

Landscape fires

A. Malcolm Gill and Geoffrey J. Cary

1. Develop an awareness of landscape fire and its multiple effects.
2. Dispel the myths that fire destroys the 'forest', while, somewhat paradoxically, that prescribed fire is a panacea for all forest-fire problems.
3. Develop a systematic, accurate and comprehensive mapping of all fires, including prescribed fires, to understand current and future effects of fires.
4. Improve probability (risk) analysis to deal with the problems of scale, measurement, relativities versus absolutes, residual risk, possible trade-offs and asset context.
5. Achieve effective management for multiple objectives, which are common yet difficult to deal with.
6. Assess the impact of fires on biodiversity and build knowledge essential to the management of flora and fauna.
7. Assess the impacts of fire regimes on water supplies in light of increasing populations and changing climates.
8. Carry out research to assess how fires can contribute to, and are affected by, atmospheric and climate change.
9. Consider the implications of the trend to domesticate/control fire regimes to better understand the effects on fire potential and the environment.
10. Improve scientific concepts and models, and maintain a vibrant, knowledgeable and competent scientific community.

Introduction

In 2009, 173 people were killed and 2133 houses were destroyed by landscape fires in Victoria. This episode cost an estimated A\$4 billion in what was declared to be 'one of Australia's worst natural disasters' (Teague *et al.* 2010). It triggered changes to fire-danger rating systems, building regulations in fire-prone areas, fire and fuel management practices, warning messages and self-perceptions of agency suppression capacity. Change extended well beyond Victoria (including nationwide) largely due to the A\$40 million Royal Commission and its 930-page final report (see Teague *et al.* 2010).

In the 5 years since the publication of the first edition of this book, significant events related to the occurrence, management, and social, economic and environmental effects of landscape fires (in addition to the Royal Commission) include: the independent inquiry