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JUNE 2026

CANADA ON FIRE

The catastrophic and escalating effects of wildfires on lives and communities

Report of the Standing Senate Committee on Agriculture and Forestry

The Honourable Mary Robinson, Chair
The Honourable John M. McNair, Deputy Chair

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Table of Contents

The Committee Membership

At the time of the adoption of the report by the committee

The Honourable
Mary Robinson
Chair

The Honourable
John M. McNair
Deputy Chair

The Honourable Senators

Robert Black
(Former Chair)

Sharon Burey

Yonah Martin

Marnie McBean

Tracy Muggli

Karen Sorensen

Ex officio members of the committee:

The Honourable Pierre Moreau, P.C., or the Honourable Patti LaBoucane-Benson
The Honourable Leo Housakos or the Honourable Yonah Martin
The Honourable Lucie Moncion or the Honourable Joan Kingston
The Honourable Flordeliz (Gigi) Osler or the Honourable Robert Black
The Honourable Brian Francis or the Honourable Judy A. White

Other senators who have participated in the study:

The Honourable Brent Cotter (retired)
The Honourable Pierre J. Dalphond
The Honourable Margo Greenwood
The Honourable Mobina S. B. Jaffer (retired)
The Honourable Marty Klyne
The Honourable Elizabeth Marshall (retired)
The Honourable Julie Miville-Dechêne
The Honourable Victor Oh (retired)
The Honourable Manuelle Oudar
The Honourable Chantal Petitclerc
The Honourable David Richards (retired)
The Honourable Paula Simons
The Honourable Toni Varone
The Honourable Kristopher Wells
The Honourable Judy A. White

Library of Parliament:

Joanne Markle LaMontagne, Analyst

Senate Committees Directorate:

Caroline Woodward, Committee Clerk
Lori Meldrum, Administrative Assistant

Senate Communications Directorate

Monica Granados, Communications Officer

Order of Reference

Extract from the *Journals of the Senate* of Wednesday, September 24, 2025:

The Honourable Senator Black moved, seconded by the Honourable Senator Osler:

That the Standing Senate Committee on Agriculture and Forestry be authorized to examine and report on the growing issue of wildfires in Canada and the consequential effects that wildfires have on forestry and agriculture industries, as well as rural and Indigenous communities, throughout the country;

That, in particular, the committee should examine:

(a) the current status of wildfires in Canada;

(b)the impact of wildfires on forestry, agriculture, water systems, air quality, food security and biosecurity;

(c) the possible federal measures that are in place, or should be in place, to adequately monitor and organize a response to wildfires;

(d) the potential areas of improvement of these federal measures for addressing wildfires; and

(e) international best practices as they relate to responding to wildfires;

That the papers and evidence received and taken and work accomplished by the committee on this subject during the First Session of the Forty-fourth Parliament be referred to the committee;

That the committee submit its final report to the Senate no later than June 25, 2026, and that the committee retain all powers necessary to publicize its findings for 180 days after the tabling of the final report; and

That the committee be permitted, notwithstanding usual practices, to deposit its reports on this study with the Clerk of the Senate if the Senate is not then sitting, and that the reports be deemed to have been tabled in the Senate.

The question being put on the motion, it was adopted.

Shaila Anwar

Clerk of the Senate

Executive Summary

The Standing Senate Committee on Agriculture and Forestry (the committee) completed a long-term study on the growing issue of wildfires in Canada and the consequential effects that wildfires have on forestry and agriculture industries, as well as rural and Indigenous communities, throughout the country.

> *"We have assessed how governments can better prepare for escalating wildfire risks. The evidence shows overwhelmingly that increasingly severe wildfire seasons are now a major economic, social and public health challenge that require urgent, coordinated action at a much larger scale than what is happening now."*
>
> *Ryan Ness*[1]

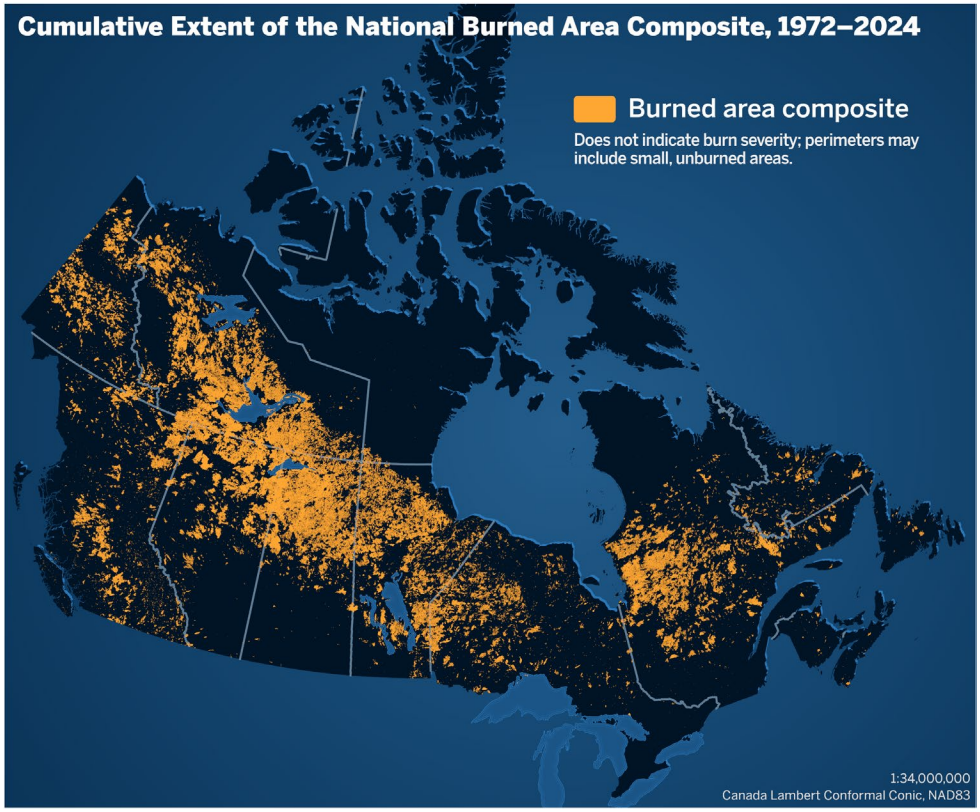
From 1981 to 2018, more than 300,000 wildfires prompted over 400,000 evacuations, including the 2016 Fort McMurray, Alberta wildfire, which displaced nearly 90,000 people and caused approximately $9.5 billion in losses.[2] Over the past decade, Canada has averaged more than 5,000 wildfires annually, burning roughly 2.9 million hectares each year.[3] In one recent year alone – 2023 – wildfires burned 14.6 million hectares of land throughout Canada, shattering previous records both nationally and regionally. Figure 1 illustrates the cumulative extent of the national burned area composite in Canada for the period 1972 to 2024.

[1] Standing Senate Committee on Agriculture and Forestry [AGFO], *Evidence*, 9 October 2025 (Ryan Ness, Research Director on Adaptation, Canadian Climate Institute).

[2] AGFO, *Evidence*, 23 October 2025 (Jean-François Houle, Vice-President, Engineering, National Research Council of Canada).

[3] Ibid.

Figure 1 – Cumulative Extent of the National Burned Area Composite, Canada, 1972 to 2024



Sources: Map prepared in 2025, using data obtained from Natural Resources Canada (NRCan), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, "National Burned Area Composite (NBAC)," Canadian Wildland Fire Information System (CWFIS) Datamart, Database, accessed on 14 October 2025; NRCan, *Administrative Boundaries in Canada - CanVec Series - Administrative Features*, 1:5M, 1 March 2019; and NRCan, *Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features*, 1:5M, 1 March 2019. The following software was used: Esri, ArcGIS Pro, version 3.5.2. Contains information licensed under the *Open Government Licence – Canada*.

Three consecutive record-breaking wildfire seasons—2023, 2024 and 2025—have demonstrated that climate change is accelerating fire behaviour beyond the capacity of existing systems. Wildfires are now a crisis.

> *"Canadians have experienced numerous highly damaging fire seasons in the past decade. Unfortunately, climate change modelling suggests things will likely be worse in the future. Higher temperatures, longer fire seasons, stronger winds, more lightning and drier fuels will all contribute to increases in area burned at high severity."*
>
> *Robert Gray*[4]

The committee heard that millions of Canadians are exposed to toxic wildfire smoke for days, weeks or sometimes months at a time. The physical health and mental health consequences are significant, particularly for children, pregnant women, older adults, people with chronic conditions and remote Indigenous communities who often have limited access to both clean air spaces and long-term mental health support. The economic costs of wildfire smoke now exceed the costs of fire suppression itself.

Indigenous communities—who have lived with fire for millennia—remain under-resourced and sidelined. Many have endured repeat evacuations, loss of homes and long-term economic losses. Despite their deep expertise in fire stewardship, Indigenous firefighters often encounter barriers to participating fully in wildfire management and urgent response. Strengthening Indigenous-led governance, training, equipment access and long-term funding is imperative.

Forestry and agriculture—the economic pillars of rural and northern regions—are also at a crossroads. Wildfires are reducing timber availability, damaging infrastructure, eroding supply chains and undermining the viability of forest-dependent communities. Agricultural producers are losing livestock, crops, equipment and land; they face rising insurance costs and inadequate business risk management programs that do not respond quickly enough during wildfire emergencies. Without significant adaptation, these sectors will continue to suffer deep and lasting losses.

The committee learned that no single authority is responsible for wildfire preparedness, response and recovery in Canada. Provinces and territories manage wildfire suppression; federal departments provide emergency coordination, scientific advice and funding. Municipalities struggle with limited resources including adequate evacuation supports and training for firefighters. Coordination challenges contribute directly to delayed response times, inconsistent planning, uneven access

[4] AGFO, *Evidence*, 7 October 2025 (Robert Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd.).

to equipment and personnel and a system that mobilizes only once disaster is already underway, none of which are moving at the speed of the current wildfire crisis.

Despite these challenges, the committee learned about solutions. For instance, prescribed and cultural burning, proactive fuel management, expanded FireSmart implementation, wildfire-resilient infrastructure, modernized building codes, enhanced predictive modelling, early-warning systems, and investments in new technology such as satellite monitoring, aerial firefighting capacity and advanced drone systems all offer pathways toward greater resilience.

To co-exist with wildfires, the committee believes that a whole-of-society approach is needed; one that is based on collaboration between federal, provincial, territorial, municipal and Indigenous governments, to ensure wildfire preparation, adaptation and resilience measures are built into all communities and business sectors, in particular forestry and agriculture. We understand that the Minister of Emergency Management and Community Resilience and Minister responsible for Prairies Economic Development Canada serves as the Ministerial Lead for Jasper. We hope that the recommendations and findings from this report will help to inform the wildfire rebuilding and recovery efforts in that community.

List of Recommendations

The Standing Senate Committee on Agriculture and Forestry recommends that:

Recommendation 1

The Government of Canada designate forests as a strategic national asset and recognize forests as critical and renewable infrastructure.

Recommendation 2

The Government of Canada create a federal coordinating office for wildfires and emergency response – modelled after the United States, the United Kingdom, Japan, Australia and New Zealand – to coordinate people, resources and policy in a modernized context, and that this office include the voices of Indigenous communities and their expertise.

Recommendation 3

The Government of Canada create and fund a national fleet of modern firefighting aircraft, that are in good working order, and the necessary infrastructure and trained personnel (i.e., pilots) that would be pre-positioned throughout the country and support provinces and territories during wildfire seasons. That the Government of Canada also provide long-term funding for emerging wildfire technologies (such as drones and other innovations).

Recommendation 4

The Government of Canada work with provinces, territories, municipalities and Indigenous communities and governments to develop coordinated approaches to mitigate and respond to human- and health-consequences of wildfires – including physical and mental health issues linked to smoke exposure and the psychological effects of evacuation and displacement trauma – by ensuring long-term funding for mental health supports for affected communities, before, during and after wildfire evacuations, that integrate pre-planning support, cultural safety and relationship-building across agencies.

Recommendation 5

The Government of Canada, in partnership with Indigenous communities and governments, take immediate action to remove barriers faced by evacuees in host communities during wildfires, including by ensuring equitable access to housing, services and culturally responsive supports.

Recommendation 6

The Government of Canada establish a national wildfire hazard mapping program to predict the likelihood of wildfires with the same models used for drought and flood forecasting.

Recommendation 7

The Government of Canada enhance capacity for Indigenous-led fire management by extending financial and logistical support to Indigenous communities, utilizing existing Indigenous clauses in the Wildfire Resilient Futures Initiative and the Fighting and Managing Wildfires in a Changing Climate program.

Recommendation 8

The Government of Canada, in partnership with Indigenous communities, take urgent action to recognize, remove any barriers to the integration of, and resource traditional Indigenous knowledge and expertise, including by investing in and expanding Indigenous-led, on-the-ground firefighting workforces.

Recommendation 9

The Government of Canada create a national reforestation policy that responds swiftly to disasters such as wildfires, as well as provide long-term investment for landscape-level planning, training and capacity building.

Recommendation 10

The Government of Canada work with the provinces and territories to ensure that, under the next Sustainable Canadian Agricultural Partnership, business risk management programs are more responsive for agricultural producers after wildfires to maintain their economic viability.

Recommendation 11

The Government of Canada work with provinces, territories and municipalities to ensure that new homes are built safely, affordably and practically, and that adaptation and resilience measures be added to the National Building Code of Canada 2030 and consider incentivizing people to purchase more FireSmart homes.

Recommendation 12

The Government of Canada collaborate with provincial and territorial governments to increase long-term funding for rebuilding municipal structures and infrastructure that are damaged or destroyed during wildfires.

Recommendation 13

The Government of Canada collaborate with provinces, territories and municipalities to further enhance the volunteer firefighter tax credit, training and safety education for firefighters.

Recommendation 14

The Government of Canada work with provinces, territories and municipalities to convene stakeholders for a regular policy-focused conference to address wildfires in the country.

Recommendation 15

The Government of Canada acknowledge that wildfires demand urgent action. As the committee heard, we must move at the speed of the crisis.

Introduction

We live in an era of megafires. Worldwide, communities are experiencing more frequent, intense and destructive wildfires – unplanned and escaped prescribed fires that burn in natural areas – affecting the spaces in which we live, work and play.[5] This trend is largely driven by the impacts of climate change. Every year, an estimated 1.1 million wildfires burn 400 million hectares of vegetation globally, roughly the size of the European Union (4 million square kilometres).[6] While most of the area burned occurs on grasslands, shrublands and savannahs, up to 70 million hectares of the world's forests burn.[7]

Canada comprises 10% of the world's total forests, 3.5% of the world's wildfires and 15% of global hectares burned. These statistics, however, do not shield Canadians from the significant and ongoing impacts that wildfires – and the toxic smoke of wildfires – pose to public safety, human and animal health, infrastructure, the environment, which affects all business sectors, including forestry and agriculture, as well as Indigenous communities.

Fire is a vital ecological process that helps shape Canada's forest, grassland and brush ecosystems. Fire supports wildlife habitats and biodiversity. Indigenous people have used fire to manage and reduce fuel loads on the landscape for millennia. Native tree species in the boreal forests, such as the black spruce, are well adapted to wildfire. Yet, changes in the fire regime are increasing the size, frequency and severity of wildfires. Consequently, forests are losing their resilience to fire and their ability to regenerate.

The 2023 wildfire season, as shown in Figure 2, was the most devastating ever recorded in Canadian history, with 6,837 wildfires scorching 14.6 million hectares of land throughout the country.[8]

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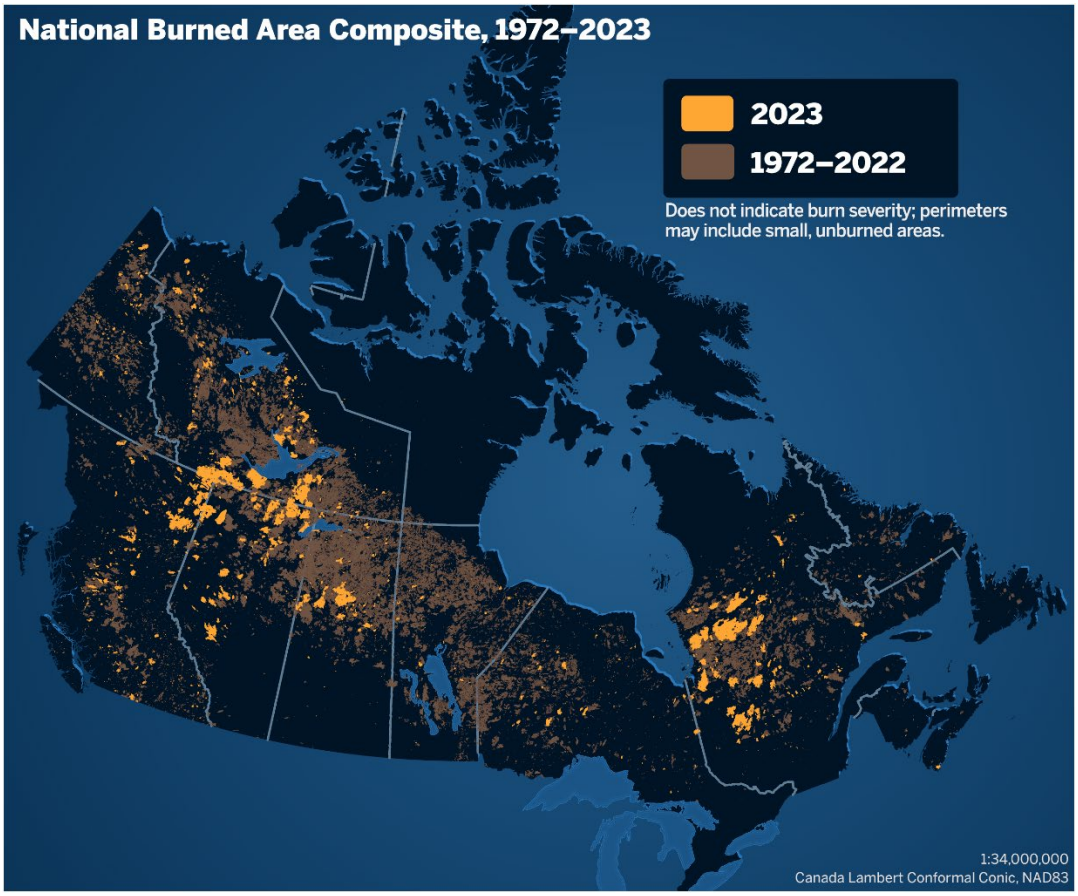
[5] The Canadian Wildland Fire Glossary, published by the Canadian Interagency Forest Fire Centre Inc. on 6 March 2026, defines wildfire as: "Any natural caused or unplanned human caused fires that is burning in and consumes natural fuels: forest, brush, tundra, grass, etc. Also include escaped prescribed fires." "Wildland fire" has a broader meaning and includes unplanned fire (wildfire), as well as intentional, controlled burns.

[6] European Union, *Facts and Figures on the European Union*.

[7] AGFO, *Evidence*, 21 November 2024 (William J. de Groot, Fire Management Specialist, Food and Agriculture Organization of the United Nations).

[8] Natural Resources Canada, *Canadian National Fire Database*.

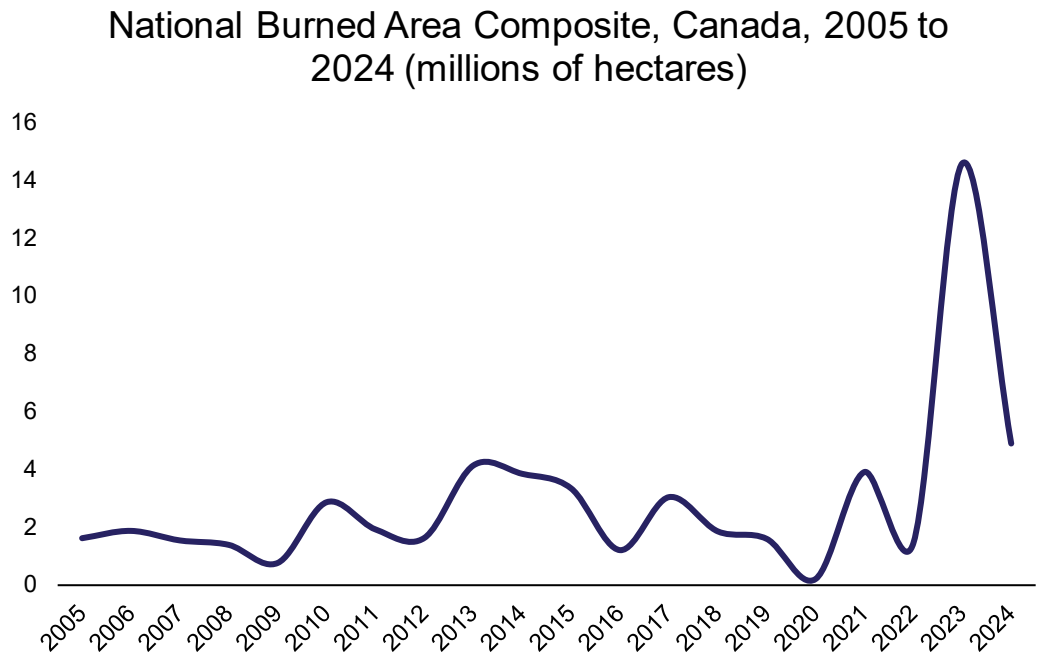
Figure 2 – National Burned Area Composite, Canada, 1972 to 2023



Sources: Map prepared in 2025, using data obtained from Natural Resources Canada (NRCan), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, "National Burned Area Composite (NBAC)," Canadian Wildland Fire Information System (CWFIS) Datamart, Database, accessed on 14 October 2025; NRCan, *Administrative Boundaries in Canada - CanVec Series - Administrative Features*, 1:5M, 1 March 2019; and NRCan, *Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features*, 1:5M, 1 March 2019. The following software was used: Esri, ArcGIS Pro, version 3.5.2. Contains information licensed under the *Open Government Licence – Canada*.

The total number of hectares burned in 2023 surpassed the national 10-year average of 5,597 wildfires and the historical annual average of 2.7 million hectares burned. Figure 3 illustrates the national burned area in millions of hectares from 2005 to 2024.

Figure 3 – National Burned Area Composite, Canada, 2005 to 2024 (millions of hectares)



Source: Figure prepared in 2026, using data obtained from Natural Resources Canada, Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, *National Burned Area Composite Summary Statistics 1972 to 2024*.

British Columbia (2,245) and Alberta (1,022) saw the most wildfires in 2023, while five provinces and territories each had over 1 million hectares burned: Quebec (4.3 million hectares); Northwest Territories (3.5 million hectares); British Columbia (2.2 million hectares); Alberta (1.9 million hectares) and Saskatchewan (1.1 million hectares).[9] The estimated area burned was above the 10-year national average in British Columbia, Yukon, Alberta, Northwest Territories, Saskatchewan, Ontario, Quebec, Newfoundland and Labrador, New Brunswick, Nova Scotia and Parks Canada, but lower than average in Manitoba and Prince Edward Island.[10]

More than 230,000 people were evacuated in 2023, including the entire city of Yellowknife, Northwest Territories, because of potential dangers to peoples' livelihoods and health. Over 95 Indigenous communities were evacuated.[11] Approximately 2.2 billion tonnes of carbon dioxide (CO_2) were released into the atmosphere, tripling previous records. A total of 16,000 domestic firefighters were

[9] Natural Resources Canada, *National Burned Area Composite Summary Statistics 1972 to 2024*. Database consulted on 25 March 2026.

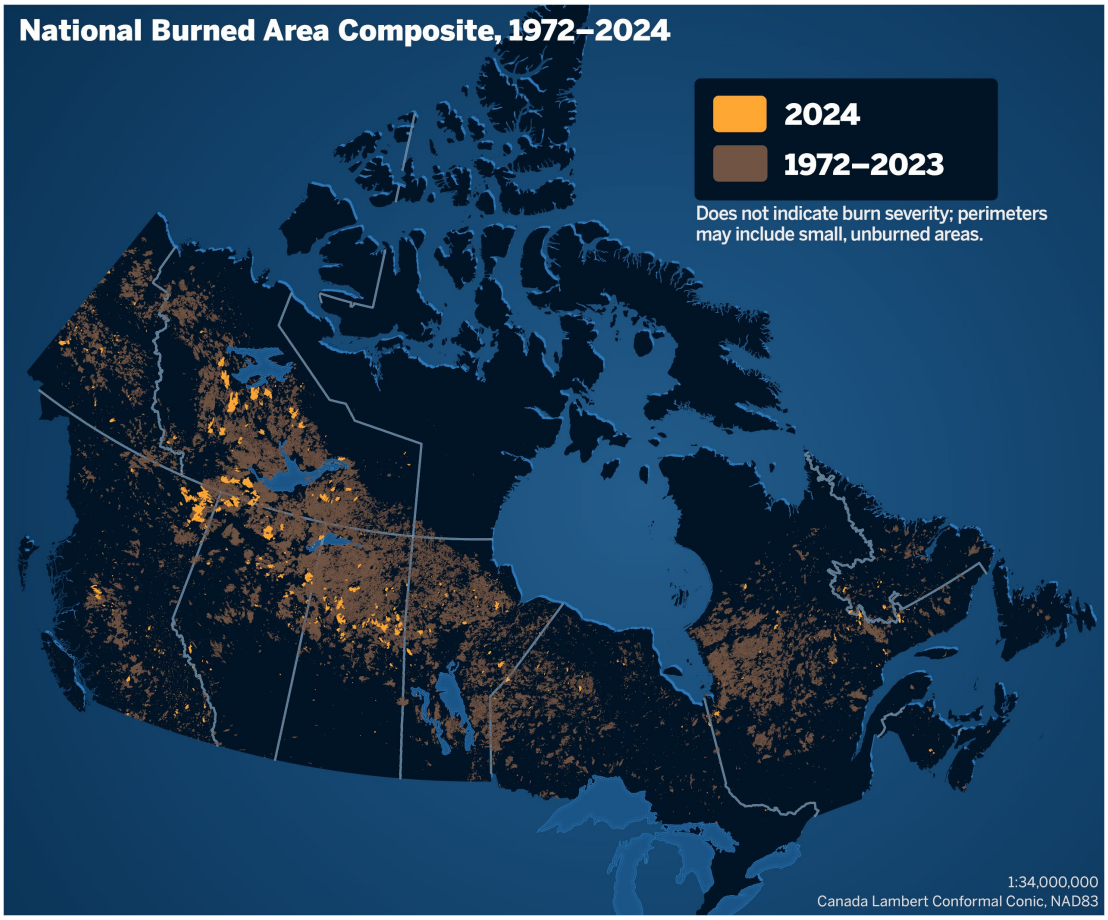
[10] Ibid.

[11] Government of Canada, *Minister Blair and Michael McLeod highlight federal investments for wildfire response and recovery in Indigenous and northern communities*, 23 April 2024.

deployed throughout the country, with Canada also receiving assistance from 5,000 international firefighters.

Unfortunately, the 2024 wildfire season was equally difficult for Canadians. Over 5.3 million hectares of land burned, as illustrated in Figure 4, making it the sixth-most disruptive wildfire season in history. Notably, the wildfire in Jasper National Park and the Municipality of Jasper in Alberta destroyed one-third of the town's buildings and was one of the most expensive natural disasters in Canada's history. **Decades of wildfire mitigation and preparedness planning has been credited with saving 70% of Jasper, but the evacuation and displacement of 20,000 people and the nearly $1.3 billion in insured damages was not averted.**

Figure 4 – National Burned Area Composite, Canada, 1972 to 2024



Sources: Map prepared in 2025, using data obtained from Natural Resources Canada (NRCan), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, "National Burned Area Composite (NBAC)," Canadian Wildland Fire Information System (CWFIS) Datamart, Database, accessed on 14 October 2025; NRCan, *Administrative Boundaries in Canada - CanVec Series - Administrative Features*, 1:5M, 1 March 2019; and NRCan, *Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features*, 1:5M, 1 March 2019. The following software was used: Esri, ArcGIS Pro, version 3.5.2. Contains information licensed under the *Open Government Licence – Canada*.

> *"**The years 2023 and 2024 were the hottest years on the planet in 120,000 years, by many estimates**. This warmed our snow, melted it early, thawed our permafrost, burned our forest, and intensified rainfall and drought outside of conditions to which nature and our population have evolved. **It is hurtling us into a dangerous and unfamiliar world where our experience in traditional approaches to forest and water management no longer provide adequate guidance for preserving our environment, building our prosperity, looking after each other, and living in safe, healthy communities**."*
>
> *John Pomeroy*[12]

In 2025, wildfires continued to devastate the country, becoming the second worst season on record after 2023, with a total of 6,125 wildfires and 8.9 million hectares burned.[13] As the third consecutive record-breaking wildfire season, 2025 saw extreme heat and drought conditions touching all corners of the country. Wildfires ravaged parts of British Columbia and the Prairie provinces with both Manitoba and Saskatchewan declaring states of emergency. New Brunswick and Newfoundland and Labrador experienced increased fire activity, while Nova Scotia closed access to all Crown land because of wildfire risk during an historic heatwave.

To better understand the growing issues of wildfires in Canada and the consequential effects that wildfires have on forestry and agriculture industries, as well as rural and Indigenous communities, the Senate Standing Committee on Agriculture and Forestry (the committee) undertook an in-depth study. Between April 2024 and November 2025, the committee held 17 meetings, heard from 79 witnesses and received 23 briefs from: federal government officials, ecologists, hydrologists, first responders, Indigenous communities, forestry and agricultural producers, municipal representatives, medical and mental health specialists, non-profit organizations, the Global Fire Management Hub of the Food and Agriculture Organization of the United Nations, among many other experts.

The committee wishes to thank the many witnesses who appeared before it. This report is informed by their testimony. Hopefully, this report informs readers and

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[12] AGFO, *Evidence*, 7 October 2025 (John Pomeroy, Distinguished Professor of Geography, Director of the Centre for Hydrology, University of Saskatchewan, As an individual).

[13] Natural Resources Canada, *National Wildland Fire Situation Report*. Database, consulted 19 November 2025.

offers solutions for building more wildfire-resilient communities, as well as forestry and agricultural industries, in the future.

Chapter 1: What Happens to People During Wildfires

Introduction

Wildfires affect economic, social, environmental and health systems in Canada, both directly and indirectly. While wildfires are a national concern, their impacts are not experienced equally among Canadians. Millions of Canadians have experienced the recent wildfire seasons through hazy skies, the smell of smoke, or an orange-tinged horizon. "Wildfire smoke is now a national hazard," said Ryan Ness, Research Director on Adaptation, Canadian Climate Institute.[14] The committee heard that the pollution from wildfires travels thousands of kilometres, degrading air quality and harming human physical health and mental health throughout the country.

For those people in the direct path of a wildfire, the committee learned that the impacts are disruptive and devastating, including forced evacuations, loss of a home and missed work hours. Furthermore, witnesses said that there are long-term cumulative mental health effects in people who experience multiple traumas such as wildfires, floods, evacuations and displacement.

Physical health and mental health effects of exposure to wildfire smoke

> *"As you know, wildfire frequency and intensity have risen sharply in Canada over the last few years, and these fires emit vast amounts of smoke. By July 2025, Canadian wildfires emitted about 180 megatonnes of carbon into the atmosphere.* ***Breathing this smoke exposes the body, especially the lungs and cardiovascular system, to fine particles and gases that cause inflammation and oxidative stress.****"*
>
> *Pat Camp*[15]

[14] AGFO, *Evidence*, 9 October 2025 (Ryan Ness, Research Director on Adaptation, Canadian Climate Institute).

[15] AGFO, *Evidence*, 28 October 2025 (Pat Camp, Associate Professor, University of British Columbia, As an individual).

Sarah Butson, Chief Executive Officer, Canadian Lung Association, told the committee: "There is no safe level of exposure to wildfire smoke."[16]

Sarah Henderson, Scientific Director, Environmental Health Services, British Columbia Centre for Disease Control and Scientific Director, National Collaborating Centre for Environmental Health, reported that the health effects of wildfires are not uniformly distributed within the population; they have disproportionate effects on people who are more susceptible and vulnerable.[17] The committee heard that this was partially because some people are more exposed while others are more susceptible to the exposure.[18]

For example, over 200,000 Indigenous People live across British Columbia: around 50% reside on reserves, many of which reserves are in remote and rural areas.[19] Pat Camp, Associate Professor, University of British Columbia, added: "These communities have lived through numerous wildfire events, exposures to high levels of wildfire smoke, few options for clean air spaces and repeated evacuation alerts and orders."[20]

The committee heard that other vulnerable populations to wildfire smoke exposure are pregnant women, children and infants:

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[16] AGFO, *Evidence*, 28 October 2025 (Sarah Butson, Chief Executive Officer, Canadian Lung Association).

[17] AGFO, *Evidence*, 21 November 2024 (Sarah Henderson, Scientific Director, Environmental Health Services, British Columbia Centre for Disease Control and Scientific Director, National Collaborating Centre for Environmental Health, As an individual).

[18] Ibid.

[19] AGFO, *Evidence*, 28 October 2025 (Pat Camp, Associate Professor, University of British Columbia, As an individual).

[20] Ibid.

> *"I really want to focus on children and infants here because there's growing evidence in that area.* ***First, we have decades of evidence to tell us that air pollution exposure for pregnant people, children and infants is damaging****. So far, when we look at wildfire smoke, we know it's associated with severe birth outcomes, like preterm birth, low birth weight and stillbirth, and there's mounting evidence for pregnancy loss in very early pregnancy."*
>
> *Sarah Henderson*[21]

Henderson said that when children are exposed to wildfire smoke in the womb, they generally have more respiratory infections in early life and are more prone to developing asthma and other chronic diseases.[22] Wildfire smoke exposure during infancy and childhood is likely to have impacts on the lifelong health of children who are exposed.[23]

Henderson explained that air pollution has health effects on two different time scales:

- the immediate effects, which is why people are warned to stay indoors on poor air quality days; and
- the long-term effects, which are associated with a short life span and a higher incidence of most chronic diseases.[24]

Sporadic exposure to wildfire smoke is similar to long-term exposure:

[21] AGFO, *Evidence*, 21 November 2024 (Sarah Henderson, Scientific Director, Environmental Health Services, British Columbia Centre for Disease Control and Scientific Director, National Collaborating Centre for Environmental Health, As an individual).
[22] Ibid.
[23] Ibid.
[24] Ibid.

> *"**Wildfire smoke is a very complex and toxic form of air pollution**.*
>
> *There was a recent study out of McGill University a couple of years ago suggesting, **if you live close to wildfire, you're at higher risk of developing lung and brain cancer**, the same way you would be if you lived in a highly polluted city."*
>
> *Sarah Henderson*[25]

Nicola Cherry, Professor Emeritus, University of Alberta, confirmed that either massive exposures or repeated lower exposures of wildfire smoke cause chronic respiratory ill health in wildland firefighters.[26] Cherry mentioned that, traditionally, wildland firefighters do not wear any sort of respiratory protection. Recent studies over three fire seasons in Alberta and British Columbia have shown that wearing a mask can reduce the amount of toxic substances absorbed from particulates. Rather than legislate mask use, Cherry said that the best way to introduce the necessity to wear a mask under bad conditions is to educate wildland firefighters "so that they can — themselves — make the decision about when it is important to do so."[27]

Finally, Henderson told the committee that, "[t]he economic impacts caused by wildfire smoke far exceed the economic impacts caused by wildfires, but they receive far less attention."[28]

To illustrate, Henderson analyzed the effects of wildfire smoke exposure from the extreme 2017 British Columbia wildfires, which burned 1.2 million hectares in that province and covered much of western Canada in smoke. Though no one died directly from those wildfires, Henderson estimated that about 2,700 excess deaths in Canada during and after the 2017 wildfire season could be attributed to smoke exposure, particularly in the deaths of people with asthma or Chronic Obstructive Pulmonary Disease.

The total costs associated with those deaths, as well as hospital and emergency room visits, time taken off work and children absent from school, was $23 billion.[29] Furthermore, the total cost of wildland firefighting throughout Canada in 2017 was

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[25] Ibid.

[26] AGFO, *Evidence*, 30 October 2025 (Nicola Cherry, Professor Emeritus, University of Alberta, As an individual).

[27] Ibid.

[28] AGFO, *Evidence*, 21 November 2024 (Sarah Henderson, Scientific Director, Environmental Health Services, British Columbia Centre for Disease Control and Scientific Director, National Collaborating Centre for Environmental Health, As an individual).

[29] Ibid.

$1.5 billion, while the insured losses in British Columbia were around $130 million.[30] Those figures are in line with work by the Canadian Climate Institute: "The health impacts of wildfire smoke are adding another layer of cost, often far from fires themselves. The annual health costs are estimated at over $1 billion annually."[31]

Ken McMullen, President, Canadian Association of Fire Chiefs, reminded the committee that firefighting is an inherently dangerous profession, career opportunity or volunteer opportunity: "We are learning more today about the risks very much directly related to cancers for firefighters and, equally as important, the impacts on mental health of first responders."[32]

McMullen also underlined the mental health strains that the 2023 wildfire season had on Canada's volunteer firefighters:

> ***"I have said many times that the volunteer fire sector in this country works most of the time. What it was not designed to handle are things like the wildfire season of 2023.*** *When we asked men and women to leave their other responsibilities as homeowners, spouses or store owners, not for a day at a time but for weeks or months at a time —* ***we asked individuals to be away for 40 or 50 days continuously — and when they came back, there were individuals who hung up their helmet and quite simply said, 'I cannot do that again for my community.'"***
>
> *Ken McMullen*[33]

The effects of wildfire evacuations and displacements

Evacuation is one of the most immediate impacts of wildfires. The committee heard that thousands of residents may be forced to leave their homes with little notice, sometimes for weeks. This displacement causes stress, anxiety and uncertainty, especially for children, seniors and vulnerable populations such as Indigenous communities.

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[30] Ibid.

[31] AGFO, *Evidence*, 9 October 2025 (Ryan Ness, Research Director on Adaptation, Canadian Climate Institute).

[32] AGFO, *Evidence*, 9 May 2024 (Ken McMullen, President, Canadian Association of Fire Chiefs).

[33] Ibid.

> *"One metric that's really important — before I get into the recommendations — is the degree to which* ***there's actually not a metric to understand the impact of wildfires. We talk about hectares burnt and evacuations, but we don't talk about how long people are evacuated and how many times they're evacuated.*** *We don't talk about the difference between two households in a community being affected versus a whole community. Not understanding how that occurs substantially changes the way in which people feel the event, how long it takes them to recover, how much they pay out of pocket and how response agencies have to support."*
>
> *Amy Avis*[34]

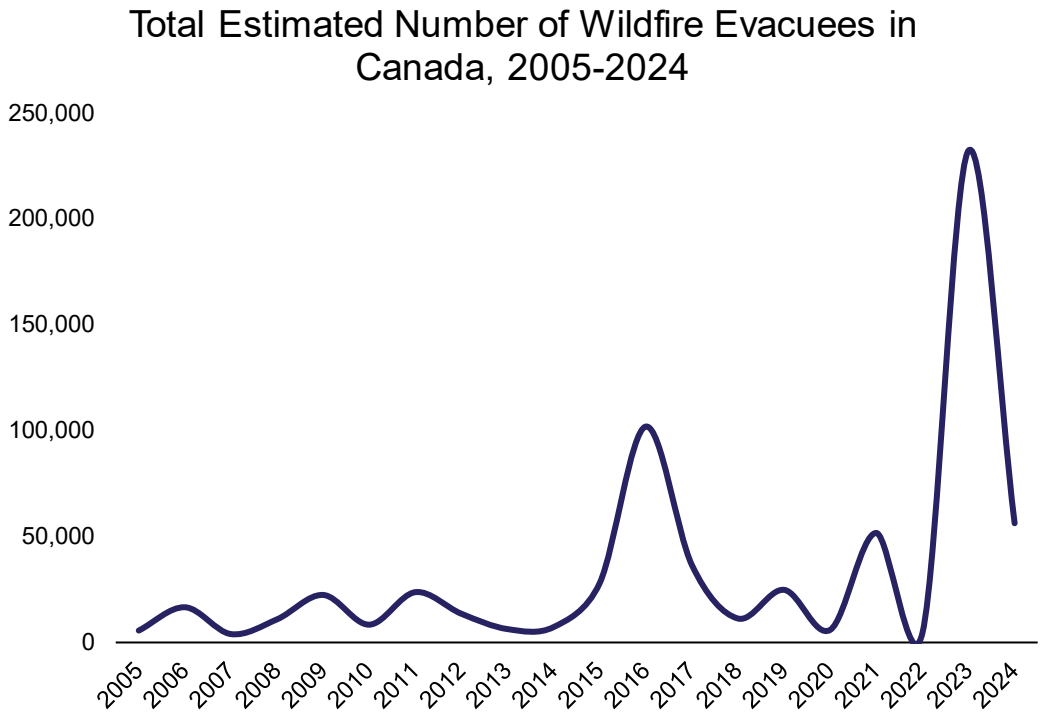
Elisa Binon, Data Coordinator for North America, the Caribbean, Europe and Central Asia, Global Monitoring, Internal Displacement Monitoring Centre (IDMC), stated: "Canada is among the countries most affected by wildfire displacement."[35] For instance, according to the IDMC, in 2023, 43% of all documented wildfire displacements worldwide occurred in Canada. The IDMC recorded over 200,000 internal displacements across Canada that year, of which 96% were caused by wildfires. Fifteen per cent of those wildfire displacements affected Indigenous communities.

Figure 5 illustrates the total number of estimated wildfire evacuees in Canada from 2005 to 2024. Two years stand out from the rest: 2016 (101,997 evacuees), because of the wildfire in Fort McMurray, Alberta, and 2023 (232,359 evacuees), due to a record wildfire season.

[34] AGFO, *Evidence*, 9 May 2024 (Amy Avis, General Counsel, Canadian Red Cross).

[35] AGFO, *Evidence*, 21 October 2025 (Elisa Binon, Data Coordinator for North America, the Caribbean, Europe and Central Asia, Global Monitoring, Internal Displacement Monitoring Centre).

Figure 5 - Total Estimated Number of Wildfire Evacuees in Canada, 2005-2024



Source: Figure prepared in 2026, using data obtained from Natural Resources Canada, Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, *Canadian Wildland Fire Information System*.

According to the IDMC, in 2024, Canada ranked third globally for wildfire displacements, after the United States and Greece.[36] Binon explained: "Our preliminary data for 2025 shows more than 70,000 wildfire-related displacement[s] across Canada. In both 2024 and 2025, wildfires triggered 99% of all internal displacements in Canada. Indigenous Peoples were disproportionately affected. 58% of wildfire evacuations in 2024 impacted Indigenous Peoples, whereas in 2025, preliminary data shows 56% of evacuations due to wildfires impacting Indigenous Peoples in Canada."[37]

Stephanie Montesanti, Associate Professor and Canada Research Chair in Health System Integration, School of Public Health, University of Alberta, told the committee that following the 2016 Fort McMurray wildfire, "local addictions and

[36] Ibid.

[37] Ibid.

mental health staff received a massive jump in referrals in the first two months after the fire — 20,000 in 51 days, compared to the typical 1,200 per year."[38]

"Wildfire health research conducted in the region highlighted the prevalence and delayed onset of mental health concerns. While evacuees are often focused on the immediate physical and material concerns such as housing or loss of property, mental health and emotional issues were usually not identified until months or years after the wildfire," said Montesanti.[39]

Dr. Vincent Agyapong, Professor and Head, Department of Psychiatry, Faculty of Medicine, Dalhousie University has studied the cumulative mental health effects of the 2016 Fort McMurray wildfires on residents.[40] The committee learned that six months after those wildfires, the prevalence of likely Post Traumatic Stress Disorder (PTSD) among adult residents was around 12.8%.[41] The corresponding prevalence for generalized anxiety disorder and major depressive disorder among adult residents was 19.2% and 14.8%, respectively.[42]

Dr. Agyapong said that the prevalence of these conditions remained high or increased 18 months after the wildfires and then dramatically increased five years post wildfires: "It's important to note that residents of Fort McMurray were also impacted by the flood in 2020 and also experienced the pandemic, like everybody else in Canada, which may account for the dramatic increase."[43]

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[38] AGFO, *Evidence*, 28 November 2024 (Stephanie Montesanti, Associate Professor and Canada Research Chair in Health System Integration, School of Public Health, University of Alberta, As an individual).

[39] Ibid.

[40] AGFO, *Evidence*, 21 November 2024 (Dr. Vincent Agyapong, Professor and Head, Department of Psychiatry, Faculty of Medicine, Dalhousie University, As an individual).

[41] Ibid.

[42] Ibid.

[43] Ibid.

> ***"In terms of children and young adults, from grades 8-12, 18 months post wildfire 37% met the criteria for probable PTSD; 31% met the criteria for probable depression; 17% for probable depression with at least moderate severity; 27% of students met the criteria for probable anxiety; also, 15% for alcohol-use disorder. Again, in three and a half years, the prevalence of these conditions actually increased, not decreased."***
>
> *Dr. Vincent Agyapong*[44]

Barriers and solutions

Camp told the committee that exposure to wildfire smoke poses many challenges for First Nations communities, namely communication barriers. One solution is installing air quality sensors and providing daily air quality bulletins directly to communities, both of which help with decision making. "First Nations are taking action to improve communication and promote the health of their communities."[45]

As for proper ventilation and filtration in homes, several strategies have been discussed for communities:

"Can we create safe spaces for people to shelter not so much from the risk of actual heat from the fire but the smoke? Can we create community centres or that kind of thing that have sufficient heating and ventilation systems that actually remove the smoke? It can be done. It's not super cheap, but it's not super expensive. You can make pretty effective filters relatively easily."[46]

Overall, the committee learned about the simple steps we can take to protect our lungs:

- watching the air quality health index and adapting activities accordingly;
- keeping indoor air clean by keeping windows shut and using air purifiers;
- taking protective steps by ensuring medications are current;

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[44] Ibid.

[45] AGFO, *Evidence*, 28 October 2025 (Pat Camp, Associate Professor, University of British Columbia, As an individual).

[46] AGFO, *Evidence*, 1 October 2024 (Brian Wiens, Managing Director, Canada Wildfire (Canadian Partnership for Wildland Fire Science).

- following action plans; and
- considering the use of N95 masks.[47]

The committee learned that the Health Portfolio works to support the federal government's response to wildfires through several ways, with a focus on human health and well-being.[48]

For example, Health Canada and the Public Health Agency of Canada (PHAC) work with other federal departments, as well as provincial, territorial, municipal and public health partners, to reduce the risks to people from wildfires and wildfire smoke. This includes providing information, advice and guidance to the public through different channels, including online resources and the Air Quality Health Index.

> *"If you have looked at air quality information on a weather app on your phone, you've accessed the Air Quality Health Index, which is a joint project with our colleagues from Environment Canada.*
>
> *The Air Quality Health Index provides advice for both the general public and those more at risk on how to minimize smoke exposure and how to manage their behaviour in times of elevated air pollution."*
>
> *Matt Jones*[49]

The Health Portfolio also helps jurisdictions establish and manage cleaner air spaces by providing technical advice, experience and guidance. PHAC provides 24/7 public health support to provinces and territories in emergencies and responds to requests from them. Furthermore, PHAC's National Emergency Strategic Stockpile contains supplies that provinces and territories can access upon request in wildfire emergencies. Supplies are available through many channels to non-governmental organizations and directly to provincial and territorial partners.

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[47] AGFO, *Evidence*, 28 October 2025 (Sarah Butson, Chief Executive Officer, Canadian Lung Association).

[48] According to this Government of Canada web page, the Minister of Health is responsible for maintaining and improving the health of Canadians. This is supported by the Health Portfolio which comprises Health Canada, the Public Health Agency of Canada, the Canadian Institutes of Health Research, the Patented Medicine Prices Review Board and the Canadian Food Inspection Agency. The Health Portfolio consists of approximately 12,000 full-time equivalent employees and an annual budget of over $3.8 billion.

[49] AGFO, *Evidence*, 22 October 2024 (Matt Jones, Assistant Deputy Minister, Healthy Environments and Consumer Safety Branch, Health Canada).

Regarding the mental health impacts of wildfires, Montesanti recommended investments and resources for addressing the long-term mental health impacts following wildfires, as well as focus on jurisdictional relationship building and enhancing coordination with respect to emergency management and planning.

“Related to that is increasing awareness around health and social inequities in risk management, and I think this is possible. It’s important to engage communities in risk reduction planning to promote their own community-led and culturally safe responses to disaster and emergency management,” said Montesanti.[50]

The committee learned about a digital intervention solution that Dr. Agyapong’s research team had explored: “We also looked at an intervention, the Text4Hope program, in 2013 in Alberta and Nova Scotia and found that daily supportive text messages were able to reduce the psychological burden in terms of anxiety, depression and PTSD symptoms in residents who were impacted by the wildfires.”[51]

[50] AGFO, *Evidence*, 28 November 2024 (Stephanie Montesanti, Associate Professor and Canada Research Chair in Health System Integration, School of Public Health, University of Alberta, As an individual).

[51] AGFO, *Evidence*, 21 November 2024 (Dr. Vincent Agyapong, Professor and Head, Department of Psychiatry, Faculty of Medicine, Dalhousie University, As an individual).

Chapter 2: The Impact of Wildfires on Canada's Indigenous Communities

Introduction

Indigenous witnesses told the committee that wildfires have severe impacts on their communities, affecting not only their physical safety and local economies (including forestry, agriculture, wildland firefighting, hunting, trapping, among others), but also their cultural, social and mental health.

The committee heard that many First Nations, Métis and Inuit communities are located in remote or forested regions that are vulnerable to increasingly frequent and intense wildfires driven by climate change.

> *"Communities often located in remote or forested areas face heightened vulnerability due to limited infrastructure, historical underfunding and systematic inequities in emergency response."*
>
> *Matt Nelson*[52]

According to a 2023 report published by the Public Health Agency of Canada (PHAC), "Indigenous peoples are disproportionately affected by wildfire evacuations compared to other people living in Canada, with First Nations and communities with a primarily Indigenous population experiencing 42% of evacuations but making up 5% of people living in Canada."[53]

Indigenous Services Canada (ISC) estimates that between 2014 and 2024, a total of 97,496 First Nations people living on reserves and in other eligible First Nations communities were evacuated because of wildfires. Figure 6 shows that the total number of wildfires evacuees for that period was highest in Saskatchewan (23,437), Alberta (21,510) and Manitoba (18,988).

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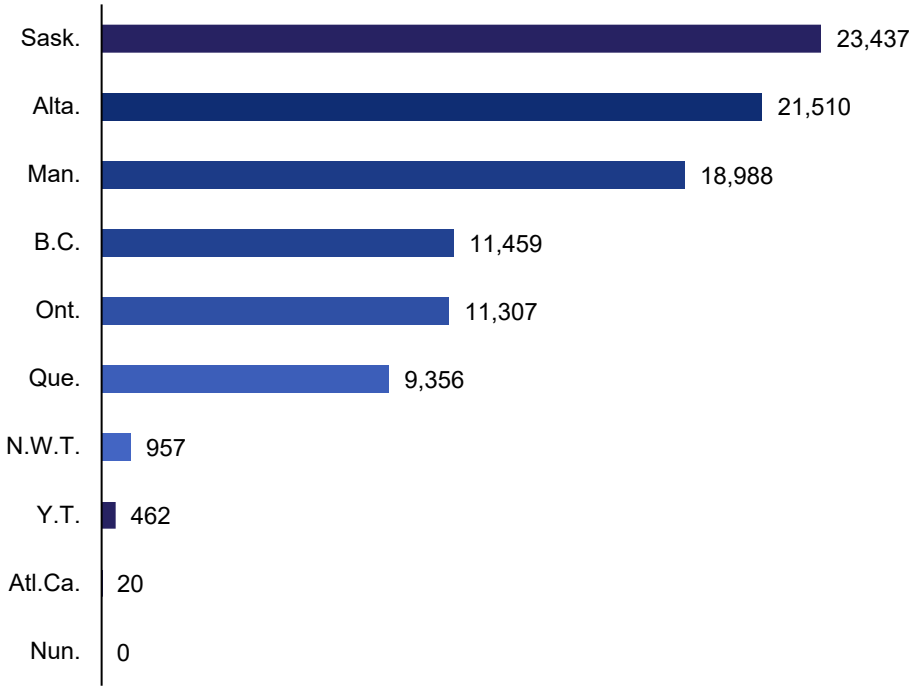
[52] AGFO, *Evidence*, 21 October 2025 (Matt Nelson, Matt Nelson, Integrated Fuel Management Supervisor, First Nations' Emergency Services Society of British Columbia).

[53] Public Health Agency of Canada, "Public health risk profile: Wildfires in Canada, 2023," 23 June 2023, p.4.

Figure 6 – Number of First Nations People Living on Reserves and in Other Eligible First Nations Communities Evacuated due to Wildfires, By Province, Territory or Region, 2014 to 2024



Source: Figure prepared in 2026, using data obtained from Government of Canada, *Wildland fire and flood evacuation statistics between April 1, 2014 and March 31, 2024*. Database, accessed 31 January 2026.

When a wildfire emergency involves a First Nation community living on reserve, the community's leadership uses all available resources to respond. If the emergency exceeds the community's response capacity, the community notifies ISC and the appropriate provincial and territorial officials. ISC has service agreements with some provinces and territories and with other organizations that provide emergency response services to First Nations communities living on reserve, such as the First Nations' Emergency Services Society (FNESS) of British Columbia.

FNESS is a success story and provides localized support for fire services, emergency management and disaster mitigation. However, FNESS said that First Nations fire services face funding challenges which affects their ability to purchase equipment and to train and hire firefighters, as is discussed later in the chapter.

ISC delivers programs and services to First Nations people living on reserve through the Emergency Management Assistance Program (EMAP) and infrastructure programs: "The EMAP provides mitigation and preparedness programming and reimburses communities for response and recovery activities following emergencies,

including wildfires, to help them recover in a timely and resilient way."[54] The committee also heard that ISC's First Nations and Inuit health branch works to ensure that there are mental health and physical health supports for evacuees in the short- and long-term;[55] however, many witnesses said that not enough supports are in place.

> *"First Nations are on the front lines of wildfire events. On average, First Nations face 52 wildfire emergencies every year. Last year [2023], there were 161 fires that threatened their safety, and 90 First Nation communities were evacuated. Nearly 80% of First Nations are considered at risk to wildfires due to their location."*
>
> *Paula Hadden-Jokiel*[56]

Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) facilitates the sharing of information with territorial and Indigenous governments, Northern communities and national Indigenous organizations.[57] CIRNAC also plays a role in areas of prevention, mitigation and preparedness through the delivery of climate change proposals, including the Northern REACHE Program, climate change preparedness in the North and the First Nation Adapt Program.

"The challenge we have is that we don't have dedicated programs. We play more of that relationship-facilitator role. Our regional offices do work with communities in the North, the Yukon and Northwest Territories, on emergency preparedness and emergency preparedness planning. That would be the level of our engagement," said Walsh.[58]

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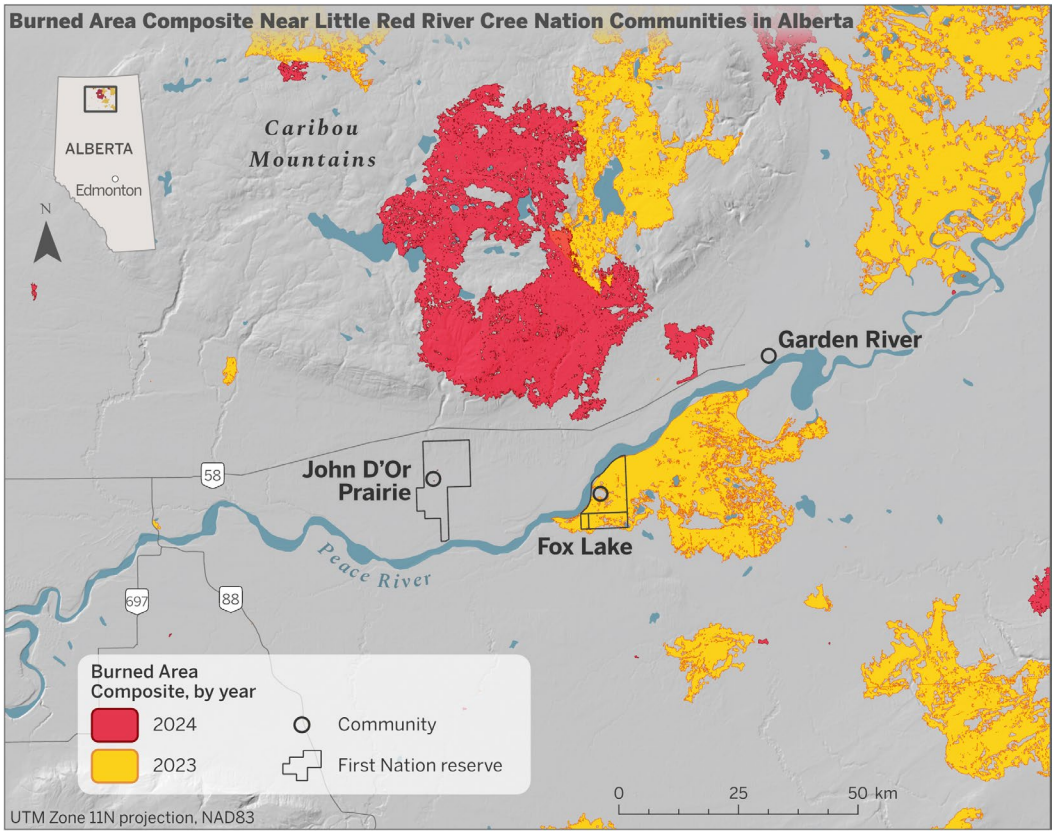
[54] AGFO, *Evidence*, 18 April 2024 (Paula Hadden-Jokiel, Assistant Deputy Minister, Regional Operations Sector, Indigenous Services Canada).
[55] Ibid.
[56] Ibid.
[57] AGFO, *Evidence*, 18 April 2024 (Wayne Walsh, Director General, Northern Strategic Policy Branch, Crown-Indigenous Relations and Northern Affairs Canada).
[58] Ibid.

Recent Wildfire Experiences of Indigenous Communities

Little Red River Cree Nation (Alberta)

The committee heard from Chief Conroy Sewepagaham, Little Red River Cree Nation, in northern Alberta. Little Red River Cree Nation is composed of three towns—Garden River, Fox Lake and John D'Or Prairie—as illustrated in Figure 7.

Figure 7 – Burned Area Composite Near Little Red River Cree Nation (Alberta), 2023 and 2024



Sources: Map prepared in 2025, using data obtained from Natural Resources Canada (NRCan), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, "National Burned Area Composite (NBAC)," Canadian Wildland Fire Information System (CWFIS) Datamart, Database, accessed on 20 May 2025; Indigenous Services Canada, "First Nations Location," Dataset, accessed 15 April 2025; NRCan, "Aboriginal Lands of Canada Legislative Boundaries," Dataset, accessed 3 April 2025; NRCan, *Administrative Boundaries in Canada - CanVec Series - Administrative Features*, 1:5M and 1:15M, 1 March 2019; NRCan, *Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features*, 1:1M, 1 March 2019; and NRCan, *Transport Networks in Canada - CanVec Series - Transport Features*, 1:1M, 1 March 2019. The Terrain – Hillshade base map is the intellectual property of Esri and is used under licence, © 2025 Esri and its licensors. The following software was used: Esri, ArcGIS Pro, version 3.5.4. Contains information licensed under the *Open Government Licence – Canada*.

Chief Sewepagaham told the committee that Little Red River Cree Nation had experienced repeat evacuations in recent years. "The Paskwa fire of 2023 did leave 800 residents without a home. In its wake, it also left behind over 100 homes burned or damaged. During this time, during the evacuation, we saw numerous instances of our folks, people, residents of all walks of life coming together and helping us get through that tough time."[59] The committee heard that, within 72 hours, all 4,000 residents of Fox Lake were evacuated during that wildfire. Chief Sewepagaham said that they used boats, canoes, barges and other water vessels to help residents across the Peace River safely.

The committee learned that firefighters from Little Red River Cree Nation were told NOT to defend their community from the wildfire:

> *"**We have approximately 1,500 homes. Every home has two or three wildland firefighters.** It is our primary economy aside from forestry. When the 2023 fires happened, a couple thousand of us were told we couldn't action it. **Despite the training and certification, we had to wait to be called.** We do have our own wildland firefighting operation that we contract and subcontract to the province."*
>
> *Chief Conroy Sewepagaham*[60]

Chief Sewepagaham also described the events of the 2024 wildfire season to the committee: "This year, despite having a wet spring, we had a dry summer combined with strong winds and, within the span of two months all the way up to July, we had drought conditions. It took a thunderstorm to come through our communities up in our hills called the Caribou Mountains to start a new set of fires."[61] The committee learned that, for the first time in Little Red River Cree Nation's history, all three towns—8,700 residents and community members—were evacuated.

Chief Sewepagaham said that while no one was hurt, the same could not be said for Little Red River Cree Nation's forests:

[59] AGFO, *Evidence*, 7 November 2024 (Chief Conroy Sewepagaham, Little Red River Cree Nation).
[60] Ibid.
[61] Ibid.

> *"We have a timber quota of 15,000 square kilometres. That fire burned our livelihood.* ***What we are estimating is the loss of $150 million taken away from our pockets, taken away from jobs.*** *From back-to-back fires we have had, we're assuming this is the new normal.*
>
> ***This means approximately 70 years of employment was wiped out.*** *Our deciduous and mixed boreal forest takes quite some time to grow. My generation will not necessarily have the same benefits as previous generations with our forestry operations. So we will be operating at a loss until the new trees grow again."*
>
> *Chief Conroy Sewepagaham*[62]

In April 2024, the committee heard that ISC was still supporting First Nations communities living on reserve that had evacuated in 2023. For instance, Little Red River Cree Nation had received over $260 million from the EMAP to support wildfire response and recovery initiatives: "There are 5,000 people living on reserve, and 2,700 of those were evacuated to a neighbouring community. The disaster resulted in the loss of 108 structures, with all 595 band-owned buildings suffering damage from smoke, heat and prolonged power outages. As of last week, there were still 869 community members displaced," said Hadden-Jokiel.[63]

By November 2024, the committee heard that Little Red River Cree Nation had rebuilt many homes for those displaced members; however, Chief Sewepagaham said that 60% of members were still waiting for their homes to be rebuilt.[64] The committee learned that Little Red River Cree Nation is frustrated with the current federal policies for First Nations and communities living on reserve, in particular in terms of wildfire response both during and after the fires.[65] Chief Sewepagaham said: "What has been hampering our rebuild efforts quite a bit is the bureaucracy that we have to go through. Even though I've been explaining to our folks in the

[62] Ibid.

[63] AGFO, *Evidence*, 18 April 2024 (Paula Hadden-Jokiel, Assistant Deputy Minister, Regional Operations Sector, Indigenous Services Canada).

[64] AGFO, *Evidence*, 7 November 2024 (Chief Conroy Sewepagaham, Little Red River Cree Nation).

[65] Ibid.

regional offices that when we want to rebuild Fox Lake, I don't want to rebuild Fox Lake the way it was; I want to rebuild Fox Lake the way it should be."[66]

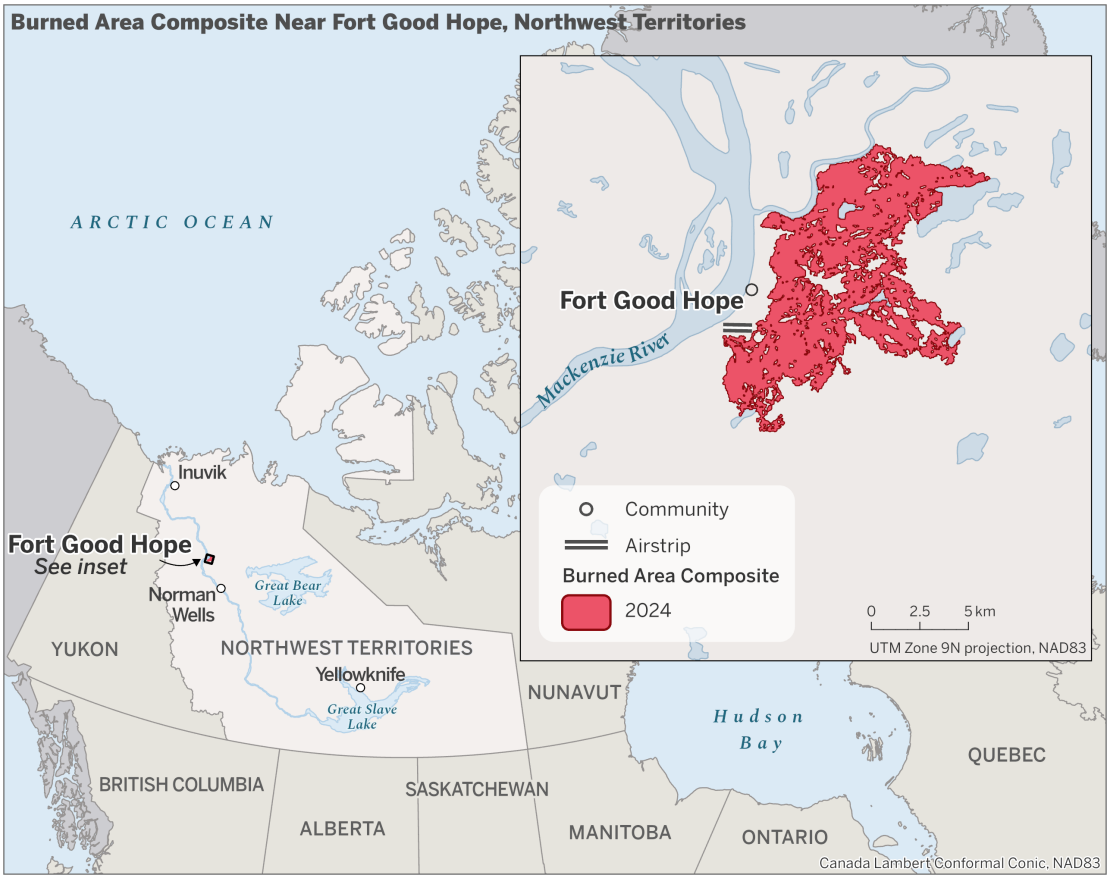
K'ahsho Got'ine Charter Community, Fort Good Hope Dene Band (Northwest Territories)

The committee heard from Chief Collin Pierrot, K'ahsho Got'ine Charter Community, Fort Good Hope Dene Band and Darcy Edgi, President, K'ahsho Got'ine Foundation, from the Northwest Territories.

K'ahsho Got'ine Charter Community has a membership of 900 people, with just over 500 people living in the community. It is located within a protected conservation area that is funded by the federal government. The community has no highway in or out. In summertime, residents either fly or boat in and out of the community. There is a runway and access to aircraft nearby. In June 2024, wildfires surrounded their community, as is illustrated in Figure 8. Chief Pierrot issued an emergency evacuation and a state of emergency for the town.

[66] Ibid.

Figure 8 – Burned Area Near K'ahsho Got'ine Charter Community, Fort Good Hope, Northwest Territories



Sources: Map prepared in 2025, using data obtained from Natural Resources Canada (NRCan), Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta, "National Burned Area Composite (NBAC)," Canadian Wildland Fire Information System (CWFIS) Datamart, Database, accessed on 20 May 2025; Indigenous Services Canada, "First Nations Location," Dataset, accessed 15 April 2025; NRCan, *Administrative Boundaries in Canada - CanVec Series - Administrative Features*, 1:5M, 1 March 2019; and NRCan, *Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features*, 1:5M, and NT, 1:250K, 1 March 2019. The following software was used: Esri, ArcGIS Pro, version 3.5.4. Contains information licensed under the *Open Government Licence – Canada*.

Chief Pierrot told the committee that everyone was evacuated by aircraft and that the elders were evacuated first: "Half the communities went to Norman Wells and Délı̨nę, and the other 150 people, we evacuated by boat. They had no time to be evacuated; we evacuated them by boat, down to this fish camp, and they stayed down there for three and a half weeks."[67]

According to Chief Pierrot, the territorial government's Ministry of Environment and Climate Change (ECC) sent a crew of three inexperienced people. Fortunately, 85 to

[67] AGFO, *Evidence*, 7 November 2024 (Chief Collin Pierrot, K'ahsho Got'ine Charter Community, Fort Good Hope Dene Band).

90% of community members were previous firefighters, which Chief Pierrot said is common in small communities such as theirs.[68] When the fire started, Chief Pierrot said that they asked for equipment, but they found almost none.

> *"They told us to run up to the ECC base and get the fire equipment, only to find out there was no fire equipment in the community — maybe five bags of hoses; that was it. So we used our two water trucks that we use to deliver water to the community and a fire truck. Twenty of us got on there and started fighting fire.*
>
> *The planes that were sent in went to Norman Wells to mix their fire retardant to help us with the fire only to find out they had no retardant there. They had to fly two and a half hours back to Yellowknife to mix the retardant. It was another two hours there and back — a total of eight hours. They burned their flying time out. When you're flying, you only have eight hours, and they burned it out with one drop."*
>
> *Chief Collin Pierrot*[69]

Edgi added: "I think the policies they have of not fighting a fire . . . This mop-up crew, they should fight the fire. That's the reason we saved our town: because we battled that fire. We didn't wait for it. If we had waited, we would have been burned."[70]

Chief Pierrot also said that two people died during the 2024 wildfire; however, the community had not yet received any mental health or trauma support:

[68] Ibid.

[69] Ibid.

[70] AGFO, *Evidence*, 7 November 2024 (Darcy Edgi, President, K'ahsho Got'ine Foundation).

> *"During the fire, we lost two lives. One was a helicopter pilot who was helping us fight the fire, and the other was a young man who lost his life before the fire. At that time, we reached out to numerous ministers, requesting that they send in trauma teams for the firefighters. The majority of the firefighters were related to the young guy whom they lost, and we ended up with nothing.* ***Still today, we haven't received any trauma teams coming in or anything****."*
>
> *Chief Collin Pierrot*[71]

Métis Nation–Saskatchewan

The committee heard from witnesses from Métis Nation–Saskatchewan (MN-S), which represents the province's 80,000 Métis citizens. Brennan Merasty, Minister of Self Determination and Self Government and Justice, MN-S, said that, over the past two years, Northern Saskatchewan has faced tinder-dry conditions and significant increases in wildfire activity. "This past year took its toll on our citizens and our government resources. In 2025, wildfires scorched 7.1 million acres of our traditional territory, nearly 5 million more acres than in 2024," said Merasty.[72]

The committee learned that the 2025 wildfires forced Métis citizens to flee their homes, often with only the clothes on their backs. Merasty said that "the surge of wildfires and evacuees heading south overwhelmed provincial resources and the support offered by the Canadian Red Cross," adding that Métis citizens were caught in a jurisdictional gap.[73]

[71] Ibid.

[72] AGFO, *Evidence*, 21 October 2025 (Brennan Merasty, Minister of Self Determination and Self Government and Justice, Métis Nation Saskatchewan)

[73] Ibid.

> *"Within the first 24 hours of evacuations, there were instances where evacuees that had travelled 500 kilometres south to urban centres were turned away from evacuation centres because the support workers were unable to determine if it was the province or the Red Cross that was responsible for meeting the needs of Métis people.* ***That led to a number of Métis citizens being forced to sleep in cars or outside and having no access to food and essential items.***"
>
> *Brennan Merasty*[74]

Merasty said that the MN-S Government acted quickly and opened up Batoche to evacuees who were then offered safety, lodging, food, clothing, essential items, and cultural and children's activities. They also mobilized their teams and locals in urban centres to ensure that evacuees, who were in evacuation centres operated by the Saskatchewan Public Safety Agency and the Canadian Red Cross, had access to Métis cultural supports and activities, clothing and other essential items. Furthermore, Merasty said that they provided air purifiers and health aids to citizens who remained in the community, to those who returned home to smoky conditions and to those throughout the province who were impacted by the smoke.

Merasty said that the MN-S Government's evacuation efforts were successful; however, they also came at a cost because of a funding gap.

[74] Ibid.

> *"**Unlike First Nation and Inuit governments, our Métis government does not have access to emergency management funding.** This makes it impossible for us to adequately invest in emergency prevention and support our citizens when we are forced to respond to wildfire-related emergencies. **Instead, we are forced to wade our way through a complicated and drawn-out process of seeking support to reallocate funding intended for other essential needs such as health, mental health and housing so that it can be used for wildfire emergency management.** As we all know, Métis people face major deficits in those areas as well, so we are shifting funds from underfunded, essential areas to emergency management."*
>
> *Brendan Merasty*[75]

The committee learned that, when Métis citizens returned home, "[s]ome of us found our homes burned to the ground, and many of us found that the hunting and trapping cabins that we rely on for essential shelter when we are out on the land had been destroyed. Similarly, forests that we had relied on for generations to provide us with food, furs, medicine and traditional economic resources had been scorched to the ground."[76]

Merasty said, all of that, coupled with the economic impacts of not being able to remain in the community or on the land, had significantly impacted the human and mental health of Métis people in Saskatchewan.[77] The committee heard that the lack of stable, emergency management funding causes immediate hardship for Métis people and makes it difficult for them to adequately prepare for future wildfire-related emergencies.

Manitoba Métis Federation

The committee heard from David Beaudin, Minister of Agriculture for the Manitoba Métis Federation (MMF), the national government of the Red River Métis. Beaudin said that, in 2025, 432 fires burned a total of 2,169,858 hectares of land in Manitoba, based on data from the Government of Manitoba's Department of Natural Resources and Indigenous Futures year-to-date *Fire Situation Report*.[78]

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[75] Ibid.

[76] Ibid.

[77] Ibid.

[78] AGFO, *Evidence*, 21 October 2025 (David Beaudin, Minister of Agriculture for the Manitoba Métis Federation).

In a brief to the committee, the MMF said that the province had declared a provincial state of emergency on May 28, 2025, due to the wildfires. The MMF stepped up to provide immediate and ongoing assistance to all evacuees throughout the province, the majority of whom were First Nations and others Métis.

Beaudin said that the hot, dry conditions that lead to an extended 2025 wildfire season had direct and indirect impacts on the agriculture sector:

> *"Narratives from Red River Métis citizens engaged in agricultural production from this region and affected by wildfires include a small, 15-head beef cattle operation in Woodridge, Manitoba, which lost 80 acres of productive land and over one mile of fencing for livestock grazing. While the farmyard and all animals were spared, this is a significant setback for a small, family-run operation. Also, a wild rice harvester and processor lost a generations' old cabin near Manigotagan, Manitoba, used to stay in when tending to wild rice crops, leaving them without a safe place to stay during harvest, as well as the hazardous working conditions during poor air quality warnings and the secondary effects of wildfire on human health, which remain to be seen."*
>
> *David Beaudin*[79]

Regarding the forestry sector, the committee heard that: "The MMF consults Red River Métis citizens on forest-harvesting operations, as these activities have the potential to impact their section 35 rights.[80] However, many consultations were postponed in 2025 due to staff being redeployed to assist evacuees and because of uncertainty surrounding wildfires threatening the designated harvest cut blocks," said Beaudin.[81] Beaudin also said that there was an urgent need for better wildfire preparation that prioritizes hiring Red River Métis citizens residing in villages and settlements near the boreal forest: "Hunting grounds were changed meaning that now no one can hunt in the burnt-out area."[82]

According to Beaudin, the MMF's emergency response during the 2025 wildfire season was "one of the most comprehensive, Indigenous-led support efforts undertaken in the province across two distinct waves of evacuations."[83] For

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[79] Ibid.

[80] Section 35 of the *Constitution Act, 1982* recognizes and affirms the existing Aboriginal and treaty rights of First Nations, Inuit and Métis in Canada.

[81] AGFO, *Evidence*, 21 October 2025 (David Beaudin, Minister of Agriculture for the Manitoba Métis Federation).

[82] Ibid.

[83] Ibid.

example, the MMF created and established reception and donation centres, put emergency housing accommodations in place within 72 hours, had donation management and volunteer coordination, as well as people working nonstop answering phones and working with Elders. For mental wellness supports, the MMF called Elders and evacuees who were staying in hotels and MMF housing and put together health supports for the pharmacies, for people who needed pharmaceuticals (i.e., medications that they could not bring along when they were displaced by fire).

Despite these efforts, the committee learned that the MMF was required to use its own money to fund the evacuations:

> *"**Everybody pitched in, including ministers. They were going out of pocket on credit cards.** I went on a shopping trip with $3,200 and that was all, just immediate hydration and fluids. The lineups on the highways were so long, bumper-to-bumper, and in Manitoba, there are only two or three direct highways coming south, so gas stations were full. People were running with cans, and we were trying to get our people up in place. **We went out of pocket over $3 million on small evacuations.**"*
>
> *David Beaudin*[84]

Indigenous Traditional Knowledge and Wildfire Stewardship

Witnesses told the committee about the many ways in which traditional Indigenous knowledge can be incorporated into a community's firefighting practices, including:

- cultural burning;
- putting down or controlling wildfire smoke within the first 24 hours;
- observing the crowning of the fire and advising residents on how to proceed;
- examining the ground (soil strata) and noting changes in local regions;
- being on the frontlines, living there everyday and noticing minute microclimate changes;

[84] Ibid.

- developing fire guardian programs to train local firefighters; and
- among many other practices.

Chief Sewepagaham said, historically, First Nations have always fought fires: "If you look into a lot of these strata and their soils, especially in our communities or in our town of John D'Or, you can actually dig into the soil and see strata of annual fires happening in our communities. That's because that was part of our cultural burning or fire management. But if we didn't fight that fire during the nighttime just because we found a loophole in the agency's policies, we would have lost an additional 41 homes."[85]

Furthermore, Chief Sewepagaham told the committee that Little Red River Cree Nation had partnered with a drone company and used their Indigenous knowledge by uploading it into a system called Fire AI. "This way, our knowledge keepers can be incorporated forever so we don't lose their technical expertise and their local knowledge. We have "digital elders" flying up in the air, aiding our firefighters on the ground."[86]

The committee learned that FNESS combines Indigenous traditional knowledge with the four pillars of emergency management (mitigation, preparedness, response, recovery) to support First Nations communities throughout British Columbia, before, during and after wildfire emergencies.

"Our approach using the four pillars allows us to go into communities before there is even the thought of a wildfire in the area. We're then able to train men, women, young people, older people to develop the capacity of running hoses, identifying where the risks are, filling out the forms when you are on evacuation," said Francyne Joe, Executive Director, FNESS.[87] "We believe that equitable training and funding in these areas are essential to reducing the impacts of disasters like wildfire," added Matt Nelson, Integrated Fuel Management Supervisor, FNESS, and type 1 wildland firefighter.[88]

In the past few years, FNESS has provided over 150 wildfire training sessions and trained almost 2,000 people in firefighting.

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[85] AGFO, *Evidence*, 7 November 2024 (Chief Conroy Sewepagaham, Little Red River Cree Nation).

[86] Ibid.

[87] AGFO, *Evidence*, 21 October 2025 (Francyne Joe, Executive Director, First Nations' Emergency Services Society of British Columbia).

[88] AGFO, *Evidence*, 21 October 2025 (Matt Nelson, Integrated Fuel Management Supervisor, First Nations' Emergency Services Society of British Columbia).

> *"We do a lot of response, so we get structure protection people out. Then we move into mitigation, so we're training firefighters and teaching cultural and prescribed fires. How are we removing fuels around the nation? We have wildfire resiliency advisers. What does good forest look like? We have integrated fire management, so a lot of Seven Generations planning. How do we move forward in good ways with colonial systems as well as with Indigenous-led initiatives? We do a lot with FireSmart as well."*
>
> *Matt Nelson*[89]

In a brief, the committee also learned about the Wabanaki Wildland Crew from New Brunswick who, in 2024, were the first all-Indigenous team to be mobilized out-of-province to fight and mitigate wildland fires in other Canadian provinces. The Wabanaki Wildland Crew assisted as Type I and Type II wildland firefighters and other wildland teams in northern Alberta where they were created and maintained new working relationships with other fire teams/officers. Among its list of recommendations, the Wabanaki Wildland Crew requested that the federal government initiate and continue the use of drone and software technology for fuel mapping, prescribed and traditional/cultural burn studies and data collection.

"By investing in community-led mitigation such as culturally and prescribed fires, FireSmart and wildland firefighter training, we can prevent fires from escalating and better equip communities to respond. This not only saves money by avoiding costly, large-scale emergencies but, more importantly, it minimizes the human impact during evacuations and recovery," said Nelson.[90]

[89] Ibid.

[90] Ibid.

Evacuation Procedures and Emergency Response

Witnesses from FNESS shared their perspectives on evacuations of First Nations communities caused by wildfires and on the challenges of post-evacuation recovery.

> *"One of my guiding principles as a wildland firefighter is to reduce suffering.* ***Displaced people are suffering.****"*
>
> *Matt Nelson*[91]

The committee heard that FNESS had recently assisted with an Emergency Operations Centre in a rural First Nations community during a major wildfire event in 2025. Nelson said that an evacuation order was made due to the limited local resources and coordination challenges: "Evacuees were split among three cities hundreds of kilometres apart, and families were separated from each other and community members from their support networks. This fragmentation not only amplified emotional distress but also complicated access to culturally safe services, such as traditional healing practices, foods and medicines. This scenario is not isolated. It reflects a systemic failure where First Nation voices are sidelined."[92]

> *"****To speak more on the realities of displacement, evacuations during wildfires save lives but they come at a tremendous human cost. The trauma extends far beyond the immediate evacuation.*** *Recovery is a stressful and arduous process that can span months or even years. Homes may be lost or damaged. Cultural sites and traditional harvesting grounds are often irreparably harmed. The psychological toll — stress, anxiety and trauma — continues long after fires are extinguished."*
>
> *Matt Nelson*[93]

Unlike FNESS, the committee heard that MN-S does not have access to federal emergency management funding. Richard Quintal, Chief Executive Officer, MN-S,

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[91] AGFO, *Evidence*, 21 October 2025 (Matt Nelson, Integrated Fuel Management Supervisor, First Nations' Emergency Services Society of British Columbia).

[92] Ibid.

[93] Ibid.

told the committee that the MN-S is always behind on evacuation response emergency preparedness:

> *"**With CIRNAC and Indigenous Services Canada in Ottawa, there is no emergency management funding for the Métis Nation—Saskatchewan**. Hearing our colleagues talk about a four-pillar approach and being prepared and able to work on preparedness, we are always behind the eight ball… For example, when the pandemic hit, last fire season, this fire season, it's always us reacting and trying to help where we can, so we aren't able to prepare. We are supporting citizens, whether we're dispatching equipment, such as sprinkler systems, hoses or air scrubbers to be able to provide support in the community, because sometimes our people stay back to fight and try to save their homes. **In one community alone, Denare Beach, we lost over 200 homes. That affects not only our community, but it also affects our Métis government because we're all related. We all know each other, so it's really tough**.*
>
> *We are working with Indigenous Services, trying to find a way to ensure that when we talk about emergency management — and with Public Safety Canada — that the Métis Nation is at the table and a part of that discussion."*
>
> *Richard Quintal*[94]

The committee heard that FNESS was working with CIFFC and the National Indigenous Fire Safety Council; however, Joe also said that more collaboration between provinces and territories was needed as each one has different expertise: "**For us, I have had the approval from my board of directors to expand some of our work as much as possible with our Métis and Inuit counterparts, not just in B.C. but across the country, but it comes down to funding again.**"[95]

Chief Sewepagaham told the committee that communication was one of the biggest challenges for Little Red River Cree Nation's wildfire evacuations: "My recommendation for my colleagues around the table is to make sure that communication is key. Ensure all your constituents, memberships or towns are given the right information at specific times. Essentially, it becomes redundant, but the more information that individuals and the memberships have — it calms them down

[94] AGFO, *Evidence*, 21 October 2025 (Richard Quintal, Chief Executive Officer, Métis Nation–Saskatchewan).
[95] AGFO, *Evidence*, 21 October 2025 (Francyne Joe, Executive Director, First Nations' Emergency Services Society of British Columbia).

to tell the truth about what is happening on the ground. Make sure you have an emergency response plan for wildfires, because that's one of the things with our evacuation plans — it helped us gain some humanity in getting our people out of danger."[96]

Barriers and Indigenous-Led Solutions

Overall, the committee heard about the many barriers that Indigenous communities face before, during and after wildfire emergencies including:

- the underutilization, the exclusion and the lack of recognition for traditional Indigenous knowledge and expertise — including on-the-ground Indigenous firefighting workforces — when fighting wildfires;
- lack of pre-positioned firefighting equipment, including hoses and fire retardant;
- the lack of timely responses from coordinating provincial, territorial and federal governments;
- the lack of timely evacuation aircraft and boats;
- the lack of communication during wildfire evacuations;
- the lack of mental health supports, given the trauma experienced by Indigenous communities;
- the lack of immediate and long-term funding for organizations such as FNESS; and
- the lack of access to federal emergency management funding for Métis peoples.

The committee also heard that governance complexity in the Northwest Territories, combined with the intensity of the 2023 wildfires, left gaps for Indigenous partners and communities such as K'ahsho Got'ine Charter Community, Fort Good Hope Dene Band.

[96] AGFO, *Evidence*, 7 November 2024 (Chief Conroy Sewepagaham, Little Red River Cree Nation).

> *"**The challenge and the gap that we have discovered in Northwest Territories is that we only have two reserves. The rest of the communities are not reserves, but they are Indigenous**. They didn't qualify for the EMAP [Emergency Management Assistance Program] funding, and they didn't qualify for the Public Safety funding [Disaster Financial Assistance Arrangements] because that went through the G.N.W.T. [Government of Northwest Territories]."*
>
> *Wayne Walsh*[97]

When asked about required changes, Tracy Desjarlais, Indigenous Liaison for Emergency Disaster Services, Salvation Army, told the committee:

> *"We need Indigenous-led solutions, community fire stewardship with training and funding of Indigenous fire crews for cultural and prescribed burns, clean-air shelters in schools and community centres, rapid water testing and emergency filtration systems after fires, culturally safe evacuation plans, designed and led by local nations and long-term mental health supports for families displaced by repeated evacuations.*
>
> ***Wildfires are not only environmental issues, they are sovereignty and public health issues. They are issues of Indigenous survival and leadership."***
>
> *Tracy Desjarlais*[98]

Under the Emergency Management Assistance Program, the FireSmart Canada program funding can support prescribed burning, cultural burning and vegetation clearing for First Nations that is based on their traditional Indigenous knowledge. "It's First Nations determining what's required and how to do it in their communities, and that is something that is absolutely supported across the country. As we've seen, it's really critical and important. It plays really big dividends in terms

[97] AGFO, *Evidence*, 18 April 2024 (Wayne Walsh, Director General, Northern Strategic Policy Branch, Crown-Indigenous Relations and Northern Affairs Canada).

[98] AGFO, *Evidence*, 21 October 2025 (Tracy Desjarlais, Indigenous Liaison for Emergency Disaster Services, Salvation Army).

of preparedness and mitigation," said James Moxon, Director General, Operations Branch, ISC.[99]

Based on lessons learned from the previous wildfire seasons, ISC said it was planning to do the following for the 2024 wildfire season:

- support the pre-positioning of critical equipment in high-risk areas, such as air purifiers;
- gather surge capacity both internally in the department, as well as support communities around surge capacity;
- support partners such as the First Nations' Emergency Services Society (FNESS) of British Columbia;
- deliver incident command training to support key operations; and
- provide prevention activities funded through their FireSmart Canada work.[100]

Furthermore, Nelson said: "A big piece would be to change the Indigenous Services Canada, or ISC, type of wording to unlock funding. If a community is under threat, the funding should be unlocked, not an imminent fire. That would be a really big help, because we could roll out the trailers early and prepare if we know that the fires are coming."[101]

In closing, Joe told the committee that wildfires are a call for change:

[99] AGFO, *Evidence*, 18 April 2024 (James Moxon, Director General, Operations Branch, Indigenous Services Canada).
[100] AGFO, *Evidence*, 18 April 2024 (Paula Hadden-Jokiel, Assistant Deputy Minister, Regional Operations Sector, Indigenous Services Canada).
[101] AGFO, *Evidence*, 21 October 2025 (Matt Nelson, Integrated Fuel Management Supervisor, First Nations' Emergency Services Society of British Columbia).

"They threaten not just our landscapes but our communities. The First Nations' Emergency Services Society of British Columbia recently submitted its pre-budget submission to the Government of Canada for the upcoming budget. We are requesting $27.9 million over three years. We met last month with various departments — Indigenous Services Canada, emergency services, the Minister of Artificial Intelligence and Digital Innovation, Environment and Climate Change Canada and many MPs — to secure support and provide background on the work we do.

Through collaborative, equitable action grounded in the four pillars, we can build a more resilient nation, one where First Nations thrive and displacement becomes a rarity rather than commonplace."

Francyne Joe[102]

[102] AGFO, *Evidence*, 21 October 2025 (Francyne Joe, Executive Director, First Nations' Emergency Services Society of British Columbia).

Chapter 3: Current Measures for Wildfire Mitigation, Management, Response and Recovery

Introduction

Constitutionally, provincial and territorial agencies are responsible for wildfire management in most of Canada's forests, whereas the federal government is responsible for wildfire management on federal lands – in national parks, on military bases and on First Nations reserves. However, witnesses told the committee that there is sometimes jurisdictional confusion with respect to these responsibilities.

The committee learned that no single entity is responsible for the vast array of wildfire issues in Canada. Wildfires are generally first managed at the local level (municipalities, fire departments). If additional assistance is required, local jurisdictions can request it from their respective province or territory. Direct wildfire response is a provincial or territorial jurisdiction. When a wildfire emergency escalates beyond a province or territory's capabilities, the province or territory can then seek assistance from the federal government. As such, emergency management is a shared jurisdiction between federal, provincial or territorial and Indigenous governments and their partners. Each escalation and application takes precious time while the fire is growing.

Federal Level

Public Safety Canada

The federal *Emergency Management Act* states that the Minister of Public Safety and Emergency Preparedness is responsible for "exercising leadership relating to emergency management in Canada by coordinating, among government institutions and in cooperation with the provinces and other entities, emergency management activities."[103] The *Emergency Management Act* acknowledges the shared nature of emergency management in Canada and also outlines the responsibilities of other federal ministers.

The committee learned that, in 2021, the Prime Minister appointed Canada's first-ever standalone Minister of Emergency Preparedness. Kenza El Bied, Director General, Policy and Outreach Directorate, Public Safety Canada, said that this role acknowledges the importance of emergency management in Canada, as well as the

[103] *Emergency Management Act*, S.C. 2007, c. 15.

need for "clear federal leadership in the face of the evolving risk landscape that Canadians and their communities continue to face."[104]

During a major wildfire event, provinces and territories can submit requests for federal assistance to the Minister of Public Safety. Requests can include support for:

- operation coordination;
- emergency evacuation, transportation and logistics;
- specialized response resources for wildland interface fires[105]; and,
- emergency public health, medical and social services.[106]

El Bied said that those requests prompt the department's Government Operations Centre to facilitate "interdepartmental consultation and coordination and ensures a coherent whole-of-government approach in responding to emergency management activities such as wildfires."[107]

The committee also heard that the *Federal Emergency Response Plan* "harmonizes federal emergency response efforts with those of the provinces and territories, non-governmental organizations and the private sector."[108]

Public Safety Canada's Disaster Financial Assistance Arrangements (DFAA) program provides financial assistance to provincial and territorial governments for response and recovery costs from large-scale natural disasters such as wildfires. The department also plays a key role through the Humanitarian Workforce Program in its work with non-governmental organizations such as the Canadian Red Cross, The Salvation Army, St. John Ambulance, Search and Rescue Volunteer Association of Canada and Team Rubicon Canada.

Natural Resources Canada

Through the Canadian Forest Service, Natural Resources Canada (NRCan) plays a pivotal role in wildland fire management in both monitoring and responding to wildfires. Glenn Hargrove, Assistant Deputy Minister, Canadian Forest Service, NRCan, told the committee that the department is the primary source of federal

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[104] AGFO, *Evidence*, 16 April 2024 (Kenza El Bied, Director General, Policy and Outreach Directorate, Public Safety Canada).

[105] The term 'wildland interface' refers to areas where homes and other human developments (e.g., towns or cities) meet or are intermixed with wildland fire fuels such as forests, brush, tundra, grass, shrubs, etc.

[106] Public Safety Canada, *Requests for federal assistance*.

[107] AGFO, *Evidence*, 16 April 2024 (Kenza El Bied, Director General, Policy and Outreach Directorate, Public Safety Canada).

[108] Ibid.

wildland fire technical and scientific expertise, and that it delivers essential functions to support wildland fire management, including:

- science and subject-matter expertise to inform government reporting and response;
- the delivery of tools and information for national situational awareness and decision support; and
- leadership on national strategic wildland fire policies and frameworks through partnerships with the provinces and territories.[109]

NRCan's Canadian Wildland Fire Information System creates daily fire weather and fire behaviour maps year-round, as well as hot spot maps throughout the wildfire season (May to September). They also look at fuel loads by pulling information from the Meteorological Service of Canada at Environment and Climate Change Canada (ECCC). The committee heard that this type of predictive analysis allows NRCan to provide decision support for the people fighting wildfires.

Hargrove said that NRCan works with the provinces, territories, the Canadian Interagency Forest Fire Centre (CIFFC) and international partners to ensure they are prepared to respond to fire emergencies and to build long-term resiliency. Under the Wildfire Resilient Futures Initiative — a five-year, $284-million initiative that was announced in 2022 as part of the National Adaptation Strategy — NRCan expanded the FireSmart Canada program for implementation in communities throughout the country.

[109] AGFO, *Evidence*, 16 April 2024 (Glenn Hargrove, Assistant Deputy Minister, Canadian Forest Service, Natural Resources Canada).

FireSmart Canada®

Founded in 1933, FireSmart Canada is a national public-awareness program that empowers communities to proactively manage and reduce wildfire risk.

The FireSmart manual and website provide homeowners, landscape planners and forest managers with advice on how to protect homes and communities located in or near forested areas. These resources provide tools to help Canadians increase public safety, protect structures and reduce evacuation and firefighting costs.

Parks Canada Agency

Parks Canada Agency (Parks Canada) protects over 450,000 square kilometres of land, water and ice. It is the only federal organization that manages and responds to wildfires on the ground in national parks and has similar roles and capabilities as provincial and territorial wildfire agencies.[110]

Through its National Fire Management Program, Parks Canada works closely with other levels of government on measures to reduce the risk of wildfire, enhance emergency preparedness and, when needed, provide personnel and equipment to support fire response. Parks Canada imports and exports resources, personnel and equipment from or to other Canadian fire management agencies including CIFFC.

The committee learned that Parks Canada has a national cadre of 300 fully trained wildland fire management personnel including wildland firefighters, support firefighters and incident management staff located throughout the country, in the areas that they cover.[111] Parks Canada also maintains a national firefighting equipment cache in Banff National Park in Alberta, including a complete inventory of fire suppression and management equipment held in a state of readiness for rapid deployment to Parks Canada-administered places and other areas of need across the country.

In addition to the national cache, large trailers filled with firefighting equipment are staged at different sites, ready to be deployed to active wildfire locations. Each national park or national historic site with wildfire risk maintains a local cache of equipment. Darlene Upton, Vice-President, Protected Areas Establishment and Conservation, Parks Canada, said that aircraft are an important tool in fighting

[110] AGFO, *Evidence*, 22 October 2024 (Darlene Upton, Vice-President, Protected Areas Establishment and Conservation, Parks Canada).
[111] Ibid.

wildfires and are used for water-bucketing, delivering supplies to the fire line and relaying important tactical information. “We have four helicopters on long-term contract during the fire season, based out of Prince Albert, Jasper and Wood Buffalo National Parks. They are deployed to other national parks as needed, and we can hire additional helicopters,” said Upton, adding that resource sharing and interjurisdictional cooperation is imperative.[112]

> *“The 2023 wildfire season was unprecedented for Canada and for Parks Canada. While deploying personnel and equipment to support wildfire-fighting efforts in Alberta, Quebec and the Northwest Territories in 2023, Parks Canada dealt with more than 100 fires of its own, burning through more than a million hectares.*
>
> *So far in 2024, Parks Canada has seen approximately 90 wildfires and 115,000 hectares burned in national parks. This includes the wildfires in Jasper National Park, which resulted in the loss of 30% of the Municipality of Jasper and approximately 32,700 hectares of forest burned.*
>
> *Additionally, Parks Canada has deployed personnel and resources to Newfoundland and Labrador, Manitoba, Alberta and the Northwest Territories, as well as the Yukon, in 2024. Recently, over Thanksgiving, we deployed firefighters to assist in the United States, in Montana.”*
>
> *Darlene Upton*[113]

Environment and Climate Change Canada

The committee learned that Environment and Climate Change Canada (ECCC) provides essential weather prediction services to the Government Operations Centre and other partners, including provincial and territorial counterparts and emergency management organizations, through regular engagement by its meteorologists.

Doris Fortin, Director General, Policy, Planning and Partnerships Directorate, Meteorological Service of Canada, ECCC, said that those experts “regularly provide information to the media and the public, and they frequently interact with public health and emergency management organizations to provide temperature,

[112] Ibid.

[113] Ibid.

precipitation, wind, air quality and smoke dispersion predictions and identify the potential impact of these factors to support real-time decision-making."[114]

ECCC's meteorologists are also engaged in emergency response. "Prior to and during these recent wildfire seasons, Environment and Climate Change Canada generated predictions, seasonal outlooks and weather conditions and provided key expertise, modelling and forecasting to support preparedness and responses to these wildfires as well as other severe weather conditions."[115] For example, in 2023, ECCC's weather prediction services, including its high-resolution smoke dispersion modelling, helped identify wildfire evacuation windows for Yellowknife's 20,000 residents, all of whom were evacuated and later returned safely.[116]

Collaboration Between Provincial, Territorial and Federal Governments and the Canadian Interagency Forest Fire Centre

Direct wildfire response is largely under provincial or territorial jurisdiction. The committee heard that provincial or territorial agencies – such as Alberta Wildfire, BC Wildfire Service, Société de protection contre les feux de forêt, among others – are responsible for suppressing wildfires, managing risks and collaborating with the Canadian Interagency Forest Fire Centre (CIFFC).

CIFFC is a not-for-profit corporation that is owned and operated by the federal, provincial and territorial governments. Their mandate is to support member agencies – including provincial and territorial agencies, Parks Canada and NRCan – in effective wildland fire management, ground response, prevention, mitigation and other services in Canada.

During times of heightened wildfire activity, the committee heard that CIFFC is responsible for coordinating resource sharing between the provinces and territories, and with international partners. Resources include personnel, equipment and aircraft.

Lisa Walker, Director, Resiliency and Partnerships, CIFFC, said that, in 2023, extreme weather and drought conditions in multiple jurisdictions exacerbated the demand for resources.[117] During that time, CIFFC mobilized approximately 5,500 resources from 12 countries to fill in where domestic resources had been exhausted. In

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[114] AGFO, *Evidence*, 22 October 2024 (Doris Fortin, Director General, Policy, Planning and Partnerships Directorate, Meteorological Service of Canada).

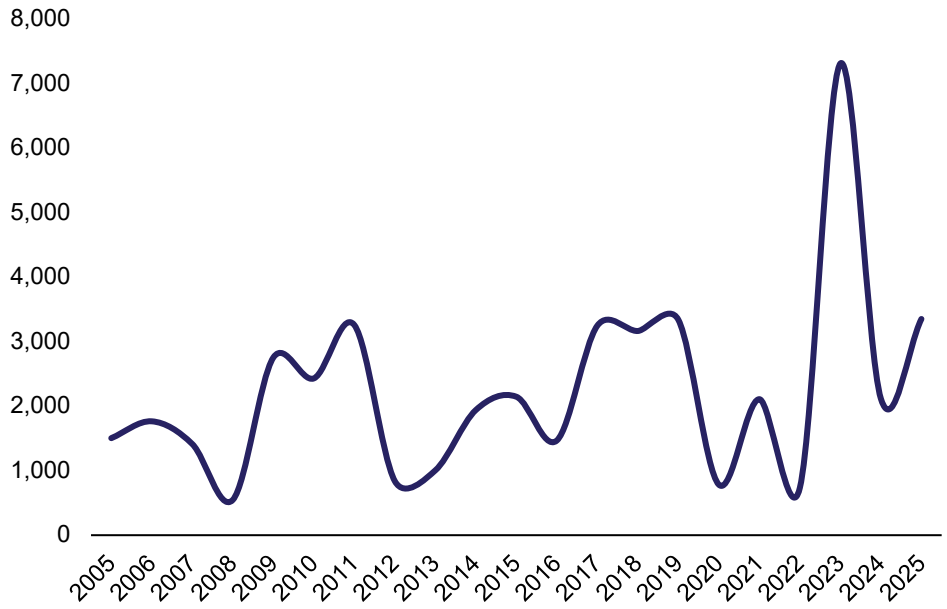
[115] Ibid.

[116] Ibid.

[117] AGFO, *Evidence*, 9 May 2024 (Lisa Walker, Director, Resiliency and Partnerships, Canadian Interagency Forest Fire Centre).

its annual reports, CIFFC provides data on wildfire mobilizations, which includes the exceptional numbers for the 2023 wildfire season: 7,311 international and domestic personnel, as well as the use of 17,150 lengths of hose, 809 pumps and 46 aircraft. Figure 9 illustrates the total number of CIFFC personnel that were mobilized to respond to wildfires between 2005 and 2024.

Figure 9 – Total Number of Canadian Interagency Forest Fire Centre Personnel Mobilized, 2005-2025



Source: Figure prepared in 2026, using data obtained from the Canadian Interagency Forest Fire Centre, *Personnel Mobilized, 1982-2026*. Data are current as of 4 June 2026.

Walker said it was difficult for CIFFC to secure the resources mentioned above because the availability of international resources was not always guaranteed.[118] Furthermore, Walker said that a shortage of management expertise in wildland fire and an aging fleet of wildfire aircraft in Canada make resource sharing more complex.[119]

The committee heard that CIFFC was committed to extending its efforts beyond the firefighting front lines. For example, Walker said that CIFFC's prevention and mitigation program, through FireSmart Canada, wants to be more proactive by supporting jurisdictions before the wildfires come and before people are impacted in their communities.

[118] Ibid.

[119] Ibid.

Other Resources, Strategies and Tools

Fuel management practices

The committee learned about different fuel management practices that are used to reduce living or dead forest fuels to mitigate wildfire risk and change fire behaviour. These practices are:

- stand thinning, including mechanical (i.e., using chainsaws or equipment to minimize the number of big trees or clear understory) and hand thinning, as well selecting specific trees;
- planting a mix of tree species and fire-resistant ones (e.g., aspen and other hardwoods);
- preserving natural firebreaks (e.g., wetlands, spruce stands, blueberry bushes);
- building new fire breaks (i.e., around vulnerable communities);
- select logging;
- prescribed fire, both on grass and in forests; and
- the re-introduction of Indigenous fire practices.

"There are key elements in the native landscape that regulated the flow of fire. We have lost many of these elements, and they are critical to restoring resilience. ***There used to be a lot of non-forest.*** *We have reconstructed many provinces, and what we see was the landscape was 25 to 70% non-forest depending upon the climate, the geography and the fire regimes.*

These non-forests were these burned areas, sparsely treed savannahs, wet-and-dry meadows, wetlands, prairies and the like, and all the factors limited the future flow of fire on that landscape.

It makes a lot of sense. It is a simple physics problem. ***These non-forest elements are low-energy fuel conditions. They break, and they govern the flow of intense fire across the landscape. The non-forest, the hardwood and the wetland elements actually allow the rest of the forest to deforest.***

We had this quiescent period in the climate and were able to put most of the fires out. Now that governor is off, the climate is warming, it is hotter, drier and winters are shorter. There is less snowpack and these trends will continue.

The punchline is, with climate change, these conditions will intensify with less snowpack, more fires, bigger fires, hotter fires. The question is: Can we restore resilience? We can. We can bring back these elements and put the governors back into the landscape that historically regulated the flow of fire."

Paul Hessburg[120]

Several witnesses agreed that prescribed fire is the most important risk-reduction tool for helping to manage or slow wildfire on the landscape and restoring ecological integrity. Prescribed fire (also known as prescribed burns or burning) is the planned use of fire to meet a set goal.[121]

[120] AGFO, *Evidence*, 28 October 2025 (Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, As an individual).

[121] Government of Canada, *Prescribed fire*.

Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, said that prescribed burns are "incredibly effective," but the conditions under which they are conducted are important to know as a starting point.[122]

"When we talk about prescribed fire, there is always a plan. There are objectives. There are weather and different indices and different conditions, as well as mapping," added Sonja Leverkus, Professor, Ecosystem Scientist and Prescribed Fire Specialist, Shifting Mosaics Consulting and Northern Fire WoRx Corporation, University of Alberta.[123]

Witnesses from Parks Canada said that the department has a robust program of prescribed burns that occurs every spring and fall, so long as the conditions allow for them.[124] Parks Canada also assesses different elements and values at risk (e.g., Trans Mountain Expansion, the ATCO hydro lines in Jasper National Park, CN Rail Lines, among others) during prescribed burns.[125] Other witnesses said that prescribed fires were being applied near Fort Nelson, British Columbia[126,127] and Aqam community north of Cranbrook, Alberta.[128]

The committee also heard that there has not been a lot of prescribed burning in Canada for some time. Robert Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd., said that, in 2023, about 7,000 hectares were applied in Canada and about 8 million hectares in the United States. Gray said that when 40% of the landscape is treated, the incidence of large fires decreases significantly:

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[122] AGFO, *Evidence*, 28 October 2025 (Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, As an individual).

[123] AGFO, *Evidence*, 1 October 2024 (Sonja Leverkus, Professor, Ecosystem Scientist and Prescribed Fire Specialist, Shifting Mosaics Consulting and Northern Fire WoRx Corporation, University of Alberta, As an individual).

[124] AGFO, *Evidence*, 22 October 2024 (Darlene Upton, Vice-President, Protected Areas Establishment and Conservation, Parks Canada).

[125] AGFO, *Evidence*, 22 October 2024 (Andrew Campbell, Senior Vice-President, Operations, Parks Canada).

[126] AGFO, *Evidence*, 1 October 2024 (Sonja Leverkus, Professor, Ecosystem Scientist and Prescribed Fire Specialist with Shifting Mosaics Consulting and Northern Fire WoRx Corporation and with the University of Alberta).

[127] AGFO, *Evidence*, 1 October 2024 (Jack Thiessen, Rancher, Grass Manager, Prescribed Fire Manager, Thiessen Bros. Ranch, As an individual).

[128] AGFO, *Evidence*, 7 October 2025 (Robert W. Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd.).

*"The analysis we've done is at the scale of 70,000-to-100,000-hectare landscapes, oftentimes watersheds**. When we model out optimization, where to put these treatments relative to where fire wants to flow, first we model fire-flow patterns based on weather, topography and fuels, and then we run optimization models and we place treatments.** Those treatments are anything from thinning and prescribed burning, to just prescribed burning to changing from conifers to hardwoods, anything that changes the behaviour of the fire. We run those optimizations. **We see that at about 40% of the landscape treated, the incidence of large fires decreases quite dramatically**."*

Robert Gray[129]

While the use of prescribed fire is embraced in certain regions, Jennifer Baltzer, Professor and Canada Research Chair in Forests and Global Change, Wilfrid Laurier University, told the committee that there are many places where there is a concern about prescribed fire and its effects on the landscape.[130]

"There is a big education piece for working to help support better understanding of the role of some of these management tools to help slow, if not prevent, fire from encroaching on communities, for example. A lot more work has to go into that. Often an under-resourced part of fire management is being able to communicate some of those things effectively to communities that are spread very thin," said Baltzer. "There is a strong interplay between doing the right work in the woods and managing the smoke down," added Hessburg.[131]

Wildfire aircraft: Water bombers

The committee learned that amphibious aircraft, known as water bombers, are an important tool in fighting wildfires. Water bombers are designed to attack fires in their early stages before they become large, fast-moving events. However, once a wildfire grows beyond a certain point, witnesses said that aircraft alone cannot stop the fire. They can only slow its advance and, at this stage, ground-based crews become essential.

Wildfire aviation in Canada is managed largely at the provincial or territorial level. Each province has developed its own approach; some own and operate fleets, while

[129] Ibid.

[130] AGFO, *Evidence*, 1 October 2024 (Jennifer Baltzer, Professor and Canada Research Chair in Forests and Global Change, Wilfrid Laurier University, As an individual).

[131] AGFO, *Evidence*, 28 October 2025 (Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, As an individual).

others contract private operators or rely on interprovincial support through CIFFC. Witnesses said that other challenges are the age of Canada's aircraft fleet, as well as the large federal investment that would be required to update the fleet or purchase more aircraft.

> *"CIFFC plays a valuable coordinating role, but decisions on deployment remain with the provincial authorities.*
>
> ***We are now seeing an increase in Level 5 alerts, meaning all available assets are fully deployed, and there is little capacity left for any interprovincial assistance. That trend should concern us all.***
>
> *[…]*
>
> *The provinces — not Canada necessarily, but the provinces — are still sitting on an ever-aging fleet. We still have 22 CL-215-type aircraft still flying to fight fires in Canada. That airplane should not fly. It is old and is going to require 20 to 30 hours of maintenance for every hour it is flown. It's not a value-added proposition. We should have made this decision years ago."*
>
> *John Gradek*[132]

The committee notes that Budget 2025 proposed an investment of $257.6 million over four years, starting in 2026-2027, to NRCan to lease four firefighting aircraft (waterbombers or other aircraft), to bolster provincial and territorial aerial firefighting capacity.[133] However, according to Gradek, there are at least 20 aircraft in Canada that need immediate replacement and the CL-415 types are not getting younger. "Those aircraft have some airtime left, yes, but we need to renew the fleet. That fleet has to be brought up to speed with the new technology and new capabilities that the DHC-515 represents," said Gradek.[134]

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[132] AGFO, *Evidence*, 30 October 2025 (John Gradek, Faculty Lecturer, Area Coordinator, Aviation Management and Supply Chain Management, School of Continuing Studies, McGill University, As an individual).

[133] Department of Finance Canada, *Canada Strong*, Budget 2025, p. 195.

[134] Ibid.

Calgary-based De Havilland Aircraft of Canada owns the rights to the Canadair water bombers including the CL-215, CL-415 and DHC-515 types. Neil Sweeney, Vice-President, Corporate Affairs, De Havilland Aircraft of Canada Limited, told the committee that, currently, there are approximately 160 Canadian-made Canadair scooping water bombers in operation around the world, with the aircraft in operation in six provinces: Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Newfoundland and Labrador.[135]

France, a long-time De Havilland Canada customer, has adopted a rapid response to wildfires within 10 minutes of alert to prevent fires from spreading out of control. "While 10 minutes is likely impractical for a country the size of Canada, having additional federal resources — pre-deployed across the country during fire seasons — would enable provinces to attack wildfires more aggressively and potentially lessen their severity," said Sweeney. The committee heard that the Canadair CL-415 is the "backbone" of France's approach and, in Sweeney's opinion, would be the ideal aircraft for a national government fleet in Canada.[136]

With a water scooping capacity of 6,000 litres, Sweeney said that the De Havilland Canadair 515, when operated in squadrons of four, can drop almost 25,000 litres of water on a fire at a time.[137] The committee learned that the next Canadian aircraft available would not be until after the Europeans who have 22 aircraft on order (i.e., France, Italy, Greece, Spain, Croatia and Portugal). Sweeney said that the Government of Manitoba announced a purchase of three aircraft and are officially in the queue. Production, however, is not expected to begin until 2027, at a production rate of approximately 10 aircraft per year.

Sweeney said: "In the meantime, infrastructure is needed, whether it be on the ground or in the air. My advice to Canada would be to go now and develop whatever you need to procure to accelerate wildfire fighting and management in the country."[138]

Emerging wildfire technologies

Witnesses told the committee that there is 'no one-size-fits-all attack' for wildfires. Other aerial tools exist such as small and large scoopers, helicopters, drones, as well as firefighting gel products.

Jacobus Benedik, General Manager, Scodev International b.v., from The Netherlands, said that while non-amphibious aircraft, such as air tankers and cargo

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[135] AGFO, *Evidence*, 30 October 2025 (Neil Sweeney, Vice-President, Corporate Affairs, De Havilland Aircraft of Canada Limited).

[136] Ibid.

[137] Ibid.

[138] Ibid.

airplanes, are widely available they cannot scoop water in flight.[139] Scodev International's solution is a patented system that enables air tankers and cargo planes to scoop water in flight while flying 10 to 15 metres above a water source.

The committee also learned about Fireswarm Solutions Inc., a British Columbia-based company, and its "national mission" to expand Canada's firefighting capacity using ultra heavy-lift drones with advanced flight technology to operate systems designed to integrate into existing wildfire agencies. "Our drones can carry up to 300 kilograms of water and rapidly deploy in those first critical 12 hours. Our goal is to give firefighters a new aerial tool that can fly when others can't, continually working 24/7 through smoke and in conditions where crewed aircraft are grounded," said Alex Deslauriers, Chief Executive Officer, FireSwarm Solutions Inc.[140]

Deslauriers believes that that this type of drone technology is now mature enough for wildfire response, emergency management and supporting Canadian sovereignty.[141] On the contrary, Gradek said that drones are "an evolving technology" and that we need to see them in production and deployed in service by CIFFC or the provinces.[142]

Deslauriers made several recommendations to the committee:

[139] AGFO, *Evidence*, 30 October 2025 (Jacobus Benedik, General Manager, Scodev International b.v.).

[140] AGFO, *Evidence*, 23 October 2025 (Alex Deslauriers, Chief Executive Officer, FireSwarm Solutions Inc.).

[141] Ibid.

[142] AGFO, *Evidence*, 30 October 2025 (John Gradek, Faculty Lecturer, Area Coordinator, Aviation Management and Supply Chain Management, School of Continuing Studies, McGill University, As an individual).

> *"**To start, we must move at the speed of this crisis.** By fast-tracking regulatory collaboration, give Transport Canada and NAV CANADA the resources to safely integrate automated wildfire drone operations into Canadian airspace so companies, like Strategic Natural Resource Group, can reaffirm investment decisions in this technology.*
>
> *Support partnerships with Indigenous and remote communities in high wildfire risk zones where the rapid response capacity of these drones would be a game changer. Direct national procurement agencies to invest in Canadian wildfire-fighting technology. Leverage dual-use funding; bolster federal innovation and defence programs, like the Strategic Innovation Fund, to support R&D and scale manufacturing here in Canada."*
>
> *Alex Deslauriers*[143]

Strategic Natural Resource Group from British Columbia, is a consulting and management company that is both employee- and majority-Indigenous-owned. Domenico Iannidinardo, Chief Executive Officer, said that the company's vision is to make automated aerial wildfire suppression a reality in Canada, supported by trained operators and Indigenous communities. Strategic Natural Resource supported Fireswarm Inc.'s recommendations and shared two additional, actionable priorities derived from their field experience:

[143] AGFO, *Evidence*, 23 October 2025 (Alex Deslauriers, Chief Executive Officer, FireSwarm Solutions Inc.).

"First, interprovincial crew mobility. This past summer, our wildfire crews in British Columbia were ready to deploy eastward to help in Manitoba. Despite the urgent need, we were blocked by inconsistent provincial administrative processes.

These are highly trained professionals, and soon, they'll be the operators managing ultra-heavy lift drones like FireSwarm's. We urgently need a system that allows wildfire personnel to move seamlessly across provincial borders.

This coordination could be guided through policy from the Canadian Council of Forest Ministers, which B.C. currently chairs, and it would instantly expand Canada's operational capacity.

Second, we need a national model for standby cost and training reimbursement for private and Indigenous wildfire crews. Canada's public firefighting agencies do heroic work, but they're increasingly stretched too thin. Private and Indigenous crews are a partially untapped force that could be mobilized much more quickly and safely if there were an established baseline support for them."

Domenico Iannidinardo[144]

Finally, the committee learned about emerging firefighting gel technologies such as Eco-Gel, a 100%-bio-based product that acts as both a fire retardant and fire suppressant, which was created by FireRein Inc. in Napanee, Ontario. According to Wayne Maddever, Chief Executive Officer, FireRein Inc., 75% of the product's composition is Canadian-based agricultural products, namely canola and corn starch.[145] In addition, Maddever said that Eco-Gel is the only firefighting water enhancer in the world to have designations with verification from both the Underwriters Laboratories and the United States Food and Drug Administration for bio and efficacy on fires.

[144]AGFO, *Evidence*, 23 October 2025 (Domenico Iannidinardo, Chief Executive Officer, Strategic Natural Resource Group).

[145] AGFO, *Evidence*, 9 October 2025 (Wayne Maddever, Chief Executive Officer, FireRein Inc.).

> *"Eco-Gel was developed by FireRein's founders, who are all firefighters, to replace the toxic PFAS [per- and polyfluoroalkyl substances] foams* ***which have now been clearly demonstrated to cause cancer in firefighters, who suffer from the highest rate of death from occupational cancer.*** *Not only are these PFAS foams toxic, but we hear about them every day as the "forever chemicals." Every airport and military base in Canada that used foams is now contaminated with these materials as the materials seeped into the groundwater after fires."*
>
> *Wayne Maddever*[146]

The committee heard that FireRein Inc. has found customers for Eco-Gel in Canada, the United States and South America and that the company was recently evaluated by the Canadian military through the federal government's Innovative Solutions Canada program. Maddever said that FireRein Inc. is now qualified to bid on government contracts. Although Eco-Gel was used during the 2024 Jasper wildfires to protect infrastructure such as CN rail tracks, "the penetration of this highly effective and environmentally safe product into the wildfire-fighting market has been hindered in large part by bureaucratic adherence to U.S. standards in the absence of Canadian standards," said Maddever.[147]

In a brief to the committee, Gel Systems Canada Inc., a Saskatchewan-based fire gel company, also said that one of their biggest challenges was the United States Forest Service Qualified Products List, which is the benchmark for Canadian operations. Gel Systems Canada Inc. said that the qualification process is lengthy, expensive and poses a barrier for Canadian companies, making it very difficult to introduce new products. "Because of this, innovation in the wildfire industry has focused on improving aircraft and application systems, and less on the products they apply," said Gel Systems Canada.[148]

[146] Ibid.

[147] Ibid.

[148] AGFO, *Brief*, received 3 November 2025 (Gel Systems Canada Inc.)

Chapter 4: The Impact of Wildfires on Canada's Forestry Industry

Introduction

Canada is home to 369 million hectares of forest. This forest is over 90% publicly owned, comprises 24% of the world's boreal forest and 9% of the world's total forest, and results in a per-capita forest area of more than 9 hectares per person.[149] Forests are a cornerstone of Canada's economy and generate wide-ranging biodiversity, carbon and human health benefits.

In 2024, Canada's forest sector contributed $30.7 billion to the country's nominal gross domestic product (GDP), representing a decrease of 1.1% compared with 2023.[150] The sector employed 194,040 people – including more than 11,000 Indigenous people – and exported over $36 billion in products in 2024.[151] Over 300 communities in Canada rely on the forest sector for employment and long-term prosperity.[152]

The committee heard that wildfires are destroying valuable timber, damaging industrial infrastructure and disrupting supply chains that support forest-dependent regional economies throughout Canada:

> *"The combined pressures of fire, drought and pests are projected to significantly reduce harvestable timber volumes over time, lowering yields, reducing employment in forestry-dependent areas, and constraining the supply of wood products for both domestic use and import.* ***Our analysis at the Canadian Climate Institute suggests that even under a best-case scenario, these pressures will reduce the forest sector's GDP by more than $2 billion annually over the next couple of decades.****"*
>
> *Ryan Ness*[153]

[149] Natural Resources Canada, *The State of Canada's Forests Annual Report 2025*.

[150] Ibid.

[151] Ibid.

[152] Ibid.

[153] AGFO, *Evidence*, 9 October 2025 (Ryan Ness, Research Director on Adaptation, Canadian Climate Institute).

Robert Gray, Wildland Fire Ecologist from R.W. Gray Consulting Ltd., added: "In B.C., wildfires in the past eight years have severely impacted a significant proportion of the timber harvesting land base. Coupled with millions of hectares of insect damage and past harvest, at some point in the not-too-distant future, the industry will cease to be economically viable and sustainable."[154]

According to Gray, the impact of wildfires on rural, single-industry communities and the province of British Columbia itself will be "catastrophic economically and socially."[155] Gray said that a healthy and diverse forest industry is needed to help solve the wildfire crisis; however, forest practices and economics must change to make the industry an effective tool.

> *"The scale of the fuels problem is immense and daunting, but we don't need to treat everywhere. To be truly effective, harvest needs to take place in specific places on the landscape and for specific reasons.* ***In other words, the primary objective can't be economics — highest volume at lowest cost — it needs to be wildfire mitigation.****"*
>
> *Robert Gray*[156]

Gray told the committee that the forest and energy sectors could be harmonized and hybridized by looking at landscape forest management through a forest product and energy sector lens from the outset instead of two separate actions.[157] Gray also mentioned that, in British Columbia, there is a new interest in planting hardwoods, such as aspen, instead of softwoods to prevent wildfire spread.[158] Hardwoods burn faster than softwoods. Pulp, oriented strand board or any other number of products can be produced from aspen.

In collaboration with the BC Wildfire Service and the Government of British Columbia, the committee heard that Gray and colleagues have modelled and shown that aspen of a certain age, structure and size has a significant impact on fire spread. Gray suggested that the forest industry replenish burned areas by planting a concentration of hardwoods, but also said that the industry must first be convinced that there is a product and market there:

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[154] AGFO, *Evidence*, 7 October 2025 (Robert Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd.).
[155] Ibid.
[156] Ibid.
[157] Ibid.
[158] Ibid.

> ***"It has been so conifer focused for so long. If there's something the feds can do to stimulate that, great. The fire science behind it says to do it, make the shift to hardwoods, but the industry is addicted to conifers, and getting them to move off of that has been difficult."***
>
> *Robert Gray*[159]

Perspectives from forestry producers and private forest owners

Forest products producers (Crown land)

The committee heard from witnesses from the Forest Products Association of Canada (FPAC), which represents Canada's wood, pulp, paper and wood-based bioproducts producers nationally and internationally in government, trade and environmental affairs.

Eric Johnson, Vice President, Government Relations, FPAC, said that the forest sector plays a crucial role in mitigating the devastating impacts of wildfires. For instance, the committee learned that climate-smart forestry – a holistic approach that integrates forest management with climate change mitigation and adaptation – can enhance forest resilience and reduce fire fuel loads.[160] Practices include afforestation, forest thinning and the use of FireSmart techniques. By scaling up federal wildfire mitigation and prevention activities, Johnson said that wildfire risks can be significantly reduced on the land base.[161] According to Johnson, the Wildfire Resilient Futures Initiative was a solid first step, but more investment is needed throughout the country.[162]

FPAC made four recommendations to the committee to effectively address the wildfire crisis in Canada:

- scale up federal forest fire mitigation and prevention activities by investing more money in initiatives such as the Wildfire Resilient Futures Initiative. The federal government should emulate successful models, such as the Forest

[159] Ibid.

[160] AGFO, *Evidence*, 7 November 2024 (Eric Johnson, Vice President, Government Relations, Forest Products Association of Canada).

[161] Ibid.

[162] Ibid.

Enhancement Society of BC, prioritize fire prevention as a national policy objective and amend regulatory barriers to this objective;

- support the development and use of best-in-class predictive fire models that are accurate, up-to-date and adaptable to enable forested communities, First Nations, businesses and the public to make informed decisions for FireSmart planning, focusing on regionalized models that reflect recent fire patterns;
- enhance capacity for Indigenous-led fire management by extending financial and logistical support to Indigenous communities, utilizing existing Indigenous clauses in the Wildfire Resilient Futures Initiative and the Fighting and Managing Wildfires in a Changing Climate Program; and
- convene stakeholders for a policy-focused conference to address wildfires in Canada.[163]

Private forest owners

The committee also heard from the Canadian Forest Owners (CFO), which represents 450,000 private landowners throughout Canada. The CFO manages 10% of the forest land base (or 25 million hectares) from Prince Edward Island to Vancouver Island, an area approximately the size of Sweden and Finland together. The CFO produces about 20% of Canada's forest volume (equivalent to one in five logging trucks coming from private land).

Andrew DeVries, Chief Executive Director, CFO, said that the CFO creates an economic benefit from these lands of $14.5 billion in revenue and 38,500 direct jobs.[164] "Additionally, these lands have been managed for 100, 150 or even 200 years, in many cases handed down within families. These lands provide critical ecological goods and services, such as recreation, fish and wildlife habitat, non-timber forest products, water quality management and what we're talking about today — fire resilience," said DeVries.[165]

The committee learned that many private forest landowners — who own anywhere from 10 acres to tens of thousands of acres — are located near Canadian towns and cities, and are often the interface between Crown land and the communities themselves.

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[163] Ibid.

[164] AGFO, *Evidence*, 7 November 2024 (Andrew De Vries, Chief Executive Officer, Canadian Forest Owners).

[165] Ibid.

> *"Private forests across Canada are managed and regulated differently than Crown forests and play a critical role in our forest land base across the country. Generally, forest owners have been managing their lands in a FireSmart way for a long time, and if we continue to offer them tools and incentives to do so, they will continue to do so."*
>
> *Andrew De Vries* [166]

For example, the committee heard that the CFO supports tax-based and other incentives to incentivize private forest landowners to allow for additional forest management on their lands to reduce volumes of fuels associated with wildfires.

"[W]e know if we get engaged in more stand tending, pre-commercial and commercial thinning, we will see an abundance of woody biomass across the country," said DeVries, who also agreed that the Forest Enhancement Society of BC is an example of a program that works well.[167] Devries told the committee: "We would be supportive of those programs and markets that would accept the wood from these stand tendings. This would include pellet plants, pulp and paper plants, cogeneration. We would also encourage innovative markets, including biofuels, bioplastics and biochars. Those would all offer market-based solutions to this challenge."[168]

[166] Ibid.

[167] Ibid.

[168] Ibid.

"Currently, our members across the country are active in fire stand management but also in training and forest firefighting. Many of our members have light or heavy equipment on their lands to help with fighting wildfires. Many of our larger and smaller members have invested in sophisticated equipment, such as weather monitoring stations, fire predictive stations to help manage their lands. They work closely with the Crown landowners, managers, the provinces, and one of our larger members has their own planes, helicopter and trucks ready to fight fires wherever they may occur, whether on private land or Crown land.

Our provincial woodlot associations, representing every province in the country, are actively engaged in providing FireSmart training and firefighter training to their members, contractors and youth. As I mentioned, our members are investing in new technologies to help move this along."

Andrew DeVries[169]

De Vries told the committee that the CFO would like to see the 2 Billion Trees Program (2BT) "retooled" to help with pre- wildfire resiliency. The federal government's 2BT Program provided financial support to organizations to plant trees over 10 years. However, the committee notes that, as announced in the 2025 Budget, the federal government cancelled the program.

For post-wildfire incentives, the CFO has been advocating for a "personal silvicultural savings and investment plan" (PSSIP) that would be similar to a Registered Retirement Savings Plan (RRSP):

"Many smaller forest owners will harvest once or twice a lifetime. They experience a spike in income; that income is taxed, usually at a high rate, and then that income is not directly available to them. The PSSIP is like an RRSP in that we would be able to recognize the benefits of that harvest income, invest it in a separate account and that account could be drawn on over the years to reforest, improve road infrastructure and improve fire resiliency," said DeVries who added that both France and Norway have similar programs to incentivize long-term savings for forest managers.[170]

[169] Ibid.

[170] Ibid.

Forestry seedling producers

The committee learned about the importance of post-wildfire recovery from Randy Fournier, Chief Executive Officer, PRT Growing Services Ltd. PRT Growing Services Ltd. is North America's largest forest seedling producer, enabling next-generation forests through its nurseries by producing over 600 million seedlings annually that sustain the environment and habitats while also underpinning the rural economy.

Fournier said: "[w]hether non-commercial or commercial, forest infrastructure is a valuable Canadian asset contributing significantly to economic wealth, environmental health and cultural heritage."[171] However, according to Fournier, there is a gap in Canada's approach to forest recovery after major wildfire events, hurricanes, or an epidemic of mountain pine beetle.[172]

> *"Canada's abundance of trees creates complacency. We must value trees, not merely like them.* ***Canada requires a national policy solution valuing forest infrastructure as an economic engine and ecological keystone that, when lost, is quickly restored."***
>
> *Randy Fournier*[173]

Fournier said: "[a]fter two years of historic wildfires [2023 and 2024], the underutilization of Canada's surplus nursery capacity accentuates our insufficient response to lost trees."[174] Fournier made the following recommendations to the committee:

- recognize forests as critical infrastructure;
- redeploy the 2 Billion Trees program funds to maximize post-disaster reforestation;
- expedite land access; and

[171] AGFO, *Evidence*, 7 November 2024 (Randy Fournier, Chief Executive Officer, PRT Growing Services Ltd.).
[172] Ibid.
[173] Ibid.
[174] Ibid.

- host private reforestation on Crown land, voluntary private investment options for timely replanting, private-funded replanting on Crown land to meet their sustainability or carbon-offset-type goals.[175]

Fournier said that the above-mentioned themes and recommendations recognize that Canada's current reforestation approach and pace are insufficient for the scale of wildfire destruction:

> *"Without policy-driven timely reforestation, Canada's vast wildfire-damaged lands will degrade and compromise the environment, economic stability and rural and Indigenous prosperity.*
>
> *PRT wants to contribute to a national solution without subsidies. With effective federal resolve to engage resources and industry for post-disaster response, Canada can sustain economic and environmental wealth by recognizing forests are renewable infrastructure of national wealth and environmental balance."*
>
> *Randy Fournier*[176]

Étienne Bélanger, Vice President, Indigenous Relations and Forestry, FPAC, agreed that commercial forestry be part of re-planting efforts post-wildfire.[177]

Perspectives from the fur trapping industry

The committee heard from Doug Chiasson, Executive Director, Fur Institute of Canada. The Fur Institute of Canada is Canada's lead expert on humane trap research and furbearer conservation and is the official trap testing agency for the federal, provincial and territorial governments.

Chiasson said that Canada is home to tens of thousands of trappers who target a range of furbearers: from wetland semi-aquatics (beavers and otters) to forest dwellers (fishers and martens), to canines (wolves and lynx) and many other species in between.[178]

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[175] Ibid.

[176] Ibid.

[177] AGFO, *Evidence*, 7 November 2024 (Étienne Bélanger, Vice President, Indigenous Relations and Forestry, Forest Products Association of Canada).

[178] AGFO, *Evidence*, 28 November 2024 (Doug Chiasson, Executive Director, Fur Institute of Canada).

> *"Trapping is one of the few industries which works in concert with the natural rhythm of the forest. Fire is an essential part of the lifecycle of a healthy forest. Healthy forests are essential to producing healthy furbearer populations, which then support trappers and the international fur market, which holds Canadian furs in incredibly high regard."*
>
> *Doug Chiasson*[179]

The committee learned that wildfires have a very real impact on trappers. For example, Chiasson said that wildfires can destroy important trapping infrastructure, including forest roads and trappers' cabins. This can lead to mid- to long-term inaccessibility for trappers to their traplines. Trappers can also incur rebuilding costs for cabins and the cost of lost items of sentimental or cultural value on their traplines because of wildfires.

Chiasson said that some organizations – such as the Cree Trappers' Association in northern Quebec – have organized their own insurance programs to reduce costs to members who have been impacted by wildfires. Those organizations, however, still rely on "large southern insurance companies", who may decide that the risk of insuring trapline cabins is too high.[180]

For families in remote, rural and Indigenous communities, wildfires pose significant long-term impacts on their income. For instance, citing a 2020 report on climate change impacts on trappers in the Yukon, Chiasson said that over 50% of trappers reported that wildfires had impacted their traplines in the preceding 10 years, 20% cent of trappers were unable to trap in the following seasons and 23% of trappers had lost property to wildfires.[181]

Chiasson also mentioned how wildfires impact forests and furbearers themselves. The committee learned that some species, such as coyotes, are highly adaptable, whereas others have preferences. Lynx prefer mid-aged forests under 20 years old and are rarely found in mature forest stands. Marten can be affected by wildfire as they prefer forests with overstory over 100 years old. Other furbearers, such as fishers, use mature forests for denning, but forage in earlier successional forests.

Chiasson said that while trapping and furbearer management are mostly a provincial jurisdiction, "[t]he federal government could do much more to support the sector as

[179] Ibid.

[180] Ibid.

[181] Ibid.

the sector makes up an important part of the forest economy."[182] The Canadian Forest Service is mandated as the national and international voice for Canada's forest sector; however, in Chiasson's opinion, it instead acts as the voice for Canada's forest tree sector: "Non-timber forest products, such as furs, are a growing part of the global conversation around biodiversity conservation and livelihood."[183]

Chiasson told the committee that the Canadian Forest Service could, through the Fur Institute of Canada and academic partners, "[f]und better science to underpin evidence-based decision making on wildfire management and its effect on furbearers and the economic benefits of trapping."[184] Finally, Chiasson said that supporting the use and wearing of fur in Canada would also help to provide better prices to trappers, thus allowing them to better withstand the economic impacts of wildfires.

Barriers and forestry-sector solutions

Witnesses told the committee that Canada's history of fire suppression is a barrier to wildfire resilience and forest regeneration:

"Fire suppression has contributed in part to the intensity, size and the lack of ability to control the fires we are now experiencing. Because we've been very effective at putting out fires, we have removed a large proportion of fires from the landscape. In my lifetime in B.C., 92% of fires have been put out, which means I have only experienced and witnessed the top 8% of fires that exceeded fire suppression capability under hot, dry, windy conditions," said Lori Daniels, Koerner Chair in Wildfire Coexistence, Forestry, University of British Columbia.[185]

Gray added that the total cost of fire is also expected to increase: "This includes the direct cost of suppression plus the many indirect costs of wildfire such as physical and emotional health of civilians and firefighters, property and infrastructure damage, business loss, evacuation costs, resource losses, et cetera. Suppression costs are tracked by provincial and territorial agencies, but indirect costs aren't. Economists estimate that indirect costs can range from 1.5 to 20 times the direct costs for any one particular fire. This cost to society is substantial. For example, the estimated annual economic burden from wildfire in the U.S. ranges from $394 to $894 billion per year."[186]

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[182] Ibid.

[183] Ibid.

[184] Ibid.

[185] AGFO, *Evidence*, 28 November 2024 (Lori Daniels, Koerner Chair in Wildfire Coexistence, Forestry, University of British Columbia, As an individual).

[186] AGFO, *Evidence*, 7 October 2025 (Robert Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd.).

While Baltzer said that climate change mitigation is the long-term solution, short-term management interventions such as stand thinning, prescribed fire and the reintroduction of Indigenous fire practices, could help to reduce fuel loads in critical locations, but not everywhere, given the vastness of Canada's forests.[187]

> *"If you do a prescribed fire, you are burning that kindling and not the big wood, so the many tonnes that might be down there are unavailable to burn; doing things like thinning the forest at a significant scale and creating patterns of open-canopy conditions on the dry slopes and the ridge tops; a more complex forest in the valley bottoms and the north-facing aspects. That interrupts the flow of fire on that landscape, and then there is no one-and-done. You actually have to continue to do that kind of maintenance work.*
>
> ***In a word, everything I learned in forestry school I have had to relearn because the period of time when we had a quiescent climate is over, and that means we have to do the things that actually re-govern the flow of fire, that downplays severe fire behaviour."***
>
> *Paul Hessburg*[188]

Furthermore, witnesses underlined the need for stable, adequate funding and incentives to build wildfire management capacity and carry out the work. For example, Gray mentioned programs such as the Weston Family Foundation-funded Canadian Prescribed Fire Training Program, recently established at the University of British Columbia Okanagan campus, are a critical first step, "but without stable funding we'll never be able to tackle the crisis at the appropriate pace and scale."[189]

In a similar vein, witnesses highlighted the need for long-term funding for Indigenous communities for wildfire management. In a brief, the Honourable Ian Bushie, Minister of Natural Resources and Indigenous Futures, Government of

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[187] AGFO, *Evidence*, 1 October 2024 (Jennifer Baltzer, Professor and Canada Research Chair in Forests and Global Change, Wilfrid Laurier University, As an individual).

[188] AGFO, *Evidence*, 28 October 2025 (Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, As an individual).

[189] AGFO, *Evidence*, 7 October 2025 (Robert Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd.).

Manitoba, wrote: "Continued investment in Indigenous Guardians programs is also critical, especially as current funding is scheduled to end in 2026. Meaningful Indigenous involvement in decision-making is foundational to building resilient landscapes and ensuring that resource management recognizes and affirms Indigenous rights." In addition, Eric Johnson, Vice President of Government Relations, FPAC, said: "The federal government should provide financial and logistical support to facilitate Indigenous leadership in developing and implementing fire-related strategic actions."[190]

Hargrove told the committee that through the Fighting and Managing Wildfires in a Changing Climate Program: Training Fund, the federal government was providing $28 million over five years, starting in 2022-2023, in the training of 1,000 new community-based firefighters. "So far through phase 1, we have already trained over 600, as well as 125 Indigenous fire guardians," said Hargrove. NRCan has also funding for First Nation communities to train First Nation teams in wildfire-fighting capabilities.

Hargrove also mentioned WildFireSat, which is a collaboration between NRCan, the Canadian Space Agency and ECCC to create the first purpose-built operational satellite system for monitoring wildfires in the world and to be launched in 2029.

> *"Reducing wildland fire risk requires us to work with all orders of government, including Indigenous governments, the private sector and, ultimately, all Canadians to understand the steps they can take to mitigate wildland fires and build resilience."*
>
> *Glenn Hargrove*[191]

Finally, witnesses mentioned the economic barriers that the forest sector faces with respect to bioeconomy opportunities. "We need to support innovative bioeconomy and bioenergy sectors that would overcome the economic barriers that are currently slowing the proactive mitigation that could be taking place, the treatments around communities that are much needed," said Daniels.[192]

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[190] AGFO, *Evidence*, 7 November 2024 (Eric Johnson, Vice President of Government Relations, Forest Products Association of Canada).

[191] Ibid.

[192] AGFO, *Evidence*, 28 November 2024 (Lori Daniels, Koerner Chair in Wildfire Coexistence, Forestry, University of British Columbia, As an individual).

Johnson added that there is an "easy way" to put value on the forest: "Half of a tree's weight is carbon. We have a price on carbon. We can do very simple math to understand how much that value is. We could be building houses out of that and restoring it. We could be manufacturing pulp and paper out of that and valuing that. Bioenergy, district heating and building sources for that fibre so we can go in and do those other things on the land base that manage for fire first and have a market for that fibre afterwards is what is important to make sure we have the whole ecosystem for our members." [193]

Meaghan Seagrave, Executive Director, Bioindustrial Innovation Canada, added that, if we make better use of the residuals that are currently lying on the ground, especially from a forestry and agricultural perspective, we could help cut the risk of that fuel for forest fires:

> *"Let me throw one quick example out at you. We currently export 90% of the soy we grow in this country to other markets, primarily the U.S. That soybean gets crushed and turned into an oil, blown into foams or made into car seats, and then we import it back to Canada and put it into cars within our automotive industry. We can do all of those pieces here in Canada. That's one example.*
>
> *We do the same thing with lumber and timber. We are still a country of fishers, farmers and foresters. We need to shift our focus from being an export-specific nation to a transformation nation and export the value-added product. That will decrease the carbon intensity of all of our manufacturing value chains and decrease the greenhouse emissions not just in Canada but globally."*
>
> *Meaghan Seagrave*[194]

[193] AGFO, *Evidence*, 7 November 2024 (Eric Johnson, Vice President, Government Relations, Forest Products Association of Canada).

[194] AGFO, *Evidence*, 9 October 2025 (Meaghan Seagrave, Executive Director, Bioindustrial Innovation Canada).

Chapter 5: The Impact of Wildfires on Canada's Agriculture and Agri-Food Sector

Introduction

Canada is an agricultural nation. In 2024, the entire agriculture and agri-food system employed 2.3 million people, provided 1 in 9 jobs in Canada and generated $149.2 billion (approximately 7%) of the country's gross domestic product (GDP).[195] In the same year, Canada exported approximately $100.3 billion in agriculture and food products (including raw agricultural materials, fish and seafood, and processed foods) to over 200 countries and was the world's ninth largest exporter of agri-food, fish and seafood products.[196]

While Canada's food system is resilient, innovative, sustains the environment and supports the economy, the committee heard that is also increasingly vulnerable to the impacts of climate change including drought—the underlaying condition for wildfires.

> *"Wildfires, droughts and floods go hand in hand with climate change. Our warming planet is warming faster in Canada than anywhere else, and the further north you go or the higher the elevation you go. Warmer winters mean shallower snowpacks, earlier springs and more intense early summer wildfires. Hotter summers mean drought, low soil moisture, more extreme and erratic rainstorms and more wildfires."*
>
> *John Pomeroy*[197]

Witnesses told the committee that wildfires have impacted primary agriculture, particularly in British Columbia, Alberta, Saskatchewan and Manitoba, as well as the North, in recent years. Primary agriculture—work that is carried out within the boundaries of a farm, ranch, greenhouse, or nursery—is an economic driver and

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[195] Government of Canada, *Overview of Canada's agriculture and agri-food sector*.

[196] Ibid.

[197] AGFO, *Evidence*, 7 October 2025 (John Pomeroy, Distinguished Professor of Geography, Director of the Centre for Hydrology, University of Saskatchewan, As an individual).

highly diversified throughout the country. In 2024, Canadian primary agriculture comprised 189,874 farms, provided 223,000 jobs in Canada and generated $31.7 billion (1.4%) of the GDP.[198] Farms covered 62.2 million hectares, or 6.2% of Canada's total land base.[199]

The committee heard that the historic 2023 wildfire season impacted Canada's farmers, ranchers and growers (also known as producers) differently. For example, officials from AAFC reported that:

- in the Northwest Territories, approximately 5,000 poultry animals were lost due to heavy smoke;
- in British Columbia, around 1,000 cattle were lost while thousands of livestock were temporarily relocated away from fire lines to auction houses and agricultural fairgrounds; and
- in parts of Central Canada, fencing and pastureland were destroyed due to wildfires, further exacerbating hay shortages which were created by excessive drought levels.[200]

AAFC leverages ECCC's prediction modeling output by monitoring and reporting on drought conditions throughout the country in the monthly Canadian Drought Monitor and the quarterly National Agroclimate Risk Report. These reports are useful tools for assessing conditions and identifying where fire risks are high throughout the country. Both resources are publicly available on AAFC's website.

> *"The department's Canadian Drought Monitor report indicates that,* ***as of the end of March [2024], 82% of the country's agricultural landscape is currently classified as abnormally dry to moderate and exceptional drought conditions****."*
>
> *Nathalie Gour*[201]

As wildfire seasons grow longer and fiercer, producers face significant economic and environmental challenges. Overall, the committee heard that wildfires have destroyed crops, pastureland, livestock, machinery and infrastructure. Exposure to wildfire smoke affects human health and reduces sunlight, which slows crop growth and pollination. Wildfires also contribute to soil degradation. Beyond physical

198 Government of Canada, *Overview of Canada's agriculture and agri-food sector*.

199 Ibid.

200 AGFO, *Evidence*, 16 April 2024 (Nathalie Gour, Director General, Regional Operations and Emergency Management Directorate, Agriculture and Agri-Food Canada).

201 Ibid.

damage, the committee also heard that wildfires cause financial stress, rising insurance costs and mental health strain for Canada's farming communities.

Under AAFC's Sustainable Canadian Agricultural Partnership (Sustainable CAP), producers have access to a suite of federal-provincial-territorial business risk management (BRM) programs that provide protection against income and production losses, helping them to manage risks – such as wildfires – which can threaten the viability of their farms.[202] One such program, AgriRecovery, is a disaster relief framework intended to work together with the core BRM programs, to help producers recover from natural disasters.

Perspectives from primary agriculture

The committee heard from Jill Verwey, First Vice-President, Canadian Federation of Agriculture (CFA), and farmer from Manitoba. The CFA is Canada's largest general farm organization, representing approximately 190,000 farm families throughout the country. In 2022, when a major wildfire tore through the Okanagan Valley, British Columbia, Verwey said that smoke exposure altered grape development, affecting both harvest timing and flavour profiles. "This has had long-term implications for wine quality and marketability in one of Canada's most productive wine regions. This is just one recent example."[203]

Verwey told the committee that, in June 2025, Manitoba health officials warned the public about the serious health risks that exposure to thick smoke from wildfires posed to farmers and livestock.[204] "Farmers were advised to wear N95 masks, and livestock showed signs of respiratory distress. Thousands of people and animals were evacuated," stated Verwey.[205]

"**When farmers are displaced — especially evacuating high-precision operations, including greenhouses and livestock — they often return to devastation**. When smoke persists for several days and weeks, it negatively affects crop yields, both in quantity and quality, as well as the health of livestock and pollinators," said Verwey.[206] "Furthermore, Verwey mentioned that ash from wildfires can have a negative effect on soil health, affecting future growing seasons.

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[202] The federal, provincial, and territorial governments negotiate five-year funding agreements—the recent $3.5 billion, five-year Sustainable CAP (2023 to 2028)—for cost-shared agricultural initiatives such as BRM programs for producers.

[203] AGFO, *Evidence*, 30 October 2025 (Jill Verwey, First Vice-President, Canadian Federation of Agriculture).

[204] Ibid.

[205] Ibid.

[206] Ibid.

> *"Farmers are on the front lines of this crisis. We are stewards of the land and we feel the effects acutely. Our crops, our animals and our infrastructure are all vulnerable. Yet, despite our best efforts, the tools we rely on are falling short."*
>
> *Jill Verwey*[207]

Witnesses from the National Cattle Feeders' Association (NCFA) shared their experiences with recent wildfires, including livestock evacuations, in British Columbia and Alberta. The NCFA represents cattle feeders from throughout Canada. Canadian feedlots vary in size from 1,000 to 30,000-plus animals.

Stacey Meunier, Member and Owner of Meunier Livestock and Member, NCFA, said that, in May 2023, her farm in Barrhead, Alberta experienced the devastating impacts of wildfire.[208] During the fire, Meunier said that cattle were moved multiple times to ensure their safety. All 2,300 cattle survived the wildfire; however, Meunier said, had the wind changed direction, it would have been a different story.[209]

To protect grazing land and livestock, Meunier said they fought the fire on their property with their own labour, tools, water trucks and tractors, and eventually hired contractors to assist them. Meunier said that the local fire department was fighting the same wildfire and that without their effort it would have been much worse. However, according to Meunier, the fire department did not understand the farm's topography and sent equipment into their lands and made random fire breaks throughout the ranch. "The cleanup and repair of these fire breaks have been extensive, and since the land is so fragile, it will take many years for it to recover. Some of it will never be the same," recalled Meunier, adding that funding support after that wildfire was limited and untimely.[210]

Furthermore, in June 2023, Meunier's feedlot near Niton Junction, Alberta was in a wildfire evacuation zone because of the Edson fire. The committee heard that fire marshals denied Meunier and staff access to the feedlot. Instead, they had to find alternate routes into the feedlot to care for 12,000 animals. Though the feedlot

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[207] Ibid.

[208] AGFO, *Evidence*, 28 November 2024 (Stacey Meunier, Member and Owner of Meunier Livestock and Member, National Cattle Feeders' Association).

[209] Ibid.

[210] Ibid.

itself was not directly impacted by the fire, Meunier said it was stressful trying to help staff into the feedlot to care for the livestock.

> *"Some recommendations I have, based on my experience, is that local fire departments need training in wildfire management, which is far different than the structured training that many of them have.*
>
> *Local authorities need to leverage the knowledge that we have as farmers on the topography and the knowledge we have to determine how to effectively approach a fire.*
>
> *Livestock need to be cared for during an emergency or they will die. Leaving a farm or ranch for more than 12 hours is just not an option.*
>
> *In the approach, evacuation zones should be able to form accounting of people who have entered that zone to care for animals versus farmers needing to go around blockades and break the law so we can care for our livestock."*
>
> *Stacey Meunier*[211]

The committee also heard from Andrea Van Iterson, Owner, Westwold View Farms and Member, NCFA, who lives in the North Okanagan region of British Columbia. In 2021, Van Iterson's farm was affected by the White Rock Lake wildfire, which destroyed approximately 83,000 hectares of land. [212]

[211] Ibid.

[212] AGFO, *Evidence*, 28 November 2024 (Andrea Van Iterson, Member and Owner, Westwold View Farms and Member, National Cattle Feeders' Association).

> *"While my family came away virtually unscathed, many in our community lost their houses, livestock, timber and grazing areas.*
>
> *While we were facing the ramifications of a fire burning near our home community, another fire in Osoyoos forced us to evacuate cattle that were on the range in that area.* ***The evacuation process was difficult, not only from an operational and strategic standpoint, but also from a mentally and emotionally draining perspective****."*
>
> *Andrea Van Iterson*[213]

Van Iterson was able to evacuate the cattle; however, once the cattle were moved to the home feedlot, a local wildfire suddenly became a direct risk to the farm. Van Iterson said that they sheltered in place with approximately 1,100 cattle in their care. It would have taken 20 livestock trailers to evacuate the animals.

Two years later, Van Iterson was impacted by the 2023 Rossmoore Lake wildfire where over 500 cattle were evacuated. Relying on neighbours and community members to assist in locating cattle, all but seven cattle were brought to safety. Based on their wildfire experiences, Van Iterson made the following recommendations to the committee:

- increase cohesiveness in regulations and communication between all levels of government, including input and action from individuals who have been directly impacted from wildfires;
- formulate a process that recognizes the validity of sheltering in place for some livestock producers and assist these producers with protection;
- re-evaluate the assistance packages available to producers who face a financial burden from a wildfire event; and
- create strategies that depend on local knowledge when wildfires are first discovered and during all firefighting attempts.[214]

Furthermore, officials from CIRNAC told the committee about the in/direct impacts that wildfires have had on agriculture in the Northwest Territories, namely the use

[213] Ibid.

[214] Ibid.

of fire retardants on farmland and harvesting, as well as the ripple effect of supply-chain disruptions on food security:

> *"Industrial agriculture is quite small in the Northwest Territories and the Yukon, but the G.N.W.T. [Government of Northwest Territories] has indicated there have been some impacts. The South Slave region, for example, was severely affected. Some farmland does exist in the South Slave.* ***You can think about the direct impact of wildfires, but then other things like fire retardants have impacted farmland and harvesting in the region, and, of course, there are the supply-chain disruptions which undermine food security. A really fundamental issue — it's not agriculture-based, but it does speak to food security in Indigenous communities — is traditional harvesting.*** *The impacts on the environment obviously also have massive impacts on the traditions."*
>
> *Wayne Walsh*[215]

Opportunities to reduce fuel loads on agricultural landscapes

The committee learned that Indigenous people have used fire on the prairies to manage grasslands and forests for millennia:

> *"[b]efore the agricultural settlement of the Prairies, there were prairie wildfires that spread into what is now the boreal forest. The boreal forest stayed further north because it couldn't extend into the southern areas because of regular fires. Of course, Indigenous people set them deliberately to manage the grasslands and to manage the forest fringe. That was part of land management that had been going on for millennia in the Prairies. With the settlement of homesteaders, it stopped, and that caused the southern encroachment of trees into Saskatchewan and a change and ultimately a risk of greater fires because of smaller plains fires moving in there."*
>
> *John Pomeroy*[216]

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[215] AGFO, *Evidence*, 18 April 2024 (Wayne Walsh, Director General, Northern Strategic Policy Branch, Crown-Indigenous Relations and Northern Affairs Canada).

[216] AGFO, *Evidence*, 7 October 2025 (John Pomeroy, Distinguished Professor of Geography, Director of the Centre for Hydrology, University of Saskatchewan, As an individual).

Other witnesses told the committee about the benefits of targeted cattle grazing, prescribed fire and virtual fencing for mitigating wildfires on agricultural landscapes. Jack Thiessen, Rancher, Grass Manager, Prescribed Fire Manager, Thiessen Bros Ranch, said: "As ranchers, I believe that we can bring forward something to Canadians that can be of great help: cattle on the landscape. We can drastically reduce the number of wildfires and their intensity, particularly in the areas of agriculture, by using prescribed fire and grazing. With the virtual fencing now available to us, we can put cattle on the landscape and drastically reduce the fuel load for mitigating wildfires."[217]

Thiessen ranches along the Blueberry River at mile 81 on the Alaska Highway near Fort Nelson, British Columbia. The ranch runs 1,100 head of cattle on 14,000 acres of land. The committee heard how Thiessen uses prescribed fire on this ranch:

> *"We use prescribed fire to manage invasive woody plants, to increase grass quantity and quality and to mitigate wildfires on our landscape. Our burn plan is to burn about 800 to 1,000 acres a year, in the spring. We strive to burn early in the year, while there is still frost in the ground or at least the duff layer is wet so that we don't burn the duff layer or our grass roots. Our goal is to provide high-quality plant-based protein, naturally processed through our cows. Grass is what makes that happen.*
>
> *Our burning has been an intricate part of managing our land base, and that has been passed down to us by the First Nations and generations of ranchers before me. It has also been key in not only mitigating wildfires but stopping them as well."*
>
> *[…]*

[217] AGFO, *Evidence*, 1 October 2024 (Jack Thiessen, Rancher, Grass Manager, Prescribed Fire Manager, Thiessen Bros. Ranch, As an individual).

When we do a prescribed fire, we try to leave at least a two-inch stubble on our grass roots because burning grass roots and upper duff layer destroys our soil.

When a fire is burning wild, the conditions are extreme, thus burning the trees, the grass and, most devastatingly for us as ranchers, the topsoil and the grass roots. That sets up the landscape for erosion. The amount of natural resources that are wasted in a wildfire is tremendous."

Jack Thiessen[218]

Kevin Boon, General Manager, British Columbia Cattlemen's Association, Canadian Cattle Association, said that: "We need to look for a goal between the trees. We have learned through the fires we have experienced that space between the trees with forage and shrubs being allowed to grow reduces fuels, and when we allow these to be grazed by livestock and wildlife, we reduce the fine fuels, and the fire risks are reduced as well."[219]

Boon added: "We must also look at timber harvesting practices. For example, we build roads to haul the timber out. Roads move water off the landscape and dry the land, causing further drought." According to Boon, managing forests and landscapes by creating a diversified environment through agroforestry and silvopasture practices creates a healthier landscape.[220] In return, those practices support more opportunities for agriculture and wildlife to thrive while achieving carbon sequestration goals by utilizing trees and other plants that can sequester.[221]

Barriers and agriculture-led solutions

In anticipation of the 2024 wildfire season, Nathalie Gour, Director General, Regional Operations and Emergency Management Directorate, AAFC, said that the department had further strengthened its ability to prepare and respond to emergency events.[222] For instance, AAFC had developed a Cyclical Event Response Plan to align the departmental response to sectoral emergencies relating to events

[218] Ibid.

[219] AGFO, *Evidence*, 5 December 2024 (Kevin Boon, General Manager, British Columbia Cattlemen's Association, Canadian Cattle Association).

[220] Agroforestry is a unique land management approach that intentionally blends agriculture and forestry to enhance productivity, profitability and environmental stewardship. Silvopasture is the intentional integration of pasture, livestock and trees.

[221] Ibid.

[222] AGFO, *Evidence*, 16 April 2024 (Nathalie Gour, Director General, Regional Operations and Emergency Management Directorate, Agriculture and Agri-Food Canada).

of a cyclical nature, primarily flooding, wildfires, drought, hurricanes or tropical storms.[223] Gour also said the department had established a sector emergency operations centre to coordinate and manage responses to emergencies or disasters affecting the agricultural sector.[224]

AAFC said it was working to expand its role in the emergency management space by establishing a single-window emergency management information portal for the agricultural sector, developing and testing sector-specific emergency response plans and creating awareness and preparedness materials and training programs.[225] Together with the provinces and territories, AAFC has been working to renew the 2016 Emergency Management Framework for Agriculture in Canada, as well as develop a Food System All-Hazards Preparedness and Response Plan.[226]

Many witnesses told the committee that the current suite of business risk management (BRM) programs is not designed for the new reality of more frequent, intense and destructive wildfires, and that the tools producers rely on are not responsive or timely enough.

For instance, Van Iterson said that most of the BRM programs must be in place before a wildfire happens: "So while we can purchase a price insurance program, this would not be helpful during these types of events because it is a market-driven program. If we lose our cattle, we don't get to benefit from that."[227] Producers can purchase farm insurance for structures, but Van Iterson was not aware of any insurance programs for livestock evacuations during wildfires.

The committee heard about the challenges producers face with the AgriStability program:

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[223] Ibid.

[224] Ibid.

[225] Ibid.

[226] Government of Canada, *Agriculture and Agri-Food Canada's 2025-26 Departmental Plan*.

[227] AGFO, *Evidence*, 28 November 2024 (Andrea Van Iterson, Owner, Westwold View Farms and Member, National Cattle Feeders' Association).

> *"We can also apply for a program called AgriStability which is like a whole farm insurance. The unfortunate thing about AgriStability is you need to physically lose animals, which we don't want to do in any case. We would have to physically lose feed, and the timeliness of the program is not enough to help us when we need it. So right now, my AgriStability personally is being worked on from the 2022 year. If that was a year that we lost enough animals or feed in a fire, I would still not have compensation from that.* ***So we do not have any programs that help us out in a timely way****."*
>
> *Andrea Van Iterson*[228]

Verwey said that Canadian producers need to have and maintain an information-sharing forum among the affected provinces and sectors — and even internationally — on best practices and emergency management planning for agriculture in the face of wildfires.[229]

> *"With the renewal of our five-year federal-provincial-territorial agricultural policy framework, we can take a fresh look at our risk management programs to ensure that they are responsive, predictable and accessible.*
>
> *We can build a system that reflects the challenges of today and prepares us for the uncertainties of tomorrow — one that protects our farmers, our rural communities and our national food security."*
>
> *Jill Verwey*[230]

For example, to improve the response framework and promote producer resilience in the face of increasingly volatile and frequent weather events such as wildfires, the CFA recommended two enhancements to AgriRecovery initiatives prior to the implementation of the new Sustainable Canadian Agricultural Partnership:

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[228] Ibid.

[229] AGFO, *Evidence*, 30 October 2025 (Jill Verwey, First Vice-President, Canadian Federation of Agriculture).

[230] Ibid.

- establish clear assessment and data collection parameters; and
- structure a public-facing post-hoc prevention and mitigation review.[231]

Finally, outside of the AgriRecovery framework, the CFA suggested that the following measures would further contribute to more predictable, timely and effective support for producers who are managing risks related to extreme weather events:

- enhance Canada's livestock tax deferral program;
- improve producer eligibility for support through Public Safety's Disaster Financial Assistance Arrangements;
- adapt the AgriInsurance program to climate change; and
- renumerate producers for ecological goods and services.[232]

[231] AGFO, *Brief*, 7 November 2025 (Canadian Federation of Agriculture).
[232] Ibid.

Chapter 6: The Impact of Wildfires on Communities

Introduction

Witnesses said that wildfires have profound and far-reaching impacts on communities throughout Canada, especially those located in the wildland-urban interface: landscapes where human and suburban development meet forested areas.

The committee heard that municipalities typically deal with wildfire emergencies within their jurisdictions. Local jurisdictions can seek additional assistance from their respective province or territory.

Given the increasing number of homes and businesses located near forested areas, Matt Gemmel, Executive Director, Policy and Public Affairs, Federation of Canadian Municipalities, said that local firefighters are often called to address wildfires in the regions that threaten their communities.[233]

Ken McMullen, President, Canadian Association of Fire Chiefs, said that fire chiefs are often the designated local emergency management coordinator or the authority having jurisdiction in the state of an emergency, including wildfires.[234] The Canadian Association of Fire Chiefs represents Canada's 3,200 fire departments through fire chiefs and a national advisory council of its provincial, territorial and relevant national affiliate organizations. Within its 3,200 fire departments, there are approximately 126,000 firefighters in Canada, 70% of which are volunteers.

In a 2024 report of the Canadian Association of Fire Chiefs, over 90% of Canadian fire departments responded to wildfires in 2023, but only half were wildfire-ready with the required equipment. Local and rural firefighters are not wildland firefighters. The latter fall under provincial or territorial jurisdiction and are generally coordinated by the Canadian Interagency Forest Fire Centre (CIFFC). Furthermore, the same report stated that only 18% of local fire departments received funding or equipment from their province or territory for wildfire support in 2023.

Sonja Leverkus, Professor, Ecosystem Scientist and Prescribed Fire Specialist, Shifting Mosaics Consulting and Northern Fire WoRx Corporation, University of Alberta, told the committee that rural incident management teams – local Type 2 and Type 3 firefighting crew who work with provincial and territorial governments – can also

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[233] AGFO, *Evidence*, 2 October 2025 (Matt Gemmel, Executive Director, Policy and Public Affairs, Federation of Canadian Municipalities).

[234] AGFO, *Evidence*, 9 May 2024 (Ken McMullen, President, Canadian Association of Fire Chiefs).

help protect local communities.[235] In 2024, during the Parker Lake Fire (officially known as the G90267 fire) near Fort Nelson, Leverkus led the first northeast British Columbia rural incident management team alongside 40 community members.[236] The committee heard that Type 3 crews are not guaranteed employment, and that there is a general lack of funding for crews, equipment and training.

Wildland-urban interface and rural communities

The committee heard that, in July 2024, numerous wildfires in Jasper National Park swept through the Municipality of Jasper. Richard Ireland, Mayor, Municipality of Jasper, said that Jasper had long recognized the threat, eventuality and inevitability of wildfire, an increasing risk for every forested community throughout Canada. Ireland mentioned how over 20 years ago, Jasper and Parks Canada began to prepare for wildfires and implemented FireSmart in and around the community:

> *"On the landscape, that can include creating firebreaks; reducing fuel loads either by hand, mechanically or by prescribed burns; installing waterlines and sprinkler systems; and planning defensive perimeters, strategies and tactics.*
>
> *Within communities, it can include treatments to the wildland-urban interface and deeper into the community, again, to reduce fuel loads and remove combustibles, as well as to install protections like waterlines and sprinklers. It can involve landscaping and maintenance around individual homes — everything from replacing cedar shakes and other roofing and siding treatments with more fire-resistant materials, to removing shrubs and bushes from against the house, as well as cleaning leaves and debris from under decks, moving woodpiles and fences away from structures and installing roof sprinklers.*
>
> ***It can also include municipal investment in equipment and training for firefighters.**"*
>
> *Richard Ireland*[237]

The committee heard that, on 22 July 2024, 25,000 residents and visitors were ordered to evacuate the Jasper area and did so safely within five hours. However,

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[235] AGFO, *Evidence*, 1 October 2024 (Sonja Leverkus, Professor, Ecosystem Scientist and Prescribed Fire Specialist, Shifting Mosaics Consulting and Northern Fire WoRx Corporation, University of Alberta, As an individual).

[236] Ibid.

[237] AGFO, *Evidence*, 31 October 2024 (Richard Ireland, Mayor, Municipality of Jasper).

44 hours after the evacuation order was issued, Ireland said that the largest and most intense wildfire that Jasper National Park had seen in over 100 years hit the townsite. “We lost 30% of our structures, leaving approximately 40% of our population homeless. Yet, despite the devastation, despite the loss and despite the heartbreak, our experience was a success,” said Ireland.

According to Andrew Campbell, Senior Vice-President, Operations, Parks Canada: “Jasper was arguably the most FireSmarted place within the country. Something important for the committee to look at is that this is what happened in a place like Jasper, which had protections. As you look around the rest of the country where this is not done, certainly, there would be other places more at risk.” [238]

Jen Beverly, Associate Professor, Wildland Fire, Department of Renewable Resources, University of Alberta, added that “the mismatch between the scope of the problem and the scale at which fuel mitigation can be implemented cannot be reconciled.”[239] Beverly told the committee that even with targeted, aggressive action now, widespread benefits will take decades:

> *“Decades of mitigation and preparedness planning is credited with saving much of the Town of Jasper, but that doesn’t avert displacement of residents or the approaching $1 billion in insured losses, let alone, the suppression of expenditures.”*
>
> *Jen Beverly*[240]

Beverly added: “Even if we focus very narrowly on the lands occupied by people and focus on mitigating the hazardous fuels responsible for extreme exposure in those areas, we would need to treat about 4 million hectares with FireSmart treatments that would cost an estimated $20 billion, and there’s no guarantee that those treatments will be effective under extreme conditions.”

In a brief, Stuart Clark, President, Wildfire Awareness Society – a group of foresters, wildfire fighters, wildland-urban fire risk experts and concerned residents from Whitehorse, Yukon – told the committee:

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[238] AGFO, *Evidence*, 22 October 2024 (Andrew Campbell, Senior Vice-President, Operations, Parks Canada).
[239] AGFO, *Evidence*, 21 November 2024 (Jen Beverly, Associate Professor, Wildland Fire, Department of Renewable Resources, University of Alberta, As an individual).
[240] Ibid.

> *"**Almost all Yukon houses can be set on fire by ember transport. Indeed, wind-born embers – not an advancing flame front – have historically ignited 90% of homes destroyed by wildfire.** If this vulnerability in the Yukon is not corrected, the excellent work done on fuel breaks will be largely fruitless. Wildfire specialists know this: effective risk reduction requires both forest fuel management (strategic fuel breaks and thinning) and widespread fireproofing (FireSmarting) of residential properties."*
>
> *Stuart Clark*[241]

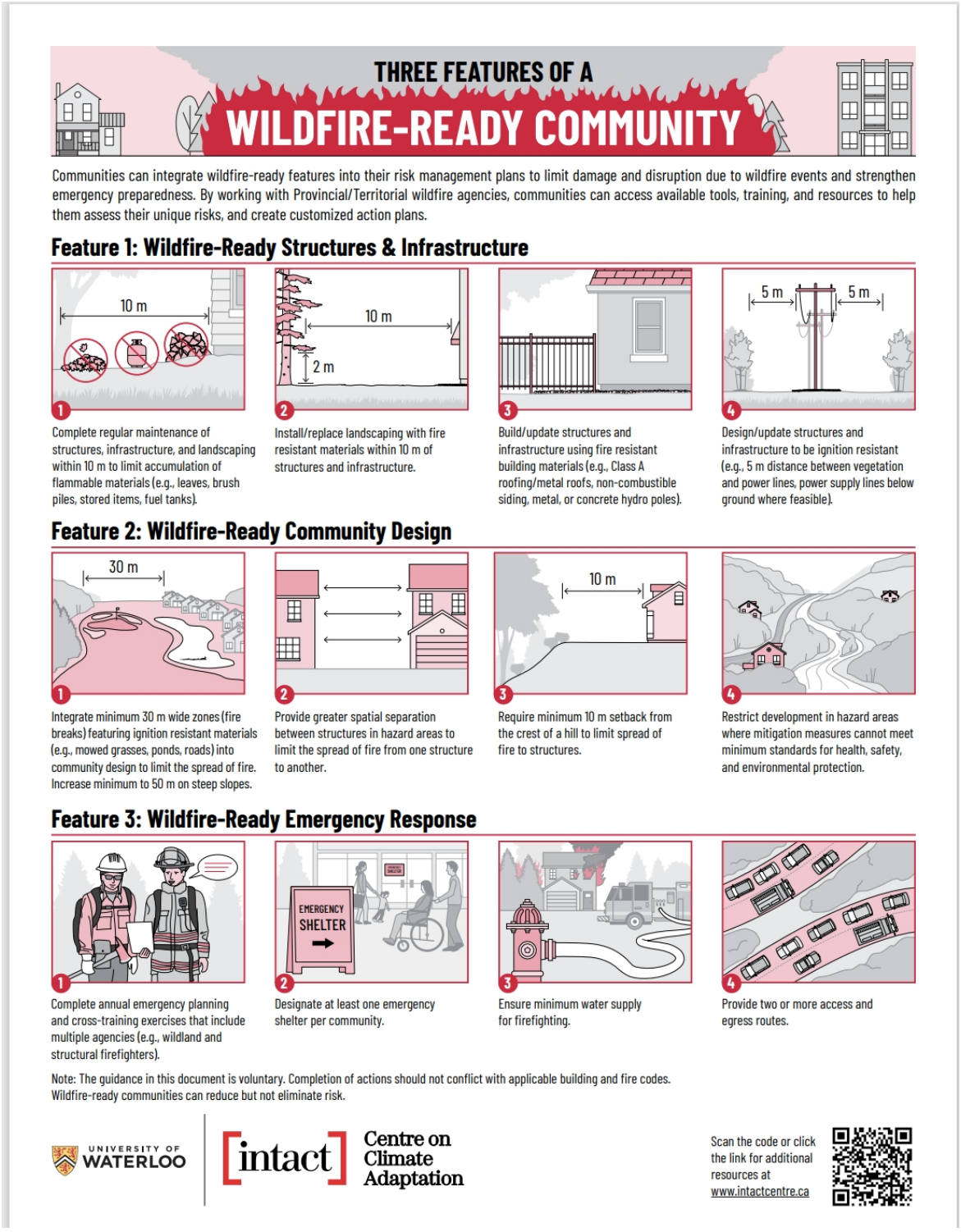
Clark strongly encouraged the committee to highlight the need for a strong public education campaign in the parts of Canada prone to wildfire, which they noted includes most of the country.

The infographic in Figure 10 illustrates the many ways in which communities can integrate wildfire-ready features into their risk management plans to limit damage and strengthen emergency preparedness.

The infographic in Figure 11 illustrates how homeowners can FireSmart their homes in three cost-effective ways.

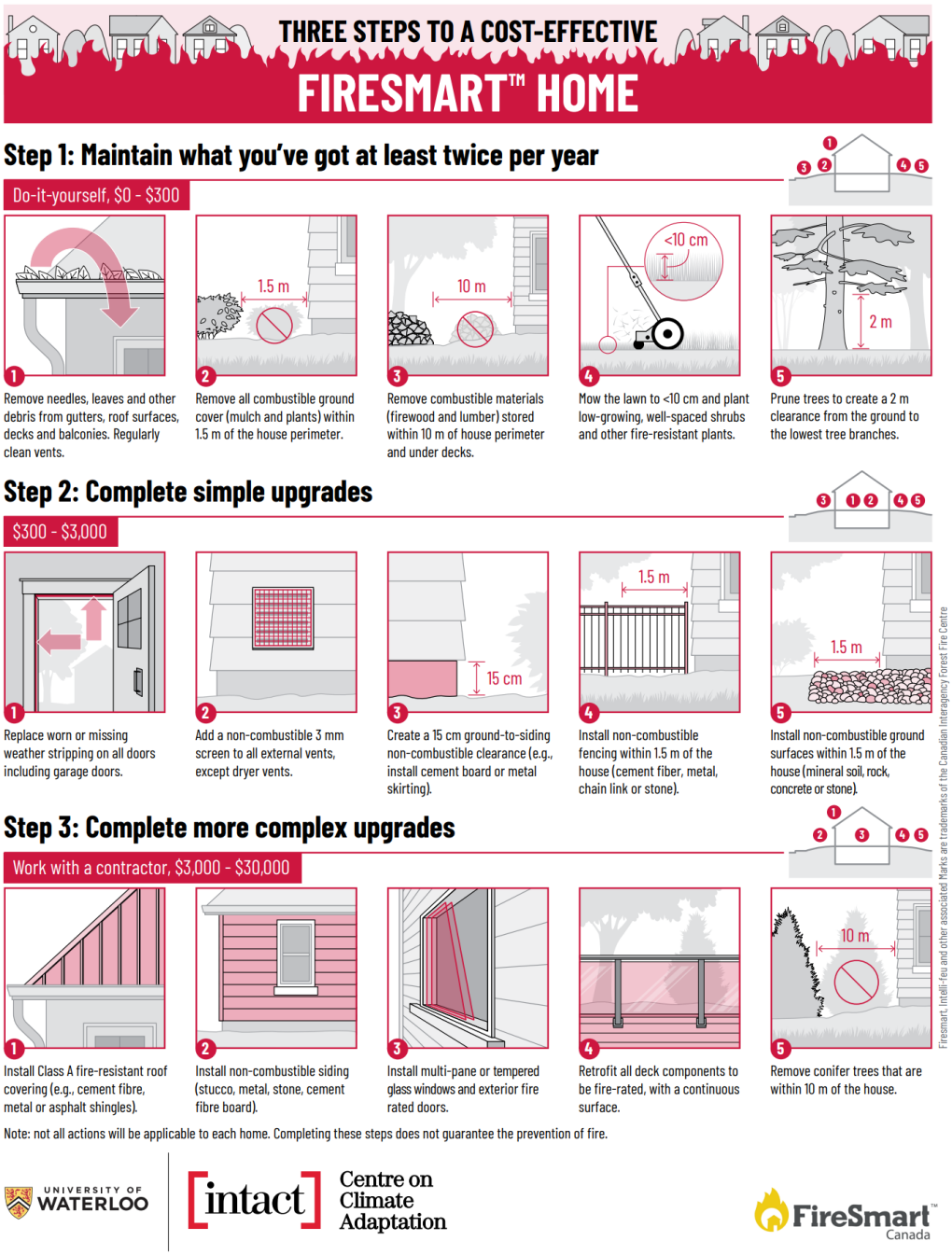
[241] AGFO, *Brief*, 1 December 2025 (Stuart Clark, President, Wildfire Awareness Society).

Figure 10 – Three Features of a Wildfire-Ready Community



Source: Intact Centre on Climate Adaptation, "Three features of a wildfire ready community", *Wildfire-Ready: Practical Guidance to Strengthen the Resilience of Canadian Homes and Communities*, © University of Waterloo, 2023.

Figure 11 – Three Steps to a Cost-Effective FireSmart Home



Source: Intact Centre on Climate Adaptation, "Three Steps to a Cost-Effective FireSmart Home," *Wildfire-Ready: Practical Guidance to Strengthen the Resilience of Canadian Homes and Communities*, © University of Waterloo, 2023.

Rebuilding Costs

Matt Gemmel, Executive Director, Policy and Public Affairs, Federation of Canadian Municipalities (FCM) – the national voice of Canada's local governments, representing over 92% of the population – stated that the federal government has a lot of work to do regarding wildfire recovery.[242] Gemmel mentioned Lytton, British Columbia, where residents are still moving back in four to five years after the 2021 wildfire that destroyed 90% of the town. While the FCM supports "building back better" and acknowledged that the federal government has made changes, Gemmel also said that it is taking too long between private increases and federal support.[243]

Blair Feltmate, Head, Intact Centre on Climate Adaptation, University of Waterloo, said that, immediately following the 2016 Fort McMurray and 2024 Jasper wildfires, the federal government "built back wrong" by using the same infrastructure.[244] Citing work by the Canadian Climate Institute, Feltmate said that Canada is currently on track to build 220,000 homes in high-risk wildfire areas by 2030.[245] Feltmate urged the federal government to invest in adaptation: **"Every dollar invested in climate change adaptation saves up to $15."**[246]

The committee learned that the National Research Council of Canada's (NRC) Construction Research Centre has been actively involved in research to help communities prepare for and respond to wildfires, particularly in areas where urban development meets forests. Under the NRC's Climate Resilient Built Environment Initiative, Jean-François Houle, Vice-President, Engineering, said that the NRC has produced several guidance documents and tools to help Canadians take steps to address the effects of wildfires.[247]

One such example is the NRC's 2021 National Guide for Wildland-Urban Interface Fires, Canada's first guide with advice on reducing wildfire risks in areas where communities border forests. This tool was created with Housing, Infrastructure and Communities Canada and was intended to guide rebuilding in Lytton, British Columbia, and provided recommendations to the town of Jasper, Alberta following the 2024 wildfires. In terms of rebuilding, the committee learned that Lytton has rebuilt at least one house using some of the measures from NRC's guide.

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[242] AGFO, *Evidence*, 2 October 2025 (Matt Gemmel, Executive Director, Policy and Public Affairs, Federation of Canadian Municipalities).
[243] Ibid.
[244] AGFO, *Evidence*, 9 October 2025 (Blair Feltmate, Head, Intact Centre on Climate Adaptation, University of Waterloo, As an individual).
[245] Ibid.
[246] Ibid.
[247] AGFO, *Evidence*, 23 October 2025 (Jean-François Houle, Vice-President, Engineering, National Research Council of Canada).

Noureddine Bénichou, Research Officer, Fire Resistant Construction, NRC, confirmed that Lytton is still in the rebuilding phase: "Actually, in 2023, I believe, they had a bylaw to rebuild using the guide. That bylaw was voted by the council at the time, but another council came and made it voluntary. There is uptake, but it takes time with these things. We just have to basically provide the message that if you invest, you can get a better resilience over time."[248]

Furthermore, many witnesses expressed concern over the National Building Code of Canada 2020, which they said does not include adaptation and resiliency measures. The code was developed by the Canadian Commission on Building and Fire Codes, and published by the NRC, and outlines technical requirements for the design and construction of new buildings, as well as the alteration, change of use and demolition of existing buildings.[249] It is only a model for provinces to adopt. The committee learned that the code will not be revisited until 2030. "Building with resilience must be the norm," said Bénichou. Liam McGuinty, Vice-President, Federal Affairs, Insurance Bureau of Canada, added: "I really think provinces have a critical role in making sure they are building to codes that are built for the perils their provinces face." [250]

Regarding infrastructure, the FCM pointed out that municipal water facilities, where they exist in rural areas, were built to provide drinking water and remove wastewater, and were never designed to battle the size and intensity of wildfires that Canadians see today.[251]

The committee also learned that municipalities are seeing increased cases of damaged or destroyed infrastructure. Kara Westerlund, President, Rural Municipalities of Alberta – which represents Alberta's 69 municipal districts, counties, specialized municipalities and the special areas board – told the committee:

"This runs the gamut from roads and bridges to water and wastewater facilities, and even our recreation facilities. The loss or damage of this critical infrastructure has a significant financial impact on municipalities. Increased funding from other levels of government to make rural municipal infrastructure more resilient to wildfire and

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[248] AGFO, *Evidence*, 23 October 2025 (Noureddine Bénichou, Research Officer, Fire Resistant Construction, National Research Council of Canada).

[249] National Research Council of Canada, *National Building Code of Canada 2020*.

[250] AGFO, *Evidence*, 23 October 2025 (Liam McGuinty, Vice-President, Federal Affairs, Insurance Bureau of Canada).

[251] AGFO, *Evidence*, 2 October 2025 (Matt Gemmel, Executive Director, Policy and Public Affairs, Federation of Canadian Municipalities).

other disasters would also go a long way to lessening local impacts when wildfires do occur."[252]

Witnesses said that access to hazard mapping data, that shows fuel loads among other risk metrics, would greatly assist municipalities in managing wildfires.

Insurance Costs

Several witnesses told the committee that as we experience more frequent and severe natural disasters, Canada is becoming a riskier place to live, work and insure.

> *"Canada has undergone an unprecedented number of water-related natural disasters since the year 2000 that have exceeded $40 billion in damage. This is making wildfire, drought and flood insurance unviable for many countries with parts of Canada becoming uninsurable."*
>
> *John Pomeroy*[253]

The Insurance Bureau of Canada (IBC) is the national industry association that represents the insurance companies that write home, car and business insurance. McGuinty said that over the last 20 years, the average annual insured losses from wildfires have increased from $70 million to $740 million.[254] The committee learned that is a 1,037% increase, while inflation over that same period was closer to 50%.[255]

[252] AGFO, *Evidence*, 28 November 2024 (Kara Westerlund, President, Rural Municipalities of Alberta).
[253] AGFO, *Evidence*, 7 October 2025 (John Pomeroy, Distinguished Professor of Geography, Director of the Centre for Hydrology, University of Saskatchewan, As an individual).
[254] AGFO, *Evidence*, 23 October 2025 (Liam McGuinty, Vice-President, Federal Affairs, Insurance Bureau of Canada).
[255] Ibid.

> *"**Last year [2024] was our worst year ever, with insured damage caused by severe weather events surpassing $9 billion.** That tally shattered the previous record of $6 billion, which was set in 2016. You may recall that was the year of the Fort McMurray wildfires. **Last year, extreme weather events resulted in approximately 228,000 claims in the span of one month. For context, in the year previous, we received 160,000 claims for the whole year.**"*
>
> *Liam McGuinty*[256]

IBC's three-point resilience plan, which was released in September 2025, provides a roadmap for governments to build climate resilience. The plan's goal is to make Canada a world leader in preparing for, responding to and recovering from natural disasters, including wildfires. The three points are:

- improving how and where we build by modernizing building codes and land use planning regulations;
- investing in resilience and helping communities mitigate their risks, by bridging the $270 billion infrastructure deficit gap between the current state of infrastructure and the investment required to maintain, repair, upgrade or expand to meet current and future demands; and
- empowering Canadians to protect themselves and recover from natural disasters more quickly, by having the federal government release its flood map portal immediately and expand it to include high-risk wildfire and hill zones.[257]

The committee also heard the IBC's renewed call for the federal government to establish a national emergency management agency that would strengthen Canada's capacity to coordinate and deploy resources during emergencies and help expedite recovery.[258]

Like other witnesses, both the IBC and the FCM said they supported the creation of a national wildfire agency. The FCM suggested that water bombers be on hand in strategic locations and that Canada's current water bomber fleet be expanded.

[256] Ibid.

[257] Ibid.

[258] Ibid.

Chapter 7: International Practices and Perspectives on Wildfire Response

Introduction

International cooperation plays a critical role in addressing the global wildfire crisis. The committee learned that Canada has a long and active history in the global fire community, dating back to international fire research collaborations by the then-Dominion Forest Service a century ago. For that reason, Canada is viewed as an international leader in forest fire research and management.

The committee learned that Canada has memorandums of understanding and operational agreements with other countries whose fire seasons are different to exchange resources.[259]

The below section presents selected international practices and perspectives on wildfire response.

Food and Agriculture Organization of the United Nations: Global Fire Management Hub

The committee heard from William J. de Groot, Fire Management Specialist, Food and Agriculture Organization of the United Nations (FAO), who was a fire scientist with the Canadian Forest Service at NRCan for 35 years, as well as a firefighter in Northern Ontario for six years.

de Groot said that countries worldwide are embracing integrated fire management, "a holistic approach that combines fire prevention, preparedness, suppression and recovery with ecological and social considerations."[260]

For example, in countries such as Australia, Brazil, Portugal and Spain, de Groot stated that community involvement and prescribed burning programs have proven effective in reducing fuel loads and mitigating large-scale wildfires. De Groot noted that the key lessons from those jurisdictions include:

- investing in proactive prevention measures such as reducing hazardous fuels;
- promoting fire resilient communities; and

[259] AGFO, *Evidence*, 16 April 2024 (Glenn Hargrove, Assistant Deputy Minister, Canadian Forest Service, Natural Resources Canada).
[260] AGFO, *Evidence*, 21 November 2024 (William J. de Groot, Fire Management Specialist, Food and Agriculture Organization of the United Nations

- incorporating traditional knowledge, especially from Indigenous peoples who have long used fire as a tool to manage landscapes sustainably.[261]

The committee learned that the Government of Canada, through the Canadian Forest Service, is a funding partner in the FAO's Global Fire Management Hub (Fire Hub). The Fire Hub brings together the global fire community, assists countries to implement integrated fire management and facilitates the international exchange of fire knowledge, data and expertise. de Groot added that the Fire Hub helps countries transition from suppression-based programs to those focused on prevention, risk mitigation, early warning and resiliency.[262]

Australia

In a brief, the committee learned about the Australasian Fire and Emergency Service Authorities Council (AFAC) – the national council for fire, land management and emergency service authorities in Australia and New Zealand. The AFAC represents 35 members and 21 affiliate members comprising permanent and part-time personnel and volunteers, totaling approximately 288,000 firefighters and emergency workers.[263]

The AFAC's work is guided by the *Strategic Directions for fire and emergency services in Australia and New Zealand 2022-2026*, which provide the fire and emergency services sector with a shared vision and a joint commitment to enhanced community resilience. The AFAC is a managing partner in the Australian Institute for Disaster Resilience, the national institute for disaster reduction and resilience.

Furthermore, the AFAC provides aerial firefighting resources on behalf of the states and territories. The National Aerial Firefighting Centre is a business unit of the AFAC and was formed in 2003 by the Australian states and territories, with the support of the Australian Government, "to provide a cooperative national arrangement for the provision of aerial firefighting resources for combatting bushfires."[264]

United Kingdom

Claire M. Belcher, Professor of Wildland Fire, wildFIRE Lab, University of Exeter, United Kingdom (U.K.) informed the committee that, last year, the U.K.'s first wildfire behaviour prediction system was built and launched as a free web app called FireInSite:

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[261] Ibid.

[262] Ibid.

[263] AGFO, *Brief*, 28 October 2025 (Australasian Fire and Emergency Services Authorities Council).

[264] Ibid.

"This was built by a team of U.K. academics to predict the probability of ignition and the potential resulting fire behaviour in U.K. fuel types. The fire service has recently reported that FireInSite has provided an excellent ability to plan and allocate resources at active fire events."[265]

In a brief, the committee learned that FireInSite was built because the U.K. lacked any system that allowed key aspects of fire danger and fire behaviour to be predicted for their fire prone northern humid temperate landscapes.[266] Wildfires in the U.K. typically occur in grassland fuels and half shrub-dominated ecosystems such as those in moorlands and heathlands. Belcher stated: "FireInSite is underlain by four years of intensive data collection that describe temperate U.K. fire prone fuel types, their fuel moisture, energy content and a range of interdependencies with weather and phenology."[267]

Additional fuel models for other countries landscapes, including Canada, can be added to FireInSite: "We hope to continue to develop the Web App to include many additional features and expand it to other regions."[268]

United States

Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, told the committee that the U.S. and Canada are longstanding collaborators: "In each U.S. region, you'll see that there are U.S. counterparts working with their Canadian colleagues."[269]

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[265] AGFO, *Evidence*, 30 October 2025 (Claire M. Belcher, Professor of Wildland Fire, wildFIRE Lab, University of Exeter, As an individual*).*

[266] AGFO, *Brief*, 12 November 2025 (Claire M. Belcher, Professor of Wildland Fire, wildFIRE Lab, University of Exeter, As an individual).

[267] Ibid.

[268] Ibid.

[269] AGFO, *Evidence*, 28 October 2025 (Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, As an individual).

> *"The real key right now is that on both sides of the border, it's very difficult to take that long look and basically say that our forest revenue streams are going to be threatened by expanding burned areas and expanding burned areas severely, so what are the landscape recipes that were created by our Indigenous folks? They know an incredible amount about how to live safely on the landscape.*
>
> *The more we work with our Indigenous partners, the more we see that combining ancestral knowledge with our western scientific practices creates a much richer intellectual and practice environment. I would say that's a huge investment in the U.S. and in Canada."*
>
> *Paul Hessburg*[270]

The committee also heard that there is currently collaboration with climate change modelling in provinces and throughout the United States. "What we are finding out is that open canopy forests, those drier exposures in the ridge top, more of these wet-and-dry meadows and wetlands are an incredibly important influence to blocking the flow of climate-driven fires in the future. Those ingredients in the historical landscape actually become more important as we look forward," said Hessburg.[271]

Finally, the committee heard from Mike Flannigan, British Columbia Innovation, Research Chair for Predictive Services, Emergency Management and Fire Science, Thompson Rivers University, who said that Canada needs a Federal Emergency Management Agency (FEMA) coordinating-type agency, that like of the United States, to deal with wildfire disasters.[272]

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[270] Ibid.

[271] Ibid.

[272] AGFO, *Evidence*, 21 November 2024 (Mike Flannigan, British Columbia Innovation, Research Chair for Predictive Services, Emergency Management and Fire Science, Thompson Rivers University, As an individual).

Conclusion

Throughout its study, the committee heard that wildfires are no longer isolated, seasonal events. Wildfires have become a complex, compound crisis that touches every sector of Canadian society: public safety, Indigenous communities, forests, agriculture, physical and mental health, municipalities and infrastructure.

> *"**Wildfire is a matter of national security**. We must recognize that a wildfire threatening a family's home is not just a local concern; it's a security threat to that family and a matter of national urgency. **Wildfires pose risks not only to infrastructure and forests but also destabilize communities, erode cultural continuity and threaten food and water security**."*
>
> *Domenico Iannidinardo*[273]

Witnesses told the committee that Canada's ability to withstand this new reality depends on decisive, coordinated action across all levels of government, meaningful partnership with Indigenous Peoples, significant investments in prevention, preparedness and adaptation measures, as well as a long-term commitment to rebuilding resilient ecosystems and communities.

A whole-of-society strategy—built on collaboration, modernized systems and shared responsibility—is essential to safeguard lives, businesses and landscapes, as well as minimize the human impact of wildfires on peoples' physical health and mental health, in the future. The committee believes that the Government of Canada must act with urgency, purpose and compassion. The scale of the challenge is great, but so is the opportunity to reexamine our relationship with fire, strengthen our institutions and chart a more resilient path forward.

[273] AGFO, *Evidence*, 23 October 2025 (Domenico Iannidinardo, Chief Executive Officer, Strategic Natural Resource Group).

Appendix A – Witnesses

44th Parliament, 1st Session

Tuesday, April 16, 2024

Francesco Del Bianco, Director General, Business Risk Management Programs Directorate, Agriculture and Agri-Food Canada

Kenza El Bied, Director General, Policy and Outreach Directorate, Public Safety Canada

Nathalie Gour, Director General, Regional Operations and Emergency Management Directorate, Agriculture and Agri-Food Canada

Glenn Hargrove, Assistant Deputy Minister, Canadian Forest Service, Natural Resources Canada

Thursday, April 18, 2024

Paula Hadden-Jokiel, Assistant Deputy Minister, Regional Operations Sector, Indigenous Services Canada

James Moxon, Director General, Operations Branch, Indigenous Services Canada

Rory O'Connor, Director General, Regional Infrastructure Delivery Branch, Indigenous Services Canada

Joshua Rose, Director, Northern Governance and Partnerships, Crown-Indigenous Relations and Northern Affairs Canada

Wayne Walsh, Director General, Northern Strategic Policy Branch, Crown-Indigenous Relations and Northern Affairs Canada

Thursday, May 9, 2024

Amy Avis, Chief of Emergencies, Canadian Red Cross

Ken McMullen, President, Canadian Association of Fire Chiefs

Tina Saryeddine, Executive Director, Canadian Association of Fire Chiefs

Lisa Walker, Director, Resiliency and Partnerships, Canadian Interagency Forest Fire Center

Tuesday, October 1, 2024

Jennifer Baltzer, Professor and Canada Research Chair in Forests and Global Change, Wilfrid Laurier University, As an individual

Sonja Leverkus, Professor, Ecosystem Scientist and Prescribed Fire Specialist, Shifting Mosaics Corporation and Northern Fire WoRx Corporation, University of Alberta, As an individual

Jack Thiessen, Rancher, Grass Manager, Prescribed Fire Manager, Thiessen Bros. Ranch, As an individual

Brian Wiens, Managing Director, Canada Wildfire (Canadian Partnership for Wildland Fire Science)

Tuesday, October 22, 2024

Andrew Campbell, Senior Vice-President, Operations, Parks Canada

Doris Fortin, Director General, Policy, Planning and Partnerships Directorate, Meteorological Service of Canada, Environment and Climate Change Canada

Nathan Gillet, Research Scientist, Canadian Centre for Climate Modelling and Analysis, Science and Technology Branch, Environment and Climate Change Canada

Matt Jones, Assistant Deputy Minister, Healthy Environments and Consumer Safety Branch, Health Canada

Darlene Upton, Vice-President, Protected Areas Establishment and Conservation, Parks Canada

Thursday, October 31, 2024

Richard Ireland, Mayor, Municipality of Jasper

Thursday, November 7, 2024

Étienne Bélanger, Vice-President, Indigenous Relations and Forestry, Forest Products Association of Canada

Andrew de Vries, Chief Executive Officer, Canadian Forest Owners

Darcy Edgi, President, K'ahsho Got'ine Foundation

Randy Fournier, Chief Executive Officer, PRT Growing Services Ltd.

Eric Johnson, Vice-President, Government Relations, Forest Products Association of Canada

Collin Pierrot, Chief, K'ahsho Got'ine Charter Community, Fort Good Hope Dene Band

Conroy Sewepagaham, Chief, Little Red River Cree Nation

Thursday, November 21, 2024

Dr. Vincent Agyapong, Professor and Head, Department of Psychiatry, Faculty of Medicine, Dalhousie University, As an individual

Jen Beverly, Associate Professor, Wildland Fire, Department of Renewable Resources, University of Alberta, As an individual

William J. de Groot, Fire Management Specialist, Food and Agriculture Organization of the United Nations

Mike Flannigan, British Columbia Innovation, Research Chair for Predictive Services, Emergency Management and Fire Science, Thompson Rivers University, As an individual

Sarah Henderson, Scientific Director, Environmental Health Services, British Columbia Centre for Disease Control and Scientific Director, National Collaborating Centre for Environmental Health, As an individual

Thursday, November 28, 2024

Doug Chiasson, Executive Director, Fur Institute of Canada

Lori Daniels, Koerner Chair in Wildfire Coexistence, Forestry, University of British Columbia, As an individual

Stacy Meunier, Member and Owner of Meunier Livestock and Member, National Cattle Feeders' Association

Stephanie Montesanti, Associate Professor and Canada Research Chair in Health System Integration, School of Public Health, University of Alberta, As an individual

Andrea Van Iterson, Owner, Westwold View Farms and Member, National Cattle Feeders' Association

Kara Westerlund, President, Rural Municipalities of Alberta

Thursday, December 5, 2024

Kevin Boon, General Manager, British Columbia Cattlemen's Association, Canadian Cattle Association

Rick Doman, Co-founder, Chairman and Director, Boreal Carbon Corporation

Nicole Hurtubise, Chief Executive Officer, Tree Canada

Jessica Kaknevicius, Chief Executive Officer, Forests Canada

45th Parliament, 1st Session

Thursday, October 2, 2025

Matt Gemmel, Executive Director, Policy and Public Affairs, Federation of Canadian Municipalities

Tuesday, October 7, 2025

Robert W. Gray, Wildland Fire Ecologist, R.W. Gray Consulting Ltd.

John Pomeroy, Distinguished Professor of Geography, Director of the Centre for Hydrology, University of Saskatchewan, As an individual

Thursday, October 9, 2025

Blair Feltmate, Head, Intact Centre on Climate Adaptation, University of Waterloo, As an individual

David Hyndman, Chief Science Officer, FireRein Inc.

Wayne Maddever, Chief Executive Officer, FireRein Inc.

Ryan Ness, Research Director on Adaptation, Canadian Climate Institute

Meaghan Seagrave, Executive Director, Bioindustrial Innovation Canada

Tuesday, October 21, 2025

David Beaudin, Minister of Agriculture, Manitoba Métis Federation

Elisa Binon, Data Coordinator for North America, the Caribbean, Europe and Central Asia, Global Monitoring, Internal Displacement Monitoring Centre

Tracy Desjarlais, Indigenous Liaison for Emergency Disaster Services, Salvation Army

Francyne Joe, Executive Director, First Nations' Emergency Services Society of British Columbia

Brennan Merasty, Minister of Self Determination and Self Government and Justice, Métis Nation Saskatchewan

Matt Nelson, Integrated Fuel Management Supervisor, First Nations' Emergency Services Society of British Columbia

Richard Quintal, Chief Executive Officer, Métis Nation Saskatchewan

Major Rick Zelinsky, Director of Public Affairs and Emergency Disaster Services, Salvation Army

Thursday, October 23, 2025

Noureddine Bénichou, Research Officer, Fire Resistant Construction, National Research Council Canada

Alex Deslauriers, Chief Executive Officer, FireSwarm Solutions Inc.

Jean-François Houle, Vice-President, Engineering, National Research Council Canada

Domenico Iannidinardo, Chief Executive Officer, Strategic Natural Resource Group

Liam McGuinty, Vice-President, Federal Affairs, Insurance Bureau of Canada

Margot Whittington, Manager, Climate Policy, Insurance Bureau of Canada

Tuesday, October 28, 2025

Sarah Butson, Chief Executive Officer, Canadian Lung Association

Pat Camp, Associate Professor, University of British Columbia, As an individual

Paul Hessburg, Professor, School of Environmental and Forest Sciences, University of Washington, As an individual

Thursday, October 30, 2025

Maria Alkayed, Manager, Environment and Regulatory Affairs, Canadian Federation of Agriculture

Claire M. Belcher, Professor of Wildland Fire, wildFIRE Lab, University of Exeter, As an individual

Jacobus Benedik, General Manager, Scodev International b.v.

Nicola Cherry, Professor Emeritus, University of Alberta, As an individual

John Gradek, Faculty Lecturer, Area Coordinator, Aviation Management and Supply Chain Management, School of Continuing Studies, McGill University, As an individual

Sandra Howell, Vice-President, Corporate Programs, De Havilland Aircraft of Canada Limited

Phil Poutissou, Vice-President, De Havilland Defence, De Havilland Aircraft of Canada Limited

Neil Sweeney, Vice-President, Corporate Affairs, De Havilland Aircraft of Canada Limited

Jill Verwey, First Vice-President, Canadian Federation of Agriculture

Appendix B – List of Briefs

A complete list of the briefs and follow-up information received during the study can be found at: https://sencanada.ca/en/committees/AGFO/briefs/44-1 and https://sencanada.ca/en/committees/AGFO/briefs/45-1.

- Follow-up information provided by Crown-Indigenous Relations and Northern Affairs Canada (Corey Hobbs)
- Follow-up information provided by Indigenous Services Canada (Corey Hobbs)
- Follow-up information provided by Public Safety Canada (Kenza El Bied)
- Brief from Forest Products Association of Canada (Derek Nighbor)
- Brief from Global Medic (Ivana Budisa)
- Letter from Fur Institute of Canada
- Follow-up information provided by K'ahsho Got'ine Foundation (Darcy Edgi)
- Follow-up information provided by K'ahsho Got'ine Charter Community, Fort Good Hope Dene Band, (Collin Pierrot)
- Brief from Wabanaki Wildland Crew
- Follow-up information provided by Environment and Climate Change Canada
- Follow-up information provided by John Pomeroy, Distinguished Professor of Geography, Director of the Centre for Hydrology, University of Saskatchewan, As an individual
- Brief from the Australian Fire and Emergency Service Authorities
- Brief from the Government of Manitoba (The Honourable Ian Bushie)
- Follow-up information provided by Internal Displacement Monitoring Centre (Elisa Binon)
- Brief from VEXSL Canada Inc.
- Follow-up information provided by Manitoba Métis Federation
- Follow-up information provided by Bioindustrial Innovation Canada (Meaghan Seagrave)
- Brief from Gel Systems Canada Inc.
- Follow-up information provided by Nicola Cherry, Professor Emeritus, University of Alberta, As an individual
- Follow-up information provided by the Insurance Bureau of Canada (Liam McGuinty)
- Follow-up information provided by First Nations' Emergency Services Society of British Columbia
- Follow-up information provided by the National Research Council Canada
- Brief from Atâhk Consulting and Advisory Services (Ola Koleoso)
- Follow-up information provided by the Canadian Federation of Agriculture
- Follow-up information provided by Claire M. Belcher, Professor of Wildland Fire, wildFIRE Lab, University of Exeter, As an individual
- Brief from Wildfire Awareness Society (Stuart Clark)

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