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**wildfireresilienceproject**

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**LEARNING TO LIVE WITH FIRE:**

# State of Wildfire in B.C.

Policy, Programs,  
& Priorities

**A PRIMER**

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With:

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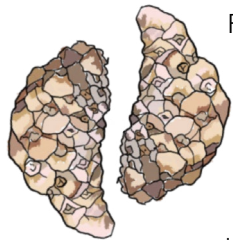
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# Summary: Learning to Live with Fire: State of Wildfire in B.C. Policy, Programs, & Priorities - A Primer



Fire is natural and necessary. It is an essential evolutionary force in British Columbia. Historical fire regimes created a mosaic of diverse ecosystems and habitat conditions and supported the cultures and livelihoods of Indigenous peoples. For millennia, Indigenous fire stewardship and the use of cultural burning practices have enhanced ecosystem biodiversity, assisted with the management of complex resources, and reduced wildfire risk by reducing fuels and vegetation.

Today, more frequent and more severe fires are burning outside of their historical regime of natural and cultural cycles. This is causing rapid changes to ecosystems and having a negative impact on society and our economy.

The provincial government plays a key role in wildfire, which includes responsibilities around prevention, active management, and recovery related to both land and emergency management. However, solving the wildfire problem will require action from more than just the provincial government. No one government has all the knowledge, resources, or authority to do it alone. First Nation governments and many other levels of government and groups within civil society have a significant role to play, with the provincial government actively involved in most of these initiatives as a partner.

All levels of government (First Nations, federal, provincial, local), the research community, and fire practitioners are investing in strategies to limit harmful impacts, better manage wildfire, and help society learn to live with fire. However, even with these plans, investments, and actions, the problem continues to outpace the current suite of solutions and ecological and social impacts are worsening year after year. An urgent need exists to develop a

## **whole-of-government provincial landscape resilience strategy.** This should include:

- A vision for wildfire resilience at the landscape level for all ecosystem types across the province.
- A plan that addresses the human and social dimensions being challenged by wildfire and that builds trust between government and communities across the province.
- Whole-of-government priority actions and better defined and coordinated roles for the various actors in a whole-of-society approach to wildfire resilience.
- An explicit commitment to the necessary provincial budget needed to execute the strategy and required law reforms within specified timelines.
- Committed resources to initiate those well-understood initial actions while the plan is being developed.

## About

This primer explores the new wildland fire reality in B.C. and is the first publication from the POLIS Wildfire Resilience Project, an initiative of the POLIS Project on Ecological Governance at the University of Victoria's Centre for Global Studies. POLIS' work on wildfire focuses primarily on land management practices and how to support and advance the modernization of provincial laws, policies, plans, practices, and processes to improve management, governance, and wildfire resilience in B.C.



## Section I: Introduction

***“The situation that we’re in right now, and the environment that we’re in right now, is something that we’ve never seen before. And we’re starting to recognize that it’s going to take everybody to work together.”***

**- Leonard Joe,  
CEO, BC First Nations Forestry Council, CBC News (2023)**

Fire is natural and necessary. It is an essential evolutionary force in British Columbia. Historical fire regimes created a mosaic of diverse ecosystems and habitat conditions and supported the cultures and livelihoods of Indigenous peoples (see box on fire regimes). For millennia Indigenous fire stewardship, and the use of cultural burning practices, have enhanced ecosystem biodiversity, assisted with the management of complex resources, and reduced wildfire risk by reducing fuels and vegetation.

Despite the important role of fire in B.C., historical fire regimes have been fundamentally disrupted by government policies, land use, settlement, and industry practices over the past 150 years. The decline of cultural burning was a result of many Crown legislative acts, including the *Bush Fire Act* (1874), and other colonial policies that dispossessed First Nations peoples of land and significantly limited traditional cultural practices, including cultural burning. During the 20th century, mainstream society’s focus on fire suppression had the effect of increasing accumulated fuels on the landscape, which has contributed significantly to the volatile wildfire situation we are now experiencing across most of B.C.<sup>1</sup>

Today, some fires are burning outside of their historical regime of natural and cultural fire cycles. This is causing rapid changes to ecosystems and having a negative impact on society and our economy.

Increases in the density of infrastructure and settlement in rural and wildland urban interface areas is exacerbating risk and consequences for people and communities, with impacts being felt disproportionately by First Nations communities.<sup>2</sup> These impacts are only projected to increase and deepen in the coming years because of the effects of climate change.

All levels of government (First Nations, federal, provincial, local), the research community, and fire practitioners are investing in strategies to limit harmful impacts, better manage wildfire, and help society learn to live with fire. Yet, the negative impacts of wildland fires continue to accelerate and outpace the ability to respond with existing solutions.

***To build lasting social and ecological resilience, significant shifts towards a different and more comprehensive approach to wildfire management and governance are urgently needed in B.C.***<sup>3</sup>

**“Fire regime”** is the term given to the general pattern in which fires naturally occur in a particular ecosystem over an extended period. Scientists classify fire regimes using a combination of factors, including frequency, intensity, size, pattern, season, and severity.<sup>1</sup>



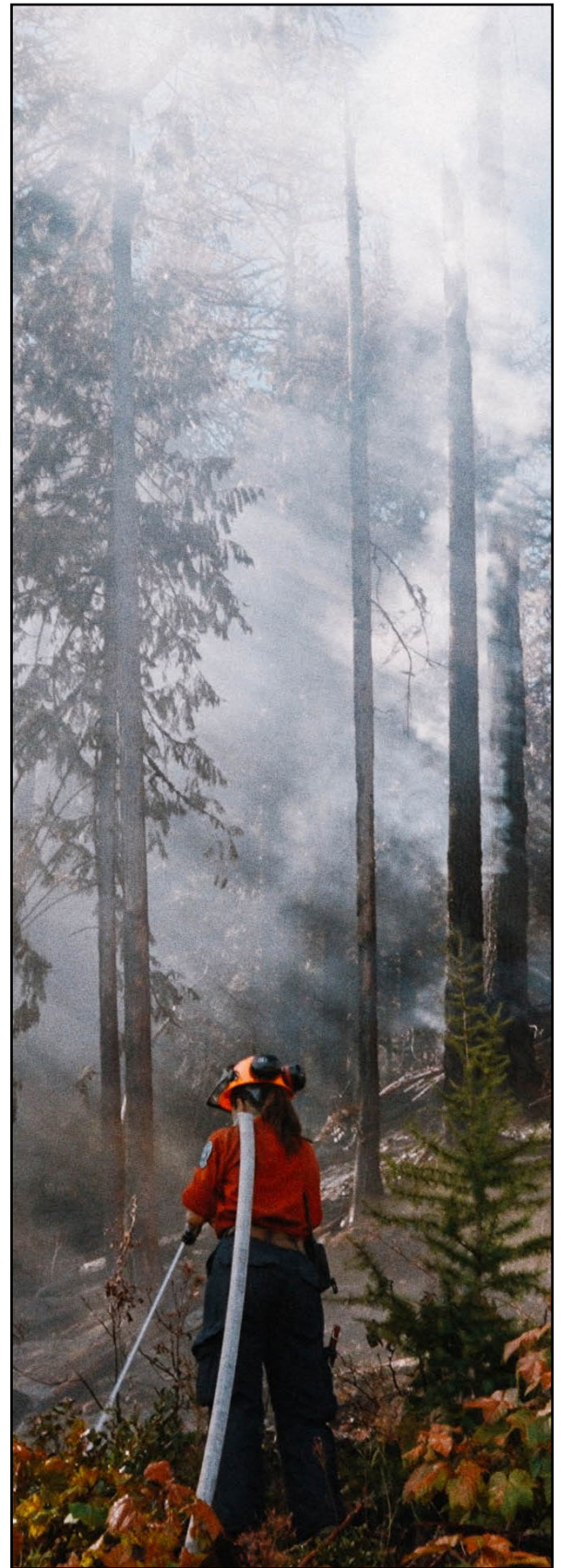
Building wildfire resilience will allow communities across B.C. to adapt to the inherent complexity and uncertainty of today's world in a way that builds social cohesion and minimizes negative impacts. Given the scope of the problem and the range of actions needed, moving towards wildfire resilience will require not only a whole-of-government response but, indeed, a *whole-of-society* approach. How we prioritize landscape-level planning, management, and prevention, and how we organize ourselves to respond and make collective decisions, build trust, ensure accountability, and coordinate action across society will influence how successfully we live with fire now and for future generations.<sup>4</sup>

## About This Report

This primer explores the new wildland fire reality in B.C. and is the first publication from the POLIS Wildfire Resilience Project, an initiative of the POLIS Project on Ecological Governance at the University of Victoria's Centre for Global Studies. POLIS' work on wildfire focuses primarily on land management practices and how to support and advance the modernization of provincial laws, policies, plans, practices, and processes to improve management, governance, and wildfire resilience in B.C.

This primer is intended for policy-makers at all levels of government, Indigenous governments, communities, industry, the expert and research community, and non-government partners. The authors describe the nature of the wildland fire situation in B.C., highlight implications for communities and ecosystems, and detail current approaches to wildland fire management from governments and civil society.

This primer is a launching point for POLIS' subsequent exploration of the reforms and solutions needed to better manage and govern for resilience in the context of wildland fires.



**Photo:** BC Wildfire Service (2023). Copyright of British Columbia. All Rights Reserved. Reproduced with permission of the Province of British Columbia.



## FEATURE BOX #1 - UNDERSTANDING RESILIENCE: HOW TO PERSIST & EVOLVE WITH CHANGE

Resilience is a central concept in this primer and the ongoing work of the POLIS Wildfire Resilience Project. In our work, we rely on the Stockholm Resilience Centre's definition of **resilience** as “the capacity to deal with change and continue to develop.”<sup>ii</sup>

Resilience is a large and complex field of research and application, and the concept is used by different sectors to indicate different ideas. We use a social-ecological systems (SES) perspective, which emphasizes that “humans must be seen as a part of, not apart from, nature—that the delineation between social and ecological systems is artificial and arbitrary.”<sup>iii</sup>

**Social-ecological systems resilience** is “the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks.”<sup>iv</sup> Social-ecological resilience has three main components: *persistence, adaptability, and transformability.*<sup>v</sup>

**Persistence** indicates a system's absorptive or buffering capacity “for conserving what you have and recovering to what you were.”<sup>vi</sup> In social-ecological resilience, persistence relates to the capability to absorb disturbances without losing essential functions.

**Adaptability** or adaptive capacity is a system's ability to “be robust to disturbance and capable of responding to change.”<sup>vii</sup> Adaptability captures the capacity of a SES “to learn, combine experience and knowledge, [and] adjust its responses” to changing conditions as well as to influence the trajectory of the system.<sup>viii</sup>

**Transformability** is “the capacity to create a fundamentally new system when ecological, economic, or social (including political) conditions make the existing system untenable.”<sup>ix</sup>

These concepts from a SES perspective have been combined with notions of resilience from health and psychology literature to create a definition of resilience for the local or community level (as opposed to the ecosystem or individual level).<sup>x</sup> Following this integrated approach, we define **community resilience** as “the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise.”<sup>xi</sup>

The Stockholm Resilience Centre has valuable related resources on this topic, including a helpful resilience dictionary that defines and explains key concepts and related terms.<sup>xii</sup>



**Photo.** A morel mushroom grows after the Tremont Creek wildfire, which burned 63,548 hectares in July and August 2021. Andrea Barnett, Project Manager, POLIS Wildfire Resilience Project (June 2022).



## Section II: The Current Wildfire Situation in B.C.

*“It’s just the sheer volume of fires, the sheer geographical area. I mean, we’ve got 77,000 square kilometres in our regional district. You can appreciate the challenge it is to get out to these fires, to monitor them... it’s a different beast.”*

- Mark Parker,  
Chair, Regional District of Bulkley-Nechako, CBC News (2023)

In four of the last eight years (2017, 2018, 2021, 2023), British Columbia has experienced the most impactful wildland fire seasons in recorded history. In those four years alone, more than 6 million hectares of forest and grassland were burned (about twice the size of Vancouver Island), more than 200,000 people were on evacuation order or alert, direct provincial wildfire fighting costs were close to \$3 billion, and more than 1,000 homes and structures were destroyed.<sup>5</sup>

A host of additional impacts follow significant fire

seasons, including ongoing displacement of people and animals, trauma and post-traumatic stress disorder, adverse health impacts from smoke, disconnection from community and culture, loss of livelihoods, and landscape impacts, including increased flood risk and debris flows.

In the midst of statistics and wide-ranging impacts, concern is mounting across society about the threat and impacts of these events, as well as the lack of clarity around what needs to be done going forward.

**Figure 1:** The four highest cost years of all time for wildfires in B.C.

Year	Total Fires	Total Hectares Burned	Total Cost (Millions)	State of Emergency (# of Days)
<b>2023</b>	2251	2,840,571	\$966 M	38
<b>2021</b>	1652	869,279	\$719 M	56
<b>2018</b>	2117	1,354,284	\$615 M	23
<b>2017</b>	1353	1,216,053	\$649 M	70

**Source:** See figure endnote A.

## Current Wildfire Science & Gaps in Knowledge

To date, the bulk of wildfire research in B.C., both from government and in academia, has focused on improving response to fires in terms of improved technology and fire suppression techniques.<sup>xvii</sup> For example, the efficacy of fire suppressants and high-volume water delivery systems are being investigated.

A scan of B.C.-based peer-reviewed science journal articles since 2017 also shows a considerable amount of research on the prevention and mitigation of wildfires. This includes studies on the effectiveness of various fuel treatments in reducing wildfire risk, and the impact of forest management activities on ensuing wildfire events. Research has also supported proactive fire management and using historical fire regimes to support fire as a predictive, mitigative, and stewardship tool.<sup>xviii</sup>

This research focus is understandable, since suppressing wildfires that can harm communities and critical infrastructure is a high priority. However, while decision-makers have relied on fire exclusion policies to primarily drive reactive rather than proactive fire research, the importance of beneficial fire has been secondary or overlooked.

Recent wildland fires in western North America—fueled by climate change, historic fire deficits on the landscape, land management practices, and settlement patterns in B.C. and other jurisdictions (especially the western United States)—have led to a more urgent need to address knowledge gaps in natural and social science.

The Canadian Forest Service's *Blueprint for Wildland Fire Science in Canada (2019-2029)* describes five areas that will require investment if the capacity of wildland fire science and technology is to keep pace with “the growing complexity of wildland fire.”<sup>xix</sup> The themes where knowledge gaps are identified are:

- Understanding fire in a changing world.
- Recognizing Indigenous knowledge.
- Managing ecosystems.
- Delivering innovative fire management solutions.
- Reducing the effects of wildland fires on Canadians.<sup>xx</sup>

In B.C., wildfire scientists point out that the diversity of ecosystems found in the province—from some of the driest to the wettest on the continent—means that a one-size-fits-all solution is not the most effective approach to improving wildfire resilience. Because of this diversity, the understanding of fire regimes in B.C. and how they will be affected by climate change also lags behind other jurisdictions. It is weaker when it comes to understanding ecosystems that are unique to the province, such as sub-boreal forest regions. This points to the need for more ecosystem-specific research related to wildfire resilience.<sup>xxi</sup>

In addition to the ecological research needed, a recent report identified gaps in the current understanding of wildfire risk to communities and individuals in B.C. Identified topics requiring further study and action included:

- The health impacts of smoke.
- The social, cultural, and psychological determinants of vulnerability to wildfire impact.
- How fuels influence fire spread in the wildland urban interface.
- Enhanced knowledge transfer with a focus on elected officials, including information on the limits of suppression.
- Pathways to support Indigenous and other forms of knowledge.<sup>xxii</sup>



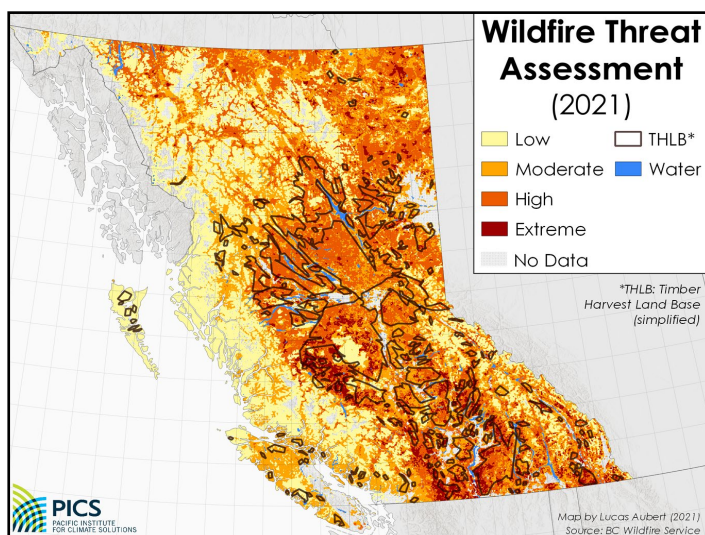
Another knowledge gap is understanding what is needed in post-fire restoration to bolster resilience, including what level of management is most appropriate (and at what interval) to ensure the continued resilience of burned or fuel-managed sites.

Research on resilience is another priority area for ongoing work. Applying resilience thinking to the governance and management of the emerging wildfire regimes in B.C. will require interdisciplinary approaches to understand the numerous impacts and interconnections, as well as the implications of possible governance and management options and pathways of adaptation and transformation.<sup>xxiii</sup> For example, management choices may be significantly altered if the risks of catastrophic wildfire to watershed security are incorporated into assessments and decision-making.<sup>xxiv</sup>

The exact pathways of adaptation and transformation for coping with wildfire remain uncertain and it is a challenge at both the community and landscape levels. While improving science and knowledge is key, it is hard to predict whether the acquisition of knowledge will occur at a pace that misses, meets, or exceeds the rate at which uncertainty is expanding. In any case, prioritizing and addressing these gaps will support the needed “whole-of-society” approach to wildland fire in B.C.

The threat of wildland fire to most of the province is increasing and cannot be ignored. The 2021 Provincial Strategic Threat Analysis (PSTA) is a spatial tool produced by the provincial government that highlights the likelihood of fire and its potential severity. In 2021, the PSTA indicated that 45 per cent (39 million hectares) of public land in B.C. is at high or extreme threat of wildfire, and that an additional 28 per cent is at moderate threat.<sup>6</sup>

**Figure 2:** 2021 B.C. wildfire threat assessment map.



**Source:** See figure endnote B.

## Why Is Fire Threat Soaring & Are Fires Today of Higher Risk & Consequence?

Even though fire is natural and necessary, many of the wildland fires today are challenging society’s ability to manage the negative impacts of these events. There are three primary reasons for this:

**1. A changing climate and more severe fire weather mean that fire seasons are longer, drought is becoming more commonplace and lasting longer, there are more fires ignited by lightning, and, once they start, fires are more likely to burn hotter and longer and to spread more quickly.**<sup>7</sup>

The changes that scientists predicted as the result of a changing climate are occurring much earlier than most models predicted. This includes:

- Rising temperatures, including higher daytime temperatures, more frequent wind conditions, and lower nighttime relative humidity. In 2023, 18 communities in B.C. experienced their highest ever daily temperature for a specific date.<sup>8</sup>
- Increased lightning events. With every one degree of global warming, there is an estimated 12 per cent increase in lightning activity.<sup>9</sup>

**Photo:** A fire tornado whirls during a prescribed burn at Mitchell Ridge, Kootenay National Park. Bob Gray, AFE Certified Wildland Fire Ecologist (May 2008).



The Village of Lytton provides a stark example of the impact of “fire danger.” In 2021 an all-time temperature record for Canada was set at 49.5 C, as a “heat dome” enveloped the province in late June. A day after the record was set, the Village of Lytton and Lytton First Nation communities were devastated by fire—151 homes and businesses were lost and two residents died.<sup>13</sup>

**Photo:** Damaged structures and vehicles in Lytton, British Columbia after a catastrophic wildfire devastated the region on June 30, 2021. Darryl Dyck, Canadian Press (2021).



- Persistent drought, including low snowpack and snow water equivalent, and warmer winter temperatures associated with higher levels of forest disease, which increases fuel loading.<sup>10</sup>
- Earlier start to fire seasons due to earlier snowmelt, higher spring temperatures, and a later end to the fire season—which extend the length of the season overall.<sup>11</sup> We now see fires start in every month of the year. For example, a grass fire in Prince George started in January 2024 and 96 fires that started in 2023 were still active as of April 2024.

A shifting climate contributes to more frequent “fire danger.” This refers to a convergence of weather conditions that can promote wildfire intensity and spread: temperatures above 30 C, winds above 30 km/hr, and relative humidity less than 30 per cent.<sup>12</sup>



Temperatures  
> 30°C



Winds  
> 30km/hr



Humidity  
< 30%

**Figure 3:** The “30-30-30” convergence of weather conditions that contribute to more frequent fire danger.

**Source:** Developed by the POLIS Wildfire Resilience Project (2024).



Figure 4: Catastrophic wildfire is a whole-of-society problem.



Source: Designed by Kara Sievwright in 2023 *Dialogue on Strategic and Collaborative Approaches to Mitigating Wildfire* (2023). Mitigating Wildfire Initiative, SFU Centre for Dialogue. See figure endnote C.

**2. Fire deficit conditions and accumulated fuels on the landscape coupled with higher temperatures mean more extreme fire behaviour, making fires harder to suppress.<sup>14</sup>**

**3. Shifting land use and settlement patterns mean that fires on the landscape impact people, property, and essential public infrastructure more often.<sup>15</sup>**

The wildland urban interface (WUI) is where built infrastructure (e.g. homes) extends into forest land. As a result of population growth and land use practices, fire risk continues to increase in the WUI across the province and those living or working within the WUI are at higher risk of catastrophic impacts due to wildfire.

As one example, from 1986 to 2016 the population

of Greater Kelowna more than doubled and it is now home to more than 200,000 residents and more infrastructure that extends into the WUI.<sup>16</sup> In 2003, wildfires destroyed 239 homes and resulted in the evacuation of 45,000 people.<sup>17</sup> In 2023, another wildfire burned parts of West Kelowna. Nearly 200 homes and businesses were destroyed and thousands of people were evacuated.<sup>18</sup> The level of destruction experienced in 2003 and 2023 was a result of wildfires engulfing infrastructure in the WUI and then spreading into more urban settings.

In addition to settlement in the WUI, increased development across all areas of the province has resulted in critical infrastructure such as mines, lodges, recreation facilities, and oil and gas infrastructure that is vulnerable to wildfire.

# Four Reasons for Fire Deficit Conditions & Accumulated Fuels

## 1. Fire Exclusion

Indigenous peoples have always recognized the importance of fire and have used it to steward landscapes across B.C. However, for nearly two centuries colonial law and policy have restricted Indigenous peoples from conducting their traditional cultural practices as they relate to fire. The B.C. provincial government has improved its legislation to restore the ability of Indigenous peoples to engage in these practices, but barriers to permitting, training, and capacity still limit the application of cultural burning. <sup>xiii</sup>

## 2. Fire Suppression

Throughout the early 20th century, mainstream society was conditioned to see wildfire as a negative process. The economic value of timber was the priority focus and the widespread Smokey the Bear campaign messaging spurred and locked in fire suppression policies. The BC Wildfire Service was created in 1912 and its suppression activities significantly ramped up in the mid-20th century. Widespread fire suppression across B.C., and beyond, disrupted the natural fire-dependent cycles of ecosystems, created significant accumulations of fuel on the landscape, and, in some regions, resulted in homogenized forest structures that lacked the natural fuel breaks and openings that help reduce the extent of extreme wildfire. <sup>xiv</sup>



## 3. The Mountain Pine Beetle Epidemic

The mountain pine beetle is a wood-boring insect native to western North America. Populations grow when summers are warm and dry, winters are mild, and food sources are abundant. Fire suppression policies contributed to a greater abundance of host trees for mountain pine beetles. As a result, a mountain pine beetle epidemic has affected more than 18 million hectares of forested land in B.C. since the late 1990s. This has created an abundance of dead and dry fuel, resulting in more severe wildfires. The effects of the mountain pine beetle epidemic are expected to last for decades, with climate change increasing the chances of future forest insect and disease epidemics. <sup>xv</sup>

## 4. Forest and Land Management Practices

Many land management practices and policies have contributed to more accumulated fuels on the landscape and fewer natural resilience assets, like hydrated landscapes and natural open areas. <sup>xvi</sup> These include:

- Early logging practices in southern B.C. that removed large, fire-resistant trees (such as larch, Douglas fir, and ponderosa pine) and allowed dense ingrowth of smaller more fire-prone tree species.
- The elimination of broadcast burning after logging.
- Requirements for replanting trees after harvest that are based on targets for timber production, rather than targets for ecosystem health and social-ecological resilience.
- Land development and agriculture practices that result in loss of wetland and riparian areas.

**Photo:** Ranchers evacuate cattle from the Tremont Creek wildfire near Tunkwa Lake, B.C. Andrea Barnett, Project Manager, POLIS Wildfire Resilience Project (August 2021).





## FEATURE BOX #2 - BENEFICIAL FIRE VERSUS CATASTROPHIC WILDFIRE

The California Wildfire and Forest Resilience Task Force defines **beneficial fire** as a collective term that refers to prescribed burning, cultural burning, and managed fire (see page 22, “Fuel Management Strategies”).

“Together, these terms encompass the full suite of beneficial fire activities that may be selected to reach certain management or stewardship objectives. These objectives range from fuels reduction, ecological benefits, cultural ceremonies, hazard abatement, restoration, replenishment of the spirit, and many more ... all have the intention of restoring a more resilient landscape for our environment and future generations.”<sup>xxv</sup>

It should be noted that in B.C., as well as in other jurisdictions, the practice of cultural burning as a tool used by First Nations in fire stewardship is often self-described in terms of “**good fire**”<sup>xxvi</sup> that improves social and ecological conditions.

The outcomes of the use of beneficial fire sit in direct contrast to what has become known as **catastrophic wildfire**. In this context, “the reintroduction of fire in controlled circumstances can limit the scope of catastrophic wildfire and improve ecosystem resilience.”<sup>xxvii</sup> Catastrophic wildfire is defined by the United Nations Environment Program as “an unusual or extraordinary free-burning vegetation fire, which may be started maliciously, accidentally, or through natural means, that negatively influences social, economic, or environmental values.”<sup>xxviii</sup>

Examples of these negative social, economic, and environmental impacts in B.C. include displaced populations, loss of livelihoods and infrastructure, and decreases in ecosystem functions, such as water and carbon cycling and greenhouse gas emissions created by large fires. Very large and high-severity fires are often catastrophic due to their effects on communities. Due to the diversity and complexity of B.C., catastrophic fire incidents can occur even outside of megafire events, such as the devastation of the Village of Lytton and Lytton First Nation communities in 2021 (see Section II).

In some ecosystems, such as dry ponderosa pine forests, the size and severity of current fires are different from the historical fire regime. As such, the ecological impacts can be catastrophic. In other areas, like the boreal forest, the occurrence of very large fires may align with the historical fire regime. In cases like this, the ecosystem has evolved with fire and the ecological impacts can include some positive outcomes. To assess the effects of a fire on an ecosystem, it is important to understand how the fire, or a series of fires, compares with the historical fire regime of that area.

**Photos:** (Back, left) *Prescribed burning*. Kira Hoffman (2023); (Back, right) *BC Wildfire Service*. Copyright Province of British Columbia. All Rights Reserved. Reproduced with permission of the Province of British Columbia (2023).



## Section III: Impacts & Challenges of the Emerging Wildfire Regime

*“When it comes to prescribed fire, we must allow communities to revitalize those practices. The stakes couldn’t be higher. What we’re talking about is the land, and without the land, we have nothing.”*

**Project Manager of Wildfire Strategy, Indigenous Leadership Initiative, CBC News (2021)**  
**- Brady Highway, CBC News (2021)**

### Embracing the Complexity & Diversity of Fire in B.C.: One Size Doesn’t Fit All

In this section, we summarize some of the complexity and most significant dimensions of the current wildfire situation in B.C. To ensure the current state of wildfire does not overwhelm society, we suggest these must be addressed at a systems level as part of a comprehensive solution and management regime.

British Columbia is home to a vast variety of ecosystems, which means there are substantial differences in the types of wildfires that occur across the province. Fire regimes are often characterized by frequency, size, and severity. Most fire regimes can change over time and climate change will likely increase the frequency, size, severity, and season of fire in much of B.C. We are already experiencing fire regimes that are departures from historical fire regimes and this divergence will only become more marked in the future. As well, different fire regimes lead to different forest structures (and in some instances a return to a non-forested state).<sup>19</sup>

Understanding the nuance of regional and fuel-specific fire regimes will be crucial to developing relevant and effective management actions. For example, approaches that work in an open ponderosa pine (interior) forest may not be as effective in sub-boreal pine and spruce or in wet coastal forests.

In ponderosa pine ecosystems, fire is an important ecosystem process to maintain old-growth forests because fire removes ground and ladder fuels. Fire is more likely to occur at low severity and thick-barked mature trees are more likely to survive. On the other hand, in sub-boreal lodgepole pine ecosystems, mixed or high severity fire periodically burns old forests, which re-initiates succession of a new, even-aged forest.

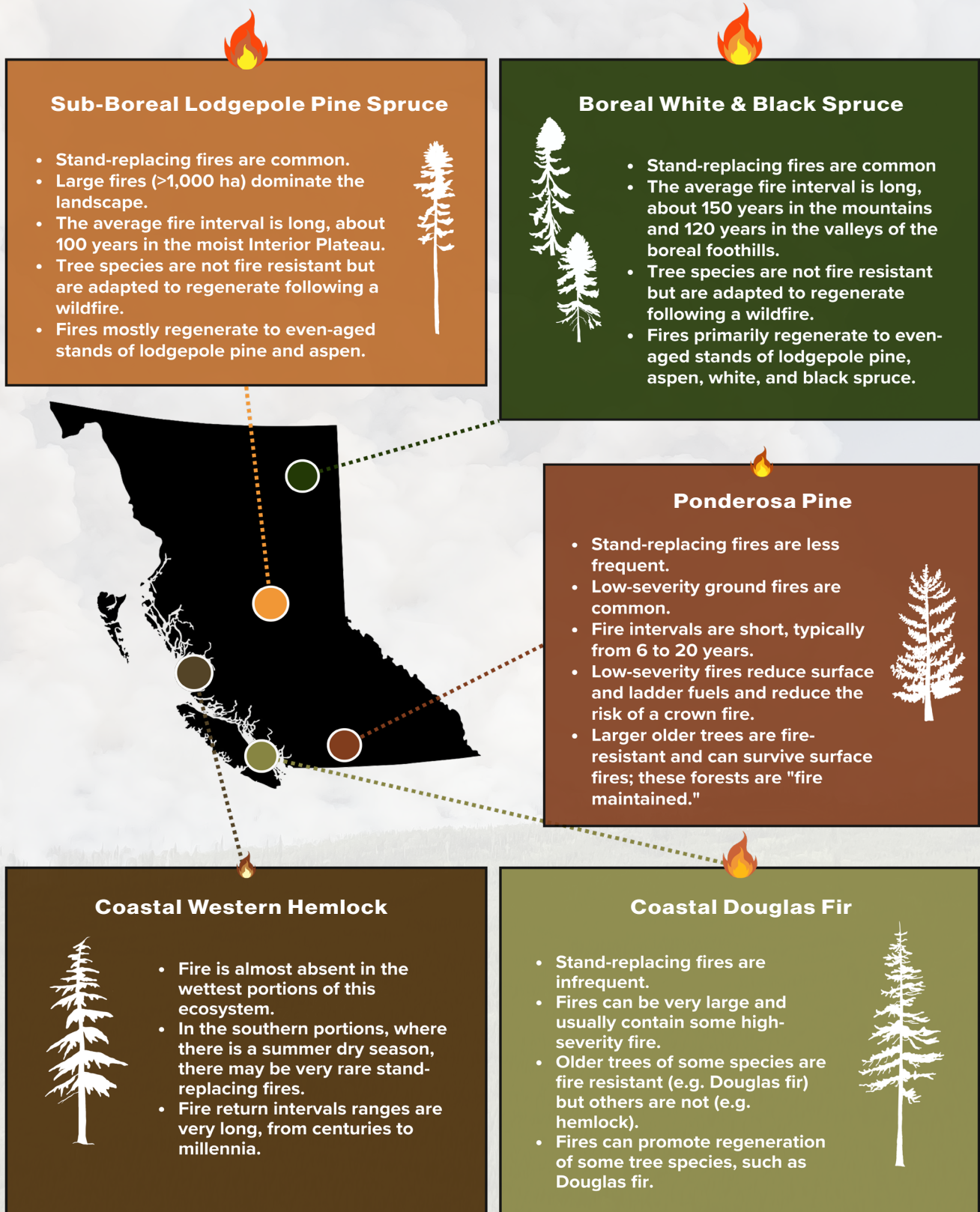
In B.C., there are large gaps in our understanding of local fire regimes. To embrace the complexity and diversity of B.C.’s ecosystems and wildfires, landscape fire management must be tailored to local ecosystems and communities, with the understanding that even within a local area there can still be a high level of diversity of wildfire due to differences in fuels, topography, and local climate.<sup>20</sup>

Indigenous fire stewardship is increasingly recognized as a significant part of the fire regime in grasslands and across all forests in B.C., but, for a variety of reasons, including the legacy of colonial fire suppression, it is not widely implemented across the province.<sup>21</sup>



**Figure 5:** Five examples of British Columbia's ecosystem variability in relation to fire behaviour.

**Note:** These examples are illustrative. There are still major gaps in our understanding of fire regimes in B.C. and more detailed research into local fire regimes will be required to create a more nuanced picture.



**Source:** Developed by POLIS Wildfire Resilience Project (2024). See figure endnote E.

## Understanding Fuel Management as a Pathway to Resilience

Fuel management is considered by many experts to be among the most effective and urgently needed interventions to help support landscape resilience to wildfire and many communities are looking to fuel management as a solution. Despite agreement about its benefits in principle, there are numerous questions about how, where, and when it is most effective.<sup>22</sup>

Prescribed and cultural fire can be used as an effective fuel mitigation tool, but often requires prior fuel treatments and must be applied repeatedly to be effective.<sup>23</sup> While some perspectives are shifting, educating the public about the role of fuel management and finding the right balance between social acceptability and risk management will be fundamental to ensuring that purposeful, beneficial fire can be used as an effective tool to combat catastrophic fire.

Additionally, there has been little formal assessment to date to determine the appropriate scale of action needed to achieve resilience or the appropriate combination of proactive fuel treatments (see Box “Fuel Management Strategies”). In 2023, the B.C. Forest Practices Board recommended adopting Landscape Fire Management and outlined an approach that can be used to develop objectives for resilient landscapes.<sup>24</sup>

While many argue that the cost of mitigative measures pales in comparison to the costs associated with response, costs associated with all approaches are significant. Given the scale likely required for effective landscape fuel treatment, the costs are daunting.

With fuel treatments ranging in cost from \$1,000 to \$10,000 per hectare, costs could range from hundreds of millions to billions annually to be done at the necessary scale. This leads to debate about how best to allocate resources between prevention and response, as well as between capital investments and operating expenditures.

With so many questions surrounding if, when, how, where, how much, and how to pay for fuel treatments, these considerations rapidly shift from being just a “management problem” to revealing the complexity

of the interlinked economic, social, and governance challenges.<sup>25</sup>

## Implications of Wildfire

While B.C.’s 2023 wildfire season is the most impactful on record, fires are expected to further increase in frequency, size, and severity in the coming years as the climate continues to change and our forests continue to age and become more susceptible to increased wildfire risk. This means the length of wildfire seasons will also continue to increase. The effect on ecosystems will have direct implications on the economy, government revenues, cultural values, and society as a whole. Despite being natural and necessary, the current wildland fire situation presents several interlinked challenges. Figure 5 offers some specific examples of ecosystem and community impacts from the current wildfire situation in B.C. and begins to illustrate the cross-cutting human and social dimensions that are being challenged by wildfire today.



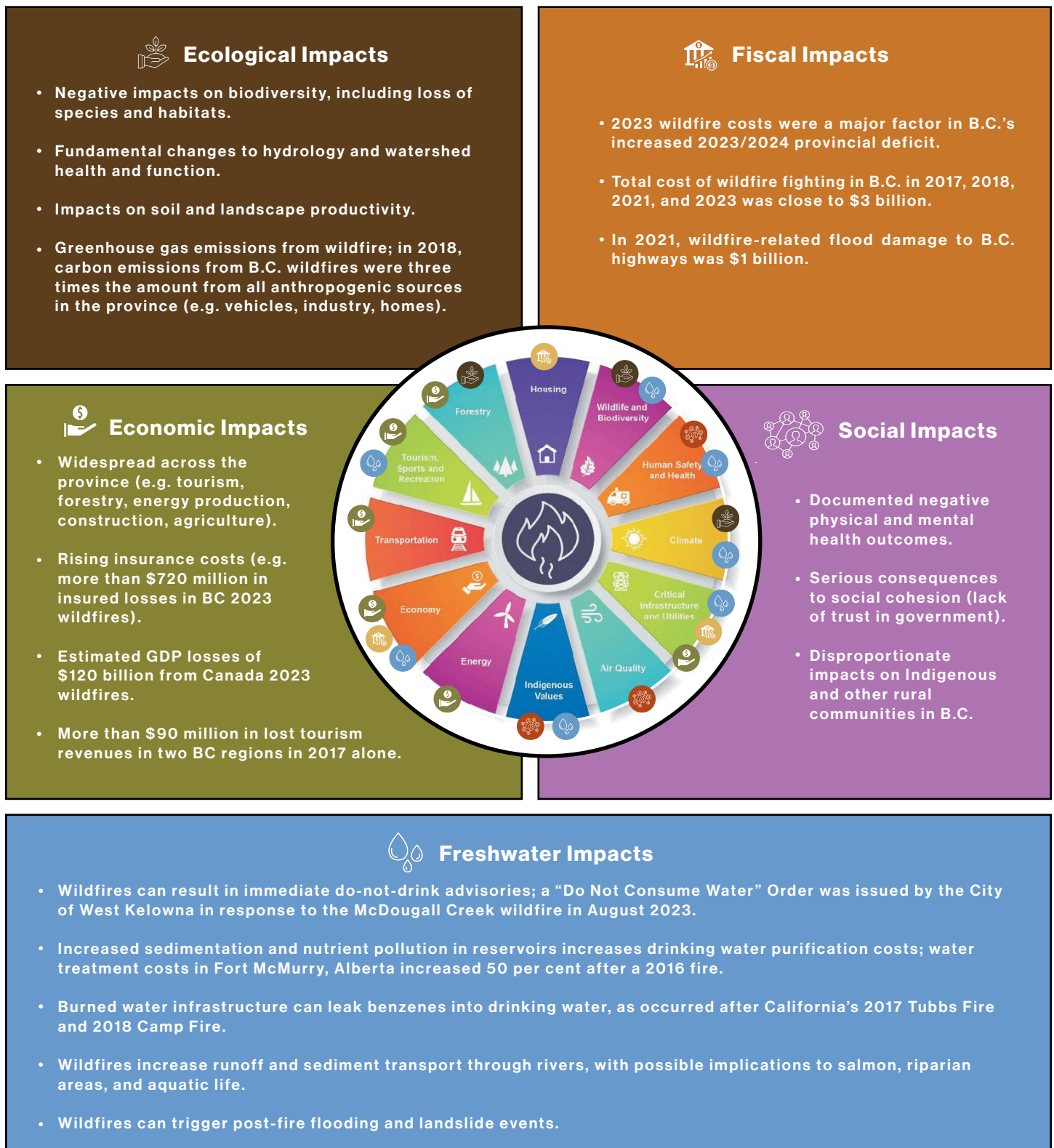
**Photo:** A prescribed burn in Moir Park, Cranbrook, British Columbia by Bob Gray, AFE Certified Wildland Fire Ecologist (September 28, 2022).



**Figure 6:** The key implications of catastrophic wildfire in B.C.

## Key Implications

### What is Affected by Catastrophic Wildfire?



**Source:** (Impact Wheel) *Forest and Wildfire Management in BC: Toward Landscape Resilience - Special Report*. BC Forest Practices Board (June 2023); (Text) developed by POLIS Wildfire Resilience Project (2024). See figure endnote D.

## The Problem of Scale

Approximately 39 million hectares of B.C. (40 per cent of its land area) are at high or very high risk of wildfire, with over one million of these hectares being in the wildland urban interface. Recent research also suggests that 30 to 40 per cent of the fireshed needs to be in a low fuel condition to meaningfully contribute to landscape resilience and minimize the risk of catastrophic fire. This means that, considering high-risk areas, the

provincial government would likely need to treat hundreds of thousands of hectares per year on an ongoing basis to achieve what is likely required for resilience. This is no small task. Considering that the provincial government has been treating approximately 5,000 hectares per year since 2018, a massive increase in the scale of treatment is required.<sup>xxxi</sup>

**Photo:** *The Donnie Creek wildfire in northeast British Columbia (2023).*



**Note:** The 2023 Donnie Creek wildfire at more than 619,000 ha is the largest recorded in provincial history disrupting jobs and lives in BC's northeast. See endnotes for Figure 5, D. b) (Cox, 2023). **Photo:** *Donnie Creek wildfire, BC Wildfire Service (2023).* Copyright Province of British Columbia. All rights reserved. Reproduced with permission of the Province of British Columbia.



## The Connection Between Wildfire & Carbon

B.C. forests shifted from being a carbon sink to being a carbon source following the mountain pine beetle epidemic (see Box “Four Reasons for Fire Deficit Conditions and Accumulated Fuels”) and wildfires have further made B.C.’s forests large carbon sources in subsequent years.<sup>26</sup> Despite not being counted as greenhouse gas emissions in the provincial government’s CleanBC plan, annual greenhouse gas emissions from wildfire can dwarf emissions from *all other sources in B.C.*<sup>27</sup> Large carbon emissions from wildfires raise the potential for a feedback loop where wildfires that are made worse by climate change also contribute to climate change.

The complex relationships between forests, wildfire, and carbon emissions require extensive additional research. In 2020, the Pacific Institute for Climate Solutions (PICS) initiated a four-year Wildfire and Carbon research project to “incorporate future wildfire impacts into forest management practices to help develop strategies to reduce emissions from wildfires, enhance forest carbon sinks, and assess bioeconomy opportunities for forest fibre”.<sup>28</sup>

Research in other jurisdictions shows that fuel treatments can reduce the extent and severity of wildfire and increase the overall amount of carbon retained when compared to an untreated landscape.<sup>29</sup>

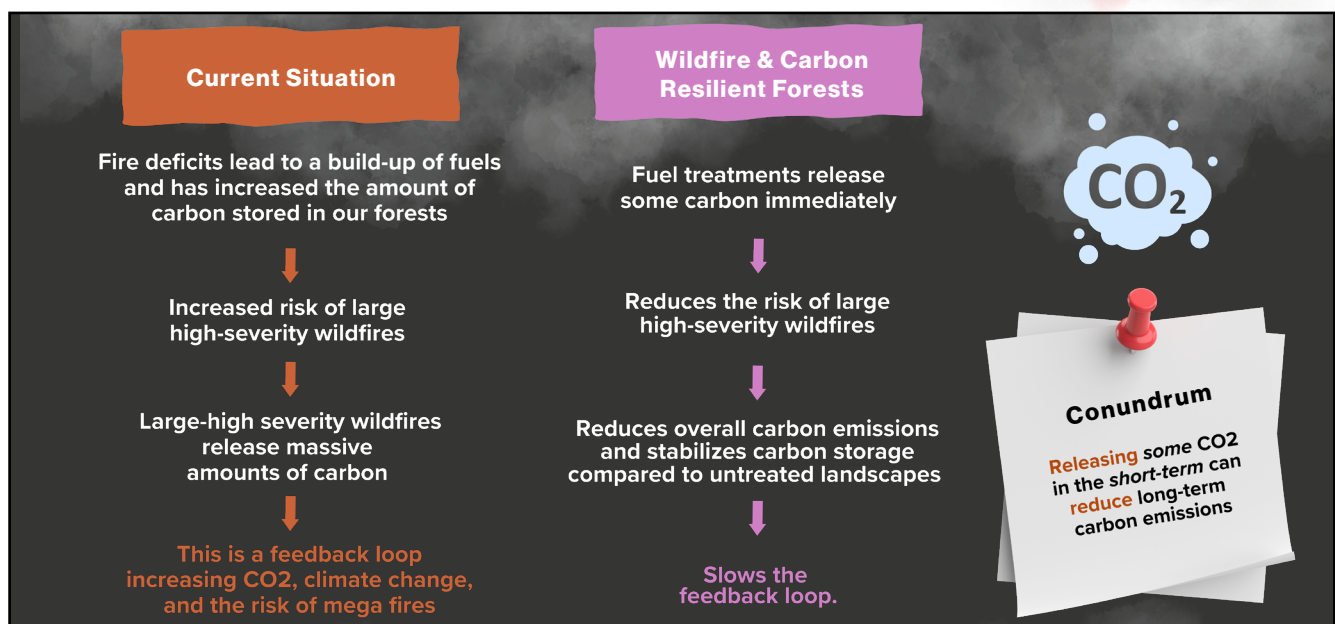
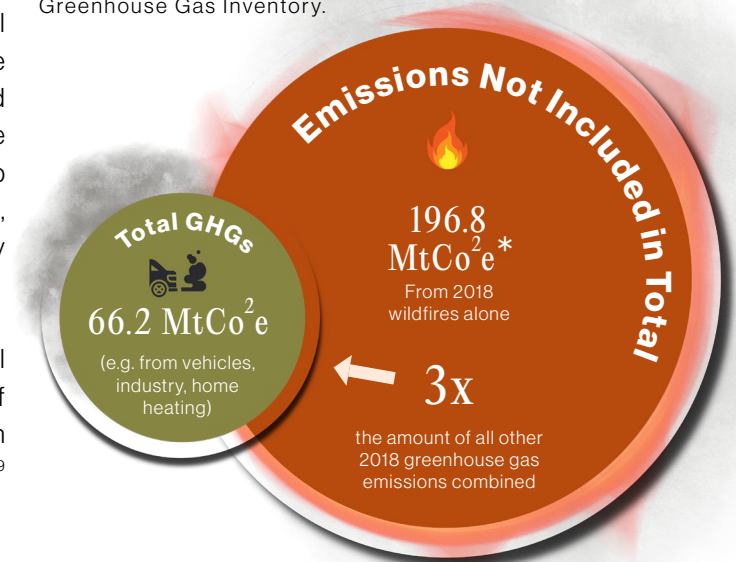
**Figure 8:** Comparison of the current wildfire management regime in B.C. with a potential future state.

Different fuel treatments have different effects on carbon emissions depending on what is done with the fuel that is removed from a site. For example, if the fibre is used in the bioeconomy or processed into biochar, instead of burned on site, then greenhouse gas emissions can be reduced. Due to the relatively recent emergence of the issue of B.C.’s forests being carbon sources rather than carbon sinks, there are gaps in policy, planning, and knowledge to make effective decisions about managing carbon from wildfires in B.C.

**Figure 7:** Greenhouse gas (GHG) emissions in B.C. in 2018.

\* Million tonnes of carbon dioxide equivalent (a scientific unit of measurement).

\*\* Wildfires considered natural disturbances by the provincial government and are not included in British Columbia’s Annual Greenhouse Gas Inventory.



**Sources (Figure 7 & 8):** Developed by POLIS Wildfire Resilience Project (2024). See figure endnote F & G.

## FEATURE BOX #3 - FUEL MANAGEMENT STRATEGIES

### Cultural Burning

Indigenous fire stewardship includes the intentional use of fire on the landscape, at any scale, that is Indigenous-led and supported through distinct cultural values, perspectives, or practices. Cultural burning is a practice that has existed since time immemorial. This practice has been conducted over time to enhance multiple values, one of which is fuel management to protect infrastructure and important gathering sites from wildfire. Much of B.C.'s forest and grassland ecosystems have been shaped by Indigenous fire stewardship. While colonial law and policy had significant negative impacts on Indigenous fire stewardship for over a century, legal and policy mechanisms are now evolving within Crown law to enable partnerships to reintroduce this practice in some cases.<sup>xxix</sup>

### Prescribed Fire

Prescribed fire is the planned and intentional use of fire on a specific land area. It can be used to achieve a range of objectives, including ecosystem restoration and habitat enhancement, preparation for tree planting or disease eradication, or to reduce forest fuel loads to reduce the risk of catastrophic wildfire. The use of prescribed fire is regulated by the provincial government and is often targeted to the highest risk and highest benefit sites.

There are a variety of approaches to prescribed fire, including broadcast burning and pile burning. The type of prescribed fire depends on the specific needs and objectives associated with the site, but all involve the intentional use of fire. Most often conducted at times of lower risk, like the spring and fall, prescribed fires can take months or years to plan and are managed to minimize the chance of escape and smoke impacts while maximizing the benefits to the site. These treatments are often very costly, ranging between \$1,000 to \$10,000 per hectare depending on the approach taken, but they are widely accepted as some of the most effective ways to reduce a buildup of forest fuels in a targeted and risk managed manner.<sup>xxx</sup>

### Mechanical Treatment

Mechanical treatment is another approach to reducing accumulated fuel on a landscape. Examples include the thinning of dense stands of trees, piling brush, pruning lower branches of trees, or creating fuel breaks. The tools used range from hand tools, such as chainsaws and rakes, to large machines, like bulldozers and woodchippers. Mechanical treatments are often used in conjunction with prescribed burning or pile burning to create effective hazard reduction.

### Modified Response (Managed Wildfire)

Modified response, or managed wildfire, refers to the practice of deferring to the natural burn process and employing little or no management or intervention efforts on wildfires. While it is often policy direction to practice modified response, this approach also includes the ability to strategically intervene if conditions change or where there are values, such as cultural values, that require protection. Local fire management plans can provide guidance on designated zones to “let burn” and when to intervene, but these plans need to incorporate multiple values and be co-developed with local and Indigenous governments.

Despite the considerable fire suppression efforts in B.C. over the past century, modified response has been a longstanding policy and practice in many (often less populated) parts of the province. As society learns to live with fire, the use of managed wildfire will likely need to grow.

**Photo:** A Lodgepole pine leading stand that underwent a prescribed burn. Dr. Kira Hoffman, Professional Fire Ecologist (May 2023).



# Section IV: How is the Provincial Government Currently Organized to Respond to Wildfire?

*“Unless the government wakes up and transforms its forest management practices, revolutionizes it back... we are yet to see the mother of all fires in British Columbia.”*

- Ron Ignace, Firekeeper & Former Chief, Skeetchestn Indian Band, BurnabyNow (2021)

Wildfire management relates to land management and emergency management, which both have dimensions of prevention, active management, and recovery. To varying degrees, the provincial government plays a role in all of these with its specific focus changing over time. In the mid-1990s, for example, it shifted the

primary function of its wildfire management agency from land management to emergency management. Since the 2010s, a re-emphasis on land management has been progressively rebuilt with a continued focus on emergency management as well (see Figure 9).

**Figure 9:** History of fire governance in British Columbia.



**Note:** This figure was developed based on input from 19 wildfire and forestry experts, 150 documents, and the work of University of British Columbia researchers Copes-Gerbitz, K., Hagerman, S.M. & Daniels, LD. **Source:** See figure endnote H.

While change is occurring regarding how the provincial government approaches wildfire, the scale and scope of the current issues are challenging the resources available as well as the way government is organized.

While there are many potential solutions and reforms (see Section V), it is important to first understand the institutional and management landscape in B.C. to better assess which solutions are the best fit.

## The Role of the BC Wildfire Service

Within the B.C. provincial government, most wildfire related activity is held by the BC Wildfire Service (BCWS), which is a division of the Ministry of Forests that is charged with all four aspects of emergency management: prevention, preparedness, response, and recovery.

### 1. Prevention (Mitigation):

The goal of the BCWS Prevention Program is to reduce the negative impacts of wildfire on public safety, property, the environment and the economy using the seven disciplines of the FireSmart program (see Box “Understanding B.C.’s FireSmart Program.”<sup>30</sup> Prevention resources focus on a variety of aspects including laws; regulations; prohibitions and restrictions, such as fire bans; funding programs for wildfire prevention for industry and communities; cultural and prescribed fire; fuel management; and the FireSmart program, which helps communities reduce risks.

### 2. Preparedness:

Like prevention, preparedness helps to minimize risks and harms and to improve outcomes by ensuring that people and communities are prepared for wildfire when it occurs. Fire preparedness has a strong focus on communication with the public to help them plan, prepare, and stay informed. The FireSmart program is also a cornerstone of preparedness.

### 3. Response:

The BCWS relies on thousands of skilled staff and contractors to detect, monitor, and respond to wildfires each year. This includes firefighters, air crew, equipment operators, and support staff.

**Photo:** BC Wildfire Service (2023). Copyright Province of British Columbia. All rights reserved. Reproduced with permission of the Province of British Columbia.



## The Sendai Framework

The B.C government recently adopted and follows the internationally recognized Sendai Framework to structure its emergency management efforts, including response to wildfire. This framework aims to “achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.”<sup>xxxiii</sup> The framework outlines targets and priorities for action to prevent new and reduce existing disaster risks. These targets and priorities include:

- Understanding disaster risk.
- Strengthening disaster risk governance to manage disaster risk.
- Investing in disaster reduction for resilience.
- Enhancing disaster preparedness for effective response and to “build back better” in recovery, rehabilitation, and reconstruction.

This framework will fundamentally reshape how the provincial government responds to and prepares for disasters, such as wildfire, and is a big driver in the creation and mandate of the new Ministry of Emergency Management and Climate Readiness.



#### 4. Recovery:

The BCWS develops partnerships with other agencies, First Nations, industry, and communities to support the provincial government's Wildfire Land-Based Recovery process, which is intended to reduce the negative impacts of select wildfires. Recovery work includes wildfire suppression rehabilitation, post-wildfire natural hazard risk reduction, and ecological wildfire recovery.<sup>31</sup>

Since 2018, the BCWS has also increased investments in research and innovation and built on multiple collaborations with various levels of government, academia, and industry to advance the state of knowledge and practice.<sup>32</sup>

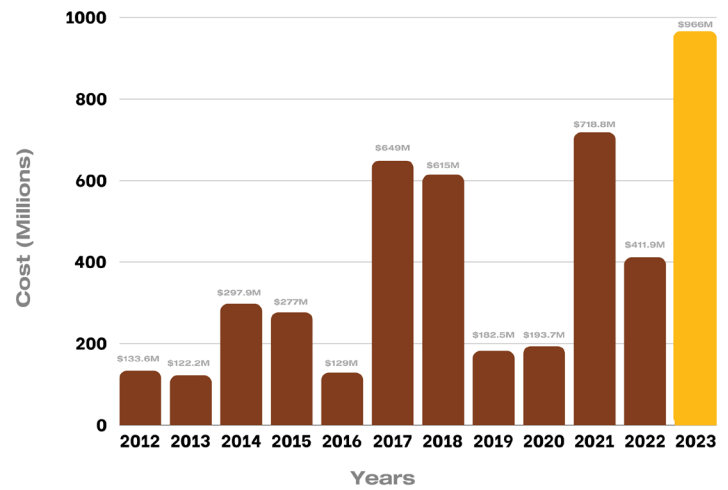
While the BCWS is the agency primarily responsible for wildfire, other divisions within the Ministry of Forests, including regional and district operations, also play a key role in aspects of landscape management and in operationalizing many aspects of fire prevention, such as fuel management and cultural and prescribed fire.

The Ministry of Forests is the principal regulator of the forest and range sectors in B.C. and administers numerous aspects of law and policy related to resource use on public lands. This includes planning, timber harvest, and reforestation. This ministry also oversees B.C.'s new forest landscape planning process.<sup>33</sup> Forest landscape plans (FLPs) bring high-level strategic land use planning direction to a specific forest management area and bridge the gap between strategic land use planning and operational/site-level planning. One key goal of FLPs is to efficiently address changing conditions (including due to wildfire). Wildfire management is one of the key objectives already identified at two of the most advanced FLP tables. With about a dozen forest landscape plans in early stages of development and over 30 expected over the coming years, FLPs could be a powerful wildfire resilience planning tool.

The Ministry of Forests is also responsible for the Forest Carbon Initiative. It launched in 2017 and has important implications for wildfire under topics like after-harvest stocking standards and fibre usage.<sup>34</sup>

**Figure 10:** Costs in millions of fighting wildfire in B.C.

**Source:** See figure endnote 1.



### Understanding B.C.'s FireSmart Program

FireSmart is the flagship program of the provincial approach to wildfire from a community and citizen engagement perspective. Its mission is to build wildfire resiliency and reduce the negative impacts of fire for everyone in the province.

The Community Resiliency Investment program was introduced by the B.C. provincial government in 2018 to provide funding and support to communities to complete FireSmart initiatives. It has two delivery and funding mechanisms: the FireSmart Community Funding and Supports program and the Crown Land Wildfire Risk Reduction program.

FireSmart Community Funding and Supports is focused on prevention activities on municipal and private lands within communities, including the wildland urban interface. This fund is application-based and administered through the Union of BC Municipalities. Non-Indigenous and Indigenous communities are eligible. An initial \$60 million was allocated in 2018 and more money has been added since then. Funded activities correspond with the seven FireSmart disciplines, including vegetation management, emergency planning, development considerations, and education.

In addition to the FireSmart program, there are numerous other provincial ministries involved in aspects of emergency management and land management, which influences landscape resilience to wildfire and wildfire recovery in B.C.

## Understanding Wildfire Law in B.C.

Numerous laws and regulations play important roles in wildfire response, recovery, and preparedness in B.C. Future POLIS work will provide an overview of the legal framework that affects wildfire in B.C. and set the stage for more comprehensive law reform.

The *Wildfire Act* (2004) and the *Forest and Range Practices Act* (2004) are two of the most significant pieces of legislation that relate to wildfire resilience. The *Wildfire Act* is the primary legislation regarding the management of wildfire in B.C. This law applies to everyone in the province (citizens, industry, and governments) and regulates:

- Fire use
- Wildfire prevention
- Wildfire control
- Rehabilitation

The *Wildfire Act* contains several provisions that directly relate to wildfire resilience, including hazard abatement, establishing penalties and cost recovery for escaped or illegal wildfire, and the regulation of open burning. It also provides the Minister of Forests the legal authority to access provincial funding beyond what was allocated to the ministry in cases of emergencies. The provincial government recently amended the *Wildfire Act* to create a partnership mechanism that is intended to support cultural and prescribed fire.

The *Forest and Range Practices Act* (FRPA) governs forest and range practices on public lands in B.C. It applies to anyone with an agreement under the *Forest Act* (1996) or *Range Act* (1996) and affects forest planning, road building, timber harvesting, reforestation, and livestock grazing. FRPA applies to most forest harvesting in B.C. and does not apply to other sectors (such as mining) or to protected areas where wildfire risk can be high.<sup>xxxii</sup>

As originally passed in 2004, FRPA had no specific provisions related to wildfire, although some parts (such as stocking standards) do affect social-ecological resilience. In 2018, the provincial government began a process to update FRPA. This led to a series of changes including:

- Creating forest landscape plans and requiring these plans to consider how to mitigate and adapt to the impacts of wildfire.
- A new power for the minister to create requirements for licensees to manage the risks of wildfire.



## The Role of Other Government Ministries

In addition to the responsibilities held by the Ministry of Forests, which includes the BC Wildfire Service, many other provincial government ministries have important functions related to the ecological and social dimensions of wildland fire.

The Ministry of Water, Land and Resource Stewardship plays a large role in ecological and planning dimensions and is responsible for wildland fire-related topics including modernized land use planning and the proposed *Biodiversity and Ecological Health Framework*, which is now in development.<sup>35</sup> Similarly, the Ministry of Environment and Climate Change Strategy oversees conservation strategies in B.C.'s provincial parks, which can include prescribed burning and modified response.

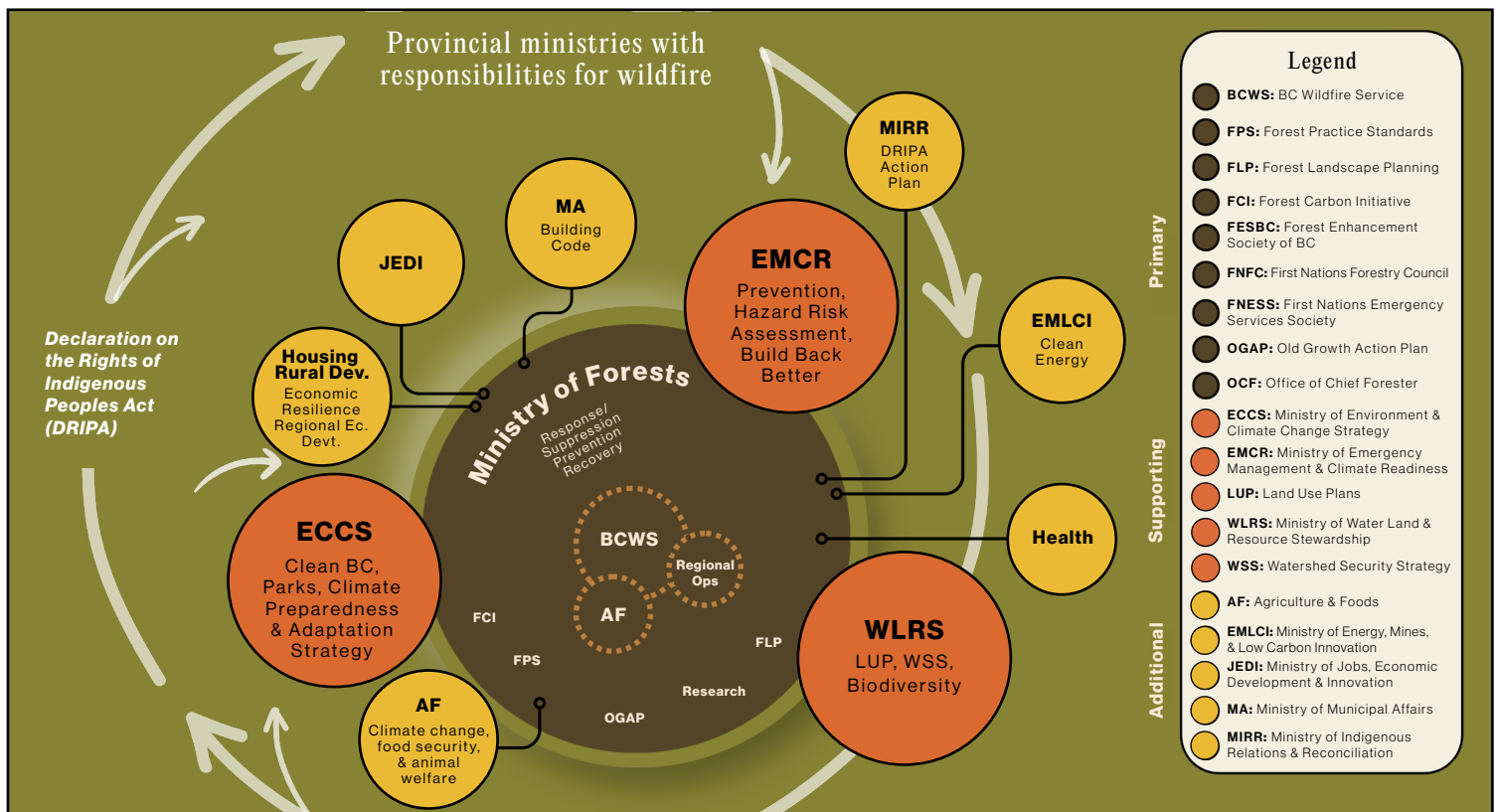
Other ministries have significant roles managing social dimensions of wildland fire. For example, the Ministry of Emergency Management and Climate Readiness is responsible for preparing for and responding to emergencies from a community perspective. Within the Ministry of Health, scientists at the BC Centre for Disease Control study the impacts of, and how to mitigate, prolonged exposure to wildland fire smoke.

This work is often complemented by external task forces and advisory groups.

Many other ministries play smaller or peripheral roles, including attending to specific aspects of wildland fire. For example, the Ministry of Energy, Mines and Low Carbon Innovation is the primary regulator of BC Hydro, which is where authority over biomass (bioenergy) power cogeneration resides, providing a potential market for wood residues. The Ministry of Advanced Education can partner with professional associations and post-secondary institutions to address training needs related to emerging wildfire trends.

Figure 11 summarizes the various ministries and agencies with responsibilities for wildfire and how they interact. While each body has clear roles and responsibilities related to wildfire and landscape management, there is no overarching mechanism to plan and integrate work across government. Most agencies operate in silos and there is no clear focus on—or mechanism to drive—resilience across the various provincial ministries, agencies, and departments.

**Figure 11:** Provincial ministries with responsibilities for wildfire. **Source:** See figure endnote J.





## FEATURE BOX #4 - WILDFIRE RESILIENCE & PROVINCIAL STRATEGIES, PLANS & AGREEMENTS

The current provincial government has a significant number of strategies, plans, and agreements related to resource management, ecosystem health, and Indigenous authority and partnerships. Many have the potential to support wildfire resilience and reinforce a cross-government approach.

One of the most significant provincial priorities is the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), which came into force in 2019, and the associated *Declaration Act Action Plan* (2022), which complements its federal counterpart legislation, the *United Nations Declaration on the Rights of Indigenous Peoples Act* (2021).

DRIPA is already having a significant and potentially transformative impact on decision-making in B.C. A shift within the provincial government to informed consent is underway and leading to more co-governance and shared authority between the provincial government and Indigenous governments across B.C. These new decision-making structures will have an impact on future wildfire decisions and priorities regionally and provincewide, including critical landscape planning aspects.

Other strategies, plans, and planning tools that have potential to advance landscape-level planning and create more resilient and diverse ecosystems and watersheds include:

- The **Old Growth Strategic Review**,<sup>xxxiv</sup> which seeks to protect old growth over potentially 2.6 million hectares, subject to consultation with Indigenous peoples. Many of these commitments are already underway.
- The **Watershed Security Strategy**,<sup>xxxv</sup> which was co-developed with Indigenous leadership and will elevate watershed security, protect riparian areas and environmental flows, reduce potential impacts from floods and droughts, and improve use of key legal tools under the Water Sustainability Act.
- The **Biodiversity and Ecosystem Health Framework**,<sup>xxxvi</sup> which commits to the conservation and management of ecosystem health and biodiversity as an overarching priority across the entire landscape. The Framework is linked to the old growth strategy and has the potential to promote healthy ecosystem management through legislation and other enabling tools that could apply to all sectors.
- **Forest Landscape Plans, Modernized Land Use Plans and Watershed Sustainability Plans**.<sup>xxxvii</sup> When deployed, these legislative planning tools engage First Nations, communities, and key stakeholders. These planning tools can change land use activities and ensure landscapes are more diverse, resilient, and hydrated with protection for key rivers, streams, wetlands, and riparian areas—all of which are critically important to minimizing catastrophic wildfire.

In addition to these specific commitments and potential reforms, the provincial government has made several very significant commitments and agreements with the federal government and philanthropic organizations to protect 30 per cent of land- and marine-based natural ecosystems by 2030.<sup>xxxviii</sup>

Beyond creating the conditions for healthier landscapes, these agreements and complementing financial resources will help build community capacity for more local decision-making, restoration, and protection initiatives that will include addressing wildfire and increasing landscape-level resilience.

**Photo:** BC Wildfire Service. Copyright Province of British Columbia. All Rights Reserved. Reproduced with permission of the Province of British Columbia (2023).





## Section V: Two Decades (and Counting) of Independent Wildfire & Resilience Recommendations in B.C.

***“The ability to deliver resilience outcomes at scale will require an efficient process for planning, reviewing, and approving risk reduction projects, supported by enabling policies. Continued effort is needed to address barriers, remove disincentives, and create a more expedited process for project delivery.”***

**- From the Summary of Recommendations by the Premier’s Task Force on Emergencies, Pg. 11 (April 2024)**

Over the past two decades, independent reviews led or initiated by the provincial government have provided over 500 recommendations concerning wildfire, as well as forest and emergency management.<sup>36</sup>

Released in 2004, the Firestorm 2003 Provincial Review evaluated the overall response to the 2003 fire season (which, at that time, were the most economically impactful forest fires in B.C.) and made recommendations for improvements for the next fire season. In our review of the independent reviews conducted since then, the most dominant, cross-cutting recommendations focus on 1) the preservation of the integrity of natural systems and 2) the adoption of Indigenous knowledge and practices related to sustainability and wildfire management.

Every report we reviewed identifies the necessity of recognizing the jurisdiction and capacity of First Nations, and of developing provincial guidelines for establishing government-to-government planning relationships between the provincial government, First Nation governments, and supporting organizations. The provincial government’s Climate Adaptation and Preparedness Strategy: Actions for 2022-2025,<sup>37</sup> and numerous other reports dating back to 2003 indicate that, due to the interdependence of land use, community, and emergency planning, plans must not only be co-developed and co-reviewed, but also align with ecosystem health priorities.

Other frequently identified priorities include the need for sustained funding for wildfire resilience planning, implementation, and capacity-building in vulnerable communities, as well as disaster and climate risk management measures that deal with systemic inequalities, such as barriers to clean, safe drinking water and medical services in remote and rural areas and on reserve lands.

Underscored by the increasing severity and intensity of fires because of climate change, the independent reviews also urgently recommend bridging disaster risk reduction and climate change adaptation approaches. Further work is required for the provincial government to make a shift from response and recovery efforts to more robust prevention and mitigation measures, and to coordinate these efforts across wildfire organizations and all levels of government. Many of the independent reviews identified gaps in inter-agency coordination that, if filled, could better align priorities and streamline efforts, not only across ministries, but also with industries and non-governmental organizations. This could enable mutually supportive solutions, such as bioenergy and bioeconomy initiatives for fuel mitigation, and insurance incentives for licensees to participate in risk reduction both in community (e.g. building codes) and on the landscape (e.g. fuel treatment).

To achieve sufficient integration of forest and wildland fire management planning, many reviews suggested



mandatory continuing education for forest practitioners and professionals, since many are not trained in fire ecology. They identified the need to redesign required professional forester certifications to include disaster risk reduction and climate change adaptation to better align with urgent ecosystem health priorities. Additionally, many of the reviews recommended that cross-jurisdictional wildfire planning, preparedness, response, and recovery be supported by the establishment of local forest boards, independent expert panels, and standardized protocols (per natural disturbance type) for monitoring, evaluation, and treatment. When applied in tandem, these individual components can support the development and use of accurate, scientific, and culturally appropriate baselines for maintaining ecosystem health.

In line with this, the integration and deployment of forest landscape plans, landscape fire management plans, and community-level plans, specifically for fuel management, has been an urgent (and mounting) priority for the last 20 years. Since the devastating wildfire year of 2003, experts have called for:

- Increase in prescribed burning capacity.
- Reduction in liability.
- Adoption of FireSmart practices in fire-prone areas.
- Effective, quantitative modelling of wildland urban interface hazards.

Finally, another important theme is the role of public education, communication, and consultation in fostering trust within and between communities and the provincial government. Robust communication strategies allow governments to understand community needs and perspectives and strengthen public and stakeholder understanding of fire-dependent ecosystem risk, which ultimately builds support and accountability for wildfire resilience outcomes.

**Photo:** British Columbia Wildfire Service aircrew and firefighters near Vernon, B.C. BC Wildfire Service (2023). Copyright Province of British Columbia. All rights reserved. Reproduced with permission of the Province of British Columbia.





## FEATURE BOX #5 - THE PREMIER'S EXPERT TASK FORCE ON EMERGENCIES

The most recent example of a wildfire-focused expert review in B.C. is the Premier's Expert Task Force on Emergencies.<sup>xxxix</sup> The Task Force was established in October 2023 with a mandate to provide strategic advice and action-oriented recommendations on how the provincial government can better respond to and support British Columbians in the face of climate-driven emergencies, with a focus on wildfire.

It consisted of a diverse team of experts from within and beyond the provincial government and had Indigenous and non-Indigenous representation. The Task Force sought advice from a wide range of thought leaders, experts, and groups across society and tabled a set of recommendations in April 2024. Key recommendations from the Task Force mirror many past themes of reviews as outlined in Section V of this report and include:<sup>xl</sup>

- Developing a landscape resilience strategy.
- Prioritizing large-scale fuel treatments and supporting Indigenous fire stewardship.
- Continuing growth of the FireSmart program and focusing on building FireSmart communities.
- The need for clear and consistent roles and processes through an all-of-society approach.
- Creating clear pathways for local community involvement and the need to strengthen the role of local and Indigenous knowledge.

While most of the Task Force recommendations address emergency response—including the use of new technology, how to better support evacuees, training, and enhancing wildfire recruitment—a few of the recommendations stand out as proactive measures focused on resilience and prevention:

### 1. Collaborative First Nations Fire Stewardship

First Nations play a unique role in partnership-based emergency management and are demonstrating leadership in building community-based capacity for fire stewardship based on Indigenous knowledge and cultural practices, as well as protecting their communities through mitigation, preparedness and response.

*The Task Force recommended defining clear pathways and strengthening supports for First Nations to build community-based capacity to lead wildfire preparedness, response, and mitigation and fire stewardship activities in their territories.*

### 2. Landscape Resilience Strategy

*The Task Force recommended government initiate a landscape resilience strategy that brings together land management partners to align existing initiatives, define shared priorities for action, and establish collaborative pathways to strengthen landscape resilience. The strategy should address policy barriers to delivering resilience outcomes on the ground and encourage economically sustainable models for risk reduction and recovery that align with utilization goals. As part of the strategy, meaningful metrics should be defined to measure progress toward resilience outcomes.*

### 3. Large-Scale Treatments

*The Task Force recommended developing landscape-level, partnership-based resilience investment projects to demonstrate how to deliver risk reduction in the natural and built environment at the watershed scale.*

### 4. Enabling Policies

*The Task Force recommended government continue to streamline administrative processes, remove policy obstacles, and build capacity to expedite wildfire risk reduction projects, including prescribed burning, increased utilization, and other risk reduction and resilience practices.*

**Photo:** BC Wildfire Service. Copyright Province of British Columbia. All Rights Reserved. Reproduced with permission of the Province of British Columbia (2023).



## Section VI: How are Others Beyond the Provincial Government Responding to Wildfire?

**“Even though governments are better equipped to fight and respond to wildfires, society has never been more vulnerable to their negative effects. More people are living in fire-prone areas while a changing climate is increasing the length of the fire season and creating more extreme weather conditions”**

**- From the conclusion of the white paper *Climate Change, Wildfires and the Costs of Limited Action*, University of British Columbia (2021)**

Solving the wildfire problem will require action from more than just the provincial government. No one government has all the knowledge, resources, or authority to do it alone. First Nation governments and many other levels of government and groups within civil society have a significant role to play, with the provincial government actively involved in most of these initiatives as a partner.

This section summarizes some of the notable contributions being made by Indigenous, federal, and local governments, as well as various bodies and organizations with increasing roles in responding to wildfire in B.C. This is not an exhaustive list. Rather, it shows how the wildfire response landscape is changing and reveals areas where existing players could have more prominent roles to ensure a modernized and inclusive governance approach.

### First Nation Government Response

Recent catastrophic wildfires have resulted in increased activity by First Nations regarding wildfire management, preparedness, and use of fire on the landscape. Partnerships with the provincial and federal governments are expanding and developing.

In 2019, B.C. became the first jurisdiction in Canada, and globally, to enshrine the United Nations Declaration on the Rights of Indigenous People in legislation when

it passed the *Declaration of the Rights of Indigenous Peoples Act* (DRIPA). The ongoing process of bringing provincial laws and objectives into alignment with the UN Declaration over five years is set out in an Action Plan released in March 2022. One of the action items listed is to “Integrate traditional practices and cultural uses of fire into wildfire prevention and land management practices and support the reintroduction of strategized burning.”<sup>38</sup>

Successful examples of partnerships around wildfire are emerging that embed shared authority and co-governance between the provincial and First Nation governments. Many of these partnerships have developed in response to recent catastrophic wildfires and vary across the province. See Box “Innovative Paths Forward in T̓silhqot’in Territory” for details on the tripartite Collaborative Emergency Management Agreement between the T̓silhqot’in Nation, the B.C. provincial government, and federal government and the unique partnership established for cultural burning.



**Photo:** Indigenous fire expert Darlene Vegh burning in Gwass Hlaam, Gitanyow Territory. Kira Hoffman (April, 2024).



### Other notable examples include:

- Nadleh Whut'en First Nation is working on training programs and jurisdictional aspects of communication and operational activities with the BCWS.<sup>39</sup>
- The Secwepemc people are co-managing wildfire restoration efforts with B.C. and conducting cultural burns.<sup>40</sup>
- Ktunaxa Nation partnered with the BCWS, local government, and consultants to undertake a large cultural burn in 2023.<sup>41</sup>
- Blueberry River First Nations is co-managing a \$200 million landscape restoration fund with the B.C. provincial government in a region of the province severely impacted by wildfires.<sup>42</sup>

Fire stewardship plans, which are collaborations between the BCWS and First Nations. Examples include the prescribed and cultural burn in Peachland in October 2022, which was done in collaboration between the Penticton Indian Band, Westbank First Nation, Okanagan Nation Alliance, Gorman Brothers Ltd., Okanagan Shuswap Resource District, the B.C. Ministry of Forests, and the BCWS.<sup>43</sup>



**Photo:** Indigenous fire expert Darlene Vegh burning in Gwass Hlaam, Gitanyow Territory. Kira Hoffman (April, 2024).

## The Indigenous Leadership Initiative & Indigenous Guardian & Wildfire Management Program

The Indigenous Leadership Initiative (ILI) is a national project that supports Indigenous nations in honouring their responsibility to care for lands and waters. It is dedicated to strengthening Indigenous nationhood and Indigenous leadership on the land and offering significant contributions to address some of the most pressing challenges of our generation, including wildfire. ILI has been at the forefront of supporting the establishment of over 70 Indigenous Guardian programs across Canada.

ILI's Indigenous Guardians and Wildfire Management project aims to develop a draft national strategy for how Indigenous Guardians might become more actively involved in fire management planning, response, and prescribed and cultural fire. This includes identifying ways to include Indigenous values and approaches to the management of fire-driven ecosystems, restoring cultural burning practices and Indigenous fire stewardship, and exploring mechanisms for coordinated wildfire response across all Indigenous Guardians programs.

ILI has established a national advisory committee of academics, practitioners, and experts to identify opportunities, gaps, challenges, and barriers that could influence the role of Indigenous Guardians in fire management.<sup>xli</sup>

## Innovative Paths Forward in T̓silhqot̓in Territory

In 2017, the Hanceville and Plateau fires affected 761,000 hectares of T̓silhqot̓in Indigenous land. The fires resulted in the evacuation of communities, which led to some controversy around jurisdiction and authority. The wildfires experienced on traditional T̓silhqot̓in territories ultimately resulted in new arrangements between the T̓silhqot̓in, B.C. provincial, and federal governments, all against the backdrop of B.C.'s *Declaration on the Rights of Indigenous Peoples Act* and the Canadian Supreme Court decision of 2014 that allocated Indigenous title to specific T̓silhqot̓in land for the first time in Canada's colonial history. Some of the more innovative features of these new paths forward include:

- B.C. signed a first-of-its-kind Collaborative Emergency Management Agreement with the T̓silhqot̓in Nation in 2018, which later became a tripartite agreement with Canada (see below).
- Expanded collaborative activities grew out of this agreement on the preventative side of the equation, with the B.C. provincial government and the T̓silhqot̓in Nation joining forces to conduct cultural burning programs.
- The T̓silhqot̓in Wildfire Management project, coordinated by the Gathering Voices Society, won the 2022 Real Estate Foundation of B.C. award in the land use and conservation category.
- The 2018 report *Nagwedizk'an Gwanes Gangu Ch'inidzed Ganexwilagh The Fires Awakened Us: T̓silhqot̓in Report on the 2017 Wildfires* is the T̓silhqot̓in Nation's foundational document outlining its high-level strategy on governance and jurisdiction.<sup>xlii</sup>

### **Tripartite Collaborative Emergency Management Agreement**

In April 2018, following the catastrophic wildfires of 2017 that significantly impacted the territory and people of the T̓silhqot̓in Nation, the first tripartite Collaborative Emergency Management Agreement in Canada was signed. This marked a significant step for federal, provincial, and T̓silhqot̓in governments to work together and learn together and to start to implement the practical changes necessary to help people in the event of another emergency in the community.

The goal of the agreement is to build trust, relationships, strong lines of communication, and improved processes between all partners, and to deliver emergency services in the most efficient and effective way for the region. The agreement reflects the common goal of the three governments to implement the *United Nations Declaration on the Rights of Indigenous Peoples* and the *Truth and Reconciliation Commission of Canada: Calls to Action*.<sup>xliii</sup> Under the Agreement, the federal, provincial, and T̓silhqot̓in governments work together to identify best practices and build on the capacity of the T̓silhqot̓in communities in emergency management.<sup>xliv</sup>



## Local Government Response

In an integrated approach to wildland fire, local governments are a key player. British Columbia has 161 municipalities and 27 regional districts, which are created and empowered through provincial legislation. Regional districts cover large areas of the province and provide local governance mechanisms for unincorporated communities. Through both legislation and social mandates, local governments are at the forefront of planning, prevention, response, and recovery (the four pillars of emergency management) regarding the impacts of wildfires. Examples of the important roles that local governments can fulfil in relation to wildland fire include:

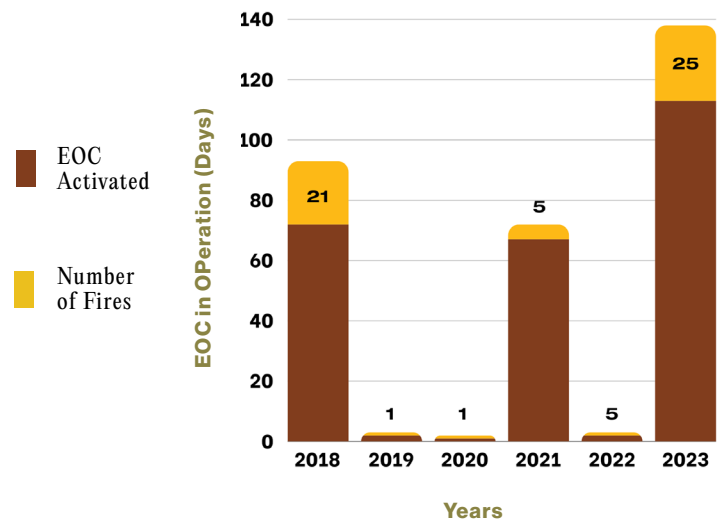
- The legal responsibility for issuing evacuation alerts and orders.
- Ensuring the integrity and protection of safe water supply.
- Coordinating and implementing the seven FireSmart disciplines (see Box “Understanding B.C.’s FireSmart Program”), land use planning guidelines, and laws about development, including in the wildland urban interface.

The *Local Government Act*, the *Community Charter*, and the *Vancouver Charter* are important pieces of legislation that allow the zoning and regulation of development activities that can reduce wildfire risk through such processes as official community plans for local governments.

Local governments are a trusted convener of community meetings and consultations on wildland fire. The provincial government is increasingly depending on this role of local government, especially as it relates to emergency management as well as relations with local First Nation communities.<sup>44</sup>

The effort it takes for local governments to fulfil the four pillars of emergency management has increased dramatically in recent years. Capacity issues arise, not only in local government, but also in the ability of various provincial government agencies to respond to local government inquiries, requests, and responsibilities related to wildfire. For instance, during a local state

**Figure 12:** Number of days per year the Emergency Operations Centre in the Regional District of Bulkley-Nechako was activated, 2018 to 2023.



**Source:** See figure endnote K.

of emergency created by wildfire, a local government will activate an Emergency Operations Centre (EOC) to coordinate local response. EOCs are staffed by local government staff who are often seconded from their regular duties for long periods. This can create significant capacity issues for smaller communities.<sup>45</sup> For example, the Emergency Operations Centre in the Regional District of Bulkley-Nechako was activated for almost one-third of the year in 2023, straining local government resources (see Figure 12).

## Federal Government Response

In the 2017, 2018, 2021, and 2023 catastrophic wildfire years, the federal government assisted B.C. with direct fire management, supplying Canadian armed forces personnel and equipment and coordinating requests for additional support that was provided by other provincial and international firefighting crews. The Canadian Interagency Forest Fire Centre (CIFFC) is a not-for-profit corporation owned and operated by the federal, provincial, and territorial wildland fire management agencies to coordinate resource sharing, mutual aid, and information sharing.<sup>46</sup> CIFFC receives assistance requests from heavily impacted provinces and, in turn, coordinates human resource

and equipment allocations from other provinces and countries (see Figure 13).

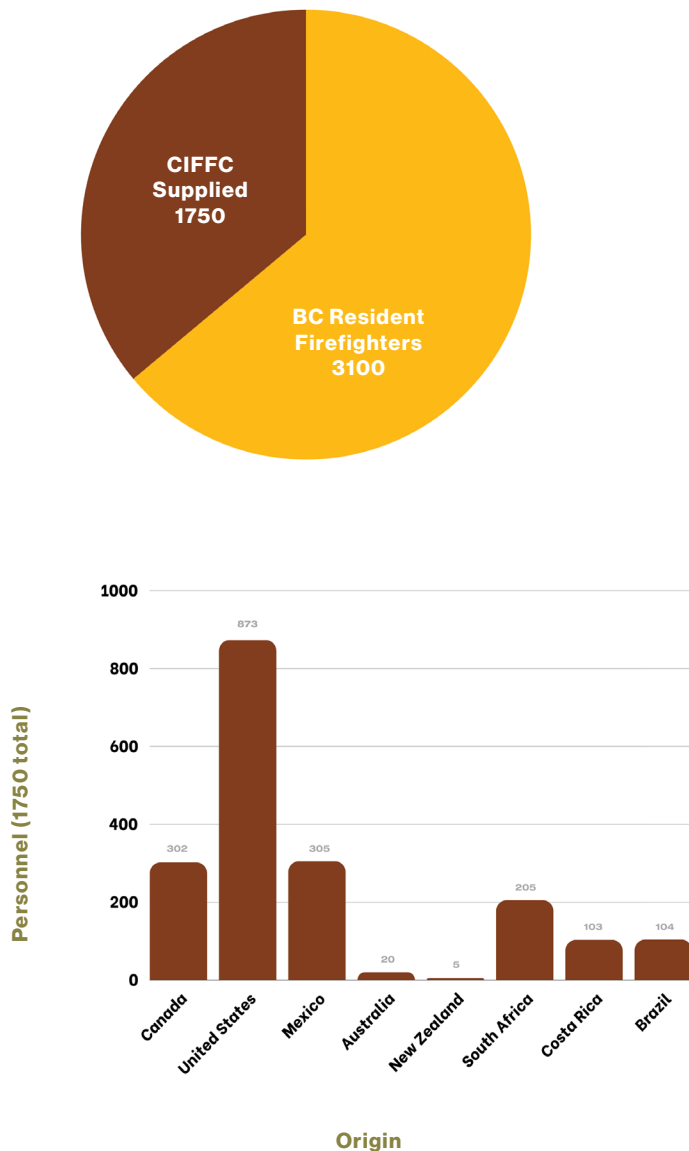
In financial recovery terms, when a large-scale wildfire occurs the federal government aids provincial and territorial governments through the Disaster Financial Assistance Arrangements (DFAA) program, which is administered by Public Safety Canada. When response and recovery costs exceed what individual provinces or territories could reasonably be expected to bear on their own, the DFAA program provides the federal government the ability to assist provincial and

territorial governments. Through the DFAA program, assistance is paid to the province or territory—not directly to affected individuals, small businesses, or communities—and can amount to millions of dollars. Recent support by the federal government has focused more on recovery through built infrastructure repairs, rather than wildfire prevention.

The federal government has also increased its financial support of the First Nations' Emergency Services Society of British Columbia (see next section "Notable Organizations Outside of Government").

**Figure 13:** The Canadian Interagency Forest Fire Centre supplied approximately 35 per cent of the total firefighter personnel in B.C.

**Total Firefighters in British Columbia (2023)**



**Photo:** British Columbia Wildfire Service aircrew in Donnie Creek, B.C. BC Wildfire Service (2023). Copyright Province of British Columbia. All rights reserved. Reproduced with permission of the Province of British Columbia.

**Source:** See figure endnote L.



## Notable Organizations Outside of Government

While many non-government entities are engaged with wildfire response, the following stand out as notable contributors.

### First Nations' Emergency Services Society of British Columbia (FNESS)

- Established in 1994, FNESS, in partnership with the provincial government, has significantly increased its activities over the past seven years in emergency planning, training, response, and recovery; fire training, education and prevention; and forest fuel and wildfire management.
- FNESS was one of six organizations who co-developed the Action Plan for Disaster Risk Reduction by First Nations in BC, 2023-2030.<sup>47</sup>
- FNESS is an important delivery organization for B.C.'s FireSmart Community Funding and Supports program.
- The provincial government has provided ongoing funding to FNESS to support knowledge building around cultural burning.

### Forest Enhancement Society of BC (FESBC)

- Created in 2016 with an allocation of \$85 million, FESBC is now a government reporting entity under the Ministry of Forests' service plan. FESBC funds wildfire prevention and mitigation, improves damaged forests and wildlife habitat, and treats forests to improve the management of greenhouse gas emissions.
- In 2023, \$50 million was allocated to FESBC to improve fibre utilization to address greenhouse gas emissions from slash burning.
- Millions of dollars have been allocated to FESBC in the last three to four years for activities that reduce wildfire threat in the wildland urban interface and on Crown land by removing wood and thinning stands.

### BC First Nations Forestry Council (FNFC)

- Advocacy organization that works to support First Nations in the governance and stewardship of forest lands and resources, and participation in the forest sector.
- Produced a B.C. First Nations Forest Strategy in 2019 including a goal to address collaborative stewardship and land use planning.
- In 2023, the provincial government announced \$2.4 million in funding to FNFC as a key partner in developing the old growth strategic plan and finalizing the regulatory framework for forest landscape plans.



**Photo:** Kevin Koch, Gitanyow Hereditary Chiefs conducting a cultural burn on Gwass Hlaam, Gitanyow Territory in Northwest BC. Kira Hoffman (2024).



## FEATURE BOX #6 - WHOLE-OF-GOVERNMENT & WHOLE-OF-SOCIETY

The scale of the wildfire crisis warrants broad and robust action within the provincial government and also *between* the other levels of government—Indigenous, local, and federal. A provincial **whole-of-government** approach to wildfire means ensuring that all relevant ministries, agencies, and departments work together cohesively and efficiently. This type of cross-government approach will be crucial to elevating the cross-cutting significance and importance of wildfire as a primary priority across historically siloed units. This focus will create momentum to improve coordinated action across provincial government ministries and agencies, as well as with other levels of government, from Indigenous to local, national, and international. Expanding on this whole-of-government focus, the broader **whole-of-society** approach widens to include industry, civil society, business, professional associations, academia, and individuals.

A whole-of-society model coordinates and effectively integrates efforts by different levels of government, and especially Indigenous government. It also explicitly includes key actors outside of government, such as industry, stakeholders, civil society, and communities in a cooperative and collaborative approach with complementing roles, shared responsibilities, and coordinated action.

It is our view that ***the provincial government is crucial to unlocking a whole-of-society approach, as a catalyst, leader, and enabler of better local decisions, understanding, and actions.***

A whole-of-society approach creates new pathways that move beyond B.C. and Canada's historical "command and control" top-down approach to wildfire management. It reveals new possibilities for partnerships, action, and accountability. A critical starting point towards advancing a whole-of-society approach is fully acknowledging the rights, authority, and responsibilities of Indigenous governments and the fundamental role of communities and local decision-making, especially in the context of landscape-level planning and wildfire resilience.

When the right enabling conditions are in place, this type of integrated, comprehensive, and holistic approach results in more capacity, greater agency, and representation. It also results in more collaboration, broader accountability, and, fundamentally, better outcomes on the ground.



**Photo:** *The Legislative Assembly of British Columbia, Victoria, B.C.* by Brigitte Werner (Pixabay; 2024)



## Section VII : Insights on the Current State of Wildfire Policy, Programs & Priorities in B.C. & What Is Next?

*“The time for waiting and conducting more studies is over—every dollar spent on prevention and mitigation saves \$5 to \$15 spent on fighting wildfires”*

- Dr. Mike Flannigan, Thompson Rivers University,  
The Province (2023)

As described in Section I, the purpose of this primer is to explore the new wildfire reality in B.C. and to assess how existing land management practices impact wildfire resilience. Its focus is to improve understanding of the B.C. wildfire situation, explore drivers and implications, and review current governance structures and how government and other key actors are responding to the wildfire challenges ahead. This primer is the first publication produced by the team at the multi-year POLIS Wildfire Resilience Project, based at the University of Victoria's Centre for Global Studies. Future research will focus on solutions and the law, policy, and governance reforms needed to enable and advance a more wildfire resilient future in B.C.

Developing this primer led us to develop several observations and insights that will drive this future work (see Figure 14).

We know that wildfire response and prevention is a top-of-mind priority for governments and communities across B.C. and beyond. New investments are being made towards wildfire planning and action and the initiatives that are emerging to respond to wildfire have the potential to be significant in their impact.

*However, even with these plans, investments, and actions, the problem continues to outpace the current suite of solutions and ecological and social impacts are worsening year after year. Accordingly, an urgent need exists to develop a **whole-of-government provincial landscape resilience strategy**. While many efforts are already underway, the following elements and*

priority actions will be essential for an effective provincial strategy that can address the challenges ahead:

- A vision for wildfire resilience at the landscape level for all ecosystem types across the province.
- A plan that addresses the human and social dimensions being challenged by wildfire and that builds trust between government and communities across the province.
- Whole-of-government priority actions and better defined and coordinated roles for the various actors in a whole-of-society approach to wildfire resilience.
- An explicit commitment to the necessary provincial budget needed to execute the strategy and required law reforms within specified timelines.
- Committed resources to initiate those well-understood initial actions (listed in Figure 15) while the plan is being developed.

Such a strategy will help the provincial government to better address the immediate challenges, identify the leadership needed, and bring broader changes to ensure wildfire resilience in B.C. These changes include a transformative shift in perspective and governance, as well as new long-term and integrated approaches that better enable shared decision-making, effective resource allocation, and nimble cross-cutting action.



**Figure 14:** Five key insights on the implementation of a whole-of-government provincial landscape resilience strategy.

**Source:** Developed by the POLIS Wildfire Resilience Project (2024).

### Complexities & Uncertainties

- Scientists, experts, and community members are surprised by the speed of change and the escalating threat. Climate change impacts predicted for 2035–2050 are happening now. This makes it difficult for government to plan and resource effectively under the current wildfire management model.
- Fire functions differently in different ecosystems, which means there is no one-size-fits-all solution. To be successful, different approaches to wildfire resilience will be required across B.C.
- There are trade-offs to consider with the amount of carbon emissions connected to different approaches to wildfire risk management.

### Funding & Economics

- A strong business case exists for preventative and harm-reduction measures, such as fuel treatments, but the scale of measures required is daunting and barriers need to be addressed before broad implementation can occur. Investment in integrated landscape-level responses is a priority.
- Long-term funding will be required for effective and sustained landscape treatments.
- There are impediments to realizing a bioeconomy that can use material from fuel treatment for commercial products, such as energy. Investments in innovative economic models for fuel management are a priority.

## Core Observations & Insights

### Capacity & Capability

Capacity to address wildfire resilience within the provincial government is limited, while capacity outside the provincial government is underutilised, especially at First Nation and local government levels.

Opportunities exist to recognize training and experience from outside of government and for industry, such as forest companies, to be more active partners in advancing landscape-level and local wildfire resilience.

Many opportunities exist to leverage partnerships with Indigenous partners, non-profits, and academic institutions to conduct long-term region-based research and drive innovation.

### Leadership & Governance

Wildfire is an urgent societal issue that requires significantly improved mechanisms for coordination, collaboration, and oversight at multiple scales.

Strong Indigenous leadership on wildfire already exists. This can be enhanced through shared authority and decision-making with Crown governments and actions that support reconciliation.

Perspectives on fire and how to respond vary across communities, and social conflicts and lack of trust in governments are mounting challenges. Community engagement and education are crucial for building trust and understanding of the actions needed and how we can live with fire.

### Legislation & Policy

Legislative and policy gaps create challenges and inefficiencies for wildfire management. Reforms are needed to improve incentives for resilience and to support work across society on social-ecological resilience as it relates to wildfire.

**THINGS TO KEEP DOING, SCALE UP, OR GET STARTED NOW**

**THE FOLLOWING WELL-UNDERSTOOD ACTIONS CAN BE UNDERTAKEN RIGHT AWAY TO BUILD AND ENHANCE RESILIENCE :**

#### 1. EXPAND INVESTMENTS IN FUEL MANAGEMENT

Reducing fire intensity and reach will remain a priority no matter how we organize ourselves going forward.

#### 2. SUPPORT INCREASED PRESCRIBED AND CULTURAL BURNING

Fire on the landscape is a natural and critical ecological process. Using fire to fight fire is an effective and underutilized tool in B.C.

#### 3. INVEST STRATEGICALLY IN PLACE-BASED, LANDSCAPE-LEVEL, AND COMMUNITY-BASED PILOTS, INCLUDING FOREST LANDSCAPE PLANS

We still have a lot to learn, and we must innovate as we go in a practical, learn-by-doing way.

#### 4. IMPROVE HARM REDUCTION THROUGH ENHANCED PROGRAMS LIKE FIRESMART AND WILDLAND URBAN INTERFACE MANAGEMENT

Building community trust starts by ensuring communities feel safe and have a voice in the decisions that will affect them and their homes.

#### 5. FOCUS ON COMMUNITY ENGAGEMENT, BUILDING TRUST, EDUCATION, AND EMPOWERING LOCAL DECISIONS

Those impacted must have a say and see themselves as part of the solution. This will allow for innovation and maximized local capacity, expertise, and resources towards a whole-of-society approach as we adapt and learn to live with fire.



## FEATURE BOX #7 - ECOLOGICAL GOVERNANCE: AN ESSENTIAL RESPONSE TO A COMPLEX AND CHANGING WORLD

**Governance** refers generally to the processes of decision-making and accountability. It is the *who*, *how*, and *what* of decision-making and, as such, is inevitably concerned with power. In our work at POLIS, we distinguish *management* from governance, with management referring to on-the-ground, often ongoing, operational activities. The broader *governance* context encompasses what decisions need to be made, shaping those decisions (including *who* is involved), and decision-making processes (*how* decisions are made).

**Ecological governance** builds on this understanding and, for us, is about embedding the environment across scales and at all levels of decision-making and action—from the personal to the global and from the formal, such as the courts and all orders of government, to the informal, such as how society organizes itself to make and influence decisions and hold ourselves to account.

Ecological governance requires a holistic view that considers our communities, forests, and watersheds; our economic, social, and political lives; and our cultural heritage within a paradigm that treats “the environment” not as one sector among many (and often as an afterthought), but instead as a web of relationships that permeates and integrates our collective priorities, actions, and understanding.

Ecological governance is focused on sustainability, which, in our view, is the long-term ability of human and ecological communities to not only endure, but to thrive. Sustainability requires that present-day decisions and actions support the well-being and function of ecosystems today and for future generations. In this process, we recognize humans as part of—not separate from or dominating—the ecosystem.

Our work at POLIS is often focused on organizing and nesting decision-making to align with ecological processes and boundaries and to promote the protection and stewardship of fundamental ecological values, such as biodiversity, habitat, environmental water flows, and healthy watersheds.

### **Some of the key questions that inform the work of ecological governance include:**

- How do we organize and govern ourselves in ways that are ecologically sustainable, place-based, and culturally appropriate?
- What does governance shaped by legal, ethical, and institutional principles of ecological sustainability look like?
- How do we implement collaborative models of ecological governance from local to global levels that embrace multiple worldviews and respect place-based Indigenous laws, authority, ethics, and cultural protocols?

**Photo:** *Western Sword Fern on Thetis Island, B.C.* by Kelly Bannister, POLIS Project on Ecological Governance (2024)

# Endnotes

## Main Text

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## Boxes

### Fire Regime

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## ABOUT THE POLIS WILDFIRE RESILIENCE PROJECT

The POLIS Wildfire Resilience Project offers practical solutions to advance wildfire resilience in British Columbia. As part of an international network, we focus on the nexus of resilience and governance, working with all levels of government, Indigenous nations, local communities, industry, experts, researchers, and civil society to offer new perspectives, innovative ideas, and practical solutions. The goal of the Wildfire Resilience Project is to create a more secure future for communities and ecosystems by promoting a wildfire regime that lies within nature's limits and reduces catastrophic wildfires. Our work is rooted in the principles of ecological governance and resilience with a firm goal of strengthening watershed security. Over the coming years, we will imagine and promote a new B.C. wildfire management and governance regime that helps position B.C. as a leader in wildfire resilience.

[www.poliswildfireproject.org](http://www.poliswildfireproject.org)

## ABOUT THE POLIS PROJECT ON ECOLOGICAL GOVERNANCE

The POLIS Project on Ecological Governance is a hub for collaborative and action-oriented research, policy practice, and education, and an integral part of the Centre for Global Studies at the University of Victoria. Since being founded in 2000, the work of POLIS has encompassed a number of initiatives, each embodying the principles of ecological governance and working towards a responsible present that supports a sustainable future. Current POLIS initiatives include the POLIS Water Sustainability Project, the POLIS Wildfire Resilience Project, and the POLIS Biocultural Ethics initiative.

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