Barriers to Community-Directed Fire Restoration

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> *"Institutions structure landscapes as fully as mountains and seasons… the means by which they decide what to do powerfully influence how fire appears on the land." Pyne (2004: 189)*

Introduction

A consistent finding from disaster research is that new social norms and groups often emerge from the chaos and power vacuum that disasters create. An agency's early interactions with new (or emergent) groups can foster or diminish collaborative potential (Sturtevant *et al.* 2005). Post-disaster dynamics present unique challenges to creating collaborative relationships: the groups initially offer only vague expressions of concern and they do not know how to deal with agencies. Moreover, natural resource managers and other agency representatives have little familiarity with the group's goals and capabilities. The natural resource manager's understandable uncertainty about how to deal with these groups can get misinterpreted as obstructionist or attempting to disguise official negligence. As a result, first encounters are often strained, because representatives of the emergent groups may perceive agency personnel as being unsympathetic, unwilling to help, and even scornful of citizen involvement (Stallings and Quarantelli 1985).

By engaging with an active, involved citizenry, land managers can assist their communities in devising effective fire management and restoration strategies that integrate alternative land uses with different expectations of people and nature. Fire restoration can be more than erosion control, fire suppression, and revegetation, but this requires a willingness to listen to outside knowledge and consider alternative visions of how to manage the environment. In 2003, in the wake of an enormous wildfire in San Diego, a coalition of scientists, conservationists, and land managers proposed an alternative way of thinking about fire and the region. We examined interactions between the group that formed and land managers after the fire to better understand the dynamics of working with such emergent groups.

Key Findings

Results from a case study after the 2003 Cedar fire near San Diego suggest that managers can improve community relations and harness new collaborative potential that emerges during times of disaster by taking the following steps:

- Expect community groups to emerge following a disaster, get actively involved with their efforts, and be sensitive to their initial ignorance about established policies and procedures.

- Appreciate that agency norms and procedures have benefits and costs. Agency practices and programs provide needed resources and structure in a time of chaos. However, adhered to too closely, agency norms also can suppress new ideas and solutions that typically emerge from communities mobilized during disasters.

- Recognize that the bureaucratic implementation of pre-disaster programs and priorities can help focus a community on critical tasks. However, these same programs can frustrate community members and create adversarial relations if these efforts are seen as suppressing alternative ideas, goals, and methods.

- Find ways to connect agency culture and practices with the culture and needs of the emergent group. In normal times, these connections are made through regular public participation channels, but during crises, emergent groups do not have the benefit of time.

Detailed Findings

Expect community groups to emerge following a disaster, get actively involved with their efforts, and be sensitive to their initial ignorance about established polices and procedures.

Research on other natural hazards has shown that after a disaster a search for meaning and direction occurs among the affected populace as they reconstruct the event and debate strategies for recovery. Citizen groups emerge to take on a variety of tasks, from immediate disaster assistance to long-term planning. Groups pursuing longer term goals of mitigation and restoration usually have small memberships of about 100, with a half-dozen active members at their core. Decisionmaking is typically informal and democratic, and the organizational structure is flat. In their initial contacts with agency personnel, these groups may not know how to influence public policies and may present only vague ideas about wanting to "live in a safe place" (Schneider 1992; Stallings and Quarantelli 1985: 95-96).

Such a group emerged in San Diego in 2003. While the Cedar fire was still burning, e-mails began to be sent out to a loose network of conservation activists, land managers, and biological consultants. On October 30, 80 people attended a hastily assembled meeting, where they agreed to take part in an association they named the San Diego Fire Recovery Network, or SDFRN (which they pronounced *EssDeeFern*). Members were well-informed about regional ecology and environmental planning and policy because of their participation in local habitat conservation plans. For the next 4 months, core SDFRNers remained in nearly daily contact with one another, guiding their coalition in creating a strategic plan, posting draft articles and editorials on their Web site and listserv for review, sharing impressions of initiatives to address landscape hazards caused by the fire and mitigate future fire risk,

and conducting a regional assessment of flora and fauna. Listserv postings requested, exchanged, and debated information, some of it critiqued as misinformed. Scientific readings were identified and a conference was organized to clarify the most debated topics.

While SDFRN members possessed a great deal of conservation expertise, they knew little about fire policy and management and they approached agencies with vague requests. Regular meetings were held in which some managers and other agency personnel participated but ultimately SDFRN was unable to integrate their positions with the existing public participation mechanisms. In hindsight, it seems that more emphasis should have been placed on the active participation of managers in the SDFRN process, which would have better enabled agency personnel to help the emergent group educate itself about agency science, agency programs, and political realities. In turn, managers would have had more opportunities to understand the group's perspective and take advantage of the large pool of local environmental expertise the group offered.

Appreciate that agency norms and procedures have benefits and costs. Agency practices and programs provide needed resources and structure in a time of chaos. However, adhered to too closely, agency norms also can suppress new ideas and solutions that typically emerge from communities mobilized during disasters.

Another important finding from studies of previous disasters is that an agency's "culture of response" can direct a community's trajectory of recovery, forever changing community form and function. On the positive side, agency norms and procedures after a disaster can help focus and prioritize action on critical tasks. On the negative side, institutional practices can limit the scope and method of a community's efforts by ignoring or suppressing ideas and solutions outside agency norms (Dyer 1999).

Content analysis of post-fire agency studies and related documents, combined with key informant interviews, helped us develop the following description of the agencies' norms that guided their actions after the fire. We call this description of the fire event and necessary restoration the Control and Protect regime (the essential features appear in bold):

> As in much of the American West, **decades of fire suppression** have allowed **unnatural** accumulation of **dry brush** in the San Diego region. After the last 5 years of drought, the potential arose for a **historically unprecedented firestorm** that **overwhelmed regional fire-fighting capacity**. After the Cedar fire began, firefighters even **lacked the surveillance or communications capacity** required to rescue **helpless residents** caught sleeping in their homes. The role of government is to **protect citizens and their property.** Fire control and restoration should be organized by **government agencies advised by professionals, scientists, and other experts.**

> Restoration efforts should strive to reduce future risk to citizen life and property by **reducing fuel loads** through **prescribed burning** or other means, by creating **defensible perimeters** around structures, and by other programs that protect structures and people living in or near flammable vegetation. Risk can further be reduced by **technological enhancement** of **fire-fighting capacity**.

SDFRN had its own set of norms. From content analysis of SDFRN e-mail and documents and key informant interviews, we developed the following description of the fire event and necessary restoration called the Between Fires regime (the essential features appear in bold):

> The chaparral **ecosystem** is **dynamic** and **self-regulating**, and the Cedar fire was a **normal**, **natural**, **inevitable,** and **recurring** feature within an ecosystem that has **evolved with fire** over millennia and **needs large, stand-replacing fires**. People **cannot control or prevent** chaparral fires, and any attempt to reduce fire risks through controlled burning, clearing, or revegetation may only **convert** this **vulnerable, globally significant** biodiversity resource into highly fire-prone nonnative grassland.
>
> Restoration efforts should emphasize **native** species and **pre-settlement conditions** adapted to fire. Citizens should engage in **land use planning** that **prevents placing people and structures** in locations that will inevitably burn. **Science** provides an important way to understand the situation but is at best **partial** and at worst **biased** by the agendas of sponsors and scientists. **Citizens** should be **mobilized, responsible, and active** in directing restoration, agency action, and regional land use development.

Major obstacles to collaboration resulted from simple but fundamental differences between the two constructions of fire and restoration. For example, a major chasm opened between two competing understandings of fire history and science. Agency managers championed the fire science of Minnich (1983, 2001) that emphasizes the role of fuel load in chaparral fire and thus lends itself to aggressive fuels reduction management, whereas the SDFRNers championed the fire science of Keeley and Fotheringham (1999, 2001) that emphasizes the role of weather and wind in chaparral fire and implies that prescribed burns or other fuels reduction management will have little effect on extreme fires. In the end, neither group successfully stepped outside its norms, and rather than discussing possible common ground and working toward acceptable solutions, agency personnel and SDFRNers chose sides and defended their positions. To avoid such polarization, all parties need to be sensitive to the alternative understandings advanced by emergent groups and work to identify how an agency's more entrenched vocabulary and definitions of issues may create barriers to productive participation and interaction.

Recognize that the bureaucratic implementation of pre-disaster programs and priorities can help focus a community on critical tasks. However, these same programs can frustrate community members and create adversarial relations if these efforts are seen as suppressing alternative or emergent ideas, goals, and methods.

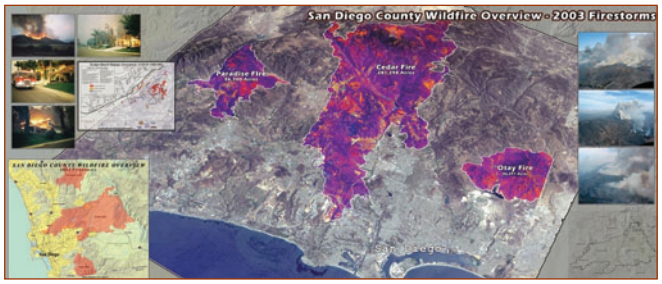
In responding to post-fire issues, the land management agencies understandably advocated pre-existing programs, approaches, and expectations that supported their Control and Protect mandate. When asked by public officials what it would take to prevent future disasters, agencies turned to personnel who were eager to advocate more resources for their programs: greater capacity to control fires, stronger regulations to clear fuels near structures, greater authority to reduce fuel loads, and better science that explained fire, smoke, and erosion control. Moreover, many professional forest and fire managers were not experts in policy, volunteerism, land use, citizenry, and other solutions advocated by SDFRN. Ultimately, the momentum of institutionalized programs with internal advocates carried the day and few, if any, of SDFRN goals were advocated by managers.

The two sides had different visions of what constitutes restored, healthy, fire-adapted landscapes and invoked very different assumptions about the relationship between nature and fire, humans and nature, and the relationship among humans themselves. Neither side really stepped outside its view of fire and nature and society to see the issues from the other group's perspective. It is difficult to think outside the box; it is harder to work there. But recognizing the presence of alternative visions is important if for no other reason than to avoid the poisonous temptations of one-size-fits-all absolutism.

Find ways to connect agency culture and practices with the culture and needs of the emergent group. In normal times, these connections are made through regular public participation channels, but during times of crisis, emergent groups do not have the benefit of time.

The county, USDA Forest Service, local fire authorities, and other agencies have for years promoted and accepted a social contract that obliges them to protect property and people by controlling fire. Society has, until recently, accepted this contract without question, and organizations that have committed enormous amounts of money, time, and expertise to carrying out this contract understandably defend the logic of control and protect. SDFRN described an alternative way to live with fire and nature—empowering people and influencing development patterns—that required tools and understandings unfamiliar to natural resource agencies that have traditionally focused on manipulating vegetation and fire, not on the relationship between people and fire.

Although SDFRN assembled detailed reports—supported by years of expertise and experience, documenting biological conditions and advocating restoration policies—they found the agencies



Cedar fire extent.

unresponsive to these alternative solutions. The reports were refused by agencies as being inappropriate public comment and, after SDFRN publicly criticized one local agency's policy, that agency discouraged its personnel from participating in SDFRN activities. Some SDFRNers, dependent on agency funding for livelihood, felt vulnerable to retaliation. These and other events alienated SDFRN from county, State, and Federal agencies, resulting in lost opportunities for collaboration and coalition building, despite the burst of intense public and professional attention focused on the region's environmental issues. Energy, vitality, volunteerism, and capacity slowly ebbed from SDFRN, in part because of the passage of time but also because the affected agencies and professions chose not to nurture SDFRN as an emergent community of new ideas and action. Gradually SDFRN refocused its efforts from advocating an alternative restoration vision to offering public and professional education and networking opportunities.

The region had a rare and narrow window of opportunity to reconsider its development path, reconfigure the responsibilities of citizens, and rethink its relationship with nature. However, divergent approaches interacting in a time-pressed situation made it difficult for all the parties to step outside their standard mode of operation. As a result, there was little room for exploring new ideas or for identifying common ground, and few, if any, of these opportunities were realized in the discussions and practices of fire restoration.

The Case

The largest of the 2003 wildfires in southern California began on October 25 when a lost hunter set a signal fire in a steep roadless area of dense chaparral in rural San Diego County. The conditions were ideal for the outbreak of fire—low humidity, high temperatures, and gusty Santa Ana winds in a landscape already parched by years of drought. County and State firefighters were stretched thin by 11 other recent fire ignitions in southern California, and this new fire—called the Cedar fire—was difficult to control because it occurred in a wildland-urban interface area that had narrow, twisting roads, and a patchwork of houses, many with highly flammable materials such as cedar-shake roofs. By the next morning the Cedar fire had grown to 100,000 acres of chaparral—a growth rate that would have been unprecedented for a fire in any other vegetation type—and began burning into the City of San Diego's suburbs. Local and national media were saturated with dramatic stories and images showing burning homes and landscapes. When the Cedar fire was finally extinguished 3 days later after the winds died down and rain began to fall, it had become the largest fire recorded in California history at 280,278 acres.

Fourteen lives and 2,232 homes were lost, and control efforts required 1,478 personnel at a cost of $27 million. It was a scary and emotional time for area residents, who demanded that fire agencies explain why the fires weren't controlled and who even channeled their anger at firefighters, who were surprised and disheartened by this unaccustomed criticism (California Department of Forestry and USDA Forest Service 2004).

While the Cedar fire was still burning, e-mails began to be sent out to a loose network of conservation activists, land managers, and biological consultants. The City and County of San Diego had supported a decade of intensive field study, preserve design, and public advocacy for three habitat conservation plans that covered the entire county. The design and implementation of these plans kept environmental professionals engaged through a variety of organizations, including conservation science programs at San Diego State and U.C. San Diego, the San Diego Natural History Museum, and many nongovernmental organizations such as the California Native Plant Society and the Biodiversity Working Group. On October 30, 80 people attended a hastily assembled meeting, where they agreed to take part in an association they named the San Diego Fire Recovery Network, or SDFRN. About 10 individuals agreed to coordinate the group's efforts. SDFRN never had a formal "membership" in the sense of dues-paying individuals or elected leaders: "SDFRNers" are defined simply through participation in SDFRN activities.

For the next 4 months, core SDFRNers remained in nearly daily contact with one another. By the beginning of 2004, SDFRN had five subcommittees, each with its own agenda:

- Assessment and monitoring: Fund raising for monitoring, planning a workshop on fire research, setting research priorities.
- Volunteers: Facilitating organization of ecological restoration field trips.
- Policy: Speaking at public forums and submitting materials to the media, organizing workshops.
- GIS: Applying for grants to collect and analyze remote sensing data.
- Education and public outreach: Seeking funding for outreach staff and activities.

Methods

Data include an extensive (500+ messages) e-mail archive of SDFRN communications. These e-mails were supplemented by meeting summaries, SDFRN planning documents, and numerous newspaper articles and editorials describing or authored by SDFRN. County, State, and Federal agencies generated multiple reports, position papers, and public statements describing and defending the status. The California Department of Forestry and the USDA Forest Service (2004) prepared an account of the wildfire and the limited resources available to fight it. The State of California (2004) and the County

of San Diego (San Diego County Wildland Fire Task Force 2003) both convened formal commissions composed of fire officials and elected representatives to address similar issues and provide policy recommendations. A Federal Burned Area Emergency Rehabilitation (BAER) team was assembled from experts around the country and brought into the area for assessing immediate rehabilitation needs to stabilize soil and prevent further damage to community infrastructure (USDA Forest Service 2003). These reports are a principal source of data used to construct and describe the alternative Control and Protect fire regime.

In addition, key informants intimately involved with SDFRN, county government, local USDA Forest Service, and other institutions were interviewed in person and by phone. In-person interviews were recorded and transcribed. Text files of all documents were entered into NVIVO™ qualitative analysis software, which facilitated use of a grounded theory methodology, in which data collection and analysis proceed simultaneously and initial theoretical concepts are continuously modified to reflect and interpret the data (Strauss and Corbin 1990). While our methods of data collection and analysis are guided by the work of numerous discourse scholars, a valuable reference text is the work of social psychologists Potter and Wetherell (1987). Publications with similar purpose and methods include Peterson's (1997) work on sustainable development, Takacs' (1996) work on biodiversity, and Scarce's (1999) work on salmon.

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