Expanding the Scope and Impact of Collaborative Planning

Combining Multi-Stakeholder Collaboration and Communities of Practice in a Learning Network

Bruce Evan Goldstein and William Hale Butler

Problem: As planners grow increasingly confident that they have settled on the right concepts and methods to conduct stakeholder-based collaboration, they are not considering what can be achieved through other collaborative approaches.

Purpose: We aimed to explore how creating a network of place- and stakeholder-based collaboratives using communities of practice could strengthen individual collaboratives and achieve network synergies.

Methods: Using a case study approach, we draw out lessons for collaborative planning from our research on the U.S. Fire Learning Network (FLN), a collaborative initiative to restore ecosystems that depend on fire. We analyzed data from over 140 interviews, hundreds of documents including restoration plans, newsletters, meeting summaries, maps, and various other reports, and observations at more than a dozen regional and national meetings.

Results and conclusions: We conclude that the FLN nurtures expertise in ecological fire restoration and collaborative planning by linking multi-stakeholder collaboratives to regional communities of practice. Moreover, this linkage creates and sustains a network of collaboratives that amplify the potential for fundamental change in the culture and practice of fire management.

Takeaway for practice: A community of practice is an effective approach to collaboration in situations where the purpose is to expand expertise rather than to resolve conflict and reach consensus. Moreover, a community of practice can link stakeholder-based collaboratives to create a whole greater than the sum of its parts. Realizing this potential requires questioning the universality of some of the core principles of stakeholder-based collaborative planning and diversifying the collaborative planning toolkit.

Keywords: collaborative planning, communities of practice, ecological restoration, fire management, networks

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The wildfires of 2000 were the most costly and destructive in U.S. history. Five million acres burned and infernos destroyed hundreds of homes across the West. The total cost of federal fire suppression activities that year was over $1.3 billion. The year after this disastrous fire season, The Nature Conservancy (TNC) and the U.S. Forest Service[1] (USFS), co-hosted a national fire roundtable to develop a systemic response to the worsening wildfire crisis. There were more than 60 fire scientists and professionals from state and federal agencies in attendance, as well as nonprofit conservation groups, academic institutions, and private firms.

Roundtable participants recognized that the immediate crisis was also an opportunity. Spurred by extensive media coverage, Congress had adopted the National Fire Plan[2] in 2001 and provided over $1 billion for federal fire management agencies, in particular the USFS, to simultaneously protect communities, reduce fuel loads, and restore ecosystems that historically depend on fire for ecological health. Thus, TNC and its federal partners took this opportunity to make a change that would reorient U.S fire management policy toward restoring fire-dependent ecosystems[3] rather than aiming to

prevent and suppress fires in all instances. Although this concept had been accepted for 30 years, little had been done to put it into practice (Pyne, 2004). At the roundtable, participants proposed to accelerate its implementation by establishing a nationwide network of landscape-scale multi-stakeholder collaborative planning efforts. The U.S. Fire Learning Network (FLN) was created the following year.

Planners can draw on 30 years of research to understand how stakeholders create plans that incorporate a wide spectrum of knowledge and enjoy broad support for implementation (Healey, 1993; Innes, 1996; Wondolleck & Yaffee, 2000). However, the FLN added an additional feature to multi-stakeholder planning by formalizing collaboration among leaders of the individual landscapes. These regional collaboratives were organized differently than multi-stakeholder processes. Their purpose was to increase individual and collective capacity rather than build consensus. In this article, we compare these regional groups to communities of practice, a concept developed within business management (Wenger, 1998), which we suggest is useful for planners whose longstanding focus on multi-stakeholder collaboration has overshadowed the possible advantages of other approaches.

We begin with a review of collaborative planning and communities of practice. These two traditions have been developed independently, reflecting the different concerns that have animated planners and the private sector. After describing each, we consider the potential of associating multi-stakeholder collaborative processes with communities of practice to address challenges at multiple scales simultaneously. Following a brief overview of our methods, we introduce the FLN, describing how it generates and circulates expertise. Finally, we distinguish communities of practice and multi-stakeholder collaboration and identify the synergies obtained by linking them. In particular, we contend that the FLN approach nurtures and distributes expertise, sustains collaborative practice at multiple scales, and amplifies the potential for change. Combining these collaborative approaches may provide an answer to the particularly thorny challenge of how to address issues, like the crisis in fire management, that manifest between and across temporal, spatial, or organizational scales.

Collaborative Planning

In the late 1980s, planners were experimenting with a variety of collaborative approaches in response to the increasing inability of regulatory agencies, legislatures, and the courts to reach decisions and enforce them in a manner that was timely, cost efficient, and equitable. Gray's (1989) early typology of collaboration encompassed joint ventures, regulatory negotiation, public-private partnerships, community gatherings and public meetings, and other settings in which stakeholders with a shared interest assembled to diagnose a problem and develop understanding of how to address it. Mediating differences was an essential element of a collaborative process, because ". . . even when collaboration is initiated in order to advance a shared vision, stakeholders are anxious to advance their own interests" (Gray, 1989, p. 112). To this end, Gray suggested that effective collaborative processes could reduce adversarial relationships and redress power and resource disparities among stakeholders.

In the subsequent two decades, planning scholars developed a more specific normative standard for evaluating collaborative conditions, processes, and outcomes through observation of planning practice (Innes, 2004). Combining commitments to broad democratic legitimacy and small group deliberation, scholars specified that collaborative forums should include representatives of those with interests in an issue or problem. These representatives should meet face to face and abide by guidelines to engage in respectful and open dialogue that was accepting of different forms of knowledge and styles of reasoning. Collaboratives should devise creative ways to achieve mutual gains and obtain broader support for implementation. Solutions or shared visions should be adopted by consensus and codified in binding agreements or plans (Booher & Innes, 2002; Healey, 1997; Innes & Booher, 1999; Susskind, McKearnan, & Thomas-Larmer, 1999).

Some collaborative processes are entirely organized and operated by stakeholders for reasons of convenience and economy (Margerum, 2002). However, when governmental and private sector stakeholders with deep pockets aim to change legislation, regulations, or organizational policies and programs, their collaboratives rely on two kinds of expertise to aid in achieving consensus (Margerum, 2008). One is process expertise, provided by neutral facilitators who help define the dispute, identify and recruit stakeholders, manage agendas, moderate discussion, and document agreement (Susskind et al., 1999). The other is topical expertise, provided by specialists able to assist stakeholders in addressing high complexity and uncertainty. To reduce the inequity and inefficiency of relying on individual stakeholders to enroll their own experts, stakeholders can be guided to jointly select experts, define technical issues, and decide how to cope with technical uncertainty (Karl, Susskind, & Wallace, 2007). Alternatively, collaboratives can convene independent advisory councils or technical committees (Goldstein, 2004). However they are engaged, experts are not enlisted in collaboratives to pass on their

expertise to stakeholders. Rather, their role is to enable stakeholders to engage in relationship building and problem solving so they can proceed to implement plans and agreements.

Communities of Practice

Over the same 20-year time period, the private sector has cultivated *communities of practice*, an alternative approach to collaboration whose purpose is to cultivate expertise rather than to solve specific problems (Dyer & Nobeoka, 2000; Wenger & Snyder, 2000). The challenge for business was to organize to respond to the quickening pace of change, recognizing that knowledge would be critical to economic competitiveness (Castells, 1996). Communities of practice and other network forms of organization have proven to be useful supplements to hierarchies and markets, allowing managers to develop and distribute knowledge across organizational boundaries (Powell, 1990; Thompson, 2003). Planners can learn from public managers' recent efforts to organize communities of practice to promote learning and adaptation among compartmentalized public agencies as well as with the private sector and civil society (Snyder & de Souza Briggs, 2003; Snyder, Wenger, & de Souza Briggs, 2004).

A community of practice is assembled not around a problem, but around a core domain or issue that its members know and care about. Activities around this common domain may include critiquing existing practice, developing innovative approaches, or imparting traditional practices to new members. While participants have a common focus rather than individual stakes, some members of a community of practice may be novices or peripherally involved, while the old hands comprise the core group, organizing gatherings and imparting their know-how to others. The status and authority they are accorded is grounded in the group's respect for their expertise rather than formal authority, since such associations are usually voluntary and cross organizational hierarchies and geographic boundaries (Lave & Wenger, 1991; Wenger, 1998). They aim for good collective practice, not consensus (Schweitzer & Howard, 2008).

Communities of practice often rely on sponsoring organizations for funding and logistical support, but sponsors cannot prescribe how members interact or what they do (Brown & Duguid, 2001). Like other small-group processes, the workings of communities of practice require reciprocity and trust, which members develop through interactions characterized by openness, mutual commitment, and willingness to share. However, interactions in communities of practice are generally less structured than in other multi-stakeholder processes and less formal than classroom or workplace training. Participants cultivate a sense of belonging by sharing stories from experience and demonstrating the skills and techniques associated with their practice. Expertise itself is the outcome of interaction, grounded in a common set of experiences, attitudes and passions (Lave & Wenger, 1991).

Collaborative Synergy

Combining these two collaborative forms can address challenges that are beyond the reach of either approach alone. Some researchers posit that the most complex problems manifest at multiple spatial, temporal, and organizational scales, and their nested and emergent properties cannot be resolved by a single collaborative. For example, Margerum and Whitall (2004) consider the cumulative impact of watershed collaboration and Weber (2008) explores the aggregate impact of community decision making on global climate change. Some problems require even more than multiple independent collaboratives in order to create a *social cascade* or tipping point at which people's attitudes and behavior changes because others that they hold in regard are also changing (Baumgartner, 2006). Initiating a social cascade requires mutual trust and social capital (Rothstein, 2005), which collaborative processes are well suited to develop (Innes, Connick, & Booher, 2007), but perhaps not in sufficient quantity when operating alone or without coordination.

Planning researchers have begun to consider how to organize networks of collaboratives to address these challenges. Margerum and Whitall (2004) describe how multiple watershed-based collaboratives operating in a river basin are served by a technical and policy assistance clearinghouse. This is similar to other efforts enabling loose linkages of collaboratives, both in collaborative planning (Innes & Booher, 1999) and communities of practice (Snyder & de Souza Briggs, 2003; Wenger, 2000). Our study of the FLN explores a much tighter and more systematic integration that combines the collaborative approach now dominant in planning with communities of practice. We suggest that in addition to fostering information flow, this synthesis could nurture appropriate expertise, aid in the creation and maintenance of individual place-based collaboratives, and amplify potential to address emergent problems. In addition, we suggest that a network composed of both kinds of collaboration would allow each collaborative to define problems in its own way, accommodate local context and contingencies, and generate innovative solutions (Booher

& Innes, 2002; Gray, 1989), while also providing sufficient guidance to ensure that knowledge generated at disparate sites is mutually comprehensible and activities are mutually supportive.

Research Methods

We have been engaged in the study of the FLN since 2005, specifically focusing on how the network was designed, how it functioned, and what accomplishments could be associated with it. Our research to date has included more than 140 interviews with network leaders, participants, and high-level staff in organizations involved in the formation and continuation of the network as well as with individuals no longer engaged in the network. We have also attended and prepared audio recordings at more than a dozen regional and national workshops and leadership meetings. We have transcribed all of the interviews and a selected subset of the audio records. We have also reviewed hundreds of documents including fire restoration plans, GIS maps and models, interorganizational agreements, meeting agendas and summaries, network newsletters, listserv communications, and media reports. We have drawn our analytical insights about how the FLN operates as a network of collaboratives of various scales from this case study approach, utilizing qualitative methods to develop codes and categories to define common interpretations of action at all levels of the network (Charmaz, 2006; Yin, 2003).

The Fire Learning Network

TNC, the USFS and the U.S. Department of Interior (DOI) established the FLN in 2002 by signing the cooperative agreement, *Restoring fire adapted ecosystems* (TNC, 2001). Organizers aimed to catalyze the restoration of fire-dependent ecosystems by initiating and supporting multi-stakeholder collaboratives that would develop and implement ecological fire restoration plans at a landscape scale. The federal agencies have contributed approximately $1 million a year to the cooperative agreement and TNC hired staff to coordinate network activities.

FLN coordinators distributed a request for proposals to establish interorganizational collaboratives to restore fire-dependent ecosystems at a landscape scale to land management nonprofits and agencies. They chose 25 proposals to receive the first two-year program grants based on proposers' potential to restore areas that were ecologically significant and evidence that landscape partners could work together effectively.

As interest in the program grew, FLN coordinators established regional networks to link landscape collaboratives that were in geographic proximity and operating in similar ecological contexts (U.S. FLN, 2004). The first six regional networks established were those for the Northwest, Southwest, Northeast, Great Plains, Great Lakes, and Intermountain West (Figure 1), with each region including between 5 and 13 landscape collaboratives. As of the end of 2009, a total of 14 regional networks and more than 150 different landscape collaboratives involving participants from over 650 organizations have engaged in the FLN for at least two years (U.S. FLN, 2009).

Landscape collaboratives generally have characteristics of traditional multi-stakeholder collaborative planning. The landscapes of concern cross multiple ownerships, and cover areas ranging from just over 100,000 acres on Long Island, NY, to more than 11 million acres on the Niobrara landscape in Nebraska. Along with TNC and federal agency partners, the collaboratives include state and local governments (such as state forestry departments or fish and wildlife agencies); nonprofit conservation groups such as Ducks Unlimited, and the National Wild Turkey Federation; and, in a few instances, environmental advocacy groups such as Forest Watch and Heartwood. Using planning guidelines provided by national FLN coordinators, leaders of landscape collaboratives organize regular meetings and facilitate dialogue among stakeholders to develop plans to guide ecological fire restoration across administrative and managerial boundaries.

Fire Learning Network regional networks resemble communities of practice in many respects. Regional network coordinators organize biannual meetings, where leaders of landscape collaboratives exchange ideas about their plans and receive technical advice from the coordinators and invited experts. At regional workshops, participants hear invited guest speakers and engage in peer review of plans, panel discussions, small group work, and field excursions to restoration sites. As the leader of the Central Appalachians FLN clarifies, "the heart of the learning network is all about group learning. Here at these peer review workshops is when . . . we get together to show off what we've been thinking and receive input on the work we've been doing . . ." (Judy Dunscomb, personal communication, July 7, 2008). Interactive forums focus participant discussion on landscape-scale ecological restoration practice, improving the quality of restoration plans as well as collaborative relationships among landscape stakeholders.

Each regional network builds community among the leading stakeholder representatives from all of its landscape

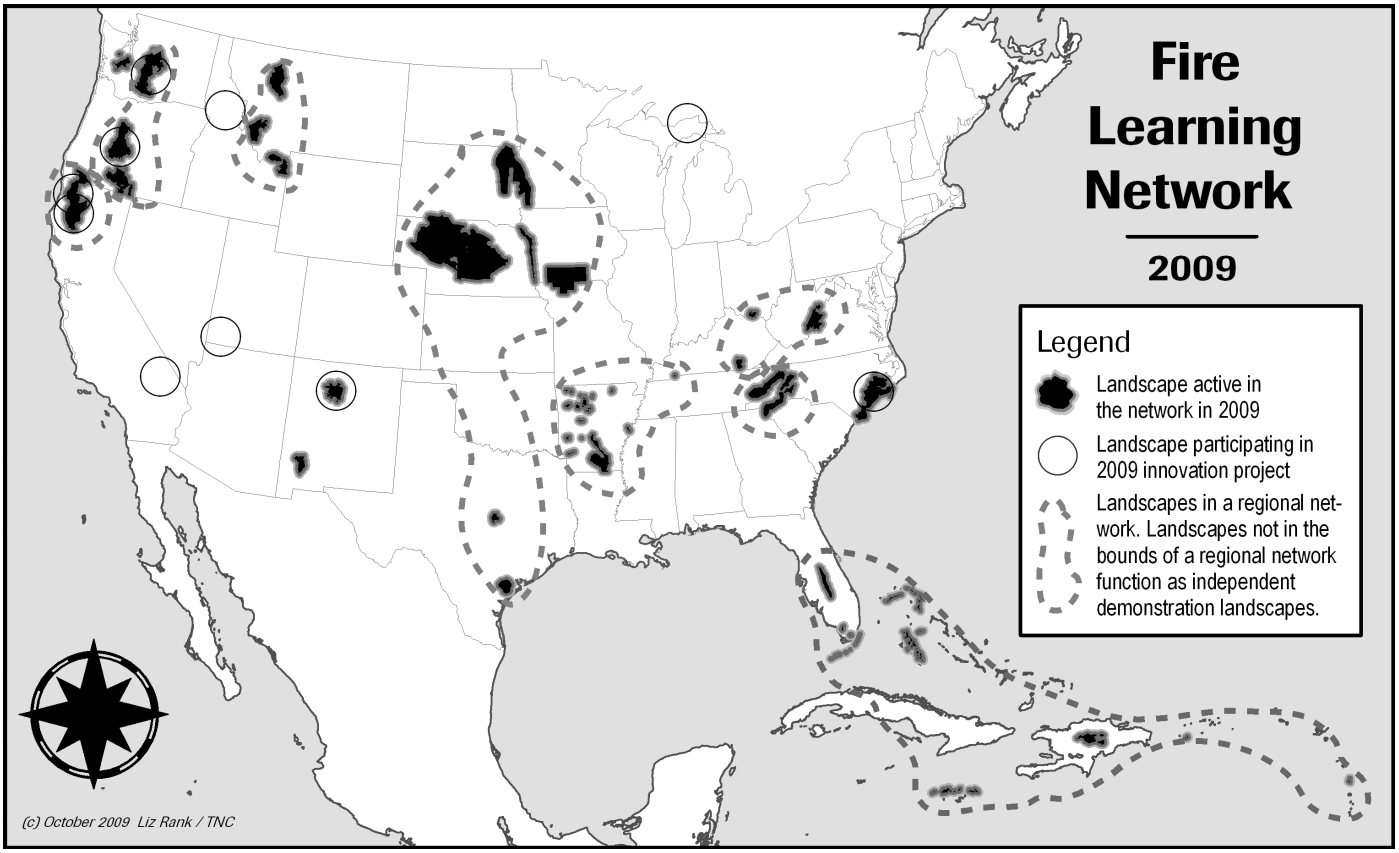

Figure 1. Map of the FLN, 2009. Reprinted with permission.

Note: The number and locations of regional networks shift each year as landscape collaboratives join or drop out. As of mid-2009, approximately 70 landscape collaboratives participated in the FLN.

collaboratives. These volunteers are generally the organizers of their own landscape collaboratives, and nearly all have federal fire management training and credentials. Most have experience both in suppressing and prescribing fire in addition to expertise in ecology, GIS, wildlife biology, or other disciplines or professions common in fire management. Regional networks meet twice yearly for three-day workshops, supplementing this interaction with frequent email and phone communications and site visits from regional leaders.

Face-to-face interaction facilitates trust building and strengthens relationships among the participants. In our other work, we have shown how engagement in the FLN fostered community by reinforcing a common language, a common set of interests, and a shared perspective across the entire network (Goldstein & Butler, 2009). Interactions among people working at various geographic scales and common planning processes reinforce shared goals and purposes by defining what it means to be a network member and clarifying each individual's role. As they developed ecological restoration plans, participants identified both goals and action strategies that shaped their own behavior as well as their expectations of how others should act to restore fire-adapted landscapes (Goldstein & Butler, 2009). Over time, participants became more open with one another, willing to share ideas, resources, and skills, and comfortable enough to describe their mistakes as well as successes. As one regional leader observed, participants moved from "excited but nervous" and "tight and quiet" at their first workshop to a sense of camaraderie with open sharing among peers by the fourth workshop (McRee Anderson, personal communication, August 11, 2006).

The regional workshops are not intended to produce joint action plans or collective decisions. Instead, they provide participants with opportunities to learn how to collaborate more successfully to restore fire-dependent ecosystems. There is no standing group of fire experts advising FLN landscape collaboratives or regional networks, nor are there professional facilitators to guide them. Instead, regional networks enable participants to acquire these skills

and techniques as they work to develop ecological fire restoration plans that are applicable to their respective landscapes, institutionally sanctioned, socially acceptable, and fiscally responsible.

Participants develop various skills and techniques depending on regional context. Most seek to improve the quality and specificity of ecological data and identify new restoration techniques. Regional networks refined GIS mapping and modeling systems to prioritize restoration treatments in the Northwest and Intermountain West regions; devised combinations of mechanical thinning, herbicide, and prescribed burning treatments to restore oak woodlands in the South Central region; and determined ways to expand longleaf pine habitat for red-cockaded woodpeckers in the Southeast region.

They also have opportunities to improve their collaborative capabilities. Some participants desired particular skills, such as one who noted that ". . . one of the things that I struggle with is serving in sort of a convener/facilitator role . . ." (Davis, Goldstein, Butler, & Goldstein, 2009, p. 5). Others hoped to understand more broadly how to engage in collaborative work specific to their FLN context. As one regional participant remarked, "I want to hear from some successful collaboratives. How did you work with your federal partners? What made your federal partners comfortable working with you in that planning process? And how do we initiate that on our sites?" (Davis et al., 2009, p. 10). Again, practices varied by region. In the Central Appalachians, participants focused on large-scale burns that crossed the properties of multiple owners. In the Great Plains, they identified ways to reduce barriers to burning on private lands and how best to share mobile fire crews. The South Central region focused on inviting and nurturing a broader array of fire restoration partners.

Participants at regional workshops presented and assessed plans and restoration initiatives from participating landscape collaboratives, discussed specific challenges, participated in break-out sessions and field excursions to restoration sites on the host landscape, and had ample opportunities for informal interaction. They did not try to reach agreement on a single, optimal combination of collaborative approaches and restoration techniques. Instead, they tried to learn to perform better on their own landscapes, to address organizational and social barriers, to enhance collaboration, and to utilize innovative ecological restoration techniques.

For example, one meeting of the Central Appalachians region considered how to build greater support by communicating the advantages of using prescribed fire. A national FLN coordinator started the session by describing how other FLN landscape collaboratives developed communications plans. In the open discussion that followed, one participant described her difficulty convincing some USFS land managers in her region to support prescribed fire treatments due to their longstanding belief that fire damaged forests. Another talked about how he won over skeptical forest managers in his state forestry office by providing studies demonstrating that fire could enhance wood fiber production for certain species and types of natural communities. Another described his efforts to reach out to environmental advocacy groups that regularly appeal USFS forest management plans and projects. Each of these ideas led to discussion and brainstorming as participants shared their experiences, talked about communications strategies, and began to outline a coherent communication plan for the region. Some group members offered to continue discussion after the workshop, and at the next regional workshop they had assembled a draft communications toolkit on the importance of ecological fire restoration.

Another example comes from a meeting held in June 2006 in Texarkana, AR, in the South Central region. Over two hours, attendees at the meeting discussed native grassland restoration and touched on effective herbicide mixtures for tenacious invasive species, how to apply fire to regenerate native grasses, techniques for sowing native seeds, and how collaborators could help overcome obstacles such as local ordinances and agency policies put in place generations ago in the mistaken belief that burning during the growing season would endanger the timber supply. Participants described successes and failures, usually prefaced with statements like "on our landscape" or "back home, we tried. . . ." After the workshop, participants noted in group evaluations and the workshop summary that this discussion had provided them with new technical ideas and made them more confident that they could overcome regulatory and organizational challenges to fire restoration.

Distinctions

While FLN's regional networks share certain similarities with the multi-stakeholder approach to collaboration that is the mainstay of the planning field, they also are fundamentally different in membership, procedures, and outcomes, as summarized in Table 1. Similarities are grounded in the reliance on small-group processes, which allow participants to build and sustain trusting relationships through face-to-face dialogue, develop shared rules and behavioral norms for interaction, and initiate social learning. In other respects, regional networks depart from the conventions of the dominant form of collaborative planning. Membership is tied to interest in fostering better landscape collaboration,

Table 1. Distinguishing multi-stakeholder collaboration from communities of practice.

	Multi-stakeholder collaboration for planning	Communities of practice in public management
Membership	• Is diverse • Is open to all stakeholders	• Is relatively homogenous • Is open to professional practitioners
Process	• Relies on guided facilitation, mediation, and negotiation • Seeks to incorporate various perspectives • Draws on multiple forms of knowledge	• Relies on informal dialogue and interaction • Defers to the most experienced or strongest voice • Imparts tacit and informal knowledge and know-how
Intended outcomes	• To resolve conflicts • To reach agreement • To execute a joint action plan	• To create or refine professional practice • To foster individual expertise • To improve collective problem-solving capacity

which leads to a relatively homogeneous group as opposed to the intentional diversity of stakeholder-based processes. Regional networks have fewer ground rules than multi-stakeholder collaboration. A regional coordinator encourages dialogue, but does not engage in structured facilitation. When there is disagreement, parties generally defer to those with greater experience, rather than negotiate or seek mediation. While multi-stakeholder collaboration accommodates different ways of knowing in order to reach agreement, FLN regions focus on spreading informal and tacit knowledge through storytelling and shared experience. For example, in the grasslands restoration example noted above, participants discussed their experiences in the field rather than trying to agree on what restoration techniques were most effective.

Since the focus isn't on reaching agreements or giving voice to all parties, regional networks tend to rely less on structured dialogue than multi-stakeholder collaboration does, and discussion is often accompanied by other ways of interacting, such as field trips, listservs, break-out groups, and presentations to update participants. In contrast to multi-stakeholder collaboration's emphasis on transparency and accountability to participants as well as parties who are not at the table, FLN regional networks are largely opaque to those are who are not members of the fire community. While the FLN cooperative agreement included the public as potential cooperators, only those with training and experience in natural resource management have the requisite skills to participate in regional workshops. When novices have attended meetings, they have struggled to understand the specialized language and have usually remained silent.

The outcomes or products of a regional network are also different from those of a multi-stakeholder collaboration. The regional networks not only enhance knowledge transfer, but also create, refine, and sustain expertise itself, with an emphasis on the practical ability to get things done. They build problem solving capacity, both by assisting individuals and by overcoming barriers to communication across sectors and silos. In itself, this capacity does not resolve multi-stakeholder conflict, overcome gridlock, or create joint action plans, although it can foster expertise that can helps accomplish these things. Using communities of practice, planners can engender social learning to enhance planning practice. In contexts where general agreement about a common purpose is high, but an understanding of the means to achieve that purpose is lacking, communities of practice can promote the development of relevant planning expertise.

Synergies Between Collaborative Approaches

The FLN also demonstrates the potential of combining communities of practice with multi-stakeholder processes. Regional leaders both engage with stakeholders in their own landscape collaboratives and meet with leaders of other landscape collaboratives in the region to learn and reflect. Expertise emerges through the interplay between engaging in collaborative planning at the landscape scale and developing shared practices in regional forums. By weaving expertise into the fabric of multi-stakeholder collaboration, communities of practice can address major challenges to organizing and sustaining a network of collaboratives while extending their influence beyond place-based problem solving. Combining the two types of collaborative approach nurtures expertise, sustains collaborative networks, and amplifies potential for change (Table 2).

Table 2. Benefits of combining multi-stakeholder collaboration with communities of practice.

Nurtures and distributes expertise
• Low cost
• Customized, contextually relevant
Collaborative and topical
• Expands and sustains collaborative networks
• Catalyzes new collaborative processes
• Promotes network expansion
• Distributes expertise
Amplifies potential for change
• Fosters cohesion without disabling control
• Inspires collective action
• Magnifies impact on policy and institutions

Nurturing and Distributing Expertise

First, by linking the two types of collaboration, the FLN nurtures collaborative and topical expertise, rather than relying on professional facilitators or advisors. Regional networks provide stakeholders with the ability to reflect on and improve their collaborative practice with others in similar situations. Karl et al. (2007) considered relying on independent external advisors to be the best way to provide stakeholders with technical advice and information to support joint fact finding. However, external advisors are not always available, cost effective, or appropriate for the challenges being addressed. Connecting leading participants of multi-stakeholder collaboratives in a community of practice can cultivate technical expertise through collaboration, providing capacity that is low in cost, readily available, and customized for the intended purpose.

In the FLN, collaborative and topical expertise is provided by circulating participants through regions and landscape collaboratives, rather than external subsidy. After regional gatherings, participants return to their own landscapes to engage other stakeholders in writing restoration plans and field-testing new restoration strategies. Collaborative strategies and analytic tools and techniques from the regional networks are tested, shaped, and refined through exposure to landscape conditions and stakeholder dynamics. Regional partners then gather anew to share insights and experiences about putting these techniques into action and to develop fresh insights. Circulating through the network (Figure 2), participants develop the capacity to perform landscape-scale collaborative ecological fire restoration planning. Combining multi-stakeholder landscape collaboratives with regional communities of practice not only deepens capacity, but also extends it, as experts provide advice and guidance to participants in new landscape collaboratives whose members themselves become experts.

For example, in the early 1990s, biologist John Andre conducted prescribed burns, sometimes reaching 200 acres at a time in the Bayou Ranger District of Arkansas's Ozark–St. Francis National Forest. These burns were intended to improve wildlife habitat in areas that had recently been logged. Andre notes that over time he and his colleagues "figured out . . . that to really have an effect, we needed to go back in and repeat treatment in these same areas instead of scattering." They began discussing the need for a landscape scale vision, but had little success in implementation. As Andre recalls, "We were chasing the timber program."

In 2002, Andre enrolled in the FLN and applied the four-step planning process to developing an ecological restoration plan for fire-adapted systems in his district. With the aid of network partners, he identified priority fire restoration areas for inclusion in forest planning documents, and prepared the environmental assessment documents needed to begin implementation. With this support, Andre extended the burning program on the Bayou Ranger District from 2,000 acres a year to more than 20,000 acres over the first two years of participating in the network.

Jim McCoy and Mike Brod were wildlife biologist trainees assigned to Andre in 2001. McCoy was transferred to Land Between the Lakes National Recreation Area (LBL) and, in 2004, he joined the newly established South Central FLN regional network. Andre's landscape was chosen as a demonstration site for the regional network and, working through the FLN, Andre provided guidance for McCoy and six other landscape team leaders. As McCoy puts it, "Everything I know about integrated management and ecological fire restoration I learned from John Andre," (Jim McCoy, personal communication, March 14, 2007). McCoy's participation in the regional network enabled him to play a significant role in revising the LBL Land and Resource Management Plan (U.S. Department of Agriculture Forest Service, 2004), infusing it with what he calls "the FLN tenets of landscape-scale prescribed fire ecosystem-based management" (Jim McCoy, personal communication, March 14, 2007). In 2007, the South Central FLN regional network established a new set of sites and McCoy was chosen as one of the mentors of the five new landscape collaboratives. Meanwhile, Andre's other trainee, Mike Brod, transferred to the Croatan National Forest in 2003 and worked with his colleagues to expand their burning program to engage in landscape-scale ecological fire restoration (Mike Brod, personal communication, May 12, 2009).

In the FLN, fire restoration ideas and practices circulated between landscape collaboratives and regions, enabling

Andre, McCoy, and Brod to become experts in landscape-scale ecological fire restoration. As these professionals built capacity in collaborative and technical expertise, junior members became leaders and mentors in their own right, fostering a growing cadre of dedicated and capable fire management professionals.

Expanding and Sustaining Networks

Combining the two types of collaborative practice also grows and sustains collaborative networks. Regional FLN collaboration facilitated sharing innovation and resources across landscapes, making work at individual sites more consistent and effective. Regional networks also fostered the creation of new sites. Even though some landscape collaboratives and regional networks have ended, new ones have formed and joined in, and the national network has extended its reach. In its first two years, the national FLN engaged an estimated 250 partners. Since then, more than 600 partner organizations and individuals have participated in the national network. Regional participants were important in extending the network, sometimes organizing new landscape collaboratives after being transferred to new locations, and at other times visiting new sites to illustrate successful FLN strategies and motivate newly formed collaboratives.

The paths of Mike Brod and Jim McCoy illustrate these dynamics. As described above, Brod helped expand the fire restoration program on the Croatan and promoted the FLN to USFS and TNC staff in his region. He was one of the catalysts creating the Onslow Bight landscape in eastern North Carolina and the Southeast regional network extending from North Carolina to Florida in 2005. In 2006, he moved to the Chattahoochee National Forest, where he established another FLN landscape and helped initiate the Southern Blue Ridge regional network. As Brod has commented, "I didn't mean for it to happen this way, but I've become an FLN junkie!" (personal communication, May 12, 2009). Meanwhile, besides becoming a mentor to a new group of sites in the South Central FLN in Arkansas, McCoy actively promoted a new FLN landscape at the Daniel Boone National Forest in Kentucky and was invited to illustrate successful FLN practice in formative meetings of the Central Appalachians region. As FLN participants circulate through landscape and regional networks, they expand the scope of FLN, establishing and supporting new sites and bringing new members into the network.

Amplifying the Potential for Change

Finally, combining the two collaborative practices amplifies potential for change by fostering cohesion across collaboratives without disabling control. Our work (Goldstein & Butler, 2009, in press) suggests that linking the two collaborative forms can directly address this tension. The FLN devised how to link independent landscape collaboratives through regional networks so that participants could be directed without coercion in their work on a shared purpose. Although regional networks are self-directed, they utilize common planning guidelines and tools on each participating landscape. Performing the work required to complete their planning products, landscape collaboratives articulate stories of the land's relationship to fire, describing their landscape's healthy past, degraded

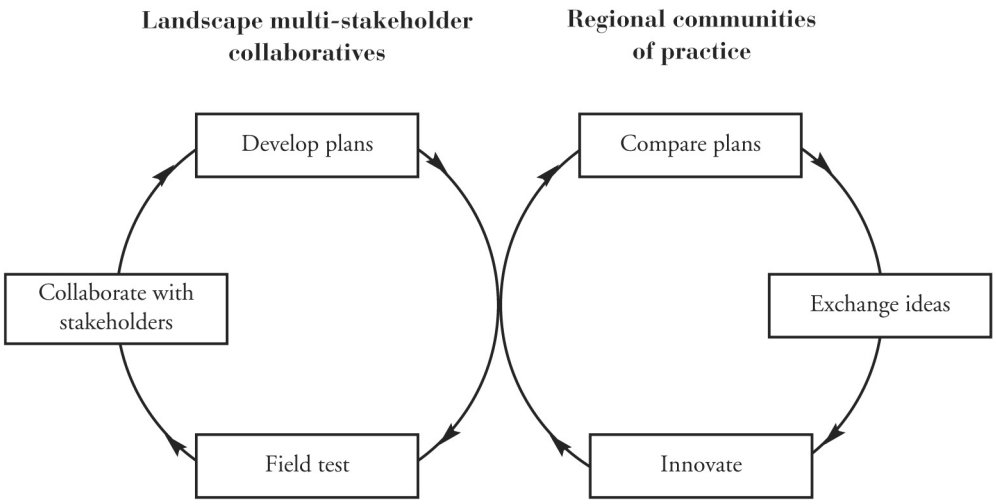

Figure 2: Circulation of expertise through the FLN's two collaborative approaches.

present, and ecologically restored future. In regional forums, participants reinforce their ties to each other and their common purpose, develop a shared expertise to inform their work, and engage in cross-jurisdictional and interorganizational collaboration.

Cohesion among multiple collaboratives makes it possible to influence issues that affect each landscape but are beyond their capacity to influence individually. In a 2007 survey, FLN participants reported that the network had made changes to rules, regulations, and policies that affected their ability to engage in landscape-scale ecological fire restoration. For example, the network's ability to project a unified message to policymakers was partly responsible for the creation of a dedicated funding source for fire restoration. After hearing from FLN's member landscapes, TNC's Global Fire Initiative government relations staff worked with senate staffers to craft the Forest Landscape Restoration Act (FLRA), which designated up to $40 million annually to support collaborative landscape-scale ecological restoration (Laura McCarthy, personal communication, June 11, 2009). The FLRA became law as part of the Omnibus Public Land Management Act of 2009.

More ambitiously, collaboratives that are autonomous and yet cohesive may also be capable of changing institutional norms and practices. The FLN provides a loosely coordinated framework to aggregate these landscape-level social cascades nationwide, creating the potential for institutional change. The FLN listserv, monthly newsletters, regular email updates, and annual conferences reinforce the group's common purpose. Even though participants do not know most of the other participants in the wide-ranging network, they can identify with a broader community whose struggles and successes resonate with their own (Goldstein & Butler, 2009).

The power of the FLN is not found in the plans it produces, but in the way it disrupts old habits and fosters new routines and collaborative relationships. The FLN builds solidarity around a collective capacity to embark on new, potentially risky, management approaches; skills; knowledge; and a professional identity grounded in ecology. By combining two different approaches to collaboration, participants are enabled to speak autonomously but with a unified voice. Bringing this new culture of fire back into their host organizations, they may attract other professionals to the FLN, creating a self-reinforcing process. The FLN creates the potential to reform national institutions, reshaping both the policy environment and the entrenched culture of fire suppression by combining the autonomous, creative, and inspired work of landscape collaboratives.

Conclusion

Over the past 20 years planners have developed a common set of assumptions and an extensive methodological toolkit for collaborative problem solving. As the field matures, it is responding to a growing interest in collaborative governance and the network society (Albrechts & Mandelbaum, 2005; Hajer & Wagenaar, 2003). Collaborative planners are now addressing challenges that operate at multiple organizational, temporal, and spatial scales. These problems cut across service areas and policy sectors and are not amenable to the solutions that single organizations, jurisdictions, or professions can offer (Booher & Innes, 2008; Keast, Mandell, Brown, & Woolcock, 2004).

The FLN provides an example of a collaborative approach that operates across multiple scales. By linking landscape-scale, multi-stakeholder, collaborative processes through regional communities of practice, the FLN enables participants to achieve coherent goals throughout the network while fostering the expertise necessary to develop ecological restoration plans. The network circulates technical knowledge about ecological fire restoration and cultivates the ability to engage more effectively in collaborative processes. These collaborative processes are autonomous enough to create specific solutions at each site, and coherent enough to catalyze national policy change. The FLN offers a response to the challenge ". . . to transform the ideas, informal relationships, and agreements into a more enduring form, without losing the flexibility and adaptiveness of what emerges from the informal system" (Innes et al., 2007, p. 207).

As planners engage in collaborative endeavors across various boundaries, they will need to build on existing organizational and facilitation skills in the collaborative planning toolkit. Planners may play multiple roles, from participants or leaders at individual sites and regions to coordinators of the entire network. No matter what their roles, planners cannot rely exclusively on customary approaches to collaborative planning practice. Skills that have proven useful for redressing conflict and building consensus will likely be insufficient to address the challenge of collaborative governance. For example, while planners are used to seeking diverse stakeholder involvement, successful communities of practice must convene relatively uniform groups of participants and focus on developing and reproducing a single way of knowing, rather than drawing on diverse types of knowledge to achieve consensus. Integrating multiple collaboratives into networks challenges planners who must navigate across or facilitate various forms of collaboration. Our analysis can help identify best practice since it shows how a successful network operates and what it can achieve.

Our research affirms that the scope and impact of collaborative planning is continuing to expand. Planners can extend their definition of collaborative planning without risk to what they have already achieved. The field has progressed from being an insurgent challenge to modernist planning to become a mainstay of planning education and practice, and even the inspiration for planning's dominant theoretical paradigm (Innes, 1995). As recent efforts to create common ground between dispute resolution and citizens' deliberative forums suggest (Ashcraft & Susskind, 2005), planners are reaching beyond their professional boundaries to link up with other fields to tackle collaborative governance challenges that resist resolution with customary tools. Like the USFS and TNC, planners are expanding our repertoire of skills by spanning old boundaries that would otherwise prevent progress.

Notes

1. The U.S. Forest Service is part of the U.S. Department of Agriculture.

2. In testimony before Congress, Barry Hill (2001) of the U.S. General Accounting Office explained that,

> The National Fire Plan is not a single, cohesive document. Rather, it is composed of various documents, including (1) a September 8, 2000, report from the Secretaries of the Interior and of Agriculture to the President of the United States in response to the wildland fires in 2000; (2) congressional direction accompanying substantial new appropriations for wildland fire management for fiscal year 2001; and (3) several approved and draft strategies to implement all or parts of the plan. . . . In addition, the 1995 federal wildland fire management policy, updated in 2001, provides the philosophical and policy foundation for federal interagency fire management activities conducted under the National Fire Plan.

3. According to TNC's Global Fire Initiative (2004),

> Fire-dependent ecosystems . . . have evolved with fires that occur within the bounds prescribed by annual and seasonal climates, vegetation types, lightning, fuel accumulation, topography and a variety of other factors. Where ecosystems have evolved with fire, fires maintain a characteristic ecosystem structure and composition. Not all fire-dependent/influenced ecosystems burn the same way. For example, many forest, grassland, woodland, savanna and wetland ecosystems are characterized by frequent, low-intensity surface fires that act to maintain an open structure with numerous grasses and forbs. On the other hand, some fire-dependent/influenced shrubland and forest types experience infrequent, intense, "stand replacing" fires. What characterizes all of these ecosystems, though, is the resilience and recovery of their plants and animals following exposure to fires occurring within the range of variation characteristic of that ecosystem's fire regime type. (pp. 4–5)

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