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Review of the implementation of the programme of work 2018-2019:**Sustainable urban development and smart sustainable cities****Summary of activities on smart sustainable cities (SSC) of
ECE Committee on Housing and Land Management****Note by the secretariat***Summary*

In 2013, the ECE Committee on Housing and Land Management (CHLM) included “smart cities” as one of its priority topics in the Committee’s programme of work 2014–2015 (ECE/HBP/173). This Note includes an overview of current ECE activities on smart sustainable cities.

The ECE, in cooperation with the International Telecommunications Union (ITU), developed Key Performance Indicators on SSCs to address the achievement of the Sustainable Development Goals (KPIs) and launched a global initiative “United for Smart Sustainable Cities – U4SSC” in 2016. ECE activities on smart sustainable cities are implemented under the United for Smart Sustainable Cities Initiative – U4SSC which brings together 16 UN agencies. In 2019, when over 50 cities were evaluated by U4SSC partners, the U4SSC secretariat proposed to strengthen the implementation of recommendations stemming from KPI evaluation. The implementation platform was strengthened, and this was reflected in the revised Terms of References (TOR) of the U4SSC which was agreed by the partners in June 2019. The TOR is available in this Note.

Since 2016, the KPIs were piloted and tested by the U4SSC partner organizations, including ITU, UNDP, UN-Habitat and others, supporting the harmonization of collection, evaluation and monitoring of smart sustainable cities within the United Nations system. The piloting of the KPIs resulted in specific recommendations by cities for updating the indicators. To respond to the requests by the cities, in 2019, the U4SSC partners, the ITU and UN-Habitat initiated an update of the set of the indicators. The revised indicators were submitted to the U4SSC partners for their review and endorsement in July 2019, and are available in ECE/HBP/2019/ Inf. 7.

The Committee is invited to take note of the information provided and to discuss possible future activities of the U4SSC, the activities under the U4SSC Initiative, to endorse the revised TOR and KPIs and to reiterate the invitation to national and local governments to use the indicators for the city evaluation.



I. Introduction

1. The topic of smart sustainable cities is considered important among the member States of the ECE region. In the “Challenges and priorities in housing and land management in the ECE region” survey (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 “sustainable urban development” area¹.

2. In 2013, the topic was included in the programme of work of the Committee and one year later the project “United Smart Cities” was launched in cooperation with the Organisation for international Economic Cooperation (OiER) and the Environment Agency Austria (EAA). In 2015, UNECE and ITU jointly elaborated the SSC definition: “*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, and environmental aspects as well as cultural aspects*”. This definition was endorsed by the Committee at its seventy-sixth session (ECE/HBP/184 Annex I)².

3. In 2014, the Committee, at its seventy-fifth session (ECE/HBP/179), requested the secretariat to prepare a set of smart sustainable cities indicators. In 2015, the Smart Sustainable City (SSC) Indicators were developed by the UNECE and the ITU with the support of the OiER and EAA and were presented at the Committee’s seventy-sixth session. The Committee endorsed the Indicators (ECE/HBP/184 Annex I) and recommended updating them considering the Sustainable Development Goals (SDG) indicators.³ The Committee further recommended elaborating SSC Standards and developing SSC profiles.

4. The secretariat, in cooperation with its partners, including the International Telecommunications Union (ITU), updated the Indicators, which have been renamed Key Performance Indicators on SSCs to address the achievement of the Sustainable Development Goals (KPIs), and continued working on the development of the standard. The new KPIs including the areas of economy, environment, society and culture to embrace the principles of the Sustainable Development Goals and the Geneva UN Charter on Sustainable Housing were endorsed by the Committee in 2016 (ECE/HBP/2016/4).

5. Before 2016, all UNECE activities on smart sustainable cities were implemented in the framework of the USC project, including the development of the KPIs, smart sustainable cities profiles and the organization of events and capacity building workshops. In May 2016 the UNECE and ITU jointly launched the global initiative “United for Smart Sustainable Cities” and under this framework, they continued their work on the Key Performance Indicators (KPIs) on Smart Sustainable Cities to address the achievement of the Sustainable Development Goals. The USC project became the UNECE implementing arm of the U4SSC initiative, in particular for capacity building and city profiles development. The work on the KPIs was also moved under the U4SSC initiative.

6. The use of USC as implementation platform of the U4SSC was not reflected in the Terms of References of the U4SSC. In May 2019, ITU invited to the U4SSC partners to update the ToR accordingly. In June 2019, the partners have agreed to update the TOR by adding information on the U4SSC Implementation Platform (please see Section 3 for the description).

¹ More information can be found at www.unece.org/fileadmin/DAM/hlm/documents/2013/ece.hbp.2013.02.e.pdf, p.15.

² http://www.unece.org/fileadmin/DAM/hlm/documents/2015/ECE_HBP_184.en.pdf

³ Please see information on the history of the development and revision of the KPIs in ECE/HBP/2017/Inf.4

II. Summary of activities implemented in the framework of the U4SSC since the seventy-ninth session of the Committee on Housing and Land Management

7. Since the Committee seventy-ninth session, in the framework of the “United for Smart Sustainable Cities” (U4SSC) initiative, the secretariat completed the following studies:

- (a) Guidelines for circular cities (ECE/HBP/2019/Inf. 8)
- (b) Guidelines on tools and mechanisms to finance smart sustainable cities projects (ECE/HBP/2019/Inf. 9)
- (c) The smart sustainable city profile for the city of Voznesensk, Ukraine (ECE/HBP/199).

8. The ECE supported the organisation of the Thirteenth Symposium on Information and Communications Technology (ICT), Environment and Climate Change; and ITU-T Study Group 5: Environment, Climate Change and Circular Economy, which took place on 13 and 4 May 2019 in Geneva.

9. At the requests of the city government of Nursultan (former Astana), Kazakhstan, and in cooperation with Astana Innovation, preparatory work for the KPI evaluation started for the city of Nursultan in 2018. This work is expected to continue within project supported by the Russian Federation in 2019-2020 and the UNDA 12th tranche project in 2020-2023. A series of workshops will be organised in Kazakhstan to support the study and develop the capacity of local experts to implement the recommendations to be developed on the basis of the results of the KPI evaluation. As part of the project supported by the Russian Federation, a pilot project on the KPI evaluation and implementation of the evaluation recommendations with a focus on innovative financing instruments will be implemented in the city of Grodno, Belarus.

10. The ECE secretariat also received invitations to conduct KPI evaluation from several cities in the Netherlands, Norway, the Russian Federation, Ukraine and other countries. Due to the lack of financial resources, it was impossible to respond to all the requests. A cooperation on the KPI evaluation will be developed with cities based on the requests from the governments and depending on availability of resources. The procedure of the KPI evaluation process within the U4SSC is outlined in the ITU concept paper for the KPI assessment and verification.⁴

11. It should be noted that piloting of the KPIs by ECE and other partner organisations resulted in specific recommendations for updating the indicators. In 2019, the ITU and UN-Habitat initiated an update the set of the indicators. The revised indicators were submitted to the U4SSC partners for their review and endorsement in July 2019; they are available in ECE/HBP/2019/Inf. 7.

III. Terms of References of the U4SSC

A. Background information

12. The International Telecommunication Union (ITU) and the United Nations Economic Commission for Europe (UNECE) have developed an internationally agreed definition for a smart sustainable city: “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

⁴ Developed based on eth ITU concept paper for the KPI assessment and verification at <https://www.itu.int/en/ITU-T/ssc/united/Documents/KPIs-for-SSC-concept-note-General-revNovember/KPIs-for-SSC-concept-note-General-revNovember-E.pdf>

the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects.”

13. The United for Smart Sustainable Cities (U4SSC) initiative was launched on 18 May 2016 at the Forum on “Shaping smarter and more sustainable cities: Striving for Sustainable Development Goals”.

14. Since its inception, U4SSC has been functioning as a global platform for knowledge sharing on feasible smart city practices, guidelines and frameworks. U4SSC is a platform among agencies of the UN system, which is open for participation of other organizations and stakeholders.

15. The U4SSC advocates for public policies to encourage the use of innovative urban technologies and tools, including ICTs, to facilitate the transition to smart sustainable cities (SSC).

16. The U4SSC developed and is promoting the implementation of a set of international key performance indicators (KPIs) for smart sustainable cities to achieve the sustainable development goals.

17. The U4SSC Implementation Programme supports the promotion of the implementation of the U4SSC KPIs in cities, carries out projects, and builds partnerships which aim to build smarter and more sustainable cities worldwide.

B. Partners of the U4SSC

18. The U4SSC partners are agencies, programmes and funds of the United Nations system. The following organizations are currently partners of the U4SSC: the International Telecommunication Union (ITU), the United Nations Economic Commission for Europe (UNECE), the Secretariat of the Convention on Biological Diversity (CBD), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the United Nations Commission for Africa (UNECA), the Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Development Programme (UNDP), , the United Nations Human Settlements Programme (UN-Habitat), the United Nations Environment Programme (UN Environment), the United Nations Environment Programme Finance Initiative (UNEP-FI), the Secretariat of the United Nations Framework Convention for Climate Change (UNFCCC), the United Nations Industrial Development Organization (UNIDO), the United Nations University - Operating Unit on Policy-Driven Electronic Governance (UNU-EGOV), United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Meteorological Organization (WMO).

C. U4SSC Participants

19. The Participants of the U4SSC are experts representing interested national and local organizations and agencies, international organizations, cities and their associations, NGOs, private sector, academia and independent experts.

D. Management team

20. The U4SSC Management Team includes two Co-Chairs and two Vice-Chairs who are experts nominated by the Partners and approved by the Partners Board. The U4SSC Implementation Programme (U4SSC-IP) has a designated leader mandated to coordinate the work of U4SSC-IP and its associated activities. The leader of U4SSC-IP is responsible for the development and implementation of the U4SSC Action Plan together with other U4SSC Leaders.

21. The work of the U4SSC is carried out by designated Leaders of Thematic Groups who organize work on specific topics and organize preparation of specific deliverables (reports, studies, etc.) as agreed during the U4SSC annual meeting or as approved electronically by

the Partners Board. The Leaders are technical experts who are appointed by U4SSC Co-Chairperson in consultation with U4SSC partners.

22. The Initiative has the following objectives, which are set in accordance with the mandate of the U4SSC Partners:

- (a) To support the creation of legal, regulatory and institutional frameworks for SSC also through relevant U4SSC Partners' intergovernmental and institutional bodies
- (b) To provide practical guidance to decision makers and other key stakeholders on sustainable urban development
- (c) To foster discussions on the role of information and communication technologies (ICTs) and its applications, including, inter alia, Internet of Things (IoT), blockchain and artificial intelligence in facilitating the transition to SSC
- (d) To encourage cooperation among relevant smart city stakeholders
- (e) To provide an accessible and neutral platform for knowledge sharing on SSC related issues
- (f) To support the implementation of the U4SSC Key Performance Indicators for SSC and to harmonize methodologies and approaches to assess cities' performance
- (g) To encourage the development of master plans and other strategic documents for cities wishing to transition into smart sustainable cities
- (h) To encourage cities to incorporate smart and sustainable city elements into their current sustainable urban development strategies
- (i) To enhance discussions on SSC through the preparation of policy papers, recommendations and guidelines
- (j) To promote the organization of raising awareness campaigns on smart sustainable city-related topics
- (k) To help achieve and monitor progress on achieving the Sustainable Development Goals (SDGs), in particular SDG 11 on cities and human settlements, the Paris Agreement, the New Urban Agenda and other international commitments, including related ITU Resolutions, UNECE or U4SSC Partners initiatives
- (l) To develop and implement projects and programmes to support cities in becoming smarter and more sustainable
- (m) To develop city support tools
- (n) To carry out fundraising campaigns and mobilize resources to support the activities of U4SSC and its Programme
- (o) To Raise awareness in order to promote the U4SSC and its activities.

E. Responsibilities of the U4SSC Partners Board

23. The Partners Board comprises 16 UN agencies, funds and programmes (U4SSC partners). The Partners Board of the U4SSC are responsible for the development of strategic directions of work of the Initiative. It will also:

- (a) Adopt the annual U4SSC Action Plan elaborated by the Chairs, Vice Chairs, Leaders with the support of the Secretariat
- (b) Provide strategic guidance
- (c) Approve the revision of the ToR (when needed)
- (d) Approve the appointment of Chairpersons and Vice-Chairpersons
- (e) Actively contribute to the production of the deliverables and other activities conducted within the U4SSC

(f) Actively disseminate the products of the U4SSC through their networks and relevant events

(g) Ensure that the main objectives of the U4SSC are met

(h) Support the U4SSC Secretariat when required.

24. The Board can also provide its approval electronically in between U4SSC physical meetings.

F. Responsibilities of Chairperson and Vice-Chairpersons of the U4SSC

25. The functions are:

(a) To oversee the overall functioning of the U4SSC

(b) To contribute to the development of a U4SSC Annual Action Plan which will help to monitor the progress of each deliverable and ensure its timely delivery with support from the Leaders and Secretariat

(c) To provide guidance in case any dispute or overlap occurs between scopes of the deliverables

(d) To promote the work of the U4SSC at the international and regional level

(e) To encourage smart sustainable city stakeholders to join the U4SSC

(f) To guide U4SSC participants and leaders in their work.

G. Responsibilities of Leaders of U4SSC

26. The responsibilities are:

(a) To propose development of specific deliverable(s) linked to the subject areas of the U4SSC

(b) To develop a work plan for his/her deliverable and inform the U4SSC Secretariat accordingly

(c) To supervise the work related to his or her own deliverable

(d) To develop a feasible schedule for the deliverable they are responsible for, including a realistic work plan and the calendar of e-meetings

(e) To take the meeting minutes for each e-meeting held for their deliverable and upload them regularly to the Initiative web-based “SharePoint” site (<https://extranet.itu.int/sites/itu-t/initiatives/U4SSC/SitePages/Home.aspx>)

(f) To harmonize the inputs provided on each deliverable

(g) To clearly define the titles, objectives and scope of each activity and deliverable proposed, including, but not limited to, policy papers, frameworks, issue papers, etc.

(h) To promote cooperation with the U4SSC Co-Chairs and other Leaders, when possible, to find synergies and work together on common topics

(i) To provide inputs to the Partners’ Board based on the discussions conducted on the deliverable they are in charge of

(j) To ensure that the smart sustainable city guidelines, policy recommendations, campaigns and smart city action plans are aligned with, inter alia, existing international standards, Key Performance Indicators (KPIs), the New Urban Agenda, Paris Agreement, Connect 2020 Agenda and the SDGs

(k) To promote the U4SSC through events and campaigns and their organizations’ network and events

- (l) To support and contribute to the overall objectives of U4SSC
- (m) To inform their respective organizations of their involvement in the U4SSC initiative.

H. Responsibilities of Participants

27. The responsibilities of the participants are:

- (a) To select the deliverable(s) they wish to contribute to and inform the U4SSC Secretariat and the leader(s) accordingly
- (b) To follow closely any global discussions on SSC which may be relevant to the work of the U4SSC and its deliverables
- (c) To bring their expertise on diverse subjects within the smart and sustainable urban development field to the discussions of the deliverable(s) they are working on
- (d) To participate in meetings or events of the U4SSC, as appropriate
- (e) To encourage smart city transitions through other events, conferences and trainings
- (f) To support bottom up initiatives on SSC that are ICT enabled
- (g) To collect relevant case studies and good practices on smart sustainable city related topics for the development of proposed deliverables.

I. Responsibilities of the U4SSC Secretariat

28. The Secretariat of the Initiative is responsible for coordinating its activities; it is open to the participation of other U4SSC Partners.

29. In order to join the Initiative, potential partners and other participants are invited to contact the Secretariat by email.

30. ITU (Telecommunication Standardization Bureau) , UNECE (Housing and Land Management Unit) and UN-Habitat jointly operate as the Secretariat of the U4SSC with their available resources and work programmes. The scope of the Initiative depends on the availability of resources to support the Secretariat and the work within the Initiative. The main responsibilities of the U4SSC Secretariat are:

- (a) To assist with the organization of the work on the deliverables and the U4SSC-IP
- (b) To assist the consolidation of the deliverables, if required
- (c) To coordinate the official communications and press releases for the U4SSC
- (d) To organize the yearly meeting of the U4SSC where the mandates, Chairperson, Vice- Chairpersons and activities of the whole initiative are discussed and approved
- (e) To bring the results of work to attention and action, as appropriate, of relevant UNECE, ITU, UN-Habitat or other U4SSC partners' intergovernmental bodies.

J. Additional provisions

31. Participation in the U4SSC is free of charge.
32. The travel medical insurance (if required), travel expenses, visa, accommodation and living expenses are responsibility of the individual or of his/her respective agency.
33. Participation in the U4SSC is voluntary and not remunerated. It does not carry any expectation of employment with ITU, UNECE, UN-Habitat or any of the other participating UN agencies.
34. The U4SSC Chairperson, Vice-Chairpersons and Leaders' tenure is one year . Subsequent renewal or appointing of a new Chairperson, Vice-Chairperson or Leader is possible.
35. All U4SSC partners are entitled to feature their official logos on the Initiative website, publications, issue papers, policy papers, guidelines and action plan prepared within U4SSC.
36. The main website of the initiative is hosted at <https://www.itu.int/en/ITU-T/sse/united/Pages/default.aspx> . This website includes the Terms of Reference (ToR) of the U4SSC, U4SSC introduction booklet, the links to U4SSC events, deliverables and other results of work.
37. An intranet site (SharePoint) has been created by ITU to facilitate the communication between Partners and other participants.
38. The participants, Leaders, Vice-Chairpersons and Chairperson shall not use their participation in the U4SSC for their personal or corporate gain or benefit; shall respect confidentiality until the results of work are completed.
39. All the material published based on the work of the U4SSC will be intellectual property of ITU, UNECE, UN-Habitat and other participating UN agencies, funds and programmes.
40. All unpublished material within the U4SSC is the intellectual property of ITU, UNECE, UN-Habitat and other participating UN agencies, funds and programmes. They cannot be reproduced or published without the written consent of the U4SSC Secretariat.
41. The logo of the U4SSC is also intellectual property of ITU, UNECE, UN-Habitat and other participating UN agencies, funds and programmes and can be used only after receiving the required approval of the U4SSC Secretariat.
42. Chairperson, Vice-Chairpersons, Leaders and participants invited to speak on behalf of U4SSC in other events as well as interested in presenting the work of the U4SSC in fora, journals, conferences etc. should inform the U4SSC Secretariat in advance in order to ensure smooth coordination of work.
43. The U4SSC Secretariat should be informed immediately of any shared or replicated work in other forums, publications or organizations, in order to avoid conflicts of interests or legal liabilities in the future.
44. The U4SSC Partners and the U4SSC Management Team can speak on behalf of U4SSC and are encouraged to inform the U4SSC Secretariat on their relevant activities.
45. Participants or other interested parties are encouraged to promote the work of U4SSC within their networks.
46. Any fundraising activities that will take place under the umbrella of the U4SSC, will be coordinated by the U4SSC Implementation Programme together with the U4SSC Secretariat.
47. Ms. Cristina Bueti, ITU; Robert Lewis-Lettington, UN-Habitat; and Ms. Gulnara Roll, UNECE, are the points of contact for the U4SSC Secretariat.
48. By participating in the U4SSC, it is implied that each participant, Leader, Vice Chairpersons and Chairperson agree to the ToR in this document with no exceptions.