

Statistics Canada's institutional arrangements and roles related to environment and climate change statistics

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Statistics
Canada Statistique
Canada

Canada





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Outline

- Policy Landscape
- Organizations that produce climate change-related data
- Initiatives to centralize the data
- Mechanisms for cooperation and collaboration between departments
- Statistics Canada's main roles



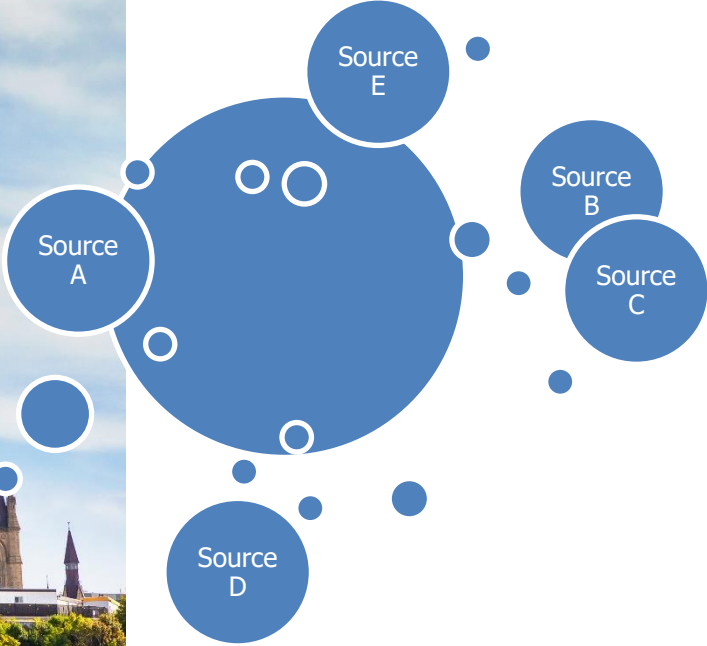
Climate Change and Canada

- Climate change is affecting Canada's economy, society, and environment.
- The Government of Canada has introduced legislation and launched several initiatives to mitigate the impacts of climate change, including (but not limited to):
 - Net-Zero Emissions Accountability Act (2021)
 - Canada's 2030 Emissions Reduction Plan: Clear Air, Strong Economy
 - Canada's National Adaptation Strategy
 - Federal Sustainable Development Strategy
 - Clean Technology and Climate Innovation Strategy
 - Climate Science 2050: Advancing Science and Knowledge on Climate Change.
 - QOL Framework
 - Canadian Environmental Sustainability Indicators (CESI) program, etc.
- As such, data, indicators and analytical insights are crucial to track, monitor and evaluate these initiatives and to better understand the impacts of climate change:
 - To support the Pan-Canadian Framework on Clean Growth and Climate Change
 - To provide insights to many government departments, including Natural Resources Canada and Environment and Climate Change Canada
 - To measure the impacts of specific government programs on the environment
 - To inform Canadians

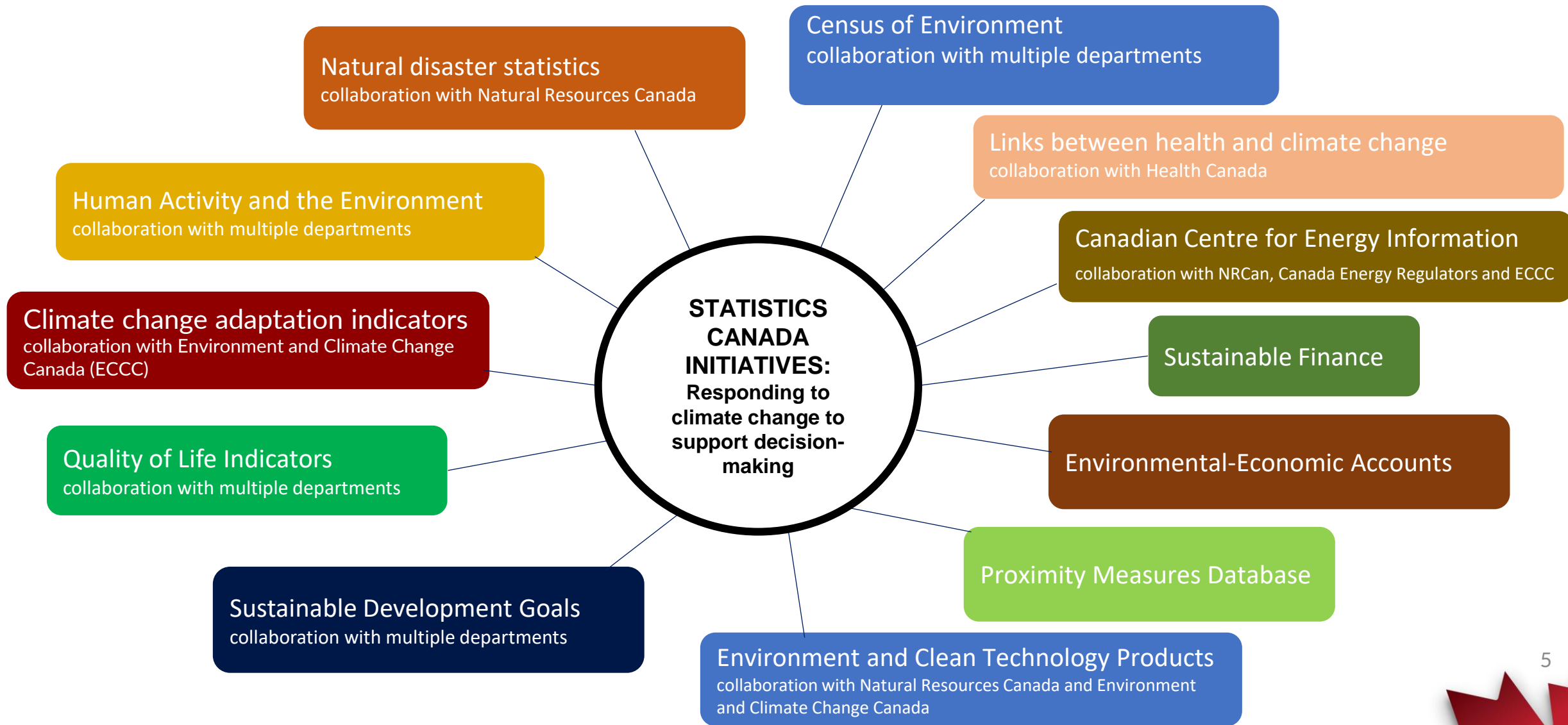
Who produces Canada's climate change data?



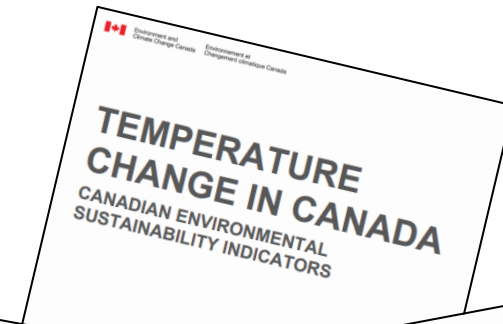
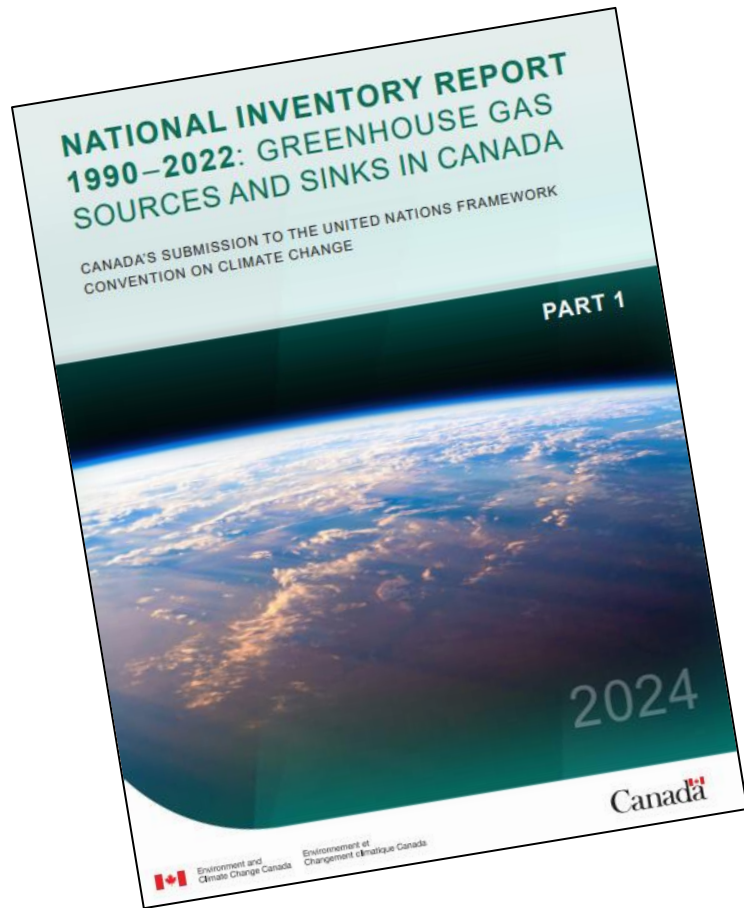
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Climate change-related programs and partners



CC-related data at Environment and Climate Change Canada



CC-related data at Natural Resources Canada

Arctic science

Geo-mapping and remote sensing capabilities in Canada's far north.

Cyber security

Learn how we collaborate across the energy sector to strengthen the security and resilience of critical energy infrastructure through research and intelligence.

Geomatics

Explore the disciplines of surveying, hydrography, mapping, remote sensing and geographic information processing.

Natural hazards

Information and tools to help you understand, report and prepare for natural hazards like earthquakes, forest fires, floods and space weather.

Climate change science

Mitigating uncertainties associated with critical infrastructure for resource industries.

Energy research

Energy research and development activities.

Geoscience

Learn about the geoscience data and knowledge that are available to those working to manage Canada's landmass and develop its natural resources responsibly.

Space weather

Short term and long term space weather forecasts, geomagnetic and geoelectric fields, effects on technology.

Mining research and innovation at CanmetMINING

Research on critical minerals, technologies for improved efficiencies, climate change adaptation and mitigation

Forest science

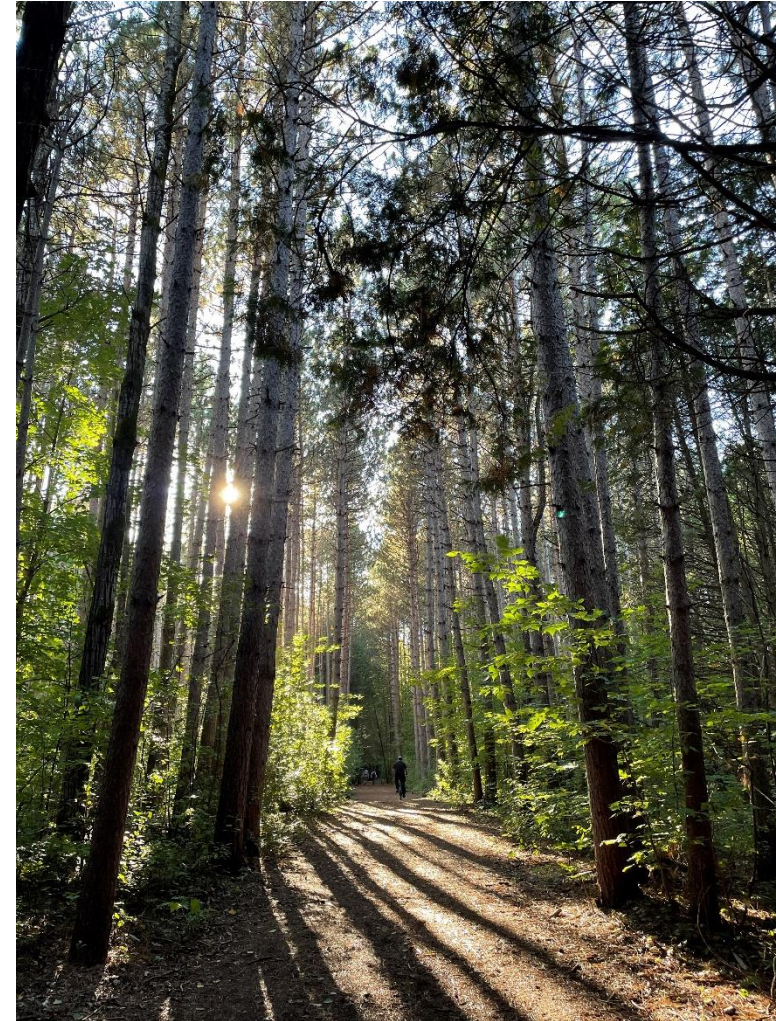
Access Canadian Forest Service science, research, publications and statistical information. Learn about our research activities that support sustainable forest management.

Materials research

Partnering opportunities and more information on working with CanmetMATERIALS.

Remote Sensing Science

Capturing information about the earth's surface using reflected or emitted energy collected by sensors mounted on satellites, aircrafts or drones.



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CC-related data at Fisheries and Oceans Canada



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Advice, publications and data

Science advisory, status reports, data, publications and infographics.

Environment and ecosystems

Habitat and ecosystem monitoring, contaminant and oil spill research, biodiversity and freshwater science.

Hydrography

Surveys and research supporting Canada's marine navigation products.

Ocean and climate

Ocean research, modelling, climate change science, predictions and scenarios.

Aquaculture science

Environmental monitoring, fish health, escapes, farmed species research, pests and pathogens.

Fish and invertebrate science

Fish population science, invasive species and genomics.

Marine mammal science

Impacts on species and ecosystems, tracking methods, research laboratories and networks.

Partnerships and collaboration

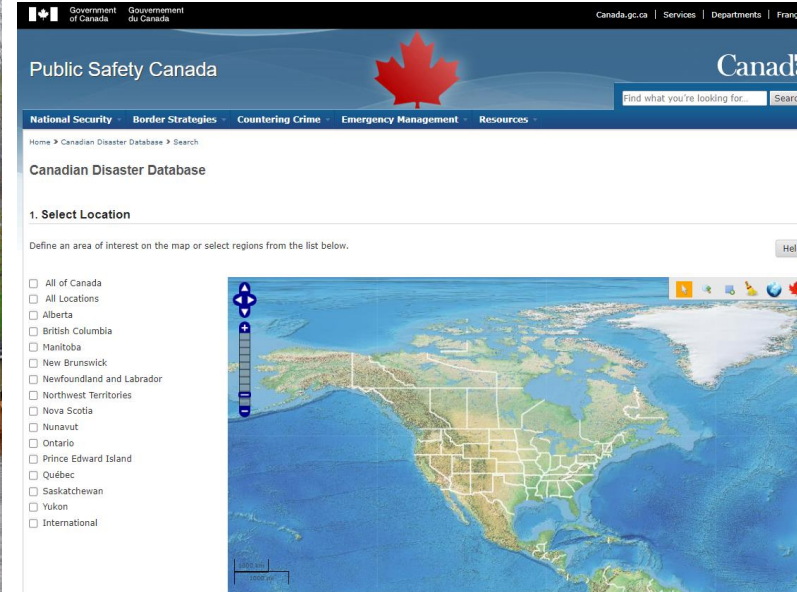
National and international funding opportunities, Science at-Sea, and academic partnerships and collaborations.



CC-related data at Public Safety Canada



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Current situation

- [Provincial and territorial wildfire information](#)
- [Weather](#)
- [Smoke maps](#)
- [Fire maps](#) (Canadian Wildland Fire Information System)
- [Canadian Interagency Forest Fire Centre \(CIFFC\)](#)
- [National Agroclimate Risk Report](#)
- [Air Quality Health Index](#)
- [Canadian Drought Monitor](#)

Environment and Climate Change at Statistics Canada

Insights / Analysis

- Impact of climate change on health (exposure to wildfire, extreme heat)
- Vulnerability, adaptation, resilience (access to cooling center, residential greenness in urban area, exposure to climate event)
- Economic activity at risk from natural disasters
- Impact of environmental policies, transition to low-carbon economy
- Impact of events on GHG (ex. increase in telework)

Data / Programs

- Census of environment
- Environment-related taxes
- Energy / Environment / Clean-tech related R&D spending and capital expenditures
- Zero-emission vehicles
- Asset management
- GHG emissions
- Community profiles to support emergency managers
- Flood risk awareness

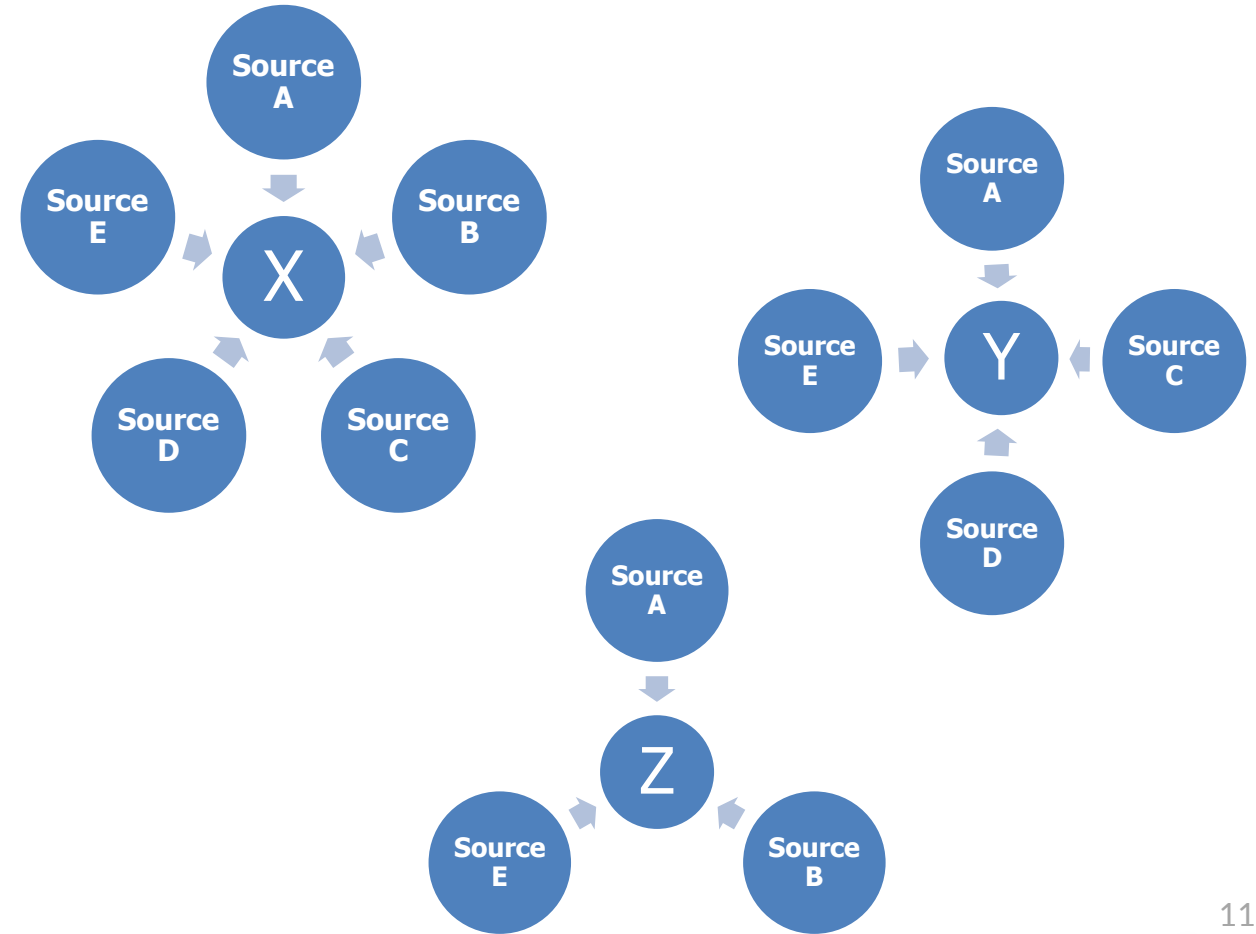
Frameworks

- System of National Accounts
- System of Environmental Economic Accounting
- Quality of life indicators
- Sustainable Development Goals
- Data Gap Initiative III

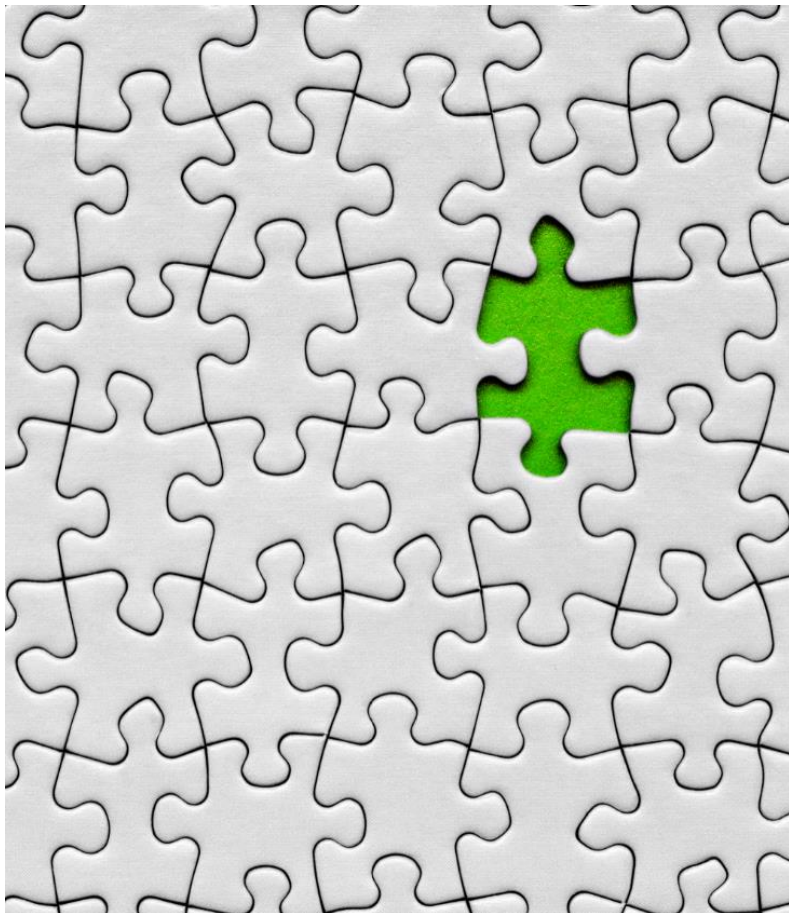
Initiatives to centralize CC-related data



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Climate Data Strategy



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Canadian Centre for Climate Services (CCCS)



Who we are

The Canadian Centre for Climate Services (CCCS) is a dedicated multi-disciplinary team with expertise across a broad range of climate-related disciplines. We work with partners and stakeholders to support the implementation of the [Pan-Canadian Framework on Clean Growth and Climate Change](#).

Our goals

Our goal at the CCCS is to help Canadians increase their resilience to climate change. We aim to do this by helping to improve your understanding of how the climate is changing. We also aim to help you discover how these changes may affect you and the things that are important to you. Additionally, we provide guidance and resources to help you use this knowledge for making climate-smart decisions when planning for the future.

What we do

Deliver climate services driven by user needs

We conduct outreach and engagement activities to assess what kinds of data, information, and tools Canadians need to incorporate climate change into their decisions. Our services are regularly updated to reflect evolving user needs. We welcome [your feedback and input](#).

Learn more about our [External Advisory Panel on Climate Services](#).
[Backgrounder from October 2018 launch](#)

Provide access to climate information

We provide access to climate data, tools, and information from across the country. We strive to provide authoritative, timely, and relevant climate services by working in partnership with federal government departments, different levels of government, and regional climate organizations.

- You can access climate data and tools from our various partners, as well as other climate experts in Canada by visiting [ClimateData.ca](#) and using [more resources from the Canadian Centre for Climate Services](#).

Build local capacity

We team up with regional climate organizations to provide locally-relevant information to our users. Together we are building a strong network of climate service providers. Find out more about the regional climate organizations by clicking on the links below.



► Long description



Library of climate resources

Datasets, tools, guidance and related resources

Climate information

Climate change concepts, applications, and the role of climate information in decision-making

Climate Services Support Desk

Get help from our climate experts to find, understand and use climate information

Display and download climate data

View selected climate datasets on maps or download data

Canadian Centre for Energy Information (CCEI)

Canadian Centre for Energy Information
Energy data for all

Get started

Search for datasets, visualizations, publications and more. Use search tools like filtering and sorting to find the information important to you.

Q

Browse energy products

Coal

Crude oil

Electricity

Natural gas

Refined petroleum products

Renewable energy

Uranium and nuclear

Indicators

[View all indicators](#)

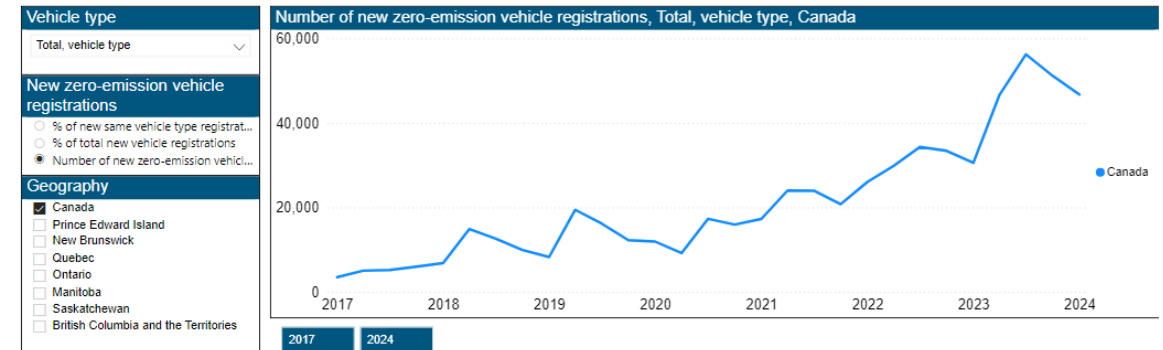
Zero emission vehicle registration, quarterly	Total energy use	Industrial energy use	Household energy use per capita	Energy use expenditure (household)
-5.7% ▼	2.4% ▲	3.1% ▲	-0.7% ▼	-10.1%
11.3	11,098,406	8,656,339	63.86	4,604,5
% of total new vehicle registrations	Terajoules	Terajoules	Gigajoules per capita	Terajoules
Reference period: Q1 2024	Reference period: 2021	Reference period: 2021	Reference period: 2021	Reference per:

[How to use](#)

- Zero-emission vehicles
- Energy use by sector
- Household energy use per capita
- Energy use by final demand category
- Energy resource reserves

New zero-emission vehicle registrations, quarterly

[Data table](#) [Chart](#)



Statistics Canada's Climate Change Statistics Portal



Bringing together data, tools and reports to provide Canadians with relevant information on climate change.

Follow:

Sign up to [My StatCan](#) to get updates in real-time.

Find data on

- [Environment](#)
- [Economy](#)
- [Population and society](#)
- [Extreme events and natural disasters](#)
- [Financial impacts and risks](#)

[More related subjects: Climate change](#)

Features

[The prevalence of household air conditioning in Canada](#)

Item 1 of 8

Key indicators

Canada

[Average car commuting duration, in minutes](#)
(2021 Census of population) **22.8**

[Direct industrial energy intensity](#)
(2021) **4.37 terajoules per million dollars of real GDP**
-1.8% ↓
(annual change)

[Direct industrial greenhouse gas emissions intensity](#)
(2021) **0.30 kilotonnes per million dollars of real GDP**

Census of Environment

The [Census of Environment](#) will deliver a comprehensive picture of Canada's ecosystems.

Canadian Statistical Geospatial Explorer

Start exploring Canada's rich data with the [Canadian Statistical Geospatial Explorer](#).

Canadian Centre for Energy Information

The [Canadian Centre for Energy Information](#) is a convenient one-stop virtual shop for independent and trusted information on energy in Canada.

Statistics on Indigenous Peoples

Visit [Statistics on Indigenous peoples](#) to explore Statistics Canada's information holdings on Indigenous peoples, including a section on Indigenous children.

Quality of Life Framework for Canada

Visit the [Quality of Life Hub](#) for information on the quality of life of people in Canada.

Gender, diversity and inclusion

A focal point for data produced by Statistics Canada's Centre for [Gender, diversity and inclusion statistics](#).



Statistics Canada's Environment Statistics Portal



Bringing together data, tools and reports to provide you with the latest information on the environment in Canada.

Follow: Sign up to [My StatCan](#) to get updates in real-time.

Find data on

- [Air and climate](#)
- [Environmental-economic accounts](#)
- [Environmental protection, technology and practices](#)
- [Land, oceans, ecosystems and biodiversity](#)
- [Natural disasters](#)
- [Solid waste and hazardous substances](#)
- [Water and wastewater](#)

Features

Item 4 of 7 Pause

Key indicators

Canada

- [Canada's natural resource wealth](#) (2022)
\$2,522 billion
63.8% ↑
(annual change)
- [Household greenhouse gas emissions per capita](#) (2021)
3.0 tonnes
-0.5% ↓
(annual change)
- [Household energy use per capita](#) (2021)
63.9 gigajoules
-0.7% ↓
(annual change)

[▶ More key indicators](#)

Analysis and information



These [products](#) present analysis on Canada's environment, as well as information about environmental statistics, surveys and environmental-economic accounts at Statistics Canada.

Human Activity and the Environment



In [Human Activity and the Environment](#), the latest information and statistics are gathered from many sources to produce an in-depth analytical article.

Data Visualization



These new tools, maps and infographics highlight environmental data:

- [Interactive data visualization tools](#)
- [Infographics and thematic maps](#)

Census of Environment Geospatial Explorer



Start exploring Canada's rich data with the [Census of Environment Geospatial Explorer](#).

Canadian System of Environmental-Economic Accounting



The [Methodological Guide: Canadian System of Environmental-Economic Accounting](#) describes the concepts, sources and methods used to compile environmental-economic accounts at Statistics Canada and links to related data tables and publications.

Quality of Life Framework for Canada



Statistics Canada's [Quality of Life Hub](#) provides important information on quality of life in Canada for all, bringing together key economic, social and environmental datasets.

Statistics Canada's Census of Environment

Census of Environment

[About](#)
[Topics](#)
[Data](#)
[Reference](#)

Welcome to the Census of Environment portal. This is where you can learn about the Census of Environment, our latest releases, data publications and reference material. Check out our mapping tools or data files!

What's new

Census of Environment: Renewable freshwater for selected drainage regions and ecoprovinces, 1971 to 2018

Item 8 of 8

[View all releases](#)

Indicators

<p>Average greenness of all population centres in Canada</p> <p>74.1% in 2023</p> <p>+2 pts Change since 2022</p> <p>Source(s): Table 38-10-0158-01</p>	<p>Average amount of carbon stored in Canada's managed forests</p> <p>205 tonnes per hectare</p> <p>2018</p> <p>Source(s): Accounting for ecosystem change in Canada</p>	<p>Percentage of surface ocean water layer that is conserved</p> <p>14.6% Conserved in 2023</p> <p>+0.7 pts Change since 2022</p> <p>Source(s): Table 38-10-0157-01</p>
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Maps geospatial data and data visualization

- [Census of Environment Geospatial Explorer](#)
- [Environmental Thematic Maps and Graphics](#)
- [Environmental Statistics: Boundary Files](#)



Partners

Working together to share data, perspectives and expertise.

- [Agriculture and Agri-Food Canada](#)
- [Environment and Climate Change Canada](#)
- [Fisheries and Oceans Canada](#)
- [Natural Resources Canada](#)



Engagement

Consulting with Canadians to seek input about the Census of Environment initiatives, data and the usability of our products.

[Statistics Canada is seeking input on the new Census of Environment program](#)

Related resources

Visit other Statistics Canada [subject](#) hubs and portals for related data, analysis and information.

Agriculture and food	Health	Poverty
Climate change	Indigenous peoples	Quality of life
Energy	Infrastructure	Rural
Environment	Population and demography	Transportation



Related frameworks

- [System of Environmental Economic Accounting](#)
- [Canadian environmental sustainability indicators](#)
- [Global Biodiversity Framework](#)
- [Sustainable Development Goals](#)
- [The Canadian Indicator Framework for the Sustainable Development Goals](#)

Mechanisms for cooperation and collaboration with other departments



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- Recurrent meetings are scheduled between the different groups
- Data sharing agreements and MoU between StatCan and other government departments to avoid duplication of effort and leverage cooperation
- StatCan informs key stakeholders when publishing data of interest for them



Statistics Canada's Main Roles

- Producer of socio-economic, environmental and economic accounts (CF and EA) indicators/data and analytics.
- Custodian of the CCEI, CCS hub and others
- Methodological participant for the Data Gap Initiative phase 3 (IMF)
- Participant in discussion to define indicators (e.g., CESI (ECCC), SDG (StatCan), etc.)
- Participant in interdepartmental and international working groups and committees.



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19



Thank you!

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Statistics
Canada

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