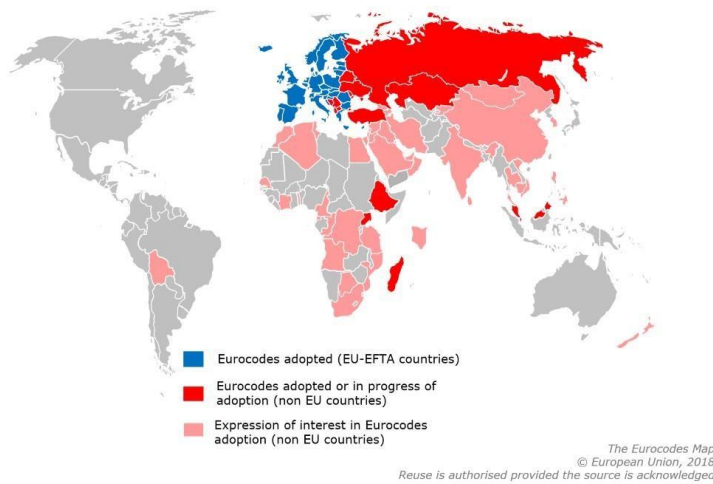


Research subject¹:

The evolution of the European structural design standard for timber structures: Eurocode 5

Description:

The European timber design standard *Eurocode 5* was published in 2004 after a long development that began in 1983 with a CIB report "Structural Timber Design Code". Eurocode 5 is part of the family of *Structural Eurocodes*, which provide common design rules for the design of structures using all major building materials for the built environment in Europe. Thus, the Eurocodes are of great importance for the European building market. They provide a common language for a uniform safety level in.



Project team:

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Period:

1. January 2014 until
 31. March 2026

Funded by:

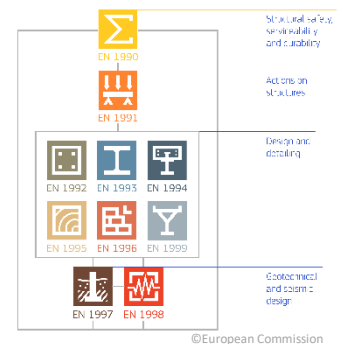
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Two decades after the first publication, again a wide range of national deviations in form of *National Determined Parameters* (NDP's) and a large number of *Non-Contradictory complementary Information* (NCCI) published in *National Annexes* (NA's) to the Eurocodes exist.

This indicates that design rules need to be updated and improved to comply with the current 'state-of-the-art'. Particularly in times of climate change with the need of a sustainable built environment, a further harmonization of the European timber design standard is in heavy need.



¹according to Kleinhenz, M.; Dietsch, P.; Winter, S.: *Eurocode 5 - a halftime summary of the revision process*, WCTE 2016.

Project aims:

a) Enhancing the 'ease-of-use'

The Eurocodes are addressed to "Competent civil, structural and geotechnical engineers, typically qualified professionals able to work independently in relevant fields". Their profile is the benchmark to enhance the ease of use throughout the document with respect to:

- clarity and
- ease-of-navigation.

On the one hand, keywords as 'clarity' and 'ease-of-navigation' may give the idea of restructuring Eurocode 5. On the other hand, it is clearly described that fundamental changes in the structure of the document are to be avoided.

b) Revision of existing parts

Systematic reviews of the existing documents were realised for the whole Eurocode 5 series in 2014 and 2015. Comments from all *National Standardisation Bodies* (NSB's) on the first generation of Eurocodes were collected. Consequentially, following subjects will be considered as most important for the revision of the standard:

- materials and products,
- durability,
- compression perpendicular to the grain,
- racking resistance of walls, floors and roofs,
- vibrations of floors,
- fatigue,
- connections,
- execution rules on which design relies.

c) New Items

Additional design rules need to be included to comply with the 'state-of-the-art' which is based in commonly accepted results of research that has been validated through sufficient practical experience:

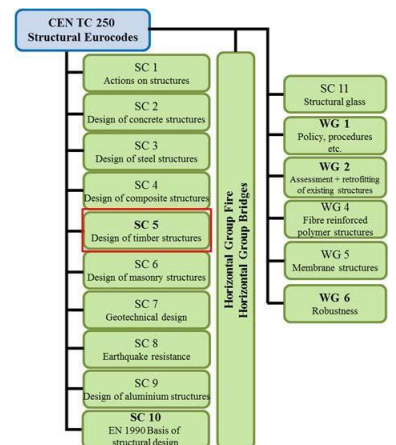
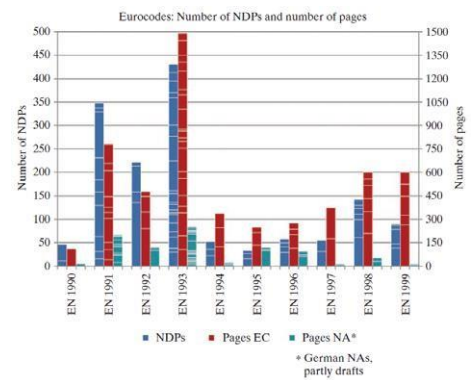
- cross laminated timber,
- timber concrete composites,
- reinforcement and
- timber foundation piles.

It is also clearly determined that excessive expansion is to be avoided since the incorporated rules shall be relevant for at least 80% of daily use design.

d) Review of NDP's

The responsible NSB's published NA's as addition to the Eurocodes where NDP's as well as NCCI's are included. The following progress will be followed during the project:

- Revision and categorization of NDP's
- Elimination of NDP's considered 'questionable'



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Document	Expected date of availability
EN 1995-1-1	01.08.2025
EN 1995-1-2	under discussion
EN 1995-1-3	under discussion
EN 1995-2	01.08.2025
EN 1995-3	01.08.2025