Wildfires in British Columbia's Future

R.W. Gray,BSc is a Professional Fire Ecologist with over 30 years experience in wildland fire research, operations, policy, and management in Canada, the US, and overseas.

Abstract

Over one million hectares burned, over $1.5 billion spent on suppression and immediate rehabilitation, and 6 firefighters lives lost all in the last decade. And if you believe the climate change science things are only going to get worse. With this future in mind government land and resource management policies and practices should be in alignment with efforts to limit the potential environmental, social, cultural and economic effects of increased wildfire activity. Unfortunately they are not.

Over the past decade, wildfire in British Columbia (BC) has accounted for:

- Over 1 million hectares of burned forest land;
- Over $1.5 billion spent on fire suppression and immediate fire rehabilitation; and
- 6 wildfire-fighter deaths.

Furthermore, wildfire activity is expected to significantly increase across Canada as the century progresses. These predictions of increased fire activity are primarily based on anticipated changes in temperature and precipitation patterns, but will be exacerbated by conditions in the forest; namely excess forest fuels. With over a century of effective fire exclusion BC's forests, and what were once grasslands and savannas, have become packed with more live trees, and dead trees and underbrush than any time in the last 2,000 years. Add the mountain pine beetle epidemic and poor forestry practices to the mix and you get a province-wide forest fuel problem of our making. What this means, and what we've already observed in the last decade, is large-scale, uncharacteristic fire behavior and fire effects.

Armed with this knowledge it is logical to formulate a solution to address the excess fuel in the forest issue –considering we are not able to control temperature and precipitation patterns. Unfortunately there appears to be a policy and practice disconnect between the predicted ramifications of climate change on wildfire activity and our efforts to mitigate the fuels issue. A classic example occurred within a few short months of the Province declaring that they had implemented all of the Filmon Report recommendations. The same Ministry that made that announcement turned around and reduced timber utilization standards allowing forest companies to leave more debris, i.e., fuel for wildfire, in the woods. The disconnect itself appears to be on a collision course. In one camp we appear to be acting as if wildfire is not an issue and we manage ecosystems as though they were static systems. We support afforestation to satisfy the provinces headlong rush into the carbon storage market, managing "secondary structure" in order to meet short-term AAC targets, reduced utilization standards, impediments to aggressive fuel management, and the continued preservation push as the solution to all things associated with biodiversity and endangered species. These are all examples of a lack of understanding of the

implications of a warming climate not only on ecosystems in general but fire regimes in particular. Fires occurring in these areas will exhibit uncharacteristic behavior and will result in socially, environmentally and economically unacceptable effects (see Stein River valley following the 2009 fire season).

In the other camp the Province has finally recognized the extent of the wildfire threat issue plus the implications of climate change on future fire behavior and fire effects but are advocating a very simplistic and potentially highly damaging solution to the problem. The broad-scale use of a practice known as "modified suppression" by the Wildfire Management Branch is seen as a potentially low-cost solution to the excess fuel in the forest issue. Unfortunately, simply allowing a forest burn because it contains fuel loads greatly in excess of anything the ecosystem evolved with, and because it's cheaper than proactively managing the fuels, will to lead to issues of reduced site productivity and impaired resilience and diversity. Furthermore, the addition of the effects of a warming climate on a severely burned site will result in a very expensive ecosystem restoration/rehabilitation problem.

Over 100 years of successful fire exclusion, beginning with the dramatic reduction in First Nations burning that formed a critical evolutionary influence on many of BC's ecosystems, has resulted in forests that are presently not resilient to wildfire. At the core of the problem are policies and practices that either advocate status-quo or increased forest density, or advocate radically reduced density through the application of wildfire treatments versus proactive fuel treatments. Wildfires of greater magnitude and intensity are part of BC's future regardless of what we do in the short-term. However, unless we harmonize our understanding of climate change and its influence on fire behavior and fire effects, and begin to aggressively manage fuels across the landscape, the cost of those fires will begin to take an even greater toll on the Provinces' annual budget as well as on society, the environment and the economy.