

# ISO 37120:2014-05 (E)

## Sustainable development of communities - Indicators for city services and quality of life

---

<b>Contents</b>	<b>Page</b>
Foreword .....	vi
Introduction .....	vii
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 City indicators .....	3
5 Economy .....	3
5.1 City's unemployment rate (core indicator) .....	3
5.2 Assessed value of commercial and industrial properties as a percentage of total assessed value of all properties (core indicator) .....	4
5.3 Percentage of city population living in poverty (core indicator) .....	4
5.4 Percentage of persons in full-time employment (supporting indicator) .....	5
5.5 Youth unemployment rate (supporting indicator) .....	6
5.6 Number of businesses per 100 000 population (supporting indicator) .....	6
5.7 Number of new patents per 100 000 population per year (supporting indicator) .....	7
6 Education .....	7
6.1 Percentage of female school-aged population enrolled in schools (core indicator) .....	7
6.2 Percentage of students completing primary education: survival rate (core indicator) .....	8
6.3 Percentage of students completing secondary education: survival rate (core indicator) .....	9
6.4 Primary education student/teacher ratio (core indicator) .....	9
6.5 Percentage of male school-aged population enrolled in schools (supporting indicator) .....	10
6.6 Percentage of school-aged population enrolled in schools (supporting indicator) .....	11
6.7 Number of higher education degrees per 100 000 population (supporting indicator) .....	11
7 Energy .....	12
7.1 Total residential electrical energy use per capita (kWh/year) (core indicator) .....	12
7.2 Percentage of city population with authorized electrical service (core indicator) .....	12
7.3 Energy consumption of public buildings per year (kWh/m <sup>2</sup> ) (core indicator) .....	13
7.4 The percentage of total energy derived from renewable sources, as a share of the city's total energy consumption (core indicator) .....	13
7.5 Total electrical energy use per capita (kWh/year) (supporting indicator) .....	14
7.6 Average number of electrical interruptions per customer per year (supporting indicator) .....	14
7.7 Average length of electrical interruptions (in hours) (supporting indicator) .....	15
8 Environment .....	16
8.1 Fine particulate matter (PM <sub>2.5</sub> ) concentration (core indicator) .....	16
8.2 Particulate matter (PM <sub>10</sub> ) concentration (core indicator) .....	16
8.3 Greenhouse gas emissions measured in tonnes per capita (core indicator) .....	17
8.4 NO <sub>2</sub> (nitrogen dioxide) concentration (supporting indicator) .....	18
8.5 SO <sub>2</sub> (sulphur dioxide) concentration (supporting indicator) .....	19
8.6 O <sub>3</sub> (Ozone) concentration (supporting indicator) .....	19
8.7 Noise pollution (supporting indicator) .....	20
8.8 Percentage change in number of native species (supporting indicator) .....	20

9	Finance .....	21
9.1	Debt service ratio (debt service expenditure as a percentage of a municipality's own-source revenue) (core indicator) .....	21
9.2	Capital spending as a percentage of total expenditures (supporting indicator) .....	22
9.3	Own-source revenue as a percentage of total revenues (supporting indicator) .....	22
9.4	Tax collected as a percentage of tax billed (supporting indicator) .....	23
10	Fire and emergency response .....	23
10.1	Number of firefighters per 100 000 population (core indicator) .....	23
10.2	Number of fire related deaths per 100 000 population (core indicator) .....	24
10.3	Number of natural disaster related deaths per 100 000 population (core indicator) .....	24
10.4	Number of volunteer and part-time firefighters per 100 000 population (supporting indicator) .....	25
10.5	Response time for emergency response services from initial call (supporting indicator) .....	25
10.6	Response time for fire department from initial call (supporting indicator) .....	26
11	Governance .....	26
11.1	Voter participation in last municipal election (as a percentage of eligible voters) (core indicator) .....	26
11.2	Women as a percentage of total elected to city-level office (core indicator) .....	27
11.3	Percentage of women employed in the city government workforce (supporting indicator) .....	27
11.4	Number of convictions for corruption and/or bribery by city officials per 100 000 population (supporting indicator) .....	27
11.5	Citizens' representation: number of local officials elected to office per 100 000 population (supporting indicator) .....	28
11.6	Number of registered voters as a percentage of the voting age population (supporting indicator) .....	29
12	Health .....	29
12.1	Average life expectancy (core indicator) .....	29
12.2	Number of in-patient hospital beds per 100 000 population (core indicator) .....	30
12.3	Number of physicians per 100 000 population (core indicator) .....	30
12.4	Under age five mortality per 1 000 live births (core indicator) .....	31
12.5	Number of nursing and midwifery personnel per 100 000 population (supporting indicator) .....	32
12.6	Number of mental health practitioners per 100 000 population (supporting indicator) .....	32
12.7	Suicide rate per 100 000 population (supporting indicator) .....	33
13	Recreation .....	33
13.1	Square meters of public indoor recreation space per capita (supporting indicator) .....	33
13.2	Square meters of public outdoor recreation space per capita (supporting indicator) .....	34
14	Safety .....	35
14.1	Number of police officers per 100 000 population (core indicator) .....	35
14.2	Number of homicides per 100 000 population (core indicator) .....	36
14.3	Crimes against property per 100 000 (supporting indicator) .....	36
14.4	Response time for police department from initial call (supporting indicator) .....	37
14.5	Violent crime rate per 100 000 population (supporting indicator) .....	37
15	Shelter .....	38
15.1	Percentage of city population living in slums (core indicator) .....	38
15.2	Number of homeless per 100 000 population (supporting indicator) .....	39
15.3	Percentage of households that exist without registered legal titles (supporting indicator) .....	39
16	Solid waste .....	39
16.1	Percentage of city population with regular solid waste collection (residential) (core indicator) .....	39
16.2	Total collected municipal solid waste per capita (core indicator) .....	40
16.3	Percentage of the city's solid waste that is recycled (core indicator) .....	41
16.4	Percentage of the city's solid waste that is disposed of in a sanitary landfill (supporting indicator) .....	42

16.5	Percentage of the city's solid waste that is disposed of in an incinerator (supporting indicator) .....	43
16.6	Percentage of the city's solid waste that is burned openly (supporting indicator) .....	43
16.7	Percentage of the city's solid waste that is disposed of in an open dump (supporting indicator) .....	44
16.8	Percentage of the city's solid waste that is disposed of by other means (supporting indicator) .....	44
16.9	Hazardous Waste Generation per capita (tonnes) (supporting indicator) .....	45
16.10	Percentage of the city's hazardous waste that is recycled (supporting indicator) .....	46
17	Telecommunication and innovation .....	47
17.1	Number of internet connections per 100 000 population (core indicator) .....	47
17.2	Number of cell phone connections per 100 000 population (core indicator) .....	47
17.3	Number of landline phone connections per 100 000 population (supporting indicator).....	48
	18 Transportation .....	48
18.1	Kilometres of high capacity public transport system per 100 000 population (core indicator) .....	48
18.2	Kilometres of light passenger public transport system per 100 000 population (core indicator) .....	49
18.3	Annual number of public transport trips per capita (core indicator) .....	49
18.4	Number of personal automobiles per capita (core indicator) .....	50
18.5	Percentage of commuters using a travel mode to work other than a personal vehicle (supporting indicator) .....	50
18.6	Number of two-wheel motorized vehicles per capita (supporting indicator) .....	51
18.7	Kilometres of bicycle paths and lanes per 100 000 population (supporting indicator) .....	52
18.8	Transportation fatalities per 100 000 population (supporting indicator) .....	52
18.9	Commercial air connectivity (number of non-stop commercial air destinations) (supporting indicator) .....	53
19	Urban planning .....	53
19.1	Green area (hectares) per 100 000 population (core indicator) .....	53
19.2	Annual number of trees planted per 100 000 population (supporting indicator) .....	54
19.3	Areal size of informal settlements as a percentage of city area (supporting indicator) .....	54
19.4	Jobs/housing ratio (supporting indicator) .....	55
20	Wastewater .....	56
20.1	Percentage of city population served by wastewater collection (core indicator) .....	56
20.2	Percentage of the city's wastewater that has received no treatment (core indicator) .....	56
20.3	Percentage of the city's wastewater receiving primary treatment (core indicator) .....	57
20.4	Percentage of the city's wastewater receiving secondary treatment (core indicator) .....	57
20.5	Percentage of the city's wastewater receiving tertiary treatment (core indicator) .....	58
21	Water and sanitation .....	59
21.1	Percentage of city population with potable water supply service (core indicator) .....	59
21.2	Percentage of city population with sustainable access to an improved water source (core indicator) .....	59
21.3	Percentage of population with access to improved sanitation (core indicator) .....	60
21.4	Total domestic water consumption per capita (litres/day) (core indicator) .....	60
21.5	Total water consumption per capita (litres/day) (supporting indicator) .....	61
21.6	Average annual hours of water service interruption per household (supporting indicator) .....	62
21.7	Percentage of water loss (unaccounted for water) (supporting indicator) .....	63
22	Reporting and record maintenance .....	63
	Annex A (informative) City indicators .....	64
	Annex B (informative) Profile indicators .....	69
	Bibliography .....	71