Research Reports

The benefits of stakeholder involvement in the development of social science research

By Robert B. Powell and Wade M. Vagias

Abstract

Collaboration among park managers, researchers, and stakeholders can reduce tension, develop support for research activities, and assist in meeting management objectives. While frequently promoted, providing meaningful stakeholder involvement can be a challenging task for researchers and managers. The purpose of this article is to discuss the potential benefits of stakeholder involvement in social science research development and explore specific steps to accomplish this goal. In 2008, researchers and NPS managers sought ORV (off-road vehicle) stakeholders' involvement and support for a study to be conducted at Big Cypress National Preserve (Big Cypress) in Florida that examines the use of education for reducing ORV impacts. Off-road vehicle management is very contentious at Big Cypress so stakeholder involvement was considered essential. The specific steps undertaken to develop support and involvement included public presentations and discussions as well as collaborative review and refinement of the research. The theoretical benefits of stakeholder involvement in the development of social science research include enhanced trust, organizational commitment, and science literacy as well as improved support for the research and its results.

Key words

public involvement, social science research, survey research

Introduction: Collaboration and public involvement in park management

NATIONAL PARKS AND PROTECTED AREAS ARE NOW SEEN as one dynamic, complex, interrelated, and interdependent socioeconomic and ecologic system (e.g., Folke et al. 2002). Because of this complexity and uncertainty, managers of national parks are moving beyond a traditional "parks as islands" paradigm and are now applying an ecosystem-wide approach that embraces adaptation, participation, and collaboration (e.g., Meffe et al. 2002). This collaborative approach requires a high degree of public involvement and the development of public understanding and science literacy to support learning and adaptive processes (Lee 1993; Force and Forester 2001; Holling 1995). Currently the National Park Service (NPS) uses research to enhance understanding of park resources and to provide usable information that supports effective management decisions. In particular, social science research can provide insight into public attitudes, beliefs, and behaviors regarding park resources and issues facing NPS management as well as evaluate current NPS programs. However, managers and researchers tasked with conducting social science research often overlook the benefits of stakeholder involvement in the design and development process. The purpose of this article is to discuss these potential benefits of stakeholder involvement in social science research development and explore specific steps to accomplish this goal.

Theoretical benefits of collaboration and stakeholder involvement in the development of social science research

Social scientists have identified the following theoretical benefits of stakeholder involvement during the formative stages of social science research:

1. Improves research (public involvement and review can improve the validity, clarity, and appropriateness of research) (e.g., Babbie 2001).
2. Ensures the utility of the results for managers and stakeholders (e.g., Patton 1996).
3. Builds trust through informal and formal communication processes (e.g., Schoemaker and Jonker 2005).
4. Enhances organizational commitment to the sponsoring agency (by internal and external stakeholders) (e.g., Mowday et al. 1982).
5. Notifies and informs the public regarding the purpose of the study and improves support for research (including heightened participation if the study is seen as valid) (e.g., Force and Forester 2001).

6. Builds acceptance of scientific results by internal and external audiences (if seen as legitimate and defensible) (e.g., Weeks and Packard 1997).

7. Builds public understanding and science literacy (through active public involvement and partnerships) (e.g., Lee 1993; Force and Forester 2001; Holling 1995).

8. Supports adaptive ecosystem management (facilitates the use of results for adaptive management) (e.g., Meffe et al. 2002; Margoluis and Salafsky 1998).

Utilizing multiple theoretical approaches in conducting social science evaluation research

Involving the public in the development of social science research is challenging and requires a departure from traditional theoretical approaches to research. In situations where stakeholder involvement is deemed important, researchers need to embrace multiple theoretical approaches for conducting social science. Traditionally, social science research conducted by and for the National Park Service can be described as theory-driven research and evaluation (e.g., Campbell and Stanley 1963; Rossi and Freeman 1993; Weiss 1998; Suchman 1967), which emphasizes that research is theoretically based, is methodologically rigorous, is scientifically objective, and uses valid and reliable data collection instruments. This ensures the defensibility of the results but may overlook their utility and the public's perception regarding their validity (e.g., Ziman 1991). To ensure the utility of the results for the funding organization, some researchers now use a more collaborative and participatory development process that is referred to as utilization-focused research and evaluation (e.g., Patton 1996). This utilization-focused approach requires involvement in the formative stages of the study by members of the funding organization. To enhance public perception regarding the utility and validity of the results, researchers also may employ a "consumer-based research and evaluation" approach (e.g., Scriven 1972; Bledsoe and Graham 2005). This requires meaningful involvement of an organization's external stakeholders in the development and review of research to capture their informational needs and to ensure the utility of results for a broader external audience. Involving stakeholders in the research development process also encourages the development of goodwill, trust, and commitment between key groups and the sponsoring organization (the National Park Service in this case) (e.g., Powell et al. 2006).

By using multiple approaches, social science researchers emphasize the primary purpose and benefits of each approach while mitigating their potential weaknesses. In other words, by using multiple approaches, researchers may maintain the rigorous and scientific nature of their work to ensure defensibility, but they also may improve the utility and acceptability of the results to both internal and external stakeholders by employing participatory processes during the developmental stages.

A case study of public involvement in the development of social science research: Big Cypress National Preserve and the TL! Education Evaluation

Formally adopted by the National Park Service in 1998, the "Tread Lightly!" (TL!) off-road vehicle (ORV) skills and ethics education program is based on five "best practices" or principles that support resource stewardship. However, no research has examined the effectiveness of this educational campaign or mechanisms for its improvement. In response to this need, the Wilderness Stewardship Division, NPS Washington Office, funded a study designed to help understand both the effectiveness of the TL! message and to identify salient factors that can be used to explain ORV operator attitudes toward TL! recommended practices. Three sites were selected for the study, one of which was Big Cypress National Preserve in Florida, which has a long history of ORV recreation (fig. 1, next page).

Early in the research development process, we asked senior managers at Big Cypress for their willingness to participate in the study. These managers and the researchers then scheduled meetings to discuss the goals of the study to ensure that the results would be useful to Big Cypress. In addition, because ORV management is a contentious issue in Big Cypress, the senior managers at the preserve requested that we present an overview of the study at a Big Cypress ORV Advisory Committee (ORVAC) public meeting at Everglades City, Florida. Members of ORVAC represent Big Cypress ORV stakeholders, including environmental organizations, ORV clubs, local residents, hunters, outdoor enthusiasts, and private land inholders. This presentation served several purposes, including notification and clarification regarding the purpose of the study (fig. 2, next page). After the presentation, ORVAC voted to form a subcommittee to collaborate with the researchers and the National Park Service by reviewing and commenting on the research methods and survey instruments. Participants felt this collaboration was particularly important because the ORV community has a level of mistrust toward the National Park Service and NPS-sponsored research. According to sev-

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Figure 1. Swamp buggies are a popular means for hunters and other outdoors people to navigate the subtropical wetlands of Big Cypress National Preserve. The National Park Service is using social science research developed in conjunction with stakeholders to evaluate the effectiveness of education to reduce off-road vehicle impacts on park resources.

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Figure 2. The first author presents an overview of the social science research to be conducted at Big Cypress. In attendance at the public meeting are members of the Big Cypress ORV Advisory Committee, which subsequently participated in fine-tuning the survey used in the study.

eral members of ORVAC, this mistrust has arisen from perceived misrepresentations of past research results and the view that public opinion has been ignored by Big Cypress managers in the past.

Shortly after formation, the ORVAC subcommittee and the researchers developed a work plan and action items. First, the subcommittee undertook a thorough review of the survey that initially focused on identifying questions that could be interpreted as inflammatory, could elicit socially desirable answers, or were confusing or poorly worded. During this process the researchers also discussed survey design and other social science research methods to develop the capacity of the ORV advisory board subcommittee for evaluating the soundness of the research, understanding the limitations of social science research, and interpreting future results. We reviewed the comments and then clarified them with each subcommittee member. Subsequently, we revised the survey based on their comments and added questions to collect more data deemed important by the stakeholders. We then repeated the process with the goal of addressing all concerns and reaching consensus on the appropriateness of the survey instrument. The subcommittee then reported to the full ORVAC regarding the process and the acceptability of the survey. The ORVAC then issued full support for the study. A summary of stakeholder involvement steps can be found in table 1.

Conclusion

The purpose of this article was to discuss the potential benefits of stakeholder involvement in social science research development and explore specific steps to accomplish this goal. The activities undertaken sought to improve the survey instrument, ensure the research will provide useful results to both the National Park Service and the public, strengthen stakeholder-NPS relationships, and enhance trust in the research process and the results of the study. Although the TL! evaluation study is ongoing, and evaluating the full benefits of this public participation process is outside the scope of the current research project, the stakeholder involvement process did appear to increase participants' awareness and understanding of social science research methods and supported the process of developing a science-literate public. Public involvement also appeared vital to the continued building of trust between Big Cypress management and the ORV Advisory Committee. Ultimately, public involvement, even in social science research development, appears important for effective ecosystem-wide management and stewardship of resources managed by the National Park Service.

Table 1. Process of stakeholder involvement in the development of social science research at Big Cypress National Preserve

1. Meetings and collaboration with Big Cypress staff (utilization-focused evaluation steps)
2. Public meeting (notification and clarification of research purpose)
3. Invitation to collaborate (review and comment regarding research)
4. Consultation (addition of questions important to both internal and external stakeholders)
5. Development of stakeholder subcommittee to review the draft instrument (similar to cognitive testing), focusing on identifying questions that could be interpreted as inflammatory, could elicit socially desirable answers, or were confusing or poorly worded
6. Incorporation of comments (builds trust by listening and responding to concerns and suggestions of stakeholders)

Managers and researchers tasked with conducting social science research often overlook the benefits of stakeholder involvement in the design and development process.

References

Babbie, E. 2001. The practice of social research. Ninth edition. Wadsworth, Belmont, California, USA.

Bledsoe, K. L., and J. A. Graham. 2005. The use of multiple evaluation approaches in program evaluation. American Journal of Evaluation 26(3):302–319.

Campbell, D. T., and J. C. Stanley. 1963. Experimental and quasi-experimental designs for research. N. L. Gage, editor. Rand McNally, Chicago, Illinois, USA.

Folke, C., S. R. Carpenter, T. Elmqvist, L. H. Gunderson, C. S. Holling, and B. Walker. 2002. Resilience and sustainable development: Building adaptive capacity in a world of transformations. Ambio 31(5):437–440.

Force, J. E., and D. J. Forester. 2001. Public involvement in National Park Service land management issues. National Park Service Social Science Research Review 3(1):1–28.

Holling, C. S. 1995. What barriers? What bridges? Pages 3–36 *in* Barriers and bridges to the renewal of ecosystems and institutions. L. H. Gunderson, C. S. Holling, and S. S. Light, editors. Columbia University Press, New York, New York, USA.

Lee, K. 1993. Compass and gyroscope: Integrating science and politics for the environment. Island Press, Washington, D.C., USA.

Margoluis, R., and N. Salafsky. 1998. Measures of success: Designing, managing, and monitoring conservation and development projects. Island Press, Washington, D.C., USA.

Meffe, G. K., L. A. Nielsen, R. Knight, and D. A. Schenborn. 2002. Ecosystem management: Adaptive, community-based conservation. Island Press, Washington, D.C., USA.

Mowday, R. T., L. W. Porter, and R. M. Steers. 1982. Employee-organization linkages: The psychology of commitment, absenteeism, and turnover. Academic Publishing, New York, New York, USA.

Patton, M. Q. 1996. Utilization-focused evaluation: The new century text. Third edition. Sage Publications, Thousand Oaks, California, USA.

Powell, R. B., M. J. Stern, and N. M. Ardoin. 2006. A sustainable evaluation program framework and its application. Applied Environmental Education and Communication 5(4):231–241.

Rossi, P. H., and H. E. Freeman. 1993. Evaluation: A systematic approach. Fifth edition. Sage Publications, Newbury Park, California, USA.

Schoemaker, M, and J. Jonker. 2005. Managing intangible assets: An essay on organizing contemporary organizations based upon identity, competencies and networks. Journal of Management Development 24(6):506–518.

Scriven, M. 1972. The methodology of evaluation: Perspectives of curriculum evaluation. Rand McNally, Chicago, Illinois, USA.

Suchman, E. A. 1967. Evaluative research: Principles and practice in public service and social action programs. Russell Sage Foundation, New York, New York, USA.

Weeks, P., and J. M. Packard. 1997. Acceptance of scientific management by natural resource dependent communities. Conservation Biology 11(1):236–245.

Weiss, C. H. 1998. Evaluation: Methods for studying programs and policies. Second edition. Prentice Hall, Upper Saddle River, New York, USA.

Ziman, J. 1991. Public understanding of science. Science, Technology, and Human values 16:99–105.

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