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Report of the United Nations Human Settlements Programme (UN-Habitat) on human settlements statistics

Note by the Secretary-General

In accordance with Economic and Social Council decision 2021/224 and past practices, the Secretary-General has the honour to transmit herewith the report of the United Nations Human Settlements Programme (UN-Habitat) on human settlements statistics, which is presented to the Statistical Commission for discussion. In the report, UN-Habitat highlights the progress that it and partners have achieved on the development of human settlements statistics and relevant methodologies and on advancements in urban data collection and reporting in a consistent manner across a set of selected human settlements indicators. UN-Habitat provides information on progress made in the implementation of previous recommendations on improving the global monitoring of and reporting on human settlements indicators.

* E/CN.3/2022/1.



Report of the United Nations Human Settlements Programme (UN-Habitat) on human settlements statistics

I. Introduction

1. At its fiftieth session, held from 5 to 8 March 2019, the Statistical Commission took note of the report of the United Nations Human Settlements Programme (UN-Habitat) on human settlements statistics (E/CN.3/2019/18), in which the Secretary-General summarized progress made on the global monitoring of the urban dimensions of the Sustainable Development Goals and the New Urban Agenda, including various capacity development activities and methodologies initiated to facilitate the efficient collection of human settlements statistics. Since 2019, more work on the development of human settlements statistics and its associated technical cooperation and capacity-building activities has been strengthened. Various actions have been taken to implement the main recommendations in the report on the fiftieth session, including the establishment of an incremental and inclusive reporting system that reinforces the United Nations system-wide coordination mechanism for monitoring and reporting, the roll-out of a harmonized definition of cities and rural areas, the establishment of an expert group to work on the categorization of slum and non-slum areas and the development of a harmonized urban monitoring framework. In its resolution 75/224, the General Assembly called upon UN-Habitat to support efforts of the Commission to establish a functional definition of urban areas and develop a common methodology for aggregating subnational urban statistics.

2. The present report is issued at a time when the trend of declining global urban extreme poverty that has been observed for the past 30 years is expected to stall or be reversed owing to the disruptions caused by the coronavirus disease (COVID-19), with the impact also compounding the forces of conflict and climate change.¹ In addition, more than 80 per cent of small urban businesses have reported financial stress, and at least 2 billion informal workers have been directly affected. Owing to the COVID-19 pandemic, the concept of cities and urbanization has been challenged as an underlying risk factor. However, recently collected urban data and global evidence clearly indicate that it is unsustainable urbanization practices that magnify the effects of the pandemic. Population density is not an inherent risk factor, but inequality, overcrowding, poor access to basic services and poverty correlate directly with a higher risk of transmission, illness and death. Even before the pandemic, 75 per cent of cities were becoming more unequal. Consequently, the COVID-19 pandemic has corroborated what has been known for decades: that inequality has been made worse in cities, with the most vulnerable segments of society being the most affected.

3. The present report provides an overview of human settlements statistics activities carried out since 2019, including the significant impacts of the COVID-19 pandemic on the work. The report covers the refinements of several methodologies connected to the monitoring and implementation of the New Urban Agenda and the urban dimensions of the Goals. They include: the roll-out of the COVID-19 tracker for cities (see <https://unhabitat.citiiq.com>); capacity development initiatives to strengthen the collection of human settlements statistics; the harmonization of the definition of city, urban and rural areas; the application of the framework for a national sample of cities and the City Prosperity Initiative; data production at the city

¹ See <https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021#:~:text=WASHINGTON%2C%20Oct.,the%20World%20Bank%20said%20today>.

level in support of voluntary local reviews; the development of the global urban monitoring framework; and related regional dissemination and advocacy initiatives.

II. The Sustainable Development Goals and human settlements statistics

4. As facilitator of the United Nations system-wide strategy for sustainable urban development and United Nations² focal point on sustainable urbanization and human settlements, UN-Habitat continues to monitor and report on global conditions and trends and lead and coordinate the implementation of the New Urban Agenda in collaboration with other United Nations system agencies. UN-Habitat continues to strengthen the use of innovative urban solutions, as well as robust data and analysis generated through the City Prosperity Index, global/national samples of cities, spatial analytics and urban observatories, among others, to support the global monitoring of the Goals, the New Urban Agenda and other global frameworks.

5. With the emergency of the COVID-19 pandemic and increased demand for disaggregated data linked to the New Urban Agenda³ and the 2030 Agenda for Sustainable Development and its associated global indicator framework, the scope of global human settlements statistics expanded to ensure the use of appropriate indicators and statistics to respond better to local, subnational and national circumstances and priorities, including engaging with a wider range of data producers and consumers, in particular multilateral organizations, civil society, the private sector and academia.

6. Data collection plans put in place earlier ensured that UN-Habitat continued to collect data and report on progress on various urban indicators within Goals 11, 1 and 6. In its preparation of the second edition of the quadrennial report on the New Urban Agenda, to be submitted in 2022, UN-Habitat has developed reporting guidelines,⁴ launched the New Urban Agenda platform,⁵ enhanced the Urban Indicators Programme,⁶ strengthened its data support for voluntary local reviews,⁷ developed the global urban monitoring framework⁸ and disseminated the New Urban Agenda monitoring framework.⁹ That activity has been accompanied by various virtual training and capacity development sessions to prepare local, national and global partners to efficiently collect the relevant and essential urban data for routine reporting under very challenging circumstances.

III. Progress on the reporting of human settlements statistics

7. In May 2018, UN-Habitat presented to the General Assembly the first of five quadrennial reports on progress on the implementation of the New Urban Agenda. The report (A/73/83-E/2018/62), prepared in consultation with 23 United Nations entities, the 5 regional economic and social commissions and 30 partners, provided qualitative and quantitative analysis of that progress. It included recommendations

² Endorsed by the United Nations System Chief Executives Board for Coordination in May 2019. See <https://unhabitat.org/sites/default/files/documents/2019-07/un-system-wide-strategy-on-sustainable-urban-development-1.pdf>.

³ See <http://habitat3.org/wp-content/uploads/NUA-English.pdf>.

⁴ See https://www.urbanagendaplatform.org/sites/default/files/2020-07/New%20Urban%20Agenda%20Reporting.Guidelines.30-10-2019_Final.pdf.

⁵ See <https://www.urbanagendaplatform.org/>.

⁶ See <https://data.unhabitat.org/>.

⁷ See <https://unhabitat.org/topics/voluntary-local-reviews>.

⁸ See <https://data.unhabitat.org/pages/urban-monitoring-framework>.

⁹ See https://www.urbanagendaplatform.org/data_analytics.

for steps to ensure the successful production of subsequent reports until 2036. The approach involves the production of inclusive data platforms and the strengthening of partnerships with other entities of the United Nations system, with the aim of monitoring a representative sample of national cities so that progress could be reported at the national level with limited selection bias and cost savings. Those well-established data support mechanisms and tools ensured that, from 2019, a streamlined system was in place to support all the urban data collection and reporting needs for the Goals and the New Urban Agenda at various national and subnational levels.

8. Since 2018, UN-Habitat has coordinated inter-agency discussions on the development of the New Urban Agenda indicator framework aligned with the indicators of relevant targets of the Goals, as well as the guidelines for reporting on the implementation of the New Urban Agenda. The monitoring process for the New Urban Agenda draws on the system of indicators and data of the 2030 Agenda monitoring framework, coordinated by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat, and the New Urban Agenda approach complements the implementation and localization of the 2030 Agenda. The global network of urban observatories continues to facilitate the collection and aggregation of data at the local level and the comparison of data at the national, city and regional levels. The system and approach, set up a while ago, now form a key mechanism enabling the routine collection of local-level data on COVID-19 responses and impacts in cities.

9. UN-Habitat supported the continued roll-out of the City Prosperity Initiative, a global framework through which Member States monitor the urban components of the 2030 Agenda at the city level. UN-Habitat used the Initiative to monitor the performance of cities globally against a core set of indicators, tracking, among other aspects, inclusiveness, infrastructure, environment, productivity, housing, water, sanitation, Internet access and civic participation in urban planning. Given the integrative nature of many global urban-related agendas, UN-Habitat, with the support of the city council of Madrid, initiated consultations with United Nations entities and other partners on the need to harmonize the many existing urban monitoring and reporting mechanisms, such as the Initiative, leading to the development of a global urban monitoring framework¹⁰ in 2020. The framework adequately captures a wider scope of urban issues, including women's empowerment, youth participation, human rights and other elements.

10. More efforts were made towards advancing the adoption and use of new data sources that support reporting on Goal 11 and the New Urban Agenda. During the period 2018–2021, capacity development efforts undertaken by UN-Habitat have helped to showcase the value of emerging data production methods, such as those requiring use of geospatial techniques and technologies. Those efforts resulted in significant understanding and appreciation of and an increase in the acceptability of the value of the emerging methods, with more Member States now producing data using geospatial techniques and/or requesting the support and guidance of UN-Habitat and its partners to apply to their Goal-monitoring activities. UN-Habitat and its partners continue to engage with and build the capacities of Member States to accelerate city-level data production, as well as to apply the degree of urbanization as a harmonized approach to the definition of cities for global statistical reporting purposes, which was endorsed by the Statistical Commission in March 2020.

11. Through such support, the production of city-specific data has gained traction, with Member States increasingly adopting sound sampling methods to identify a set of representative cities for which they collect data and report on urban trends, as opposed to generating data for only bigger and more well-known cities. City-level data production has become very useful in the production of voluntary local reviews, which have gained traction in the past four years. Such data production efforts at the

¹⁰ See <https://data.unhabitat.org/pages/urban-monitoring-framework>.

city level, which are connected to the UN-Habitat roll-out and its continued support for the implementation of the national sample of cities approach, have resulted in the production of data that are more representative of urban contexts across countries and that further enhance the principle of leaving no one and no place behind.

12. To support the implementation of the New Urban Agenda, the localization of the urban dimensions of the Goals and the monitoring of urban-related targets and indicators, UN-Habitat disseminated guidelines on data collection, analysis and monitoring to nearly 150 Member States. Support was provided to over 90 countries in the monitoring and disaggregation of urban data, including on gender-urban related indicators, to inform policymaking. Eighteen workshops on improving ways to apply international recommendations linked to human settlements statistics at the local level were organized and attended by more than 1,000 participants. As a result, the production of specific urban data related to gender, age, persons with disabilities and other groups by State and civil society actors has increased, enhancing monitoring at various levels and supporting the commitment to leave no one behind.

13. As part of its global monitoring function, UN-Habitat expanded its original global sample of 200 cities to more than 1,000 cities to support the measuring of trends in world urbanization, as well as progress made towards the implementation of the New Urban Agenda and the 2030 Agenda. In close collaboration with the regional commissions, UN-Habitat organized 12 expert group meetings between 2018 and 2020 to strengthen the methodologies for monitoring progress made towards the urban-related Goals and their indicators, in particular Goal 11 (make cities and human settlements inclusive, safe, resilient and sustainable). A recommendation that Member States adopt a national sample of cities and the spatial disaggregation of data was submitted in 2019 through the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. Over the reporting period, more than 90 national statistical offices were trained on the adoption and application of the national sample of cities approach and other innovative spatial and non-spatial urban data collection methodologies.

14. UN-Habitat has been working closely with various United Nations system agencies, such as the United Nations Environment Programme, the United Nations Children's Fund (UNICEF), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the World Food Programme, the International Organization for Migration and regional commissions, to ensure better coordination of the production of human settlements statistics. For example, since 2019, UN-Habitat has worked closely with UNAIDS and the International Association of Providers of AIDS Care to track the commitments of the Fast-Track Cities initiative, a global partnership between cities and municipalities around the world and four core partners (the International Association, UNAIDS, UN-Habitat and the city of Paris) that was launched in 2014. Various conferences have been organized jointly every year since 2018, with evidence-based data shared to track progress across a stream of cities and to document lessons learned and challenges encountered. The conferences have provided an international gathering of representatives of more than 250 cities that are accelerating their responses to HIV/AIDS, tuberculosis and viral hepatitis – three diseases that are cited as urban health priorities in the New Urban Agenda and in the declaration entitled “On the Fast Track to Accelerating the Fight against HIV and to Ending the AIDS Epidemic by 2030” (General Assembly resolution [70/266](#)).

IV. Global and regional workshops related to capacity-building activities

15. UN-Habitat has worked with various stakeholders and partners to accelerate support to Member States in establishing monitoring systems for the urban-related

Goals and the New Urban Agenda. The efforts have improved data generation, thereby contributing to policymaking and providing an evidence base for transformative actions. The most recent Urban Indicators Programme relating to capacity development is now well resourced with tools and data from the global monitoring framework for human settlements statistics, the New Urban Agenda monitoring framework, a technical note on the operational definition of a city, the national sample of cities methodology, a guide to setting up urban observatories and nine training modules on the indicators for Goal 11. The tools have been used as training materials in various regional workshops to build capacity in the collection, analysis and use of human settlements indicators.

16. Since 2018, 18 capacity development workshops on improving ways to apply international recommendations linked to human settlements statistics at the local and national levels have been organized and attended by more than 1,000 participants from over 80 countries. They include: a regional workshop on human settlements indicators for Asia-Pacific countries, organized with the Economic and Social Commission for Asia and the Pacific in March 2018; a regional workshop for Arab States, organized with the Economic and Social Commission for Western Asia in July 2018; an international workshop on human settlements statistics held in Kuala Lumpur in February 2018, as part of the ninth session of the World Urban Forum; and seven subregional workshops on harmonization of city definitions and computation of Goal 11 indicators, organized in 2019 and 2020 in partnership with regional commissions in Africa, Arab States, Asia and Latin America and the Caribbean, bringing together 250 participants from 85 countries.

17. The technical assistance of UN-Habitat, along with the technical support of many partners, was provided at various scales to many cities and countries, including Bahrain, Botswana, Cameroon, Colombia, Ecuador, Egypt, Ethiopia, India, Kenya, Kuwait, Mexico, the Republic of Korea, Rwanda, Saudi Arabia, Senegal, Tunisia, Turkey, Uganda, the United Republic of Tanzania and Viet Nam. With more than 320 active local and national urban observatories contributing to global data collection, the Global Urban Indicators database now offers a richer global repository of urban data that addresses multiple territorial levels and is complemented by topical data from other sources, including United Nations entities.

18. The above-mentioned technical assistance initiatives represent continued efforts by UN-Habitat and partners to ensure sustainable access to reliable urban data and information for monitoring global agendas. For example, the New Urban Agenda indicators framework and the harmonized global urban monitoring framework were developed in collaboration with global partners and were harmonized to support reporting for all agendas, at various levels and with limited duplication. The new Urban Indicators Programme¹¹ draws on spatial, non-spatial and qualitative measures from all the harmonized frameworks that are key tools for studying urban formations at the lowest levels and designing policies, strategies, actions and programmes for sustainable urban development.

19. Continuous capacity development initiatives geared towards strengthening the Urban Indicators Programme provide a comprehensive means of monitoring, evaluating and reviewing global urban conditions, trends and issues through appropriately disaggregated data (by gender, location, age, education, wealth and disability) and provide adequate tools for evaluating the implementation of the urban dimensions of the Goals and the New Urban Agenda in such a way as to ensure that no one and no place is left behind.

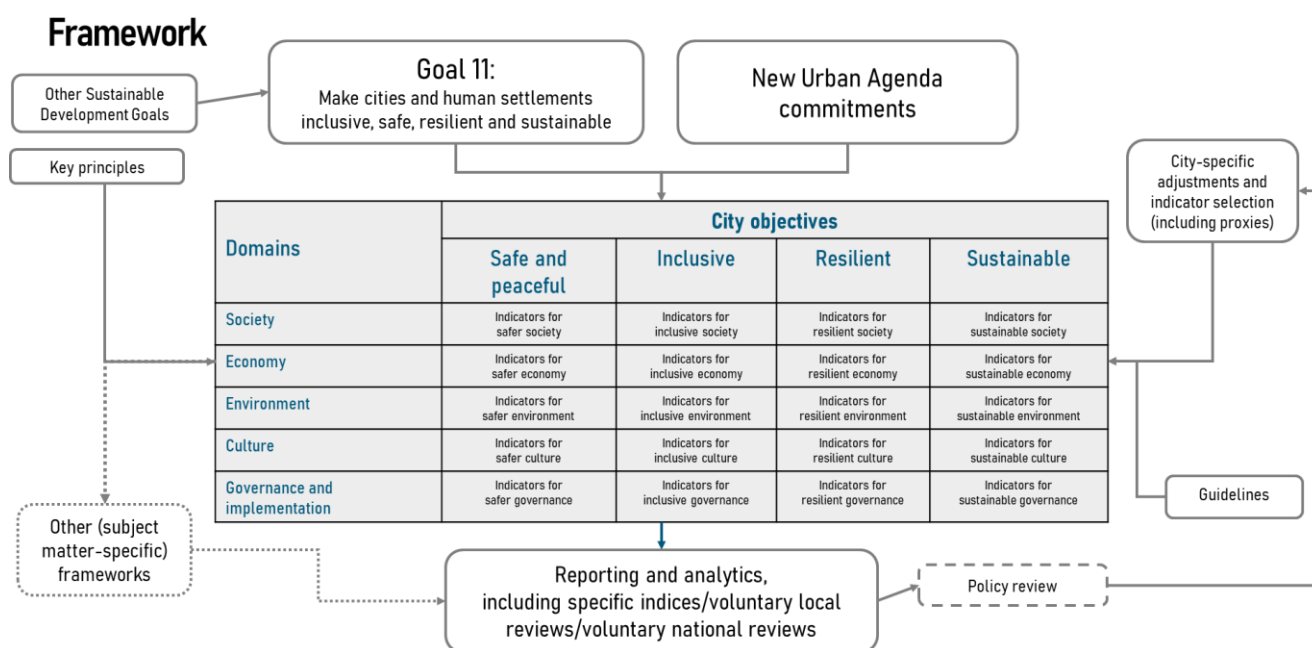
¹¹ See <https://data.unhabitat.org/>.

V. Global urban monitoring framework

20. As part of the harmonized approach to reporting on progress towards the implementation of the New Urban Agenda, the Goals and other global, regional, national and local agendas, UN-Habitat has led the process of developing a global urban monitoring framework. The framework is the result of collaboration between various United Nations agencies, regional commissions, city representatives and more than 25 partners from institutions working with urban indicators. Expert group meetings and bilateral discussions were organized, which further guided the development of the framework, including the development of harmonized framework principles and indicator selection criteria.

21. As shown in the figure below, the framework covers five key urban development domains (society, economy, environment, culture and governance and implementation), as well as four local city objectives (safe and peaceful, inclusive, resilient and sustainable), allowing for a consolidated approach to reporting on sustainable urban development at all levels. It intentionally draws from well-established trackers to reduce duplication with national and local data production efforts. The framework is a process, as well as a set of measures that any city or local government will be able to use to quantify, rate or rank its progress towards transforming its urban fabric into a more sustainable form. The indicators selected provide a rate of change or a snapshot status so that a city can monitor progress and alignment with the objectives of the Goals and the New Urban Agenda or other local targets.

Structure of the global urban monitoring framework



22. The global urban monitoring framework integrates tools and mechanisms for monitoring progress towards Goal 11 and indicators relating to urban matters that are aligned with international and national guidance on gender, young people and human rights monitoring strategies at all levels. Specifically, tools such as the national sample of cities methodology are well integrated into the global urban monitoring framework, which allows for the measurement and assessment of urban performance in a very representative manner. UN-Habitat has already been working with the City

Prosperity Index, which is being upgraded to form the global urban monitoring framework for monitoring the performance of cities at the global level, with a core set of indicators that track inclusiveness, such as monitoring gender balance in internal structures, governance structures and decision-making processes and incorporating a gender perspective into all actions in national Governments and ministries as well as in local governments.

23. The global urban monitoring framework is at the core of the UN-Habitat approach to data and indicators for Goal localization, specifically the Agency's work on voluntary local reviews and the Sustainable Development Goals Cities flagship initiative. In addition, the global urban monitoring framework is being digitized through a partnership with the Global CEO Alliance on a data entry and indexing system that allows cities to measure development performance.¹² With its core set of urban indicators, the global urban monitoring framework is envisaged to be efficient (not burdensome to cities), effective (able to assist cities in tracking their progress towards meeting the Goals and New Urban Agenda commitments and informing local action) and harmonized (ensuring that data are comparable).

24. The framework has been piloted in various cities that expressed an interest in it and will be used by national teams reporting on the New Urban Agenda, local governments involved in voluntary local reviews, cities in the UN-Habitat Sustainable Development Goals Cities flagship programme and countries interested in undertaking a proper urban analysis to form part of the common country assessments. It can be complemented by additional sets of indicators, allowing deeper thematic analysis, and with geospatial and local perception indicators to understand differences experienced at the district and subdistrict levels of cities. Adopting the unified and standardized platform for the monitoring and reporting of urban indicators will help countries to save time and resources in urban monitoring.

VI. Data and reporting at the local level: voluntary local reviews

25. Since 2018, voluntary local reviews have been emerging as a key tool through which local and regional governments can report on their Sustainable Development Goal strategies and achievements and mobilize a wide range of local actors in support of the global agendas. UN-Habitat has supported and enhanced the voluntary local review global movement through: (a) strategic partnerships with key local, national and international institutions; (b) technical support provided to local and regional governments; (c) normative development and capacity-building; and (d) global advocacy and support for intergovernmental processes. Specific attention has also been paid to harnessing the potential of voluntary local reviews to bridge reporting on the New Urban Agenda and the Goals at the local level, as well as to build strong linkages between voluntary local reviews and voluntary national reviews.

26. Building on a strong partnership with the city of New York – the pioneer of the voluntary local review movement – and the main associations of local and regional governments, such as United Cities and Local Governments, UN-Habitat has built a broad network of collaborators within and outside the United Nations system to advance the voluntary local reviews globally. They include the Department of Economic and Social Affairs, regional economic commissions, other United Nations entities, offices of the United Nations resident coordinators and United Nations country teams, as well as networks of local and regional governments, such as those convened by the Global Task Force of Local and Regional Governments. UN-Habitat has provided technical support to many local and regional governments worldwide.

¹² See unhabitat.org/global-ceo-alliance-and-un-habitat-aim-to-support-1000-cities-to-reach-the-sustainable-development.

In 2019, it worked with Niterói and Rio de Janeiro (Brazil) and Chimbote and Trujillo (Peru), the first voluntary local review pilot cities in Latin America. In 2020, UN-Habitat assisted the cities of Moscow (Russian Federation) and Florence (Italy) and, more recently, the Greater Amman Municipality (Jordan) and Bhopal (India) in producing urban data and processing their voluntary local reviews. UN-Habitat is working closely with the city of Madrid to advance the voluntary local review agenda globally, including by supporting the development of the city's voluntary local review. Voluntary local reviews have a strong connection with the application of the harmonized global urban monitoring framework that UN-Habitat is seeking to fully integrate into its voluntary local review methodology.

27. UN-Habitat normative work to support voluntary local reviews is aimed at providing local and national partners with cutting-edge knowledge and guidance. Volume 1 of “Guidelines for voluntary local reviews: a comparative analysis of existing voluntary local reviews”,¹³ developed in partnership with United Cities and Local Governments, was launched at the 2020 high-level political forum on sustainable development. A second volume of the guidelines, in which the connection between voluntary local reviews and voluntary national reviews was explored and which provides recommendations on strengthening multilevel governance for reporting on and localizing the Goals, was published in July 2021. In addition, UN-Habitat is currently developing spin-off research on megacities and voluntary local reviews, and it will soon begin to develop a third volume of the guidelines, on data, anchored in the global urban monitoring framework.

28. At the regional level, UN-Habitat supported the Economic and Social Commission for Asia and the Pacific in the development of regional guidelines for voluntary local reviews in 2020, and it worked closely with the Economic Commission for Africa and United Cities and Local Governments Africa to develop and co-publish regional guidelines for voluntary local reviews for Africa in 2021. Similar cooperation is continuing with the Economic Commission for Europe, which UN-Habitat has supported in developing regional guidelines for voluntary local reviews for Europe. UN-Habitat has a unique capacity to link the local reviews and dynamics with the global advocacy and intergovernmental processes, such as the high-level political forum on sustainable development and the World Urban Forum.

VII. Existing data gaps and challenges in reporting on human settlements statistics

29. Notwithstanding the ongoing efforts of UN-Habitat and the many stakeholders working on human settlements statistics, the coverage of its technical assistance in human settlements statistics in all countries, and in particular cities, remains limited. In the past two years, its support in assisting more cities and countries was further limited by the COVID-19 pandemic, which largely affected urban areas. Such assistance is providing becoming increasingly more critical as capacity development efforts make the transition from introducing and broad perspectives on indicators to providing on-the-job training and direct technical support for data production.

30. Many countries continue to struggle with the need to produce data at the city level and work upwards to produce national estimates as dictated by the Goals framework, in which cities are now a unit of analysis. The Statistical Commission's endorsement of the degree of urbanization as the harmonized approach to defining cities and rural areas for statistical purposes provides a major boost to the accelerated

¹³ See <https://unhabitat.org/guidance-for-voluntary-local-reviews-voll-a-comparative-analysis-of-existing-vlrs>.

and harmonized monitoring of Goal 11 and other urban indicators, but the question remains how quickly countries can integrate the approach into their statistical processes. Between 2020 and 2021, UN-Habitat and partners continued to support selected countries in developing regions in applying the approach in order to produce data on selected indicators, with lessons learned and best practices documented to help in the upscaling phase in 2022 and onward.

31. UN-Habitat, as a focal point for urban issues, has updated various tools for global urban monitoring, which have contributed to the generation of urban data that are directly relevant for the monitoring of progress towards Goal 11 monitoring and the New Urban Agenda. The tools include urban observatory models, harmonized city-urban-rural definitions, the global urban monitoring framework, the Earth observations toolkit, the Urban Indicators Programme and the national sample of cities approach. Many of the tools were refined and modified in collaboration with other United Nations agencies to prepare for supporting the global monitoring of Goals pertaining to urban matters and the New Urban Agenda. However, the process of updating many of the tools is expensive, in addition to only being able to meet half the technical support need that UN-Habitat receives from cities and national partners owing to financial constraints.

VIII. Urban monitoring guides and tools

A. City definition

32. A global definition of a city as a unit of analysis for monitoring purposes is critical to overcoming the challenges associated with comparisons of cities' performance. In addition, at the city level, a harmonized global definition of what constitutes a city, an urban area and a rural area is needed for purposes of global monitoring and reporting. Specific guidance on concepts, measurements and unified standards for defining cities was developed and disseminated to many countries to ensure that harmonized and mutually agreed definitions of city and urban areas are used.

33. Efforts towards a harmonized definition of a city are not meant to change how countries define their urban areas but rather to support more systematic global monitoring and reporting of the performances of their systems of cities. Global consultations and expert group meetings organized by UN-Habitat and its partners led to building consensus by Member States and the subsequent endorsement by the Statistical Commission during its fifty-first session, held in March 2020, of the degree of urbanization as a workable method of delineating cities and urban and rural areas for international statistical comparisons.¹⁴ A manual on how to implement the method was shared during the fifty-second session of the Commission.¹⁵

34. The degree-of-urbanization approach and definition combine population size and population density thresholds to classify the entire territory of a country along the urban-rural continuum and to capture the full extent of a city, including the dense neighbourhoods beyond the boundary of the central municipality. The degree of urbanization is applied in a two-step process. First, grid cells measuring 1 km² are classified on the basis of population density, contiguity and population size. Subsequently, local units are classified as city, urban or rural on the basis of the type of grid cells in which majority of their population resides.

¹⁴ See <https://unstats.un.org/unsd/statcom/51st-session/documents/BG-Item3j-Recommendation-E.pdf>.

¹⁵ See https://unstats.un.org/unsd/statcom/52nd-session/documents/BG-4a-DEGURBA_Manual-E.pdf and <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-02-20-499>.

B. Demarcation of slum and non-slum areas

35. Identifying slum and non-slum areas in census tracts remains a priority for human settlements statistics because a large portion of urban populations in the developing world still reside in deprived neighbourhoods, including slums, informal settlements and areas of inadequate housing, and face a range of challenges, from insecure tenure to unplanned housing, pollution, environmental risks and social exclusion. While there has been a significant increase in the production of spatial data, such detailed data on poor neighbourhoods remain scarce and, where the data do exist, they are often outdated. Without up-to-date information on the geography (location and extent) of deprived neighbourhoods and the specific social and physical environmental conditions faced by residents of poor urban neighbourhoods, the impact of any interventions on health and social outcomes is not traceable.

36. Following the Statistical Commission's endorsement of the creation of a group of experts on the development of guidelines for identifying slums and non-slum enumeration areas, refinements in definitions of slum areas were completed¹⁶ and, through strong partnerships with universities and research institutions working on Earth observation technologies, innovative digital-based satellite imagery analysis was rolled out in several countries, including Ghana, Kenya and Nigeria, and later supported by ground-truthing and local observation techniques led by citizens. Support was also provided for more advocacy to ensure the performance of census-based slum mapping at the enumeration-area level and that many national statistical offices incorporate a definition of a slum area into the ongoing 2020 round of population and housing censuses by assigning the categories "slum area", "non-slum area" and "rural area" to each enumeration area.

37. To ensure sustainability amid scarce resources, UN-Habitat, together with partners, developed an Integrated Deprived Area Mapping System (IDEAMAPS) network that combines citizen-generated, Earth observation, census, survey and other data to produce a common, dynamic and accurate map of deprived urban areas in cities. In the long run, the initiative will produce appropriate data on slums and non-slum areas and a wider description from the data on the quality of spaces, the locations and the basic characteristics of deprived areas with more regularity because the deprived areas are heterogeneous. Key principles followed from the approach include harmonizing and working with common definitions, integrating community mapping and other household data, digitizing local satellite imagery and pushing the boundaries of machine learning/artificial intelligence modelling to identify slum and non-slum areas as a sustainable model for future data production.

38. The data from the initial pilot countries will be made available to local governments for policymaking and budgeting to ensure that cities become more equitable, healthy and prosperous and that no spaces are left behind. With more funding for this proven concept, a scale-up of the analysis and production of common, dynamic and accurate maps of deprived urban areas for over 1,000 cities in 100 countries by 2023 is planned.

C. National sample of cities

39. Without a standardized method of measurement and clear aggregation techniques, countries are having serious difficulties with creating a consistent set of cities for national-level reporting that is representative of their territory, geography

¹⁶ See <https://gh.bmj.com/content/4/2/e001267>.

and history.¹⁷ The national aggregation problem will make it difficult, if not impossible, to report at the regional and global levels on locally produced urban- and city-level data. UN-Habitat and other collaborating partners recognize the challenge and have responded to demands from governments to put forth a methodology (a national sample of cities) that will ensure that a system of representative cities is drawn and made available for national-level reporting.

D. Earth observation toolkit for sustainable cities and human settlements

40. The use of Earth observation data and geospatial analysis techniques has become an integral part of urban monitoring and informed decision-making processes over the past decade. Global monitoring frameworks, such as the Goals, the New Urban Agenda, the global urban monitoring framework and the Sendai Framework for Disaster Risk Reduction, have deeply integrated the use of such data sources into their indicator systems, while national and city-specific monitoring efforts have also increasingly included indicators that require the use of such technologies. Noting the monitoring requirements for Goal 11, in which at least three indicators have more than 70 per cent of the requirements for the use of Earth observation and geospatial analysis, capacity-building in countries and cities and making accessible the relevant resources and tools have been a priority for UN-Habitat since 2015.

41. In 2020, UN-Habitat, the Group on Earth Observations and Earth Observations for the Sustainable Development Goals partnered with one another and started working towards the development of the Earth observation toolkit for sustainable cities and human settlements, which was officially launched in February 2021.¹⁸ The toolkit was developed with contributions from more than 40 organizations, including representatives of national statistical systems, city authorities, space agencies, academia, research institutions, the private sector and independent Earth observation data producers. The toolkit contains resources, such as data, tools, use cases and learning opportunities, that are related to the Goal 11 aspects of housing, open spaces, public transport and spatial urbanization.

42. The resources are continuously updated, and the steering committee continues to advance work relating to the toolkit's four priority areas: impact, awareness-building, benchlearning across levels and promoting fair practices for data provision and use. Through the toolkit, Member States, city authorities and the general public can obtain access to information and resources from the same place to enable them to understand how Earth observation and geospatial information can contribute to Goal 11 monitoring, as well as data and tools that can help them to advance their monitoring efforts.

E. Urban observatories

43. UN-Habitat continued to support the development of urban observatories for local data collection and use for evidence-informed decision-making through capacity-building and direct technical support for setting up an urban observatory, including guidance on resource requirements, development of data systems, indicator prioritization and their alignment with global indicators frameworks. That included conducting a stocktaking exercise in 2020 to 2021 to ensure the level of functionality of all 321 observatories identified and to inform targeted support to address the challenges that they are facing. The main issues raised included the lack of financial

¹⁷ Reporting on a handful of cities that are not necessarily the same does not statistically represent the country, and data cannot be aggregated at the national urban level without a clear method of aggregation.

¹⁸ See <https://eotoolkit.unhabitat.org/>.

resources for sustaining their activities and insufficient technical capacity/expertise for urban data production and use.

44. The COVID-19 pandemic has shown that local urban observatories are key for guiding responses to such health crises through the generation of reliable, timely and relevant information if they are fully functional and have appropriate resources, sound data production systems and strong connections to local decision-making processes. UN-Habitat is already taking the actions necessary to help existing urban observatories to improve their operations and be more efficient in producing data to inform decision-making and assess the impact of policies and actions at the local level.

45. The lack of sound urban data affects the formulation of evidence-based policies and the design of programmes that respond to urban dynamics and related challenges. As countries move towards increased decentralization and localized decision-making, there is a need to strengthen local monitoring systems, such as urban observatories, that can support the tracking of progress, the identification of setbacks using new approaches and techniques and the formulation of evidence-informed policies.

46. Local authorities require periodic assessments of their state of development and accurate tools to evaluate policy outcomes and the impact of specific plans and actions. With well-established and resourced urban observatories, authorities are able to: develop, collect and analyse data on a set of localized indicators to monitor a range of local or national priority issues; establish permanent mechanisms for monitoring the Goals and urban indicators; promote the use of urban data in planning and policymaking at the local and national levels; disseminate information to strengthen accountability and transparency; and promote local ownership of urban indicator systems and a culture of monitoring and assessment.

IX. Conclusion and recommendations

47. The monitoring of and reporting on urban-related Goals still present major challenges, from the need to apply common urban definitions, apply the national sample of cities approach and ensure proper mappings of poor urban neighbourhoods so that no spaces are left behind to huge demands for capacity strengthening. Many national statistical system partners are aware of those challenges, and direct support from UN-Habitat and its partners has been provided in the past four years. Through those efforts, UN-Habitat has witnessed an increased level of reporting on human settlements statistics by Member States. However, the gains have been curtailed by the COVID-19 pandemic, adversely affecting cities, which are key as levels and units on which data collection, analysis and monitoring efforts are based.

48. The global urban monitoring framework has been designed as a flexible framework for the formulation, implementation and monitoring of urban policies and practices on sustainable development to increase prosperity levels in cities, and it can be leveraged for monitoring Goals and many other city objectives because it integrates the structure and indicators of Goals pertaining to urban matters, the New Urban Agenda and many other subject-matter urban-related frameworks to address in a single framework the environmental, social, cultural, governance and economic components of city sustainability, as well as various city objectives, such as inclusiveness, resilience and safety. At the same time, the framework has been designed following the review of many recent and/or completed voluntary local reviews, which makes it the most appropriate structure to guide the development and production of future voluntary local reviews.

X. Action to be taken by the Statistical Commission

49. The Commission is invited:

(a) **To take note of the achievements and approve the planned human settlements statistics activities of UN-Habitat for the next four years, including the ongoing work on regional capacity-building activities, the global urban monitoring framework, the New Urban Agenda framework, the national sample of cities approach, urban observatories, spatial analysis, and slum and non-slum areas demarcations, as described in the present report;**

(b) **To take note of the progress made on rolling out the global urban/city definition and the capacity development plan following its earlier endorsement in 2020;**

(c) **To endorse the global urban monitoring framework and its further implementation as part of a harmonized global urban United Nations system-wide strategy.**
