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Mapping the ethical landscape of wildland fire management: setting an agenda for research and deliberation on the applied ethics of wildland fire

Dyllan Goldstein and Eric B. Kennedy

International Journal of Wildland Fire 31, 911–917

Decisions in wildfire management include important ethical dimensions: how should we resolve competing trade-offs and priorities? In this paper, we provide a roadmap to different ethical issues involved in wildfire, argue for discussing these more explicitly, and suggest the need for further research to support fair and equitable management decisions.

More smoke today for less smoke tomorrow? We need to better understand the public health benefits and costs of prescribed fire

Benjamin A. Jones, Shana McDermott, Patricia A. Champ and Robert P. Berrens

International Journal of Wildland Fire 31, 918–926

As we scale up the use of prescribed fire in the US, we need a better scientific understanding of how the health costs associated with its smoke in the present compare to the future benefits of reduced wildfire smoke exposure. Research is called for on the public health benefits and costs of prescribed fire.

The US Forest Service Life First safety initiative: exploring unnecessary exposure to risk

David Flores and Emily R. Haire

International Journal of Wildland Fire 31, 927–935

Organisational studies can unearth the values of everyday work cultures. This application of the social science of wildland firefighting discusses unnecessary risk in normal operations. Perceived internal and external organisational pressures interact with mission-oriented work cultures, creating for employees an unnecessary exposure to risk.

Collective action for managing wildfire risk across boundaries in forest and range landscapes: lessons from case studies in the western United States

Heidi R. Huber-Stearns, Emily Jane Davis, Antony S. Cheng and Alison Deak

International Journal of Wildland Fire 31, 936–948

Actors must collectively manage wildfire risk across administrative, conceptual, organisational and other boundaries in fire-prone landscapes. We interviewed practitioners in five cases across the western United States, identifying how actors were engaging in collective action to address wildfire risk, organised through a typology of actor functions and boundary-spanning features.

GAMBUT field experiment of peatland wildfires in Sumatra: from ignition to spread and suppression

Muhammad A. Santoso, Eirik G. Christensen, Hafiz M. F. Amin, Pithier Palamba, Yuqi Hu, Dwi M. J. Purnomo, Wuquan Cui, Agus Pamitran, Franz Richter, Thomas E. L. Smith, Yulianto S. Nugroho and Guillermo Rein

International Journal of Wildland Fire 31, 949–966

This paper presents the largest and longest to-date field experiment of peat wildfires. Results show peat wildfires behaviour at field conditions in term of smouldering spread, thermal severity and response to rainfall and suppression. Findings in this paper can contribute to better mitigation efforts.

On the intermittent nature of forest fire spread – Part 2

Domingos Xavier Filomeno Carlos Viegas, Jorge Rafael Nogueira Raposo, Carlos Fernando Morgado Ribeiro, Luís Reis, Abdelrahman Abouali, Luís Mário Ribeiro and Carlos Xavier Pais Viegas

International Journal of Wildland Fire 31, 967–981

Interaction between a fire and its surroundings induces spread properties oscillations with an amplitude proportional to the rate of spread and a frequency that depends on the type of fire and its rate of spread. In fast-spreading fires, large amplitude oscillations produce quick changes of the rate of spread.

Automated classification of fuel types using roadside images via deep learning

Md Riasat Azim, Melih Keskin, Ngoan Do and Mustafa Gül

International Journal of Wildland Fire 31, 982–987

This paper presents a framework for automated identification of fuels in an area by analysing roadside images using a convolutional neural network. The results show that the framework has the potential to automate the process of fuel classification, which can complement the current practice of visual inspection and aerial monitoring.



A wildland firefighter checks a drip torch on the Pioneer Fire, Boise National Forest, ID. See Flores and Haire, pp. 927–935. US Forest Service photo by Kari Greer taken on 24 August 2016 (public domain).