

International Journal of Wildland Fire

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Contents	Volume 19	Issue 1	2010
Comparing selected fire regime condition class (FRCC) and LANDFIRE vegetation model results with tree-ring data Tyson L. Swetnam and Peter M. Brown <i>International Journal of Wildland Fire</i> 19 , 1–13			FRCC methods assess departure in current vegetation conditions from historical conditions derived from vegetation modelling. Tree-ring data from Utah suggest that FRCC frequent fire vegetation models are generally accurate and infrequent fire models inaccurate. LANDFIRE historical and current vegetation maps also were compared, and found to have ~60% overall accuracy.
Spatial and temporal characteristics of wildfires in Mississippi, USA Katarzyna Grala and William H. Cooke III <i>International Journal of Wildland Fire</i> 19 , 14–28			This research focusses on recent fire history in the state of Mississippi and utilises geographic information systems, statewide wildfire point location data and other readily available geographic data to describe spatial and temporal patterns of wildfires in Mississippi. Anthropogenic as well as climatic influences and their relationship to wildfire frequency and burned area are examined.
Assessing ignition probability and moisture of extinction in a Mediterranean grass fuel A. P. Dimitrakopoulos, I. D. Mitsopoulos and K. Gatoulas <i>International Journal of Wildland Fire</i> 19 , 29–34			The probability of ignition at various fuel moisture contents was determined for the grass slender oat during field experiments. At 38.5% oven-dried weight (ODW) moisture content the ignition probability was 50%, whereas at 55.5% ODW it was less than 1% (moisture of extinction). Wind speed had an effect on ignition probability at fuel moisture contents greater than 30% ODW.
The effect of fuel age on the spread of fire in sclerophyll forest in the Sydney region of Australia Owen F. Price and Ross A. Bradstock <i>International Journal of Wildland Fire</i> 19 , 35–45			Among 1473 historical fire patches, the chance that a patch would experience an unplanned fire within 5 years that stopped within the patch was 8% for prescribed patches and 18% for unplanned patches. Statistical models revealed that fuel age has a modest effect on stopping likelihood.
Fire severity in a northern Australian savanna landscape: the importance of time since previous fire Brett P. Murphy and Jeremy Russell-Smith <i>International Journal of Wildland Fire</i> 19 , 46–51			Following examination of a detailed fire history from a savanna landscape in northern Australia, we concluded that fire severity strongly increases with time since previous fire. This highlights the difficulty of reducing both fire frequency and severity in these landscapes, as reducing fire frequency is likely to increase the severity of fires that do occur.
Repeated disturbance through chaining and burning differentially affects recruitment among plant functional types in fire-prone heathlands Carl R. Gosper, Suzanne M. Prober and Colin J. Yates <i>International Journal of Wildland Fire</i> 19 , 52–62			Chaining and burning is used as a fire management tool in the global biodiversity hotspot of south-west Western Australia. We investigate the effects of chaining and burning on plant communities. The abundance and species richness of serotinous, obligate seeding plants are decreased by chaining and burning; this should be considered in fire management planning.
The development of fire-induced damage functions for forest recreation activity in Alberta, Canada Michael Rausch, Peter C. Boxall and Arunas P. Verbyla <i>International Journal of Wildland Fire</i> 19 , 63–74			This study develops a fire damage function for camping trips in the Canadian Rocky Mountains. The methodology used actual trip and survey data and regression models for non-negative integers. The results suggest that fires decrease trips; but as the forest grows the effect of fire diminishes over 12 years after which trip frequencies recover to pre-fire levels.

Monitoring post-wildfire vegetation response with remotely sensed time-series data in Spain, USA and Israel

Willem J. D. van Leeuwen, Grant M. Casady, Daniel G. Neary, Susana Bautista, José Antonio Alloza, Yohay Carmel, Lea Wittenberg, Dan Malkinson and Barron J. Orr

International Journal of Wildland Fire **19**, 75–93

The presented remote sensing monitoring approach provides a valuable tool for assessing seasonal and spatial changes in post-fire vegetation dynamics for sites in Spain, Israel and the USA. This post-fire vegetation assessment tool is based on readily available moderate spatio-temporal resolution satellite-based time-series vegetation data. Vegetation time-series data and phenological metrics also provided insights into climatic influences on post-fire vegetation response.

Use of linguistic estimates and vegetation indices to assess post-fire vegetation regrowth in woodland areas

Carol R. Jacobson

International Journal of Wildland Fire **19**, 94–103

A non-destructive method of field sampling is required for vulnerable vegetation recovering from a severe fire, and therefore classification of digital photographs using linguistic terms was trialled. The linguistic data for three vegetation strata (canopy, shrub and ground) were compared with vegetation index data derived from remotely sensed imagery.

Applying LiDAR technology for tree measurements in burned landscapes

Michael G. Wing, Aaron Eklund and John Sessions

International Journal of Wildland Fire **19**, 104–114

We compared field-based and LiDAR-derived tree measurements at three south-western Oregon (USA) sites subjected to a range of tree mortality due to fire. No significant differences were detected between field-based and LiDAR-derived horizontal positions. Mean and maximum LiDAR intensities were significantly different between live and fire-killed trees at two sites.

Delaying sheep grazing after wildfire in sagebrush steppe may not affect vegetation recovery

Lovina Roselle, Steven S. Seefeldt and Karen Launchbaugh

International Journal of Wildland Fire **19**, 115–122

The influence of season of sheep grazing and a 1- to 3-year delay on vegetation recovery following wildfire was studied in sagebrush steppe rangelands in Idaho. Moderate sheep grazing had subtle impacts on vegetation recovery after fire, with spring grazing having more negative consequences.

Integrating values and risk perceptions into a decision support system

Barbara J. Morehouse, Sara O'Brien, Gary Christopherson and Peter Johnson

International Journal of Wildland Fire **19**, 123–136

Results of a project to integrate public values into a web-based geographic information science decision support system indicate that such integration may provide improved understanding and visualisation of factors influencing public perceptions of fire risk. The integration of such factors in decision support tools offers opportunities for improving wildfire strategic planning efforts.

Trust, acceptance, and citizen–agency interactions after large fires: influences on planning processes

Christine S. Olsen and Bruce A. Shindler

International Journal of Wildland Fire **19**, 137–147

Findings from this research support that acceptance of post-fire forest management strategies are highly dependent on trustworthy relations. Further, there is evidence this trusting relationship must be fostered long before the fire begins. Citizen assessments of their interactions with agency personnel after wildfire are also examined.



The wildland–urban interface at Coimbra, Portugal, in August 2005.
Photo: A. Ferreira