

International Journal of Wildland Fire

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Contents	Volume 19	Issue 6	2010
Adoption and perceptions of shelter-in-place in California's Rancho Santa Fe Fire Protection District Travis B. Paveglio, Matthew S. Carroll and Pamela J. Jakes <i>International Journal of Wildland Fire</i> 19 , 677–688			This article explores public and professional perception of emerging US strategies for protecting local residents during wildland fire events. We focus on the social factors leading to implementation of one version of alternatives to evacuation – a broad category of strategies designed to allow residents to remain at home when a wildfire threatens their area.
Building bridges to fight fire: the role of informal social interactions in six Colorado wildland–urban interface communities Hannah Brenkert-Smith <i>International Journal of Wildland Fire</i> 19 , 689–697			Based on in-depth interviews with full- and part-time owners, this study highlights the role informal social interactions play in the dissemination of wildfire information and galvanisation of small-scale cooperative efforts to reduce risk by linking those not likely to be direct recipients of outreach efforts with those who are.
Field estimation of ash and char colour-lightness using a standard grey scale David P. Roy, Luigi Boschetti, Stefan W. Maier and Alistair M. S. Smith <i>International Journal of Wildland Fire</i> 19 , 698–704			The mean visible wavelength reflectance of combustion residue samples was compared to visually evaluated grey-scale scores. A significant linear relationship between the grey-scale scores and the mean reflectance was found, suggesting that combustion residue colour-lightness can be assessed using a grey scale.
Global assessment of the temporal reporting accuracy and precision of the MODIS burned area product Luigi Boschetti, David P. Roy, Christopher O. Justice and Louis Giglio <i>International Journal of Wildland Fire</i> 19 , 705–709			The paper presents a method for validating the time of detection reported in the MODIS global burned area product, using active fire detections as reference dataset. Analysis of 6 years of global data shows that 75% of the MODIS burned area detections are within 4 days of an active fire.
Burn severity mapping using simulation modelling and satellite imagery Eva C. Karau and Robert E. Keane <i>International Journal of Wildland Fire</i> 19 , 710–724			This project compares and contrasts satellite imagery- and simulation model-based approaches to mapping fire effects and burn severity with the intention of providing resource managers with information and tools to more effectively meet burned area rehabilitation objectives. An approach that uses these two tools synergistically may be optimal, depending on management priorities and the specific circumstances of the fire event.
Integrating fuel treatment into ecosystem management: a proposed project planning process Keith D. Stockmann, Kevin D. Hyde, J. Greg Jones, Dan R. Loeffler and Robin P. Silverstein <i>International Journal of Wildland Fire</i> 19 , 725–736			There is a need to plan hazardous fuel treatments in conjunction with other land management activities in the context of ecosystem management policies requiring multiple-use and environmental conservation objectives. We present an integrated assessment modelling process for accomplishing multiple attribute trade-off analysis for land management alternatives.
Prescribed burning of thinning slash in regrowth stands of jarrah (<i>Eucalyptus marginata</i>) following bauxite mining in south-west Australia Andrew H. Grigg, Melanie A. Norman and Carl D. Grant <i>International Journal of Wildland Fire</i> 19 , 737–745			Changes to fuel loads and structure after thinning in 10- to 13-year-old regrowth jarrah stands established after bauxite mining are related to resultant fire behaviour and subsequent recovery in fuel characteristics. Fire intensities were typically low to moderate but autumn burning after thinning is not recommended because dense understorey regrowth poses a future fire risk.
Minimal effectiveness of native and non-native seeding following three high-severity wildfires Ken A. Stella, Carolyn H. Sieg and Pete Z. Fulé <i>International Journal of Wildland Fire</i> 19 , 746–758			We conducted an experimental, replicated study following three wildfires in Arizona. Seeding with either single non-native species or native seed mixes was generally ineffective in reducing bare ground and curtailing non-native plants, and did not significantly increase plant canopy cover. Natural plant regeneration was high and seeding was minimally effective.

Effect of heat shock on germination of 23 plant species in pine–oak and montane cloud forests in western Mexico

Susana Zuloaga-Aguilar, Oscar Briones and Alma Orozco-Segovia

International Journal of Wildland Fire **19**, 759–773

Germination of seeds of 23 species growing in pine–oak and montane cloud forest was stimulated by high temperatures similar to those registered during fires. Moisture of the substrate during exposure to high temperatures and the water content of seeds had a species-dependent effect on seed germination.

Methods to determine the impact of rainfall on fuels and burned area in southern African savannas

S. Archibald, A. Nickless, R. J. Scholes and R. Schulze

International Journal of Wildland Fire **19**, 774–782

In southern African savannas, grass production, and therefore the annual extent of fire, is highly dependent on rainfall. Here long term fire data from six national parks in southern Africa were used to explore how annual area burned responds to pre-fire accumulated rainfall in grass-fuelled systems. A standardised accumulated rainfall index was derived which can be used for regional comparisons and to inform management.

Fuel loading and flammability in the Mediterranean Basin woody species with different post-fire regenerative strategies

S. Saura-Mas, S. Paula, J. G. Pausas and F. Lloret

International Journal of Wildland Fire **19**, 783–794

Post-fire regenerative groups differ on their flammability and fuel loading properties. In fact, results suggest that ecosystems dominated by seeder species are more susceptible to fire risk than those dominated by non-seeder species in the Mediterranean Basin. We propose that these differences may be the result of selective pressures associated with both fire and climate.

Understorey fire propagation and tree mortality on adjacent areas to an Amazonian deforestation fire

J. A. Carvalho, Jr., C. A. Gurgel Veras, E. C. Alvarado,

D. V. Sandberg, S. J. Leite, R. Gielow, E. R. C. Rabelo

and J. C. Santos

International Journal of Wildland Fire **19**, 795–799

Fires that escape from deforestation burns into the understorey of Amazon primary forest spread slowly and are of low intensity. However, they cause high mortality rates. This fire-caused mortality is evidence of the synergistic effect between slash burning, tree mortality and future fire vulnerability on the forest–land clearing interfaces.

Effect of drying temperature on fuel moisture content measurements

Stuart Matthews

International Journal of Wildland Fire **19**, 800–802

Laboratory measurements are used to demonstrate that drying temperature has an effect on the oven-dry mass of dead grass, pine and eucalyptus fuels. Differences between oven-dry masses of fuels dried at 60 and 105°C of up to 3.5% were measured. This difference is large enough to affect fire behaviour predictions.



Wildfire in pine forest, Turkey.
Photo: Aykut Ince