



Green/sustainable buildings Policy and standards: EU & India

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Agenda

- Overview
- Europe – Policy & Standards
- India – Policy & Standards



Overview

Europe:

- Construction sector is one of Europe's biggest industries, representing about 9% of the EU's GDP and 50.5% of gross fixed capital formation.
 - ✓ It is responsible for around 40% of CO2 emissions
 - ✓ It is responsible for over 35% of the EU's total waste generation.
 - ✓ Greenhouse gas emissions from material extraction, manufacturing of construction products, as well as construction and renovation of buildings are estimated at 5-12% of total national GHG emissions.
 - ✓ Greater material efficiency could save 80% of those emissions.

India:

- The building sector contributes immensely to the growth of the Indian economy, but due to its non-sustainable nature of construction, it is responsible for approximately 40% of the overall CO2 emissions.

Policy and Standards: Europe



CENELEC

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European strategy for a Sustainably Built Environment

- To increase material efficiency and reduce climate impact, European Commission launched a comprehensive **new strategy for a sustainable built environment** based on learnt lessons.
- European strategy for a Sustainably Built Environment represents an exhaustive plan aiming to guarantee a coherent integration between all the **policy strategic areas such as climate change, energy and resource efficiency, CDW management**, etc.
 - ✓ will promote **circularity principles of construction** throughout the lifecycle of buildings starting from an update to the **Construction Product Regulation**.
 - ✓ Strategy includes the possibility to require appropriate recycled content for construction products and to adopt a Life Cycle Assessment (LCA) methodology in public procurement.

Circular Economy Action Plan

- European Commission published a new [Circular Economy Action Plan \(CEAP\)](#) in March 2020.
 - ✓ One of the main building blocks of the [European Green Deal](#) , **Construction and Buildings** is one of the priority areas
 - ✓ It introduces legislative and non-legislative measures that focus on sectors that use most resources and where the potential for circularity is high, such as **construction and buildings**.
- **Measures that will be introduced under the new action plan aim to:**
 - ✓ focus on the sectors that use most resources and where the potential for circularity is high such as: electronics and ICT, batteries and vehicles, packaging, plastics, [textiles](#), **construction and buildings**, food, water and nutrients
 - ✓ make sustainable products the norm in the EU & empower consumers and public buyers
 - ✓ ensure less waste & make circularity work for people, regions and cities
 - ✓ lead global efforts on circular economy
- As part of Circular Economy Action Plan, EU has launched/funded the [Circular Cities and Regions Initiative \(CCRI\)](#) that focuses on implementing the circular economy across Europe's cities and regions.

Other Initiatives

- **Energy Performance of Buildings Directive (EPBD):**
 - Main legislative instrument regulating buildings across Europe
 - It aims at **fostering energy efficiency** and to accelerate the **deployment of renewable energy sources** in the building sector
- **EU Ecolabel for Construction Products:**
 - EU Ecolabel certifies the environmental performance of products, incl. construction materials.
 - This helps consumers and professionals make environmentally conscious choices when selecting materials for construction projects.
- **Green Building Certifications:** assess and reward buildings for their environmental performance.
 - Certifications like [BREEAM \(Building Research Establishment Environmental Assessment Method\)](#) and **LEED (Leadership in Energy and Environmental Design)** are **gaining prominence**.
- **National Building Codes and Standards:**
 - Several European countries have updated their building codes to include specific provisions for energy efficiency and sustainability.
 - ✓ These codes set minimum requirements for new constructions and renovations to meet certain environmental standards.

Standardization: CEN CENELEC

- **CEN/TC 350** ‘Sustainability of construction works’ provides a standardized approach for the **delivery of environmental information on construction products**, the **assessment of the environmental, social and economic performance of new and existing construction works** (buildings and civil engineering works), and more generally the **sustainability performance of construction works**.
 - ✓ In 2020, **CEN/TC 350/SC 1** ‘Circular economy in the construction sector’ was created: The purpose of this subcommittee is to develop deliverables enabling the **transition from a linear to a circular economy of the construction sector to support a climate neutral and resource efficient sector**.
- **CEN/TC 351** ‘Construction products - Assessment of release of dangerous substances’ develops projects under the standardization request **M/366**,
 - ✓ development of horizontal standardized assessment methods for harmonized approaches relating to dangerous substances under the construction products regulation. It addresses topics, such as **emission to indoor air, and release to soil, surface water, and ground water**.
- **CEN/TC 371** ‘Energy performance of buildings’ is concerned with standardization related to the **energy performance of buildings (EPB)**.
 - ✓ The TC ensures the development, alignment and maintenance of a coherent set of standards for the determination of the EPB by developing standards at overarching EPB level and by coordinating the activities of related and specialized TCs that are responsible for the development of EPB standards within their scope, thereby ensuring harmonization.

Standardization: CEN CENELEC

- **CEN/TC 127** '**Fire safety in buildings**' develops standards for the assessment and classification of the fire behavior of building products, components and elements of construction and fire risks related to their application and more generally for fire safety in buildings.
 - The Construction Products Regulation (CPR) is a key legislation for fire safety in buildings.
- **CEN/CLC/JTC 11** '**Accessibility in the built environment**' provides a standardized approach under standardization request Mandate **M/420** to support the European accessibility requirements for public procurement in the built environment.
 - The accessibility of the built environment is a key element to assure the effective participation of EU citizens in the everyday life, as well as the suitability of the buildings, streets, parks, to being effectively used by people notwithstanding their disabilities or age.

Policy and Standards: India



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National Building Code of India 2016

- National Building Code of India (NBC): BIS,

- ✓ It serves as a Model Code for adoption by all agencies involved in building construction works be they Public Works Departments, other government construction departments, local bodies or private construction agencies.
- ✓ a comprehensive building Code and, is a national instrument providing guidelines for regulating the building construction activities across the country.

- The Code mainly contains:

- ✓ administrative regulations, development control rules and general building requirements; fire safety requirements; stipulations regarding materials, structural design and construction (including safety); building and plumbing services; **approach to sustainability**; and asset and facility management.

Smart City Mission

- Government of India introduced “[Smart Cities Mission](#)” initiative on 25th June 2015 to develop 100 smart cities all over the country to:
 - ✓ drive economic progress and boost the quality of life by fueling local development and harnessing technology to create smart outcome for the citizens.
- Smart Cities Mission includes the development of smart and **sustainable buildings** as a key component.
 - This involves integrating technology and data to improve **energy efficiency**, water management, and **overall sustainability** in urban development.
- The Union Housing and Urban Affairs Ministry has decided to extend the deadline for the Smart Cities Mission till **June 2024**, following requests from some cities that sought more time to complete their ongoing projects.

Other initiatives

- **Model Building Bye Laws (MBBL) 2016:**

- provided guidelines for **sustainable buildings to reduce energy** and water consumption to 50% of the present consumption in conventional buildings.

- **National Mission on Sustainable Habitat (NMSH):**

- This mission, under the **National Action Plan on Climate Change (NAPCC)**, aims to promote sustainable and climate-resilient urban development.
- It includes measures to **enhance energy efficiency in buildings and promote green and sustainable construction practices.**

- **Energy Conservation Building Code (ECBC):**

- The ECBC sets energy performance standards for commercial buildings. It aims to promote energy efficiency in the design and construction of commercial buildings.

- **Eco-Niwas Samhita:**

- This is the Energy Conservation Building Code for Residential Buildings (ECBC-R).
- It sets the minimum energy performance standards for residential buildings and aims to promote energy-efficient practices in the residential construction sector.

- **Pradhan Mantri Awas Yojana (PMAY):**

- The affordable housing scheme, PMAY, includes a component that encourages the use of **environmentally sustainable construction practices.** It aims to promote the construction of **energy-efficient and eco-friendly homes.**

Standardization: BIS

- **CED 29-Construction Management Including Safety In Construction Sectional Committee:**
 - Formulation of standards in the field of construction management and related aspects including **use of digital technologies**
- **CED 58-Sustainability in Building Construction Sectional Committee:**
 - Standardization in the area of sustainability of built environment.
- **CED 59-Smart Cities Sectional Committee Sectional Committee:**
 - Standardization in the field of smart cities terminology, components, planning, design, integration, implementation, operation, maintenance and assessment

Thank you!

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