

ISO 37120:2018 (E)

Sustainable cities and communities — Indicators for city services and quality of life

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	City indicators
5	Economy
5.1	City's unemployment rate (core indicator)
5.1.1	General
5.1.2	Core indicator requirements
5.2	Assessed value of commercial and industrial properties as a percentage of total assessed value of all properties (supporting indicator)
5.2.1	General
5.2.2	Supporting indicator requirements
5.3	Percentage of persons in full-time employment (supporting indicator)
5.3.1	General
5.3.2	Supporting indicator requirements
5.4	Youth unemployment rate (supporting indicator)
5.4.1	General
5.4.2	Supporting indicator requirements
5.5	Number of businesses per 100 000 population (supporting indicator)
5.5.1	General
5.5.2	Supporting indicator requirements
5.5.3	Data sources
5.6	Number of new patents per 100 000 population per year (supporting indicator)
5.6.1	General
5.6.2	Supporting indicator requirements
5.6.3	Data sources
5.7	Annual number of visitor stays (overnight) per 100 000 population (supporting indicator)
5.7.1	General
5.7.2	Supporting indicator requirements
5.7.3	Data sources
5.8	Commercial air connectivity (number of non-stop commercial air destinations) (supporting indicator)
5.8.1	General
5.8.2	Supporting indicator requirements
5.8.3	Data sources
5.9	Economy profile indicators
5.9.1	Average household income (USD) (profile indicator)
5.9.1.1	General
5.9.1.2	Profile indicator requirements
5.9.2	Annual inflation rate based on the average of the past five years (profile indicator)
5.9.2.1	General
5.9.2.2	Profile indicator requirements
5.9.3	City product per capita (USD) (profile indicator)
5.9.3.1	General

5.9.3.2 Profile indicator requirements

5.9.3.3 Data sources

6 Education

6.1 Percentage of female school-aged population enrolled in schools (core indicator)

6.1.1 General

6.1.2 Core indicator requirements

6.1.3 Data sources

6.2 Percentage of students completing primary education: survival rate (core indicator)

6.2.1 General

6.2.2 Core indicator requirements

6.2.3 Data sources

6.3 Percentage of students completing secondary education: survival rate (core indicator)

6.3.1 General

6.3.2 Core indicator requirements

6.3.3 Data sources

6.4 Primary education student–teacher ratio (core indicator)

6.4.1 General

6.4.2 Core indicator requirements

6.4.3 Data sources

6.4.4 Data interpretation

6.5 Percentage of school-aged population enrolled in schools (supporting indicator)

6.5.1 General

6.5.2 Supporting indicator requirements

6.6 Number of higher education degrees per 100 000 population (supporting indicator)

6.6.1 General

6.6.2 Supporting indicator requirements

6.6.3 Data sources

7 Energy

7.1 Total end-use energy consumption per capita (GJ/year) (core indicator)

7.1.1 General

7.1.2 Core indicator requirements

7.1.3 Data sources

7.2 Percentage of total end-use energy derived from renewable sources (core indicator)

7.2.1 General

7.2.2 Core indicator requirements

7.2.3 Data sources

7.2.4 Data interpretation

7.3 Percentage of city population with authorized electrical service (residential) (core indicator)

7.3.1 General

7.3.2 Core indicator requirements

7.4 Number of gas distribution service connections per 100 000 population (residential) (core indicator)

7.4.1 General

7.4.2 Core indicator requirements

7.4.3 Data interpretation

7.5 Final energy consumption of public buildings per year (GJ/m²) (core indicator)

7.5.1 General

7.5.2 Core indicator requirements

7.6 Electricity consumption of public street lighting per kilometre of lighted street (kWh/year) (supporting indicator)

7.6.1 General

7.6.2 Supporting indicator requirements

7.7 Average annual hours of electrical service interruptions per household (supporting indicator)

7.7.1 General

7.7.2 Supporting indicator requirements

7.7.3 Data interpretation

7.8 Energy profile indicators

7.8.1 Heating degree days (profile indicator)

7.8.1.1 General

7.8.1.2 Profile indicator requirements

- 7.8.2 Cooling degree days (profile indicator)
 - 7.8.2.1 General
 - 7.8.2.2 Profile indicator requirements
- 8 Environment and climate change
 - 8.1 Fine particulate matter (PM2.5) concentration (core indicator)
 - 8.1.1 General
 - 8.1.2 Core indicator requirements
 - 8.2 Particulate matter (PM10) concentration (core indicator)
 - 8.2.1 General
 - 8.2.2 Core indicator requirements
 - 8.3 Greenhouse gas emissions measured in tonnes per capita (core indicator)
 - 8.3.1 General
 - 8.3.2 Core indicator requirements
 - 8.4 Percentage of areas designated for natural protection (supporting indicator)
 - 8.4.1 General
 - 8.4.2 Supporting indicator requirements
 - 8.5 NO2 (nitrogen dioxide) concentration (supporting indicator)
 - 8.5.1 General
 - 8.5.2 Supporting indicator requirements
 - 8.5.3 Data sources
 - 8.6 SO2 (sulfur dioxide) concentration (supporting indicator)
 - 8.6.1 General
 - 8.6.2 Supporting indicator requirements
 - 8.6.3 Data sources
 - 8.7 O3 (ozone) concentration (supporting indicator)
 - 8.7.1 General
 - 8.7.2 Supporting indicator requirements
 - 8.8 Noise pollution (supporting indicator)
 - 8.8.1 General
 - 8.8.2 Supporting indicator requirements
 - 8.8.3 Data sources
 - 8.9 Percentage change in number of native species (supporting indicator)
 - 8.9.1 General
 - 8.9.2 Supporting indicator requirements
 - 8.9.3 Data sources
- 9 Finance
 - 9.1 Debt service ratio (debt service expenditure as a percentage of a city's own-source revenue) (core indicator)
 - 9.1.1 General
 - 9.1.2 Core indicator requirements
 - 9.1.3 Data interpretation
 - 9.2 Capital spending as a percentage of total expenditures (core indicator)
 - 9.2.1 General
 - 9.2.2 Core indicator requirements
 - 9.2.3 Data sources
 - 9.2.4 Data interpretation
 - 9.3 Own-source revenue as a percentage of total revenues (supporting indicator)
 - 9.3.1 General
 - 9.3.2 Supporting indicator requirements
 - 9.4 Tax collected as a percentage of tax billed (supporting indicator)
 - 9.4.1 General
 - 9.4.2 Supporting indicator requirements
 - 9.5 Finance profile indicators
 - 9.5.1 Gross operating budget per capita (USD) (profile indicator)
 - 9.5.1.1 General
 - 9.5.1.2 Profile indicator requirements
 - 9.5.2 Gross capital budget per capita (USD) (profile indicator)
 - 9.5.2.1 General
 - 9.5.2.2 Profile indicator requirements
- 10 Governance
 - 10.1 Women as a percentage of total elected to city-level office (core indicator)

- 10.1.1 General
- 10.1.2 Core indicator requirements
- 10.2 Number of convictions for corruption and/or bribery by city officials per 100 000 population (supporting indicator)
 - 10.2.1 General
 - 10.2.2 Supporting indicator requirements
- 10.3 Number of registered voters as a percentage of the voting age population (supporting indicator)
 - 10.3.1 General
 - 10.3.2 Supporting indicator requirement
- 10.4 Voter participation in last municipal election (as a percentage of registered voters) (supporting indicator)
 - 10.4.1 General
 - 10.4.2 Supporting indicator requirements
 - 10.4.3 Data sources
 - 10.4.4 Data interpretation
- 11 Health
 - 11.1 Average life expectancy (core indicator)
 - 11.1.1 General
 - 11.1.2 Core indicator requirements
 - 11.2 Number of in-patient hospital beds per 100 000 population (core indicator)
 - 11.2.1 General
 - 11.2.2 Core indicator requirements
 - 11.2.3 Data sources
 - 11.3 Number of physicians per 100 000 population (core indicator)
 - 11.3.1 General
 - 11.3.2 Core indicator requirements
 - 11.3.3 Data sources
 - 11.4 Under age five mortality per 1 000 live births (core indicator)
 - 11.4.1 General
 - 11.4.2 Core indicator requirements
 - 11.4.3 Data sources
 - 11.5 Number of nursing and midwifery personnel per 100 000 population (supporting indicator)
 - 11.5.1 General
 - 11.5.2 Supporting indicator requirements
 - 11.6 Suicide rate per 100 000 population (supporting indicator)
 - 11.6.1 General
 - 11.6.2 Supporting indicator requirements
 - 11.6.3 Data sources
- 12 Housing
 - 12.1 Percentage of city population living in inadequate housing (core indicator)
 - 12.1.1 General
 - 12.1.2 Core indicator requirements
 - 12.1.3 Data sources
 - 12.2 Percentage of population living in affordable housing (core indicator)
 - 12.2.1 General
 - 12.2.2 Core indicator requirements
 - 12.2.3 Data sources
 - 12.3 Number of homeless per 100 000 population (supporting indicator)
 - 12.3.1 General
 - 12.3.2 Supporting indicator requirements
 - 12.4 Percentage of households that exist without registered legal titles (supporting indicator)
 - 12.4.1 General
 - 12.4.2 Supporting indicator requirements
 - 12.5 Housing profile indicators
 - 12.5.1 Total number of households (profile indicator)
 - 12.5.1.1 General
 - 12.5.1.2 Profile indicator requirements
 - 12.5.2 Persons per unit (profile indicator)
 - 12.5.2.1 General

- 12.5.2.2 Profile indicator requirements
- 12.5.3 Vacancy rate (residential) (profile indicator)
 - 12.5.3.1 General
 - 12.5.3.2 Profile indicator requirements
 - 12.5.3.3 Data interpretation
- 12.5.4 Living space (square metres) per person (profile indicator)
 - 12.5.4.1 General
 - 12.5.4.2 Profile indicator requirements
- 12.5.5 Secondary residence rate (profile indicator)
 - 12.5.5.1 General
 - 12.5.5.2 Profile indicator requirements
- 12.5.6 Residential rental dwelling units as a percentage of total dwelling units (profile indicator)
 - 12.5.6.1 General
 - 12.5.6.2 Profile indicator requirements
- 13 Population and social conditions
 - 13.1 Percentage of city population living below the international poverty line (core indicator)
 - 13.1.1 General
 - 13.1.2 Core indicator requirements
 - 13.1.3 Data interpretation
 - 13.2 Percentage of city population living below the national poverty line (supporting indicator)
 - 13.2.1 General
 - 13.2.2 Supporting indicator requirements
 - 13.2.3 Data interpretation
 - 13.3 Gini coefficient of inequality (supporting indicator)
 - 13.3.1 General
 - 13.3.2 Supporting indicator requirements
 - 13.3.3 Data sources
 - 13.4 Population and social conditions profile indicators
 - 13.4.1 Annual population change (profile indicator)
 - 13.4.1.1 General
 - 13.4.1.2 Profile indicator requirements
 - 13.4.2 Percentage of population that are foreign born (profile indicator)
 - 13.4.2.1 General
 - 13.4.2.2 Profile indicator requirements
 - 13.4.3 Population demographics (profile indicator)
 - 13.4.3.1 General
 - 13.4.3.2 Profile indicator requirements
 - 13.4.4 Percentage of population that are new immigrants (profile indicator)
 - 13.4.4.1 General
 - 13.4.4.2 Profile indicator requirements
 - 13.4.5 Percentage of city population that are non-citizens (profile indicator)
 - 13.4.5.1 General
 - 13.4.5.2 Profile indicator requirements
 - 13.4.6 Number of university students per 100 000 population (profile indicator)
 - 13.4.6.1 General
 - 13.4.6.2 Profile indicator requirements
- 14 Recreation
 - 14.1 Square metres of public indoor recreation space per capita (supporting indicator)
 - 14.1.1 General
 - 14.1.2 Supporting indicator requirements
 - 14.1.3 Data sources
 - 14.2 Square metres of public outdoor recreation space per capita (supporting indicator)
 - 14.2.1 General
 - 14.2.2 Supporting indicator requirements
 - 14.2.3 Data sources
- 15 Safety
 - 15.1 Number of firefighters per 100 000 population (core indicator)
 - 15.1.1 General
 - 15.1.2 Core indicator requirements

- 15.2 Number of fire-related deaths per 100 000 population (core indicator)
 - 15.2.1 General
 - 15.2.2 Core indicator requirements
 - 15.2.3 Data sources
- 15.3 Number of natural-hazard-related deaths per 100 000 population (core indicator)
 - 15.3.1 General
 - 15.3.2 Core indicator requirements
 - 15.3.3 Data sources
 - 15.3.4 Data interpretation
- 15.4 Number of police officers per 100 000 population (core indicator)
 - 15.4.1 General
 - 15.4.2 Core indicator requirements
 - 15.4.3 Data sources
- 15.5 Number of homicides per 100 000 population (core indicator)
 - 15.5.1 General
 - 15.5.2 Core indicator requirements
 - 15.5.3 Data sources
- 15.6 Number of volunteer and part-time firefighters per 100 000 population (supporting indicator)
 - 15.6.1 General
 - 15.6.2 Supporting indicator requirements
- 15.7 Response time for emergency response services from initial call (supporting indicator)
 - 15.7.1 General
 - 15.7.2 Supporting indicator requirements
- 15.8 Crimes against property per 100 000 population (supporting indicator)
 - 15.8.1 General
 - 15.8.2 Supporting indicator requirements
- 15.9 Number of deaths caused by industrial accidents per 100 000 population (supporting indicator)
 - 15.9.1 General
 - 15.9.2 Supporting indicator requirements
- 15.10 Number of violent crimes against women per 100 000 population (supporting indicator)
 - 15.10.1 General
 - 15.10.2 Supporting indicator requirements
 - 15.10.3 Data sources
- 16 Solid waste
 - 16.1 Percentage of city population with regular solid waste collection (residential) (core indicator)
 - 16.1.1 General
 - 16.1.2 Core indicator requirements
 - 16.1.3 Data sources
 - 16.1.4 Data interpretation
 - 16.2 Total collected municipal solid waste per capita (core indicator)
 - 16.2.1 General
 - 16.2.2 Core indicator requirements
 - 16.2.3 Data interpretation
 - 16.3 Percentage of the city's solid waste that is recycled (core indicator)
 - 16.3.1 General
 - 16.3.2 Core indicator requirements
 - 16.3.3 Data sources
 - 16.4 Percentage of the city's solid waste that is disposed of in a sanitary landfill (core indicator)
 - 16.4.1 General
 - 16.4.2 Core indicator requirements
 - 16.4.3 Data sources
 - 16.5 Percentage of the city's solid waste that is treated in energy-from-waste plants (core indicator)
 - 16.5.1 General
 - 16.5.2 Core indicator requirements
 - 16.5.3 Data sources
 - 16.6 Percentage of the city's solid waste that is biologically treated and used as compost or biogas (supporting indicator)
 - 16.6.1 General

- 16.6.2 Supporting indicator requirements
- 16.6.3 Data sources
- 16.7 Percentage of the city's solid waste that is disposed of in an open dump (supporting indicator)
 - 16.7.1 General
 - 16.7.2 Supporting indicator requirements
 - 16.7.3 Data sources
- 16.8 Percentage of the city's solid waste that is disposed of by other means (supporting indicator)
 - 16.8.1 General
 - 16.8.2 Supporting indicator requirements
 - 16.8.3 Data sources
- 16.9 Hazardous waste generation per capita (tonnes) (supporting indicator)
 - 16.9.1 General
 - 16.9.2 Supporting indicator requirements
 - 16.9.3 Data sources
- 16.10 Percentage of the city's hazardous waste that is recycled (supporting indicator)
 - 16.10.1 General
 - 16.10.2 Supporting indicator requirement
 - 16.10.3 Data sources
- 17 Sport and culture
 - 17.1 Number of cultural institutions and sporting facilities per 100 000 population (core indicator)
 - 17.1.1 General
 - 17.1.2 Core indicator requirements
 - 17.2 Percentage of municipal budget allocated to cultural and sporting facilities (supporting indicator)
 - 17.2.1 General
 - 17.2.2 Supporting indicator requirements
 - 17.3 Annual number of cultural events per 100 000 population (e.g. exhibitions, festivals, concerts) (supporting indicator)
 - 17.3.1 General
 - 17.3.2 Supporting indicator requirements
- 18 Telecommunication
 - 18.1 Number of internet connections per 100 000 population (supporting indicator)
 - 18.1.1 General
 - 18.1.2 Supporting indicator requirements
 - 18.1.3 Data sources
 - 18.2 Number of mobile phone connections per 100 000 population (supporting indicator)
 - 18.2.1 General
 - 18.2.2 Supporting indicator requirements
 - 18.2.3 Data sources
- 19 Transportation
 - 19.1 Kilometres of public transport system per 100 000 population (core indicator)
 - 19.1.1 General
 - 19.1.2 Core indicator requirements
 - 19.1.3 Data sources
 - 19.2 Annual number of public transport trips per capita (core indicator)
 - 19.2.1 General
 - 19.2.2 Core indicator requirements
 - 19.2.3 Data sources
 - 19.3 Percentage of commuters using a travel mode to work other than a personal vehicle (supporting indicator)
 - 19.3.1 General
 - 19.3.2 Supporting indicator requirements
 - 19.3.3 Data sources
 - 19.4 Kilometres of bicycle paths and lanes per 100 000 population (supporting indicator)
 - 19.4.1 General
 - 19.4.2 Supporting indicator requirements
 - 19.5 Transportation deaths per 100 000 population (supporting indicator)
 - 19.5.1 General

- 19.5.2 Supporting indicator requirements
- 19.6 Percentage of population living within 0,5 km of public transit running at least every 20 min during peak periods (supporting indicator)
 - 19.6.1 General
 - 19.6.2 Supporting indicator requirements
 - 19.6.3 Data sources
- 19.7 Average commute time (supporting indicator)
 - 19.7.1 General
 - 19.7.2 Supporting indicator requirements
 - 19.7.3 Data sources
- 19.8 Transportation profile indicators
 - 19.8.1 Number of personal automobiles per capita (profile indicator)
 - 19.8.1.1 General
 - 19.8.1.2 Profile indicator requirements
 - 19.8.2 Number of two-wheeled motorized vehicles per capita (profile indicator)
 - 19.8.2.1 General
 - 19.8.2.2 Profile indicator requirements
- 20 Urban/local agriculture and food security
 - 20.1 Total urban agricultural area per 100 000 population (core indicator)
 - 20.1.1 General
 - 20.1.2 Core indicator requirements
 - 20.2 Amount of food produced locally as a percentage of total food supplied to the city (supporting indicator)
 - 20.2.1 General
 - 20.2.2 Supporting indicator requirements
 - 20.2.3 Data sources
 - 20.3 Percentage of city population undernourished (supporting indicator)
 - 20.3.1 General
 - 20.3.2 Supporting indicator requirements
 - 20.3.3 Data sources
 - 20.4 Percentage of city population that is overweight or obese — Body Mass Index (BMI) (supporting indicator)
 - 20.4.1 General
 - 20.4.2 Supporting indicator requirements
- 21 Urban planning
 - 21.1 Green area (hectares) per 100 000 population (core indicator)
 - 21.1.1 General
 - 21.1.2 Core indicator requirements
 - 21.1.3 Data sources
 - 21.2 Areal size of informal settlements as a percentage of city area (supporting indicator)
 - 21.2.1 General
 - 21.2.2 Supporting indicator requirements
 - 21.2.3 Data sources
 - 21.3 Jobs–housing ratio (supporting indicator)
 - 21.3.1 General
 - 21.3.2 Supporting indicator requirements
 - 21.4 Basic service proximity (supporting indicator)
 - 21.4.1 General
 - 21.4.2 Supporting indicator requirements
 - 21.5 Urban planning profile indicators
 - 21.5.1 Population density (per square kilometre) (profile indicator)
 - 21.5.1.1 General
 - 21.5.1.2 Profile indicator requirements
 - 21.5.2 Number of trees per 100 000 population (profile indicator)
 - 21.5.2.1 General
 - 21.5.2.2 Profile indicator requirement
 - 21.5.2.3 Data sources
 - 21.5.3 Built-up density (profile indicator)
 - 21.5.3.1 General
 - 21.5.3.2 Profile indicator requirements
- 22 Wastewater

- 22.1 Percentage of city population served by wastewater collection (core indicator)
 - 22.1.1 General
 - 22.1.2 Core indicator requirements
 - 22.1.3 Data sources
 - 22.2 Percentage of city's wastewater receiving centralized treatment (core indicator)
 - 22.2.1 General
 - 22.2.2 Core indicator requirements
 - 22.2.3 Data sources
 - 22.3 Percentage of population with access to improved sanitation (core indicator)
 - 22.3.1 General
 - 22.3.2 Core indicator requirements
 - 22.4 Compliance rate of wastewater treatment (supporting indicator)
 - 22.4.1 General
 - 22.4.2 Supporting indicator requirements
- 23 Water**
- 23.1 Percentage of city population with potable water supply service (core indicator)
 - 23.1.1 General
 - 23.1.2 Core indicator requirements
 - 23.1.3 Data sources
 - 23.2 Percentage of city population with sustainable access to an improved water source (core indicator)
 - 23.2.1 General
 - 23.2.2 Core indicator requirements
 - 23.3 Total domestic water consumption per capita (litres/day) (core indicator)
 - 23.3.1 General
 - 23.3.2 Core indicator requirements
 - 23.3.3 Data sources
 - 23.3.4 Data interpretation
 - 23.4 Compliance rate of drinking water quality (core indicator)
 - 23.4.1 General
 - 23.4.2 Core indicator requirements
 - 23.5 Total water consumption per capita (litres/day) (supporting indicator)
 - 23.5.1 General
 - 23.5.2 Supporting indicator requirements
 - 23.5.3 Data sources
 - 23.6 Average annual hours of water service interruptions per household (supporting indicator)
 - 23.6.1 General
 - 23.6.2 Supporting indicator requirements
 - 23.6.3 Data interpretation
 - 23.7 Percentage of water loss (unaccounted for water) (supporting indicator)
 - 23.7.1 General
 - 23.7.2 Supporting indicator requirements
 - 23.7.3 Data sources
- 24 Reporting and record maintenance**
- Annex A (informative) City indicators**
 - Annex B (informative) Mapping of indicators to ISO 37101 issues and purposes**
 - Annex C (informative) Mapping of indicators to United Nations Sustainable Development Goals (SDGs)**
 - Annex D (informative) Additional profile indicators**