Addressing Social Fragmentation is Key to Effective Wildfire Management

Science brief prepared by **Alex W. Kirkpatrick.** Edited by **Sonia A. Hall.**

Key Findings

- Social fragmentation, or a lack of familiarity, cohesion and communication among residents and managers, can complicate the implementation of evacuation strategies, domestic mitigation efforts and even the management of public lands.

- The ongoing evolution of land ownership, with trends of increasing recreational properties, second homeownership or absentee forest landowners, was considered a primary source of social fragmentation.

- Developing community ties was one key focus community members and land managers described as a means to implement more effective wildfire management initiatives.

- Regulations relating to private development, including building codes and landowner vegetation mitigation actions, may not be well supported or enacted by residents in many rural locations.

A primary aim of U.S. fire management is to foster communities who can adapt to wildfire as a reoccurring process on the landscapes in which they live. Such fire adapted communities should ideally have the ability to effectively prepare for, respond to and recover from wildfires by mitigating the threat to property, land value and life, allowing fire to play its natural role in the environment and reducing the need for suppression resources over time. Adaptation involves an ongoing and evolving appraisal of a community and its impact on the ecosystem and how this can affect response to wildfire, like reviewing development patterns, management practices and coordination of suppression activities. All can affect how wildfire behaves across a given landscape.

In an effort to better understand how the interplay between various landowners, officials and land managers affect a community's ability to adapt to wildfire, researchers at the University of Idaho conducted focus groups with a variety of professionals, residents and government officials in Bonner County, Idaho, and Pend Oreille County, Washington (Figure 1). Researchers contacted selected community members and land managers with comprehensive knowledge of their county and engaged in semi-structured discussions around voluntary fuel reduction, zoning efforts, public lands management and recovery after wildfire events.

Management Implications

This study's findings illustrate how influential social dynamics are to broader processes surrounding ecosystem or forest management. Discussions with community members suggest that land managers should recognize and understand the evolving patterns of social dynamics across the landscape in question. For example, how do the types of residency influence collective action? How does land ownership affect fire mitigation efforts? In understanding the unique perspectives and goals of specific categories of individuals (e.g., homeowners, part-time residents, elderly residents, etc.), land managers can tailor mitigation activities to specific sections of communities, and offer targeted incentives
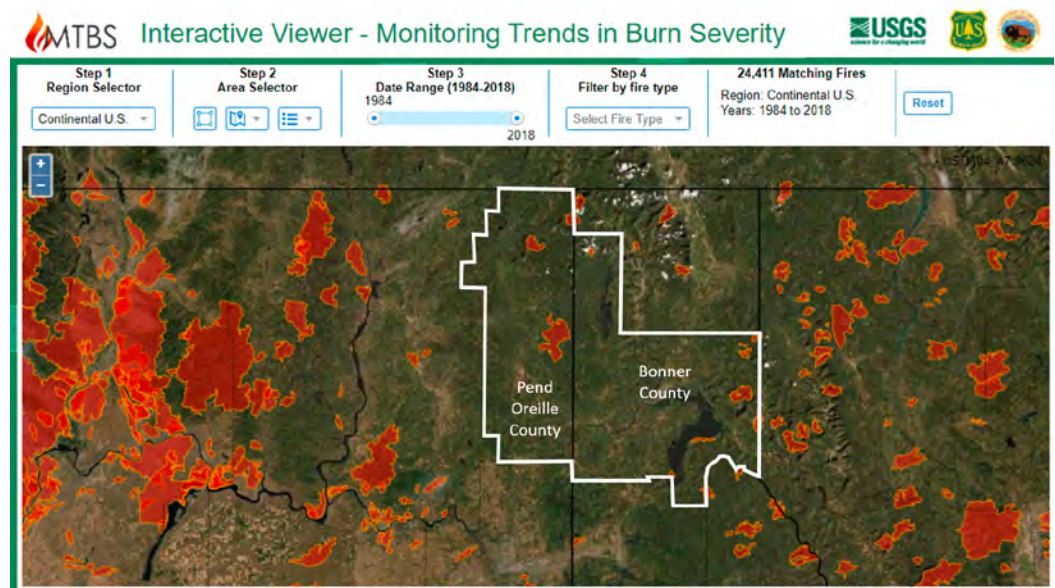
Figure 1. Occurrence of fires in Pend Oreille County, Washington, Bonner County, Idaho, and surrounding areas from 1984 to 2018. Source: Monitoring Trends in Burn Severity (MTBS) Interactive Viewer, https://mtbs.gov/viewer/index.html.

Fire adapted communities that have the ability to effectively prepare for, respond to and recover from wildfires could better allow fire to play its natural role in the environment and reduce the need for suppression resources over time. Photo: USDA Forest Service, under CC BY 2.0.

to distinct groups where they exist (e.g., permanent residents, part-time residents, homeowners, business owners, etc.). Of great importance to mitigating the potential limitations implied by social fragmentation, land managers and community leaders could consider strategies to build a common sense of purpose, or build on shared values among groups to develop a stronger sense of community. Where interactions between groups may be lacking, managers could consider communication strategies such as encouraging town hall-style public deliberation, or otherwise including the diverse perspectives of community stakeholders "upstream" of any local policy or land management decision. Disagreements and later compromises about forest management actions require trust-building and the formation of common goals among diverse stakeholders surrounding the ways that proposed management actions would impact different at-risk values in the area. Efforts to democratize community action at an early stage in the wildfire planning process could serve to enhance community members' sense of collective ownership and build the community bonds essential to effective wildfire management.

Foundational Publication

Paveglio, T. B., Carroll, M. S., Stasiewicz, A. M., & Edgeley, C. M. (2019). *Social fragmentation and wildfire management: Exploring the scale of adaptive action.* Int. J. Disaster Risk Reduction, 71, 12-23. https://doi.org/10.1016/j.ijdrr.2018.09.016

Communities surrounded by and increasingly developing into fire-prone forested landscapes may need to actively mitigate the effects of social fragmentation to help them become fire adapted communities. Photo: Flickr user Jasperado under CC BY-NC-ND 2.0.