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MEASURING THE ACCOMPLISHMENTS OF PUBLIC PARTICIPATION PROGRAMS: OVERVIEW OF A METHODOLOGICAL STUDY PERFORMED FOR DOE'S OFFICE OF ENVIRONMENTAL MANAGEMENT

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ABSTRACT

Recently, staff at Oak Ridge National Laboratory performed a study for the Office of Intergovernmental and Public Accountability within the U.S. Department of Energy's (DOE) Office of Environmental Management (EM), examining how to measure the success of public participation programs. While the study began with a thorough literature review, the primary emphasis of this research effort was on getting key stakeholders to help identify attributes of successful public participation in EM activities and to suggest how those attributes might be measured. Interviews were conducted at nine DOE sites that provided substantial variety in terms of geographic location, types of environmental management activities undertaken, the current life-cycle stage of those EM efforts, and the public participation mechanisms utilized.

Approximately 12 to 15 oral interviews were conducted at each site, and each respondent also was asked to complete a written survey. Those interviewed included: non-regulatory state and local government officials; project managers and public participation staff for DOE and its management and operations contractors; non-government groups concerned with environmental protection, public safety, and health issues; federal and state environmental regulators; business organizations; civic groups; and other interested parties. While this study examined only those public participation programs sponsored by DOE, the resulting findings also have applicability to the public involvement efforts sponsored by many other public and private sector organizations.

The written survey asked respondents to rate 16 different attributes on the basis of how important they believed each one to be for evaluating the success of the DOE public participation programs with which they had been involved. A follow-up question asked each respondent to list the five attributes that they considered *most* important for evaluating DOE's public participation efforts. In addition, respondents were asked to suggest specific performance indicators—measurable factors that can be used to gauge the extent to which a specific public participation activity has been successful according to a given attribute of success.

Based on the information provided, we identified a set of seven key attributes of success that we suggest be used in future evaluations of DOE's public participation programs. These suggested attributes place more emphasis on process, understanding, and decisions than on directly measuring the *effects* of the decisions that are made, reflecting the apparent belief of most respondents that if the process is fair, if understanding and trust are enhanced, and if good decisions are reached, then the ultimate effects of the decisions will be acceptable. For each of our suggested attributes of success, we developed one or more indicators that could be used to measure performance in any subsequent evaluation. Half of these indicators are "behavioral"—that is, they focus on actual events and actions—while the other half are "perceptual," eliciting the impressions of key stakeholders regarding program performance.

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DISCLAIMER

I. ATTRIBUTES OF SUCCESS

A. Description of Attributes

The success of DOE's public participation efforts at its EM sites can be conceptualized in a number of different ways. For instance, one could say that a successful program is one that allows full and active stakeholder representation. One could also say that a successful program is one that results in the minimization of adverse environmental impacts, or one in which key decisions are accepted as legitimate by stakeholders. Each of these statements describes a specific attribute of success, focusing on a particular facet or characteristic of successful public participation programs. None of these attributes—by itself—definitively describes program success, nor are the different attributes mutually exclusive. Table 1 shows the 16 attributes of success rated by our survey respondents, grouped into five broad subject areas: (1) the decision-making process; (2) effects of public participation on stakeholder understanding and attitudes; (3) effects of public participation on environmental management decisions; (4) effects of environmental management decisions on site conditions; and (5) effects of environmental management decisions on stakeholders' objectives.

The 16 attributes were selected based on information gathered during open-ended interviews at the first two study sites and, among them, seem to cover all major stakeholder perspectives and provide a reasonably thorough listing of the ways in which success can be conceptualized for DOE's public participation efforts. Further, each attribute is broad enough to be useful in evaluating a wide range of public participation efforts focusing on a variety of environmental management programs.

B. Stakeholder Responses to Attributes

In addition to asking respondents to rate the importance of the various attributes of success, we also asked which five attributes they considered to be *most important* for evaluating DOE's public participation efforts. We attached great significance to this latter question, because it required stakeholders to weigh the relative merits of all 16 attributes and declare which were best. Figure 1 shows all items that were listed as being among the five most important attributes of success by at least 20% of survey respondents, and the percent of respondents that chose each one. Three attributes stood out as clearly more important than all the rest: the decision-making process is accepted as legitimate by stakeholders; DOE understands public concerns; and the decision-making process allows full and active stakeholder representation. Each of these attributes was on the "top five" list for over three-fifths of all respondents. Another block of three attributes—while not as widely mentioned as the first three—emerged as being very important to a substantial number of respondents. These attributes are: the public has trust and confidence in DOE and the DOE facility; key decisions are accepted as legitimate by stakeholders; and key decisions are improved by public participation.

Disaggregating survey results by the respondent's primary organizational affiliation is necessary to see if differences emerge among the different types of stakeholders in terms of the attributes that they favor. An examination of the data reveals that the top three attributes listed above were among the most frequently mentioned items in the "top five" lists for nearly every type of organization represented. The next three most popular attributes did well with half or more of the different organization types, but there was not the unanimity, or near-unanimity, of opinion that we found for the first three items. A few other attributes frequently appeared on the "top five" lists for one or two stakeholder groups. Most notably, "DOE's site-specific mission is accomplished" was among the most frequently mentioned "top five" items for DOE and business groups.

C. Key Attributes to Use in Future Evaluations

Based on the survey responses, we suggest the use of seven attributes of success in future evaluations of DOE's public participation programs: (1) the decision-making process allows full and active stakeholder representation; (2) the decision-making process is accepted as legitimate by stakeholders; (3) DOE and other stakeholders understand each others' concerns—a combination of two attributes that were considered important by many respondents; (4) the public has trust and confidence in DOE and the DOE facility; (5) key decisions are improved by public

participation; (6) key decisions are accepted as legitimate by stakeholders; and (7) DOE's site-specific mission is accomplished. The first two of these attributes fall under the category of the decision-making process, the next two address effects of public participation on stakeholder understanding and attitudes, the following two deal with effects of public participation on environmental management decisions, and the last one concerns effects of environmental management decisions on stakeholders' objectives.

Nearly all of the attributes suggested here were considered very important by most stakeholder groups, and any attribute that was unimportant to a given group tends to be balanced by one or more attributes that were highly relevant to that same group. The only attribute in our final list that was not broadly embraced by survey respondents is the last item: "DOE's site-specific mission is accomplished." We believe that this attribute is essential because DOE, as the agency sponsoring the public participation efforts in question, needs to know how these programs affect its underlying mission. In addition, evaluating the extent to which DOE's site-specific mission has been accomplished lends itself to the use of performance indicators that examine how site conditions (e.g., environmental management costs, adverse environmental impacts, and the distribution of those impacts) have been affected—a topic that is not broached by any of the other attributes that we suggest.

When performing an evaluation of a particular public participation effort, we believe that each of the attributes discussed above should be considered separately, rather than weighting them to come up with a single tally of success. Not only is it extremely difficult to come up with a widely acceptable weighting system that is meaningful for all interested parties, but focusing on a single "success score" rather than on multiple attributes of success obscures the
rich descriptiveness of what was accomplished according to various perspectives.

II. PERFORMANCE INDICATORS FOR KEY ATTRIBUTES

Performance indicators are measurable factors that can be used to gauge the extent to which a particular public participation program or activity has been successful according to a given attribute of success. Indicators can be developed to measure actual behavior, events, and actions as well as the perceptions of stakeholders regarding program performance. Behavioral findings *may* have greater credibility than perceptual indicators, at least among some stakeholders and some auditing- or oversight-type organizations, because of their reliance on "objective," rather than "subjective," measures. For some projects, programs, or activities, where it is understood that it may take several years (or more) to complete the action, "final" data may not be readily available until a particular clean-up, remediation, or waste management action is completed. On the other hand, interim or preliminary data may be developed based on predictive preliminary investigations, including items such as engineering cost analyses or environmental impact assessments of alternative decisions, including those "selected" or "modified" by public participation.

Some indicators, particularly those measuring perceptions or attitudes, may be of substantial value in trending analyses. If one rating can be compared to other earlier ratings, it is possible to determine whether public involvement activities are helping or hurting things according to the attribute in question.

Most of the 16 attributes of success presented in Table 1 can be measured reasonably well by indicators associated with actual behavior as well as by indicators based on stakeholder perceptions. In a few cases, however, only perceptual or behavioral indicators are likely to be appropriate or yield the most relevant information. When in doubt, an evaluator could use both perceptual and behavioral indicators for a single attribute.

Our performance indicators were developed using a number of sources and methods. We conducted reviews of research and practitioner literatures, including—but not limited to—the referenced works on public and stakeholder participation, [1-3] bureaucratic systems, [4-6] democratic theory and theories of justice, [7-10] program evaluation research, [11-13] and policy implementation.[14-15] Our most important sources of information in developing performance indicators for the selected attributes, however, were

the stakeholders themselves. The survey instrument asked stakeholders to suggest performance measures for a few specified attributes as well as for the five attributes they considered to be most important. We then collected the performance indicators suggested by respondents for each of the most important attributes, looking for dominant themes and common performance indicators identified by different kinds of stakeholders at the various EM sites. Table 2 presents those performance indicators that we recommend using with the suggested attributes of success, and identifies each as being either behavioral or perceptual in nature.

III. SUMMARY AND CONCLUSIONS

The attributes and indicators of public participation success identified in this paper are designed to document the value added by public participation and to provide a mechanism by which decision makers and public participation specialists can identify strengths and weaknesses of their current efforts so as to do a better job. Our attributes and indicators were developed through significant interactions with stakeholders in the field, and the ratings that they provided demonstrated remarkable agreement both within and across internal and external stakeholder groups. That agreement allowed us to assemble a subset of attributes focusing on the *decision-making process*, *mutual understanding* among internal and external stakeholders, *trust and confidence* in DOE, the *decisions* themselves, and *mission accomplishment*.

The indicators for these attributes were likewise developed with the participation of the internal and external stakeholders at our study sites. Based on our request to respondents for suggested indicators of success corresponding to their "top five" attributes, we received hundreds of suggestions. Looking for commonality among the suggestions and opportunities to combine and coalesce indicators, we assembled a set of behavioral and perceptual indicators for the attributes considered to be useful and important in future evaluations. However, it should be noted that the use of these indicators, and particularly the use of behavioral indicators, will require some site-specific or project-specific modification.

The attributes and indicators suggested in this paper are interactive, and a thorough evaluation requires the whole package. Using only one or two of the seven recommended attributes would *not* yield a balanced picture of the extent to which a given public participation effort has been successful. Also, success should not be expressed as a single, aggregated score because that would deny the multi-dimensionality of the concept of success. Furthermore, we acknowledge that there may be some cases that call for one or more additional attributes or indicators not recommended in this paper, and there may be some cases where an evaluator wants to evaluate some attributes more frequently than others because of a perceived need to "fix" some part of a public participation activity or program.

Periodic evaluations of public participation activities, whether performed locally in an *ad hoc* manner, as systematic site-specific or project-specific self-assessments, or nationally, should result in improved understanding and performance. These studies are expected to enhance the ability of all stakeholders, internal and external, to meet the challenges that they face. It is our hope that the information and recommendations contained in this paper will assist DOE and its stakeholders—as well as many other public and private sector organizations—in accurately measuring the effects of public participation efforts and identifying ways in which the value they add to agency activities can be increased.

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Table 1. Attributes of success rated by survey respondents

I.	**The Decision-Making Process**
	• The decision-making process allows full and active stakeholder representation.
	• DOE is presented with comprehensive and thoughtful input by the public.
	• The decision-making process is accepted as legitimate by stakeholders.
II.	**Effects of Public Participation on Stakeholder Understanding and Attitudes**
	• The public understands DOE's environmental management problems and associated actions
	• The public understands the connection between clean-up costs and environmental benefits
	• DOE understands public concerns.
	• The public has trust and confidence in DOE and the DOE facility.
III.	**Effects of Public Participation on Environmental Management Decisions**
	• Key decisions are influenced by the public.
	• Key decisions are improved by public participation.
	• Key decisions are accepted as legitimate by stakeholders.
IV.	**Effects of Environmental Management Decisions on Site Conditions**
	• Environmental management costs are minimized.
	• Adverse environmental impacts are minimized.
	• Adverse impacts are distributed equitably among the public.
V.	**Effects of Environmental Management Decisions on Stakeholders' Objectives**
	• Stakeholder (DOE and non-DOE) objectives for a particular public participation effort are met.
	• DOE's site-specific mission is accomplished.
	• The overall objectives of non-DOE stakeholders are met.

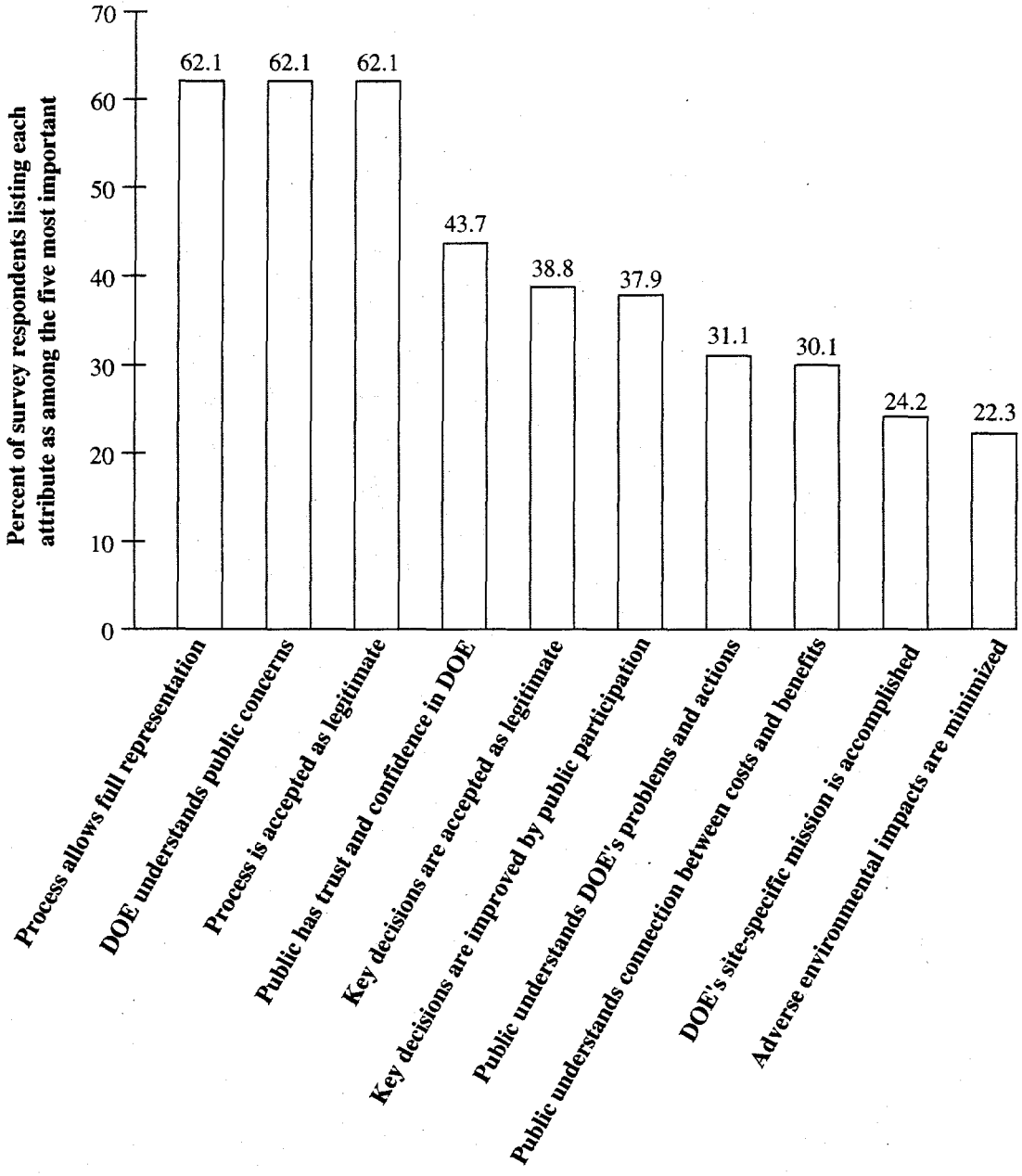

Fig. 1. Items listed as among the five most important attributes of success by at least 20 percent of survey respondents

Table 2. Suggested attributes of success and performance indicators to use in future evaluations

Attribute	Performance indicator	Type of indicator
The decision-making process allows full and active stakeholder representation.	The proportion of all identifiable stakeholder groups that have taken part in public participation efforts.	Behavioral
	The mechanisms used to attract, engage, and maintain the interest of stakeholders throughout the public participation effort.	Behavioral
The decision-making process is accepted as legitimate by stakeholders.	Participants' evaluation of the legitimacy of decision-making processes at various stages in the decisions cycle for the EM activity in question.	Perceptual
DOE and other stakeholders understand each others' concerns.	Internal and external stakeholders' ability to identify each others' concerns and understand the bases of those concerns.	Behavioral
The public has trust and confidence in DOE and the DOE facility.	The public's self-reported levels of trust and confidence in DOE and its contractors.	Perceptual
Key decisions are improved by public participation.	Judgments by internal and external stakeholders that public participation has led to better decisions.	Perceptual
Key decisions are accepted as legitimate by stakeholders.	Participants' evaluation of the legitimacy of decisions for a given EM activity.	Perceptual
DOE's site-specific mission is accomplished.	The development and implementation of a decision integrating cost, schedule, environmental, safety, and health factors plus other external stakeholders concerns.	Behavioral