Canadian Wildland Fire Strategy: A Vision for an Innovative and Integrated Approach to Managing the Risks

Canadian Wildland Fire Strategy Project Management Team[1]

Abstract—*The Canadian Wildland Fire Strategy (CWFS) provides a vision for a new, innovative, and integrated approach to wildland fire management in Canada. It was developed under the auspices of the Canadian Council of Forest Ministers and seeks to balance the social, ecological, and economic aspects of wildland fire through a risk management framework that emphasizes hazard mitigation, preparedness, and recovery as well as efficient fire suppression and response. This strategic and holistic approach is needed to address both the root causes and symptoms of current and future wildland fire management challenges.*

The desired future state advocated in the CWFS consists of communities that are empowered to enhance their own safety and resilience, forest ecosystems that are healthy and productive, and wildland fire management agencies that utilize modern business practices. To foster change in attitudes, policy, and practices, the provincial, territorial, and federal governments are currently working collaboratively to create a joint cost-shared program in excess of 1 billion dollars over 10 years to address 4 strategic objectives: (i) pan-Canadian FireSmart initiative, (ii) wildland fire preparedness and response capability, (iii) public awareness and risk and policy analysis, and (iv) innovation. The underlying tenet is that managing the risks from wildland fire is a shared responsibility of individuals, stakeholder groups, the private sector, and all levels of government and therefore requires integrated and cooperative actions.

Introduction

Each summer the news media carry stories of wildfires raging across the Canadian landscape, threatening our communities, causing evacuations, and at times burning public and private property. This portrayal of fire as a menace to society is often accurate but it is only part of the story. In Canada, fire is nature's primary way of keeping the wildlands (including forests, grasslands, and parks) healthy and productive. As a result, policy makers and practitioners are faced with the complex and difficult task of managing wildland fires so that their environmental benefits are maximized and simultaneously the risk to people and property is minimized.

Recognizing that the challenges of today and the future cannot be solved by simply using the thinking and methods of the past, the provincial, territorial and federal governments have worked together under the auspices of the Canadian Council of Forest Ministers (CCFM) on a new Canadian Wildland Fire Strategy (CWFS). Based on the principles of risk management, the CWFS will address the symptoms and the root causes of wildland fire management by modernizing approaches and capabilities. It provides a comprehensive vision of integrated activities that will increase public safety, improve the health and productivity of Canadian forests, enhance intergovernmental cooperation, and apply public funds efficiently.

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[1] The Canadian Wildland Fire Strategy Project Management Team members (in alphabetical order) are:

Brian Emmett, Natural Resources Canada, Canadian Forest Service, Ottawa, ON, Canada.

Peter Fuglem, British Columbia Ministry of Forests and Range, Victoria, BC, Canada.

Kelvin Hirsch, Natural Resources Canada, Canadian Forest Service, Edmonton, AB, Canada. khirsch@nrcan.gc.ca

Gordon Miller, Natural Resources Canada, Canadian Forest Service, Edmonton, AB, Canada.

Tim Sheldan, British Columbia Ministry of Forests and Range, Victoria, BC Canada.

Fire and Fire Management in Canada

The Role of Fire in Canada's Forests

Fire has been a very dominant feature in Canada's forests since the last Ice Age, particularly in the vast boreal region that stretches from the Yukon to Newfoundland. Many plant species — such as pine, spruce and birch, to name just a few — have not only adapted to fire but rely on it for their renewal. Fire has also created a mosaic of habitat types and ages, which are needed by various animal species. Wildfires burned freely in most of Canada until the late 19th century after which European-influenced views of fire and forestry resulted in policies that sought to suppress all fires. In recent decades there has been a growing recognition that fire exclusion is neither ecologically desirable, nor economically possible, to eliminate all fires from our wildlands.

The Risk from Wildfire

Currently in Canada there is an annual average of 8,600 fires that burn 2.5 million hectares, or an area larger than Lake Ontario. Provincial and territorial agencies and Parks Canada are world leaders in forest fire suppression, controlling 97% of all wildfires when only a few hectares in size. But just as with hurricanes, floods, and tornados, there are times when Mother Nature presents conditions that make wildfires unstoppable. As more Canadians live, work, and recreate in or near flammable vegetation, wildfires are posing an increasing threat to public safety. Over the past 10 years more than 700,000 people have been threatened by wildfires in over 200 communities – many of which are inhabited by Aboriginal peoples. A recent, vivid example was in western Canada in 2003, when hundreds of homes were lost, tens of thousands of people were evacuated, and combined damage and firefighting costs exceeded $1 billion.

The Looming Crisis

Extensive analysis conducted by federal, provincial, and territorial government officials has found that the vulnerability of people, property, and natural resources to wildfire has reached an unprecedented level and is projected to continue to rise rapidly. The main reasons for this include more frequent and intense fires resulting from severe droughts and climate change; insect infestations that leave dead and highly flammable forests in their wake; and the growing number of homes, cottages, businesses and activities located in or near flammable forests. Meanwhile current wildland fire suppression capacity is eroding as aircraft, facilities, and equipment age and experienced firefighting professionals retire. Many believe it is only a matter of time until another major fire season occurs again in Canada and the greatest concern is that next time the tragic consequences may include the loss of human lives as seen recently in other parts of the world.

Moving Forward

Taking a Strategic Approach

To address current and emerging challenges, the CWFS recommends expanding the toolkit available to wildland fire managers to include hazard

mitigation, preparedness, and recovery programs that complement an efficient fire suppression and response system. New ways of sharing and managing the risks are also required.

To put this another way, on a personal level all Canadians, in their daily lives, face decisions about risks from house fires and how to deal with them. Some people buy insurance, others purchase smoke detectors, and many schoolchildren have helped their families plan escape routes from a burning home as part of a homework assignment. At the community level, local governments invest in firefighting equipment and the training of firefighters to stop fires, if possible, before they become devastating. However, perhaps most important has been the considerable effort that has gone into creating building materials that are increasingly fire-resistant and the rigourous use of building codes that demand high standards of fire protection in the construction of residential homes and office buildings. The principles that have worked in our homes and communities for house fires can also work in the Canadian wildlands to reduce the risk from unwanted wildfires.

Action Plan

In October 2005, the provincial, territorial, and federal forestry ministers signed the CWFS Declaration and committed to a shared vision and common set of principles for wildland fire management in Canada (see www.ccfm.org). They also agreed to approach their respective governments to invest over $1 billion dollars over the next 10 years to implement the CWFS. Working with relevant partners and stakeholders, a joint cost-shared program would target four main initiatives:

(1) pan-Canadian FireSmart activities that empower individuals and communities to directly reduce the risk from wildfire;
(2) improved preparedness and response capability through, for example, replacement of aging aircraft and equipment, plus a stepped-up recruitment and training program to create the next generation of professional fire management staff (including extensive capacity building in aboriginal and rural communities); and
(3) a public awareness campaign about the role of wildland fire and the associated risks;
(4) innovation that includes the development and application of new science and technology in support of early warning systems, better predictive models, and the increased use of prescribed fire.

All of these actions build upon a strong spirit of intergovernmental cooperation that has existed in the wildland fire community for many years, and is evidenced in the thousands of fire fighting resources that are exchanged among agencies during times of need.

The CWFS is an ambitious initiative, but one whose time has definitely come. At first glance it may appear costly; however, in the face of increasing threats from wildfires, it is an investment that will avoid escalating costs and losses in the future. When implemented, the CWFS will make Canada's wildland fire management policies and programs among the most progressive in the world – thereby enhancing the safety of Canadians, facilitating forest sustainability, and ensuring the efficient use of public funds.