

Forest fire danger

[Science](#), [Agriculture](#)



Canada has identified that historically, there have been four developmental stages in the country's fire management programs (Taylor & Alexander, p3).

What this means is that fire danger systems must be dynamic enough to evolve in support of decision making that is continuously getting complex.

The systems, according to experts, in order to be effective must be based on factors that are accurately measurable and that are consistent irrespective of place and time. Two types of error may result from the application of fire danger systems; low and high fire danger levels. The low danger level error is grave and may easily result in the management system underestimating a fire's potential (Taylor & Alexander, p4).

The CFFDRS

The CFFDRS (Canadian Forest Fire danger Rating System) has continued to evolve ever since its introduction. The Fire Weather Index (FWI) system that is currently used in the country was developed in the 70s and then involved the manual observation of fires from fire weather stations.

The system's values were then determined by consulting look-up tables since electronic communication and computer systems were widely unavailable. In the 80s and 90s, remote automatic weather stations were developed. This went hand in hand with developments in communications technology. In a review published by the Canadian government in 1987, it was noted that the CFFDRS had saved a whopping 750 million Canadian dollars to the country with a cost-to-benefit ratio of about 1: 3 (Taylor & Alexander, p6).

Conclusion

Underlying every modern fire management system is the fire danger rating scheme. It is through such systems that scientific knowledge of the potential of fires can be synthesized and integrated with practical experience in the management of fire incidences that may occur in the future. One such successful system is the CFFDRS.

Key to the success of CFFDRS has been the cooperation that has been between territorial and provincial fire management agencies. In addition, the cooperation between operational staff and researchers, and that between provincial and federal agencies have been very important in the successful implementation of the system. Owing to its successful implementation in Canada, many countries have adopted the CFFDRS in part or wholly - Fiji, Argentina, and New Zealand being key examples.