

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

Indicator 11.7.1: Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities

Institutional information

Organization(s):

UN-HABITAT

Concepts and definitions

Definition and concepts:

Indicator 11.7.1 has several interesting concepts that required global consultations and consensus. These include; built-up area, cities, open spaces for public use, etc. As a custodian agency, UN-Habitat has worked on these concepts along with several other partners.

- a) City: A range of accepted definitions of the “city” exist, from those based on population data and extent of the built-up area to those that are based solely on administrative boundaries. These definitions vary within and between nations, complicating the task of international reporting for the SDGs. As partners, UN-Habitat organized global consultations and discussions to narrow down the set of meaningful definitions that would be helpful for the global monitoring and reporting process. The global consultations narrowed down to two city definitions, both emanating from joint work conducted by teams from New York University and European Commission-Joint Research Centre. These are available elsewhere with full documentation of the pros and cons for each. For this indicator, partners resolved to work with the City as defined by its Urban extent (built-up and urbanized open space).
- b) City as defined by its Urban extent (built-up and urbanized open space)
The definition of urban extent described in this note was developed to facilitate the study of a global sample of 200 cities in the production of the Atlas of Urban Expansion: 2016 Edition. It relies on the analysis of satellite imagery to define the boundary of the city morphologically – based on the density of structures, not on the density of population, which we know to be highly variable in different contexts. It supposes that non-residential zones should be thought of as part of the city, along with open spaces such as parks and small amounts of undeveloped land, in addition to residential areas that report populations for the census.
- c) Urban extent is defined as the total area occupied by the built-up area and the urbanized open space. The built-up area is defined as the contiguous area occupied by buildings and other impervious surfaces.

Landsat imagery¹ is used to identify and classify the built-up pixels into 3 types depending on the share of built-up density (urban-ness) in a 1-km² circle of a given building (walking distance radius of about 564 meters around a given building):

- Urban built-up area: pixels where the walking distance circle has a built-up density greater than 50%.
- Suburban built-up area: pixels where the walking distance circle has a built-up density between 25%-50%. It also includes subdivided land, whether it is wholly unbuilt or not.
- Rural built-up area: pixels where the walking distance circle has a built-up density of less than 25% and that are not on subdivided land.

The urbanized open space (mainly refers to unbuilt areas including open countryside, forests, crop fields, parks, unbuilt urban areas, cleared land) is classified into 3 types:

- Fringe open space consists of all open space pixels within 100 meters of urban or suburban pixels;
- Captured open space consists of all open space clusters that are fully surrounded by urban and suburban built-up pixels and the fringe open space pixels around them, and that are less than 200 hectares in area; and
- Rural open space consists of all open spaces that are not fringe or captured open spaces.

The fringe open space and captured open space together make up the urbanized open space in a given study area. In other words, the urban extent consists of all the buildings and the small open space areas (<200 ha) that are surrounded by buildings and the open space fringe that is within 100 meters of urban and suburban areas (i.e. where built up area is more than 25%).

- d) Public space: The Global Public Space toolkit defines Public Space as all places that are publicly owned or of public use, accessible and enjoyable by all, free and without a profit motive, categorized into streets, open spaces and public facilities.

For the purpose of monitoring and reporting on indicator 11.7.1, public space is defined as all places of public use, accessible by all, and comprises open public space and streets. Public space in general is defined as the meeting or gathering places that exist outside the home and workplace that are generally accessible by members of the public, and which foster resident interaction and opportunities for contact and proximity. This definition implies a higher level of community interaction and places a focus on public involvement rather than public ownership or stewardship. For measurement of indicator 11.7.1, the elements which can be considered as open public space include:

- Parks: Open space inside an urban territory that provide free air recreation and contact with nature. Their principal characteristic is the significant proportion of green area.
- Recreational areas: public areas that contribute to environmental preservation. Their main functions can be both ornamental and passive recreation. These include areas such as playgrounds, riverfronts, waterfronts, public beaches, etc.
- Civic parks: Open space created because of building agglomeration around an open area, which was later transformed into a representative civic area. They are characterized by

¹ Landsat Imagery is made up of several spectral bands that can be used to identify impervious surfaces roughly corresponding to built-up areas, making it possible to classify them by human-assisted algorithms into several classes with a high degree of accuracy.

considerable nature, specifically gardens and a good place for cultural events and passive recreation.

- Squares and Plazas: Open spaces created because of building agglomeration around an open area. Its main characteristics are the significant architectonic elements and interaction between buildings and the open area. Squares are usually public spaces relevant to the city due to their location, territorial development, or cultural importance.
- e) Streets are defined thoroughfares that are based inside towns, cities and neighbourhoods most commonly lined with houses or buildings used by pedestrians or vehicles in order to go from one place to another in the city, interact and to earn a livelihood. The main purpose of a street is facilitating movement and enabling public interaction. The following elements are considered as streets space: Streets, avenues and boulevards, pavements, passages and galleries, Bicycle paths, sidewalks, traffic island, tramways and roundabouts. Elements excluded from street space include plots (either built-up), open space blocks, railways, paved space within parking lots and airports and individual industries.
- f) Land allocated to streets: refers to the total area of urban surface that is occupied by all forms of streets (as defined above). This indicator only includes streets available at the time of data collection and excludes proposed networks.

Rationale:

The value of public spaces is often overlooked or underestimated by policy makers, leaders, citizens and urban developers. There are several reasons for this, such as the lack of resources, or understanding or capacity to use public space as a complete, multi-functional urban system. Often the lack of appropriate enabling frameworks, weak political will and the absence of the means of public engagement compound the situation. Nevertheless, fundamentally, the lack of a global measurement indicator has hindered the local and global appreciation of the value of the public spaces.

The SDGs have for the first time provided a platform where public spaces can be globally monitored. The indicator 11.7.1 aims to monitor successfully the amount of land that is dedicated by cities for public space (open spaces and streets). Cities vary considerably in size, history, development patterns, designs, shapes and citizen's attitudes towards public spaces. Measuring how much public space a city has is only one part of measuring whether residents actually benefit from the space. For more than a decade, UN-Habitat has promoted the use of public space as an implementation and delivery strategy for projects in urban planning, housing and slum upgrading, governance and urban safety, basic services and even post-conflict reconstruction.

In 2011, UN-Habitat's Governing Council gave a clear opportunity and direction through Resolution 23/4 to consolidate agency-wide work on public space. UN-Habitat's Member States mandated the agency to develop an approach that promotes the role of public space in meeting the challenges of our rapidly urbanizing world, and to coordinate various global partners and experts on public space and to directly assist cities in their initiatives on the public space management and monitoring. This mandate led to the initiation of the methodological work on global monitoring and reporting on public spaces.

Based on this mandate, UN-Habitat and its partners spearheaded discussions and work on global definitions, as well as measurement of various elements of public space. The inclusion of a global indicator on public space within the SDGs framework further invigorated the already ongoing efforts by UN-Habitat. In its bid to fast track the monitoring of public spaces as required in the SDGs framework,

UN-Habitat over the last two years has undertaken initiatives aimed at enhancing clarity on concepts, refining methodologies and facilitating their piloting and adoption across the world. Some of the key activities undertaken by the agency towards this goal included convening of several consultations and expert group meetings to address the outstanding issues on definitions and concepts, refining and piloting the indicator computation methodology, and developing a strategy for developing Member States capacities to monitor open public spaces.

The Right to the City. By recognizing and developing the positive potential of their public spaces, cities can enhance safety and security, create economic opportunity, improve public health, and create diverse public environments and public democracy. In a century where the right to the city movement is increasingly being recognized, it is important to develop cities where people of all income groups, social classes and ages can live safely, happily and in economic security.

Urban Planning for City Leaders (UPCL). UN-Habitat has put forward a list of recommended steps to be followed in securing better public spaces in cities. These are contained in the UN-Habitat Publication “Urban Planning for City Leaders (2013)” under the chapter ‘Define and Enhance Public Space’, in which four broad categories of intervention are presented:

- Secure sufficient public space in advance
- Plan a system of public spaces
- Reap the benefits of well-designed streets
- Plan green public spaces

The Street as Public Spaces - Drivers of Prosperity. Furthermore, the issue of the street as an important public space has been explored in depth in a recently published technical report entitled Street as Public Spaces-Drivers of Prosperity (2013). The research looked at 30 cities spread globally and found evidence to prove that prosperous cities are those that have allocated sufficient land to street development (with proper layout), including sufficient crossings along an appropriate, lengthy network.

Public space and other intergovernmental bodies. It is also important to note that other intergovernmental bodies, in addition to the UN-Habitat’s Governing Council, have stressed the importance of public space for sustainable urban development. As early as 2007, the Ministers responsible for urban development of the European Union adopted the Leipzig Charter on Sustainable European Cities. The charter contains a strong and explicit statement in support of public space:

“The quality of public spaces, urban man-made landscapes and architecture and urban development play an important role in the living conditions of urban populations. As soft locational factors, they are important for attracting knowledge industry businesses, a qualified and creative workforce and for tourism. Therefore, the interaction of architecture, infrastructure planning and urban planning must be increased in order to create attractive, user oriented public spaces and achieve a high standard in terms of the living environment, a “Baukultur”. Baukultur is to be understood in the broadest sense of the word, as the sum of all the cultural, economic, technological, social and ecological aspects influencing the quality and process of planning and construction. However, this approach should not be limited to public spaces. Such a “Baukultur” is needed for the city as a whole and its surroundings. Both cities and government must make their influence felt. This is particularly important for the preservation of architectural heritage. Historical buildings, public spaces and their urban and architectural value must be preserved”

The United Cities and Local Governments (UCLG) have also established an Urban Strategic Planning Committee, which has taken the opportunity to network, learn and develop a body of knowledge on public space.

Public spaces - including streets - are and must be seen as multi-functional areas of social interaction, economic exchange and cultural expression among a wide diversity of people. It is for urban planning to establish and organize these public spaces, and for urban design to facilitate and encourage their use, in the process enhancing a sense of identity and belonging. Safety and security are important dimensions to be considered in any such design, together with vital infrastructure (water, energy and communications). Important conditions for such planning to be successful are the contextual existence of good governance and management arrangements, as well as viable mechanisms to redirect part of the value gains into the nurturing of good quality public space. The street network is the integrative tissue that binds cities together. It organizes the geographic space of cities, integrates them both as job markets and as local political spaces. Cities that are walkable and transit-friendly require a highly connected network of paths and streets around small, permeable blocks. A tight network of paths and streets offering multiple routes to many destinations that also make walking and cycling trips varied and enjoyable. This has clear implications in making cities more energy efficient.

For cities to be vibrant and safe places, it is important to think of them as systems of interdependent parts and complex connections, as interactive and social spaces. However, many public areas have been gradually forgotten; they are no longer safe living spaces that people enjoy. Reclaiming urban spaces for people is part of how we can humanize our cities and make our streets and public areas more communal. Public spaces are often more than anonymous places that can be replaced by one another: the meetings and exchanges that occur there affect our relationships with each other, giving meaning to our communities and urban landscapes.

Cities function in an efficient, equitable, and sustainable manner only when private and public spaces work in a symbiotic relationship to enhance each other. In optimal conditions, they need to be secured and laid out in advance of urbanization to ensure orderly urban expansion. In existing cities, there is a need to revise and expand the ratio of public space in cities to make them more efficient, prosperous and sustainable and are needed in adequate amounts. Uncontrolled rapid urbanization creates disorderly settlement patterns with dangerously low shares of public space. Many cities in developed countries are also experiencing a dramatic reduction of public space.

This indicator provides information about the amount of open public areas in a city. Cities that improve and sustain the use of public space, including streets, enhance community cohesion, civic identity, and quality of life. A prosperous city offers a profusion of public goods and develops policies and actions for a sustainable use of, and equitable access to, 'the commons', such as public space. It is in any city's best interest to promote public goods such as transport, green areas, spaces and 'urban commons' such as safety, security and political participation to enhance quality of life and shared prosperity. The size and quality of a city's overall public space act as a good indicator of shared prosperity.

Comments and limitations:

A major challenge for local monitoring of this indicator is the maintenance and the application/consistency of use of universal definition, which broadly does not consider existing operational/functional administrative demarcations. While urbanization has over the past decade resulted in big urbanized patches/regions which extend beyond existing urban area boundaries, the local

operationalization and management of urban systems remain within defined authorities. These authorities are often in charge of governing the urban systems, ensuring effective and efficient functioning through such actions as provision of basic services, development control among others. While some countries have adopted dynamic administrative structures for their urban areas (which shift with expansions in built-up areas), others have maintained confined boundaries. Some of the most common types of boundaries include city, municipality, local authority, metropolitan, mega and meta region demarcations; all of which are set and defined based on prevailing operational dynamics (e.g. governance and service delivery structures).

UN-Habitat has developed tools, programmes and guidelines to assist cities in measuring, and accounting for the available public space in cities. Some cities in the developing world lack formally recognized public spaces, that are publicly maintained. Understanding of the prevailing local contexts and primary data collection in collaboration with city authorities and local communities contribute significantly to collecting accurate and relevant data in these contexts.

Similarly, the types of open public space vary across cities. The types of spaces listed in this indicator are however the most common and accepted variations of the open public space. Data collection processes using the methodology described in this metadata, which has been conducted by UN-Habitat in partnership with cities, as well as by other partners has revealed that there are no major overlaps or omissions in the described broad categories of open public spaces.

Beyond quantifying the amount of open space in public use in cities, this indicator also attempts in minimal ways to capture the quality of the space that may impede its proper use. The qualitative data collected on this indicator strengthens the evidence that an open space exists, and that its public use is guaranteed, to allow city authorities and other stakeholders to further improve its quality and increase its use.

Methodology

Computation Method:

The method to estimate the area of public space has been globally piloted in over 250 cities and this follows a series of methodological developments that go back to the last 7 years. The finalized methodology is a three-step process:

- a) Spatial analysis to delimit the built-up area of the city;
- b) Spatial analysis to identify potential open public spaces, field work to validate data and access the quality of spaces and calculation of the total area occupied by the verified open public spaces;
- c) Estimation of the total area allocated to streets;

a. Spatial analysis to delimit the built-up area

Built-up areas are a true reflection of multiple (urban) activities, and the presence of populations; with higher built-up density often reflecting higher activity/population concentrations. To monitor and report on indicator 11.7.1, the main focus is on the built-up area defined as the contiguous area occupied by buildings and other impervious surfaces. To delimit the area of analysis for the indicator, follow these steps:

1. Identify the study area – this can be all cities in a country or a representative sample of cities

2. Download freely available LANDSAT imagery for the analysis year. Aim for imagery with low cloud cover. Alternative high resolution imagery from other sources can also be used.
3. Classify LANDSAT imagery into built-up, non-built-up, and water using a GIS or image processing software.
4. Assess the level of urban-ness for each of the resultant built-up pixels - This can be achieved through spatial statistics in GIS and/or image processing software. Place a 1-km² circle around each built-up pixel and calculate the share of pixels in the circle that are also built-up. If $\geq 50\%$ of the pixels in the circle are built-up, the pixel is classified as Urban. If $\geq 25\%$ and $< 50\%$ of the pixels in the circle are built-up, the pixel is classified as Suburban. If $< 25\%$ of the pixels in the circle are built-up, the pixel is classified as Rural.
5. Combine contiguous urban and suburban pixels to form an urban cluster of the built-up area.

b. Spatial analysis to identify potential open public spaces, ground verification and estimate their total area

This step involves mapping of potential open public spaces within the urban boundaries defined in step one above and estimation of their area. Identification of potential open public spaces is based on the spatial character of each space, and is also informed by existing country/ city land use maps and open space inventories. To compute this component of the indicator, follow these steps:

1. An inventory of Open Public Spaces should be the initial source of information. Additional legal documents, land use plans and other official sources of information can be used to complement the data from the inventory.
2. Since many cities and countries do not have an open public spaces inventory, satellite imagery can be used to identify potential open public spaces. The identification of such spaces from imagery should be based on careful evaluation of the character of each space against the known forms of open public spaces within that city / country
3. Digitize the identified potential open public spaces.
4. Undertake field work to verify the identified spaces and assess their quality. UN-Habitat, in consultation with partners, experts and data producers have developed a detailed tool to facilitate the verification of each space and collection of additional data on the space quality and accessibility. This tool is freely available and allows for on-site definition/ editing of the space's boundaries. It also contains standard and extended questions which collect data relevant to the indicator, including location of the spaces, their ownership and management, safety, inclusivity and accessibility. This data provides basic information about each space, as well as information relevant for disaggregation - such as access issues linked to age, gender and disabilities, as requested for by the indicator. The tool is dynamic and allows cities to include extra questions which generate information that is useful for their decision making (Tool is available at <https://ee.kobotoolbox.org/x/#IGFf6ubq>).
5. Calculate the total area covered by the verified open public spaces.

c. Computation of land allocated to streets (LAS)

Where street data by width and length fields is available/specified, the following methodology could be used:

1. Select only the streets included in the urban extent (or clip streets to the working city boundary)
2. From GIS (or alternative software), calculate the total area occupied by each street by multiplying its length with width. Add up all individual street areas to attain the total amount of land occupied all streets within the defined urban area.

An alternative technique for computing land allocated to the streets is one that adopts sampling principles. An approach that uses the Halton sampling sequence is recommended, specifically because the sequence generates equidistant points, increasing the degree of sample representativeness. To compute LAS using this method, follow the following steps:

1. Using the urban extent boundary identified earlier, generate a Halton sequence of sample points (Halton sequence refers to quasi-random sequence used to generate points in space that are ex-post evenly spread i.e. Equidistant). The number of points used for each city varies based on its area. In large study areas of more than 20 km², a density of one circle per hectare is used while in small study areas of less than 20 km² a density of 0.5 circle per hectare is used.
2. Buffer the points to get sample areas with an area of 10 hectares each.
3. Within each 10 hectare sample area, digitize all streets in GIS software and compute the total amount of land they occupy.
4. Calculate the average land allocated to streets for all sample areas using the following formula:

$$\text{The land allocated to streets} = \frac{\text{Sum of LAS from all sampling points}}{\text{Number of sampling points}}$$

The final computation of the indicator is done using the formula:

$$\text{Share of the built – up area of the city that is open space in public use(\%)} = \frac{\text{Total surface of open public space} + \text{Total surface of land allocated to streets}}{\text{Total surface of built up area of the urban agglomeration}}$$

Disaggregation:

- Location (intra-urban)
- Qualities of the open public space (safe, inclusive, accessible, green)
- The share of built-up area that is green open space in public use
- The share of built-up area is universally accessible open space in public use, particularly for disable persons
- Type of human settlements
- Typology of public space.

Treatment of missing values:

All qualifying cities/countries are expected to fully report on this indicator more consistently following implementation and full roll out of this methodology. In the early years of this indicator, we had data gaps due to no data being collected yet, as opposed to missing data. In most of cases, missing values to-date reflect a non-measurement of the indicator for the city. However, because national statistical agencies will report national figures from a complete coverage of all their cities, some cities may take longer to be measured or monitored. As a result, UN-habitat has worked with partners to develop a concept of applying a National Sample of Cities. With this approach, countries will be able to select a nationally representative sample of cities from their system of cities, and these will be used for global monitoring and reporting purposes for the period of the SDGs. The fully developed methodology on this concept has been rolled out and countries that are unable to cover the full spectrum of their cities are already applying this approach.

See: <https://unhabitat.org/national-sample-of-cities/>

Regional aggregates:

N/A

Sources of discrepancies:

Applying the proposed methodology to an entire globe of different cities will be challenging, but there are some basic principles that cities can use to measure public space uniformly. Cities can inventory the spectrum of spaces, from natural areas to small neighbourhood parks owned by different government entities. For example, in some cities, cemeteries are publicly available spaces run by the city park and recreation department. The team has developed a basic methodological guide and tools, which have enabled national statistical agencies and cities to apply these methods in a standard way and compile a comparable inventory of open public spaces.

Methods and guidance available to countries for the compilation of the data at the national level:

Information not available.

Quality assurance

Information not available.

Data Sources

Sources and collection process:

Satellite imagery (open sources), documentation outlining publicly owned land and community-based maps are the main sources of data.

- For estimating the total surface of Built-up area - Data can be extracted from existing layers of satellite imagery ranging from open sources such as Google Earth, US Geological Survey/NASA Landsat imagery and Sentinel Imagery to higher resolution land cover data sets and commercial imagery. Images are to be analyzed for the latest available year.
- For the Inventory of open public space - Information can be obtained from legal documents outlining publicly owned land and well-defined land use plans. In some cases, where this information is lacking, incomplete or outdated, open sources, key informants in the city and community-based maps, which are increasingly recognized as a valid source of information, can be a viable alternative.
- The share of land occupied by public open spaces cannot be obtained directly from the use of high-resolution satellite imagery because it is not possible to determine the ownership or use of open spaces through remote sensing. However, fieldwork to validate and verify the open spaces derived from satellite imagery helps to map out land that is for public and non-public use.

Data Availability

Description:

Data for this indicator is available for 289 cities in 94 countries, and related data is available for more than 450 cities. Additional pilots are on-going which will be further added to this collection of cities and countries. Available data has been drawn from:

- a) The Global Public Spaces Programme (GPSP) under UN-Habitat has conducted city-wide public space assessments in 9 cities which offered an opportunity to gather more qualitative data, as well as disaggregated data on the use of the spaces. The GPSP mapped various sources of data (inclusiveness, accessibility and safety) for the indicator, and identified all the actors involved in data collection activities at the global, national and city levels for scaling-up gathering public space data on city level. This information has been compiled in a database of stakeholders working on the indicator, who are consistently being consulted on the indicator-specific developments.
- b) In 2016, UN-Habitat collaborated with New York University (NYU) and Lincoln Institute for Land Policy to implement the Atlas of Urban Expansion project, which mapped out and calculated the amount of land occupied by open spaces within 200 cities. This measurement was based on the basic methodology for indicator 11.7.1, developed by UN-Habitat and partners.
- c) UN-Habitat's City Prosperity Initiative (CPI) has been collecting data related to this indicator in over 450 cities distributed across Latin America & Caribbean, Africa, Asia and Europe.
- d) Qualitative data on public spaces in cities is being collected locally through a global tool developed (<https://ee.kobotoolbox.org/x/#YbIR>).
- e) UN-Habitat and regional partners also conducted a multi-country capacity assessment for several cities on the ability and preparedness to report on indicator 11.7.1.

UN-Habitat has compiled a database on the indicator, which contains data from different sources, including the CPI, the Atlas of Urban Expansion project, World Cities Culture Forum, outputs from city specific piloting initiatives by the GPSP and other sources. A data collection process at the city and country level has also been initiated by the GPSP, through which countries are submitting data on the indicator to the agency. So far, about 94 countries have provided data on the indicator. In addition, UN-Habitat has initiated a data validation process, which involves collating all the available data and sharing it with countries for review and verification.

Table 1. Global set of countries and cities with public space data available

Region	Cities covered as of December 2017	Countries covered as of December 2017
Asia and the Pacific	91	16
Europe and North America	66	24
Latin America and the Caribbean	55	17
North Africa and Arab States	47	19
Sub-Saharan Africa	30	18
Total	289	94

Source: UN-Habitat: Global Urban Observatory database 2017.

Calendar

Data collection and release calendar:

The monitoring of the indicator can be repeated at regular intervals of 3-5 years, allowing for three reporting points until the year 2030. However, annual updates to the existing database will be done and hence data releases based on annual updates will be available every year. Monitoring in 3-5-year intervals will allow cities to determine whether the shares of open public space in the built-up areas of cities are increasing significantly over time, as well as deriving the share of the global urban population living in cities where the open public space is below the acceptable minimum.

Data providers

See “Data compilers” section below.

Data compilers

UN-Habitat is the lead agency on the global reporting for this indicator and as such, has over the last two years coordinated the efforts of various partners, on methodological developments and piloting of data collection. Key among these partners have included National Statistical Offices, New York University, ESRI, FAO, UNGGIM, UCLG, Local government departments, the European Commission, UN regional commissions, KTH University-Sweden, Urban Observatories, etc. Working in partnership with these partners, UN-Habitat has undertaken trainings and capacity development activities in cities, countries and regions, which have contributed to enhanced data collection and setting up of systems to monitor and report on the indicator.

In addition, over the last 5 years, UN-Habitat and other partners have held several consultations which have collectively contributed to the refinement of the indicator methodology, and its piloting. Some of the key activities include;

- a) Internal consultations within UN-Habitat and the review of several toolkits of particular relevance to the subject of public space have provided an initial base of information on concepts and definitions. Lessons learned by UN-Habitat in field projects devoted to public space have proven particularly valuable.
- b) A second important source and point of reference has been the Charter of Public Space adopted by the Biennial of Public Space, containing simple and actionable principles for the creation, management and enjoyment of public spaces in cities.
- c) A third set of sources has been the contributions offered by a team of international experts, both during and immediately following the Expert Group Meeting on Public Space held in Rome in 12-14 January 2014. Additionally, the contributions of over 300 practitioners from over 40 countries during the series of International Conferences on the Future of Places, which developed a set of key messages in advancing the public space agenda at the global level.
- d) A fourth source has been global consultative meetings organized after the adoption of the 2030 Agenda in line with the SDG requirements for indicator 11.7.1 and global initiatives that have supported the data collection of this indicator. Specifically, these were:
 - i. The first EGM in October 2016 focused mainly on methodological refinements and on concretising the institutional partnership arrangements for capacity development and data collection. Representatives from the NSOs, Urban Observatories, European Union, World Resources Institute, United Cities and Local Governments, Arab Urban Development Institute, World Health Organization, ESRI, NYU, among others participated in this EGM.

- ii. The second EGM held in February 2017 focused on the challenges of data collection and review of preliminary data made available through the efforts of collecting city-based monitoring the human settlement data at local levels.
 - It also focused on the technical aspects of computing the indicator using the proposed methodology. This helped in identifying the challenges and opportunities of improving the methodology as well as strategies to scale up and capacity building for NSOs.
 - Representatives attended the meeting from Urban Observatories, European Union, World Resources Institute, United Cities and Local Governments, ESRI, Arab Urban Development Institute, UNESCO, Women in Cities (WICI), Universities and private planning firms, senior statisticians from governments, academic institutions, urban planners, etc.
- e) Within the City prosperity initiative - data for this indicator has been collected for over 450 cities globally. See also: <http://cpi.unhabitat.org>.

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Related indicators

NA