

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