SEAR Healthy Cities Network Assessment Tool

The detailed rubrics here are a guide to help cities assess their health profile. It is divided into seven areas of assessment namely: (i) general information; (ii) livelihood and living conditions; (iii) socioeconomic and work conditions; (iv) urban infrastructures and facilities; (v) public health systems and welfare services; and (vi) urban governance. Overall, the rubrics are intended as a tool for improving urban governance to advance achievement of health and well-being for cities.

1. A.1. General information

Table A-1. Assessment questionnaire for general information

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Answer type</th>
</tr>
</thead>
<tbody>
<tr>
<td>General characteristics</td>
<td></td>
</tr>
<tr>
<td>Geographical characteristics</td>
<td></td>
</tr>
<tr>
<td>Size of administrative area</td>
<td>Sq.km</td>
</tr>
<tr>
<td>Size of urban area</td>
<td>Sq.km (It can be smaller or larger than the administrative area)</td>
</tr>
<tr>
<td>Sociocultural characteristics</td>
<td></td>
</tr>
<tr>
<td>Existing ethnicity</td>
<td>List with percentages of total population (if applicable)</td>
</tr>
<tr>
<td>Existing religious beliefs</td>
<td>List with percentages of total population (if applicable)</td>
</tr>
<tr>
<td>Gender roles</td>
<td>Description</td>
</tr>
<tr>
<td>Other characteristics</td>
<td></td>
</tr>
<tr>
<td>Economic characteristics</td>
<td>Description</td>
</tr>
<tr>
<td>Mode(s) of governance</td>
<td>Description</td>
</tr>
<tr>
<td>Other special characteristics</td>
<td>Description</td>
</tr>
<tr>
<td>Demographic characteristics</td>
<td></td>
</tr>
<tr>
<td>Number of registered residents</td>
<td>Persons</td>
</tr>
<tr>
<td>Estimate number of actual residents</td>
<td>Persons (including non-registered residents and other types of urban dwellers)</td>
</tr>
<tr>
<td>Population density</td>
<td>Sq.m/person</td>
</tr>
<tr>
<td>Fecundity (birth) rate</td>
<td>Persons/year</td>
</tr>
<tr>
<td>Mortality (death) rate</td>
<td>Persons/year</td>
</tr>
<tr>
<td>Child and infant mortality rate</td>
<td>Per 100 000 child births</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>%</td>
</tr>
<tr>
<td>Average life expectancy</td>
<td>Years old</td>
</tr>
<tr>
<td>Literacy rate</td>
<td>Percentage of population aged 15 years and above</td>
</tr>
<tr>
<td>Population by income levels</td>
<td>Description with statistics</td>
</tr>
</tbody>
</table>
2. **A.2. Livelihood and living conditions**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1. Life expectancy:</td>
<td>Disability-adjusted life year: DALYs is the summation of Years of Life Lost (YLL) and Years Lived with Disability (YLD). It reflects the impact of diseases and illnesses on the population.</td>
<td>&gt;10 000</td>
<td>8 000–9 999</td>
<td>6 000–7 999</td>
<td>4 000–5 999</td>
<td>2 000–3 999</td>
<td>&lt;2 000</td>
<td>(Parkin, 2009, WHO, 2020e, WHO, n.d.-b, WHO, 2018d, WHO, n.d.-a)</td>
</tr>
<tr>
<td></td>
<td>Disability-adjusted life year: Age-standardized DALYs attributable to the environment (per 100 000 pop.)</td>
<td>No active activity in a week</td>
<td>1–50 min/week</td>
<td>51–100 min/week</td>
<td>101–150 min/week</td>
<td>151–300 min/week</td>
<td>&gt;300 min/week</td>
<td>(WHO, 2020c)</td>
</tr>
<tr>
<td>2.2. Active living: Active activity has significant health benefits for heart, body, and mind.</td>
<td>Time spent doing active activities (e.g. walking, cycling, dancing, sport, gardening, chores, etc.)</td>
<td>&gt; 25 min</td>
<td>20–25 min</td>
<td>15–20 min</td>
<td>10–15 min</td>
<td>5–10 min</td>
<td>0–5 min</td>
<td>(WHO, 2018a, World Life Expectancy, n.d.)</td>
</tr>
<tr>
<td>2.3. Accessibility to healthy foods: Access to healthy foods reduces the risk of foodborne diseases and other types of chronic diseases from poor diet.</td>
<td>Travel time to food stores with healthy foods (minutes)</td>
<td>&gt; 25 min</td>
<td>20–25 min</td>
<td>15–20 min</td>
<td>10–15 min</td>
<td>5–10 min</td>
<td>0–5 min</td>
<td>(Barrett and et al., 2017, Belon and et al., 2016)</td>
</tr>
<tr>
<td></td>
<td>Proportion of healthy food choices (%)</td>
<td>0–15%</td>
<td>16–30%</td>
<td>31–45%</td>
<td>46–60%</td>
<td>61–75%</td>
<td>76–100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of population who can afford healthy foods (%)</td>
<td>0–15%</td>
<td>16–30%</td>
<td>31–45%</td>
<td>46–60%</td>
<td>61–75%</td>
<td>76–100%</td>
<td></td>
</tr>
<tr>
<td>2.4. Urban safety: Focuses on the neighbourhood environment and potential day-to-day well-being.</td>
<td>Crime rate: The notion that acts such as murder, rape and theft are to be prohibited exists worldwide. A city with low crime rate is a safe city to live in.</td>
<td>&gt;100</td>
<td>80–100</td>
<td>60–80</td>
<td>40–60</td>
<td>20–40</td>
<td>0–20</td>
<td>(Numbeo, n.d.)</td>
</tr>
<tr>
<td></td>
<td>Crime rate index</td>
<td>Death and injury rates from traffic accidents as well as management plans and preventative measures.</td>
<td>&gt;40</td>
<td>30–40</td>
<td>20–30</td>
<td>10–20</td>
<td>5–10</td>
<td>0–5</td>
</tr>
<tr>
<td>2.5. Urban environment: Includes air quality, water quality, noise pollution, and waste management coverage.</td>
<td>Air quality: Air pollution has severe impact on health.</td>
<td>&gt;300 (Hazardous)</td>
<td>201–300 (Very unhealthy)</td>
<td>151–20 (Unhealthy)</td>
<td>101–150 (Unhealthy for sensitive groups)</td>
<td>51–100 (Moderate)</td>
<td>0–50 (Good)</td>
<td>(US Environmental Protection Agency, 2016)</td>
</tr>
<tr>
<td></td>
<td>Water quality: Water quality impacts transmission of diseases and is an essential indicator for health outcomes.</td>
<td>&gt;100 (Unfit to drink)</td>
<td>76–100 (Very poor)</td>
<td>51–75 (Poor quality)</td>
<td>26–50 (Good quality)</td>
<td>0–25 (Excellent quality)</td>
<td>(Onukwugha et al., 2019b, Parastar et al., 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noise pollution: Chronic exposure to noise pollution can affect mental and audible health in the long term.</td>
<td>&gt;85dB (Very high decibel levels that is dangerous to health.)</td>
<td>75 – 85 dB (High decibel levels which affect health.)</td>
<td>60 – 70 dB (Moderate decibel levels which have some effect on health.)</td>
<td>50 – 60 dB (Low decibel levels that affect health or sensitive groups.)</td>
<td>40 – 50 dB (Low decibel levels that have little effect on health.)</td>
<td>&lt;40 dB (Low decibel levels that do not affect health.)</td>
<td></td>
</tr>
</tbody>
</table>
3. A.3. Socioeconomic and work conditions

Table A-3. Assessment rubrics for socioeconomic and work conditions

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste management service coverage: Waste management service level benchmarking (SLB) can be one of the ways to look at household and living conditions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(American Academy of Audiology, n.d.)</td>
</tr>
<tr>
<td>3.1. Income equality: Equality leads directly to accessibility and affordability.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Uphoff et al., 2013, Truesdale and Jencks, 2016)</td>
</tr>
<tr>
<td>Gini coefficient: The Gini index, or Gini coefficient, is a measure of the distribution of income across a population.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Beveridge, 1945, Frasquilho et al., 2016, Tefft, 2011, Mathers and Schofield, 1998)</td>
</tr>
<tr>
<td>Unemployment: Unemployment rate is found to have strong relationship with the health outcomes in both mental and physical way.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(ILO, n.d.-a)</td>
</tr>
<tr>
<td>Employment inclusiveness: The inclusivity of employment in a city means that there are equal job opportunities for those most in need namely: persons with disabilities, women, minorities, and refugees.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Asylum Access, 2019, Protsyk, 2010)</td>
</tr>
</tbody>
</table>

(Indicators are presented as examples and are not exhaustive.)
4. Work environment: Includes the average working hours and the work environment.

**Working hours:** Working hours affect individuals in many ways that can lead to health outcomes.

<table>
<thead>
<tr>
<th>Hours spent working</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 50 h/week</td>
<td>0 – 45 h/week</td>
<td>45 – 40 h/week</td>
<td>40 – 35 h/week</td>
<td>35 – 37 h/week</td>
<td>35 – 37 with flexible hours</td>
<td></td>
</tr>
</tbody>
</table>

(Ref. Pega et al., 2021, Pencavel, 2014, 2021)

**Work environment:** Working expose individuals to different health risks and their work environment can have health outcomes.

<table>
<thead>
<tr>
<th>Health risks, which need proper safety measures.</th>
<th>No safety procedure and equipment.</th>
<th>Provide basic safety procedure.</th>
<th>Safety procedure and sufficient equipment.</th>
<th>Safety procedure and full equipment.</th>
<th>Fully equipped with safety tools and strong enforcement.</th>
<th>Safety is highly enforced, and aware by all workers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ref.</td>
<td>(Silla et al., 2017, Hohnen and Hasle, 2011, Torp and Moen, 2006)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

4. A.4. Urban infrastructures and facilities

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**Table A-4. Assessment rubrics for urban infrastructures and facilities**

**Indicator** | **Criteria (0–5)** | **Ref.**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 0</strong></td>
<td><strong>Level 1</strong></td>
<td><strong>Level 2</strong></td>
</tr>
</tbody>
</table>

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**4.1. Public utilities:** Access to public utility infrastructure is a key determinant of well-being as it affects quality of life within housing units.

**Proportion of population using at least basic drinking water services (%):** Every household should have access to quality utilities for convenience and well-being.

<table>
<thead>
<tr>
<th>Proportion of population using at least basic drinking water services (%)</th>
<th>&lt;90%</th>
<th>90–92%</th>
<th>92–94%</th>
<th>94–96%</th>
<th>96–98%</th>
<th>98–100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World Bank)</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Proportion of population using safely managed drinking water services (%):**

<table>
<thead>
<tr>
<th>Proportion of population using safely managed drinking water services (%)</th>
<th>&lt;90%</th>
<th>90–92%</th>
<th>92–94%</th>
<th>94–96%</th>
<th>96–98%</th>
<th>98–100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World Bank)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proportion of population using at least basic sanitation services (%):**

<table>
<thead>
<tr>
<th>Proportion of population using at least basic sanitation services (%)</th>
<th>&lt;60%</th>
<th>60–70%</th>
<th>70–80%</th>
<th>80–90%</th>
<th>90–95%</th>
<th>95–100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World Bank)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proportion of population with access to electricity (%):**

<table>
<thead>
<tr>
<th>Proportion of population with access to electricity (%)</th>
<th>&lt;90%</th>
<th>90–92%</th>
<th>92–94%</th>
<th>94–96%</th>
<th>96–98%</th>
<th>98–100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World Bank)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**4.2. Housing adequacy:** Housing in informal settlements and homelessness are fundamental issues on the quality of living in a city.

**Informal (or slum) settlements:** Adequate housing is a basic service for all citizens.

<table>
<thead>
<tr>
<th>Urban slum population (%)</th>
<th>&lt;50%</th>
<th>50–50%</th>
<th>50–40%</th>
<th>50–30%</th>
<th>50–20%</th>
<th>&lt;10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World Bank, 2018, WHO, n.d.-c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Homelessness:** Adequate and affordable housing for vulnerable groups reduces treatment and healthcare service costs.

<table>
<thead>
<tr>
<th>Price-to-Income Ratio (Housing price/GDP per capita)</th>
<th>&lt;90</th>
<th>91–90</th>
<th>91–70</th>
<th>91–50</th>
<th>91–35</th>
<th>&lt;20</th>
</tr>
</thead>
<tbody>
<tr>
<td>(World Bank, 2018, WHO, n.d.-c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tenants’ protection laws and legislation:**

<table>
<thead>
<tr>
<th>Tenants’ protection laws and legislation</th>
<th>No legal protection for tenants.</th>
<th>Regulations are not effective.</th>
<th>Regulations to protect some rights of tenants exist but not in case of forced eviction.</th>
<th>Tenants are protected against forced eviction.</th>
<th>Tenant rights are protected by regulations.</th>
<th>Tenants are protected by regulations with the additional help from government and monetary easing policy.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ref.</td>
<td>(Ritchie et al., 2020)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator</td>
<td>Criteria (0–5)</td>
<td>Level 0</td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td>Level 4</td>
</tr>
<tr>
<td>-----------</td>
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<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Walking distance to the nearest public transport stop (meters)</td>
<td>&gt; 2 000 m</td>
<td>1 600–2 000 m</td>
<td>1 200–1 600 m</td>
<td>800–1 200 m</td>
<td>600–800 m</td>
<td>400–600 m</td>
</tr>
<tr>
<td>Travel time to the nearest public transport stop (minutes)</td>
<td>&gt;25 min</td>
<td>20–25 min</td>
<td>15–20 min</td>
<td>10–15 min</td>
<td>5–10 min</td>
<td>5–5 min</td>
</tr>
<tr>
<td>Departure frequency (per hour)</td>
<td>Majority population cannot easily walk to a public transport stop, in other words it takes more than 5 minutes to reach a bus stop and more than 10 minutes to reach a metro or train station.</td>
<td>Majority population can easily walk to a public transport stop with less than two departures an hour.</td>
<td>Majority population can easily walk to a public transport stop with between two and four departures an hour.</td>
<td>Majority population can easily walk to a public transport stop with between four and ten departures an hour.</td>
<td>Majority population can easily walk to a bus stop with more than 10 departures an hour OR people can easily walk to a metro or train station with more than 10 departures an hour (but not both).</td>
<td></td>
</tr>
<tr>
<td>Presence and design of streets, walking and cycling paths as well as interconnecting streets</td>
<td>The city makes people feel inactive. People cannot walk or cycle to work.</td>
<td>Poor active transports but has process of finding a solution.</td>
<td>Poor active transports. Has a vision to support active transport.</td>
<td>Has covered sidewalks and bike lanes, but of low quality. Has actions to support active transports.</td>
<td>The urban environment encourages people to walk, cycle, and use public transports.</td>
<td>The city makes people feel active. People choose to walk or cycle to work.</td>
</tr>
<tr>
<td>Recreational facilities: High quality public space in community allow people to come out and do activities together. Promote health and create a strong community.</td>
<td>Majority population have no access to a recreational facility by walking but have access by public transport.</td>
<td>Majority population have access to a recreational facility by walking within 1200–1600 m.</td>
<td>Majority population have access to a recreational facility by walking within 800–1200 m.</td>
<td>Majority population have access to a recreational facility by walking within 400–800 m.</td>
<td>Majority population have access to a recreational facility by walking within 0–400 m.</td>
<td></td>
</tr>
<tr>
<td>Number of recreational facilities</td>
<td>No recreation facilities within 2000 m.</td>
<td>No recreation facilities within 1600 m.</td>
<td>No recreation facilities within 800 m.</td>
<td>Have one recreation facility within 800 m.</td>
<td>Have two recreation facilities within 800 m.</td>
<td>Have three or more recreation facilities within 800 m.</td>
</tr>
<tr>
<td>Proportion of population with access to at least one recreational facility (%)</td>
<td>&lt;50%</td>
<td>50–60%</td>
<td>60–70%</td>
<td>70–80%</td>
<td>80–90%</td>
<td>90–100%</td>
</tr>
<tr>
<td>Universal design: Provides equal accessibility to public spaces regardless of physical abilities due to age, disabilities, or other factors.</td>
<td>Public spaces are not designed for all. Have no development plan.</td>
<td>Public spaces are not designed for all. But have the process of finding a solution.</td>
<td>Some public spaces are designed for all but lack quality. Have a vision to develop public spaces.</td>
<td>All public spaces are designed for all but lack quality. Have an action to develop public spaces.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4.3. Public facilities: Access to public facilities affects quality of life indirectly as these facilities provide options for people to live with a healthier lifestyle.

**Active transportation modal:** Lead people to have more physical activity in daily life. It’s also help reduce the use of motorized vehicles and reduces greenhouse gas emissions.

**Recreational facilities:** The quality of universal design for accessibility.

- **Proportion of population with access to at least one recreational facility (%)**
  - Level 0: <50% (50–60%)
  - Level 1: 60–70% (70–80%)
  - Level 2: 70–80% (80–90%)
  - Level 3: 80–90% (90–100%)

- **Walking distance to the nearest recreational facility (meters)**
  - Level 0: > 2 000 m
  - Level 1: 1 600–2 000 m
  - Level 2: 1 200–1 600 m
  - Level 3: 800–1 200 m
  - Level 4: 600–800 m
  - Level 5: 400–600 m

- **Travel time to the nearest public transport stop (minutes)**
  - Level 0: >25 min
  - Level 1: 20–25 min
  - Level 2: 15–20 min
  - Level 3: 10–15 min
  - Level 4: 5–10 min
  - Level 5: 5–5 min

- **Departure frequency (per hour)**
  - Level 0: Majority population cannot easily walk to a public transport stop, in other words it takes more than 5 minutes to reach a bus stop and more than 10 minutes to reach a metro or train station.
  - Level 1: Majority population can easily walk to a public transport stop with less than two departures an hour.
  - Level 2: Majority population can easily walk to a public transport stop with between two and four departures an hour.
  - Level 3: Majority population can easily walk to a public transport stop with between four and ten departures an hour.
  - Level 4: Majority population can easily walk to a bus stop with more than 10 departures an hour OR people can easily walk to a metro or train station with more than 10 departures an hour (but not both).
  - Level 5: Majority population can easily walk to a bus stop with more than 10 departures an hour AND a metro or train station with more than 10 departures an hour.

**Active transportation modal:** Lead people to have more physical activity in daily life. It’s also help reduce the use of motorized vehicles and reduces greenhouse gas emissions.

**Active transportation modal:** Lead people to have more physical activity in daily life. It’s also help reduce the use of motorized vehicles and reduces greenhouse gas emissions.

**Recreational facilities:** The quality of universal design for accessibility.

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<tr>
<th>Indicator</th>
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<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking distance to the nearest public transport stop (meters)</td>
<td>&gt; 2 000 m</td>
<td>1 600–2 000 m</td>
<td>1 200–1 600 m</td>
<td>800–1 200 m</td>
<td>600–800 m</td>
<td>400–600 m</td>
<td>200–400 m</td>
<td>(Kaszczyszyn and Sypion-Dutkowska, 2019)</td>
</tr>
<tr>
<td>Travel time to the nearest public transport stop (minutes)</td>
<td>&gt;25 min</td>
<td>20–25 min</td>
<td>15–20 min</td>
<td>10–15 min</td>
<td>5–10 min</td>
<td>5–5 min</td>
<td></td>
<td>(Kaszczyszyn and Sypion-Dutkowska, 2019)</td>
</tr>
<tr>
<td>Departure frequency (per hour)</td>
<td>Majority population cannot easily walk to a public transport stop, in other words it takes more than 5 minutes to reach a bus stop and more than 10 minutes to reach a metro or train station.</td>
<td>Majority population can easily walk to a public transport stop with less than two departures an hour.</td>
<td>Majority population can easily walk to a public transport stop with between two and four departures an hour.</td>
<td>Majority population can easily walk to a public transport stop with between four and ten departures an hour.</td>
<td>Majority population can easily walk to a bus stop with more than 10 departures an hour OR people can easily walk to a metro or train station with more than 10 departures an hour (but not both).</td>
<td>Majority population can easily walk to a bus stop with more than 10 departures an hour AND a metro or train station with more than 10 departures an hour.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence and design of streets, walking and cycling paths as well as interconnecting streets</td>
<td>The city makes people feel inactive. People cannot walk or cycle to work.</td>
<td>Poor active transports but has process of finding a solution.</td>
<td>Poor active transports. Has a vision to support active transport.</td>
<td>Has covered sidewalks and bike lanes, but of low quality. Has actions to support active transports.</td>
<td>The urban environment encourages people to walk, cycle, and use public transports.</td>
<td>The city makes people feel active. People choose to walk or cycle to work.</td>
<td></td>
<td>(Poelman and Dijkstra, 2015)</td>
</tr>
<tr>
<td>Recreational facilities: High quality public space in community allow people to come out and do activities together. Promote health and create a strong community.</td>
<td>Majority population have no access to a recreational facility by walking but have access by public transport.</td>
<td>Majority population have access to a recreational facility by walking within 1200–1600 m.</td>
<td>Majority population have access to a recreational facility by walking within 800–1200 m.</td>
<td>Majority population have access to a recreational facility by walking within 400–800 m.</td>
<td>Majority population have access to a recreational facility by walking within 0–400 m.</td>
<td></td>
<td></td>
<td>(Merriam, 2016)</td>
</tr>
<tr>
<td>Number of recreational facilities</td>
<td>No recreation facilities within 2000 m.</td>
<td>No recreation facilities within 1600 m.</td>
<td>No recreation facilities within 800 m.</td>
<td>Have one recreation facility within 800 m.</td>
<td>Have two recreation facilities within 800 m.</td>
<td>Have three or more recreation facilities within 800 m.</td>
<td></td>
<td>(Kaczynski et al., 2014)</td>
</tr>
<tr>
<td>Proportion of population with access to at least one recreational facility (%)</td>
<td>&lt;50%</td>
<td>50–60%</td>
<td>60–70%</td>
<td>70–80%</td>
<td>80–90%</td>
<td>90–100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universal design: Provides equal accessibility to public spaces regardless of physical abilities due to age, disabilities, or other factors.</td>
<td>Public spaces are not designed for all. Have no development plan.</td>
<td>Public spaces are not designed for all. But have the process of finding a solution.</td>
<td>Some public spaces are designed for all but lack quality. Have a vision to develop public spaces.</td>
<td>All public spaces are designed for all but lack quality. Have an action to develop public spaces.</td>
<td>All public spaces is suitable for all ages and abilities, good quality. Everyone is satisfied using all public spaces and willing to help each other.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 5. A.5. Public health system and welfare services

### Table A-5. Assessment rubrics for public health system and welfare services

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.1. Public health facilities</strong>: Having a quality health service near home keep people from getting sick easily and is well prepared to deal with any situation.</td>
<td></td>
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<tr>
<td><strong>Spatial coverage</strong>: the spatial coverage is one dimension to look at how accessible health services are in a city.</td>
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<td></td>
</tr>
<tr>
<td>Distance to the nearest health facility</td>
<td>&lt;10 km</td>
<td>5–9.9 km</td>
<td>3–4.9 km</td>
<td>2–2.9 km</td>
<td>1–1.9 km</td>
<td>&lt;1 km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel time to the nearest primary health facility (minutes)</td>
<td>&gt;120 min</td>
<td>60–119.9 min</td>
<td>30–59.9 min</td>
<td>20–29.9 min</td>
<td>10–19.9 min</td>
<td>&lt;10 min</td>
<td>(Falchetta et al., 2020, Karra et al., 2017, Ashiagbor et al., 2020)</td>
<td></td>
</tr>
</tbody>
</table>

| **5.2. Social security and insurance coverage**: Social security plays a role of social safety net and is proper to use as an indicator to measure the policy by the government to help provide for citizens. |
| **Levels of coverage** |
| No social security, and social health insurance. |
| Social security AND social health insurance provide benefits to at least one out of three of the following populations: Retirees, Disabled, Surviving family members *depending on years of work and base salary.* |
| Social security AND social health insurance provide benefits to two out of three of the following populations: Retirees, Disabled, Surviving family members *depending on years of work and base salary.* |
| Social security AND social health insurance provide benefits to all three populations: Retirees, Disabled, Surviving family members *depending on years of work and base salary.* |
| Social security AND social health insurance provide all benefits for all citizens. |


| **5.3. Social security and insurance inclusiveness**: To achieve the vision of the 2030 SDGs – to leave no one behind – it is imperative that the health needs of refugees and migrants be adequately addressed. Healthy cities should concern not only their birth inhabitant, but also the asylum seekers. Hence the need to provide this basic essence of accessing health care. |
| **Minorities (and refugees)**: The higher the coverage which includes immigrants and refugees, the better the city is in achieving the state of a healthy city. |
| **Levels of coverage** |
| No health care coverage. |
| Accessible health care with usage fee. |
| Health care coverage only for registered workers (the coverage is not equal for national workers). |
| Coverage for both registered and unregistered but is not equal for national workers. |
| Equal coverage for both registered but unequal for unregistered workers. |
| Equal access and coverage as national workers for both registered and unregistered workers. |

(Mullins et al., 2005, WHO, 2018c) |

| **5.4. Health Information Accessibility and Education**: Improving education attainment can positively impact health outcomes by enhancing an individual’s ability to understand and apply health information. It is important to note that health literacy is not solely dependent on education level, as other factors also play a role in shaping an individual’s health literacy. |
| **Health Information Accessibility**: Facilitates the management of health-related information, fostering personal health literacy and supporting the development of health promotion attitudes and behaviours. |


### Health Information Accessibility

<table>
<thead>
<tr>
<th>Criteria (0–5)</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>No health information provided in any circumstance.</td>
<td>Provide health information only in crisis period.</td>
<td>Provide general health information in one format.</td>
<td>Provide general health information in different formats.</td>
<td>Provide updated and useful health information in one format.</td>
<td>Provide health information in different formats at different times.</td>
<td><strong>Ref.</strong></td>
</tr>
</tbody>
</table>

**Education inequity:** An education Gini index—a new indicator for the distribution of human capital and welfare—facilitates comparison of education inequality.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gini coefficient of education</td>
<td>&gt;0.4</td>
<td>0.4–0.3</td>
<td>0.3–0.25</td>
<td>0.25–0.2</td>
<td>0.2–0.1</td>
<td>0.1–0</td>
<td><strong>Ref.</strong></td>
</tr>
</tbody>
</table>

### 6. A.6. Urban governance

**Table A-6. Assessment rubrics for urban governance**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
<th>Level 0</th>
<th>Level 1</th>
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<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6.1. Participation:</strong> Participation is about the freedom of association and expression and organized civil society. It is the keystone of public policy and decision-making processes. The more city citizens are involved, the greater the positive impacts contribute to the urban society.</td>
<td>(Information) Local government, in partnership with the health sector, provides information and informs people about public services.</td>
<td>Consultation Local government, in partnership with the health sector, provides information, informs people, and obtains feedback about public services.</td>
<td>Involvement Local government and the health sector work directly with citizens throughout the process to ensure that public concerns are consistently understood and considered.</td>
<td>Collaboration Citizens are involved in the decision-making process by partnering with public or other private entities from different fields.</td>
<td>(Empowerment) Local government and health sector implements decisions formed in partnership with citizens and stakeholders.</td>
<td><strong>Ref.</strong></td>
<td></td>
</tr>
<tr>
<td>Levels of participation</td>
<td>Non-participation</td>
<td></td>
<td></td>
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</tbody>
</table>

| **6.2. Service Performance:** As city citizens are the core component of urban governance, serving them to obtain positive socioeconomic outcomes is the standard responsibility of both government and the health sector. | (Volume and Variety) A significant quantity of services/policies are provided, covering various and all dimensions of citizens' lives. However, services are not of high-quality. AND (Volume and Variety) the significant quantity of health services are | (Volume and Variety – High Quality – Inefficient) A significant quantity of public services/policies as well as health services provided are of good quality, however, the resources are not well-allocated. | (Volume and Variety – High Quality – Effective – Inefficient) Local government, together with the health sector, produce/deliver significant satisfying results of such services that meet society’s needs however the resources are not well-allocated. | (Effectiveness + Efficiency) Local government, together with the health sector, produce/deliver the satisfying results of public services that meet society's needs and these leading sectors make the best use of the resources at their disposal. | (Consistency in services/policies delivering) The local government and the health sector constantly deliver public services and develops a constant and steady set of policies over time. | **Ref.** | |
### 6.3. Open Data and Information: The openness of public information and data is important to the socioeconomic values of urban society. It improves transparency, effectiveness, and the efficiency of public services. It helps foster public innovation as well.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
<th>Level 0</th>
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<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-existing or Existing with legal barriers</strong></td>
<td>Governmental information/data are not available and require access permission.</td>
<td>NO government information/data</td>
<td>Partially Accessible – No Variety</td>
<td>Accessible – Valid – Variety</td>
<td>Accessible – Valid – Variety</td>
<td>Fully Accessible – Valid – Variety</td>
<td></td>
</tr>
<tr>
<td><strong>Partially Accessible – Invalid</strong></td>
<td>Governmental information/data on various formats are discoverable but only 30% can directly access without permission or more than 75% of this information can directly access without permission but not accurate, valid and comparable. AND health information/data in whatever format are discoverable but only 30% can directly access without permission but not accurate, valid and comparable and is challenging to understand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accessible – Valid – No Variety</strong></td>
<td>Governmental information/data on whatever format are discoverable and 60–80% can directly access without permission and these data are accurate, valid and comparable but are 30% comprehensive, covering all governmental, health, social and economic issues. And (Fully Accessible – Valid – Easily Understandable) the health information/data are 100% directly accessible, valid and easily understandable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fully Accessible – Valid – Huge Variety</strong></td>
<td>The information/data are 60–80% directly accessible, valid and timely and 60–80% comprehensive, covering all governmental, health, social and economic issues. And (Fully Accessible – Valid – Easily Understandable) the health information/data are 100% directly accessible, valid and easily understandable.</td>
<td></td>
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</tbody>
</table>

The concerned dimensions of data and information openness cover the accessibility, validity and variety of data provided. Public information provided by governmental sectors is significantly important to the decision-making mechanisms and transparency. Health protection information is considered as the public data as well. City citizens have rights to health information. It enables various sectors to encourage health innovation. Also, as health information is quite specific, they need to be simplified and provided in understandable forms. Nobody is segregated from health information.

In most of the developing countries, there are legal and institutional barriers that impede the public sector to make a respond promptly and effectively to the predicaments. However, there are some other sectors, like the private or community sectors, able to tackle the shifting priority better than the institution bodies.

### 6.4. Adaptiveness: Adaptiveness is the ability to encounter and effectively respond to difficult situations. Also, it concerns the potential to perform in future conditions. The ability to be agile and flexible is a great component of urban governance to handle the crisis.

<table>
<thead>
<tr>
<th>Indicator</th>
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<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-existing or Existing with legal barriers</strong></td>
<td>The entire city cannot respond to the crisis. There are no countermeasure initiatives.</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Partially Accessible – Invalid</strong></td>
<td>There are no decent and adaptive processes and mechanisms available for the leading sectors, governmental and health sector, to promptly tackle the crisis. Or there are no long-term urban resilience.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accessible – Valid – No Variety</strong></td>
<td>The whole society acknowledges the importance of adaptiveness in crisis times. However, instead of the leading sector, the community and individual level stakeholders are</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fully Accessible – Valid – Huge Variety</strong></td>
<td>The adaptiveness to the crisis is thus an urban value. There is formal cooperation among whole urban stakeholders responding to the crisis. The multisectors jointly</td>
<td></td>
<td></td>
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</tbody>
</table>
### 6.5. Trust and strong civic networks:

Social capital can be distinguished into four main aspects: people’s networks and social behaviours, social network support, civic engagement and trust and cooperation. These four aspects are significant components for the policy, the social and political legitimacy, and for the sustainability of the socioeconomic and political structure.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Criteria (0–5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 0</strong></td>
<td>plans mentioned in the urban arena, but the leading sector tries to provide some toolkits to handle the emergency period.</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td>more agile and flexible. They enable to handle the emergency with their contextual mechanisms and flexible. They are promptly able to respond the crisis.</td>
</tr>
</tbody>
</table>

Social capital completely contributes to socioeconomic factors, health and well-being. Social capital, as well as the social networks, help strengthen individuals and communities’ capability for facing urban challenges and difficulties.

#### Limited trust and trustworthiness

A trustworthy environment exists only at a family level. The community sector hardly provides trust and trustworthy environment for individuals. However, there are some social constraints that are likely to hinder the community and individuals from achieving the collective agenda.

#### Community-level trust (Intra networking initiative)

The community sector provides a trust and trustworthy environment for individuals. Individuals in the community begin to establish community networks such as developing a platform for exchanging news and knowhow or spending time with other community members. However, there are some social constraints that are likely to hinder the community and individuals from achieving the collective agenda.

#### Community-level trust (Informal Cooperation)

A trust and trustworthy environment happen at the community level. The community provides more supportive networks which lead to strong informal cooperation within the community. This informal cooperation helps facilitate achieving collective issues.

#### Strong community trust and cooperation (Social Networks Extension)

The networks are dense with most individuals of the community knowing each other. The relationship in the community becomes closer and more supportive. Community cooperation has shared values and identity. This cooperation systematically provides an initial source of support to community members that experience socioeconomic hardships and poor health and well-being. Also, the community attempts to extend its networks to outside civic sectors such as NGOs, civil cooperation/foundation/other communities.

#### Developing wide networks

The community has a very strong tie internally. Additionally, the community, as well as individuals, has more opportunities to develop relationships with outside civic sectors. These civic sectors provide news and knowledge exchanging platforms and try to help the community reach its needs and goals.

#### Thick trust and wide networks

The networks with other civic sectors become closer. These civic sectors are trustworthy. Also they provide a significant source of support to the entire community, as well as individuals, that face socioeconomic challenges, poor health and well-being matters and monetary issues. When there are crises, the community can turn to these sectors.