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We created B.C.'s wildfire problem – and we can fix it

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Wildfire has become a wicked problem – as witnessed in British Columbia this week as intense and fast-moving wildfires have driven 14,000 people from their homes and prompted a state of emergency. In the past 15 years, high-intensity wildfires have burned through forests altered by mountain pine beetle or decades of fire suppression, often threatening communities that are expanding into wildlands. Wildfire seasons are beginning earlier and summer droughts are more pronounced, likely enhanced by global climate change. Given the extent of forests in B.C.'s mountainous terrain, most communities are at risk of burning during a wildfire. Understanding the cause and consequences of this problem is essential to find meaningful solutions.

The common misconceptions that all wildfires are destructive, should be controlled and can be suppressed have created unrealistic expectations and are barriers to meaningful solutions. Ecologists know wildfire is an essential component of our ecosystems; most Canadians, however, have a limited appreciation of the benefits of wildfire. Wildfires rejuvenate forests and create habitats essential for biodiversity. In the absence of wildfire, landscapes become uniformly susceptible to damaging fires and insect outbreaks.

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Public aversion to all wildfire has been reinforced by a very successful policy of suppressing nearly all wildfires in recent decades. An unintended consequence of suppression has been to increase forest densities and fuel loads in the dry forests of British Columbia, making them more susceptible to severe fire that is difficult to control and may threaten human communities – a phenomenon known as the fire-suppression paradox.

Read more: B.C. wildfires: The damage so far, and how you can help

Simultaneously, urban sprawl into wildlands throughout the province exacerbates this problem. The expanding wildland-urban interface poses an enormously challenging fire-management problem. Many homeowners are unaware of the risk they face from wildfire, erroneously believing fire is an improbable, once-in-a-lifetime event so they see no reason to reduce forest fuels surrounding their homes and communities.

Innovation such as fighting fire with fire may seem counterintuitive, but is a critical part of the solution to the urgent and growing wildfire problem. In recent years, many wildfires have exceeded modern suppression technology at tremendous economic, social and ecological costs. Long-term solutions must include managed wildfires – a variant of fire suppression also known as "modified response" – as well as prescribed fires. Under managed wildfire, the strategy is to let wildfires burn if they are of low risk to life and property. Managed wildfires, as well as prescribed fires, are key to restoring fire into naturally flammable landscapes and an effective mechanism to reduce fuel loads and risk of subsequent uncontrollable fires. Closer to communities and critical infrastructure, wildfire risk can be reduced by thinning forests or prescribing fire to manage fuels.

Reducing wildfire threats to homes and communities is a shared responsibility. Meaningful and effective solutions to wildfire threats are well known, but have proven difficult to implement. The Filmon Report, written in the wake of the 2003 wildfires that devastated several communities in British Columbia, detailed pro-active and integrated forest and fire management necessary to prevent a repeat of catastrophic wildfires in British Columbia. Over the past decade, we have seen several positive developments, but there are still significant barriers preventing solutions to safeguard many communities. Hazardous fuels, the chief culprit in the wildfire problem, are still accumulating and have yet to be treated at the appropriate scale. High treatment cost is a limiting factor, but economies of scale could be realized through forest policy changes, such as tenure reform. Bioenergy is a promising outlet for the low-value biomass resulting from forest thinning, but incentives to make bioenergy co-exist with traditional forest products are lacking. Debate over responsibility for treating thousands of hectares of hazardous fuels on Crown land is a major impediment to safeguarding communities. The province of British Columbia insists local governments should be the d to address interface fuel hazards, but many communities lack the legal mandate, expertise and capacity to take on such a monumental task.

For many communities in B.C., it is not if, but when, wildfire will pose a threat. The necessary home renovations, forest thinning and other mitigation activities require substantive, sustained funding so they can be applied consistently across large areas to ultimately make forests and communities resilient. Leadership and investments from the provincial government are urgently needed to overcome these barriers and enable solutions to safeguard our communities.

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Video: Surveying wildfire damage in a B.C. community (THE CANADIAN PRESS)

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