



EU-ASEAN DIALOGUE ON EUROCODES

Eurocodes Awareness Workshop Cambodia

24-25 March 2022 • Virtual Event (Zoom)

Supported by the Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI)

BACKGROUND

The Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI), funded by the EU, is a development cooperation programme that facilitates dialogue forums between the EU and ASEAN in priority policy areas of joint interest across all three ASEAN Community pillars (Political and Security, Economic and Socio-Cultural). Drawing on relevant EU regional integration experience, the E-READI dialogue facility further strengthens both the ASEAN regional integration as well as the overall ASEAN-EU partnership.

As part of the EU-ASEAN Cooperation for Regional Integration through economic growth, connectivity, trade and business development, the E-READI supported EU-ASEAN dialogue on Eurocodes has been established through a multi-annual concept note with the ASEAN Buildings and Construction Working Group (BCWG), ASEAN Secretariat and the European Commission's Joint Research Centre (JRC). The Eurocodes dialogue aims to bring a coherent approach to the adoption of the design standards for the construction sector across the ASEAN member states, through a regional approach. ASEAN member states are currently being at various stages of awareness on the Eurocodes concepts and/or their adoption at national level.

OBJECTIVES OF EUROCODES AWARENESS WORKSHOP CAMBODIA

The E-READI assistance provides an opportunity for ASEAN countries to benefit from greater awareness and understanding of the content, principles and benefits of the Eurocodes, building upon the recent developments in their adoption in some ASEAN countries. Under the E-READI Eurocodes Dialogue, it is foreseen to offer support for ASEAN MS in the organisation of regional and national workshops, conducting necessary studies and a possible community of practice. Such activities would support trade, the business sector and climate resilient cities.

Within the multi-annual dialogue concept note for cooperation between relevant ASEAN and EU institutions in the construction sector, the primary objective of the Eurocodes Awareness Workshop is to provide the technical support to raise the interest and awareness of the benefits of using the Eurocodes facilitate the understanding of the procedures for their adoption, as well as the impact of their adoption to the future of construction sector and the implications of climate change mitigation measures..

The workshop will outline the needs and the availability of necessary technical assistance in support of the Eurocodes adoption and introduction into the national regulatory environment of Cambodia. EU Member States (MS) experts will share knowledge with representatives from competent organisations in Cambodia on technical methods and techniques underpinning policy implementation in the construction sector. The event will provide an opportunity to build on the experience, initiatives and difficulties concerning the adoption of standards and policies for the construction sector in the EU.

The workshop's objectives are following:

1. Present the concept of Eurocodes as a standardisation framework (targeting mainly national authorities) and also as advanced technical design codes (targeting engineers/practitioners);
2. Present a case study from a non-EU country and AMS that has successfully implemented the Eurocodes in the national regulatory framework;
3. Facilitate exchange of views, knowledge and information between the EU and ASEAN stakeholders on Eurocodes and their benefits;
4. Present information on the second generation of the Eurocodes and their links to the European Green Deal.
5. Facilitate use of the Eurocodes in design practice through technical discussion on their basic design philosophy, actions on structures, design of concrete and steel structures including geotechnical issues;
6. Present the process and support available for countries willing to adopt the Eurocodes.

PROGRAMME AND AGENDA

Day 1 - Thursday, 24 March 2022

| TIME | PROGRAMME |
|-----------------------------|------------------------|
| 14:30 - 14:55 (Cambodia) | 08:30 - 08:55 (CET) |

WELCOME ADDRESSES AND INTRODUCTION

Ms Camilla Lombard • Counsellor, Deputy Head of Cooperation, EU Delegation to Cambodia
Dr. Artur Pinto • Head of Unit, Safety and Security of Buildings, Joint Research Centre of the European Commission
H.E Mr. Monirith Leang • Secretary of State - Ministry of Land Management, Urban Planning, and Construction, Cambodia

Moderator:
Mr Aldo Dell'Araccia • E-READI Team Leader

SESSION 1

EN STANDARDIZATION SYSTEM FOR THE CONSTRUCTION SECTOR AND AVAILABLE INSTRUMENTS TO SUPPORT THE ADOPTION OF THE EUROCODES

Moderator: **Mr Aldo Dell'Araccia** • E-READI Team Leader

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|-----------------------------|------------------------|---|
| 15:00 - 15:25 (Cambodia) | 09:00 - 09:25 (CET) | EN standardization system for the construction sector Dr. Pavlina Karagianni • CEN Standards Manager |
| | | Content in brief: <ul style="list-style-type: none">• The EU construction sector• The EU internal market - free movement of goods and services• The EU policy in construction sector - Construction Product Regulation• Elaboration of harmonized European standards (ENs) in construction• International dimensions of ENs, modes of their adoption in Cambodia and benefits• Eurocodes - advanced design standards for achievement of health and safety in construction and free movement of engineering/construction services |
| 15:25 - 15:45 (Cambodia) | 09:25 - 09:45 (CET) | Available instruments to support the adoption and use of the European standards for structural design - the Eurocodes Dr. Adamantia Athanasopoulou • JRC Scientific Officer |
| | | Content in brief: <ul style="list-style-type: none">• JRC technical support in adoption and implementation of the Eurocodes• E-READI eligible instruments for support• Synergy with other EU programmes/initiatives |
| 15:45 - 15:55 (Cambodia) | 09:45 - 09:55 (CET) | Break |

SESSION 2

INTRODUCTION TO THE EUROCODES, THE EUROCODES DESIGN PHILOSOPHY, ACTIONS ON STRUCTURES, THE EUROCODES SECOND GENERATION AND ADAPTATION OF STRUCTURAL DESIGN TO CLIMATE CHANGE

Moderator: **Dr. Adamantia Athanasopoulou** • JRC Scientific Officer

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| 15:55 - 16:20 (Cambodia) | 09:55 - 10:20 (CET) | Introduction to the Eurocodes and their design philosophy Prof. Paolo Formichi • CEN/TC250/SC10 Chair |
| | | Content in brief: <ul style="list-style-type: none">• Introduction to the Eurocodes - key features of the current generation, benefits of use, evolution• Eurocodes' flexibility - NDPs as an instrument to meet national safety level• Introduction to EN 1990: Basis of structural design - Design philosophy - reliability background, main design principles, basic variables, structural analysis, verification by the partial factor methods |

| TIME | | PROGRAMME |
|-----------------------------|------------------------|---|
| 16:20 – 16:45 (Cambodia) | 10:20 – 10:45 (CET) | <p>Actions on Structures Dr. Nick Malakatas • CEN/TC250/SC1 Chair</p> <p>Content in brief:</p> <ul style="list-style-type: none"> • Introduction to EN 1991: Actions of structures (overview) • Introduction to EN 1991-1-4: General action -wind actions (design situation, modelling of wind action, wind velocity and velocity pressure, wind actions, structural factors, pressure and force coefficients, wind action on bridges. Elaboration of NA EN 1991-1-4 (EU MS experience) • Introduction to EN 1991-1-5: General action -thermal actions (classification of actions, design situation, representation of actions, temperature change in buildings, bridges, industrial chimneys, pipelines, silos, tanks and cooling towers). Elaboration of NA EN 1991-1-5 (EU MS experience) • Emerging climate issues and adaptation of structural design to climate change |
| 16:45 – 17:10 (Cambodia) | 10:45 – 11:10 (CET) | <p>The Eurocodes Second Generation Dr. Steve Denton • CEN/TC250 Chair</p> <p>Content in brief:</p> <ul style="list-style-type: none"> • Towards the Second Generation of the Eurocodes • Assessment, re-use, retrofitting of existing structures • Development of new Eurocodes • The European Green Deal and the Eurocodes Second Generation |
| 17:10 – 17:20 (Cambodia) | 11:10 – 11:20 (CET) | <p>Closure remarks for Day 1 Dr. Adamantia Athanasopoulou • JRC Scientific Officer</p> <p>Design standards towards safe, resilient and sustainable cities</p> |

Day 2 – Friday, 24 March 2022

| TIME | | PROGRAMME |
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| <p>SESSION 3 DESIGN BY THE EUROCODES: DESIGN OF CONCRETE AND STEEL STRUCTURES, GEOTECHNICAL DESIGN Moderator: Prof. Dr. Roberta Apostolska • E-READI Senior Non-Key Expert for Eurocodes</p> | | |
| 14:30 – 14:55 (Cambodia) | 08:30 – 08:55 (CET) | <p>Design of concrete structures with the Eurocodes Prof. Humberto Varum • University of Porto, Portugal / E-READI</p> <p>Content in brief:</p> <ul style="list-style-type: none"> • Introduction to EN 1992: Design of concrete structures in general • Overview of EN 1992-1-1: General rules and rules for buildings (basis of design, materials, durability, structural analysis, limit states, detailing) • Overview of EN 1992-2: Concrete bridges |
| 14:55 – 15:20 (Cambodia) | 08:55 – 09:20 (CET) | <p>Design of steel structures with the Eurocodes Prof. Helena Gervásio • University of Coimbra, Portugal</p> <p>Content in brief:</p> <ul style="list-style-type: none"> • Introduction to EN 1993: Design of steel structures in general • Introduction to EN 1993-1-1: General rules and rules for buildings (basis of design, materials, durability, structural analysis, limit states) • Overview of EN 1993-2: Steel bridges |
| 15:20 – 15:45 (Cambodia) | 09:20 – 09:45 (CET) | <p>Geotechnical design Dr. Sébastien Burlon • CEN/TC250/SC7 Management Group</p> <p>Content in brief:</p> <ul style="list-style-type: none"> • Introduction to EN 1997-1: General rules (basis of design, geotechnical data, spread foundations, pile foundations, anchorages, retaining structures, overall stability) • Introduction to EN 1997-2: Ground investigations and testing |

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| 15:45 – 15:55 (Cambodia) | 09:45 – 09:55 (CET) Break |
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SESSION 4

ASEAN MS AND EUROCODES – NON-EU SUCCESSFUL STORIES FOR IMPLEMENTATION OF EUROCODES

Moderator: Ms. Minna Saneri • E-READI Key Expert

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| 15:55 – 16:20 (Cambodia) | 09:55 – 10:20 (CET) | Regional story: Singapore and the Eurocodes – more than 15 years towards EU-ASEAN harmonization in design codes (pre-recorded) |
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Prof. Richard Liew • National University of Singapore, Head of Department of Civil & Environment Engineering

Content in brief:

- Adoption and implementation of the Eurocodes in Singapore
 - Design of steel and composite structures (EN 1993 and EN 1994)
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|-----------------------------|------------------------|---|
| 16:20 – 16:45 (Cambodia) | 10:20 – 10:45 (CET) | Eurocodes in the non-EU middle income countries: the example of Balkan countries |
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Jelena Skoković • Head of Division for Metallurgy, Mechanical Engineering, Civil Engineering and Traffic, Standardisation Institute of Serbia

Content in brief:

- Adoption and implementation of the Eurocodes in non-EU Balkan countries – regulatory & standardization framework, capacity building, training, implementation, maintenance – example of Serbia
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| 16:45 – 17:00 (Cambodia) | 10:45 – 11:00 (CET) | Closing Remarks and feedback from the participants |
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Dr. Adamantia Athanasopoulou • JRC Scientific Officer

SPEAKER PROFILES

Dr. Pavlina Karagianni

Standards Manager
The European Committee for Standardization (CEN)

Pavlina Karagianni is a civil engineer with a strong educational background and practical experience in construction sector. The last years, she is highly involved in standardization as a CEN and CENELEC project manager for construction by assisting and contribute to more than 40 CEN and CENELEC Technical Committees. CEN and CENELEC is working closely with European Commission to ensure the continuous improvement of standardization sector.

Adamantia Athanasopoulou, PhD, MEng, MSc, CEng

Scientific Project Officer
European Commission Joint Research Centre (JRC)

Dr Adamantia Athanasopoulou is a Scientific Project Officer in the Safety and Security of Building Unit of the European Commission's [Joint Research Centre](#) (JRC) since 2016. She is contributing to the activities on support to EU policies and standards for safe and sustainable construction, including facilitation to the implementation and further development of the European standards for structural design – the [Eurocodes](#). Adamantia is particularly involved on the dissemination, promotion and training for the worldwide use of the Eurocodes. She also coordinates European expert networks and working groups on various scientific topics related to the construction sector and she is involved in the works of several Technical Committees of the European Standardization Committee (CEN).

Prof. Paolo Formichi

CEN/TC250/SC10 Chair
The European Committee for Standardization (CEN) / University of Pisa

Paolo Formichi, PhD, works at the University of Pisa since 1996 in the field of structural engineering. From 1996 to 1999 has been involved in a wide European research on Snow Loading, led by the University of Pisa. In 1998 started working in CEN standardization as member of CEN/TC250/SC1 Actions on Structures. Since 2008 he is involved in the works for the further development of EN 1990 "Basis of Structural Design" and in 2016 has been appointed as Chairman of CEN/TC250/SC10 "Basis of Structural Design", contributing to the evolution of EN1990 towards the second generation of the Eurocodes.

Dr. Nick Malakatas

CEN/TC250/SC1 Chair
The European Committee for Standardization (CEN)

Dr Nikolaos (Nick) Malakatas, is a civil and structural engineer who spent most of his career in the Greek Administration (Ministry of Infrastructure and Transport) being personally involved in various important bridge and tunnel projects, motorways and transport infrastructure concession projects and has served as Director in various relevant posts. He has been involved with the Eurocodes since mid '80ies, initially as national delegate for Greece and since 2008 as the Chairman of CEN/TC250/SC1 for EN 1991. Since many years involved in the standardisation at national level, he became in 2014 the Chairman of the Greek Eurocodes Mirror Committee.

Dr. Steve Denton

CEN/TC250 Chair
The European Committee for Standardization (CEN)

Steve Denton is WSP's Head of Civil and Bridge Engineering in UK, leading a unit of over 500 staff. Steve's expertise and experience span many facets of engineering and strategic consultancy, research and construction. In addition to his business and project leadership responsibilities, Steve retains a high degree of technical involvement in complex projects. He is an internationally recognised expert in bridge engineering and a global leader in the development and implementation of design standards.

Steve is the Chairman of CEN/TC 250, the international committee with overall responsibility for the Structural Eurocodes. In this role, he is leading the development of the second generation of the Eurocodes, which is the largest international standardisation programme ever of its type. Steve is a Fellow of the Royal Academy of Engineering (FREng) and a Fellow of the ICE and IStructE. He has an MA and PhD from Cambridge University. In 2019 he was awarded the ICE International Medal and the BSI Leadership award for his ongoing work as Chairman of CEN/TC 250. He is also a visiting Professor at the University of Bath, a trustee of Clifton Suspension Bridge Trust and a Non-exec Director of CIRIA.

Prof. Humberto Varum

University of Porto, Portugal / E-READI

Humberto Varum is full professor and director of the PhD Program in Civil Engineering at the Faculty of Engineering of the University of Porto, Portugal. He is integrated member and Vice-Coordinator of CONSTRUCT research unit: Institute of R&D in Structures and Construction. Since May 2015, he is member of the directorate body of the Construction Institute from the University of Porto, and President since May 2019.

He has been Seconded National Expert to the ELSA laboratory, Joint Research Centre, European Commission, Italy, in the period July 2009 to August 2010. He was member of the Project Team 2 for the development of the 2nd generation of EN Eurocodes (SC8.T2 - material dependent sections of EN 1998-1).

Prof. Helena Gervásio

University of Coimbra, Portugal

Helena Gervásio has a PhD in Civil Engineering from the University of Coimbra and is an integrated member of the research center ISISE – Institute for Sustainability and Innovation in Structural Engineering. She is Assistant Professor in the field of Steel Construction and Sustainability, at the Department of Civil Engineering of the University of Coimbra. In 2016, she was awarded a Marie Skłodowska-Curie grant to develop a project in the area of natural resource efficiency in construction, at the Joint Research Center of the European Commission, in Italy.

She develops research work and provides specialized consultancy services in the area of Steel Construction and Sustainability, being a member of several national and international associations and technical committees. She is responsible for several national and international research projects and is the author of around 150 publications in specialized journals, international and national conferences.

Dr. Sébastien Burlon

CEN/TC250/SC7 Management Group Committee, Project Team 1 Leader
The European Committee for Standardization (CEN)

Sébastien Burlon is a Project Director at Terrasol (Setec group), a major consultancy in geotechnical engineering in France and abroad. He has been involved since the beginning of his career in many projects: high rise towers, nuclear power plants, wharfs. He has participated or directed several research projects in France and Europe, such as swelling-shrinkage of clays, piles under cyclic loads, geothermal energy, and pressuremeter tests. He is a member of the SC7 Management Group and is also involved as convenor of two project teams for the second generation of Eurocode 7.

Dr. Richard Liew

Professor and Head of Department of Civil & Environmental Engineering
National University of Singapore

Richard Liew is a Professor and Head of the Department of Civil and Environmental Engineering at the National University of Singapore. He is a fellow of Singapore Academy of Engineering, Professional Engineer, and the Past President of the Singapore Structural Steel Society. His main research interest is on steel and concrete composite materials and structures with applications to high rise buildings and large span structures. He is a member of the Building and Construction Standards Committee, responsible for developing the Singapore national annexes for Eurocodes 3 and 4. He is the lead author of several design guides published by Buildings Construction Authority and Singapore Structural Steel Society.

Jelena Skoković MSc

Head of Division for Metallurgy, Mechanical Engineering, Civil Engineering and Traffic
Institute for Standardization of Serbia

Working at the Institute for Standardization of Serbia for more than nine years as the technical secretary of national technical committees in the field of Eurocodes (SC2, SC3, SC4, SC5, SC6, SC9 & SC11), concrete, cement, aggregates, BIM etc. Experience in preparation of national legislation through the participation in working groups at the Ministry of Construction, Transport and Infrastructure (Law on construction products and related bylaws, Rulebook for building structures, etc). Expert in the Committee for Accreditation at the Accreditation Body of Serbia.

EN Eurocodes: Synopsis

The Eurocodes within the European Construction Sector

As in the many countries across the world, the construction sector is of strategic importance also to the European Union (EU), contributing to about 9% of the EU's Gross Domestic Product and provides 18 million direct jobs. The construction sector is key element for the implementation of the Single Market and other construction relevant EU policies, e.g. Sustainability, Environment and Energy, since 40-45% of Europe's energy consumption stems from buildings with a further 5-10% being used in processing and transport of construction products and components (Athanasopoulou et al., 2019).

The EU has put in place a comprehensive legislative and regulatory framework for the construction sector, including corresponding European standards. Health and safety in construction and the free movement of engineering/construction services and products are important policy priorities. Concerning the construction activity itself, the focus is on the competitiveness of the sector, not least in the field of sustainable construction.

European legislation defines the essential requirements that goods must meet when they are placed on the market and the European standards bodies have the task of drawing up the corresponding technical specifications. In the construction sector, the Construction Products Regulation¹ (CPR) is delivered to enable the proper functioning of the internal market for construction products by establishing harmonised rules on how to express their performance. Technical specifications shall be drawn by European standardisation bodies and shall be based on seven Basic Requirements (BR) for construction works:

1. Mechanical resistance and stability;
2. Safety in case of fire;
3. Hygiene, health and the environment;
4. Safety and accessibility in use;
5. Protection against noise;
6. Energy economy and heat retention;
7. Sustainable use of natural resources.

The free movement of construction-related products and services is facilitated by the EU-wide implementation of common European technical standards for the structural design of buildings and other construction works-the Eurocodes.² They are recommended means of giving a presumption of conformity with the basic requirements of the CPR in particular BR1 "Mechanical resistance and stability" and BR2 "Safety in case of fire".

The European Standardisation system relating to the construction sector is a comprehensive system of design standards that comprises the Eurocodes, along with material and product standards, as well as execution and test standards (Figure 1.1). Thus, for the design and construction of buildings and other civil engineering works, the Eurocodes are intended to be used in combination with execution, material, product and test standards. This set of standards covers all aspects of construction, namely design rules, material properties, execution of structures and special works, specifications for construction products, as well as quality control (Athanasopoulou et al., 2019).

Figure 1.1. The European standard family for the construction sector (Source: <https://eurocodes.jrc.ec.europa.eu/>)



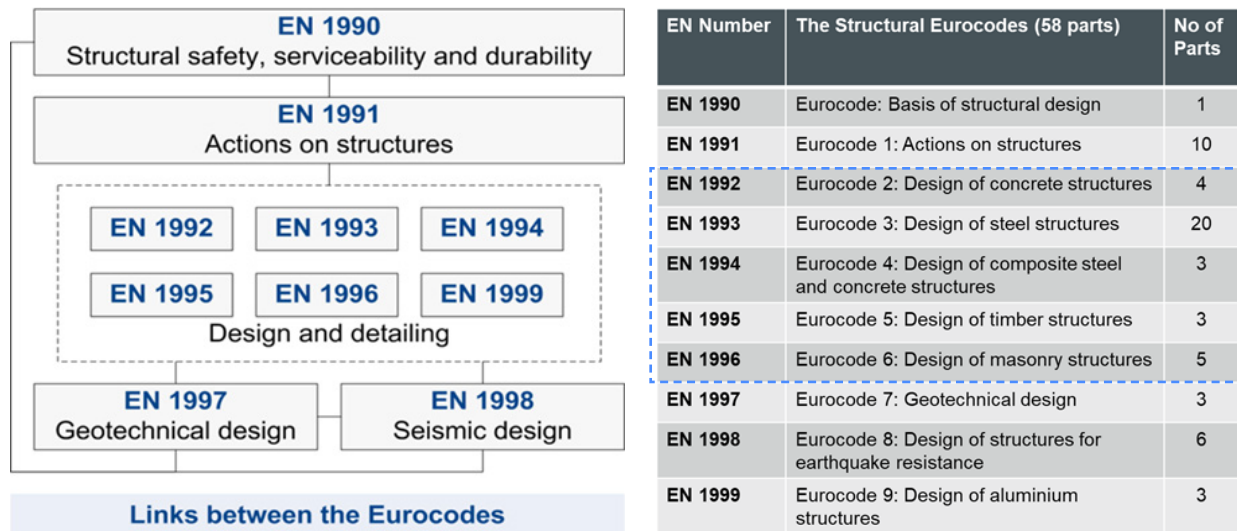
¹ <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:EN:PDF>

² <https://eurocodes.jrc.ec.europa.eu/>

What are the Eurocodes?

The EN Eurocodes are a series of 10 European Standards, EN 1990 – EN 1999, (Figure 1.2) providing a common approach for the design of buildings and other civil engineering works and construction products. The EN Eurocodes are the reference design codes. They cover the basis of structural design, actions on structures and the design of concrete, steel, composite steel-concrete, timber, masonry and aluminium structures, together with geotechnical, seismic and structural fire design. The EN Eurocodes are developed under the guidance and co-ordination of CEN Technical Committee 250 (CEN/TC250) "Structural Eurocodes". CEN/TC250 has the overall responsibility for all CEN work on structural design codes.³

Figure 1.2. Links between the Eurocodes (source: <https://eurocodes.jrc.ec.europa.eu/>)



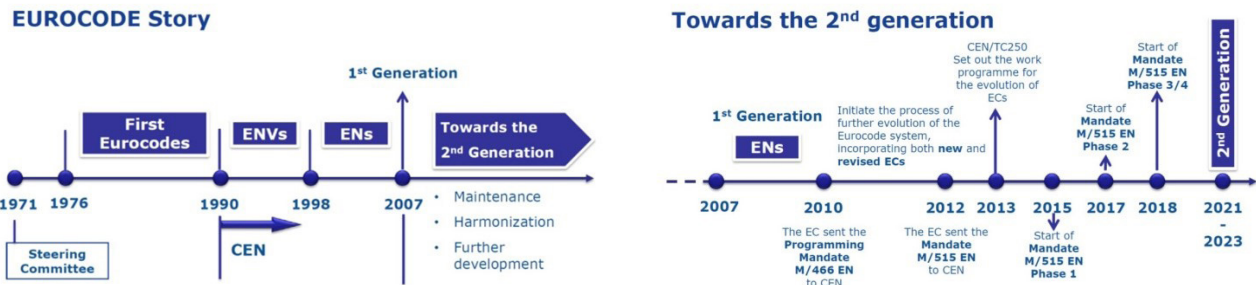
The considerable interest in the implementation and adoption of the Eurocodes in EU MS but also in third countries is based on the opportunity to have an advanced common standardization environment, which is adaptable to the particular requirements of each country and represents:

- a complete set of design standards that cover in a comprehensive manner all principal construction materials, all major fields of structural engineering and a wide range of types of structures and products;
- the most up-to-date codes of practice;
- flexible, offering the possibility for each country to adapt the Eurocodes to their specific conditions regarding climate, seismic risk, traditions, etc. through the Nationally Determined Parameters. Nationally Determined Parameters can also be adapted to the national approach and setup regarding risk and safety factors;
- are a major tool for the successful removal of trade barriers for construction products and services;
- contribute to the safety and protection of the people in the built environment, on the basis of the best possible scientific advice;
- are a common basis for technical and scientific collaboration.

The publication of the Eurocodes by CEN in May 2007 (Figure 1.3) marked a major milestone in the European standardisation for the construction sector, since the Eurocodes introduced common technical rules for calculating the mechanical and fire resistance, and the stability of constructions and construction products.

³ https://standards.cencenelec.eu/dyn/www/f?p=205:7:0:::FSP_ORG_ID:6231&cs=IDE5F6AD2EAID540EEF59F3719FCDFE7FE

Figure 1.3. EN Eurocodes – timeline (Source: Formichi, workshop “The way forward for the Eurocodes implementation in the Balkans”, 10-11 October 2018, Tirana, https://eurocodes.jrc.ec.europa.eu/showpage.php?id=2018_10_WS_Balkan)



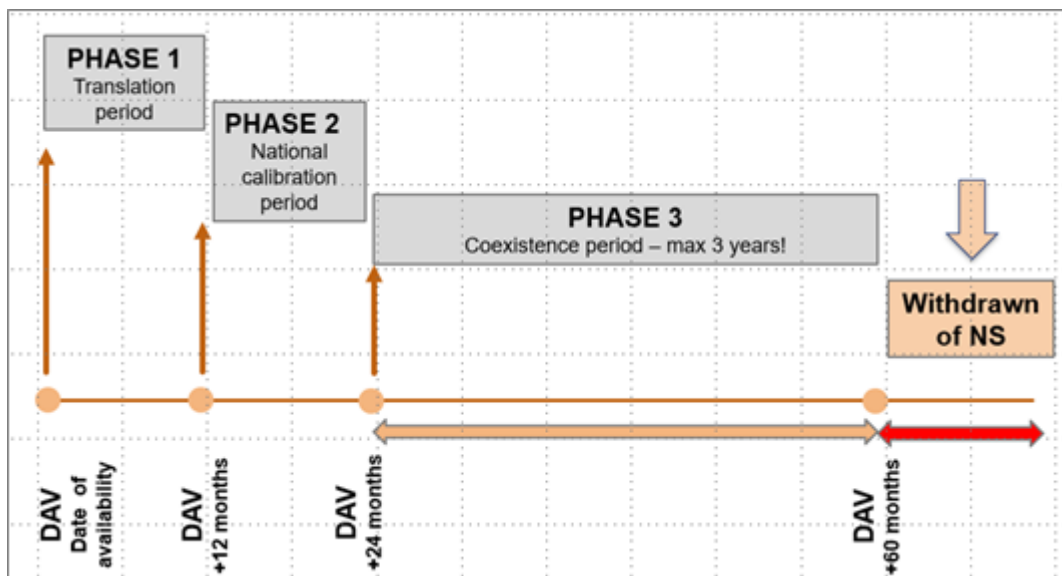
The adoption and implementation of the Eurocodes

The national implementation of a Eurocode Part has three phases: translation period, the National calibration period and the Coexistence period (Figure 1.4).

The National Authorities and National Standardization Body (NSB) should:

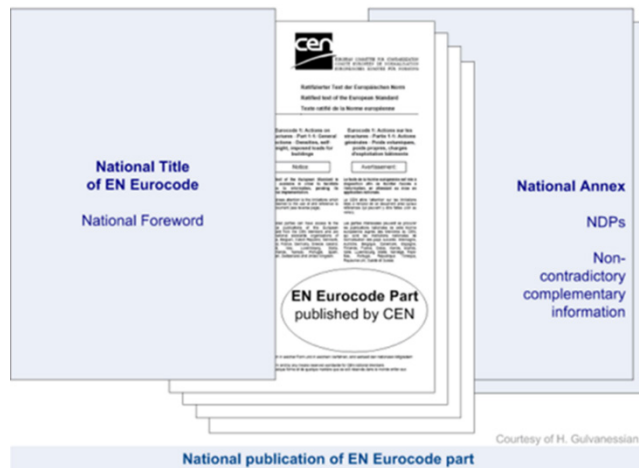
- Translate the Eurocode Part in authorised national languages;
- Set the Nationally Determined Parameters (NDP)s to be applied on their territory;
- Publish the [National Standard](#) transposing the EN Eurocode and the National Annex (NA), containing the national choice on the NDPs and reference to non-contradictory complementary information (NCCI), and notify the European Commission;
- Adapt, as far as necessary, their National Provisions so that the Eurocode Part can be used on their territory: (1) as a means to prove compliance of construction works with the national requirements for "mechanical resistance and stability" and "resistance to fire" and (2) as a basis for specifying contracts for the execution of public construction works and related engineering services;
- Promote training on the Eurocodes.

Figure 1.4 Phases in national implementation of the Eurocodes



The National Standard transposing the EN Eurocode Part, when published by NSB, will be composed of the EN Eurocode text (preceded by a National Title page and by a National Foreword), generally followed by a National Annex (Figure 1.5). The NSBs should normally publish a National Annex, on behalf of and with the agreement of the national competent authorities.

Figure 1.5 National publication of EN Eurocode part (Source: <https://eurocodes.jrc.ec.europa.eu/>)



Application of EN standards including the Eurocodes is voluntary according to the principle of the European Standardisation⁴. However, the national legislative provisions may refer to standards making the compliance with them compulsory. Thus, in relation to the implementation procedure of the Eurocodes Parts, it is important to stress that the regulatory environment in each country is very important. In the different regulatory environments, the national regulations either refer to standards - thus making the compliance with them compulsory- or introduce directly a set of design rules. In the latter case, no National Standards exist, and hence there is no need to withdraw conflicting standards. Contrary, there are countries where the rules for structural design are enforced by legislative acts, i.e. national regulations (Athanasopoulou et al., 2019).

The complete Eurocodes glossary (abbreviations and definitions) can be found at: <https://eurocodes.jrc.ec.europa.eu/showpage.php?id=7>.

Reference

Athanasopoulou A., P. Formichi, P. Spehl, I. Dabizheva, V. Gacesa-Moric, J. Markova, J. A. Calgaro, N. Malakatas, M. Lurvink, P. Croce, R. Apostolska, D. Sumarac, M. L. Sousa, S. Dimova, The implementation of the Eurocodes in the National Regulatory Framework, EUR 29601 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-79-98657-4, doi:10.2760/033434, JRC115175.

Links for Further Information on Eurocodes

- European Commission's Joint Research Centre: https://joint-research-centre.ec.europa.eu/index_en
- European Committee on Standardization (CEN): <https://www.cencenelec.eu/>
- Information on Eurocodes: <https://eurocodes.jrc.ec.europa.eu/>
- The Eurocodes Parts: <https://eurocodes.jrc.ec.europa.eu/showpage.php?id=13>
- National implementation of the Eurocodes: <https://eurocodes.jrc.ec.europa.eu/showpage.php?id=3>
- Use of Eurocodes outside EU: <https://eurocodes.jrc.ec.europa.eu/showpage.php?id=8>
- Training material published by the JRC: <https://eurocodes.jrc.ec.europa.eu/showpage.php?id=33#wslist>

⁴ Regulation (EU) 1025/2012 on European standardisation.