

Making It Work: Keys to Successful Collaboration in Natural Resource Management

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ABSTRACT / This paper explores the positive aspects of collaboration in natural resources. Its purpose was to investigate participants' overall attitudes about keys to successful collaboration. The sample for the study consisted of 671 participants involved in 30 collaborative initiatives (CI) with the Forest Service. Using a mailed questionnaire, this study profiled the collaborative initiatives investigating purpose, problems addressed, groups involved, and years in existence. Respondents were queried on their overall perspectives on keys to successful collaboration. A total of more than 300 comments was collected from respondents and six categories emerged: development, information exchange, organizational support, personal communication, relationships/team building, and accomplishments. Continued research will need to explore the short- and long-term impacts of collaboration in natural resources.

A growing trend across the nation shows that numerous grass roots organizations are challenging the existing decision-making processes that exist within public land managing agencies today (Weber 2000). Susskind and Cruikshank, leaders in dispute resolution, commented aptly, "Once the word is out [on consensus building], we expect the results to speak for themselves" (1987, p. 150). More and more the results are speaking for themselves, especially when it comes to natural resource management decisions today. Public land management agencies, community leaders, interest groups, and private citizens are using a number of alternative approaches involving collaboration in natural resource management decision-making (Cestero 1999).

As Smith and others (1999) point out, natural resource professionals and the public both agree that more and better public participation is needed to resolve resource management issues. Within federal agencies, for example, a more participatory approach to managing public lands is being implemented in the Forest Service. Michael Dombeck, Chief of the Forest Service, is advocating partnerships, collaboration, and

ecosystem management for our national forests (Ghannan 1997). Perspectives from the general public on forest management were expressed through citizen roundtable discussions of the Seventh American Forest Congress. Results from these meetings produced suggested changes in the way forests should be managed. Participants recommended improving existing processes for engaging stakeholders in decision-making and the establishment of permanent advisory groups (Williams and Ellefson 1996). This direction along with the public's continued interest and awareness of natural resource issues has led to an increase in collaborative efforts (Schuett and others 1998).

Even though the natural resource management literature is replete with anecdotal evidence either praising or criticizing participatory management efforts, little systematic research has evaluated the success of these collaborative initiatives. In general, specific factors have been identified that contribute to the success of collaborative efforts in natural resources (Kenney and others 2000, Selin and others 1997). Key aspects identified in measuring elements of successful initiatives suggest inclusion of a broad representation of stakeholders represented in the collaborative effort (Cestero 1999, Grimble and Chan 1995, Sample and others 1995), well-defined goals and objectives (Mattessich and Monsey 1992), information exchange, shared decision-making (Lampe and Kaplan 1999, Moote and others 1997), and building linkages beyond the community (Cestero 1999).

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The majority of the previous research has been limited to specific case studies with only a few exceptions. In one of the most comprehensive studies, the *New Watershed Source Book* by Kenney and others (2000) contains over 100 case studies profiling watershed initiatives in the western United States. This resource describes the mechanisms of improving resource management and examines actions that can be taken to improve the performance of these watersheds in the future. Keys to success were explored in case studies yielding ten categories of responses: (1) collaboration, consensus, and/or participation by stakeholders; (2) consistent funding/paid staff; (3) education of participants and/or the public; (4) coordination of participants/agency efforts; (5) on-the-ground projects/modifications; (6) clearly identifying the problem; (7) following through on goals; (8) leadership; (9) long-range vision or outlook, and (10) government and/or stakeholder buy-in/investment in the project.

Lampe and Kaplan (1999) selected eight communities examined in a case study on land-use conflicts. Observations from this research showed that several themes emerged regarding the nature of conflict and its resolution. A summary of the results showed that the issue must be well understood, leaders and key officials must endorse the process, a history of past interactions has a major impact on the eventual outcome, and also how the complexity of the dispute impacts the process.

In her guide to collaborative conservation in the western United States, Cestero (1999) investigated seven collaborative initiatives in natural resources. She found several "ingredients to constructive collaboration" such as making the process open and inclusive, broad participation, engaging agency personnel, and building on local leadership.

Williams and Ellefson (1996) examined factors leading to cooperative success in 40 partnerships. They found several key variables that contributed to keeping individuals and organizations together in a partnership, including recognition of common goals and interest in the resource, mutual respect for goals, and information sharing among partners. They also identified barriers to success including lack of time, indifference to the issue, and fear of losing control over land decisions.

In their book, *The Power of Environmental Partnerships*, Long and Arnold (1995) investigated 12 case studies. They examined the life cycle of a partnership, illustrating a process made up of three phases: initiation, execution, and closure. Within these phases, they identified several factors that are important to determining success, such as formulating an agenda, monitoring ground rules, and implementing actions and policies.

Current research is expanding the body of knowl-

edge evaluating collaboration in natural resources. Past literature has been limited to specific case studies or types of projects. With these few studies, information on collaborative management approaches is still early in its development and analysis. It is necessary to explore the success of collaboration in natural resources more critically and to evaluate this strategy for managers and stakeholders nationwide. This study contributes to the literature by exploring keys to successful collaboration by going beyond specific case studies and assessing the past experience respondents have with successful collaboration in natural resources.

The impetus for this project was guided by several years of research in the area of collaborative planning with the Forest Service, i.e., Forest Service managers (Selin and others 1997) and stakeholders (Schuett and others 1998). Using these data, a study was conducted that examined a number of groups involved in collaboration in natural resources. Within this study, collaboration in natural resources was defined as people working together, sharing knowledge and resources, to ensure sustainable ecological systems and communities (Forest Service 1997).

Study Design

Sample

A purposive sampling methodology was employed to select respondents for the study. Selection criteria were developed to obtain a diverse set of established initiatives—geographically, at multiple scales, and diverse in purpose. To qualify for possible inclusion in the study, initiatives were required to meet the following criteria to fulfill study objectives:

1. The Forest Service is an active participant or plays an identifiable role in support of the initiative (e.g., provides funding or technical assistance). This requirement reflects the strategic interest of the Forest Service to assess their involvement in collaborative initiatives.
2. The collaborative initiative has a history of two or more years. The study intent here was to limit eligible initiatives to those that have had enough time to accomplish their organizational objectives.
3. The initiatives occur at multiple scales including the community, forest, or bioregion. This criterion reflects the study objective of including a diverse set of initiatives representing different scales of application.
4. The initiatives are geographically dispersed throughout the United States. The study intent

here was to account for regional differences in collaborative initiatives by having a representative sample from each region of the United States.

5. The initiatives are diverse in their purposes and missions. Finally, this prerequisite was selected to ensure that the final sample of collaborative initiatives reflected the diversity of purposes that are found in these initiatives in the United States.

Clearly, the choice of study criteria reflected the interests of both the Forest Service and project investigators. Readers should note that, consistent with this purposive sampling method, one should be very cautious in generalizing the results of this study to the population of collaborative initiatives operating nationwide.

The actual initiatives included in the final sample were drawn from a number of existing sources as well as from the investigators' personal knowledge and past research. Wondolleck and Yaffee's (1994) *Building Bridges* report and the book by Yaffee and others (1996) on ecosystem management were particularly helpful in constructing the sample of initiatives. The initial sample consisted of 647 active participants in 30 different collaborative initiatives (CI), most of whom served on steering committees or executive committees of each initiative. Although recognizing the potential bias of including only active participants who might have more positive evaluations of the initiative, assessing the perspectives of inactive participants or dropouts was beyond the scope of this study. Study results should only be attributed to the perspective of active participants.

The final sample of study respondents was obtained by contacting the coordinator of each initiative, confirming that the initiative met the study criteria, and then requesting a mailing list of active initiative participants who regularly attended meetings or participated actively in initiative working groups. This list was usually the list of steering committee or executive committee members. In several cases, the coordinator sent a general membership list with active members identified.

Instrument

A questionnaire was sent to the 647 respondents using a modified Dillman (1978) technique for questionnaire design and administration. After the initial mailing, two follow-up mailings were made, including a postcard reminder after two weeks and a new questionnaire sent to nonrespondents after four weeks. Data collection was completed by the summer of 1997.

This study examined numerous issues about each CI such as participants, problems addressed, scope of issues, and years in existence. These items were largely adapted from past research on partnerships (Selin and

Myers 1995). This paper capitalizes on respondents' past experience with collaboration. Using an open-ended measure, respondents were asked the following item, "What are the keys to successful collaboration?" In answering this item, respondents were asked to reflect and consider all their experience with collaborative initiatives. The interpretation of the term "success" was left up to the respondent in order to minimize biased results by the researchers.

Results

The response rate for the study was 43% ($N = 276$). Examples of the CIs in the sample included the Applegate Partnership, The Chicago Wilderness Program, Northern Forest Lands Council, Montezuma County (CO) Federal Lands Program, and Quincy Library Group. The stakeholders and group members represented in each CI varied from government agencies, industry landowners, and environmental groups. A summary of problems addressed in the CIs included ecosystem management, watershed restoration, forest management, urban green space, and wildlife habitat. The scope of the issues ranged from more localized, community-level concerns to issues that were more regional and national in scope. The CIs varied in how long they had been in existence, with 75% having been formed since 1990.

In examining keys to successful collaboration, a total of more than 300 comments was collected from respondents. Content analysis was used to examine the responses, reading the text for common themes, phrases, and wording. Categories were then derived from these emergent themes. The final categories were reviewed by the research team and outside reviewers to check for interrater reliability and assure consistency. The categories created were: development, information exchange, organizational support, personal communication, relationships/team building, and accomplishments. These categories are explained in the next section, with quotes where appropriate, to illustrate the richness of these data.

Development encompassed the formative stages of the CI. Respondents felt it was necessary to have a specific purpose, goal, and representation from all affected parties. Several respondents made comments regarding basic necessities and things they felt were rudimentary for the CI, "...adequate preparatory staff work, sufficient lead time for homework, business-like agendas" and "...adequate operative resources and time." To illustrate similar points one respondent commented on what was needed at the start of the experience, "good ground rules, clear goals, known and agreed upon at the start." Another referred to stake-

holders: "... clearly defined roles of all parties involved and a decision making procedure understood by all involved ... ensure representation from all affected stakeholders."

In information exchange, the contents were available research, informed stakeholders, and progress updates. Information exchange was reinforced by participants about what should take place in communicating to all parties in the CI and into the community. For example, one mentioned reports: "Continued periodic interaction of all stakeholders, each reporting progress." Another commented, "All parties should have some other contact than just meetings." Still another stakeholder stated the need for "... informed representation ... having an open free forum."

Organizational support included such items as regularly scheduled meetings, funding, staff, and necessary resources. In keeping the CI process on track, respondents felt it was necessary for specific types of support. One responded, "... facilitation at each meeting and meet often ... good staff and a strong board." Another individual felt that physical resources were critical to the process, "... available funding to do the work ... plenty of coffee." Support from various levels was mentioned several times by respondents including support for participants from committees, staff, and upper management. Not only was internal support deemed essential but external support from the community and beyond was mentioned, "... the community taking an interest, broad base support ... responsive federal employees."

Personal communication included the need for an atmosphere that permits communication within the CI. Communication involves listening, understanding, discussing, and decision-making. For example, one individual commented, "If those people come willing to listen and learn and develop mutual goals, a collaborative initiative has a much better chance at being successful." Another stated, "... valuing others' opinions or the right for them to have differing opinions even if you don't concur with their opinion." The process of decision-making was another element that was viewed as important. According to respondents, a decision-making mechanism must be set up for the environment to work, "... most important is to require 100% consensus by all."

Relationships/team building was made up of trust, respect, and honesty. Within this category, respondents had a great deal to say about establishing trust between each other and building relationships. One respondent stated it quite clearly, "... an understanding that you must work together if you want to solve the problem." One participant stressed that the team concept was

important, "... being able to work together as a team even when interests differ." For everyone, it was necessary to create an atmosphere within the CI that was honest and forthcoming among participants with all stakeholders involved. One commented on the need for openness, "... the agencies must constantly be above-board and honest—no behind the scenes deals with any party!" It was clear from the comments of respondents that this facet of the CI process was an emotional and integral part of success.

Lastly, accomplishments consisted of remarks on creating final reports, taking action on issues, and evaluating the collaborative process. All respondents were outcome-oriented with a desire for some specific achievement to occur from the collaborative initiative. The comments were very pragmatic, as in the organizational support category. Statements by respondents showed a need for evaluation of the CI, acknowledging successes during and after the process and reporting progress along the way.

Discussion

The management of America's renewable natural resources can often be an area of emotion and controversy. Over many years, a shift in values has taken place on how the public views the use and management of natural resources (Susskind and Cruikshank 1987). As found in this study, active participation by stakeholders and land managing agencies is becoming more and more accepted as the planning protocol for natural resource management nationwide. This level of interest is occurring whether problems/issues are centered on local community affairs or impacting an entire region. The public simply wants to be more involved in the decision-making process.

The information from this study provides a preliminary framework to consider when initiating or working with collaborative initiatives. The results of this study do not provide a checklist that could be used for making collaboration work. They are limited to the perspectives of active respondents that participated in the study. However, the findings about views on keys to successful collaboration provide some essential ingredients that can be used to guide participants in the future.

On the measure of success, similar components emerged that are the result of the experiences of each respondent in the study. The categories that evolved from the participants' comments provide some guidelines that can advance the planning process. Our findings identified several keys to success in collaborative initiatives supporting past research. These factors include information exchange among stakeholders, goal

setting at the development stage, participation of stakeholders, and communication. Some new factors emerged, including accomplishments and relationships/team building. Another contribution this study makes is by drawing from the overall experience of the respondents exploring more than the specific 30 CIs in which the respondents were involved. This approach goes beyond a case study method, which is how most of the previous research has been done.

From the results of this study, it is apparent that several things need to take place to create an atmosphere in a collaborative effort that will facilitate what respondents feel is a productive process. These factors are an integral part of assessing and recognizing what potential factors contribute to the success (or lack of) of collaboration in natural resources. Several components are rudimentary at the onset of the process, such as identifying the actual issue and the purpose of the collective. As pointed out in the *New Watershed Source Book* (Kenney and others 2000), stakeholders must set goals, have a clear vision, but also have adequate resources and time to conduct the process.

Information exchange for all parties is another important area. Careful attention must be paid to creating an atmosphere for the stakeholders and communities involved to be aware of what is taking place. Support to conduct a collaborative effort is another factor that surfaced. This important factor can be manifested in terms of staff, monetary resources and physical space. As noted in the findings of Lampe and Kaplan (1999), support is also needed from leaders, key officials, and management, if applicable, and from the stakeholder group being represented.

Hand in hand with support is communication. Respondents felt that interpersonal communication was critical in collaborative efforts. Communication from participants and those they represent, i.e., federal agencies or voluntary associations, was essential. Communication was linked to effective decision-making and consensus in the group process. Cestero (1999) found that an open and inclusive process is constructive and is ultimately enhanced through open communication.

Other elements surfaced that are less tangible, dynamic, and more difficult to assess, such as trust, respect, and relationship building. The ability to build relationships and create an environment of trust and respect is a difficult task but was viewed by respondents as central for achieving its goals. Working together to solve problems, trusting one another, and leaving personal agendas at home are decisive factors that enable positive outcomes to occur. Differing interests may be present on potentially conflicting issues such as economic development or water quality, yet stakeholders

need to be aware of these interests. An environment conducive for establishing beneficial working relationships is an integral part of any initiative's success. Effective leadership is also needed throughout the process to bring all these factors together and aid the members of the CI in accomplishing their purpose.

In the end, an effective collaborative initiative must produce some viable results. These results may be accomplished through progress/final reports or taking specific actions, i.e., initiating legislation. For those participating in collaborative efforts, the need to determine what tangible outcomes are produced and reporting them was a compelling aspect for measuring an initiative's outcome.

Future Research

Philosophically and practically, the management of our natural resources by bureaucrats, lobbyists, or even Congressional mandates has constraints. Consequently, the involvement of the general public, stakeholders, and communities must forge a positive atmosphere for effective collaboration. As Cortner and Moote (1994) point out, the trend in natural resources is toward more direct and open participation by citizens with the manager in a facilitative role. If this management tendency continues, as we believe it will, collaboration in natural resources should be examined in more detail and evaluated on a long-term basis.

This study sheds some light on an area that is receiving increased attention by researchers and managers alike—the evaluation of collaboration in natural resources. This project represented a diverse group of CIs in terms of purpose, issue, and composition; however, the findings are limited to the experience of active participants in the 30 CIs that were chosen and caution should be taken in generalizing to other CIs. The findings in this study provide additional details on what stakeholders feel are keys to the success of collaboration in natural resources.

Methodologically, research on measures of success beyond those used in this study would help in determining how best to assess the outcomes of collaboration in natural resource management. Other research should include additional data collection techniques, i.e., in-depth interviews and case studies. Longitudinal analysis involving case studies should also be considered to compare various CIs over time.

Theoretically, further research should not only explore success during the collaborative process but also outcomes associated with it. Cestero (1999) used numerous indicators of constructive collaboration, such as getting meaningful projects implemented, establishing

credible monitoring programs, group diversity, and innovative projects. Other components of CIs must be analyzed in detail include but are not limited to the influence of organizational structure on success, location of initiative, scope, barriers, and a comparison of the agency stakeholder and industry perspectives.

As complex natural resource issues continue to emerge, whether they pertain to forests, watersheds, wildlife, or economic development, collaboration can become very complex and sometimes does not work. Although beyond the scope of this paper, numerous internal and external factors can create barriers to success or make it impossible for collaboration to work, such as philosophical differences, government policies, poor facilitation, project scope, and inadequate leadership (Gray 1989, Selin and others 1997, Smith and others 1999).

Reports and papers on collaboration and natural resources can sometimes be hard to locate and often are not available beyond the groups, stakeholders, and mediators involved. A clearinghouse of this information should be created and made available through a website(s) on the Internet. Some of these sources already exist and cover issues beyond those in natural resources, such as the Consensus Building Institute (CBI) associated with the Public Disputes Program at Harvard's Law School, and the Institute for Policy Research and Implementation and the Natural Resources Law Center—both in Colorado. This information should be shared more widely with natural resource professionals and stakeholders alike in national conferences, trainings, and workshops.

Several meetings highlighting case studies, seminars, and collaboration in natural resources have taken place in the last year few years. A meeting in May 2000 was recently held in Arlington, Virginia, entitled, "Community-Based Environmental Decision Making." Another was held in May 1998 at the University of Montana Law School, Missoula, Montana, "Coming Together on the Land: Evaluating the Collaborative Process in Natural Resource Management." These meetings have provided a positive forum for the discussion and analysis of collaboration in natural resources and, it is hoped, will continue. Finally, there is much to learn by exploring collaboration beyond our borders, examining what is being done internationally to add to a growing body of knowledge in effectively managing our environment.

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