

# Outcomes of the Survey on Building Standards and Building Regulations in the UNECE Region



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United Nations Economic Commission for Europe

**Outcomes of the Survey on Building  
Standards and Building Regulations in the  
UNECE Region**

Geneva, 2015

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## INTRODUCTION

Standards are documents based on voluntary compliance, established by consensus, and approved by a recognized body. They provide, for common and repeated use, rules, guidelines or characteristics for activities or their results. Standards are aimed at the achievement of the optimum degree of order in a given context, and should be based on the consolidated results of science, technology and experience, and aim to promote community benefits.<sup>1</sup>

Technical regulations, on the other hand, are mandatory requirements for the design, content, operation, and disposal of products to protect health and safety or minimize environmental damage.

Standards may be international or national. International standards are those developed by international standards organizations, such as, the International Organization for Standardization (ISO). These standards are available for consideration and use worldwide. Governments also develop national standards, which describe and fit specific country conditions.

The benefits of using standards are widely recognized. Their application:

- Promotes harmonization of common practices, procedures and product specifications which allows compatibility across borders, in the case of international standards, and within countries, in the case of national standards. In addition, the use of international standards enables the creation of harmonized, stable and globally-accepted frameworks of technologies, best practices and agreements, which support sustainable development.
- Encourages better access to new technologies and best practices by reducing costs and complexity, opening markets and promoting broader access to products and services.
- Reduces the risk of the proliferation of non-compliant and often dangerous goods and practices across countries, and increases safety through harmonized and up-to-date processes and measures.
- Supports the use of clear and transparent rules, which improve consumer confidence and protection, and safeguard the interests of relevant stakeholders.

Standards can be used to show compliance with the requirements set by technical regulations and help minimize possible inconsistencies between countries. There are over 150 standards in energy efficiency and ISO, ITC and UNIDO have recently developed “ISO 50001 Energy Management Systems: A practical guide for SMEs”.<sup>2</sup> Standards, in conjunction with other policy tools, have a crucial role in expediting the uptake of energy-efficiency measures in the housing sector.

## THE UNECE EXPERIENCE IN THE DEVELOPMENT OF INTERNATIONAL STANDARDS

At the UNECE, work on standards is very well established. In the case of energy efficiency, they are covered by the following three entities:

- **The Committee on Housing and Land Management (CHLM)** provides policy advice and expert assistance on sustainable housing development, land administration and spatial planning. Since its establishment in 1947, it has actively promoted building codes and standards.<sup>3</sup>

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<sup>1</sup> ISO website: [www.iso.org/sites/ConsumersStandards/1\\_standards.html#section1\\_1](http://www.iso.org/sites/ConsumersStandards/1_standards.html#section1_1)

<sup>2</sup> A preview of the publication is available at [www.iso.org/iso/50001\\_handbook\\_preview.pdf](http://www.iso.org/iso/50001_handbook_preview.pdf)

<sup>3</sup> More information can be found at [www.unece.org/housing.html](http://www.unece.org/housing.html)

- **The Committee on Sustainable Energy (CSE)** oversees UNECE work on sustainable energy with a view to improving access to affordable and clean energy for all and helping reduce greenhouse gas (GHG) emissions and the carbon footprint of the energy sector. It oversees the activities of the Group of Experts on Energy Efficiency.<sup>4</sup>
- **The Working Party on Regulatory Cooperation and Standardization Policies (WP.6)** serves as a forum for dialogue among regulators and policy makers. It addresses technical regulations, standardization, conformity assessment, metrology, market surveillance and risk management. It promotes a holistic partnership in all phases of regulatory action, from standards-setting all the way through to regulatory enforcement.<sup>5</sup>

Information on previous activities on standards undertaken by the above-mentioned entities is given in Annex I.

## REASONS TO UNDERTAKE THIS NEW STUDY

Meeting the imperatives of sustainable development and a low carbon economy requires the efficient and effective management of energy transitions, in collaboration with all stakeholders. The UNECE is well-placed to support the new sustainable development agenda given its capabilities to develop normative instruments such as standards that are necessary to incite the required investment. In all of these areas, the UNECE's work on the development of normative instruments is expected to have a direct, material impact and to catalyse or accelerate the transition to a future of sustainable energy.

Standards play an important role in the recent developments in the international agenda to support increased access to more sustainable energy. They are an effective instrument for addressing energy efficiency in buildings and for supporting the achievements of the targets set by several international initiatives such as the Global Goals, the Sustainable Energy for All Initiative, and the Geneva UN Charter on Sustainable Housing. These initiatives stress the importance of energy efficiency to ensure energy security, mitigate GHG emissions and grant access to affordable energy for all.

In response, the UNECE Ministerial Meeting on Housing and Land Management, which took place in October 2013, emphasized the importance of setting energy-efficiency standards for buildings – for new constructions as well as for the refurbishment of existing residential buildings. During that Meeting, the “UNECE Strategy for Sustainable Housing and Land Management 2014-2020” was adopted.<sup>6</sup> According to the Strategy, by the year 2020, member States shall put in place:

- “Policies and legal frameworks to support and stimulate retrofitting of the existing residential housing stock in order to reduce its ecological footprint and make it more energy efficient...” (Target A1); and
- “Energy performance requirements and legislation for the issuance of energy performance certificates for new and existing residential buildings”.

The seventy-fourth session of the Committee, which took place back-to-back with the Ministerial Meeting, agreed the programme of work for 2014-2015, which included the preparation of documents requested by the Committee on improving housing energy efficiency, and on facilitating the maintenance, management and

<sup>4</sup> More information can be found at [www.unece.org/energy.html](http://www.unece.org/energy.html)

<sup>5</sup> More information can be found at [www.unece.org/trade/wp6/welcome.html](http://www.unece.org/trade/wp6/welcome.html)

<sup>6</sup> The document is available in three languages at: [www.unece.org/index.php?id=35252&L=0](http://www.unece.org/index.php?id=35252&L=0)

refurbishment of existing housing stock (item 1.5. of the programme of work) (ECE/HBP/2013/10).<sup>7</sup> This item supports the implementation of the Strategy.

The Executive Committee (EXCOM), the body which represents all the Committees of the UNECE, at its sixty-sixth meeting on 6 February 2014, approved the programme of work of the CHLM.

The seventy-fifth CHLM session in October 2014 endorsed a proposal by the Committee Bureau for the development of a study on standards related to energy efficiency in buildings and disaster risk reduction (ECE/HBP/2014/4).<sup>8</sup>

In line with the CHLM, the CSE, in its twenty-third meeting on 19-21 November 2014 agreed on the importance of standards and normative instruments in the housing, transport and industry sectors, to guide and increase the impact of energy-efficiency approaches. It further requested collaborative work with the CHLM (ECE/HBP/2014/4) to distil possible measures that could be included in a matrix on best-practices in energy efficiency.

## SURVEY OBJECTIVES AND APPROACH

A questionnaire was jointly developed by the CHLM and the CSE to identify the most important areas and activities in the field of building standards and regulations where the UNECE can support member States. The survey had the following objectives:

- To obtain general information on the situation in the member States in the field of building standards and regulations, in particular on energy efficiency in buildings;
- To obtain general information on the main challenges that member States face in this sector; and
- To identify the role that the UNECE can play in better assisting member States in this matter.

Invitations to participate in the survey were sent to the networks of both Committees, and in particular to potential respondents who represented the following three clusters of stakeholders:

1. CHLM and CSE focal points in 56 member States
2. Members of the UNECE Group of Experts on Energy Efficiency
3. International experts, representing international intergovernmental and non-governmental organizations, the private sector and academia.

The questionnaire was made available online in English from 27 March until 15 May 2015.

Countries of the region differ greatly in the area of building standards. In order to analyse these differences, the respondents were requested to select their subregion as follows:

- A. European Union (EU) Member States prior to 2004 (EU15)<sup>9</sup>;
- B. EU enlargement - the 12 countries that joined the EU after 2004<sup>10</sup> (EU12);
- C. Russian Federation, South-Eastern Europe, the Caucasus and Central Asia;
- D. United States and Canada; and

<sup>7</sup> Available at: [www.unece.org/fileadmin/DAM/hlm/documents/2013/ECE\\_HBP\\_2013\\_10.pdf](http://www.unece.org/fileadmin/DAM/hlm/documents/2013/ECE_HBP_2013_10.pdf)

<sup>8</sup> Available at: [www.unece.org/fileadmin/DAM/hlm/documents/2014/ECE\\_HBP\\_2014\\_4.en.pdf](http://www.unece.org/fileadmin/DAM/hlm/documents/2014/ECE_HBP_2014_4.en.pdf)

<sup>9</sup> It alphabetically includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

<sup>10</sup> It alphabetically includes Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.

#### E. Other countries.

This distinction will enable to better determine the specific challenges and needs of these five groups of countries, paying particular attention to the countries of the subregion of the Russian Federation, South-Eastern Europe, the Caucasus and Central Asia (subregion C). Moreover, the results of the questionnaire will also help to identify those countries that are in the process of developing their building standards.

For the purpose of this questionnaire, Switzerland and Norway are included in subregion A, even though they are not EU member states. This is due to economic and social development similarities with the original EU15.

To allow the Secretariat to analyse the main groups of stakeholders, the respondents were also asked to select the sector they represented:

- a) Private sector;
- b) Government agency;
- c) International organization;
- d) Non-government organization; or
- e) Other stakeholder.

A total of 84 responses were given, of which 52 fully completed the questionnaire.

### STRUCTURE OF THE REPORT - QUESTIONNAIRE RESPONSES

The structure of the report is based on that of the survey, and consists of three main chapters of five, nine and two questions, respectively. They are briefly introduced below:

**Chapter 1** (questions 1-5) relates to general information concerning the respondent.

**Chapter 2** (questions 6-14) describes the situation regarding building standards and regulations in the respondent's country, and the challenges that the building sector faces.

**Chapter 3** (questions 15-16) aims to understand the respondents' opinion of the role that the UNECE should play in the matter of building standards and regulations.

**Annex I** describes the experience of the three entities involved in this study in the area of building standards and regulations.

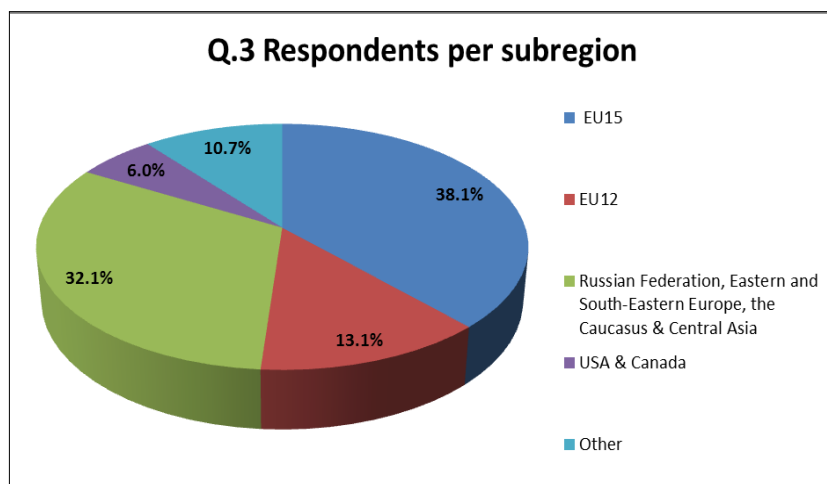
**Annex II** provides the full text of the questionnaire.



This section includes questions related to the personal details of the respondents, such as name, address, contact details, country, etc. Respondents have been categorized by subregion.

Most of the respondents (38.1%) belong to member States that joined the EU before 2004, followed by the countries of subregion C, and countries that joined the EU after 2004. There are ten responses from countries categorized as “Other”, which come from Australia, Brazil, India and Turkey.

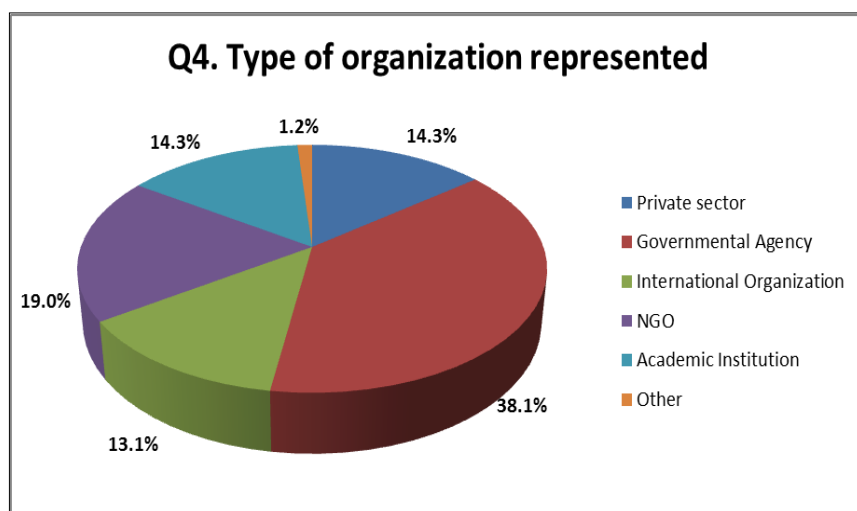
Figure 1: Respondents by subregion



Almost all respondents gave information on their own country. 3% of EU member state respondents gave information on another country.

As shown in the table below, the majority of respondents (38.1%) work for government agencies, 19% work for non-governmental organizations (NGOs). The rest are distributed almost equally between those that work for the private sector (14.3%), academia (14.3%) and international organizations (13.1%). One representative, an inter-governmental organization (Housing Europe), ticked “Other”. In this questionnaire all the relevant stakeholders are represented.

Figure 2: Type of organization represented



<sup>11</sup> Q with a number indicates the number of a question in the questionnaire.

If we only consider the answers from the countries of subregion C, the answer is slightly different, in that most of the respondents work in NGOs (37%), followed by international organizations (18.5%).

## CHAPTER 2: DESCRIPTION OF THE SITUATION IN THE RESPONDENT'S COUNTRY (Q6-Q14)

The housing sector in the UNECE region is very diverse. In subregions A and D, three quarters of the building stock is residential, with 36% composed of apartment blocks and 64% of single-family houses. In these countries more than 40% of residential buildings were constructed before 1960, and the growth rate is currently 1%. In subregion B, 50% of the housing stock was constructed between 1960 and 1990. There is a predominance of private homeownership, due to mass privatization in the 1990s, which resulted in very high owner-occupier rates (80% -90%). In subregion C, the housing stock is mainly represented by multi-family panel-built deteriorating housing blocks with low levels of energy efficiency.

Energy efficiency was first legally taken into consideration in the countries of subregions A and D at the beginning of the 1970s when the first energy building regulations started to be discussed. In 1972, the first energy-efficient building was designed in the U.S. and, in 1976, Germany was the first country in Europe to adopt a law on energy savings. The situation of the countries located in subregion C is completely different. Very little information concerning energy efficiency is available. In several cases, energy efficiency is not a top priority for the government, and support for energy-efficiency policies happens only within the framework of international cooperation programmes.<sup>12</sup>

### 2.1 INSTITUTIONS (Q6)

There is no unified system of institutions responsible for developing building norms and standards in the UNECE region. In most of the countries, the same institutions are responsible for developing building standards, regulations and codes, and technical requirements for buildings. In more than 50% of the respondent countries, a national body, usually supervised by the relevant ministry, develops such regulations. According to the data, in 26% of cases, the ministry is responsible for building standards. However, responses may refer to the national body, under the relevant ministry, mentioned above. In the remaining responses, other institutions are mentioned, such as universities, specialized organs, provincial agencies and local government.

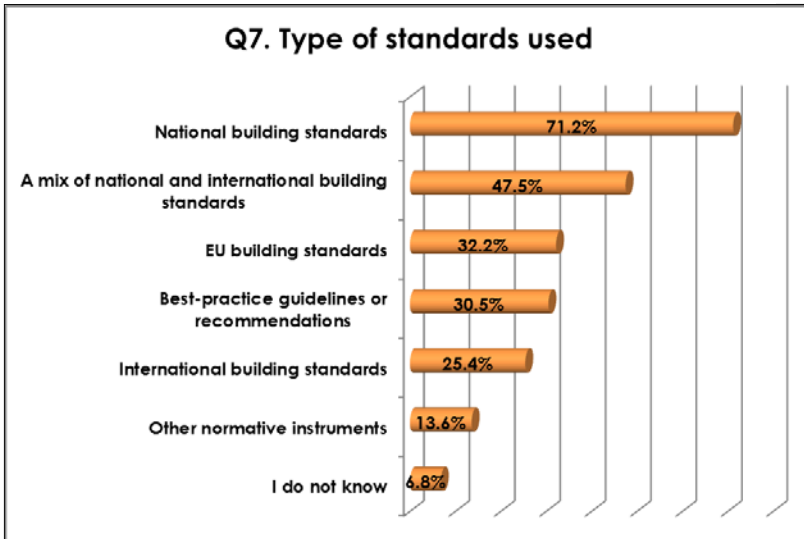
### 2.2 TYPE OF BUILDING STANDARDS USED (Q7)

Most of the respondents (71%) confirmed that the country for which they completed the questionnaire uses national building standards. A considerable number of countries (47.5%) use a mixture of national and international standards. EU building standards are used by 32.2% of countries, while 30.5% use best-practice guidelines or recommendations. 25.4% of the respondents confirm the use of international building standards.

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<sup>12</sup> All data in this paragraph have been taken from “Good practices for energy-efficient housing in the UNECE region”, available at: [www.unece.org/fileadmin/DAM/hlm/documents/Publications/good.practices.ee.housing.pdf](http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/good.practices.ee.housing.pdf)

Figure 3: Type of standards used



If we analyse the situation according to subregion, we see that, in subregion C, almost the same ratio of responses is found. In 68% of responses, countries use national standards. The other alternatives (the use of international building standards, and a mixture of national, EU and international building standards) are then equally divided.

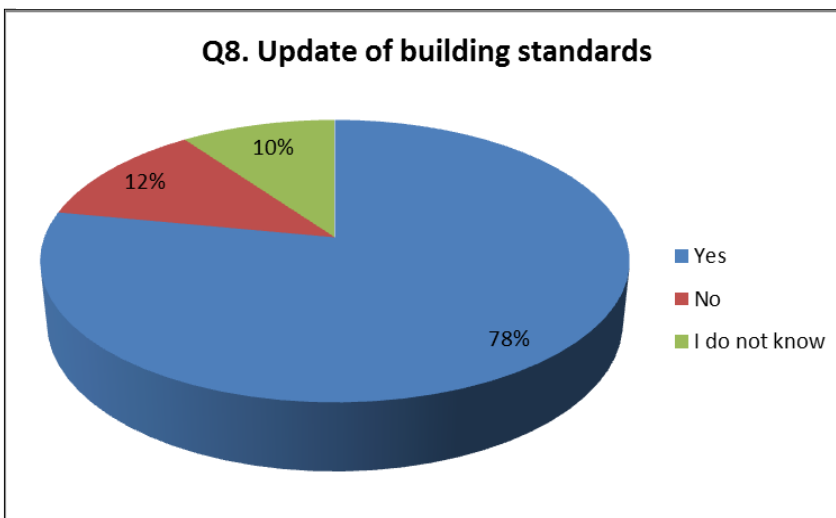
The situation in the EU15 group is slightly different. The use of national standards is confirmed by 81% of respondents, while 48% indicate the use of EU building standards.

The majority of respondents from the countries of the EU12 (75%) indicate the use of national building standards as the prevailing system, in line with EU standards, whose use is confirmed by 50% of respondents.

### 2.3 UPDATING BUILDING STANDARDS (Q8– Q10)

Almost all the respondent countries (78%) affirm having updated their building regulations in the last three years, and a slightly higher percentage (82%) declare that their country plans to do so.

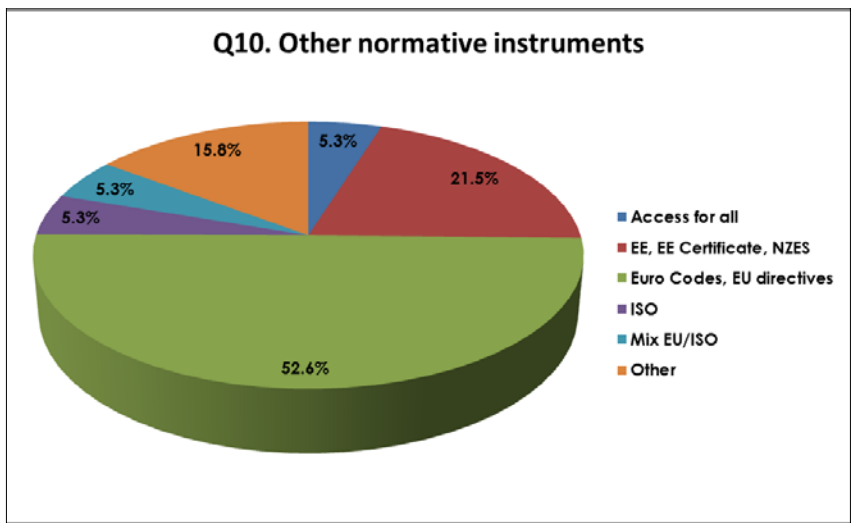
Figure 4: Update of building standards



For the countries of subregion C, the figures are higher. 84% of respondents indicate that their country has updated its building regulations in the last three years. The same percentage indicates that their country is going to revise them.

In Q10, respondents were asked whether their countries are planning to adopt other normative instruments. 52.6% indicate a willingness to adopt Eurocodes and EU directives, and 21.5% energy-efficiency standards and related regulations.

Figure 5: Other normative instruments

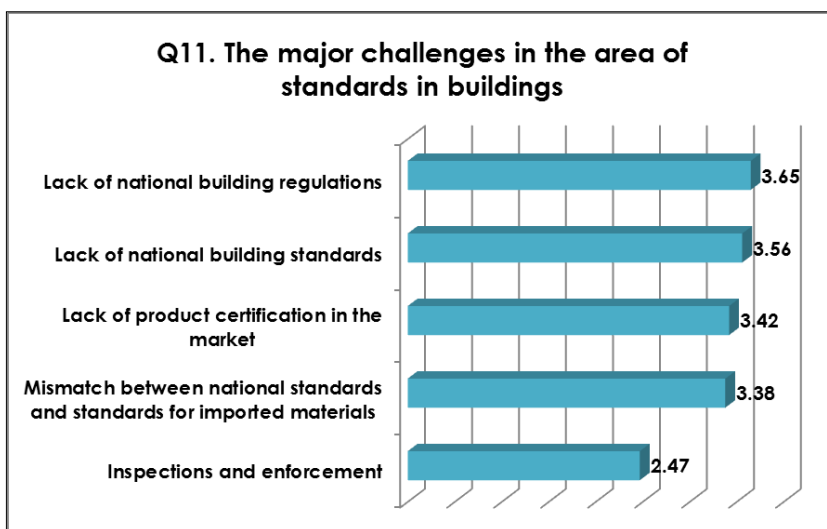


## 2.4 MAJOR CHALLENGES (Q11)

Q11 is the first of a set of questions aimed at understanding the major problems faced by the housing sector in the UNECE region. In particular, this question focuses on the challenges that the building sector faces in the area of standards and regulations.

The respondents were asked to rate the major challenges from 1 to 5, with 1 being the most important and 5 the least relevant. A small majority of respondents declared that “Lack of national building regulations” is the major challenge, with a rating of 3.65 out of 5. It is followed by “Lack of national building standards”, rated 3.56. “Lack of product certification in the market”, “Mismatch between national standards and standards for imported materials”, and “Inspections and enforcement” are at the bottom of the list.

Figure 6: The major challenges in the area of standards in buildings



The first four issues, as shown in the table above, reveal only a very small difference in responses, indicating that they are almost equally important for the respondent countries.

The rating average differs slightly for subregion C. “Lack of national building regulations” (3.11) and “Lack of national building standards” (3.6) take the first two places, as in the general result. They are followed in third place by “Mismatch between national standards and standards for imported materials” (3).

Other challenges listed by respondents in “Other” include:

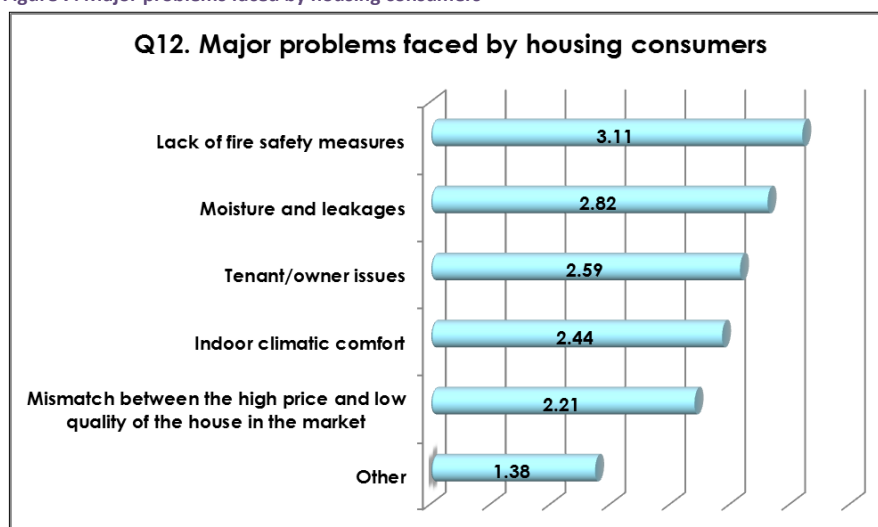
- High market costs, limited or no government incentives, limited housing refurbishment
- Bringing the level of construction and design skills in line with market requirements
- Lack of control and monitoring of the implementation of standards
- Training, implementation of standards, planning security
- Lack of:
  - Institutional capacity of local building sector specialists
  - Relevant knowledge in the field of building standards
  - Knowledge-sharing from advanced international experiences
  - Motivation for developing skills
- Capacity of private certifying workforce
- ISO standards
- Mismatch between national and provincial standards
- Lack of best quality specification
- Harmonization of the building standards among the regions of federal countries

## 2.5 MAJOR PROBLEMS FOR CONSUMERS (Q12)

Q12 aims at identifying the major problems households face as housing consumers.

The major problem, according to all respondents, is the “Lack of fire safety measures”, rated at 3.11. This is followed by problems with “Moisture and leakages” (2.82), “Tenant/owner issues” (2.59), “Indoor climatic comfort” (2.44), and “Mismatch between the high price and the low quality of houses in the market” (2.21).

Figure 7: Major problems faced by housing consumers

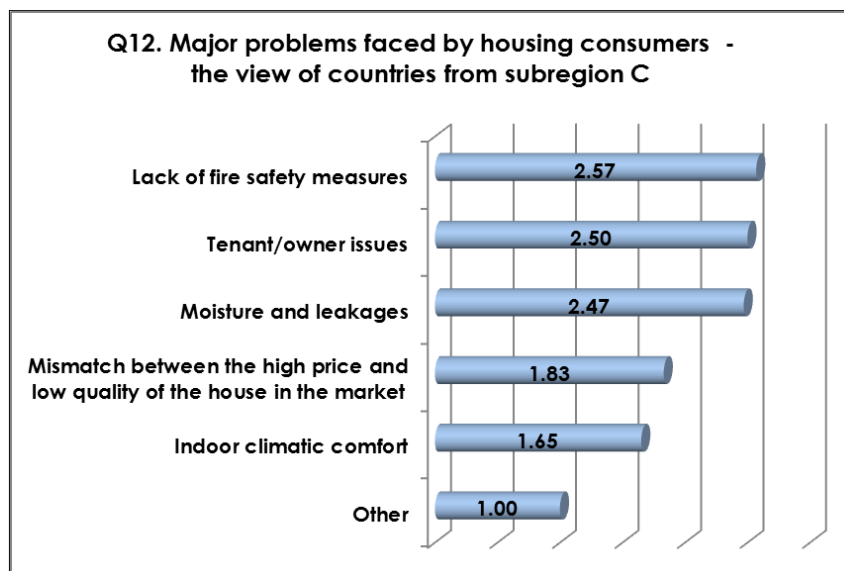


The option “Other” is mainly used by the countries of subregion C, which list the following issues:

- Problems with secure property title, registration of the title, responsibility of the quality of the building after construction
- Lack of motivation to save energy, low tariffs for electricity and for heat energy
- Lack of specific incentives for energy efficiency and energy performance certificates
- Non-compliance with energy performance requirements
- Lack of land for housing in growing regions
- Lack of housing organizations
- Misinformation about allegedly high costs of better products

The countries of subregion C attributed importance to the same problems, although the rates are slightly different as showed in the table below.

Figure 8: Major problems faced by housing consumers – the view of countries from subregion C



## 2.6 MAIN CAUSES OF THESE PROBLEMS (Q13)

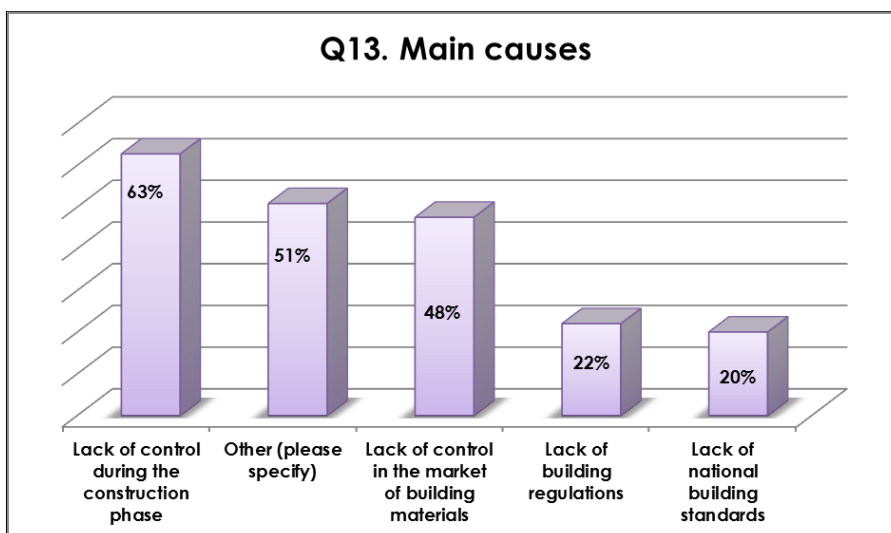
Q13 aims to identify the main causes and factors which resulted in the above-mentioned issues. The respondents had five choices to rate. “Lack of control during the construction phase” ranks first, followed by “Other” and “Lack of control of building materials in the market”.

In “Other”, respondents listed the following as the most important causes:

- A big gap between building regulations and constructor problems
- Up-skilling of industry (design and construction) to most recent standards
- Unbalanced property market in many regions
- Adequate insulation materials not commonly used
- Weak enforcement, low capacity of inspection, low level of awareness
- Wild growth in the building market

- Scattered ownership of dwellings
- Growing regions attract people for better employment markets
- Low/subsidized domestic prices for energy resources
- Lack of:
  - Financial incentives to save energy and funds
  - Information on energy efficiency and energy savings; undeveloped market of energy-efficient construction materials, etc.
  - Maintenance; and lack of training of building professionals
  - Financial mechanisms for energy-efficiency investments in the building sector
  - Quality control of installation works
  - Confidence in policy makers
  - Political will
  - ISO standards
  - Lack of “rule of law”
  - Implementation of regulations and control
- Poor understanding of the codes; poor training and poor/lack of refresher courses for workers
- High price level in the housing market and speculation
- Special interests of industry

Figure 9: Main causes



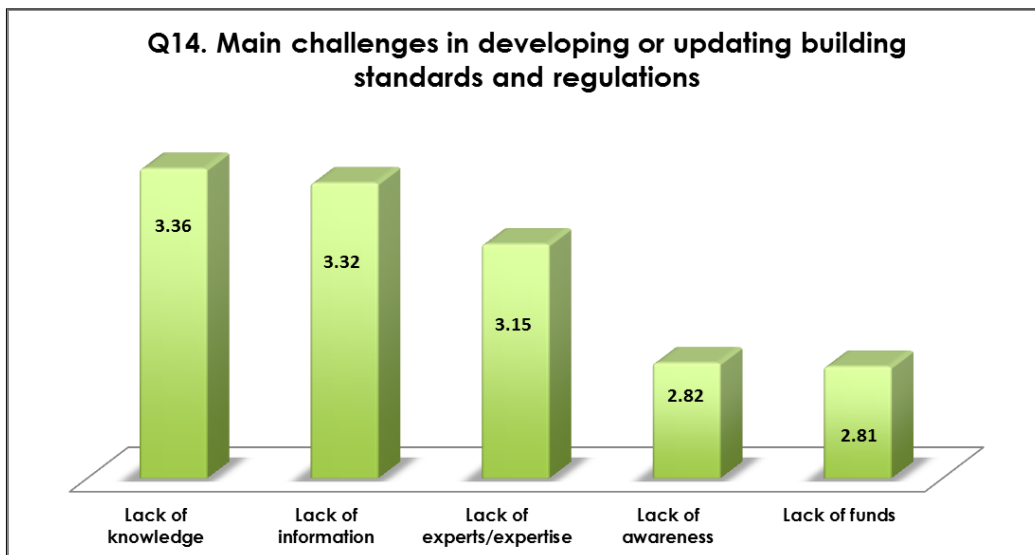
## 2.7 MAJOR CHALLENGES COUNTRIES FACE IN DEVELOPING BUILDING STANDARDS (Q14)

According to the respondents, the two major challenges that countries in the ECE region face in developing and/or updating building standards and/or regulations are “Lack of knowledge”, followed by “Lack of information”.

Other challenges listed include:

- Lack of policy drive, ownership structure
- Lack of research into new areas (i.e., use of radon); energy efficiency
- High level of bureaucracy within state structures regarding development of regulations; and lack of skills and capacity
- Lobbying pressure
- Lack of political will
- Lack of social recognition of the need for building standards
- Lack of government policy leadership and direction
- Capacity and coordinating outcomes between different jurisdictions (regulators)
- ISO standards
- Requirements for car parking increases construction (and overall) costs
- Low priority for building regulations
- Energy requirements are too political (EU directives)
- Lack of in-depth information - there is abundant misinformation

Figure 10: Main challenges in developing or updating building standards and regulations



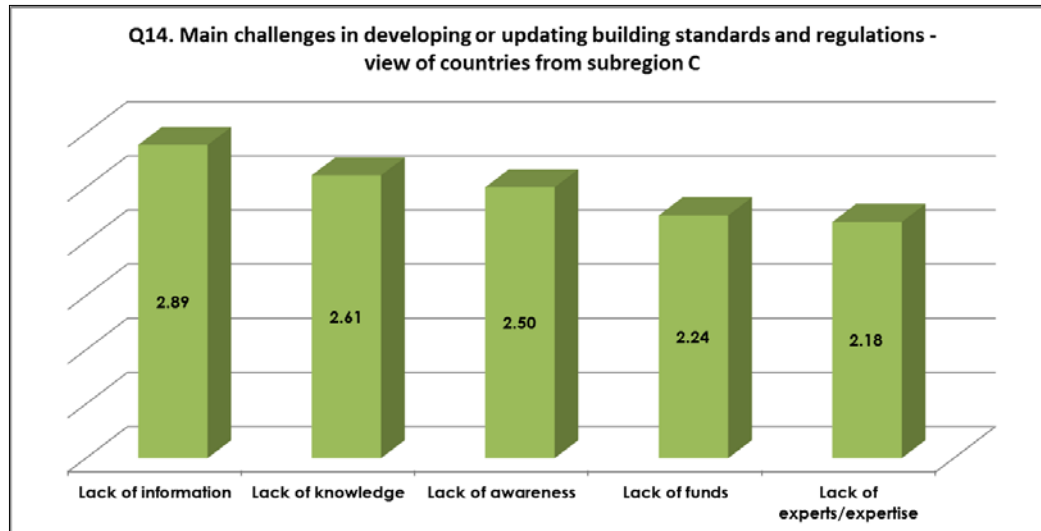
For countries of subregion C, the major challenges are the “Lack of experts/expertise” and the “Lack of funds”. Other challenges identified, which are listed under “Other”, include:

- High level of bureaucracy within state structures regarding the development of regulations
- Lack of skills and capacity



- Lack of political will and low priority of the topic for the government

Figure 11: Main challenges in developing or updating building standards and regulations – the view of countries from subregion C



### CHAPTER 3: ROLE OF THE UNECE IN BUILDING STANDARDS AND REGULATIONS (Q15-Q16)

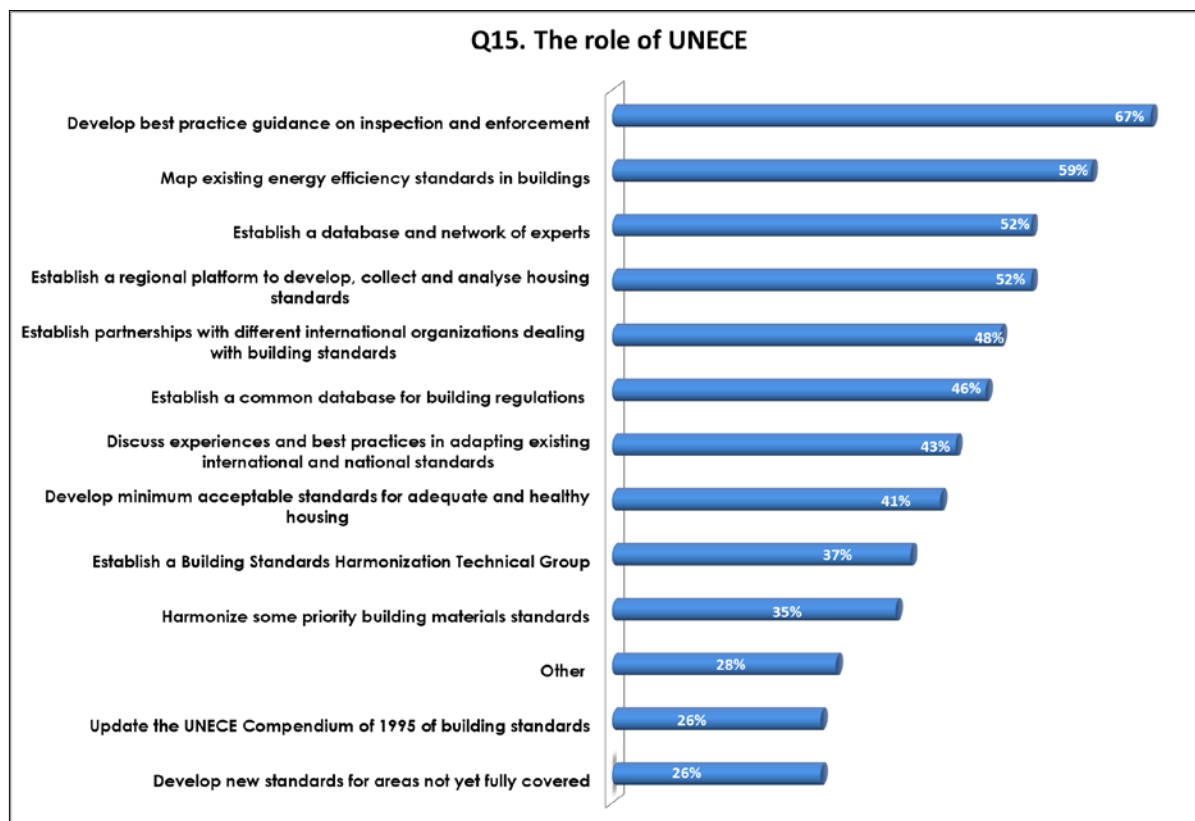
As mentioned above, one of the major aims of this survey was to get the views of member States on the role that the UNECE can play in better assisting them in the matter of building standards and regulations, with a special focus on energy efficiency. This set of questions serves to identify the possible future steps that UNECE work on energy-efficiency standards in buildings could take.

#### 3.1 THE ROLE OF THE UNECE IN ASSISTING MEMBER STATES IN IMPROVING BUILDING STANDARDS (Q15)

According to the data, respondents believe that “Developing best-practice guidance on inspection and enforcement of regulations” would be the best way to assist member States. This data is rather misleading, since the entry “Inspections and enforcement” ranked last in Q11, concerning the main challenges of the building sector in building standards. Another main activity is the “Mapping of existing energy-efficiency standards in buildings” (56%). This reply is justified by the “Lack of information” and “Lack of knowledge” that rank highest among the major challenges of countries with regards to building standards. Respondents also believe that the UNECE can assist member States by “Establishing partnerships with different international bodies and professional organizations that deal with building standards”.

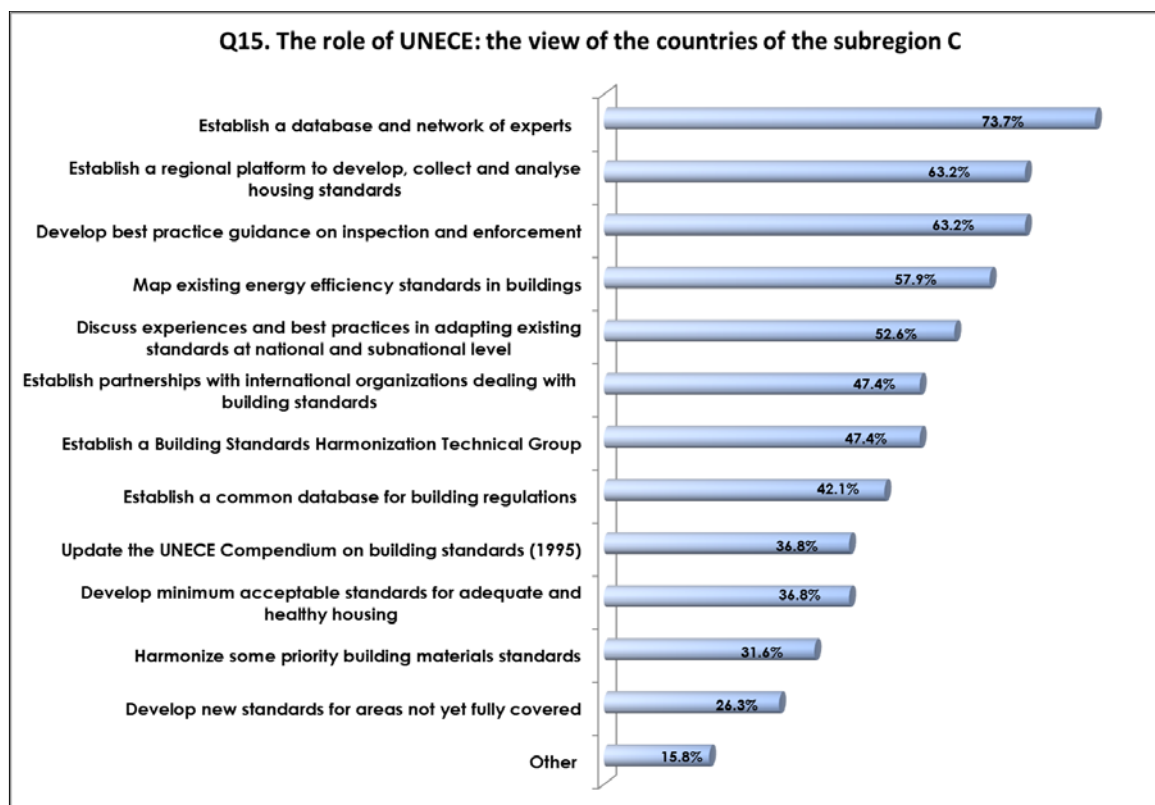
The 13 possibilities are listed in the chart below with the relative scores.

Figure 12: The role of the UNECE



Countries of subregion C have slightly different priorities. They believe that “Establishing a database and network of experts” will be more helpful to them. Their priorities are mostly related to establishing partnerships and platforms for the exchange of experience and the development of guidance.

Figure 13: The role of the UNECE - the view of countries from subregion C



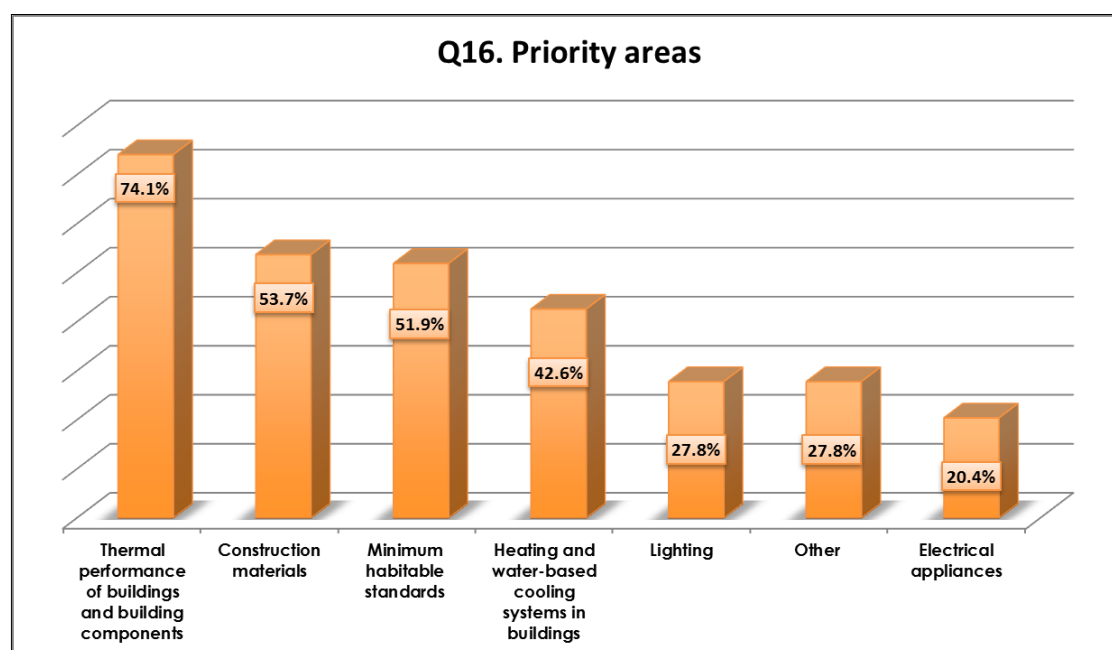
Respondents from government agencies and the private sector also share these priorities.

For NGOs, the best way to assist member States is by “Developing best-practice guidance on inspection and enforcement” and by “Establishing partnerships with different international bodies and professional organizations dealing with building standards”.

### 3.2 THE PRIORITY AREAS FOR THE WORK OF THE UNECE IN STANDARDS FOR ENERGY EFFICIENCY IN BUILDINGS (Q16)

According to the respondents, the highest priority area for the UNECE is the “Thermal performance of buildings and building components”, followed by “Construction materials” and “Minimum habitable standards for healthy and safe living”.

Figure 14: Priority areas for the UNECE



Other priority areas not included in the list, but indicated by the respondents under “Other”, include:

- Sensitize governments to the environmental and energetic issues of buildings
- Sustainability issues
- Ventilation in habitable rooms and roof spaces
- Use of renewable energy technologies
- Quality of installation works
- Solar energy technology improvement and application
- Mobility issues
- Role of housing organizations in applying building standards
- Capacity-building for policy makers

The representatives of government agencies and of the private sector share these priorities, and at the same rate of importance.

# ANNEX I

## THE UNECE EXPERIENCE ON THE DEVELOPMENT OF BUILDING STANDARDS

### A) THE WORK OF THE COMMITTEE ON HOUSING AND LAND MANAGEMENT (CHLM)

The former Working Party on Building of the CHLM conducted analyses of national building regulations in the UNECE region and promoted the international harmonization of their technical specifications.<sup>13</sup>

A number of studies were undertaken and published, including the “List of International Standards and Similar Documents Relating to Building Activity” (ECE/HBP/48/Rev.1), “Building Regulations in ECE Countries” (ECE/HBP/52), “International Harmonization of Building Regulations in the ECE Region” (ECE/HBP/62), and “International Harmonization of Approval and Control Rules for Buildings and Building Products” (ECE/HBP/67).

The ECE Compendium of Model Provisions for Building Regulations (ECE/HBP/55)<sup>14</sup> was initially published in 1985 and was later updated several times.<sup>15</sup> It provided comprehensive information on available national building regulations and related documents. Its publication supported the harmonization of building regulations in the UNECE region and thus contributed to a wider exchange of building products and services among member States.

### B) THE WORK OF THE COMMITTEE ON SUSTAINABLE ENERGY (CSE)

The CSE includes the Group of Experts on Energy Efficiency (GEEE) which focuses on improving and strengthening regional cooperation on energy efficiency, thus contributing to climate change mitigation efforts. The first session of the Group, held on 17–18 November 2014 in Geneva, developed a work plan for 2014–2015 with specific reference to energy-efficiency standards and labelling, and requested further work on developing and establishing ECE standards for energy efficiency in the longer term in cooperation with selected international standardization organizations.

The CSE approved the conclusions and recommendations of the first meeting of the GEEE and noted the study on standards related to energy efficiency in buildings undertaken by the CHLM (ECE/HBP/2014/4). The Committee requested to distil possible measures that could be included in a matrix on best practices in energy efficiency to strengthen the work of the CHLM.

EXCOM, at its seventy-fifth meeting on 10 February 2015, endorsed the work plan of the GEEE for 2014–2015.

The UNECE Sustainable Energy Division, secretariat to the CSE, has been involved in analysing best practices in energy efficiency in countries of the UNECE region for a number of years. Resulting studies include: i) “Regional Analysis of Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments”, describing a selection of case studies on overcoming barriers to enhance energy efficiency and renewable energy uptake through policy reforms; ii) the publication, “Analysis of National Case Studies on Policy Reforms to Promote Energy-Efficiency Investments”, describing 17 case studies from five regions; and iii) the publication “Best Practices in Policies for Promoting Energy Efficiency in UNECE Member States”,

<sup>13</sup> See “International Harmonization of Building Regulations in the ECE Region” (ECE/HBP/62).

<sup>14</sup> Available at [www.unece.org/index.php?id=35672](http://www.unece.org/index.php?id=35672)

<sup>15</sup> The latest version is ECE/HBP/81/Rev.1.

presenting a structured framework of best practices in policies to promote energy efficiency for climate change mitigation and sustainable development to be used by policy makers.

### C) THE WORK OF THE WORKING PARTY ON REGULATORY COOPERATION AND STANDARDIZATION POLICIES (WP.6)

WP.6 works to avoid unnecessary barriers to trade while promoting sustainable development, protecting consumers' and workers' health and safety, and preserving the natural environment. It is an intergovernmental body, open to the participation of business, standards-making bodies, civil society, other international organizations, and private individuals, from any of the United Nations Member States.

WP.6 develops and shares best practice in the areas of: technical regulations and regulatory cooperation; standardization policies and conformity assessment; consumer protection; market surveillance; and related activities at national, regional and international level, including metrology and quality of the national infrastructure. A recent area of focus for WP.6 has been how regulatory activities within its mandate contribute to managing risk – and in particular disaster risk- that citizens, businesses and communities encounter.

The main deliverables of WP.6 are:

- Recommendations aimed at facilitating international trade through the harmonization of national policies and the promotion of best practices based on good-governance principles in all the areas within its mandate;
- Common frameworks of technical regulations for key sectors of economic activity based on international standards, as the basis for regulatory convergence among countries; and
- Advisory services and capacity-building projects for countries or regional groups aimed at implementing best practices in standardization, regulatory cooperation, conformity assessment, and market surveillance.

The specific contribution that WP.6 will make to the UNECE Expert Group on Energy-Efficiency Standards in Buildings is its extensive network of contacts in international standards organizations and national and regional standards bodies, as well as its expertise in the development of common regulatory frameworks at the sectoral level, as based on the “international model”, contained in WP.6 “Recommendation L”. The Recommendation sets out a clear roadmap for countries wishing to align their regulatory frameworks in a specific sector, or for free trade areas or customs unions aiming to approximate their technical regulations across the board.

Under the Recommendation, the first step countries take after deciding to align their regulatory frameworks in a specific sector is to document current regulatory practices at national and regional level via a survey. Based on the results, experts draw up common regulatory objectives (CROs) which address legitimate concerns that usually relate to public health, safety or environmental protection. They include:

- International standards that contain product-related requirements;
- How compliance with the CROs will be assured and demonstrated;
- If third-party-assessment bodies are going to be involved, which conformity assessment bodies are recognized as competent and how they will be accredited or assessed;
- How post-market surveillance will be performed.

# ANNEX II

## QUESTIONNAIRE ON BUILDING STANDARDS AND BUILDING REGULATIONS

Dear Survey Participant,

This request is addressed to you in connection with the decision of the Committee on Housing and Land Management (CHLM), at its seventy-fifth session, to **develop a study on standards in energy efficiency in buildings**, which could address one or more of the following thematic priorities:

- Energy efficiency of buildings, including manufacturing of building materials and energy performance requirements;
- Building codes and standards;
- Construction codes for healthy and barrier-free housing.

You are kindly invited to complete the questionnaire below. It will provide an input into the Expert Consultation on Energy-Efficiency Standards in Buildings, organized by the CHLM and the Committee on Sustainable Energy (CSE) of the United Nations Economic Commission for Europe (UNECE) on 20 and 21 April 2015 in Geneva. The meeting aims to give an overview of the existing energy-efficiency standards in buildings; discuss the needs of UNECE member States in the field; and elaborate the next steps for the work of the UNECE in the area. More information on the event can be found at [www.unece.org/housing/expertconsultation\\_ee1](http://www.unece.org/housing/expertconsultation_ee1).

### **PART ONE – General information**

- 1- Name and family name
- 2- Name of organization
- 3- Position in your organization
- 4- Contact information
  - a. Address
  - b. Telephone
  - c. Email
  - d. Website
  - e. City
  - f. Country
- 5- Country for which you are providing information

### **PART TWO – Description of the situation in your country**

- 6- Please provide information on the institutions/agencies responsible for developing:
  - a. Building standards
  - b. Building regulations
  - c. Technical requirements for buildings
  - d. Building codes
- 7- Your country uses:
  - a. International building standards

- b. EU building standards
  - c. National building standards
  - d. A mix of the above
  - e. Best-practice guidelines or recommendations
  - f. Other normative instruments
  - g. I do not know
- 8- Has your country updated its building regulations within the last three years?
- 9- Is your country planning to review or update building standards in use?
- 10- Is your country planning to adopt other normative instruments? If so, which ones? (i.e., Eurocode 1, 2, 3, etc...)
- 11- In your opinion, what are the major challenges that the building sector in your country faces in the area of building standards and regulations?
- a. Lack of national building standards
  - b. Lack of national building regulations
  - c. Lack of product certification in the market
  - d. Mismatch between national standards and standards for imported materials
  - e. Inspections and enforcement
  - f. Other (please specify)
  - g. I do not know
- 12- In your opinion, what are the major problems that housing consumers face?
- a. Mismatch between the high price and low quality of housing in the market
  - b. Lack of fire safety measures
  - c. Moisture and leakages
  - d. Indoor climatic comfort
  - e. Tenant/owner issues
  - f. I do not know
  - g. Other (please specify)
- 13- In your opinion, the above problems are a consequence of (you can tick more than one answer):
- a. Lack of national building standards
  - b. Lack of building regulations
  - c. Lack of control in the market of building materials
  - d. Lack of control during the construction phase
  - e. Other (please specify)
- 14- In your opinion, what are the major challenges that your country faces in developing building standards and/or regulations or updating existing ones? (You can tick more than one answer):
- a. Lack of experts/expertise
  - b. Lack of knowledge
  - c. Lack of awareness

- d. Lack of information
- e. Lack of funds
- f. Other (please specify)

### **PART THREE – The role of the UNECE**

15- What can the UNECE do to better assist member States in improving building standards and their effectiveness (you can pick more than one answer)?

- a. Harmonize some priority building materials standards
- b. Establish a Building Standards Harmonization Technical Group
- c. Map existing energy-efficiency standards in buildings
- d. Develop best-practice guidance on inspection and enforcement
- e. Develop new standards for areas not yet fully covered (if yes, please list the areas you suggest)
- f. Develop minimum acceptable standards for adequate and healthy housing
- g. Update the UNECE Compendium of 1995 of building standards (if yes, please specify the reason)
- h. Establish a common database for building regulations in the ECE region
- i. Establish a regional platform to develop, collect and analyse housing standards
- j. Discuss experiences and best practices in adapting existing international and national standards to national and subnational situations (if yes: please provide an example and explain what difficulties you encountered and how the UNECE could help)
- k. Establish partnerships with different international bodies and professional organizations dealing with building standards in the UNECE region (if yes: please provide an example and explain what difficulties you encountered and how the UNECE could help)
- l. Establish a database and network of experts in the area of building standards by country and by field
- m. Other (please specify)

16- What are the main priority areas on which to focus the work of the UNECE in the area of standards for energy efficiency in buildings?

- a. Thermal performance of buildings and building components
- b. Lighting
- c. Construction materials
- d. Minimum habitable standards for healthy and safe living
- e. Heating and water-based cooling systems (HVAC) in buildings
- f. Electrical appliances
- g. Other (please specify)



# Outcomes of the Survey on Building Standards and Building Regulations in the UNECE Region

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