

National Cohesive Wildland Fire Management Strategy Workshop

All Hands, All Lands: Implementation Rooted in Science

Peppermill Resort Spa Casino - Reno, Nevada

APRIL 25-27, 2017

Ignite Talks

IG1. A Review of Community-Scale Fire Adaptation Practices Across the Fire Adapted Communities Landscape

Presenter: Jeremiah Osborne-Gowey, PhD, landscape ecologist, policy analyst, University of Colorado Boulder

Co - Author(s): Bruce Goldstein, Associate Professor

Communities in fire-prone landscapes across the United States are moving toward becoming more fire-adapted. In this ignite presentation, we identify the range of fire-adaptation practices that have been adopted by communities participating in the Fire Adapted Communities Learning Network (FAC Net), many of which are collaborative in nature. In examining activities in fire-adapted communities across the United States we identified four general categories of community-based fire adaptation activities: 1) communications and messaging, 2) relationship and trust-building, 3) practice and projects, and 4) co-management of fire risk. Many projects, activities and programs incorporate aspects of all four categories. Using representative examples, we present a range of strategies and approaches to fire that are working in different FAC Net communities to help researchers, fire practitioners and communities choose activities that may be more durable and lasting across the fire landscape.

Keywords: Fire Adapted Communities Learning Network, FAC Net, fire adaptation, practice, co-management, collaboration, networks

Bio: Jeremiah is a PhD candidate interested in the intersection of science and policy and how science is used in the policy-making process. His current research focuses on understanding how learning networks build resilience (social and ecological) and transformation of practices. He is currently working with the Fire Adapted Communities Learning Network (FAC Net) and the Locally Managed Marine Area (LMMA) Network of the Indo-Pacific. Previously, Jeremiah worked for over 15 years as an aquatic/landscape ecologist with Federal and State agencies, universities and private and non-profit consulting firms throughout the Western United States. www.brugo.org/meet-the-team/jeremiah-osborne-gowey/

IG2. Understanding what works in collaborative cohesive strategies.

Presenter: Marlene Rebori, Community Development Specialist, University of Nevada Extension

Building community collaboration to take action on reducing wildfire threat can be a challenging and overwhelming task. In addition to building the community collaboration, how do we know if the process is successful? Where is the evidence to indicate collaboration helped develop cohesive wildfire strategies? In an exploratory presentation, we will share the PARTNER tool (Program to Analyze, Record, and Track Networks to Enhance Relationships)

www.partnertool.net developed from the University of Colorado Denver, to assess the viability of revising the template to measure successful collaborative wildfire cohesive strategies. The survey and PARTNER tool were developed to measure and visualize outcomes related to resilient communities in public health. Our session will query respondents to examine a draft tool to measure and visualize outcomes related to collaborative cohesive strategies. The session will be highly interactive and include a brief overview of the survey questions and PARTNER tool. Next participants will have the opportunity to provide their answers to our burning questions on the survey. Each question will be posted on a poster board, session participants will have the opportunity to respond to each question. Responses gathered will be used to analyze and visualize successful outcomes. In addition, participants will have the opportunity to revise, edit, add or change potential survey questions that best reflect a survey tool suitable for measuring successful collaborative wildland fire cohesive strategies.

Keywords: Collaboration, Tool-kit, indicators of success, shared stories, themes.

Bio: Marlene K. Rebori, Ph.D. is an Associate Professor at University of Nevada, Reno (UNR) and the Community Development Specialist with Cooperative Extension. As an outreach faculty member, Dr. Rebori has worked to address countless community issues across the State of Nevada such as organizing communities to reduce wildfire threat, developing leadership development programs and community engagement curricula. Marlene considers herself a community engagement practitioner and an inquisitive researcher. She has provided facilitation assistance and group process design expertise to over 200 non-profit, agency and citizen groups regarding board development and strategic visioning. Marlene's research interests include civic learning, deliberative democracy, and community engagement and leadership. Marlene has a Bachelors of Arts in Environmental Policy (B.A.) a Masters of Science in Forestry (M.S.F.), and a Doctorate in Public Policy (Ph.D.).

IG3. Comparing land use planning for wildfire risk reduction in France and California

Presenter: Susie Kocher, Forestry Advisor, University of California Cooperative Extension

Co - Author(s): Van Butsic, Land Use Specialist, University of California, Berkeley

Wildfire is a natural part of forested Mediterranean systems. As humans continue to live and build housing in these areas, wildfire is a constant threat to homes and lives. The goal of this paper is to analyze how land use planning has been used to reduce fire risk to homes in two institutionally divergent regions: Southern France and California. By reviewing relevant legislation and conducting in person interviews with fire and planning professionals, we identify the institutions which participate in land use planning to reduce fire risk, identify key laws and regulations that guide planning decisions and finally evaluate how these structures manifest themselves on the ground. Our results indicate that France has a more centralized system for planning for fire, with national level entities heavily involved in local land use planning. California, on the other hand sees almost no national oversight, and while state law requires local plans to include wildfire risk, most fine grain decisions are left to local planners and decision makers. In both regions, however, we see a reliance on technical support provided from outside of local jurisdictions. Increased coordination between local, regional and national governments could improve land use planning in both locations.

Keywords: land use planning, California, France

Bio: Susie Kocher is a forestry/natural resources advisor for the University of California Cooperative Extension in the Central Sierra Nevada of California. Her extension program has focused on responding to forest disturbances from wildfire and now bark beetle mortality. She did her work on land use planning in France while on sabbatical in Aix en Provence in 2016. She is a California Registered Professional Forester.

IG4. Spaceborne Remote Sensing Capabilities for Fire Science and Their Usefulness for Various Spatial and Temporal Demands

Presenter: Luke Ellison, Scientific Programmer, SSAI / NASA GSFC

Co - Author(s): Charles Ichoku, Scientist, NASA GSFC

Over the last two decades, with advancements in instrument technology and as fire science has gained recognition as an integral variable in Earth studies, spaceborne fire detection and measurement capabilities have continually become more sophisticated. NASA's Moderate Resolution Imaging Spectroradiometer (MODIS) aboard the Terra and Aqua satellites in low Earth orbit (LEO) has been the staple in spaceborne measurement of biomass burning. MODIS' successor, the Visible Infrared Imaging Radiometer Suite (VIIRS) aboard the Suomi National Polar-orbiting Partnership (SNPP) satellite, improved the spatial resolution capabilities from 1km to 375m for active fire observation. Likewise in geostationary orbit (GEO), the new GOES-16 Advanced Baseline Imager (ABI), and sister Advanced Himawari Imager (AHI), have increased the spatial resolution for fires from the 4km of older GOES instruments to 2km. At a spatial resolution of 30m, the new Landsat-8 Operational Land Imager (OLI) provides a good source of small fire detections, albeit without sufficient dynamic range for qualitative measurements. The new race underway is for a constellation of CubeSats to cover the earth so that fires are measured quantitatively at both spatial and temporal resolutions that are greater than MODIS or VIIRS by an order of magnitude.

The demands for spaceborne remotely sensed fire data, particularly regarding spatial extent and response time, spans a broad spectrum of user needs, from local wildland fire management to regional climate science and international environmental policy. Although we have the environmental analysis and climate modeling community needs as our main driver, our products such as the FEERv1.0 Biomass Burning emissions inventory are applicable at different scales. The emissions inventory particularly lends itself to a give-and-take process during field experiments, providing both emissions estimates and validation utilizing ground and airborne sensors. Further interaction between remote sensing scientists and operational personnel will accelerate research and development, ultimately benefiting society. Although the amount and quality of fire detection and measurements from space are improving, the presentation of the data sets can leave end-users frustrated. Through the FEER website (<https://feer.gsfc.nasa.gov/>), we have established easily accessible fire data sets in near-real-time, and seek to improve the data quantity and usefulness.

Keywords: spaceborne measurements, science, global, emissions, data products, fire detection

Bio: Mr. Ellison graduated from Bethel University and the University of Minnesota with undergraduate degrees in Physics and Engineering Science, and Aerospace Engineering and Mechanics, respectively. Hired by Science Systems and Applications, Inc. in 2009, he has worked in the Climate and Radiation Laboratory at NASA Goddard Space Flight Center as part of the Fire Energetics and Emissions Research team. His role in data analysis and production resulted in the FEER biomass burning emissions inventory. His science research is highlighted by a six-year study of biomass burning impacts in African droughts. His data visualization work is reflected on their project website.

IG5. The Role of Networks in Transforming Natural Resource Management

Presenter: Jeremiah Osborne-Gowey, PhD candidate, landscape ecologist, policy analyst, University of Colorado Boulder

Networks - as radicalized versions of decentralization - are uniquely well-situated to play a leading role in collaborative governance and co-management of natural resources. Networks share a number of similarities with and elements of collaborative governance. Networks are typically voluntary, self-organizing, cooperative, relatively informal, often flexible and adaptive, highly connected and cross-scalar, encompass a multitude of contexts, draw on a diversity of knowledge systems, and are often highly communicative in nature. Additionally, networks can facilitate the building of social and cultural capital (e.g., trust, relationship, social memory, etc.), encourage development of shared identity and vision, and act as a sort of incubator for creativity and innovation, all critical components of collaborative governance. Drawing from examples in the Fire Learning and Fire Adapted Communities Learning networks, we illustrate how two fire practitioner networks are implementing various aspects of the Cohesive Strategy.

Keywords: networks, learning networks, collaborative governance, FAC Net, FLN, Fire Adapted Communities Learning Network, Fire Learning Network

Bio: Jeremiah is a PhD candidate interested in the intersection of science and policy and how science is used in the policy-making process. His current research focuses on understanding how learning networks build resilience (social and ecological) and transformation of practices. He is currently working with the Fire Adapted Communities Learning Network (FAC Net) and the Locally Managed Marine Area (LMMA) Network of the Indo-Pacific. Previously, Jeremiah worked for over 15 years as an aquatic/landscape ecologist with Federal and State agencies, universities and private and non-profit consulting firms throughout the Western United States. www.brugo.org/meet-the-team/jeremiah-osborne-gowey/