Climate Action Case Study

Wildfire Smoke Events: Protecting Health and Quality of Life

The Issue

Health, lifestyles and quality of life are closely connected. The projected trend to longer and more intense wildfire seasons creates a range of consequences that affect all three of these factors. From closures of the backcountry due to extreme fire danger, community evacuation alerts and orders, to health risks posted by wildfire smoke, wildfires will increasingly impact the way we live, work and play in the Columbia Basin-Boundary region.

A wildfire smoke event occurs when a community is shrouded by smoke for two or more days. Living in smoky conditions might cause lung irritation, trigger asthma and bring increased risk of dying from a stroke or from chronic obstructive pulmonary disease (COPD). BC's sharp spike in wildfires in 2017 and 2018 resulted in a 40 per cent increase in people needing respiratory inhalers and over 18 per cent increase in people visiting their doctor for asthma. The long-term health effects of repeated exposures to concentrated smoke are unknown. Those at highest risk are infants and young children, the elderly and those with pre-existing chronic conditions, including respiratory diseases.

If the wildfires experienced in 2015, 2017 and 2018 are indicative of a new trend to more extreme wildfire seasons that cause widespread smoke and poor air quality for communities, it is likely that BC and the Basin-Boundary region are still in the early stages of adaptation and addressing the challenges posed by wildfire and wildfire smoke.

The Action

In response to the increase in wildfire smoke events, the Province of BC has introduced the "Smoky Skies Bulletin", which is a special type of public advisory to communicate the rapidly changing nature of wildfire smoke and provides an important supplement to provincial Air Quality Advisories. It is issued when areas of the province are being impacted or have reasonable potential to be impacted by wildfire smoke within 24-48 hours.

The bulletins are based on available information on pollutant concentrations, satellite data, smoke forecast models and visual observations. They are broadcast to large distribution lists that include health officials, local and regional air quality groups, local government and local media, as well as Environment Canada's weather alert service. This approach ensures all potential smoke-affected regions receive alerts and public health messages on measures to reduce health risks. The goal is to communicate key health information to maximize public protection prior to the smoke event.

Once wildfire smoke is present, individuals are encouraged to stay indoors with windows closed and to minimize exertion, especially if they are having breathing difficulties. The best option is usually an indoor area that is cool and ventilated. Other recommendations include using an air conditioner to cool and filter air, using a HEPA filter or for those who do not have air conditioning to consider going to a public place (e.g. library, shopping mall, recreation centre) that is air-conditioned.