

SPECIAL SESSION: Social Networks and the Communication and Transmission of Fire Risk

Social networks (i.e., the arrangement of formal and informal relationships among people) have bearing on how people share information and make decisions. In the case of federal forest management, social networks can influence how people access scientific information, come to agreement on the best course of action, and implement plans for fighting fires, reducing fire risk and restoring fire-adapted ecosystems. This session will explore social networks in the field of fire and fuels management. Papers will address how social network characteristics are associated with how scientists and managers share scientific information; the function of incident response teams; how community-based organizations foster forest restoration; and the biophysical connectivity of hazardous fuels.

Social Networks for the Communication of Science about Managing Fire-Prone Ecosystems

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Scientific information is important for management of forest ecosystems. However, researchers and managers have different perceptions of the availability and usefulness of scientific information. This study identifies hurdles to science-based decision-making that arise from gaps in communication of information rather than gaps in the availability of information. Using social network analysis and statistical analysis of survey data, we examine patterns of communication and interaction among researchers and managers in the field of fire and fuels management, specifically in riparian systems. We describe how researchers and managers exchange information through their social networks and we identify factors in how this information is applied in management. Findings have implications for the organizational structure of natural resource agencies and strategies used by these agencies to communicate science.

A Social Network Approach to Understanding Science Communication among Fire Professionals

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Studies of science communication and use in the fire management community suggest manager's access research via informal information networks and that these networks vary by both agency and position. We used a phone survey followed by traditional statistical analyses to understand the informal social networks of fire professionals in two western regions of the United States (Northern Rockies and Southwest). In these regions, we sampled federal and tribal decision-makers, fire management officers, fire ecologists and fuels specialists to determine 1) who they go to for scientific information supporting fuels management, 2) why they go to these individuals and 3) how they communicate with these individuals. We will present preliminary results of analyses of the extent to which communication about science is driven by formal positions and corresponding responsibilities, expertise and/or personal history of working together. Results are compared between the two regions. Science communicators can use information about personal sources of fire science information to design points of entry for more

strategic and efficient science communication. In contrast to a broadcast approach, an approach strategically based on understanding the characteristics of communication networks would be expected to shorten time lags to diffusion.

Wildfire Management and Forecasting Fire Potential: The Roles of Climatology, Perceptions and Social Networks in the Southwest U.S.

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Continuing progress in the fields of meteorology, climatology and fire ecology has enabled more proactive and risk-tolerant wildland fire management practices in the United States. Recent institutional changes have also facilitated the incorporation of more advanced climate and weather research into wildland fire management. One of the most significant changes was the creation of Predictive Services in 1998, a federal agency unit comprised in part of meteorologists who create climate- and weather-based fire outlooks tailored to fire manager needs. Despite the numerous forecast products now available to fire managers, few studies have examined how these products have affected their practices. In this paper the authors assess how fire managers in the Southwest region of the U.S. perceive and incorporate different types of information into their management practices. A social network analysis demonstrates that meteorologists have become central figures in disseminating information in the regional interagency fire management network. Interviews and survey data indicate that person-to-person communication during planning phases prior to the primary fire season is key to Predictive Services' success in supporting fire managers' decision-making. Over several months leading up to the fire season, predictive forecasts based on complex climate, fuels and fire-risk models are explained to fire managers and updated through frequent communication. One significant benefit of the information sharing process is the dialogue it fosters among fire managers, locally, regionally and nationally, which better prepares them to cooperate and strategically plan for the fire season.

Building Bridges to Foster Forest Restoration and Economic Development in the Rural West

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A growing number of community-based organizations promote linked strategies for forest restoration and local economic development in fire-prone communities in the American West. These strategies typically focus on the potential of biomass utilization to offset the costs of hazardous fuels reduction and provide local employment. To realize these linked strategies, these organizations work with an unusually broad range of partners who typically do not interact. This research examines two case studies of community-based organizations to examine the conditions under which they 1) use different networks to accomplish components of these linked strategies, and 2) do or do not create new active relationships between natural resource managers and economic development entities.

Communication under Fire: Key Factors Related to Performance Effectiveness in Large Wildfires