to improve sustainability performance;
- detailed information on the civil engineering works gathered and organized in such a way that it can be used to lower operating, financing and insurance costs and increase operating efficiency and life;
- a clear description of the factors considered to be the key sustainable considerations and their relative importance, thereby assisting the design process.

To achieve the practical goals noted above, methods of assessment of the sustainability performance of civil engineering works refer to limited criteria and seek a balance between rigor and practicality. The sustainability performance assessment of civil engineering works uses different types of information. The results of a sustainability performance assessment of a civil engineering works provide information on the different types of indicators, the related civil engineering works scenarios and the life cycle stages included in the assessment. Life-cycle based approaches play an increasingly significant role for setting performance criteria within methods of assessment of sustainability performance of civil engineering works. In carrying out assessments, scenarios and a functional equivalent are determined