Census of Environment: Urban greenness, 2022

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Urban greenness is one measure that can be used to assess the condition and health of an urban environment, which contributes to more liveable communities and overall quality of life for residents. Areas with trees and vegetation improve local air quality, increase cooling effects, reduce wind speeds, absorb water runoff, provide habitat for wildlife and offer recreational opportunities for people living in local communities.

In 2022, 72% of the land area of 1,016 cities and towns across Canada was classed as green. Urban greenness reflects the presence and health of vegetation in summer across the urban landscape, including all publicly and privately owned green space and built-up areas. The development of urban ecosystem accounts is part of Statistics Canada's new Census of Environment program.

Atlantic provinces have the greenest cities

Almost two-thirds (65%) of large urban population centre area were classed as green in 2022. Average urban greenness was higher for medium-sized population centres (73%) and small population centres (86%).

Regional differences can reflect the climate and types of vegetation that grow naturally across the country. Population centres in the Atlantic provinces had the highest proportion of land area that was classed as green, while those in the Prairies had the lowest greenness on average.

Chart 1
Urban greenness, all population centres, by province, 2022
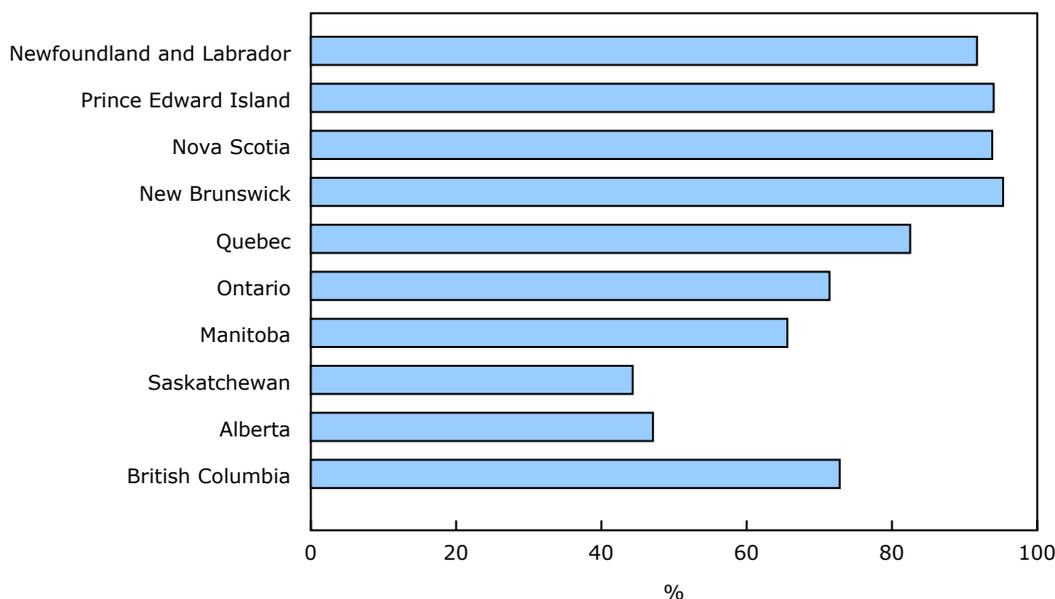
Source(s): Table 38-10-0158-01.

In 2022, the greenest large urban population centres in Canada were Saint-Jérôme, Quebec (93.2%); St. John's, Newfoundland and Labrador (92%); Kanata, Ontario (91.6%); Moncton, New Brunswick (91.5%); and Sherbrooke, Quebec (90.6%).

Urban greenness has decreased over time

Overall, urban greenness in Canada decreased from 2000 to 2022. Land use and climate conditions are important factors that can affect the level of greenness in a given location and period. They can result in both long- and short-term changes in greenness levels.

Comparing the most recent five-year period (2018 to 2022) with the baseline period (2000 to 2004) shows that average urban greenness declined by 8.0 percentage points at the Canada level. Decreases in urban greenness over these periods were seen in all provinces.

These decreases were most pronounced in large urban population centres, which saw a loss of 10.5 percentage points in the five-year greenness average relative to the baseline period. All large population centres saw a decline in greenness when comparing the most recent period with the baseline.

Table 1
Urban greenness, large urban population centres, top five largest centres

	Average greenness 2000 to 2004	Average greenness 2018 to 2022	Difference
	%		percentage point change
Toronto, Ontario	72.9	61.2	-11.7
Montréal, Quebec	78.6	69.3	-9.3
Vancouver, British Columbia	82.4	68.2	-14.2
Calgary, Alberta	54.1	37.6	-16.5
Edmonton, Alberta	62.9	51.1	-11.8

Source(s): Table **38-10-0158-01**.

Table 2
Urban greenness, large urban population centres, top five largest differences over time

	Average greenness, 2000 to 2004	Average greenness, 2018 to 2022	Difference
	%		percentage point change
Milton, Ontario	80.1	49.6	-30.5
Winnipeg, Manitoba	65.9	41.4	-24.6
Kelowna, British Columbia	71.9	55.3	-16.5
Calgary, Alberta	54.1	37.6	-16.5
Windsor, Ontario	77.3	61.9	-15.4

Source(s): Table **38-10-0158-01**.

Note to readers

Data for two urban greenness measures by population centre are now available for 2000 to 2022. These measures provide information on the condition of urban ecosystems as part of Statistics Canada's new Census of Environment program.

Both measures were computed from the Normalized Difference Vegetation Index (NDVI), derived from satellite imagery from the moderate resolution imaging spectroradiometer. The average greenness is the percentage of the land area that was classed as green and corresponds to areas with an NDVI of 0.5 or more. The average NDVI is the average of all pixel NDVI values excluding water.

Population centres have a population of at least 1,000 and a population density of 400 people or more per square kilometre, based on population counts from the Census of Population. All areas outside population centres are classified as rural areas. Population centres are classified in three groups: small (population from 1,000 to 29,999 inhabitants), medium (population from 30,000 to 99,999 inhabitants) and large urban (100,000 inhabitants or more).

Table 38-10-0158-01 assesses greenness based on population centre boundaries from the 2021 Census of Population. It replaces Table 38-10-0149-01, which calculated greenness for population centres from the 2016 Census of Population.

*Statistics Canada's **Census of Environment program** reports on ecosystems in Canada, providing information to help Canadians make evidence-based decisions to protect and enhance the environment. The program follows the internationally accepted environmental economic standard for producing information on ecosystems' extent, their condition and the services they provide.*

Have your say: The Census of Environment

Help shape the future of the Census of Environment. Visit the page Statistics Canada is seeking input on the new Census of Environment program to participate.

For more information, see "Canadian System of Environmental-Economic Accounting – Ecosystem Accounts (5331)."

Available tables: table 38-10-0158-01.

Definitions, data sources and methods: survey number 5331.

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; **infostats@statcan.gc.ca**) or Media Relations (**statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca**).