Establishing a platform on EE standards in buildings
The United Nations Economic Commission for Europe

56 member States in Europe, Central Asia and North America

One of the five ECOSOC Regional Commissions

8 thematic sub-programmes:
• Economic cooperation
• Environment
• Forestry
• **Housing and land management**
• Statistics
• Sustainable Energy
• Trade
• Transport
Committee on Housing and Land Management

Established in 1947
Mandate: to improve housing, urban sustainability and land governance
Areas of work

1. Sustainable housing and real estate market

2. Sustainable urban development

3. Land Administration and Management

4. Country Profiles
Sustainable housing

Social housing


Energy-efficient housing

Practical examples on means of implementation (2013)
Geneva UN Charter on Sustainable Housing

**Main purpose:** to ensure the access to decent, affordable and healthy housing in the ECE region

**Scope:** to improve the sustainability of housing in the ECE region through effective policies and actions at all levels, supported by international cooperation

**Four principles:**
- Environmental protection,
- Economic effectiveness,
- Social inclusion and participation,
- Cultural adequacy
Housing: overview of the sector

Western Europe, Canada & U.S.

- 3/4 of the building stock is residential; (apartment blocks 36%; single-family houses 64%
  - The annual growth rate in residential buildings is 1%
  - More than 40% of residential buildings constructed before the 1960s
  - 1970s – beginning of energy building regulations in the Western countries
  - 1972 – first energy efficient building was designed in the U.S.
  - 1976 – Germany was the first country in Europe to adopt a law on energy savings

Central Europe and Baltic states

- 50% of the existing housing stock constructed between 1960 and 1990
  - Predominance of private homeownership: mass privatization in the 1990s resulted in owner-occupation rates from 80 to over 90%
  - Main issue: the management and rehabilitation of high-rise multi-family housing

Eastern Europe, Caucasus and Central Asia

- Multi-family panel-built deteriorated housing blocks with low levels of energy efficiency
  - Very low awareness of potential energy savings
  - Very little information available on existing energy efficiency initiatives
  - Energy-efficient housing stock not a top state priority
  - Energy-efficiency policies within the framework of international cooperation programmes
Statistics on performance of buildings

- 40% of global total energy consumption
- 60% of global electricity use
- 40% of global GHG emissions
- 12% of global fresh water use
- 30% of global resource consumption
- 10% of global GDP
- 111 million people employed
Main barriers to EE in the housing sector

Lack of:

- Information
- Legal and institutional framework
- Resources
- Experience
- Technology and knowledge

Energy efficiency trap
HLM integrated approach

- Design a legislative framework
- Create management structures in multi-family housing blocks
- Raise awareness on energy efficiency benefits and prospects
- Conduct building assessments
- Develop and provide access to financial instruments
Energy efficiency Standards in buildings (1/2)

1. Proposal for developing a study on standards for EE in buildings (ECE/HBP/2014/4) - accepted in October 2014

2. Survey on building standards and regulations (March 2015)

3. Expert Consultation on EE standards in buildings (April 2015)

4. Establishment of a UNECE Task Force on building codes and standards on energy efficiency in buildings
Outcomes of the survey on building standards and building regulations (1)

Q3. Respondents per subregion

Q7. Type of standards used

Q11. The major challenges in the area of standards in buildings
Outcomes of the survey on building standards and building regulations (2)

<table>
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<tr>
<th>Q15. The role of UNECE in assisting member States in improving EE standards in buildings</th>
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<tr>
<td>Develop best practice guidance on inspection and enforcement</td>
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<td>Map existing energy efficiency standards in buildings</td>
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<td>Establish a database and network of experts in the area of building standards</td>
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<td>Establish a regional platform to develop, collect and analyse housing standards</td>
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<td>Establish partnerships with different international organizations dealing with building standards</td>
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<td>Establish a common database for building regulations</td>
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<td>Discuss experiences and best practices in adapting existing international and national standards to the national and subnational...</td>
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<td>Develop minimum acceptable standards for adequate and healthy housing</td>
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<td>Establish a Building Standards Harmonization Technical Group</td>
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<td>Harmonize some priority building materials standards</td>
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<td>Other</td>
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<td>Update the UNECE Compendium of 1995 of building standards</td>
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<td>Develop new standards for areas not yet fully covered</td>
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Outcomes of the survey on building standards and building regulations (3)

Q16. Priority areas for the UNECE

- Electrical appliances: 20.4%
- Lighting: 27.8%
- Other: 27.8%
- Heating and water-based cooling systems (HVAC) in buildings: 42.6%
- Minimum habitable standards for a healthy and safe living: 51.9%
- Construction materials: 53.7%
- Thermal performance of buildings and building components: 74.1%
Suggested activities for the task force

Informal Task Force on EE Standards in Buildings

Activities

• Mapping EE standards for buildings and preparing gap analyses
• Preparing guidance materials
• Promoting partnerships
• Establishing an expert network
• Developing and organizing training programmes
• Elaborating national and regional profiles on building standards
Thank you for your attention

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