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Committee on Housing and Land Management

Seventy-sixth session
Geneva, 14-15 December 2015

Report of the Committee on Housing and Land Management on its seventy-sixth session

Contents

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I. Introduction

1.	The Committee on Housing and Land Management (CHLM) held its seventy-sixth session in Geneva from 14 to 15 December 2015.

## A.	Attendance

2.	Representatives of the following ECE countries participated: Albania, Armenia, Austria, Azerbaijan, Belarus, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, the Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, and Uzbekistan.

3.	Representatives of the following United Nations programmes and specialized agencies attended: the HABITAT III Secretariat, the Office of the United Nations High Commissioner for Human Rights (OHCHR), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Development Programme (UNDP), the United Nations Human Settlements Programme (UN-HABITAT), the United Nations Office for South-South Cooperation (UNSSC), the International Labour Organization (ILO), the International Telecommunication Union (ITU), the World Health Organization (WHO), and the United Nations International Strategy for Disaster Risk Reduction (UNISDR).

4.	Representatives of the following intergovernmental organizations attended: the European Commission, the European Investment Bank, the Delegation of the European Union to the United Nations in Geneva, the Council of Europe Development Bank, the Environment Agency Austria, the International Organization for Standardization (ISO) and the Council of the Baltic Sea States.

5.	Representatives of the following non-governmental attended: the Abbé Pierre Foundation, the Association for Farmers Rights Defense, the Centre for Socio-Economic Development (CSEND), the Council of European Geodetic Surveyors (CLGE), the European Land Registry Association (ELRA), Fédération des Entreprises Sociales pour l'Habitat, Housing Europe, the International Council of Women (ICW), the International Federation of Surveyors (FIG), the International Property Registries Association (IPRA-CINDER), the International Society of City and Regional Planners (ISOCARP), the International Union of Tenants, the National Association of Housing and Redevelopment Officials, the Organization for International Economic Relations (OiER), the Regional Environmental Centre for Caucasus (REC Caucasus), and the Geneva International Model United Nations (GIMUN).

6.	Private-sector representatives, experts and academics from universities and research institutions also attended, at the invitation of the secretariat.

## B.	Adoption of the agenda

7.	The Chair of the Committee, Ms Elena Szolgayová (Slovakia), presented the provisional agenda (ECE/HBP/183), which was adopted without any changes.

C. Organizational matters

8. The Chair reported that 209 delegates from 43 countries had registered for the meeting.

9. She invited participants to a lunch reception featuring the exhibition "Art for Smart Sustainable Development", set up by the Cittadellarte Foundation (Italy).

10. The Executive Secretary of the UNECE, Mr Christian Friis Bach, welcomed the participants and highlighted the main issues to be covered during the session, including the implementation of the Sustainable Development Goals (SDGs) which were adopted by the UN General Assembly in September 2015, the implementation of the Geneva UN Charter on Sustainable Housing, the Smart Sustainable City Indicators, and energy-efficiency standards for buildings. Mr Bach underlined that endorsement of the Geneva UN Charter on Sustainable Housing in 2015 provides important support to the post-2015 development agenda in the area of sustainable cities and human settlements.

11. He emphasized the importance of the adoption of the historical agreement addressing climate change in Paris at the 21st Session of the Conference of the Parties (COP21) to the UN Framework Convention on Climate Change (UNFCCC). The work of the Committee on energy efficiency is very important; promoting energy efficiency in buildings is one of the most effective tools in climate change mitigation.

12. He also stressed the importance of the Committee's active involvement in the preparations for the Third United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) in 2016 in Quito, Ecuador. The ECE is coordinating the preparation of the HABITAT III Report on Housing and Urban Development for the ECE Region, which will provide input into the New Urban Agenda to be adopted by HABITAT III. The Executive Secretary invited everyone to participate in "European Habitat", which is a high-level regional preparatory conference delivering inputs to HABITAT III, organized by the Czech Government in March 2016.

II. Work of the Bureau of the Committee on Housing and Land Management

13. The Chair reported on the Bureau's work and the main decisions taken since the seventy-fifth session of the Committee (ECE/HBP/2015/1).

14. The Committee took note of this information.

III. Information on the outcomes of the United Nations Summit to adopt the post-2015 development agenda

15. The secretariat provided information on the outcomes of the United Nations Summit for the adoption of the 2030 Agenda for Sustainable Development (2030 Agenda). The Summit was held from 25 to 27 September 2015 in New York, and was convened as a high-level plenary meeting of the General Assembly. It adopted the 2030 Agenda, including SDGs, and discussed global indicators to review their implementation. The Committee was informed on the process of the development of indicators for the SDGs. A representative of the ECE Sustainable Development and Gender Unit presented the ECE's work on SDGs, the timing on turning goals into actions, and the review, measurement of progress and follow-up. A representative of the ECE Statistics Division presented the indicators to measure the implementation of the SDGs. The global list has 225 proposed indicators and will be complemented by others at the regional and national levels. For SDG

11, there are currently 4 "green" (agreed) and 7 "grey" (under discussion) indicators. The Committee discussed how it could work and cooperate on the implementation of the 2030 Agenda, including monitoring the relevant SDGs at the regional level.

16.   The Committee adopted a decision to develop a system for monitoring SDG 11 on Cities and Human Settlements, and entrusted its Bureau to develop a methodology therefor.

IV.   Implementation of the Geneva UN Charter on Sustainable Housing and the ECE Strategy for Sustainable Housing and Land Management 2014-2020

17.   The Chair reminded session participants that the ECE Ministerial Meeting on Housing and Land Management (Geneva, October 2013) adopted the ECE Strategy for Sustainable Housing and Land Management 2014-2020 (ECE/HBP/2013/3)[1]. The CHLM, at its seventy-fifth session in October 2014, agreed on the Geneva UN Charter on Sustainable Housing (the Charter) as a non-legally binding document (ECE/HBP/2014/2)[2]. The Charter was further endorsed by the ECE on 16 April 2015 (E/ECE/1478/Rev.1)[3]. The Committee secretariat developed recommendations for the implementation of the Charter (Informal Note 1), which were presented at the session.

18.   The recommendations for the implementation included proposals for the dissemination of information about the Charter through web information, publications, capacity building activities and the establishment of centers of excellence.

19.   High-level representatives of the Governments of Albania, Belarus, The former Yugoslav Republic of Macedonia, Italy, Lithuania, Malta, Russian Federation, Slovakia, and Switzerland informed on the implementation of the Charter in their countries.

20.   The Committee endorsed the recommendations for the implementation of the Charter, and entrusted its Bureau to elaborate terms of references for the centers of excellence.

V.   Preparation for the Third United Nations Conference on Housing and Sustainable Urban Development - HABITAT III

21.   The Committee session was informed of the preparations for HABITAT III, including the organization of the high-level preparatory conference for the ECE region, European Habitat, in Prague (Informal Note 2), and the drafting of the HABITAT III Report on Housing and Urban Development for the ECE Region (Informal Notes 3 and 3A).

22.   The HABITAT III Secretariat provided an update on the preparation for HABITAT III.

23.   The Czech Republic informed on the preparations for European Habitat, to be held in Prague from 16 to 18 March 2016, and presented a draft outcome document for the conference, the "Prague Declaration" (Informal Note 4).

24.   The secretariat informed on the activities of the ECE, including the organization of national workshops on housing and urban development in countries with transition

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[1] http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/sust.hsng.strategy.pdf
[2] http://www.unece.org/fileadmin/DAM/hlm/documents/2014/ECE_HBP_2014_2.pdf
[3] http://www.unece.org/fileadmin/DAM/commission/2015/E_ECE_1478_rev1_en.pdf

economies, and the preparation of two reports which provide input into the HABITAT III report for the ECE region "Towards a city-focused, people-centred and integrated approach to the New Urban Agenda" and the UN-Habitat/ECE Subregional Report on Housing and Urban Development for the CIS Subregion.

25.   The main author of the HABITAT III Report on Housing and Urban Development for the ECE Region presented information on the preparation of the draft report and its key messages.

26.   Representatives from the following countries provided inputs to the draft regional report and its key messages: Albania, France, Italy, Kyrgyzstan, Lithuania, Montenegro, Russian Federation, Slovakia, Slovenia, Spain and Sweden. Representatives from the following organizations also provided input: the World Health Organization (WHO), the Office of the High Commissioner on Human Rights (OHCHR), the Real Estate Market Advisory Group (REM), and UN-Habitat.

27.   The Committee took note of the draft HABITAT III report for the UNECE region "Towards a city-focused, people-centred and integrated approach to the New Urban Agenda" and invited comments by 20 January 2016. It entrusted the CHLM Bureau to coordinate, with the group of experts preparing the report, the inclusion of comments into the draft report and to endorse the report's key messages.

28.   The Committee took note of the information provided on the preparations for European Habitat, to be held in Prague from 16 to 18 March 2016, and the regional meeting draft outcome document for the conference, the Prague Declaration.

VI.   Review of the implementation of the programme of work 2014-2015

(a)   Sustainable housing and real estate markets

(i)   Towards affordable and social housing

29.   In October 2015, the Committee launched its study, "Social Housing in the ECE Region: Models, Trends and Challenges" (ECE/HBP/182)[4]. This session included a presentation of the study's key conclusions and recommendations, and a panel discussion. The objective of the latter was to discuss challenges to achieving access to adequate and affordable housing in the ECE region, and possible future activities to be implemented by the Committee in cooperation with its partners in this area.

30.   The session included presentations by representatives of countries including Denmark, Kyrgyzstan, and Russian Federation; academia - Sciences Po, L'Institut d'études politiques (IEP) de Paris; NGOs - Housing Europe, the International Union of Tenants, the Abbé Pierre Foundation; and the private sector - HypZert GmbH from Germany.

31.   The Committee adopted a decision to prepare, in cooperation with partner organizations, a new survey on how countries in the ECE region have tackled the economic and financial crises after 2008, and how they are addressing the current migration crisis. The Committee requested its Bureau to elaborate a concept of the study, and invited the secretariat to implement it, subject to the availability of resources.

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[4]http://www.unece.org/index.php?id=41388

(ii)   Thematic discussion on energy efficiency in buildings

32.   The secretariat informed the Committee about the activities supporting the implementation of the ECE Action Plan for Energy-Efficient Housing (ECE/HBP/164), the Strategy for Sustainable Housing and Land Management in the ECE region for the period 2014-2020 (ECE/HBP/2012/3), and the Committee's decision to establish an informal expert group to develop building standards (ECE/HBP/179, para 40). The secretariats of the CHLM and the Committee on Sustainable Energy conducted a survey of Member States and prepared the survey report on "Building Standards and Building Regulations in the UNECE Region" (Informal Note 5). Further, an Expert Consultation on Energy-Efficiency Standards in Buildings was held on 20 and 21 April 2015 in Geneva, Switzerland.

33.   The secretariat presented the conclusions and recommendations of the survey and the expert consultation, including the recommendation for the establishment of a Joint Task Force on Energy-Efficiency Standards in Buildings of the CHLM and the Committee on Sustainable Energy (and its Group of Experts on Energy Efficiency) with the participation of experts representing the ECE Working Party on Regulatory Cooperation and Standardization Policies (WP6), and other ECE-relevant intergovernmental bodies and international partner organizations. The Joint Task Force, if established, would address issues on energy-efficiency codes and standards in buildings.

34.   The representative of the ISO informed on the latest work of the ISO on the development and implementation of energy-efficiency standards in buildings.

35.   The secretariat informed the Committee on the regional workshop "Energy Efficiency for Sustainable Cities", which was organized as part of the Sixth International Forum on Energy for Sustainable Development, held in Yerevan, Armenia, from 29 September to 2 October 2015, by the ECE Sustainable Energy Division in cooperation with the Government of Armenia, the UNDP, other UN regional commissions, and other international organizations.

36.   The Chair of the ECE Committee on Forests and the Forest Industry (COFFI), informed about possible cooperation with the CHLM on energy efficiency in buildings, and on buildings with wooden frames.

37.   Representatives of Albania, Canada and Lithuania informed on their work on energy efficiency in buildings, and recommended endorsing the proposal for the establishment of the Joint Task Force.

38.   The Committee endorsed the proposal for the establishment of the Joint Task Force on Energy-Efficiency Standards in Buildings with the Committee on Sustainable Energy and with the participation of experts from WP6, other ECE bodies and international partner organizations. The start of the work of the Joint Task Force will depend on the availability of funds at the CHLM secretariat. The Committee invited potential donors to provide financial support to the proposed project.

39.   The Committee took note of the possibilities of cooperation with COFFI, and entrusted the CHLM Bureau to develop and organize the implementation of joint activities.

(iii)   Activities of the Real Estate Market Advisory Group

40.   The Committee, at its seventy-fifth session in October 2014, approved the terms of reference of the Advisory Group (ECE/HBP/2014/5) for 2015-2016. EXCOM, at its seventy-third meeting on 14 November 2014, approved the renewal of the mandate and the revised terms of reference of the Group until 31 December 2016 (ECE/EX/2014/L.26). The Group held its meeting on 12 May 2015 where it elaborated its draft programme of work for 2015-2016. The Committee Bureau agreed on the text of the programme of work.

41.   The Committee adopted the Advisory Group's programme of work for the period 2015-2016 and invited EXCOM to extend the mandate of the Group until 2018.

(b)   Sustainable urban development

42.   The secretariat presented the elaborated Smart Sustainable City Indicators and recommendations for the development of smart city standards (ECE/HBP/2015/4)[5]. The Committee was also informed on the implementation of activities in smart cities (Informal Note 7).

43.   Representatives of Austria, Italy, the Smart City Laboratory of Moscow Construction Institute, REC Caucasus, and the Council of the Baltic Sea States informed on their activities on smart cities and underlined the importance of the use of the Smart Sustainable City Indicators for measuring the performance of cities.

44.   The Committee endorsed the UNECE/ITU Smart Sustainable City Indicators (Annex I), and recommended developing Smart Sustainable City Standards and further activities on the preparation of smart sustainable city profiles with a possible amendment once the SDG indicators are approved.

(c)   Land administration and management

45.   The Chair (Azerbaijan) of the Working Party on Land Administration (WPLA) reported on the publications, workshops and other activities carried out by the Party (Informal Note 8) since the last session of the Committee. The secretariat presented the Working Party programme of work 2016-2017 (ECE/HBP/2015/5)[6]. The WPLA Vice-chair (the Netherlands) reported on the progress of a study on the advantages and disadvantages of the unification of land registries and cadastres. WPLA Bureau member (Ireland) informed on the planned update of the Land Administration Systems Survey. President of FIG presented the study, formalizing the informal challenges and opportunities of informal settlements in south east Europe. The CLGE, ELRA, and IPRA-CINDER informed about their activities and their willingness to cooperate with the Working Party.

46.   The Committee took note of the information on the Working Party's ongoing activities and adopted its revised programme of work for 2016-2017 (Annex II).

(d)   Country profiles on housing and land management

47.   At its seventy-fourth session, the Committee approved guidelines for the preparation of country profiles on housing and land management (ECE/HBP/2013/8)[7]. The Committee presented the updated guidelines (ECE/HBP/2015/6)[8].

48.   The Committee further provided updates on the status of the country profiles. In particular, it informed of the key outcomes and policy recommendations in the Country Profile on Housing and Land Management of the Republic of Moldova (ECE/HBP/181)[9], the progress of the preparation of those of Uzbekistan and Armenia, and the preparations for the work on that of Kazakhstan.

49.   The secretariat informed the Committee of letters received from Belarus and Portugal requesting to prepare their Country Profiles.

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[5] http://www.unece.org/fileadmin/DAM/hlm/documents/2015/ECE_HBP_2015_4.en.pdf
[6] http://www.unece.org/fileadmin/DAM/hlm/documents/2015/ECE_HBP_2015_5.en.pdf
[7] http://www.unece.org/fileadmin/DAM/hlm/documents/2013/ECE_HBP_2013_8.pdf
[8] http://www.unece.org/fileadmin/DAM/hlm/documents/2015/ECE_HBP_2015_6_ENG.pdf
[9] http://www.unece.org/index.php?id=41823

50.   The Committee approved the updated guidelines for the preparation of the ECE Country Profiles on Housing and Land Management. It endorsed the key outcomes and policy recommendations of the Country Profile of the Republic of Moldova, took note of the information provided on the preparation of those of Armenia, Uzbekistan and Kazakhstan, and decided on Belarus and Portugal as the next countries to be reviewed. Meeting participants expressed gratitude for the funding of the Country Profiles, specifically of Kazakhstan in 2016 and Belarus in 2017.

VII.   Status of the trust fund on human settlements

51.   The secretariat reported on the status of funding of the programme of work of the Committee. It thanked the Governments of the Czech Republic and the Russian Federation, the OiER, and the European Real Estate Institute for their contributions to the Committee's Trust Fund. He also thanked the many organizations that have assisted with in-kind contributions and expert support.

52.   The secretariat informed the Committee on the new mandates received, including those related to the need to monitor the implementation of the SDGs; the coordination of the implementation of the Geneva UN Charter on Sustainable Housing; the organization of a study on best practices in sustainable housing in the contexts of the economy, finance and migration; and the establishment of the Task Force on Energy-Efficiency Standards in Buildings. The work on the above-mentioned tasks is not covered by the regular budget; member Member States and donors are invited to provide financial support to these activities.

53.   The Committee took note of the information provided.

VIII.   Adoption of the programme of work of the housing and land management component of the Housing, Land Management and Population Subprogramme for 2016-2017

54.   The Secretariat presented the draft programme of work 2016-2017 (ECE/HBP/2015/7) and a detailed plan of activities to implement it.

55.   The Committee adopted the programme of work of the housing and land management component of the Housing, Land and Population Subprogramme 2016-2017, including planned publications, and recommended it to EXCOM for approval.

IX.   Strategic framework for the housing and land management component of the Housing, Land Management and Population Subprogramme for 2018-2019

56.   The secretariat presented the draft Strategic Framework 2018-2019 for the housing and land management component of the Housing, Land Management and Population Subprogramme (ECE/HBP/2015/8), which was endorsed by the Committee Bureau.

57.   The Committee adopted the Strategic Framework as endorsed by the Bureau.

X.   Election of the Bureau

58.   The Chair invited the member States' representatives to present nominations for the Bureau members.

59. The Committee elected the Bureau for its seventy-seventh session as follows:

- Elena Szolgayová, Slovakia (Chair)
- Alena Rakava, Belarus
- Daniela Grabmüllerová, Czech Republic (Vice-Chair)
- Lise Nielsen, Denmark
- David Gigineishvili, Georgia (Vice-Chair)
- Stefano Scalera, Italy
- Vilma Vaiciuniene, Lithuania
- Inger Vold Zapffe, Norway
- Andrey Chibis, Russian Federation
- Nuria Raga Sastre, Spain
- Maria Ulfvarson Östlund, Sweden
- Paul Dowse, UK.

60. The Chair also welcomed Mr Elshad Khanalibayli as an ex officio member of the Bureau of the Committee in his capacity as Chair of the WPLA.

61. The Committee elected the Bureau for its seventy-seventh session.

XI. Other Business

62. It was suggested that housing cooperatives be included in the future activities of the Committee.

XII. Adoption of the report and closing of the session

63. The Chair summarized the major decisions taken by the Committee.

64. The Committee adopted its report based on a draft prepared by the secretariat.

65. The Committee agreed on 13-14 September 2016 as the dates for the next Committee session in Geneva.

66. The Chair closed the session.

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Annex I

The UNECE/ITU Smart Sustainable Cities Indicators

1. Introduction

1. The topic of smart cities is considered very important among the member States of the UNECE region. In the survey "Challenges and priorities in housing and land management in the UNECE Region" (ECE/HBP/2013/2), respondents from member States ranked the "smart cities initiative, which addresses information, communication and technology in urban planning" second among the activities in the area "sustainable urban development".[10]

2. In 2012, the UNECE Committee on Housing and Land Management (CHLM) decided to include the topic of "smart sustainable cities" as one of its priority activities in the Committee's programme of work 2014–2015 (ECE/HBP/2013/10)[11] under the cluster "Sustainable urban development".

3. Following the Committee's decision, its secretariat conducted a review of existing smart city projects and networks; organized consultations with stakeholders; and, in May 2014, launched a project called "United Smart Cities".[12]

4. At its seventy-fifth session, the Committee requested the secretariat (ECE/HBP/179)[13] to prepare a set of Smart City Indicators for its consideration and endorsement at its seventy-sixth session.

5. The Committee secretariat, within the "United Smart Cities" project, in cooperation with the Environment Agency Austria (EAA) and the International Telecommunication Union (ITU) and in consultation with relevant stakeholders and member States[14,] elaborated the Smart Sustainable Cities Indicators.

6. The indicators were developed as a tool to evaluate how smart and sustainable a city is and serve as a starting point to implement concrete actions and measures and improve a city's sustainability level. These indicators have already reflected the content of the Sustainable Development Goals (SDGs), which were approved in September 2015 by the United Nations General Assembly. Therefore, the UNECE-ITU Smart Sustainable Cities Indicators will help cities to evaluate their performance against the SDGs.

7. This document provides a definition of smart sustainable cities, describes the objectives and the benefits of using smart cities indicators, informs about the history of the development of the indicators, and explains how the indicators are described. Annex I

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[10] More information can be found at
www.unece.org/fileadmin/DAM/hlm/documents/2013/ece.hbp.2013.02.e.pdf, p.15.

[11] Information is available at www.unece.org/fileadmin/DAM/hlm/documents/2013/ECE_HBP_2013_10.pdf, p.4.

[12] More information is available at www.unece.org/housing/smartcities.html

[13] Information is available at www.unece.org/fileadmin/DAM/hlm/documents/2014/ece.hbp.179.en.pdf

[14]Stakeholder consultations on the indicators included a workshop "Measuring Progress: Achieving Smarter Cities" on 26-27 May 2015 in Lisbon, www.unece.org/index.php?id=38886#/; a workshop on "Smart City Indicators" on 4-5 June 2015 in Rakvere, Estonia, www.unece.org/index.php?id=39554#/; and an expert consultation meeting in Geneva, on 11 May 2015, www.unece.org/index.php?id=39566#/. In addition, consultation with member States was organized by email in July and August 2015.

presents the visual structure of the indicators and Annex II provides the list of the proposed UNECE–ITU Smart Sustainable Cities Indicators.

2. The UNECE-ITU definition of smart sustainable cities

8. The smart sustainable cities definition elaborated by the ITU Focus Group on Smart Sustainable Cities (FG-SSC) reads: "A smart sustainable city is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, cultural[15] and environmental aspects". According to this proposed definition, a city is considered as an "integrated" system. The secretariat is proposing this definition of Smart Sustainable Cities for endorsement by the CHLM.

3. History of the preparation of the Smart Sustainable Cities Indicators

9. The main objective of the UNECE "United Smart Cities" project[16,] within which the draft Smart Sustainable Cities Indicators (SSCIs) have been elaborated, is to support cities, in particular in developing countries and in countries with economies in transition, to improve their sustainable growth while focusing on a more transparent and efficient use of their resources. Sustainable growth can also be achieved with easier access to new and affordable technologies and will result in better living conditions for citizens. Information on this project's activities and partners is available in Informal Note 5.

10. In May 2015, the secretariat of the CHLM conducted an Expert Consultation on Smart Cities Indicators, in Geneva. During this consultation the ITU informed the UNECE about its work on smart cities indicators. As a result of the discussions between the ITU and the UNECE, a joint set of indicators was established in order to build synergies and ensure a global applicability of the indicators by cities. A joint expert group then worked to unify the two sets of indicators and to provide the version that the CHLM is invited to endorse. Further an online consultation with member States and stakeholders was organized by the UNECE secretariat and received comments during this consultation were incorporated into the draft set of the indicators. Annexes III and IV provide the history of the development of the indicators by the UNECE and the ITU, respectively.

4. The UNECE–ITU Smart Sustainable Cities Indicators

(a) Objectives of the development and benefits of the indicators

11. The objectives of using the indicators are the following. First, the indicators represent a tool to evaluate the performance of a city so that concrete measures can be recommended and then implemented by the city. Second, they can be used as a tool to monitor cities' progress towards sustainable urban development in the global framework of the Sustainable Development Goals (SDGs). SSCIs cannot be considered a "troubleshooting" instrument but rather a supportive tool that can help cities to grow more sustainably and smartly.

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[15] The UNECE proposed the addition of the word "cultural" to this definition to make it closer to the principles of the Charter on Sustainable Housing and more in line with the Sustainable Development Goals.

[16] More information on the project is available at www.unece.org/housing/smartcities.html

12.   These indicators are also expected to be used by the UNECE for its "United Smart Cities" project to draft cities' profiles and support cities in improving their sustainable development.

13.   The benefits of using indicators are several. First of all, they can help assess the strengths and weaknesses of a city. By analyzing the performance of a city against the indicators, it is easier to recognize which areas are most critical or in which areas the city is performing well. Second, they can be used to set priorities. Once the strengths and the weaknesses of a city are identified, the indicators can help to prioritize, i.e. to choose the most critical issues for the sustainable growth of the city, and to define measures to address them. Lastly, indicators can also be seen as a good monitoring tool to evaluate the changes in the city's performance over a certain period of time and after several actions have been implemented.

14.   The first step in the application of the indicators is an assessment of a defined city - this step can be compared with diagnosing a patient. Many aspects have to be investigated and the city has to be understood in the context of its past development and its surroundings.

15. Considering the fact that every city is different, cities can select an appropriate set of indicators from the series of the UNECE-ITU Smart Sustainable Cities Indicators. Cities are also encouraged to add new indicators and switch category of indicators as appropriate (additional to core, and core to additional).

(b)   Description of the UNECE–ITU Smart Sustainable Cities Indicators

16.   The list of the UNECE-ITU SSCIs, a total of 71 indicators, is provided in Annex II.

17.   The current set of indicators has been structured according to:

- Area

- Topic, and

- Typology.

18.   The areas represent the more generic dimensions which provide a framework for the set of indicators. They correspond to the three pillars of sustainability: economy, environment, and society and culture.

19.   The topic indicates a group of specific indicators which describe an area of potential development. Eighteen (18) major topics were identified and each indicator was assigned to one specific topic. Some topics include specific sub-topics which can be considered as keywords that more thoroughly define the nature of the indicators. The topics are:

20.   Economy, including the following topics:

- ICT infrastructure

- Innovation

- Employment

- Trade (sub-topics: e-Commerce and export/import)

- Productivity

- Physical infrastructure (sub-topics: piped water, health, electricity, transport, and buildings)

21.   Environment, including the following topics:

- Air quality

- Water

- Noise

- Environmental quality

- Biodiversity

- Energy

22.	Society, including the following topics:

- Education

- Health

- Safety (sub-topics: disaster relief, emergency, and ICT)

- Housing

- Culture

- Social inclusion

23.	The indicator typology indicates the "applicability" of the indicator itself. In total, two indicator types are defined and explained below:

- The core indicators can be used by all cities globally. They will be put in the main body of   international standard.

- The additional indicators may be used by some cities according to their economic capacity, population growth, geographic situation, etc. Also, some additional indicators are very "smart" and can be addressed by "smarter" cities. These indicators are optional, especially for self-benchmarking, and will be put in the appendix of international standard which is not normative.

24.	Using the area, the topic, and the typology, the indicators are assigned a unit which indicates how they are measured; a definition which informs about what they describe; and a number.

Annex I.I

The UNECE–ITU Smart Sustainable Cities Indicators: visual representation
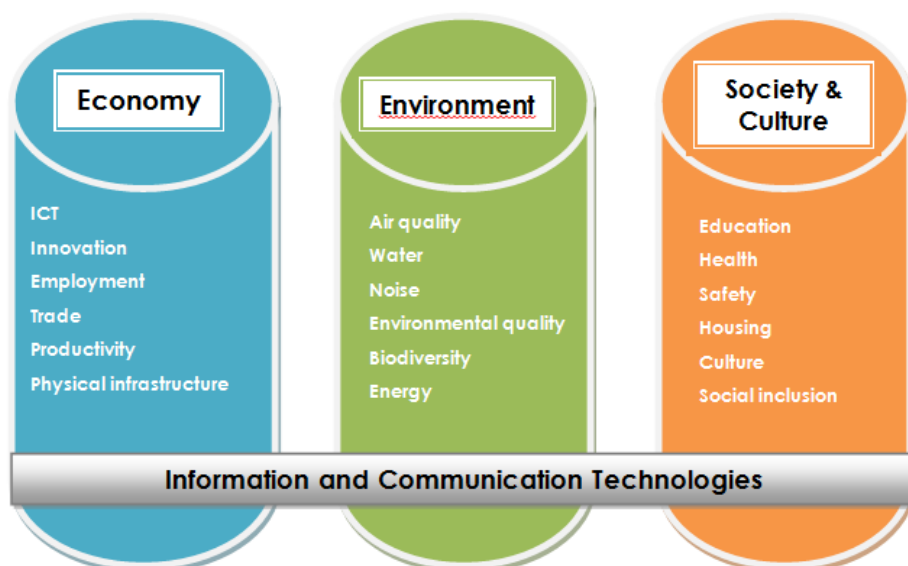
Annex I.II

UNECE-ITU Smart Sustainable Cities Indicators

Area	Topic	No.	Indicator	Typology
Economy	T1.1 ICT infrastructure	1	C1.1.1 Internet access in households	core
		2	A1.1.1 Electronic devices penetration	core
		3	A1.1.2 Wireless broadband subscriptions	additional
		4	A1.1.3 Fixed broadband subscriptions	additional
	T1.2 Innovation	5	C1.2.1 R&D expenditure	core
		6	C1.2.2 Patents	core
	T1.3 Employment	7	C1.3.1 Employment trends	core
		8	A1.3.1 Creative industry employment	additional
		9	A1.3.2 Tourism industry employment	additional
	T1.4 Trade – e-Commerce	10	C1.4.1 e-Commerce transactions	core
		11	A1.4.1 Electronic and mobile payment	additional
	T1.4 Trade – export/import	12	A1.4.2 Knowledge-intensive export/import	additional
	T1.5 Productivity	13	A1.5.1 Companies providing e-services	additional
		14	A1.5.2 Computing platforms	additional
		15	A1.5.3 SMEs trends	additional
	T1.6 Physical infrastructure – piped water	16	C1.6.1 Smart water meters	core
		17	A1.6.1 Water system leakages	additional
	T1.6 Physical infrastructure – electricity	18	C1.6.2 Smart electricity meters	core
		19	C1.6.3 Reliability of electricity system	core
	T1.6 Physical infrastructure – health	20	A1.6.2 Sporting infrastructure	additional
	T1.6 Physical infrastructure –	21	C1.6.4 Public transport system	core
		22	C1.6.5 Road traffic efficiency	core

Area	Topic	No.	Indicator	Typology
	transport	23	C1.6.6 Real-time public transport information	core
		24	C1.6.7 Share of EVs	core
		25	A1.6.3 Traffic monitoring	additional
	T1.6 Physical infrastructure – buildings	26	A1.6.4 Integrated management in public buildings	additional
Environment	T2.1 Air quality	27	C2.1.1 Air pollution	core
		28	A2.1.1 Air pollution monitoring system	additional
		29	C2.1.2 GHG emissions	core
	T2.2 Water	30	C2.2.1 Quality of water resources	core
		31	A2.2.1 Water saving in households	additional
		32	C2.2.2 Waste water treatment	core
		33	C2.2.3 Household sanitation	core
		34	A2.2.2 Drainage system management	additional
	T2.3 Noise	35	C2.3.1 Exposure to noise	core
		36	A2.3.1 Noise monitoring	additional
	T2.4 Environmental quality	37	C2.4.1 EMF consideration	core
		38	C2.4.2 Solid waste treatment	core
		39	C2.4.3 Perception on environmental quality	core
	T2.5 Biodiversity	40	C2.5.1 Green areas and public spaces	core
		41	C2.5.2 Native species monitoring	core
		42	A2.5.1 Protected natural areas	additional
	T2.6 Energy	43	C2.6.1 Renewable energy consumption	core
		44	A2.6.1 Renewable energy generation	additional
		45	A2.6.2 Energy saving in households	additional
Society and Culture	T3.1 Education	46	C3.1.1 Students' ICT capability	core
		47	C3.1.2 Adult literacy trends	core
		48	C3.1.3 Higher education ratio	core

Area	Topic	No.	Indicator	Typology
		49	A3.1.1 e-learning systems	additional
	T3.2 Health	50	C3.2.1 Electronic records	core
		51	C3.2.2 Sharing of medical resources	core
		52	A3.2.1 Adoption of telemedicine	additional
		53	C3.2.3 Life expectancy	core
		54	C3.2.4 Maternal mortality trends	core
		55	A3.2.2 In-patient hospital beds	additional
		56	A3.2.3 Health insurance	additional
	T3.3 Safety – disaster relief	57	C3.3.1 Vulnerability assessment	core
		58	C3.3.2 Disaster mitigation plans	core
	T3.3 Safety – emergency	59	C3.3.3 Emergency response	core
		60	A3.3.1 Disaster and emergency alert	additional
	T3.3 Safety – ICT	61	C3.3.4 Information security and privacy protection	core
		62	A3.3.2 Child Online Protection (COP)	additional
	T3.4 Housing	63	C3.4.1 Housing expenditure	core
		64	C3.4.2 Slums reduction	core
	T3.5 Culture	65	C3.5.1 Smart libraries	core
		66	C3.5.2 Culture infrastructure	core
		67	C3.5.1 Protected cultural heritage sites	additional
	T3.6 Social inclusion	68	C3.6.1 Public participation	core
		69	C3.6.2 Gender income equity	core
		70	C3.6.3 Opportunities for people with special needs	core
		71	C3.6.4 Attractiveness for skilled people	core
		72	A3.6.1 Gini coefficient	additional

Annex I.III

The history of the development of the UNECE Smart Cities Indicators

25.   The starting point of the methodological approach to the UNECE Smart Cities Indicators is the Smart City PROFILES that the EAA developed for twelve Austrian cities in 2013.

26.   Since many Austrian cities and municipalities were actively pursuing energy-saving and climate strategies, setting examples which could help develop a joint knowledge basis and disseminate best practice models represented a good strategy to support cities in fulfilling this goal. In fact, by obtaining a better understanding of the key factors of urban development with respect to climate and energy issues, Profiles could provide important contributions, since they characterize cities in terms of different areas of activity in urban development. The Smart City PROFILES developed by the EAA were conceived to help Austrian cities and municipalities create smart and sustainable urban strategies and to implement them.

27.   The EAA established a set of 21 indicators with the aim of developing city profiles for Austrian cities which gave a full picture of the characteristics and special features of cities and municipalities and could be reproduced by other cities. The indicators focused on climate change mitigation and energy efficiency in five areas of activity in urban development: buildings and settlement structures; transport and mobility; technical infrastructure; economy and population; and policy, administration and governance. From the analysis of the indicators' results, city profiles were drafted. They provided information about relevant sectors of urban activities, including business and economy, demography, strategic urban planning, governance, etc., and especially about the use of energy and resources as well as about the potential for increasing efficiency.

28.   The resulting recommendations enabled cities to make better evaluations of their current status and their development, in particular with respect to energy and climate change mitigation, but also to other aspects influencing the quality of life of their citizens, and their competitiveness.

29.   Due to the great diversity of the cities in the ECE region, the Austrian Smart Cities PROFILES methodology, as well as the areas considered, was to be revised. Hence, a consortium of partners was established and the existing smart cities initiatives analysed.

30.   In order to gather the most relevant indicators to evaluate smart and sustainable cities, the EAA scanned multiple initiatives whose output was the elaboration of indicators on sustainable urban development. They were analysed with regard to their relevance and practicability in low and middle income countries in the UNECE region. The key parameters of this assessment were:

- Name of publisher or organization who developed the indicator set

- Background information

- Addressed topics or indicators

- Data availability

- History of application (reference to cities)

- Sources of information, i.e. website, guidelines, and other literature.

31.   In addition to these initiatives, other relevant sources have been analyzed such as: available statistical data at European and global level, i.e. EUROSTAT, Urban Audit, the World Bank, the WHO, the FAO, etc.; thematic maps on several issues, such as likelihood of drought, earthquakes, flooding, precipitations; other methods to assess the quality of urban features, such as perception surveys, checklists, expert judgments, etc.

32. The results of the assessment were summarized in the report "Smart Urban Solutions in the UNECE Region - Preliminary study on a flexible indicator set for smart cities".[17]

33.   From the above-mentioned assessment, ten (10) development fields divided into three (3) dimensions were identified. The three dimensions are: economy, environment, and society and culture. The development fields under the area "economy" are: economic development; and infrastructure and energy. The development fields under the area "environment" are: air, climate change and natural hazards; land and biodiversity; freshwater and oceans; and waste. The development fields under the area "society and culture" are: social issues; governance; health; education; and demography.

34.   A preliminary set of top indicators for each development field was also defined. The preliminary set included 59 out of 456 indicators collected, and proposed 4 to 8 indicators per development field. For each indicator a description was provided according to the following parameters:

- Indicator title

- Source: the origin of the indicator

- Development field

- Sub-topic

- Literature: available guidelines and websites

- Relevance: only indicators with high relevance were chosen

- Feasibility (0-10): expert judgment with regard to feasibility

- Implementation: reference to regions where the indicator was already implemented

- Data availability: indication whether or not data is readily available; needs to be collected; is only available for certain regions, etc.

- Comments

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[17] Prokop G., Schwarzl. B., Thielen P. (2014): "Smart Urban Solutions in the UNECE Region - Preliminary study on a flexible indicator set for smart cities". Environment Agency Austria (unpublished).

Annex I.IV

The history of the ITU Smart Sustainable Cities Indicators

35. The International Telecommunication Union (ITU) is the United Nations specialized agency responsible for information and communication technologies (ICTs) and an international standards developing organization (SDO).

36. In February 2013, the ITU established the Focus Group on Smart Sustainable Cities (FG-SSC) to assess the standardization requirements of cities aiming to boost their social, economic and environmental sustainability through the integration of information and communication technologies (ICTs) in their infrastructures and operations. The FG-SSC successfully completed its mandate in May 2015. During its tenure, the FG-SSC developed 21 technical specifications and reports.

37. While acknowledging the potential role of ICTs in addressing urban challenges and providing a better quality of life for its inhabitants, the FG-SSC realized that not every city will have the required level of expertise or a defined set of guidelines for the transition to a SSC.

38. While embarking on the SSC journey, it is important for cities to be able to understand and assess the stage of the transition they are at so that they may take the required steps to progress further. It is also important for urban stakeholders to be able to measure the performance of various SSC ventures once they are initiated. In this regard, the FG-SSC developed a set of international key performance indicators (KPIs) for cities aiming to become SSCs. They provide an ideal measuring system, which assists in monitoring the progress achieved in SSC transitions.

39. The FG-SSC's proposed KPIs are in alignment with the definition of SSCs and the framework provided by UN-Habitat in its City Prosperity Index. The KPIs are divided into six dimensions:

- Information and communication technology

- Environmental sustainability

- Productivity

- Quality of life

- Equity and social inclusion

- Physical infrastructure.

40. These KPIs seek to establish the criteria needed to evaluate ICTs' contributions in making cities smarter and more sustainable, and to provide the cities with the means for self-assessment. By utilizing these indicators, cities, as well as their stakeholders, can also objectively assess the extent to which they may be perceived as SSCs and, accordingly, improve on their SSC initiatives.

41. The KPIs are based on the following principles:

- Comprehensiveness: The set of indicators should cover all the aspects of SSCs. The indicators of evaluation should be aligned to the measured subject, i.e., ICT and its impact on the sustainability of cities.

- Comparability: The KPIs should be defined in a way that data can be compared scientifically between different cities according to different phases of urban development, which means the KPIs must be comparable over time and space.

- Availability: The KPIs should be quantitative, and the historic and current data should be either available or easy to collect.

- Independence: KPIs in the same dimension should be independent or almost-orthogonal, i.e., overlap of the KPIs should be avoided as much as possible.

- Simplicity: The concept of each indicator should be simple and easy to understand for the urban stakeholders. The calculation of the associated data should also be kept intuitive and simple.

- Timeliness: This refers to the ability to produce KPIs with respect to emerging issues in SSC construction.[18]

42.   After eight (8) face-to-face meetings and over twenty (20) e-meetings, the ITU-T FG-SSC finalized and approved the following series of Technical Specifications and Reports on SSC KPIs:

- Technical Specifications on the overview of KPIs in SSCs, October 2014.

- Technical Specifications on KPIs related to the use of ICT in SSCs, March 2015.

- Technical Specifications on KPIs related to the sustainability impacts of ICT in SSCs, March 2015.

- Technical Report on KPIs definitions for SSCs, March 2015.

43.   The set of indicators of the series of the ITU-T FG-SSC Technical Specifications includes 78 core indicators and 30 additional indicators which cities can select as appropriate. Cities are also encouraged to add new indicators following the above principles for their self-benchmarking.

44.   In May 2015, the ITU and the City of Dubai (United Arab Emirates) signed a cooperation agreement in order for Dubai to be the world's first city to access the efficiency and sustainability of its operations using the KPIs developed by the ITU-T FG-SSC. The two-year pilot project will evaluate the feasibility of the indicators with the aim of contributing to their international standardization. Since then, several other cities have requested ITU's assistance to pilot the ITU-T FG-SSC KPIs.

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[18] Additional information on ITU indicators and its focus group can be found at www.itu.int/en/ITU-T/focusgroups/ssc/Pages/default.aspx

Annex II

Programme of work of the Working Party on Land Administration for 2016-2017

1. Capacity-building and international knowledge-sharing

1.   Objective: To increase the capacity of UNECE member States to formulate policies on land administration and management.

2.   To achieve this objective, the Working Party will:

• Organize four workshops in the UNECE region to allow for experience and knowledge-sharing

• To improve the human capital of stakeholders and to enhance land management practices

• Present the work of the Working Party and provide advice on land management and land administration at workshops, conferences, seminars and other events focusing on land administration

• Identify and programme joint work and activities in close cooperation with international organizations on land administration issues.

2. Land administration reviews

3.   Objective: To provide, upon the request of a member State, an assessment of that member State's land administration systems, and issue guidelines for the enhancement of said systems.

4.   To achieve this objective, the Working Party will, upon invitation by governments and subject to the availability of funding, develop member State land administration reviews as part of the UNECE country profiles on housing and land management.

3. Studies on selected topics in land management[19]

5.   Objective: To study issues in land management of interest to member States and to develop publications containing analyses of these issues to help them better understand the current status of land management and thus formulate more targeted and effective policies.

6.   To achieve this objective, the Working Party will:

• Assist, in cooperation with the Committee on Housing and Land Management, in the development of Smart City Standards. This is part of the UNECE's project, "United Smart Cities: Smart urban solutions for transition and developing countries", which has produced smart city indicators[20]

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[19] Development of the studies is subject to the availability of funding.

[20] Please see the report of the Committee on Housing and Land Management in its seventy-fifth session, paras 46-48, at http://www.unece.org/fileadmin/DAM/hlm/documents/2014/ECE_HBP_179.en.pdf

- Organize the dissemination of the conclusions and recommendations of the study "Formalizing the Informal: Challenges and Opportunities of Informal Settlements in South-East Europe"[21] through the preparation of guidelines on informal settlements

- Establish, in cooperation with other international organizations, joint initiatives and projects, studies on marine cadastres and address registries

- Develop, in cooperation with the Real Estate Market Advisory Group, a compendium of best practices and recommendations on land and property valuation in collaboration with the World Bank.

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[21] Outcomes of the study were presented at the WPLA workshop "The challenges of Informal Settlements" on 25 February 2015, materials of which are available at http://www.unece.org/hlm/informalsettlements.html#/