

social sciences

# Facilitation, Coordination, and Trust in Landscape-Level Forest Restoration

Kimberly Coleman, Marc J. Stern, and Jocelyn Widmer

Collaborative forest management efforts often encounter challenges related to process and stakeholder relationships. To address these challenges, groups may employ the services of coordinators and facilitators who perform a range of tasks in support of the collaborative. We sought to understand differences between facilitation and coordination in terms of trust creation and maintenance. We conducted case studies in four collaborative groups, one with a facilitator and three with coordinators. We highlight the trust-building practices unique to the facilitator and discuss the potential implications for future collaborative groups.

**Keywords:** forest management, collaboration, trust, facilitator, coordinator

## Background

Collaborative approaches to forest management have become ubiquitous. For example, the Collaborative Forest Landscape Restoration Program (CFLRP), the subject of this article, mandates collaboration between the U.S. Forest Service (hereafter, Forest Service) and stakeholder groups as part of its funding requirements (Butler 2013). Although collaboration offers benefits related to more effective forest management, challenges exist. Large-scale projects have many moving pieces that need to be organized and tracked. In addition, projects that involve diverse forest user groups can be complex and contentious (Sturtevant et al. 2005). Collaboration between individuals who differ on core beliefs may be particularly difficult because these differences may become major sources of distrust (Leach and Sabatier 2005).

To address these challenges, many groups employ the services of facilitators or coordinators. *Facilitator* refers to an individual who is responsible for cultivating

productive dialogue and decision-making (Leach and Sabatier 2003). Facilitators are often described as being part of a group of professionals whose work focuses on consensus-building (Elliott 1999). As consensus-builders professionals, facilitators engage in activities to help stakeholders reach agreement about issues that are mutually relevant. Several scholars have suggested that effective facilitators engage in activities that fall into three categories: substance, relationships, and process (Bostrom, Anson, and Clawson 1993; Elliott 1999). *Substance* refers to core issues that concern stakeholders. Facilitators undertake tasks to help a group define and narrow the substance of their work. These tasks include setting agendas, leading the groups through identifying and creating a common understanding of the issues, helping the group to jointly establish criteria for evaluating possible future actions or solutions, and promoting implementable agreements (Elliott 1999). Facilitators support relationships by ensuring that communication between stakeholders is both effective and

courteous, by building the capacity of stakeholders to participate in effective and courteous dialogues, and by ensuring that all stakeholders have adequate representation. (Elliott 1999). Finally, facilitators design consensus-building processes depending on the needs of the group (Elliott 1999). Process-related activities include recording and distributing meeting minutes, designing deliberative and decision-making processes, and establishing and enforcing ground rules.

Facilitators use tools such as interest-based negotiation (IBN) to help groups reach consensus (Susskind, McKearnen, and Thomas-Lamar 1999). IBN is a strategy for achieving consensus with four key principles: separate people from the problem, focus on interests instead of positions, invent options for mutual gain, and insist on using shared objective criteria for evaluating decisions and outcomes (Fisher, Ury, and Patton 1991). Separating people from the problem involves keeping people focused on the task at hand rather than on each other as adversaries. Here the term *positions* refers to outcomes for which a given party is arguing whereas the term *interests* refers to the reason they hold those positions (Fisher, Ury, and Patton 1991). By using IBN, facilitators may help stakeholders deal with divisive topics while maintaining relationships (Susskind, McKearnen, and Thomas-Lamar 1999).

The term *coordinator* refers to an individual who assumes primarily administra-

Received September 8, 2016; accepted March 21, 2017; published online April 20, 2017.

**Affiliations:** Kim Coleman ([kimberly.coleman@uvm.edu](mailto:kimberly.coleman@uvm.edu)), Vermont Higher Education Council, Saint Michael's College Box 298, One Winooski Place, Colchester, VT 05439. Marc J. Stern ([mjstern@vt.edu](mailto:mjstern@vt.edu)), Virginia Polytechnic Institute and State University. Jocelyn Widmer ([widmerj@ufl.edu](mailto:widmerj@ufl.edu)), University of Florida.

Active duties such as scheduling meetings, setting agendas, recording and disseminating meeting minutes, and serving as a contact person for the general public (Leach and Sabatier 2003). Coordinators offer logistical support to collaborative groups and conduct project management. Some coordinators may take on facilitator roles, but they typically do not engage in governance practices or in negotiating conflicts. For example, in their study of a watershed collaboration, Bonnell and Koontz (2007, p. 160) reported that the coordinator played an "important but largely administrative role for the board, including writing grant applications, editing the quarterly newsletter, and organizing meetings." Because of differences in roles, facilitators and coordinators may have different influences on both processes and outcomes of collaborative groups. For example, in a study of 50 watershed partnerships, Leach and Sabatier (2003) found that having an effective coordinator was important for developing relationships and capacity whereas having an effective facilitator was important for reaching agreement.

Facilitators and coordinators may influence trust, which is critical to effective deliberation and collective problem-solving. Stern and Coleman (2015) define trust as a psychological state in which one actor accepts vulnerability based on positive expectations of another entity. They outline four types of trust relevant to collaborative natural resource management. Three of those forms<sup>1</sup> are actionable (Stern and Baird 2015); that is, they can be influenced by a facilitator or coordinator. These forms include rational, affinitive, and procedural trust (Stern and Coleman 2015). Rational trust is based on someone's evaluations of the likely outcomes of how they predict someone else will act. As such, it arises from assessments of past performance or perceptions of competence. Affinitive trust is based on an affinity for another entity and can come about from shared social experiences, assumptions of similar values, meaningful relationships, charisma, membership in common groups and communities, or positive relationship-building behaviors such as active listening. Finally, procedural trust refers to trust in processes, procedures, and/or rules. In a collaborative setting, procedural trust may be created by establishing and enforcing agreed-upon rules for decision-making, behavior at meetings, membership

guidelines, and other procedures (Coleman 2016).

On the basis of their typical roles, facilitators and coordinators may impact trust development in different ways. They may engender affinitive trust between individuals by highlighting similarities and creating opportunities for building positive social relationships. They may promote rational trust by vouching for individuals' competence or providing opportunities for demonstrations of reliability. They may promote procedural trust by ensuring that collaborative process occurs in a fair and transparent way. Because trust is critical for successful collaborative natural resource management, understanding how facilitators and coordinators impact trust is relevant to the future design of successful collaboratives. Through qualitative analyses of observations and interviews within four CFLRP collaborative groups, we explore and develop theory on the relationships between trust development and facilitation and coordination in collaborative natural resource management.

## Cases

We studied four collaborative groups from the CFLRP, a federal program that supports the implementation of collaborative landscape restoration work on National Forests and adjacent lands. These groups work together to draft restoration recommendations to the Forest Service, which then makes final decisions regarding National Forestlands (Butler 2013; Schultz, Jedd, and Beam 2012). To protect the anonymity of our interviewees, we refer to the projects as Collaborative A, Collaborative B, Collaborative C, and Collaborative D.

Collaborative A included individuals from diverse public interests, nonprofit or-

ganizations, and Native American tribes who were working with the Forest Service on planning and implementing forest restoration across National Forest and private land. Collaborative A employed a third-party facilitator to monitor and direct the work of the group. Collaborative A began from a place of high conflict between environmental groups and the Forest Service, the forest products industry and Forest Service, environmental groups and forest products industry, and Native American Tribes and the Forest Service, including past instances of litigation against the agency and reported distrust among collaborative members.

Collaborative B included nonprofits and private industry to collaborate with the Forest Service on planning and implementing forest restoration activities in National Forestlands. Collaborative B employed a part-time coordinator of monitoring activities. Collaborative B experienced very low conflict at the start of the collaborative.

Collaborative C involved a landscape that spans National Forestlands, land owned by a Native American tribe, state-owned land managed by two state agencies, and private land owned and managed by a nonprofit organization. The nonprofit landowner hired a part-time staff member to coordinate the efforts of the group. Collaborative C began from a place of high conflict between the Forest Service and state agencies, the Forest Service and Native American Tribes, and the Forest Service and environmental groups, including past instances of litigation.

Collaborative D included nonprofit organizations and state agencies to collaborate with the Forest Service on planning and implementing forest restoration activities on

### Management and Policy Implications Sidebar

Although collaboration may benefit natural resource management, it is also difficult. Facilitators and coordinators can help groups develop the trust needed to address the various challenges faced by diverse stakeholders within collaborative groups. Decisions about whether a facilitator or coordinator is more appropriate can be considered in light of their functions. Facilitators are likely to possess the skills needed to build three types of trust: affinitive, rational, and procedural. By comparison, coordinators' work is likely to lead to rational trust, and to a limited extent, procedural trust. Because of these differences, and because trust is critical for successful collaboration, collaborative groups should consider their needs vis-à-vis trust building to decide if a facilitator or coordinator best fits their situation. Collaboratives should consider hiring a facilitator when levels of affinitive and procedural trust are low and need to be increased. Long-term collaborative groups may also consider hiring a facilitator to ensure that trust is adequately maintained. We posit that a coordinator may be sufficient for short-term or periodic collaborative engagements between stakeholders with high levels of preexisting affinitive and rational trust.

National Forestlands. Collaborative D had a full-time coordinator who was employed by the Forest Service. Collaborative D began from a place of low conflict among most members, with the exception of some disagreements between wilderness advocacy groups and members of the Forest Service who worked on active management projects.

## Methods

This research was part of a larger investigation exploring the role of collaborative structure on natural resource management; therefore, we selected cases that varied in terms of governance structure (Coleman 2016, Coleman and Stern 2017). The importance of the roles of the facilitator and coordinators emerged in early interviews and observations, and their differential impacts on trust development became a focus of the study. Because only one of the cases employed a facilitator, the generalizability of our results is limited. However, comparing a single case to others different from it provides an opportunity for theory building (Eisenhardt and Graebner 2007, Sigglekow 2007, Yin 1994). We examined our cases in depth in comparison with the literature on facilitation and coordination to build theory about the differential impacts of facilitation versus coordination on trust development so that future researchers can test the generalizability of our claims and that future collaborative efforts can make wise decisions about employing either a facilitator or coordinator.

We used multiple data collection methods: 29 interviews with project participants, 1 in-depth interview with each facilitator and coordinator (4 total interviews), observations during eight (two per site) site visits, and the review of archival documents, including meeting notes, websites, e-mails, and publications. The interviews were conducted in person whenever possible ( $n = 12$ ) or over the phone ( $n = 21$ ). We used purposive sampling to ensure that we interviewed individuals who represented diverse interests (e.g., environmental groups, industry, and governments) as well as those who played important roles in the collaborative.

We asked interviewees to describe how facilitation and coordination happened within each collaborative and the impacts of each on the group's processes and outcomes. We also explored the ways in which the actions of the facilitator and coordinators influenced the interviewees' trust in other members or in the process. All but two interviews were recorded and transcribed.

These two were not recorded at the request of the interviewees. During site visits, we recorded observations of both formal and informal interactions between stakeholders not only to observe trust in action but also to identify the roles that individuals (and/or their groups) played in the collaboratives.

We coded all interview transcripts, observation notes, and archival documents using HyperRESEARCH 3.5.2. (2013). HyperRESEARCH allowed us to identify emerging themes and patterns in the data as well as linkages between themes and patterns. When interview transcripts or observations suggested that the actions of the coordinators or the facilitator engendered trust in the process of collaborating (e.g., interviewee's statement that the creation of fair and transparent rules by the facilitator led them to trust their views would be equally represented), these were coded as creators of procedural trust. Actions that engendered trust based in affinities between members were coded as creators of affinitive trust (e.g., interviewee's statement that facilitator's use of IBN led to them realize shared values with other stakeholders and subsequently come to trust them). Finally, actions of the coordinators or the facilitator that led to trust based in the likelihood of positive outcomes were coded as creators of rational trust (e.g., interviewee's statement that they trusted that things would get done well and on time because the coordinator was keeping work on track). This allowed us to identify the specific ways in which the coordinators and the facilitator engendered each type of trust. We then consulted the literature to fully develop and sharpen our theory.

## Roles and Responsibilities

The coordinators and the facilitator assumed different roles and responsibilities within our cases, which translated into differences in the types of trust engendered. Collaborative B, Collaborative C, and Collaborative D all relied on coordinators to oversee at least part of their collaboratives. The majority of their duties were administrative. Collaborative B relied on a nonprofit organization to provide a monitoring coordinator for the partnership. This individual was fully employed by that organization, and funding for his role as the monitoring coordinator was provided through a grant. He was responsible for planning, scheduling, and organizing the monitoring activities for the collaborative. He also recruited and managed the volunteers that would carry out

the monitoring and organized field days to educate collaborative members about monitoring efforts. In addition, he acted as an informal coordinator for the broader collaborative by scheduling meetings, sending out notes and updates, and keeping members updated.

Collaborative C relied on a part-time (20 hours per week) coordinator who was employed by a member nonprofit organization. The coordinator's time was largely devoted to managing the collaborative's executive committee, a small governing body within Collaborative C that was responsible for setting the direction and guiding the activities of the larger collaborative. The coordinator scheduled meetings and set agendas for the executive committee, recorded and disseminated minutes for those meetings, reminded executive committee members of tasks and due dates, and organized an annual meeting of the larger collaborative. The coordinator also facilitated some communication between the executive committee and the larger collaborative on an as-needed basis via e-mail communication.

The Collaborative D coordinator held a full-time position with the Forest Service. This individual was responsible for scheduling meetings, setting agendas, and recording and disseminating meeting minutes. The coordinator was also responsible for tracking and managing federal budget reporting requirements and was additionally charged with acting as the main point of contact for the general public.

Collaborative A employed a professional facilitator. Given the history of adversarial relationships, the founding members of the collaborative recognized a need for third-party support. The members reached out to an independent organization and hired a facilitator using grant funds. When this original facilitator moved on to a new position, the role was filled by the facilitator discussed in this article (employed by the same organization). The facilitator had been in place for more than a year at the time of the research. The responsibilities assigned to these facilitators included coordination duties such as setting meeting agendas, sending out meeting minutes, and reminding members of upcoming due dates. However, they also included monitoring the process of the collaborative and encouraging individuals to interact in productive and respectful ways. This involved establishing and enforcing ground rules and guiding democratic decision-making (i.e., holding votes). The facil-

**Table 1. Observed roles and trust outcomes for the facilitator and coordinators.**

Observed roles and responsibilities	Example activities	Consensus-building category (Elliott 1999)	Observed type of trust engendered	Facilitator or coordinator
Discrete tasks	Scheduling and organizing meetings and events Sending out agendas Taking meeting minutes Reminding people of assigned tasks and due dates	Process	Procedural and rational	Facilitator and coordinators
Managing governance and interest-based negotiation	Establishing ground rules Promoting democratic decision-making (i.e. overseeing votes) Creating a process for members to update rules Enforcing ground rules and using graduating sanctions Separating people from the problem Moving people from position- to interest-based negotiation Inventing options for mutual gain Insisting on shared criteria for evaluation	Process, relationships, and substance	Procedural, rational, and affinitive	Facilitator only

itor also actively worked to manage relationships and resolve conflicts between stakeholders, responsibilities not assumed by the coordinators in the other three collaboratives.

### Trust Engendered through Discrete Tasks

Both the facilitator and the coordinators engaged in numerous discrete tasks that encouraged stakeholder behavior that brought about rational and procedural trust (see Table 1). These tasks were in line with Elliott's (1999) concept of consensus-building activities related to process, but less so substance and relationships. For example, the Collaborative D coordinator kept work on track, thus encouraging the likelihood of positive outcomes. Participants reported that rational trust waned when a prior coordinator left the collaborative. When no one was actively driving the process, stakeholders began to question the likelihood of achieving desired outcomes. When the new coordinator was hired, rational trust was restored as the new individual began to get work back on track. One interviewee described how he doubted if certain tasks would actually get achieved in the absence of a coordinator: Having someone take the lead on stuff like field trips and activities and that type of thing, it makes them actually happen. If no one's pushing for a field trip or for monitoring, and monitoring is actually a good example, because that's something that tends to fall behind when people have too much to do. Monitoring is kind of the first thing that falls off and so without a coordinator, there wasn't really much monitoring taking place.

Coordination activities in the other three collaboratives had similar effects. For

example, the Collaborative A facilitator regularly sent out follow-up e-mails and meeting minutes to keep work on track, ensuring the timely accomplishment of outputs. Over time, performance expectations rose, creating rational trust between actors. In Collaborative B, interviewees attributed expectations of positive outcomes to the actions taken by the monitoring coordinator to ensure that beneficial work occurred in a timely manner. Similarly, members of the executive committee in Collaborative C expressed their beliefs that the executive committee would continue to engage and move toward productive outcomes because the coordinator kept them on track and encouraged them to do so.

Both the facilitator and coordinators scheduled meetings, sent out agendas and meeting minutes, and updated the larger collaborative about the progress of work. This kept collaborative members informed, increasing transparency and subsequently procedural trust. One stakeholder in Collaborative D described the impacts of hiring a coordinator, "So I really feel that communication increased, which increases trust between the partners and us, because they feel like we're being more transparent as well." In Collaborative B, the monitoring coordinator also promoted the development of procedural trust by actively publicizing the monitoring plans and hosting field days to educate members about the process.

### Trust Engendered by Facilitation

In addition to the discrete tasks described above, we observed the facilitator engender trust through additional consensus-building activities related to process as well as through activities that directly addressed

substance and relationships. Specifically, the facilitator managed the governance of the collaborative and used IBN, which led to the development of all three types of actionable trust. We did not observe any of the coordinators engage in similar activities.

### Managing Governance

The facilitator engaged in more consensus-building activities related to process than the coordinators did (see Table 1). These activities focused on managing the governance of the collaborative. Such responsibilities included establishing and enforcing ground rules and oversight of democratic decision-making. These actions appeared to result in deeper levels of procedural trust in Collaborative A than in the other groups. For example, in Collaborative A, the ground rules were established through the creation of a charter, which was crafted with the guidance of the facilitator. It outlined the collaborative's charge and deliverables, the organizational structure, the planning and decision-making processes, and procedural guidelines for stakeholders, including membership requirements and responsibilities. The charter also outlined rules for behavior during meetings. For example, it included requirements that members behave respectfully toward each other and refrain from unproductive behaviors such as grandstanding and name-calling. The three coordinators did not lead their respective groups through formally outlining appropriate and inappropriate behavior.

The facilitator directly contributed to legitimizing the charter by leading the drafting process and by facilitating a process through which collaborative members voted to adopt the charter as their governance document. To be an active voting member in

the collaborative, members had to commit to following the rules and procedures outlined in the charter by signing on to the document. Individuals who elected not to sign the document were allowed to continue to attend collaborative meetings, but they were not permitted to vote on collaborative decisions.<sup>2</sup> This was critical for establishing the legitimacy of the document. Interviewees reported that they believed others would follow the charter because everyone participating in full had agreed to do so in good faith. As the collaborative evolved, the facilitator assisted the group in updating and modifying the charter so that it would continue to serve the needs of the group.

The Collaborative A facilitator also enforced the charter. Interviewee testimonies revealed that the existence of the charter and the knowledge that it would be fairly enforced by the facilitator gave stakeholders enough confidence in the process (i.e., procedural trust) to allow them to participate, even in cases in which they did not actually have interpersonal (rational or affinitive) trust in the other members. They believed they were protected by the procedures. One interviewee said that knowing the facilitator would enforce the charter made him feel that “people can trust that they’re safeguarded, that there are venues to be heard.”

The facilitator monitored and refereed the ways in which individuals engaged with each other in addition to keeping members informed of the collaborative’s work. For example, when one member of the collaborative made disparaging remarks about another member in a public e-mail, the facilitator responded and reminded the group that such a remark violated the charter. The offending individual was not asked to leave the group; they were only reprimanded for their behavior. Interviews and observations revealed that the coordinators in the other collaboratives were not involved in any similar form of conflict resolution or in sanctioning rule violators.

### Use of IBN

The Collaborative A facilitator also differed from the three coordinators by using IBN to address issues related to Elliott’s (1999) concepts of substance and relationships (see Table 1). The facilitator engaged the group in activities specifically designed to get members to see each other as people with similarities to themselves, allowing them to separate individual conflicts from the larger debate, as suggested by IBN

(Fisher, Ury, and Patton 1991). Such activities often also helped stakeholders to focus on interests rather than positions, another tenet of IBN (Fisher, Ury, and Patton 1991).

In one demonstration of moving the debate from positions toward discussion of interests, the facilitator implemented a trust-building activity in which individuals discussed why they valued a particular treatment area. The discussion led to the realization of shared interests. In an interview, the facilitator described how one person who had identified herself as a member of an off-road vehicle group shared a story as part of the activity about boating and bird-watching with her children. That story led other collaborative members to realize that she valued the restoration area for more than just opportunities for off-road vehicles; they had a shared interest in forest health. The facilitator commented that, through these trust-building activities, “people would come to better understand their interests and realize they’re actually not that much apart.” The facilitator went on to describe how activities such as this often led stakeholders to develop affinities and subsequently affinitive trust. They also contributed to rational trust as stakeholders realized that they might be able to accomplish goals relevant to everyone’s interests through continued discussion and negotiation.

The facilitator also encouraged the members of Collaborative A to establish objective criteria to arrive at options for mutual gain, further reflecting important components of IBN (Fisher, Ury, and Patton 1991). By helping the group establish jointly agreed-upon criteria, the facilitator led the group through clarifying a rubric for solutions they might consider (i.e., identifying the substance of the work; Elliott 1999). For example, we observed a working group within Collaborative A develop shared criteria to prioritize future project areas that would be acceptable to all stakeholder groups. The criteria involved jointly identifying and ranking a list of factors to help determine which areas made the most sense for restoration work. Factors included accessibility, risk for catastrophic fire, presence of wildlife habitats, and use by different recreation groups, among others. Following this process allowed the working group to come up with a list of prioritized areas for restoration in a way that was perceived as fair, even to those who would have otherwise advocated for a different ranking. Interviews re-

vealed that this contributed meaningfully to the development of procedural trust. When asked if the coordinators ever used IBN or similar techniques, participants from Collaboratives B, C, and D all responded in the negative. One interviewee stated of the coordinator, “That’s not her role.”

### Discussion

Before discussing implications, we wish to remind the reader that our sample, four cases, only one of which employed a facilitator, limits the generalizability of our findings. Although the roles and responsibilities we observed matched the literature on coordination and facilitation, a wider sample would be necessary to investigate the broader application of our observations. Moreover, a broader sample would help to shed light on any idiosyncratic (or systematic) influences of individual personalities on the outcomes we observed. We hope that the external validity of the study will be vetted through observation and future research of additional cases. We contend that the strength of our efforts lies in the internal validity of our in-depth case study research, our direct observations, and the reporting and explanations of our interviewees. As a result, what we are able to provide is theoretical guidance based on our observations and the broader literature on facilitation, coordination, and trust regarding.

The CFLRP faces several challenges, particularly regarding the effective management of interactions between stakeholders throughout the collaboration (e.g., Butler 2013; Schultz, Jedd, and Beam 2012). Enhanced trust between participants can ease some of those challenges (Coleman 2016, Coleman and Stern 2017), but theoretical questions remain about how to build trust in collaborative natural resource management. Our findings suggest that although coordinators can be vital to keeping collaboratives moving forward and building a degree of rational and procedural trust, facilitators, in our case an external professional,<sup>3</sup> are more likely to engender all three forms of trust by engaging in activities related to substance, relationships, and process (see Table 1). In particular, IBN (Fisher, Ury, and Patton 1991) emerged as particularly useful in terms of addressing issues related to relationships and building affinitive trust.

When stakeholders perceive social enmity or incompatible values and experiences, building trust between stakeholders in the process is vital to enabling collabora-

tion. In these instances, we suggest hiring a facilitator. As outlined in the case study descriptions, our cases experienced varied levels of historical distrust among stakeholders. In Collaborative A, which experienced high levels of historical distrust, the facilitator's careful planning and implementation of strategies such as IBN helped to create affinitive trust between previously adversarial stakeholders. Moreover, the creation of procedural trust provided a safe space for interaction, thus providing a platform from which affinitive and rational trust could more easily develop (see Coleman 2016). Collaborative C, which also experienced high levels of historical distrust, lacked strategies such as IBN and continued to suffer from issues related to distrust among members (Coleman 2016).

Still, a facilitator may not be necessary in all circumstances. Collaboratives that are made up of like-minded constituents with adequate stores of affinitive and/or rational trust (such as Collaboratives C and D) may consider spending their resources elsewhere. However, when contentious issues arise, interpersonal forms of trust may be highly susceptible to disagreements about alternative courses of action or to performance failures in the absence of procedural trust. Stern and Baird (2015) posit that adequate stores of all three forms of actionable trust (rational, affinitive, and procedural) are necessary for longer-term engagements in which disturbances of multiple forms are highly likely. As such, short-term or periodic collaborative engagements between stakeholders with high levels of affinitive and rational trust may forego the costs of hiring a facilitator with little risk. Longer-term collaborative efforts may risk much without an effective facilitator to help build meaningful stores of all three forms

of actionable trust (rational, affinitive, and procedural).

## Endnotes

1. The fourth type of trust is dispositional. It is based on an individual's propensity to trust and sets the baseline from which other forms of trust (or distrust) can develop through interactions.
2. To date, only one individual has decided to participate in this way.
3. Some coordinators, if they are highly trusted by the rest of the members of the collaborative, might also be able to function similarly to the facilitator observed in this study and thus act like an informal facilitator.

## Literature Cited

- BONNELL, J.E., AND T. KOONTZ. 2007. Stumbling forward: The organizational challenges of building and sustaining collaborative watershed management. *Soc. Natur. Resour.* 20(2):153–167. DOI:10.1080/08941920601052412.
- BOSTROM, R., R. ANSON, AND V. CLAWSON. 1993. Group facilitation and group support systems. P. 146–168 in *Group support systems: New perspectives*, Jessup, L., and J. Valacich (eds.). Macmillan, New York.
- BUTLER, W. 2013. Collaboration at arm's length: Navigating agency engagement in landscape-scale ecological restoration collaboratives. *J. For.* 111(6):395–403. <https://doi.org/10.5849/jof.13-027>.
- COLEMAN, K. 2016. *The role of trust in collaborative natural resource management*. Available online at [vtechworks.lib.vt.edu/bitstream/handle/10919/64987/Coleman\\_KJ\\_D\\_2016.pdf?sequence=1](http://vtechworks.lib.vt.edu/bitstream/handle/10919/64987/Coleman_KJ_D_2016.pdf?sequence=1); last accessed March 21, 2017.
- COLEMAN, K., AND M. STERN. 2017. Boundary spanners as trust ambassadors in collaborative natural resource management. *J. Environ. Plann. Manage.* <http://dx.doi.org/10.1080/09640568.2017.1303462>.
- EISENHARDT, K., AND M. GRAEBNER. 2007. Theory building from cases: Opportunities and challenges. *Acad. Manage. J.* 50(1):25–32. doi:10.5465/AMJ.2007.24160888.
- ELLIOTT, M.L.P. 1999. The role of facilitators, mediators, and other consensus building practitioners. P. 199–239 in *Consensus building*

- handbook*, Susskind, L., S. McKearnon, and S. Carpenter (eds.). Sage, Thousand Oaks, CA.
- FISHER, R., W.L. URY, AND B. PATTON (ED.). 1991. *Getting to yes: Negotiating agreement without giving in* (2nd ed.). Penguin Books, New York.
- HYPERRESEARCH 3.5.2. 2013. COMPUTER SOFTWARE, RESEARCHWARE, INC. Available online at [www.researchware.com/](http://www.researchware.com/); last accessed March 21, 2017.
- LEACH, W., AND P. SABATIER. 2003. Facilitators, coordinators, and outcomes: The promise and performance of environmental conflict resolution. P. 148–174 in *The promise and performance of environmental conflict resolution*, O'Leary, R., and L. Bingham (eds.). Resources for the Future, Washington, DC.
- LEACH, W., AND P. SABATIER. 2005. To trust an adversary: Integrating rational and psychological models of collaborative policymaking. *Am. Polit. Sci. Rev.* 99(4):491–503. <https://doi.org/10.1017/S000305540505183X>.
- SCHULTZ, C., T. JEDD, AND R. BEAM. 2012. The Collaborative Forest Landscape Restoration Program: A history and overview of the first projects. *J. For.* 110(7):381–391. <https://doi.org/10.5849/jof.11-082>.
- SIGGELKOW, N. 2007. Persuasion with case studies. *Acad. Manage. J.* 50(1):20–24. doi:10.5465/AMJ.2007.24160882.
- STERN, M.J., AND T.D. BAIRD. 2015. Trust ecology and the resilience of natural resource management institutions. *Ecol. Soc.* 20(2):14. doi:10.5751/ES-07248-200214.
- STERN, M.J., AND K.J. COLEMAN. 2015. The multidimensionality of trust: Applications in collaborative natural resource management. *Soc. Natur. Resour.* 28(2):117–132. <http://dx.doi.org/10.1080/08941920.2014.945062>.
- STURTEVANT, V., M. MOOTE, P. JAKES, AND A. CHENG. 2005. *Social science to improve fuels management: A synthesis of research on collaboration*. USDA Forest Service, Gen. Tech. Rep. NC-257. North Central Research Station, St. Paul, MN. 84 p.
- SUSSKIND, L.E., S. MCKEARNEN, AND J. THOMAS-LAMAR. 1999. *The consensus building handbook: A comprehensive guide to reaching agreement*. Sage, London, United Kingdom.
- YIN, R. 1994. *Case study research: Design and methods*. Sage, Beverly Hills, CA.