



## CANADIAN FOREST SERVICE

# Science HIGHLIGHTS

### HUMAN INTERACTION WITH WILDFIRE

## How can authorities help people mitigate the effects of wildfires?

**Education can help people become fire smart,  
but individual commitment is still needed**

Policy-makers and firefighters know what to tell people to help them prevent and limit the damage from forest fires. But making sure people actually make the right choices is a different matter. "Education is part of it, but we need policies and programs to encourage people to be fire smart," says Bonita McFarlane, a fire social science researcher at Natural Resource Canada's Canadian Forest Service Northern Forestry Centre in Edmonton.

Communities that are surrounded by or close to forests live with the threat that a wildfire could force mass evacuation and lead to millions of dollars of property damage. In extreme instances, wildfire can cause injury and death.

### More people are being exposed to forest fires

About 9000 forest fires are recorded every year in Canada. Most are small, burning just a few hectares. Some are huge, raging for weeks and consuming 100 000 hectares or more. An average of 2.1 million hectares is burned every year—about half the size of Nova Scotia—virtually all of it in the boreal forest. However, the eastern hardwoods and the west coast rain forest are less prone to, but still at risk from, fire. Increasingly, fires are in places where forests and other vegetation meet human development, earning them the name "interface fires."

"More people are moving into interface areas, and fires are becoming more frequent and intense particularly in the boreal forest. So the question is: How do communities adapt," McFarlane says.

Partners in Protection is a coalition representing national, provincial and municipal associations and government agencies responsible for emergency services, land-use planning, forest and park management, and research. It offers practical tools for building fire-smart communities, including an interactive manual called *FireSmart: Protecting Your Community from Wildfire*. The manual has been modified by various provinces to apply to specific regions. It provides recommendations to reduce the risk of fire—including vegetation management guidelines, building material options, suggestions for water supply, access routes and wildfire hazard assessment forms.

### Increased awareness doesn't lead to increased homeowner implementation of mitigation measures

McFarlane's research involves how people in interface areas perceive wildfire risk and what they are prepared to do about it. McFarlane, in collaboration with

#### Overview

Fires in places where flammable vegetation meets human development are called interface fires.

Increasing awareness of fire risk is not leading to increasing mitigation efforts by individuals.

*FireSmart: Protecting Your Community from Wildfire* is a resource for communities and property owners.



researchers at the University of Alberta, surveyed homeowners in six Alberta towns—three towns where wildfire management activities had been completed by government and three where no activities had been completed.

“People in the management group expressed higher levels of perceived risk and greater awareness of wildfire and mitigation than those in the no management group. But they did not attribute greater responsibility for mitigation to the homeowner, nor did they complete more mitigation activities on their properties. We still have to come up with better ways to get communities engaged,” McFarlane says.

McFarlane’s research is providing some insights into engaging communities and homeowners. Funding fire-smart programs may be part of the answer. McFarlane cites a funding program from the Alberta government that offers fire-smart community grants to municipalities that want to institute good practices.

### **Incorporating community values into fire mitigation planning**

Her research also suggests there are other factors that may convince people to complete mitigation measures, such as incorporating forest values that are important to homeowners—like aesthetics, privacy and wildlife protection—into mitigation plans. Other potential ways to convince people to take action include providing demonstrations or examples of fire smart properties so that homeowners can see firsthand what is involved in being fire smart.

Communities and fire management agencies that engage residents at the planning stage of developing community protection plans and take residents’ concerns into consideration also tend to be more successful. And providing assistance such as free site hazard assessments and recommendations on how to make a property fire smart are also promising mitigation tactics.

Even simple actions like providing a means for homeowners to dispose of tree branches and yard waste through road-side pickup show promise.

“Canada is very good at fire suppression, and we know how to mitigate fire. We have lots of expertise. Now we need to move to a model where fire mitigation goes hand-in-hand with fire suppression,” McFarlane says.



Residents participate in a community FireSmart project in Jasper, Alberta

