

Heat of the moment: Canada's wildfires call for more sustainable forest management, not less

Canada is facing one of its most extreme wildfire seasons in history. Amidst the smoke, a ray of opportunity for climate adaptation and Indigenous leadership shines through.



A wildfire located on southeast of Edson, Alta. At last count, Emergency Preparedness Minister Bill Blair said nearly 440 fires have burned 3.9 million hectares of forest across nine provinces and two territories in recent weeks—more than 13 times the 10-year average for this time of year. *Image courtesy of the Government of Alberta*

OPINION | BY DEREK NIGHBOR, JOHN DESJARLAIS | June 19, 2023

The profound devastation being inflicted by wildfires spreading across Canada is unmistakable. As thousands of people are displaced from their homes and jobs, and communities and critical infrastructure are put at risk, cities across Canada and the United States have become enveloped in a thick haze of smoke.

At last count, according to Emergency Preparedness Minister Bill Blair, nearly 440 fires have burned 3.9 million hectares of forest across nine provinces and two territories in recent weeks—more than 13 times the 10-year average for this time of year. That's six times the forested land base that we have seen burn relative to what Canadian foresters sustainably harvest in an entire year.

As demonstrated in a recent study by the [Canadian Forest Service](#), the threat wildfire poses to communities is expected to increase in the future. Remote First Nations communities in particular will be at the forefront of the impact of wildfires in the coming years. The study also notes that in recent decades, First Nations reserves made up almost one-third of all evacuees and evacuation events.

With the 2023 wildfire season poised to break records for its intensity and severity, the pressing call for climate action to help our forests is reaching a crescendo.

But to chart our path forward, we must first understand the broader context that got us here.

Canada's forests have experienced a significant transformation in their carbon dynamics over the past two decades. While natural disturbances are normal in the forest, drought, pest, and fire outbreaks are becoming more frequent and severe—not only putting lives, communities, and forests at risk, but also releasing tremendous amounts of carbon dioxide and other greenhouse gases into the atmosphere.



Derek Nighbor is president and CEO of the Forest Products Association of Canada. *Photograph courtesy of Derek Nighbor*

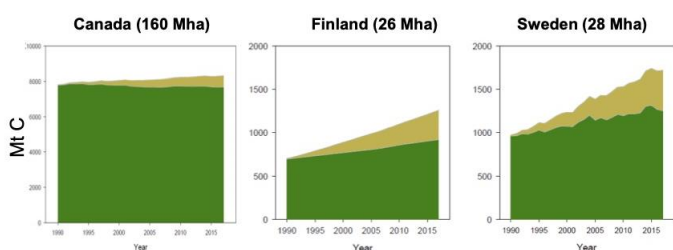
Increasing disturbance in the form of insect infestations and catastrophic wildfires have been the largest drivers of carbon emissions over the last 20 years. And as our climate continues to change, the severity of these disturbances will continue to escalate.

Trees in many parts of Canada's boreal forest are getting older and forests are becoming more dense. Today, [60 per cent of the trees in our boreal forest are in the 61-140 year age range](#). As they reach maturity, they lose their ability to sequester carbon and are at greater risk of succumbing to the effects of drought, windstorms, pests, and fire.

What anti-forestry campaigners Michael Polanyi and Janet Sumner continue to get wrong (“[Logging in Canada is not sustainable and needs to change](#),” *The Hill Times*, June 7, p. 22) is trying to lay the blame for increased forest emissions at the feet of forest scientists and Canadian forestry workers. They are in fact part of the solution.

The Nordics get it.

A [January 2022 publication by the International Boreal Forest Researchers Association](#) shows that a more active approach to forest management in Finland, Norway, and Sweden is paying dividends— both in terms of benefits to forest carbon stocks and improving forest resiliency. In Scandinavia, fire and natural disturbance levels are 50-60 times less than they are here in Canada. Plus, to support domestic demand for affordable housing, wood products, and forest bioproducts and bioenergy, Scandinavians are getting five to seven times the amount of wood out of the same sized plot of land compared to Canada.



Carbon stocks in living tree biomass (dark green) and carbon in cumulative harvests (yellow) in Boreal forests in Canada, Finland, and Sweden 1990-2017. Through active forest management practices, Finland and Sweden are able to sequester more carbon in their forests (per hectare) and in

wood-based products than Canada. Source: [Sustainable boreal forest management—challenges and opportunities for climate change mitigation](#)

Simply protecting forests across a natural fire-prone region like the boreal is not an effective climate strategy. Nor is it an effective public safety plan. This is further supported by [findings of Parks Canada](#) that show many of this country's parks are now net-carbon sources due to worsening natural disturbances.

If we maintain the status quo, GHG emissions stemming from drought, pest, and fire outbreaks in Canada's forests are likely to exceed those from anthropogenic sources by 2035.

We need more active sustainable forest management, not less.

It is critical to note that Indigenous leadership in this effort is vital to our collective success. Many Indigenous communities hold generations of knowledge about the land and forests, offering a deep understanding of how the forest evolves, and how it can be managed in a way that is both environmentally and economically sustainable.



John Desjarlais is executive director of the Indigenous Resource Network. *Photograph courtesy of John Desjarlais*

For centuries, Indigenous communities have implemented fire practices to help renew and regenerate the forest, preserve biodiversity, and mitigate the impacts of wildfire by removing excess fuel (dead or decaying wood that can be kindling for the next fire) through prescribed burns. These practices in turn make forests less prone to other disturbances like insects and disease.

By embracing more sustainable forest management practices, turning to more active management of fire-prone stands, doing more prescribed burning, getting more dead and decaying wood out of the forest, creating more fire breaks around municipalities and Indigenous communities, and by seizing forest biomass and bioenergy opportunities in the north, forestry is poised to play a leading role in Canada's climate mitigation and adaptation efforts.

Canada's Registered Professional Foresters are on the first line of defence, and are in a position to quickly identify both pest outbreaks and high-risk fire areas. They can also restore forest lands that have low productivity or poor biodiversity by thinning and removing dead or deteriorating trees, thus providing the light and space required to grow healthier trees.

While much of wood harvested to reduce fuel in the forest may be of insufficient quality for milling into lumber or other long-lived solid wood products, directing our efforts towards energy and heat generation presents a promising opportunity for using low-grade wood and residuals. Bioenergy is already Canada's second largest source of renewable energy—providing five times the energy of wind and solar combined—and is the largest source of renewable energy in half the provinces.

As we look to further develop energy markets for low-grade wood, the [CHAR Technologies-Lake Nipigon Forest Management Inc. partnership](#) is a great example of what is possible. The proposed renewable natural gas and biocoal plant in the Lake Nipigon area, which will utilize wood fibre, will not only maximize the value of wood waste and residues from the surrounding forest,

but will also help produce a steady, yearly revenue stream for Indigenous communities in the area.

When it comes to continuous improvement and adaptation to ensure that our forests remain both productive and sustainable in Canada, it is not a choice between the environment and forest management. The two go together. To keep Canadians safer from worsening fire and air quality risks, we need to embrace more active management of our forests, collaborate with Indigenous communities, and look to lessons learned from the Nordic countries to help get us there.

Canada's forests are a resource of global significance. In the face of a changing climate, the way we manage them matters now more than ever.

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