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CITY-WIDE PUBLIC SPACE ASSESSMENT

TECHNICAL GUIDE
PURPOSE AND TARGET AUDIENCE

The purpose of this document is to guide cities when conducting a city-wide public space assessment. It illustrates the steps that should be followed within the process to ensure that the assessment meets the objectives of the city. This guide sets out the “hooks” that the results of the assessment will support the development of a comprehensive evidence-based public space strategy or policy.

Once a city has commissioned an assessment of public spaces, the following steps, which are grouped into four parts, can be followed; (i) Data collection, (ii) Data collection (iii) Reporting and (iv) Public space strategy. This guide is designed primarily for local governments including field staff and partners with responsibility for planning, establishing and implementing the programmatic, managerial and organizational aspects of public spaces. It will also be useful for policy makers and supervisors in understanding and promoting public spaces.
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ACRONYMS

**APP** - Application

**CSV** - Comma-separated values file

**DWG** - Is a proprietary binary file format used for storing two- and three- dimensional design data and metadata

**GIS** - Geographic Information System

**GPS** - Global Positioning System

**KMZ** - zipped KML (Keyhole Markup Language)

**NUA** - New Urban Agenda

**NUP** - National Urban Policies

**OPS** - Open Public Spaces

**OSM** - Open Street Map

**SDGs** - Sustainable Development Goals

**USGS** - United States Geological Survey
UN-Habitat has been supporting cities to map and assess their public spaces since 2015. It has done this through working directly with the local government and has developed a framework to achieve long-term impacts and achievement of the Sustainable Development Goal SDG 11.7 and the New Urban Agenda (see figure 1) as well as build the institutional capacity of both the local and national governments. Each step within the process has tools that can be contextualized and applied to any city. In summary, the first step is to understand the state of public spaces in the city by conducting a city wide assessment using the city-wide public space inventory and assessment tool. This tool provides both spatial and non-spatial gaps which then helps to identify priority projects for upgrading and areas for creating new public spaces. The second step is to take into consideration the gaps identified from the public space assessment and develop a long-term public space strategy with a clear vision, mission and objects for the city. In this regard, UN-Habitat has developed a compendium of inspiring practices for city-wide public space strategies and a step-by-step guide on how to develop a public space strategy for local governments. Based on this exercise and as a third step, with the involvement of local technical expert, UN-Habitat supports the local government to develop contextualized guidelines and principles for public space development using the Public Space Toolkit as a reference. The fourth step, is to develop a clear action plan which is based on the vision and objectives of the strategy, that has clearly identified priority projects, stakeholders to be involved and the available budget for implementation.

All programs included in the city-wide public strategy and annual public space action plan need to be synchronized into the municipal agency draft work plans. This synchronization is critical to achieving the objectives and targets set out in the strategy. The fifth step, building on the gaps identified through the assessment, is to identify demonstration public spaces projects for upgrading and conducting a site specific assessment which focuses on analyzing the qualitative aspect of the site itself and a 5 minutes walking radius to the site. Another tool that UN-Habitat uses within this step to engage communities especially hard to reach groups in the in the design of the space is Minecraft through the Block by Block Methodology. As a final step, UN-Habitat supports local government to monitor and evaluate the strategy, action plan as well as the implemented demonstration projects(s). This is done by through indicators identified at the 1st stage, the fifth stage, within the local and national government and globally set indicators and substandard. UN-Habitat recommends that the city-wide public space assessment is conducted every 5 years.

UN-Habitat has developed this framework in such a way that it is flexible and non-linear and it can support any city at any stage of the process. It recognizes that cities will be at different stages of the process, have different planning structures and purposes as well have different resources and capacities.
Figure 1: UN-Habitat’s Public Space Programme Process and Tools

- Block by Block methodology
- Place analysis tool
- Design Charrattes
- SDG indicators 11.7 and 11.3

- Guide to city wide public space strategy
- Plan assessment tool
- Compendium of inspiring practices on city wide public space strategy

Scaling up
- SDG indicators 11.7 and 11.3
- Capacity building and training
- National guidance
- Policy tools
- Institutional support
- Resource mobilization

- 5 principles for sustainable neighbourhood planning
- Global public space toolkit
- Planned city extension tool

- Public space assessment tool
- City profiles
- Plan assessment tool
- International guidelines on urban and territorial planning

- Global public space toolkit
- Public space and NUP
- Guide to city wide public space strategy
- Urban planning for city leaders
Public space can fulfill its role as a promoter of equity when cities correct imbalances in its supply, distribution and quality in different neighborhoods and settlements within the city. Therefore, public space surveys should cover the whole urban area. The city-wide public space inventory and assessment is a tool developed to assess public spaces in cities and identify gaps for the development of long-term comprehensive city-wide strategies for public spaces. Cities that have a comprehensive public space strategy have conducted a thorough assessment of public space.

This assessment helps in identifying particular needs or substantive areas to address in the city, but also how the process can align with other, already ongoing or planned processes. The objective of this alignment is to identify areas of possible synergies and the identification of institutions, organizations, agencies and other municipal departments as potential stakeholders or collaborating partners.

In addition to identifying key strategies, steering documents, potential partners, etc., the key issues of the existing strategic plan (if any) should be mapped and analyzed. This tool helps to answer the question “where are we?” in the realm of public space.

The city-wide public space assessment is a digital tool that uses a structured questionnaire that can be modified to fit any context as well as assess the priorities for any city. It utilizes the free and open source mobile application called Kobo Collect (see figure 2). The application is supported by android software but can be used by iPhone users through a web form (see figure 3). Some of the advantages of the application are;

1. Open source and digital
2. Validation on the ground
3. Remote administration
4. Works under difficult conditions such as limited Internet.

For more information regarding the Kobo Collect application please refer to our manual for data collection.
Figure 3: Kobo Collect used on Android, Iphone and web (Online) to collect data on public spaces.
Why conduct a city-wide public space assessment?

1. To determine the level of accessibility of public spaces in respective cities and human settlements.

2. To establish the quantity of public spaces within urban boundaries while providing a benchmark against which improvements can be measured. This particularly is important in meeting local targets, and monitoring the implementation of SDG 11.7.

3. To understand the network of public spaces in cities and identify enablers and barriers for connectivity and linkages.

4. To understand the distribution of public spaces and identify disparities.

5. To assess the quality of public spaces with a special focus on access, use, comfort, amenities, safety, and green coverage.

6. To develop comprehensive and implementable city-wide public space strategies and policies.
How UN-Habitat works with Cities in conducting City-wide Public space Assessment

UN-Habitat works with different city governments and partners in conducting city-wide public space assessments in their respective cities (see figure 4). This process usually takes 6 or more months depending on the needs and the capacity of the city. UN-Habitat recommends that each city follows the process to guarantee long-term appropriate provision, quality and accessibility of public spaces.

As mentioned, the city-wide public space assessment tool can be contextualized to fit different contexts and cities. Therefore, the assessment could either be formulated to capture the broad and diverse aspects of public space or it can emphasize certain thematic or geographical areas. The latter could for example be the case if a city or town already has a sufficient provision and quality of public space in the urban fabric - but where a rapid urban development and growth expected.

Hence, the assessment in this case could be designed towards addressing certain areas of concern, i.e. as a complement to already existing plans, policies and strategies such as safety, protection of heritage areas and ecological spaces, citizens’ health etc. In view of the above, the assessment can be delineated into thematic areas, illustrating the provision of larger parks and green areas, the provision and distribution of rivers and water bodies, areas of particular ecological importance, public and recreational functions etc. The nature and direction of the city-wide assessment will have an impact on the various modes and tools available for implementation.

Example of thematic areas could be;

Blue and Green open spaces (links to environment, biodiversity, climate change and recreation);

- Streets, bicycle and pedestrian paths (links to mobility and transport plans);
- Accessibility and connectivity in the urban fabric at large;
- Provision and access to public facilities and functions;
- Arts, culture and heritage
- Age-friendly public spaces
- Safety and security
- Public realm and furnishing the public space;
- Signs and advertising;
- Urban ecology and leisure
- Economic development and tourism
Figure 4: How UN-Habitat works with partners to conduct city wide public space assessments.

Actions by:
- UN-Habitat
- UN-Habitat & Partner
- Partner
METHODOLOGY

Requirements

**Phone Requirements**
1. It is recommended to have a smart phone running on Android version 4 or above.
2. Ensure there is enough storage in the phone.
3. Ensure that there is no uncertified anti-virus as this may restrict installation.
4. Charge your phone.

**GIS Requirements**
1. Shapefiles of administrative boundaries of the city/municipality which includes the population information for the lowest administrative boundary disaggregated by age, gender and if possible disability.
2. Shapefile of the urban extent of the city (this can go beyond the administrative boundary)
3. Shapefiles of all open public spaces.
4. Shapefiles of all pedestrian streets (sidewalks, avenues, boulevards).
5. Shapefiles of all public facilities (markets, public schools, hospitals, civic buildings, public libraries)
6. Shapefiles of land use.
7. High resolution ortho-photo.

**Human Resource Capacity**
1. Team from the city with knowledge in GIS, Urban Planning, Architecture.
2. Team from the city with knowledge on ODK and/or Kobo toolbox
The time required for each part is dependent on the capacity and the geographical scope of the assessment.
Step 1: Reference/Project Group

A city-wide public space inventory and assessment preparation does not belong to a single department function, a joint approach is required between all relevant stakeholders. The process starts with setting up a relevant target-oriented ad hoc reference group. It is important that members of the reference group come from municipal agencies, the private sector, NGOs, and community groups. This is done by identifying different stakeholders and government departments within the city that will be part of the process. Each stakeholder should identify one team member who will be part of the reference group. Some cities consider having a separate private entity dedicated specifically to public spaces assessment. However, in both instances, the public space planning department within the local authority should take a leading role. This reference group assumes a central role in the formulation and planning of the public space assessment. The earlier they are involved, the quicker the synergy and their ownership in the process is created.

The reference group does not have to be formed as a permanent institution that will take over the roles of the existing government agency currently involved in public space. The reference group is an ad hoc team that can better coordinate stakeholders to accelerate the city-wide public space assessment planning. The presence of such a group is expected to support the coordination function of the local planning agency. It may be possible that in the future, this group may expand their role beyond public space assessment.

The reference group should however undergo training to build their capacity on public space basics and the use of the public space assessment tool including the condition of the public space in the city, planning process and how to use the results. This training can act as a “training of trainers” in cities where there will be other recruited data collectors.

Output

1. Selection of a reference group with an agreed terms of reference
Step 2: Developing the Assessment

The city-wide public space assessment is designed to fit the local context. In this step, the geographical scope and the thematic focus of the assessment is established. This supports the preparation of the questionnaire (see annex 1 on a sample questionnaire) that will be used in the field. The city-wide public space assessment is divided into the following dimensions/aspects:

1. Quantity: proportion of urban surface devoted to public space;
2. Distribution: spatial balance and accessibility to the population;
3. Network: a system of public spaces;
4. Quality: main design features and management (comfort, access, use, users, amenities and green).

If a city is focused on a specific theme, additional dimensions could be added as well as new indicators in the existing dimensions/aspects. The results from this will be used to judge change in public space quality and provision. These indicators can incorporate indicators and benchmarks already set by the local government, national government and globally.

Output

1. An overview of the public space legislation, laws and policies related to public space
2. A mapping of key stakeholders/partners
Step 3: Information gathering

The reference group collects all the information relevant to public space, reviewing laws and regulations as well as mapping of key partners and stakeholders. This entails:

- Mapping of partners/stakeholders that are pertinent to and have an interest in public space
- Conduct a review of local legislation, laws, policies, building codes etc. that have a bearing on public space
- Acquire high resolution imagery: this can be downloaded from the open source such as USGS
- Extract urban extent of the city. UN-Habitat has prepared a training module on how to extract the urban extent which can be found in SDG indicator 11.3.1 module
- Download open public space data from open source eg OSM to ensure that all open spaces are captured, in addition to the data from OSM, draw all open spaces from satellite imagery within the urban extent
- Acquire public space information eg dwg, shapefiles from the local authority, Academia this includes streets such as sidewalks, boulevards, avenues, open public spaces such as parks, cemeteries, gardens, and public facilities eg, markets, churches, public schools, mosques, temples, hospitals, public libraries for the full definition of public space and the different typologies please refer to the Global Public Space Toolkit From Global Principles to Local Policies and Practice

Output

1. A map and shapefiles in GIS with all open public spaces, streets and public facilities
2. An overview of the public space legislation, laws and policies related to public space
3. A mapping of key stakeholders/partners
Step 4: Mobilizing of data collectors

At this step, selection of the data collectors with agreed terms of service is done. These will be the team that will primary do the field work if the reference group does not have the capacity. Data collectors could be university students, local government officials, community members, etc. It is highly recommended that student are selected from appropriate disciplines (urban planning, landscape architecture, forestry, agriculture, environment, ecology). It is also advised that some data collectors speak the local language. The data collectors should be grouped according to the area where they will conduct the survey and a team leader is selected. It is important to identify a team leader who will support the teams, having to troubleshoot and support the teams on the ground and also to do the quality control of the submitted questionnaires.

Activities in this step include;

- Establishing contact and introducing the survey objectives
- Identification of teams and selecting of team leaders
- Developing a terms of service for the data collectors
- Administering the location for data collection for each team

Output

1. Selected data collectors with teams and team leaders
2. Signing of the terms of service
3. Allocation of teams to specific geographical areas for data collection
Step 5: Workshop/training

Prior to the workshop, a clear agenda should be developed (see table 1 for guidance). Participants are given basic training on public space definitions, issues, theories and design considerations.

The following steps need to be taken:

- Training on types of public space, definitions and principles as well as an introduction to the benefits and importance of developing a public space strategy
- Setting-up and configuring the tool
- Training on the use of kobo collect
- Testing the questionnaire
- Field work to test the questionnaire
- Update the questionnaire based on the outcome of the workshop and training

<table>
<thead>
<tr>
<th>DAY</th>
<th>SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAY 1</td>
<td>PUBLIC SPACE BASICS</td>
</tr>
<tr>
<td></td>
<td>GLOBAL PRINCIPLES TO LOCAL ACTION</td>
</tr>
<tr>
<td></td>
<td>KNOWING WHERE YOU ARE TO KNOW WHERE TO GO</td>
</tr>
<tr>
<td>DAY 2</td>
<td>SETTING-UP AND CONFIGURING THE TOOL</td>
</tr>
<tr>
<td></td>
<td>REVIEW OF QUESTIONNAIRE</td>
</tr>
<tr>
<td>DAY 3</td>
<td>FIELD TEST RUN</td>
</tr>
<tr>
<td></td>
<td>REVIEW OF RESULTS FROM TEST RUN</td>
</tr>
<tr>
<td>DAY 4</td>
<td>TOWARDS A STRATEGY</td>
</tr>
</tbody>
</table>

Output

1. Updated questionnaire
2. Workshop report
PART 2: DATA COLLECTION AND QUALITY CHECK

**Step 6 Field work**
This step is dedicated to the field work. Depending on the geographical scope of the assessment (city-wide or district/neighborhood) the city may need to organize for transportation for the data collection teams. It is essential to ensure that the data collectors have a supply of food and refreshments when out in the field. Data collectors should be aware of all the data collection tools that have been integrated into the city-wide public space assessment tool (see annex 2). Other important points include:

1. Data collectors should be on their respective site, recommended to be at the center/middle of the site while taking the coordinates for the site on GPS.
2. Turn on the GPS on the device while capturing the data.
3. Take photos that clearly describe the situation of the site (5 minimum). The photos should be taken from different angles showing different activities and characteristics of the site.
4. Respond to the questions based on the site existing/ current situation rather than knowledge in the past.
5. Respond to all the questions with red asterisks (*) and finalize before trying to upload.
6. Upload the information as requested after finishing and continue with a new one, which should be on the new site.
   - During data collection in the field ensure quality control by using the credentials provided by UN-Habitat
   - Each point collected in the field is automatically uploaded to the server, Therefore, check each point with the data collected in relation to the current state of public space.

**Output**
1. Raw data collected for all sites in each city
2. Summary report extracted from Kobo toolbox of the data collected
Step 7 Data cleaning

For the data cleaning, it is crucial to work with the municipality/local government. Data cleaning refers to the process of identifying and removing (or correcting) inaccurate records from the data set collected and this is done by the team leader in collaboration with the Municipality/local government. Proper data cleaning can make or break the assessment and you usually need to spend a large portion of time on this step. In other words “garbage in gets you garbage out!”

The first step to data cleaning is removing unwanted observations from your dataset. This includes duplicate or irrelevant observations. The next step under data cleaning involves fixing structural errors such as checking for typos or inconsistent capitalization. Also need to handle outliers and missing data. This step can either be done with Kobo Toolbox or ArcGIS/QGis as below:

Using Kobo

- Accessing the administrative account of Kobo toolbox through the credentials provided by UN-Habitat
- Clicking on your city’s project title
- Navigating to “project legacy”
- Clicking on “view data” and the form will be generated. You can also view the data on a map by selecting “view on map”
- To understand how to use kobo analyser kindly refer to the data collection manual or use the UNOCHA data analyser manual

Using ArcGIS/QGis

- Access the administrative account of Kobo toolbox through the credentials provided by UN-Habitat
- Navigate to “project legacy” then select your city
- Navigate to download data: download the KMZ file and the CSV file
- Navigate to download media: Download the zip file for all photos and media
- Open the ArcGIS/QGis that you had created during step 1 or open a new file and add all the layers from step 1.
- Add the CSV file and display the X and Y data
- Export the file as a Geo-database as a back-up
- Label the file using PS-ID
- Add a text field to the Open spaces prepared in step 3 and name it as “CODE”

While on edit mode, open the attribute table of the open spaces that were
prepared in step 3

- Select and zoom to every open space to display the PS-ID. Type the corresponding PS-ID to the CODE field. If there are duplicates, multiple entries with no data, delete as you move to the next open space
- Once all the PS-IDs are reflected in the attribute table of the open space, save your edit and stop editing
- Right click on the ops layer and navigate to join. Use the “CODE” layer from the open public space and “PS-ID” from the CSV to join the files.

This step can be done for other types of public spaces such as public facilities and streets.

Output

1. A map of all public spaces showing public spaces with information from the field and ones without
2. A fact sheet/s with the statistics of all public spaces, public spaces after data cleaning, the total area of urban area/municipality/city or area of interest. This includes data collected per sub-administrative division of the city/municipality

Step 8: Updating GIS layers

At this step, the GIS database requires updating prior to data analysis, this included reshaping of number of public spaces and deleting number of public spaces that were identified as privately-owned public spaces during data collection.
Step 9: Data analysis

Data analysis is a process of transforming, and modeling data with the goal of identifying the gaps, developing recommendations, and informing decision-making. The public space assessment tool has several indicators related to safety, inclusivity, accessibility, ownership and management, typology and scale. However, further spatial analysis is required such as, spatial distribution, land allocated to public space and green space, trend in the distribution and allocation of public space in relation to population density, population growth and spatial growth of the city (see annex 3 on scales of analysis). Additionally, a more in depth analysis of the key priorities of the city is required eg. safety, heritage, health. This also means reporting on the gaps in the existing institutional framework, the legal framework, the policies and other relevant guidelines and strategies within the city/municipality.

Using ArcGIS/QGis

- Once the join has been done in step 7. The analysis can be done based on the report. However, UN-Habitat recommends the analysis of safety, inclusivity and accessibility in all reporting, as this supports the implementation of the SDG 11.7. Please (see annex 4) on indicators for the different categories of analysis. These indicators can be modified depending on the assessment as developed in step 2.

Output

1. Maps and data representing different dimensions and providing actionable items for the municipality
2. A report on the gaps in the existing institutional framework, the legal framework, the policies and other relevant guidelines and strategies within the city/municipality. This can be geared towards the priorities of the city.
3. Relationship between the gaps in the existing institutional framework, the legal framework, the policies and other relevant guidelines and strategies within the city/municipality and the data analysed
4. A short paper on the vision for the city, objectives and strategic direction- if available. If not, a visioning process needs to be planned in terms of workshops, seminars and charrettes.
Step 10: Public Space Assessment Reporting: Preliminary findings

Before providing concrete recommendations to the municipality on a strategic long term plan. It is important to have a report on the preliminary findings from the research. This report provides an overview of the data, maps on key hotspot areas, data analysis, the vision, mission and strategic direction for the city/municipality, gaps in the institution, legal, policy and other relevant guidelines and strategies. It is important to share this report with the municipality and key stakeholders for inputs prior to the validation workshop in step 7.

Output

1. A report on the key findings from the analysis at the governance level, the spatial and the normative work.
2. Individual maps at a scale that is visible. This will be used during the validation workshop.

Step 11: Validation workshop

Organizing and holding a validation workshop is key to be able to ensure that the information gathered is accurate and correct. The validation workshop also provides an opportunity to identify the gaps and agree upon the recommendations emanating from the assessment. It is important to ensure that different departments of national and local government, key experts and stakeholders and community members are invited to the validation workshop. The validation workshop is also an opportunity to mobilize social and political support and to obtain the commitment necessary for the development of a public space strategy/policy. This step includes:

- Conducting a validation workshop with the local governments, the community members, academia and other relevant stakeholders involved in public space work.
- Present the findings from the report and the exercise
- Use the maps prepared in step 6 and group the participants to assess the data and provide inputs
- In the case that a vision, mission, objectives and strategic goals of the municipality/city is missing, this can be a starting point on the needs assessment
and visioning process.

- Distribute the reports for further comments

**Output**

1. Workshop report
2. Consolidation of the outcome from the group exercise.
3. Recommendations for the public space strategy.

**Step 12: Public Space Assessment Report: Final Report to identify gaps**

Once the data has been validated by the municipality. A final report is prepared, this report will provide a comprehensive overview of the state of public space in the city including a strong component on the priority area for the city/municipality and this could be related to heritage, mobility, biodiversity, safety, child-friendly and senior friendly public spaces etc. A long term strategic vision and public space spatial plan for the city needs to be prepared at this step including key recommendations on policy, institutional set-up to anchor the public space strategy development and implementation. This step, can be summarised below;

- This is the most crucial stage of the process as the report will form a basis for a long term strategy for the city
- All inputs consolidated from different actors regarding the report and the data is revised and incorporated into the report accordingly
- Gaps (spatial such as deprived neighbourhoods, priority public spaces for upgrading) and non-spatial (institutional set-up, legislation, policy gaps) from the analysis and research can be documented in a separate section of the report
- Preliminary recommendation on the spatial strategy, institution set-up and policy
- Dissemination strategy for the report.

**Output**

1. A comprehensive report on data gaps and long term spatial and non-spatial recommendation for the city in relation to the vision, mission and objectives of the city.

It is most realistic and economical to prioritize improvement of existing vacant spaces or underutilized spaces.
This process should be repeated as the strategy is being updated to keep with the current state, needs and demands of public spaces in the city. For the development of the public space strategy, kindly refer to UN-Habitat’s publications below:

1. City-wide public space strategy: Compendium of Inspiring Practices and
ANNEXES

Annex 1: Sample questionnaire

Click the link below or scan the QR code to view a sample questionnaire

https://ee.humanitarianresponse.info/x/#ATBCSIMA
User name: surveyor
Password: ward
Annex 2: Data collection tools in the city-wide public space assessment

**Location data**
- GPS Location
- Area of space

**Sound recording**
- Noise levels in spaces.

**Interviews**
- Structured interviews
- Focus group interviews

**Photos**
- Pictures of existing elements, facilities, users present etc.

**Surveyor’s observations**
- Presence (users, elements, etc) and condition (facilities, etc.)
Annex 3: Scales of analysis

City scale analysis

Spatial accessibility
- % of land accessible within 400m (5mins walk)
- Street connectivity and density

Quantity
- Public Space per capita
- % of built up area that is public space including streets

Location and spatial distribution
- Number of public spaces per km²

Environmental biodiversity
- Green area per capita
- Mesh size of green patches (landscape connectivity)
- % protected areas, permeable, invasive alien species

Network
- Number of public spaces per km²

Site scale analysis (Quality)

Access
- Accessibility level
- Infrastructure condition
- Proximity to residential/commercial areas
- Bicycle parking
- Vehicular parking

Use and user
- Number of users
- Type of activity

Comfort and safety
- Air quality
- Noise level
- Cleanliness
- Visual amenity
- Perception of safety

Facilities
- Lighting
- Seating
- Garbage bins
- Toilet facilities
- Signage
- Drainage
- Artificial shading

Green coverage
- Tree canopy coverage
- Grass coverage
### Annex 4: Analysis categories and indicators

<table>
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<tr>
<th>No</th>
<th>Dimension</th>
<th>Sub-dimension</th>
<th>Indicator</th>
<th>Disaggregate/proxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Land allocated to public space</td>
<td>Land allocated to OPS</td>
<td>Scale of ops, Typology of ops</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>Land allocated to Streets</td>
<td>Type of street</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>Land allocated to OPS in Public Facilities</td>
<td>Type of public facility</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Land allocated to Streets</td>
<td>Per capita open public space</td>
<td>Smallest administrative division</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>Per capita green area</td>
<td>Smallest administrative division</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Per capita public space</td>
<td>5 minutes walk to public space</td>
<td>Population with access by age, gender and disability</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>10 minutes walk to public space</td>
<td>Population with access by age, gender and disability</td>
</tr>
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<td>8</td>
<td>Spatial distribution</td>
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<td>Number of intersection per square kilometer</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td>Street length per square kilometer</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Street Connectivity</td>
<td>Length of bicycle lane to length of roads (excluding motorways)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td>Length of sidewalks to length of roads (excluding motorways)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Network/Distribution of public space</td>
<td>Open public space fragmentation</td>
<td>Smallest administrative division</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td>Proximity of one public space to another</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Land cover dates</td>
<td>Change in green area over time (years)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>Change in urban extent over time (years)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>Change in average surface temperature (years)</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Governance</td>
<td>Finance and Economy</td>
<td>Land value change around public spaces over time</td>
<td>Urban, sub-urban</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td>Per cent of municipal budget allocated to public space</td>
<td>Utilities, creation, management and maintenance</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>Policy</td>
<td>Number of cities that have public space plans/ strategies including action plans</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Dimension</td>
<td>Sub-dimension</td>
<td>Indicator</td>
<td>Disaggregate/proxy</td>
</tr>
<tr>
<td>----</td>
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<td>--------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td>Number of plans/strategies that have included high-quality network of public spaces</td>
<td>Type of plan eg. urban extension, renewal, regeneration, slum upgrading strategies</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
<td>Acquisition of land for public space</td>
<td>Mean of acquisition eg. expropriation</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>Planning Standards for Public Space</td>
<td>Management of public spaces</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Accessibility</td>
<td>Level of accessibility</td>
<td>Number of ops with free access (no entrance fee charged)</td>
<td>Typology of public space</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td>Number of ops with controlled access (by opening hours)</td>
<td>Typology of public space</td>
</tr>
<tr>
<td>26</td>
<td></td>
<td>Infrastructure to access</td>
<td>Public spaces with access infrastructure for all</td>
<td>Mode of transport, age, gender and disability</td>
</tr>
<tr>
<td>27</td>
<td>Safety</td>
<td>Social problems in the public space</td>
<td>Number of incidences in the public space within the last 12 months</td>
<td>Age, gender, jurisdiction and type of social problem eg vandalism, harassment, drug abuse, robbery</td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>Infrastructure problems in the public space</td>
<td>Number of public spaces with infrastructural problems</td>
<td>Age, gender and type of infrastructural problem eg poor street lighting, poor pavements, no traffic calming</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>Environment</td>
<td>Noise pollution</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td>Mean levels of particulate matter in public spaces</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td></td>
<td>Waste disposal</td>
<td>Type of waste</td>
</tr>
<tr>
<td>32</td>
<td>Users in public space</td>
<td></td>
<td>Number of users in public spaces in the last 12 months</td>
<td>Age, gender and disability</td>
</tr>
<tr>
<td>33</td>
<td>Inclusivity</td>
<td>Civic engagement</td>
<td>Number of participants in the design, implementation, maintenance, policy of public spaces</td>
<td>Age and gender, type of engagement eg workshop, training, charrette</td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>Use of public space</td>
<td>Type of activity in the public space</td>
<td>Type of activity eg monofunctional, pluri functional, multi functional..... socializing, resting, eating</td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>Amenities for use</td>
<td></td>
<td>Type of amenity eg. public toilets, seating furniture</td>
</tr>
</tbody>
</table>