



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

FOREST MANAGEMENT AND DISTURBANCES

CANADIAN ENVIRONMENTAL
SUSTAINABILITY INDICATORS



Canada 

Suggested citation for this document: Environment and Climate Change Canada (2025) Canadian Environmental Sustainability Indicators: Forest management and disturbances. Consulted on *Month day, year*. Available at: <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/forest-management-disturbances.html>

Cat. No.: En4-144/14-2025E-PDF
ISBN: 978-0-660-78778-7
Project code: EC25115

Unless otherwise specified, you may not reproduce materials in this publication, in whole or in part, for the purposes of commercial redistribution without prior written permission from Environment and Climate Change Canada's copyright administrator. To obtain permission to reproduce Government of Canada materials for commercial purposes, apply for Crown Copyright Clearance by contacting:

Environment and Climate Change Canada
Public Inquiries Centre
Place Vincent Massey Building
351 Saint-Joseph Boulevard
Gatineau QC K1A 0H3
Toll Free: 1-800-668-6767
Email: enviroinfo@ec.gc.ca

Photos: © Environment and Climate Change Canada

© His Majesty the King in Right of Canada, represented by the Minister of the Environment, Climate Change and Nature, 2025

Aussi disponible en français

CANADIAN ENVIRONMENTAL
SUSTAINABILITY INDICATORS

FOREST MANAGEMENT AND DISTURBANCES

December 2025

Table of contents

Forest management and disturbances5

 Timber harvest5

 Annual timber harvest compared to the sustainable wood supply5

 Forest disturbances6

 Number of forest fires and area burned6

 Area disturbed by insects8

 Estimated total area of annual deforestation8

 Forest regeneration9

 About the indicator11

 What the indicator measures11

 Why this indicator is important11

 Related Initiatives11

 Related Indicators12

 Data sources and methods12

 Data sources12

 Methods13

 Caveats and limitations16

 Resources16

 References16

 Annex A. Data tables for the figures presented in this document18

List of Figures

Figure 1. Maximum sustainable wood supply and annual harvest of industrial roundwood, Canada, 1990 to 2023 5

Figure 2. Number of forest fires by region, Canada, 1990 to 2024 6

Figure 3. Area burned by forest fires by region, Canada, 1990 to 2024 7

Figure 4. Area disturbed by insects, Canada, 1990 to 2023 8

Figure 5. Estimated total area of annual deforestation, Canada, 1990 to 2023..... 9

Figure 6. Total area planted and seeded, Canada, 1990 to 2023..... 10

List of Tables

Table A.1. Data for Figure 1. Maximum sustainable wood supply and annual harvest of industrial roundwood, Canada, 1990 to 2023 18

Table A.2. Data for Figure 2. Number of forest fires by region, Canada, 1990 to 2024..... 19

Table A.3. Data for Figure 3. Area burned by forest fires by region, Canada, 1990 to 2024..... 20

Table A.4. Data for Figure 4. Area disturbed by insects, Canada, 1990 to 2023..... 21

Table A.5. Data for Figure 5. Estimated total area of annual deforestation, Canada, 1990 to 2023 22

Table A.6. Data for Figure 6. Total area planted and seeded, Canada, 1990 to 2023 23

Forest management and disturbances

In 2023, Canada's forests made up an area of approximately 3.7 million square kilometres (km²), representing about 40% of Canada's land area. These forests account for approximately 9% of the world's forests. Much of it grows in the boreal zone, throughout which over 2.8 million km² of forest are interspersed with lakes, wetlands, and other ecosystems. Canada's rich forest ecosystems offer significant environmental, social and cultural benefits, as well as opportunities for responsible economic development.¹ This indicator presents a series of measures covering timber harvest, forest disturbances, and forest regeneration.

Timber harvest

This section compares the total amount of wood harvested with the sustainable wood supply. The sustainable wood supply is defined as the potential volume of timber which can be harvested sustainably as determined by a complex analysis of ecological, economic, and social considerations.

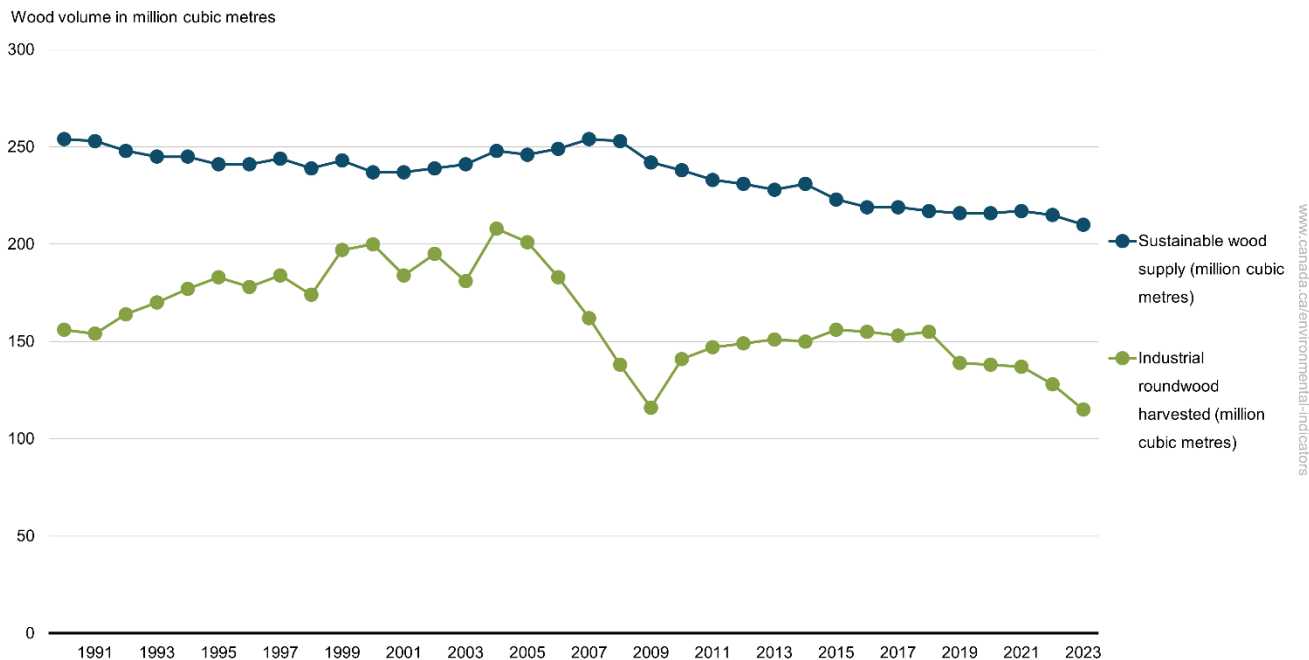
Annual timber harvest compared to the sustainable wood supply

Key results

In 2023,

- Canada's sustainable wood supply was approximately 210 million cubic metres (m³)
- the amount of industrial roundwood harvested was close to 115 million m³, which represents approximately 55% of the sustainable wood supply

Figure 1. Maximum sustainable wood supply and annual harvest of industrial roundwood, Canada, 1990 to 2023



[Data for Figure 1](#)

Note: Sustainable wood supply data presented are for industrial roundwood only. Harvested industrial roundwood is intended to be delivered to a mill (for example, logs and bolts, and pulpwood) and also includes poles and pilings.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

¹ Natural Resources Canada (2025) [The State of Canada's Forests Annual Report](#). Retrieved on October 7, 2025.

The annual harvest of industrial roundwood peaked at 208 million m³ in 2004, then steadily declined to 116 million m³ by 2009. It rebounded to 156 million m³ in 2015 but fell again to a new low of 115 million m³ in 2023. This pattern is mostly the result of economic factors, such as the collapse in the United States housing market in 2008 and subsequent global economic downturn that led to reduced demands for Canadian lumber and pulp and paper products.

Both the sustainable wood supply and the volume of wood harvested fluctuate in response to a wide range of ecological, social and economic factors. Changes in the sustainable wood supply are largely a result of adjustments in provincial forest management objectives. For example, the sustainable wood supply can be reduced to conserve animal habitat, or it can be increased to harvest insect-damaged wood. Comparing the amount of timber harvested to the sustainable wood supply is one way to track forest management.

Canada is committed to [sustainable forest management](#), which is defined in the Canadian Forest Service's [forestry glossary](#) as "management that maintains and enhances the long-term health of forest ecosystems for the benefit of all living things while providing environmental, economic, social and cultural opportunities for present and future generations." In practice, sustainable forest management means ensuring that forests provide a broad range of goods and services over the long term. Therefore, forest managers plan for harvest levels that ensure the long-term sustainability of environmental, economic and social objectives for the managed forest.

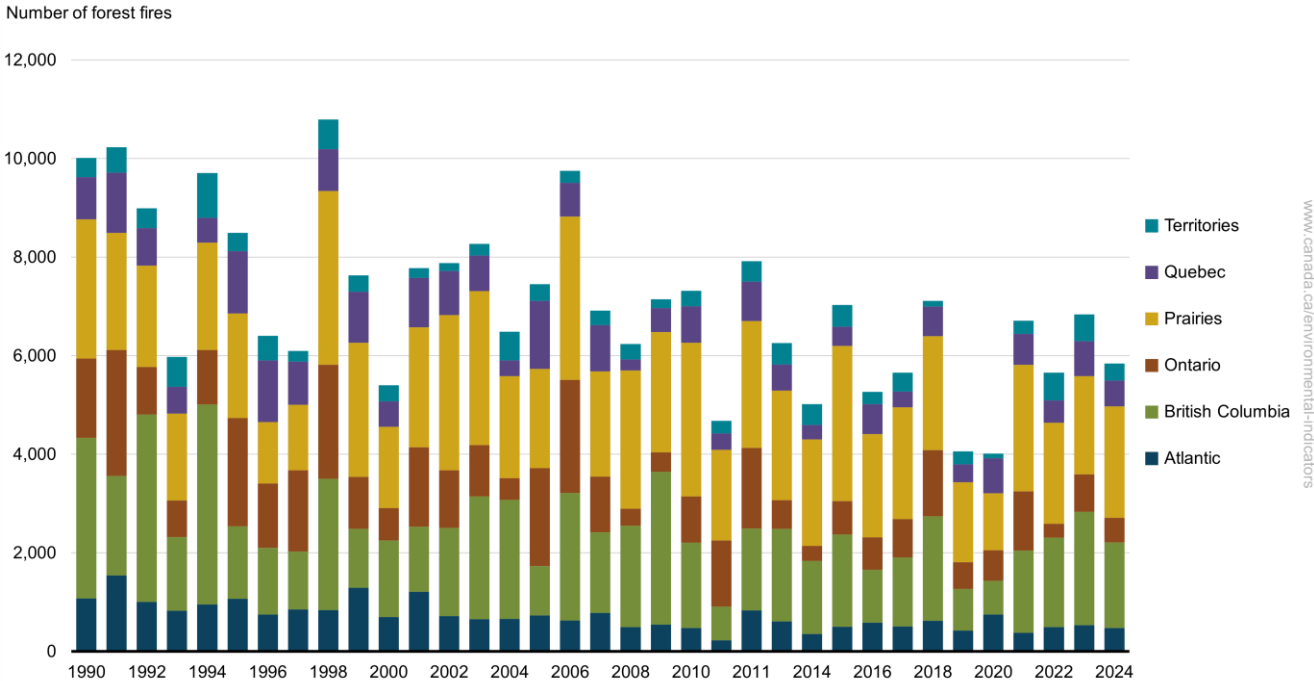
Forest disturbances

Number of forest fires and area burned

Key results

- In 2024, Canada experienced an estimated 5,844 fires that burned approximately 53,743 km² of forest
- While 2023 set a record with 176,065 km² burned, the 2024 season was also severe, recording the fourth largest total area burned since the 1990s

Figure 2. Number of forest fires by region, Canada, 1990 to 2024



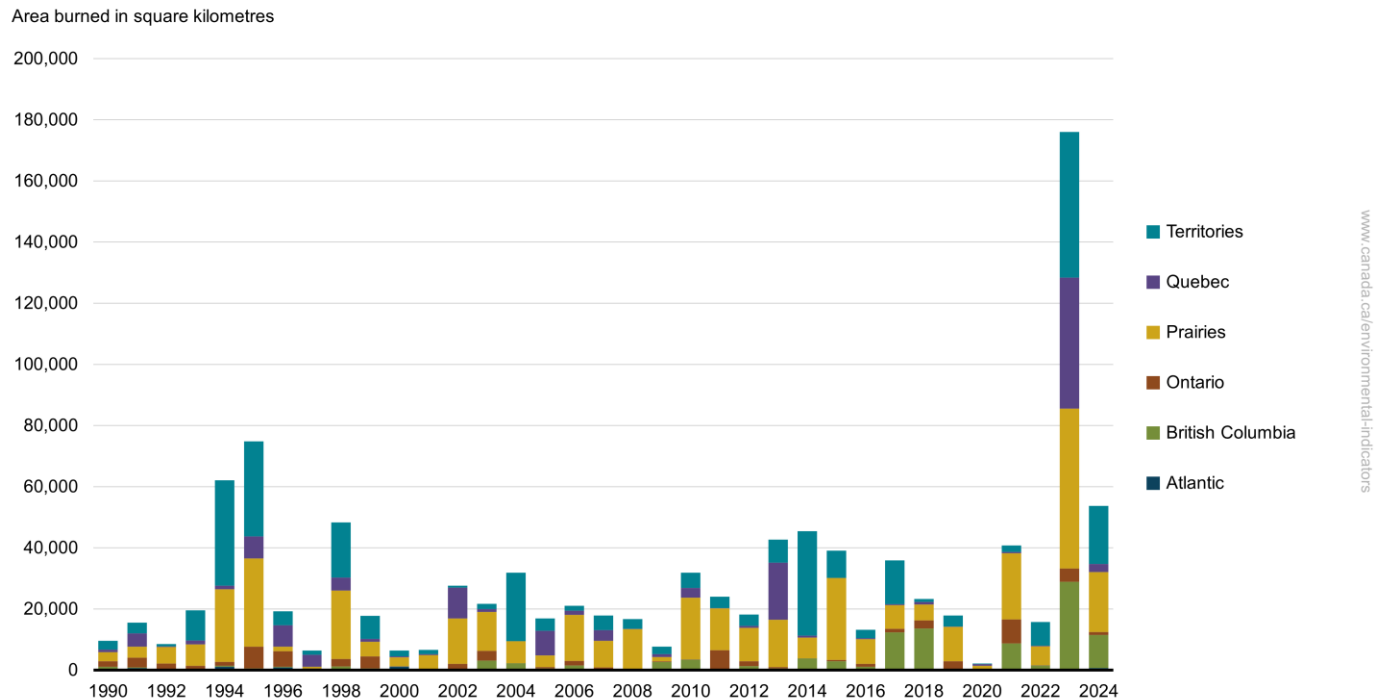
[Data for Figure 2](#)

Note: Data include fires of known and unknown or indeterminable origin. The Territories region includes Yukon and Northwest Territories. Nunavut was not included as they are not a part of the data sharing agreement with Natural Resources Canada. The Prairies region includes Manitoba, Saskatchewan, and Alberta. The Atlantic region includes New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland

and Labrador.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Figure 3. Area burned by forest fires by region, Canada, 1990 to 2024



[Data for Figure 3](#)

Note: Data include fires of known and unknown or indeterminable origin. The Territories region includes Yukon and Northwest Territories. Nunavut was not included as they are not a part of the data sharing agreement with Natural Resources Canada. The Prairies region includes Manitoba, Saskatchewan, and Alberta. The Atlantic region includes New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Fires are a natural part of the forest ecosystem and are important for maintaining the health and diversity of the forest. Forest fires play a vital role in forest renewal, much like sunlight and rain. They release nutrients from debris on the forest floor and open the canopy to sunlight, encouraging new growth.² However, they can also result in costly economic and environmental losses, including public health and safety concerns. Fires can directly threaten communities and infrastructure, and smoke can reduce visibility and air quality. Climate change is expected to increase the frequency and severity of wildfires due to hotter, drier conditions.³

In 2023, wildfires burned over 170,000 km² across Canada, which is more than double the previous record of 74,813 km² set in 1995. Quebec and the Northwest Territories alone accounted for nearly 85,000 km². In 2024, the area burned dropped to 53,743 km², but the threat remains high.

Climate change makes hotter, drier weather more common, which in turn leads to more intense and longer fire seasons. The summer of 2023 was the hottest in Canada in recorded history, further contributing to the drought conditions that made forests especially prone to igniting. The fires caused over 200 communities to be evacuated, with the heavy smoke causing air quality concerns across the country.⁴

The total area burned varies widely from year to year, averaging over 29,000 km² from 1990 to 2024. Although only a small percentage of wildland fires grow beyond 2 km², these larger fires account for approximately 97% of

² Natural Resources Canada (2025) [Why forests need fires, insects and diseases](#). Retrieved on October 7, 2025.

³ Natural Resources Canada (2025) [Impacts of Climate Change on Forests](#). Retrieved on October 7, 2025.

⁴ Nature Communications (2024) [Drivers and Impacts of the Record-Breaking 2023 Wildfire Season in Canada](#). Retrieved on October 7, 2025.

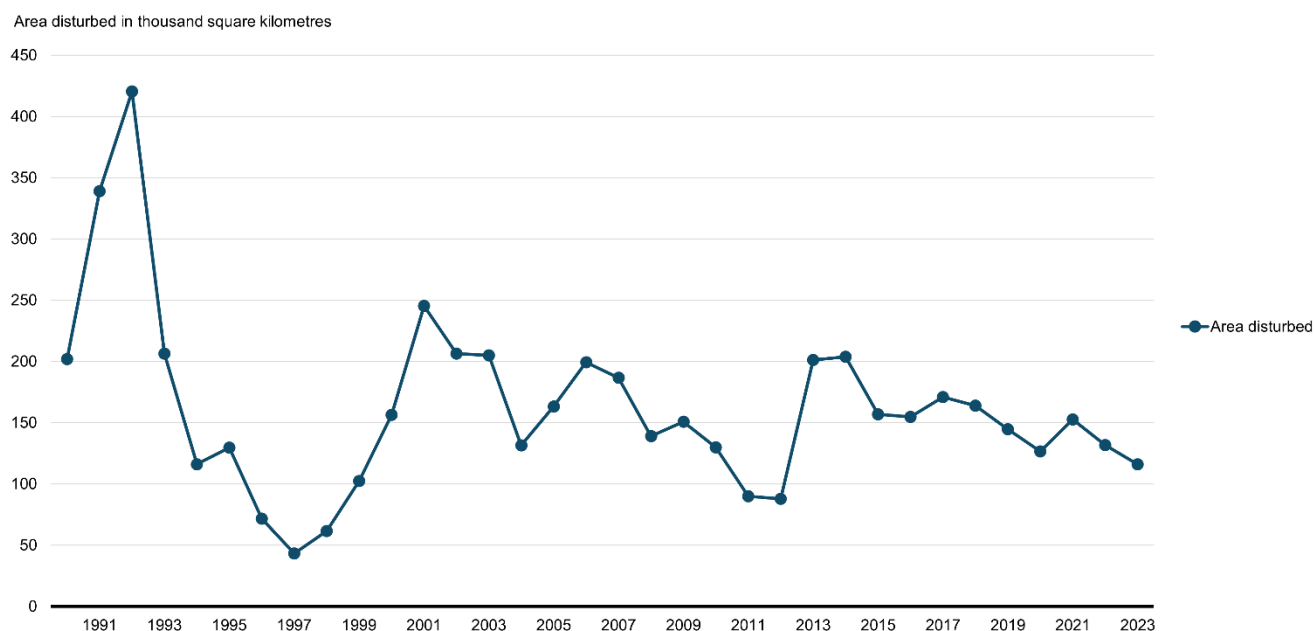
the total area burned across Canada.⁵ In 2024, about 2,571 forest fires across Canada, or 44%, were caused by human activity. However, this only resulted in approximately 816 km² of forest being burned, representing approximately 1.5% of the total area burned nationally.

Area disturbed by insects

Key results

- In 2023, approximately 116,000 km² of Canadian forests were disturbed by insects

Figure 4. Area disturbed by insects, Canada, 1990 to 2023



[Data for Figure 4](#)

Note: Includes beetle-killed trees. Trees that suffer moderate to severe defoliation are those on which 30% or more of the current foliage has been removed.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Canada's forests are home to thousands of species of native and introduced insects. Most of the time, these species contribute a vital role to the normal functioning of forest ecosystems as prey for other species or by recycling nutrients back into the forest.⁶ Only a small number of insect species kill trees and damage forests. This can occur when insect populations experience outbreaks over vast areas. Disturbance, or defoliation, is the removal of all or most of a plant's leaves by natural disturbance agents (for example, insects) or through the actions of humans (for example, the application of herbicides). These impacts can reduce Canada's timber supply and influence the functioning of forest ecosystems, which can in turn affect carbon stocks, increase fire risk and reduce the recreational and non-timber uses of forests.

Estimated total area of annual deforestation

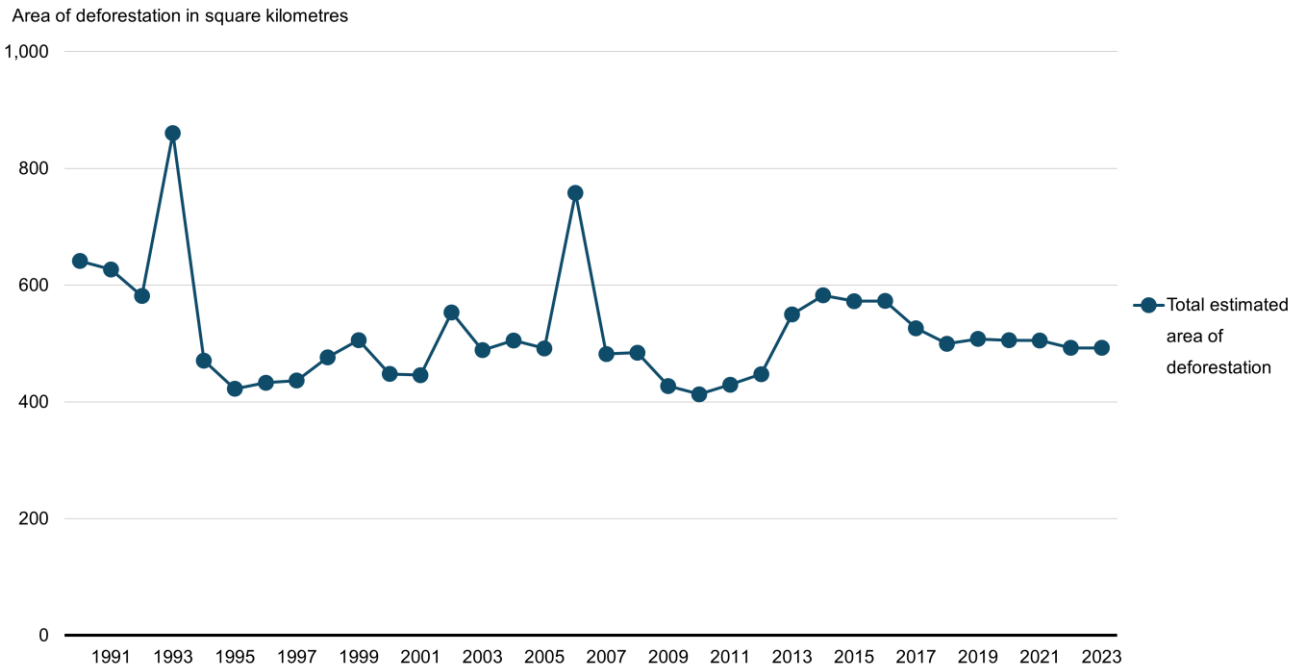
Key results

- In 2023, an estimated 492 km² of forest were converted to non-forest uses
- Deforestation is due to agriculture, forestry, mining, oil and gas, built-up (for example, industrial development and golf courses), and hydroelectric sectors development

⁵ Canadian Wildland Fire Information System (2025) [Canadian National Fire Database \(CNFDB\)](#). Retrieved on October 7, 2025.

⁶ Natural Resources Canada (2025) [The State of Canada's Forests Annual Report](#). Retrieved on October 7, 2025.

Figure 5. Estimated total area of annual deforestation, Canada, 1990 to 2023



[Data for Figure 5](#)

Source: Natural Resources Canada (2025) [State of Canada's Forest Annual Report](#).

Deforestation is the permanent clearing of forests to make way for new, non-forest land uses, such as agriculture or urban expansion. The annual estimated area of deforestation in Canada has declined from about 640 km² in 1990, to about 492 km² in 2023. Two (2) spikes in the overall declining trend occurred in 1993 and 2006. These were due to forest flooding for the development of hydroelectric reservoirs. However, agricultural expansion remains the primary driver of deforestation, accounting for approximately 43% of forest loss.

Forest regeneration

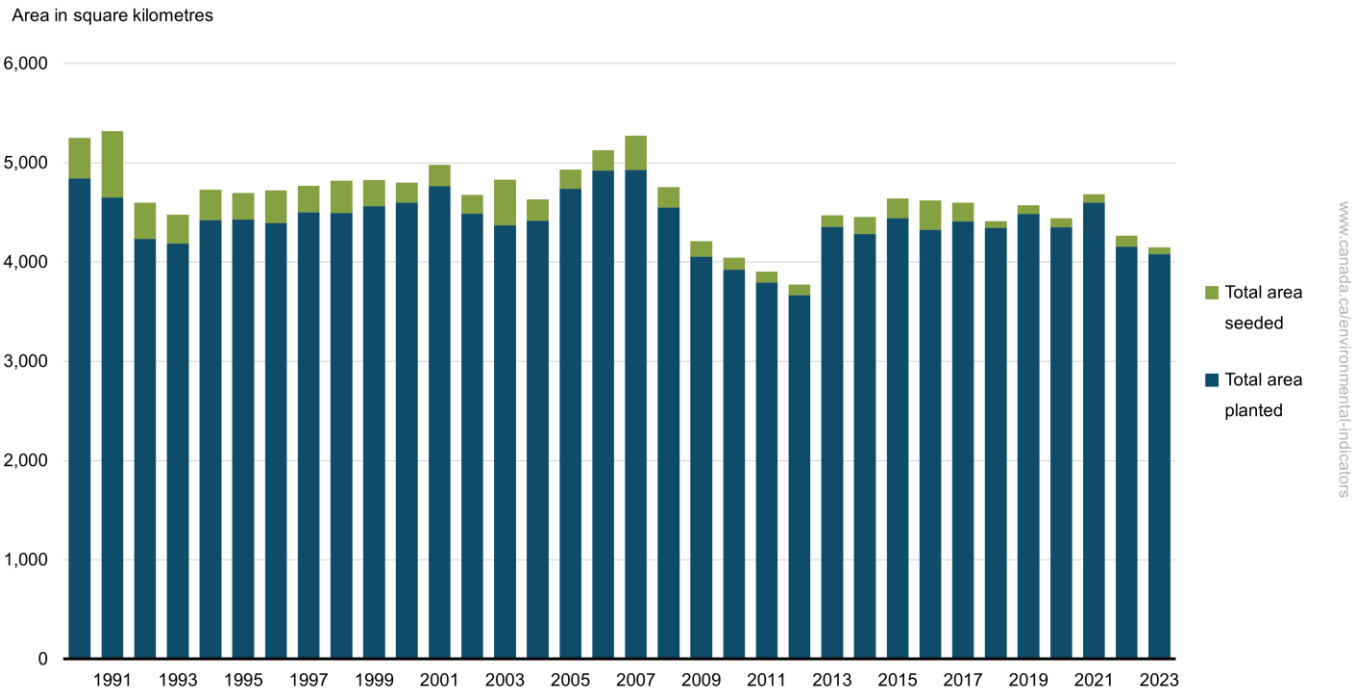
This section presents the total area of land that was regenerated by planting and seeding, as well as the number of seedlings planted in Canada between 1990 and 2023.

Key results

In 2023,

- approximately 4,078 km² were planted with around 592 million seedlings
- approximately 71 km² were seeded

Figure 6. Total area planted and seeded, Canada, 1990 to 2023



[Data for Figure 6](#)

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Successful regeneration ensures that harvested areas return to a forested state so that they can continue to produce timber and maintain ecosystem services, such as regulating water and providing habitat for wild species. In all provinces and territories, tree regeneration is mandatory on Crown lands after harvesting activities.⁷ In 2023, there was an overall decrease in area planted, with British Columbia showing notably lower planting rates compared to previous years.

⁷ Natural Resources Canada (2025) [The State of Canada's Forests Annual Report](#). Retrieved on October 7, 2025.

About the indicator

What the indicator measures

This indicator is not a single measure of the state of forests in Canada but rather presents a series of measures that provide an overall picture of their condition. The specific measures used in this indicator are:

- Timber harvest
 - Maximum sustainable wood supply and annual harvest of industrial roundwood
- Forest disturbances
 - Number of forest fires and area burned
 - Area disturbed by insects
 - Estimated total area of annual deforestation
- Forest regeneration
 - Area planted and seeded

Why this indicator is important

Canada's forests are vital ecosystems that hosts well over a hundred native tree species and a wide variety of plants, insects, fungi, mosses, lichens, and birds, with one-third of the country's breeding bird species relying on them for survival. Forest characteristics such as age, composition, and structure influence which species can thrive, and these traits are shaped by disturbances. Disturbances may be natural, like wildfires, storms, and insect outbreaks, or human-induced, such as logging, land-use changes, and invasive pests.

Canadian forests are well adapted to natural disturbances, but climate change is increasing their frequency and severity, altering forest composition, and enabling the spread of pests. These changes threaten certain tree species, disrupt forest-dependent communities, and reduce sustainable wood supply, leading to greater evacuation needs and economic impacts.

Forests play a key role in the carbon cycle, storing and releasing carbon through growth, decay, and disturbance.⁸ Both natural events (like wildfires and insect outbreaks) and human activities (such as timber harvesting and land conversion) influence greenhouse gas emissions and removals. Managing forests and understanding disturbances is essential, as recovering forests can absorb carbon, helping offset emissions and support climate goals. For more detailed information on this specific issue see the [Land-based greenhouse gas emissions and removals](#) indicator.

The forest sector is a major contributor to Canada's economy, producing lumber, pulp, and paper products, and providing employment across the country. Its economic role is especially significant in rural, remote, and Indigenous communities, where forest-related jobs are often a primary source of income.⁹

Related initiatives

This indicator tracks progress on the [2022 to 2026 Federal Sustainable Development Strategy](#), supporting the target: "Between 2023 and 2026, Canada's sustainable wood supply level (guided by sustainable forest management policies to reflect the current unique social, environmental and economic characteristics of managed forests), exceeds the annual timber harvests."

In addition, the indicator contributes to the [Sustainable Development Goals of the 2030 Agenda for Sustainable Development](#). It is linked to Goal 15, Life on land and Target 15.2, "By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally."

The indicator also contributes towards reporting on Target 10 of the [Kunming-Montreal Global Biodiversity Framework](#): "Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of

⁸ Natural Resources Canada (2023) [Forest Carbon](#). Retrieved on October 7, 2025.

⁹ Natural Resources Canada (2024) [How does the forest sector contribute to Canada's economy?](#) Retrieved on October 7, 2025.

biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches contributing to the resilience and long-term efficiency and productivity of these production systems and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services."

Along with 11 other countries, Canada is a member of the Montréal Process, an international working group of northern and southern hemisphere nations committed to sustainable forest management. Since 1995, the Montréal Process member countries have used a common set of science-based criteria and indicators to measure progress toward the conservation and sustainable management of 90% of the world's boreal and temperate forests.

Related indicators

The [Air quality](#) indicators track ambient concentrations of fine particulate matter (PM_{2.5}), ozone (O₃), sulphur dioxide (SO₂), nitrogen dioxide (NO₂), and volatile organic compounds (VOCs) at the national and regional levels and at local monitoring stations.

The [Land-based greenhouse gas emissions and removals](#) indicator tracks exchanges of greenhouse gas (GHG) emissions and removals between the atmosphere and Canada's managed lands.

The [Land-use change](#) indicator reports on the change in how land was used and converted across Canada south of 60° North from 2010 to 2015.

The [Temperature change in Canada](#) indicator measures yearly and seasonal surface air temperature departures in Canada.

Data sources and methods

Data sources

The data for the Sustainable forest indicators comes from 2 main sources: the Canadian Council of Forest Ministers [National Forestry Database](#) and the [State of Canada's Forest Annual Report](#) from Natural Resources Canada.

More information

National Forestry Database

The [National Forestry Database](#) was mandated through the Canadian Council of Forest Ministers and is maintained by the Canadian Forest Service of Natural Resources Canada. Data for the following measures included in this indicator come from the database:

- Annual timber harvest compared to the sustainable wood supply
 - [Wood supply estimates by ownership and species group](#)
 - [Net merchantable volume of roundwood harvested by ownership, category and species group](#)
- Number of forest fires by region
 - [Number of fires by cause class](#)
- Area burned by forest fires by region
 - [Area burned by cause class](#)
- Area disturbed by insects
 - [Area of moderate to severe defoliation \(including beetle-killed trees\) by insects](#)
- Number of seedlings planted
 - [Number of seedlings planted by ownership and species group](#)
- Area planted and seeded
 - [Area of direct seeding by ownership and application method](#)
 - [Area planted by ownership and species group](#)

The indicator includes data from all provinces, Yukon, the Northwest Territories, and federal departments, starting in 1990, with datasets ending in either 2023 or 2024 depending on availability. Data on Nunavut is not included because it is not a National Forestry Database partner and has very little forest cover.

In December of every year, provinces, territories and federal agencies submit data that were collected the previous year. The data are compiled and published within 6 months of submission.

Canada's total area is estimated using the [Land and freshwater area, by province and territory](#) from Natural Resources Canada Atlas of Canada. The Canadian Forest Service uses the [National Forest Inventory](#) to track forest area over time.

The State of Canada's Forest Annual Report

The [State of Canada's Forest Annual Report](#) has been a trusted and authoritative source of comprehensive information on the social, economic and environmental state of Canada's forests and forest sector for 34 years. Data for the following measures included in this indicator come from the report:

- Estimated total area of annual deforestation
 - [Estimated area \(hectares\) of annual deforestation in Canada, by industrial sector](#)

Science-based measures called sustainability indicators are helpful tools for understanding the overall condition or state of Canada's forests. They provide a way to consistently define, assess, monitor and report progress toward sustainable forest management. Reporting on these indicators over time helps to ensure and promote the long-term sustainable management of our forests. They do so by:

- providing reliable data and essential information on the state of and trends in Canada's forests
- highlighting any needs for improvement in forest management policies and practices
- supplying reliable information for discussions and initiatives related to environmental performance and trade

The State of Canada's Forests annual reports are based on the most accurate and currently available data from Canada's most trusted sources, including Statistics Canada, the National Forestry Database, and the National Forest Inventory, among others. These data and information are then analyzed by a collection of Canada's leading experts who produce the written text for the report. The report provides government, industry, researchers and the public with relevant context on the current status, the historical trends as well as future forecasts. The report demonstrates Canada's ongoing commitment to sustainably managing its forests and forest sector.

Methods

Data from the National Forestry Database and the State of Canada's Forest Annual Report are used in this indicator. The only changes to the data are converting units to square kilometres (km²) where appropriate. There are no custom views of the data or additional data sets.

Forests in Canada include both forest land and other wooded land. These are defined according to the internationally agreed definition from the Food and Agriculture Organization of the United Nations, as outlined in the [Global Forest Resources Assessments](#).

Under this definition, forest lands refer to areas that:

- contain trees taller than 5 metres and where tree canopy covers more than 10%, or that have the capability to support trees taller than 5 metres with more than 10% canopy cover
- cover an area greater than 0.5 hectares
- are not predominantly under agricultural or urban land use

Other wooded lands refer to areas:

- where tree canopy covers 5 to 10% of the total area and the trees, when mature, can grow to a height above 5 metres, or where shrubs, bushes and trees together cover more than 10% of the area
- that include treed wetlands (swamps) and land with slow-growing and scattered trees that are not predominantly under agricultural or urban land use

More information

Timber harvest

Maximum sustainable wood supply and annual harvest of industrial roundwood

The indicator compares wood supply to industrial roundwood harvest. Wood supplies from federal, provincial, territorial and private lands are summed to estimate Canada's wood supply. Similarly, Canada's industrial roundwood harvest is the volume of wood harvested from federal, provincial, territorial and private lands.

Wood supply is the volume of timber that can be harvested from an area over a specified period of time while meeting environmental, economic and social objectives.¹⁰ In the indicator, wood supply refers to industrial roundwood supplies only. It does not include other types of harvest such as fuelwood (for industrial use) and firewood (for household use). Under sustainable forest management, forest managers plan for harvest levels that will not affect the long-term sustainability of forest resources.

Industrial roundwood is defined as sections of tree stems (with or without bark), logs, bolts, pulpwood, posts and pilings that are usually intended to be delivered to mills. Fuelwood and firewood are not part of the industrial roundwood harvest, although they contribute to the total roundwood harvest. Other forest products, such as Christmas trees, are not included.

Wood supply estimation

Wood supply, the volume of timber that can be harvested sustainably, is estimated for each province and territory. Wood supply levels are estimated for forests that are actively managed for timber, which are a subset of forests and other wooded land. Provincial and territorial wood supplies are summed to estimate Canada's wood supply.

Wood supply is the sum of 2 values:

1. The estimated allowable annual cut (known as allowable annual cut in British Columbia and as guarantee of supply in Quebec) for provincial Crown lands, that is, publicly owned lands under provincial jurisdiction.

The estimated annual allowable cut is the volume of industrial roundwood that can be harvested sustainably each year from provincial Crown lands, as estimated by professional foresters. Provincial Crown lands make up around 76% of Canada's forest,¹¹ but the percentage varies by province. Most provinces establish annual allowable cuts for their Crown lands based on a policy of maintaining a non-declining future wood supply. They also consider a range of additional factors. For example, annual allowable cuts may be decreased in order to maintain animal habitat, or they may be increased so that insect-damaged wood can be salvaged. The importance of individual factors to the annual allowable cut varies among provinces and even among forest management areas within provinces, due to regional differences in forestry policies. Each province is responsible for the extensive rationale behind an annual allowable cut determination for individual forest management areas. Additional information is available from [provincial resource management organizations](#). The volume of wood harvested may be above or below the annual allowable cut in any one year, but it must balance out over the regulation period, which varies from 5 to 10 years depending on the jurisdiction. Annual allowable cuts are set based on an assessment of a wide range of ecological, social and economic factors.

2. Estimates of wood supply on federal, territorial and private lands.

Federal, territorial and private lands account for 1.7%, 12.8% and 6.6%, respectively, of Canada's forest land, with Indigenous peoples owning 2.1%.¹¹ Wood supply estimates on federal, territorial and private lands are based on sustainable management plans (when

¹⁰ Canadian Council of Forest Ministers (2023) [National Forestry Database, Wood Supply - Background](#). Retrieved on October 7, 2025.

¹¹ Canada's National Forest Inventory (2016) [Standard reports](#). Retrieved on October 7, 2025.

available) or on past harvest levels. Estimation methods are not standardized and may or may not be similar to those used for the annual allowable cut on provincial lands.

Because historical harvests are often used by the Canadian Forest Service to estimate wood supply, recent declines in harvest levels have led to a decreased estimate of wood supply in some jurisdictions. This does not necessarily imply a change in forest health or harvest sustainability.

Industrial roundwood harvest estimations

Canada's total industrial roundwood harvest is the sum of the following:

1. The reported industrial roundwood harvested from provincial/territorial Crown lands.
Provincial law requires harvest from provincial Crown lands to be reported and compared to the annual allowable cut value for individual forest management areas. The harvest must not exceed the annual allowable cut over multi-year regulation periods. However, in a given year, the volume harvested may vary by as much as 50%, depending on a range of social, economic and environmental factors.
2. The estimated industrial roundwood harvested from federal, territorial and private lands.
Because there is generally no legislated mechanism to report the volume harvested on these lands, it is estimated by either provincial or federal forest authorities located in that jurisdiction. There is no set sustainable harvest level for federal, territorial and private lands.

Forest disturbances

Number of forest fires by region and Area burned by forest fires by region

Data for this measure have been taken from the National Forestry Database. Totals from all types of fires in a region have been added together to give the regional total presented in the tables and graph. Due to data collection methods, forest fires taking place in national parks are first allocated to Parks Canada each year before being reallocated to provinces and territories as appropriate in future years. Therefore, provincial and territorial totals may change between years due to this reallocation.

Area of defoliation by insects

Data for this measure have been taken from the National Forestry Database. The data for this measure have been summarised nationally.

Estimated area of annual deforestation in Canada

Deforestation is the conversion of forest to non-forest land uses. Consistent with international definitions, deforestation does not include harvest followed by forest regrowth. The National Deforestation Monitoring System tracks changes from forest land to other land uses across Canada.

Deforestation by sector:

- Forestry sector includes the creation of new permanent forestry access roads and landings
- Hydroelectric sector includes new hydro lines and reservoir flooding
- Built-up sector includes industrial, institutional or commercial developments as well as municipal urban development, recreation (ski hills and golf courses) and transportation
- Mining, oil and gas sector includes mine development for minerals and peat as well as oil and gas developments

National deforestation estimates are calculated on a periodic basis using the method described in the National Deforestation Monitoring System description report. Data from the National Deforestation Monitoring System was provided to the Canadian Forest Service as a special tabulation, which has subsequently been used for this indicator from the State of Forest Report produced by Natural Resources Canada.

Data for this indicator has been summarized as its total, rather than being presented by industry.

Forest regeneration

The information included in this section was taken directly from the National Forestry Database.

Caveats and limitations

Area measurements used in this indicator are shown in square kilometers, where they may appear in hectares in other sources.

More information

Annual roundwood harvest versus wood supply

National aggregation can mask variability between areas. In some cases, data are either unavailable or too small to be expressed or included in the national aggregate values.

National aggregation can mask Crown harvests above or below the annual allowable cut in individual provinces. Similarly, the provincial aggregates can mask variability among management areas. If harvesting above the annual allowable cut occurs in a portion of a regulation period, it may be balanced at another time or location in such a way that the overall annual allowable cut of the regulation period is not exceeded.

Detailed caveats on the quality or completeness of annual data from individual provinces and territories, including explicit indications of which data are estimates, can be found in the [National Forestry Database](#).

Annual allowable cuts are calculations of the sustainable wood supply on Crown lands established by professional foresters with the objective of maintaining sustainable wood supplies over long periods. Annual allowable cut calculations use sophisticated growth models and scientific data to help estimate future wood supply and take into consideration fluctuating social, economic, or environmental factors.

A large percentage of forest land in Atlantic Canada is privately owned. The breakdown of private ownership across Atlantic provinces is approximately as follows:

- New Brunswick: 47%¹²
- Nova Scotia: 66%¹³
- Prince Edward Island: 88%¹⁴
- Newfoundland and Labrador: 4%¹⁵

Because of the high percentage of private land in Atlantic Canada, provincial agencies that determine annual allowable cuts must also assess the potential timber supply on private land. Because private woodlots are not regulated by legislation, there is uncertainty associated with this portion of the wood supply equation. However, as the Atlantic region accounts for only about 8% of Canada's total wood supply, the uncertainty on a national scale is small.

The Canadian Forest Service wood supply estimates for private lands are often based solely on the average of past harvests, which are generally unregulated. Although estimates are provided, it is difficult to be certain whether harvesting on those lands is sustainable.

Resources

References

Canadian Council of Forest Ministers (2023) [National Forestry Database, Collaborators](#). Retrieved on October 7, 2025.

Canadian Council of Forest Ministers (2023) [National Forestry Database, Wood Supply - Background](#). Retrieved on October 7, 2025.

Canada's National Forest Inventory (2016) [Canada's National Forest Inventory](#). Retrieved on October 7, 2025.

¹² SGS Belgium S.A. (2018) [Forest Sustainability in the province of New Brunswick, Canada](#) (PDF; 1.85 MB). Retrieved on October 7, 2025.

¹³ SGS Belgium S.A. (2014) [Forest Sustainability in the province of Nova Scotia, Canada](#) (PDF; 2.59 MB). Retrieved on October 7, 2025.

¹⁴ Government of Prince Edward Island (2019) [Public Lands](#). Retrieved on October 7, 2025.

¹⁵ SGS Belgium SA/NV (2018) [Forest Sustainability in the province of Newfoundland and Labrador, Canada](#) (PDF; 1.53 MB). Retrieved on October 7, 2025.

Government of Prince Edward Island (2025) [Public Lands](#). Retrieved on October 7, 2025.

Natural Resources Canada (2007) [Criteria and indicators of sustainable forest management in Canada, National Status 2005](#). Retrieved on October 7, 2025.

Natural Resources Canada (2020) [Forestry Glossary](#). Retrieved on October 7, 2025.

Natural Resources Canada (2022) [Sustainable forest management](#). Retrieved on October 7, 2025.

Natural Resources Canada (2023) [Why forests need fires, insects and diseases](#). Retrieved on October 7, 2025.

Natural Resources Canada (2024) [Forest fires](#). Retrieved October 7, 2025.

Natural Resources Canada (2024) [Statistical data](#). Retrieved on October 7, 2025.

Natural Resources Canada (2025) [Forestry in Canada](#). Retrieved on October 7, 2025.

Natural Resources Canada (2025) [The State of Canada's Forests Annual Report](#). Retrieved on October 7, 2025.

SGS Belgium S.A. (2014) [Forest Sustainability in the province of Nova Scotia, Canada](#) (PDF; 2.59 MB). Retrieved on October 7, 2025.

SGS Belgium S.A. (2018) [Forest Sustainability in the province of New Brunswick, Canada](#) (PDF; 1.85 MB). Retrieved on October 7, 2025.

SGS Belgium S.A./NV (2018) [Forest Sustainability in the province of Newfoundland and Labrador, Canada](#) (PDF; 1.53 MB). Retrieved on October 7, 2025.

United Nation Food and Agriculture Organization (2023) [Global Forest Resources Assessments](#). Retrieved on October 7, 2025.

Annex A. Data tables for the figures presented in this document

Table A.1. Data for Figure 1. Maximum sustainable wood supply and annual harvest of industrial roundwood, Canada, 1990 to 2023

Year	Sustainable wood supply (million cubic metres)	Industrial roundwood harvested (million cubic metres)	Industrial roundwood harvested as a proportion of sustainable wood supply (percentage)
1990	254	156	62
1991	253	154	61
1992	248	164	66
1993	245	170	69
1994	245	177	72
1995	241	183	76
1996	241	178	74
1997	244	184	75
1998	239	174	73
1999	243	197	81
2000	237	200	84
2001	237	184	78
2002	239	195	82
2003	241	181	75
2004	248	208	84
2005	246	201	82
2006	249	183	73
2007	254	162	64
2008	253	138	55
2009	242	116	48
2010	238	141	59
2011	233	147	63
2012	231	149	65
2013	228	151	66
2014	231	150	65
2015	223	156	70
2016	219	155	71
2017	219	153	70
2018	217	155	71
2019	216	139	65
2020	216	138	64
2021	217	137	63
2022	215	128	59
2023	210	115	55

Note: Sustainable wood supply data presented are for industrial roundwood only. Harvested industrial roundwood is intended to be delivered to a mill (for example, logs and bolts, and pulpwood) and also includes poles and pilings. The industrial roundwood harvested column includes harvest of industrial roundwood, fuelwood and firewood.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Table A.2. Data for Figure 2. Number of forest fires by region, Canada, 1990 to 2024

Year	Atlantic (number of fires)	British Columbia (number of fires)	Ontario (number of fires)	Prairies (number of fires)	Quebec (number of fires)	Territories (number of fires)	Total (number of fires)
1990	1,077	3,255	1,614	2,825	851	390	10,012
1991	1,545	2,014	2,560	2,378	1,216	518	10,231
1992	1,005	3,805	960	2,058	765	401	8,994
1993	826	1,497	743	1,760	543	609	5,978
1994	953	4,057	1,106	2,183	499	908	9,706
1995	1,069	1,474	2,197	2,121	1,265	366	8,492
1996	748	1,360	1,302	1,247	1,250	499	6,406
1997	850	1,176	1,654	1,325	876	217	6,098
1998	841	2,663	2,316	3,522	854	597	10,793
1999	1,293	1,198	1,049	2,724	1,037	331	7,632
2000	703	1,551	659	1,643	517	330	5,403
2001	1,213	1,320	1,612	2,432	1,005	196	7,778
2002	716	1,795	1,163	3,150	899	155	7,878
2003	656	2,490	1,044	3,124	720	237	8,271
2004	660	2,418	437	2,072	322	581	6,490
2005	732	1,006	1,981	2,017	1,375	344	7,455
2006	628	2,587	2,293	3,316	684	247	9,755
2007	780	1,641	1,129	2,135	939	295	6,919
2008	495	2,058	344	2,803	223	316	6,239
2009	547	3,101	392	2,443	485	178	7,146
2010	479	1,731	936	3,120	740	313	7,319
2011	227	684	1,341	1,839	331	257	4,679
2012	837	1,659	1,636	2,573	798	416	7,919
2013	609	1,879	582	2,224	528	434	6,256
2014	358	1,478	309	2,157	296	422	5,020
2015	503	1,871	675	3,150	392	443	7,034
2016	582	1,075	657	2,100	607	246	5,267
2017	508	1,400	781	2,264	322	383	5,658
2018	621	2,123	1,339	2,317	597	114	7,111
2019	428	843	541	1,623	362	265	4,062
2020	753	684	615	1,156	712	94	4,014
2021	382	1,663	1,206	2,565	629	265	6,710
2022	494	1,818	281	2,049	453	563	5,658
2023	532	2,301	760	1,992	714	538	6,837
2024	476	1,741	498	2,262	520	347	5,844

Note: Data include fires of known and unknown or indeterminable origin. The Territories region includes Yukon and Northwest Territories. Nunavut was not included as they are not a part of the data sharing agreement with Natural Resources Canada. The Prairies region includes

Manitoba, Saskatchewan and Alberta. The Atlantic region includes New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Table A.3. Data for Figure 3. Area burned by forest fires by region, Canada, 1990 to 2024

Year	Atlantic (square kilometres)	British Columbia (square kilometres)	Ontario (square kilometres)	Prairies (square kilometres)	Quebec (square kilometres)	Territories (square kilometres)	Total (square kilometres)
1990	320	758	1,837	2,911	833	2,875	9,534
1991	618	252	3,188	3,559	4,383	3,457	15,458
1992	84	305	1,760	5,351	271	748	8,518
1993	297	52	1,047	7,032	1,282	9,794	19,504
1994	1,114	298	1,290	23,715	1,160	34,490	62,067
1995	17	481	7,185	28,800	7,277	31,052	74,813
1996	840	207	5,109	1,539	6,916	4,626	19,236
1997	95	30	406	506	3,931	1,380	6,347
1998	410	768	2,405	22,440	4,183	18,027	48,234
1999	424	116	3,886	4,813	977	7,559	17,774
2000	1,045	178	93	2,800	392	1,859	6,366
2001	23	142	167	4,531	331	1,341	6,535
2002	156	86	1,822	14,802	10,137	633	27,636
2003	292	2,834	3,192	12,718	882	1,766	21,685
2004	29	2,203	19	7,180	31	22,370	31,832
2005	193	368	425	3,826	8,001	4,056	16,869
2006	62	1,394	1,500	15,123	1,364	1,564	21,007
2007	127	300	407	8,759	3,427	4,835	17,855
2008	30	153	14	13,218	16	3,219	16,649
2009	178	2,475	209	1,417	940	2,408	7,627
2010	16	3,372	161	20,115	3,149	4,979	31,792
2011	6	132	6,364	13,651	124	3,701	23,978
2012	300	1,032	1,531	10,985	640	3,628	18,117
2013	314	188	511	15,409	18,728	7,534	42,685
2014	95	3,689	64	6,725	639	34,245	45,457
2015	45	2,810	427	26,821	62	8,919	39,084
2016	118	1,004	862	8,101	339	2,771	13,196
2017	18	12,299	1,129	7,740	384	14,324	35,894
2018	9	13,609	2,657	5,122	863	1,003	23,264
2019	7	215	2,697	11,233	97	3,612	17,862
2020	64	147	155	971	600	246	2,183
2021	9	8,664	7,846	21,653	497	2,120	40,789
2022	186	1,356	26	6,153	297	7,744	15,762
2023	424	28,425	4,416	52,240	42,883	47,677	176,065
2024	684	10,813	906	19,599	2,652	19,089	53,743

Note: Data include fires of known and unknown or indeterminable origin. The Territories region includes Yukon and Northwest Territories. Nunavut was not included as they are not a part of the data sharing agreement with Natural Resources Canada. The Prairies region includes

Manitoba, Saskatchewan and Alberta. The Atlantic region includes New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador.

Source: Canadian Council of Forest Minister (2025) [National Forestry Database](#).

Table A.4. Data for Figure 4. Area disturbed by insects, Canada, 1990 to 2023

Year	Forest area disturbed (thousand square kilometres)
1990	202
1991	339
1992	421
1993	206
1994	116
1995	130
1996	72
1997	43
1998	62
1999	103
2000	156
2001	245
2002	206
2003	205
2004	131
2005	163
2006	199
2007	187
2008	139
2009	151
2010	130
2011	90
2012	88
2013	201
2014	204
2015	157
2016	155
2017	171
2018	164
2019	145
2020	127
2021	153
2022	132
2023	116

Note: Includes beetle-killed trees. Trees that suffer moderate to severe defoliation are those on which 30% or more of the current foliage has been removed.

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Table A.5. Data for Figure 5. Estimated total area of annual deforestation, Canada, 1990 to 2023

Year	Total estimated area of deforestation (square kilometres)
1990	641
1991	627
1992	581
1993	861
1994	471
1995	422
1996	433
1997	437
1998	476
1999	506
2000	448
2001	446
2002	553
2003	489
2004	505
2005	492
2006	758
2007	482
2008	484
2009	427
2010	413
2011	429
2012	447
2013	550
2014	583
2015	573
2016	573
2017	526
2018	500
2019	508
2020	506
2021	505
2022	492
2023	492

Source: Natural Resources Canada (2025) [State of Canada's Forest Annual Report](#).

Table A.6. Data for Figure 6. Total area planted and seeded, Canada, 1990 to 2023

Year	Total area planted (square kilometres)	Total area seeded (square kilometres)	Seedlings planted (millions)
1990	4,844	408	800
1991	4,650	667	761
1992	4,234	362	691
1993	4,186	291	675
1994	4,422	305	679
1995	4,428	266	678
1996	4,394	328	651
1997	4,499	269	684
1998	4,492	326	698
1999	4,562	263	708
2000	4,599	201	702
2001	4,765	214	702
2002	4,486	189	655
2003	4,369	461	643
2004	4,414	217	645
2005	4,737	195	681
2006	4,921	205	715
2007	4,928	346	704
2008	4,547	206	670
2009	4,052	159	584
2010	3,924	121	534
2011	3,792	112	548
2012	3,666	105	524
2013	4,354	116	585
2014	4,283	173	580
2015	4,442	198	607
2016	4,323	299	638
2017	4,409	189	633
2018	4,342	69	624
2019	4,484	88	642
2020	4,350	93	796
2021	4,598	86	662
2022	4,155	109	605
2023	4,078	71	592

Source: Canadian Council of Forest Ministers (2025) [National Forestry Database](#).

Additional information can be obtained at:

Environment and Climate Change Canada
Public Inquiries Centre
Place Vincent Massey Building
351 Saint-Joseph Boulevard
Gatineau QC K1A 0H3
Toll Free: 1-800-668-6767
Email: enviroinfo@ec.gc.ca