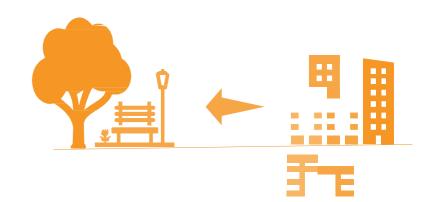


11.7.1: Average share of the built-up area of cities that is open space for public use

UN-GGIM: Europe – SDG Line of Work Webinar Follow-up Report



Questions & Answers

Q.1: @natalia: how do you distinguish between public open and another open spaces?

A.:

Natalia Kotulak:

In our study, we selected specific public objects from the OSM database, such as parks or playgrounds, which in Polish cities are always open spaces.

Dennis Mwaniki:

The main distinction from the SDG 11.7.1 is that an open public space is openly and freely accessible for all for social and recreational needs, which is not necessarily true for other open spaces e.g a generic open could be a private plot of land that is not yet developed, but an public open space would be a dedicated park for which no private interests vest. You can find more information on the indicator metadata here: Metadata-11-07-01.pdf

Q.2: @natalia: How do you differentiate between parks that are open to the public and parks that are not open to the public (entrance fee)? Where do you get the information?

A.:

Natalia Kotulak:

In Poland, city and public parks are generally free - there are no fees for entering green areas, fees are only charged for additional attractions.

Dennis Mwaniki:

The distinction is possible majorly through either a) entrance fee or b) clear presence of fencing and monitored entry/exit. The first requires high resolution data at the city level, but the second can be assessed from services such as google street view. Local knowledge is critical also to validating the level of openness of these spaces, with proposed validation mechanisms including primary data collection or key informant information and participatory mapping with local city dwellers.

Q.3: Why 400 meter walk to green is used as a measure of accessibility instead of the 300 meter from WHO recommendations for universal access to green?

A.: Dennis Mwaniki:

The 400 m was agreed on by experts during the early days of the indicator formulation. It should also be noted that public open spaces are different from green areas, where green areas can easily be found within shorter proximities to populated areas (not necessarily requiring dedicated spaces – such as a tree within a privately owned plot) while public open spaces require dedicated areas to be set aside.

Q.4: Do you use data from the crowd (GPS, camera, ..) to evaluate the actual usage of public space against your classification?

A.: Dennis Mwaniki:

Many cities use this information and collect data from users on space use, including tracking mobile data in these spaces. A lot of the data currently available openly comes from crowd sourced and volunteered information such as that found in OSM.

Q.5: Given the disparate approaches, data sources and contexts, will it ever be possible to compare these indicators internationally with any degree of confidence?

A.:

Julián Delgado-Hérnandez:

Difficult. Unfortunately, if required data is not available for all countries, they cannot apply the same methodology, and the results will be consequently different. Degree of difference could be a topic to assess. To skip that, a global calculus can be done (i.e. by UN) based exclusively in Earth Observation techniques, but sure some aspects of the information can be lost. Not all can be detected by images.

Hugo Poelman:

Ensuring international comparability is challenging and requires different elements of harmonisation. Some of those should be easier to implement than others, and gradual progress towards better comparability is possible.

For instance, using comparable spatial concepts when calculating indicators by city is an important asset: the global degree of urbanisation classification provides an important framework enhancing comparability. It is recommended to use the grid-based concept of urban centres (a.k.a. high-density clusters) and the concept of "city" (based on nationally defined local administrative units), both concepts being clearly defined within the degree of urbanisation.

Furthermore, when using national or international authoritative geodata it is important to ensure that the concepts (for instance green urban areas, public areas, streets,...) are adequately defined and described in clear metadata. Combining different sources of data (if needed also including non-authoritative ancillary data) can help to ensure a better convergence between the geodata and the concepts defined in the global SDG 11.7.1 metadata.

Given the fact that various algorithms and software can be used to compute the indicators, different outcomes are somewhat inevitable. Hence, it is important to document the methods used and to publish the geodata (such as the definition of the open public spaces, the service areas around those, etc.) jointly with the resulting indicators. This helps to assess the comparability of the results.

Dennis Mwaniki:

The global definition is clear and widely acceptable, so the data is quite comparable. Many countries produce additional metrics that are relevant for other uses – such as to help make spaces freely accessible.



Q.6: @Hugo: how were the service access areas defined in the DG regio study?

A.: The method used to determine the service areas is described in the notes contained in this package:

https://ec.europa.eu/regional_policy/sources/work/2018_01_methodology_data_2021.zip

In that package you will find:

- the note "A short walk to the park", providing a general description of the indicator computation methodology.
- a zipfile containing the python scripts used to compute the service areas and a technical note detailing the steps taken to determine the service areas. Please note that the scripts are designed to be used within an ESRI ArcGIS environment, although the general logic of the methodology can also be transposed in another GIS software environment.

Q.7: Does anyone have experience with mapping the 3-30-300 rule in cities? (seeing 3 trees from a building, 30% tree cover, 300 m to the nearest green space)?

A.:

Hugo Poelman:

At European level, DG REGIO has not looked into computing the 3-30-300. The EC JRC may examine the mapping of this 3-30-300 framework in the future. For some national / local experiences, please refer to the question of local and citizen science experiences (see below).

A regional analysis for Flanders (Belgium):

https://www.natuurenbos.be/sites/default/files/2024-02/EindrapportGroennormen.pdf

Jaume Fons Estève:

We are currently involved in the project Horizon Europe Net4Cities. We plan to approximate this 3/30/300 by using in-situ data on single tree distribution to identify the percentage of street length with a tree cover, the 30% will be computed at district level and for the 300 m we will probably adopt the methodology from DG REGIO "A walk to the park".

Q.8: @Hugo - what could be used to assess quality characteristics of green spaces in terms of accessibility with disabilities? (topographic data?)

A.: Currently I am not aware of any specific attempt to assess the accessibility of green spaces for people with disabilities. It might be checked if OpenStreetMap tags are being used, although if available such tags will not provide a complete picture of accessible areas. Probably a specific analysis of characteristics of national / regional geodata would be required to find out about relevant characteristics. Another track of investigation might be to check if advocacy groups representing people with disabilities have assessed the accessibility of public spaces.

Q.9: Does anyone know of local studies (i.e. citizen science) regarding these indicators?

A.: Local analyses (citizen science in cooperation with non-governmental environmental awareness groups) have been assessing the 3-30-300 framework, of which the "300" component bears some similarities with the definition of the SDG indicator on people's access to green spaces.

A few examples:

https://thedatalab.be/330300/index.html (in cooperation with Greenpeace Belgium), comparing all Belgian municipalities.

Comparing the neighbourhoods of the city of Ghent (Belgium) – report by a local environmental awareness organisation:

https://www.gentsmilieufront.be/wp-content/uploads/2024/05/Rapport_-3-30-300-in-Gent.pdf

Some other examples are referred to in the publications section of this publication: https://tradkontoret.se/wp-content/uploads/2025/02/The-330300-Handbook.pdf

Q.10: @Dennis, how are you handling variability in the public spaces that are related to temporary closures, such as renovations to parks/streets?

A.: These spaces can usually be included in the measurement of the indicator, particularly because most data is also collected over a period of several months to a year (during which closures can start and end). Spaces that are closed for long time can be excluded for different measurement periods as needed. This is also why it is critical for this data to be collected at the local city level and where it is collected through alternative means a validation process undertaken with cities to ensure the computed values are realistic.

Q.11: Some Parks in Austria have opening hours. How to you handle this?

A.: Dennis Mwaniki:

These can usually be included in the indicator since in most cases they are open during most active use periods. In the indicator reporting, we encourage countries to add comments on such additional information.

Q.12: Thanks Dennis, are those indicators officially utilised by the private sector, semi-government and governmental sector for better results?

A.: Yes, the indicators are actually helping countries to make decisions on needed investments and/or improve operations of open public spaces for enhanced urban living.

Q.13: @Natalia: How does the WorldPop database compare to the census in Poland?

A.: Detailed comparative analysis on these two datasets is difficult due to different spatial resolution and temporal shift.

Q.14: @Natalia: do you envisage the use of the JRC 100 m population grid that is based on the official European census grid 2021?

A.: We plan to use this data and recalculate the indicator and compare it with the one currently available.

Q.15: @Dennis: Are larger city highways open spaces in the sense of the indicator, too? One could argue they are not really beneficial for the local public.

A.: In most cases they are, since many increasingly provide non-motorized transport infrastructure. In cases where a country/city has very detailed data, such as on whether a street is tolled (paid for), lacks key non-motorized infrastructure, they can be excluded but most countries include highways in their analysis which is acceptable (and indeed they play key roles including overall city ventilation)

Q.16: @natalia: Is there a minimum population threshold for a place to be considered a city in Poland? How many cities have been considered in the study?

A.: The cities were selected based on city rights, we did not introduce an additional criterion in the form of a threshold of the number of city inhabitants. The analysis covered over 900 cities.

Q.17: @Julian, do you open these data to scientists or educators to see how they can enrich them?

A.: Currently results are freely accessible to everyone at https://www.ine.es/dyngs/ODS/es/index.htm. Please, navigate the selected indicator. Table data (not geographical) are downloadable disaggregated until municipalities of 20,000 inhabitants. Intermediate data and geographical data are not accessible, but we (IGN or INE) can be asked for them.





Q.18: @Julian: what were the main challenges you faced? Do you test the accuracy of your method?

A.: Georeferencing of population. In Spain, the most detailed geographical level of population georeferentiation is the GRI Settlement dataset. No actual individual location of homes contains the number of inhabitants. Addresses systems contain postal identification and geocoordinates but not inhabitants. For that reason, it was not possible to implement the calculus approach based in buffering of green & open areas, we did not have geometries to compare with buffers.

Q.19: @Jaume: If there are recommendations about the dB levels, why not use it? Isn't it better to overestimate than underestimate to drive change?

A.: Since the data we used originates from country reports submitted under the Environmental Noise Directive (END), and the END establishes a threshold of 55 dB Lden, most countries only report data at or above this level. As a result, information below the 55 dB threshold is generally unavailable, limiting the scope of analysis to higher noise exposure levels. However, whenever feasible, the European Environment Agency (EEA) reports also include information based on the World Health Organization (WHO) thresholds, offering a broader perspective on noise exposure impacts. You can see it in the recent report Environmental Noise in Europe 2025 (https://www.eea.europa.eu/en/analysis/publications/environmental-noise-in-europe-2025).

Q.20: @Jaume: Noise pollution changes with the time of day and also with the day of the week. How do you deal with it?

A.: Currently, we do not have detailed information on noise levels broken down by specific times of day, and the week. However, having this finer temporal resolution would be valuable at the local level, as it could support urban planning and help understand how people use and experience public spaces throughout the day and week. The Environmental Noise Directive, which is the data we used, only provides data on L_{den} and L_{night}, which are annual averages.

Q.21: @Gregory: could you explain again where the private/public mask came from?

A.: If you concentrate on a single city, you can probably find this information in the cadastre. If such data is not available (e.g., restricted access, ...) then one possible solution would be to use Open Street Map (OSM) data that allows differentiating between private and public area. However, you should be cautious because OSM can vary in terms of quality and description of attributes (e.g., completeness of data, ...).

Q.22: What are perspectives to compute the indicators back in time?

A.: Given the recent progress in creation, openness and content-wise enrichment of detailed geodata it is often difficult to find time series of the geodata required to compute the indicators back in time.

However, what should become more and more possible is to compute time series in the future, provided that the underlying geodata are updated using a suitable update cycle, and that previous versions of those geodata are adequately archived and kept accessible.

Q.23: Many aspects of 11.7. are quite open to individual interpretation: what is safe? what is seen as inclusive? even what is counted as green space can be different.

A.: Defining what is counted as green space requires clear criteria, preferably in line with the global metadata for SDG 11.7.1. However, should national, regional or local data fail to comply with the global criteria, a meaningful analysis is still possible, provided that the users are made aware of the differences in approach. For instance, if a somewhat different definition of public green spaces is used, it will still be possible to compare cities within the same country. Safety or inclusiveness definitely have both objective and subjective components. Surveys assessing quality of life in cities may provide elements of answer, although they will probably not focus on an assessment of individual green spaces in a city.

At European level, the survey on quality of life in European cities contains questions on the the degree of the population's satisfaction with green spaces and with public spaces in the city. See:

https://ec.europa.eu/regional_policy/information-sources/maps/quality-of-life_en