

Mapping the Dimensions of Successful Public Participation in

Messy Natural Resources Management Situations

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Abstract

It is not a eye-opening statement to suggest that natural resource management increasingly occurs in turbulent, contentious settings. These settings are often typified by contested or ambiguous goals and lack of scientific agreement on cause-effect relationships. These settings are termed messy problems. Planning and public participation in these settings must by nature be fundamentally different than for tame problems-situations where goals are shared and scientists agree. The research reported here asked the question "what dimensions characterize successful public participation in a messy setting?" We interviewed 40 scientists, managers, and members of the public that participated in two ecosystem-based planning processes to address this question. Our results indicated that participants provided answers reflecting several dimensions: writing a plan and implementing it; learning; interest representation; relationship building; creating responsibility; and gaining social and political acceptability.

Introduction

That public lands natural resource managers find themselves in complex, ambiguous, and frequently conflicting and contentious situations is not a new conclusion. Not only do managers struggle to meet congressional mandates for providing a wider variety and higher volume of goods and services from public lands (than in the past) but they must do so with steadily declining budgets. This era of accelerating demands and

declining capacity requires managers to rethink how their fundamental mission of serving public needs through resource management will be met.

With the expanding recognition that resource management decisions must recognize both biophysical and social processes at larger spatial scales and longer time frames, resource managers have become particularly challenged at uncovering an information base to support decisions. Increasingly, management has relied on an ecosystem-based management paradigm to address the consequences of decisions, but in so doing has become even more reliant on science to find the answers to questions about how demands for goods and services can be met. This expert-driven, science-based model of management, while qualitatively different from the recent past¹, seems at odds with increasing pressures for more intimate participation in decision-making demanded by a public which has growing misgivings about the federal government.

The expert-driven model of planning exemplified in ecosystem-based management served well when the dominant product of natural resources management was commodities, when decisions were made at the stand level, and when there was an apparent public consensus about the goals of resource management. However, as the goods and services ecosystems are expected to produce have broadened and extended beyond commodities there has been increasing conflict over what should be produced. While science continues to provide information, the movement of management to consideration of the larger temporal and spatial scales demanded in ecosystem-based management, landscape ecology and conservation biology, has resulted in increased recognition of uncertainty in decision making (Dovers and Handmer 1993). Scientists

¹ The qualitative differences arise in terms of temporal and spatial scale and focus on the outputs— commodities versus something else.

frequently disagree about the long-term effects of management action, making use of a science-based model of planning increasingly problematic because disputes tend to simultaneously involve conflict over both means and ends.

These conflicting goals and scientific disagreement result in messy situations, as opposed to tame problems where there is agreement on goals and scientists can point the way to cause-effect relationships (Ackoff 1974). These messes are also characterized by an interacting set of sub-problems that generally cannot be solved in isolation of each other. Identifying the presence of linked sub-problems often occurs only when those affected by proposed plans are directly involved in their development. That these types of problems occur in natural resources planning and management has long been recognized (Allen and Gould 1986).

Clearly, the way that planning proceeds and the manner in which the public is involved in messy situations is different from how planning and public participation are designed for tame problems. In messy situations, emphasis must be placed on learning and consensus building-learning because understanding cause-effect relationships is fundamental to choosing an effective alternative (and learning from the consequences of selecting that alternative) and consensus building because agreement on goals is required before socially acceptable action can take place. Thus, planning must integrate scientific information, publicly held knowledge and the administrative procedures and policies of resource management agencies.

In messy situations, understanding what makes for successful public participation can be problematic. While implementation or modification of a proposed project or decision may be one such measure, the need to learn and understand is fundamental.

While a few recent studies have examined measures of successful public participation e.g., (Shindler and Neburka 1997), Wondelluck and Yaffee 1994; Moore 1994), none have specifically linked such measures to messy situations. In such situations, meanings of success have important implications for the organization of public discourse, design of meetings, and development of planning strategies. Narrow definitions, oriented toward informing the public of proposed actions may result in incomplete specification of the problem and development of opposition. Typically, messy situations are accompanied by intense conflict; one-way flows of information from planner to the public may create more in the way of disagreement about proposed actions than agreement among those publics affected.

Broader, multidimensional definitions of success provide opportunities to achieve greater public understanding of ecological principles and concepts while encouraging planners to engage the public in meaningful and authentic discourse. The degrees to which meanings of success are shared suggest a basis for public interaction and discussion over what is important. In this paper, we report on a study of participants in a typical ecosystem-based management project occurring in the intermountain west. Our objective is to map the dimensions of successful public participation in terms of how it is defined by participants.

Framework

The messy situations in which natural resources management are increasingly embedded is a departure from the norm of much of the field's history. The broadening diversity of expected goods and services strains the traditional role of planners as owners of the technical knowledge required to represent the public interest. This depression era

new deal model (McGarity 1990) of a government agency as representing the public interest-developed in an era of national crisis when the nation was confronted with the singular goal of economic recovery-no longer works in a time when various groups, with some common, some conflicting goals, express new political voices. The planner is increasingly confronted with the question of whose interest to represent. Since natural resource agencies also pursue their own agendas with vested interests in the outcomes of planning processes, planners increasingly may represent the agency's interest, which may no longer coincide with that of their publics'. An example may be state level agencies that manage school trust fund lands under a constitutional mandate to maximize revenues. Such mandates mean that school trust fund managers and the wider public may assign different meanings to state administered lands, and that their interests may not overlap completely.

One important role of planning is to better understand the distributive aspects of the consequences of a proposed action. In messy situations, the boundaries distinguishing the various interests and values may be particularly muddled from the planner's perspective. These interests and values reflect definitions and meanings of landscapes that may or may not be widely shared. Williams (Williams 1995) notes "The issues for resource managers [and planners] is not so much knowing how meaning is created, negotiated or lost ... but knowing what meanings individuals, groups or cultures assign to what pieces of the landscape". Since the planner is confronted with the dilemma of whose interest to represent (e.g., the public or school trust fund), public involvement potentially allows for identification of how different values and interests will be affected by proposed actions.

Public involvement also permits negative feedback to occur. Negative feedback in the systems context provides the important function of ensuring that systems do not spin out of control (Dryzek 1987). In messy situations, negative feedback demonstrates the social and political acceptability of proposed actions, and needs to occur early in the planning process to be effective. Negative feedback allows learning of all types to occur so that adaptive strategies-including the planning process-may be implemented to reduce the probability of surprises.

Complicating expanding demands for public voices in messy situations has been the growing technical complexity of resource management and environmental problems. Human capacity to make enduring, potentially irreversible, impacts to the environment coupled with accelerating production of new products and compounds has resulted in technically difficult pollution and impact issues. The increasing "patch" size of forest cover resulting from silvicultural practices, fire suppression and insect control has led to increasing awareness of the complex web of intricate relationships that cross temporal and spatial scales. Knowledge of the consequences of these effects at large time and spatial scales is as limiting as the budget and policy timeframes structuring their management. Returning to more "natural" conditions in forested settings requires a high level of understanding of a variety of ecological processes, most of which we are now only beginning to map, let alone describe, measure or model. Managing these effects requires a high level of technical understanding, which may lead to reinforcement of a "culture of technical control" (Yankelovich 1991). Those who hold technical expertise may take elitist views of public participation programs that typically collect data that is more experiential, emotional and anecdotal than technical.

Finally, the presence of conflict-while difficult to resolve-serves as an impetus for learning. Where a balance of power exists, stalemates occur. Stalemates, however, often are incentives for creative solutions, such solutions themselves require learning.

Given this contextual complexity for public participation and natural resources planning and the dominance of technically trained planners in natural resource agencies, it is not surprising that the question of successful public participation programs has been largely ignored in the natural resource planning literature. It is clear that in messy situations, planning and public participation are so interweaved as to be inseparable and undistinguishable- a situation likely at odds with Yankelovich's culture of technical control.

Yet, several researchers have attempted to map the dimensions of success. Most notably, Wondelluck and Yaffee (1994) suggested that success is multi-dimensional in character. They indicated that successful public participation programs involved "collaborative" decision-making, built relationships, involved communication across agency/non-agency boundaries, and resulted in measures of social and political acceptance of proposed actions. Moore's (1994) cross-cultural investigation of two protected area planning projects yielded similar results, with success having both product and process dimensions. Product dimensions included getting a plan written, securing the political acceptance of the proposed plan, and ensuring that various interests were represented in the planning process. Process oriented measures included establishing responsibility for the area ("ownership" in the plan) and enhancing relationships among the groups involved in the process.

Both studies are useful in furthering our understanding of important dimensions of successful participation. Yet, significant questions remain. For example, ecosystem-based management often involves an assortment of agency planners and managers, biophysical and social scientists, and various stakeholders among the affected publics. Each type of person brings to a planning situation different perspectives, knowledge and roles. What definitions of success do people bring to natural resource planning settings? Are the results of previous research applicable? Do some types of people hold broader or narrower definitions of success? For example, scientists involved may feel that success occurs when their data shows up in the plan; managers may feel success occurs when the plan is implemented. Some members of the public may feel a planning process was successful in the proposed course of action was not implemented.

These questions form the basis for the current study. The overall objective is to map the dimensions of success as identified by people involved in an ecosystem-based management process that is inherently messy in character.

The Study Area and Methods

Two relatively small, adjacent and procedurally linked planning projects in the Bitterroot Valley of western Montana served as the setting for examining the meaning of successful public participation. Both projects were conducted by the Stevensville District of the Bitterroot National Forest and designed to address ecosystem-based management issues at a landscape scale. Each project (the Stevensville Southwest and Stevensville West Central) was conducted sequentially, involved numerous meetings (about 40) with members of the public, and directed toward developing management actions for a variety of forest uses-- including timber, grazing, watershed, recreational and wildlife values.

The projects were conducted over the period 1992 to 1996. Currently, formal environmental analyses on both have been approved, following unsuccessful administrative appeals by various interests. The public participation process involved a variety of formats, including typical agency informational meetings, small group processes, field trips, and presentations from participating scientists.

Both projects were similar in size (about 40,000 acres) and scope of issues. Each was based on the concept of ecosystem-based management. The Stevensville West Central Unit had a significantly higher level of public involvement in an attempt to create a consensus about management direction. In addition, a focused scientific effort was initiated by the (then) Forest Service Intermountain Research Station to create a larger information base upon which to make decisions. Scientists from various programs and departments from The University of Montana also participated. An important feature of the scientific participation involved presentations by scientists to both federal managers and members of the public to increase awareness of important ecosystem processes and functions in the planning area. (During the Stevensville Westcentral project, the junior author assumed a participant-observer research strategy.)

In this study, all scientific and managerial participants in the project were interviewed to identify meanings of success. About half the public participants were sampled. Public participants (which included a typically wide range of beliefs and political positions about natural resources management) interviewed were sampled to achieve representativeness of perspectives on the project. In addition, some participants were unavailable for an interview; only one declined. Interviews were conducted in the

summer and fall of 1996, with six additional follow-up interviews initiated in the summer of 1997.

Forty individuals were interviewed. All interviews were conducted on a confidential basis. Respondents were asked about a number of process characteristics, including their perceptions of the public participation component of the planning effort. Each participant was asked if the participation component was successful, and then followed up with questions about why (either it was or was not successful). Each interview was tape recorded with the permission of the individual and was later transcribed. Transcribed interviews were subject to a content analysis; key concepts were identified and marked using Ethnograph statistical software.

Results

In presenting results, we will use quotations from the transcribed interviews since those constitute the data for the study. Such quotations are accurate, but grammatical inconsistencies and speaking hesitations such as "ohs" and "ums" have been removed to increase clarity. The objective of reporting the results here is not to critique the specific process used in these planning projects, but rather to enhance our understanding of what makes up definitions of success.

When asked if the public participation program was successful, most respondents felt it had been, regardless of their role in the process. This assessment was held by all the scientists and managers and most of the public participants. However, the reasons for this assessment, the focus of this research often varied, as shown below.

When asked to explain why they felt the process was successful or not, respondents in total identified seven specific dimensions involving two major arenas:

product oriented dimensions and process oriented dimensions. These dimensions were similar to those discussed by Moore and Wondelluck and Yaffee reviewed above, and we use their typology to organize the discussion. Product oriented dimensions concern primarily the outputs of the process while process oriented measures deal with how the planning was conducted. To some extent, these two arenas may overlap. To examine these dimensions, quotations from study respondents will be used.

Product oriented dimensions of success

These dimensions included writing a plan (an EIS in this study), implementing it, and receiving social and political acceptability. As a manager observed, *preparing a plan* is an important goal of the process:

I think we produced what's now viewed as the production goal for the [Interdisciplinary] team, which is the NEPA document. It has a decision notice with it from the [District] Ranger or Forest Supervisor. So ... that deal was successful.

Another manager observed:

We looked at ecological land units and historical ranges of variability by species. We'd never done that before. So, we were successful in being able to apply those kinds of concepts and theories. And, come up with a decision. So, from that standpoint, it was successful.

However, members of the public and scientists did not support a limited definition of success in terms of creating a plan. One public participant noted:

Was it successful from the point of view of the Forest Service, that they went through a public process and came up with a NEPA document? Yes, but they could have come up with a document without the public process as well.

Another participant complained:

*Now, we got a lot of documents out of it, a lot of nice pretty paperwork and its all b-----.
Every bit of it.*

A scientist was equally unimpressed with a narrow definition of success when he noted:

A lot of those [pubic meetings] meetings didn't really affect the decision one way or another.

The data presented above suggests that narrow, product definitions of successful public participation, stated in terms of production of a plan or environmental document are not widely shared. Most respondents in this study amplified on their definitions of successful participation by identifying additional dimensions. Yet, there was considerable concern about the emphasis on the planning process used to come up with the product, as this member of the public noted:

I don't think we ever had a good feeling about the process, because anybody that's worked out in the world for a while, at any level of government knows that they [the Forest Service] thrive[s] on process. And process doesn't equate to common sense and good decisions. It only involves a certain degree of participation by the public.

This member of the public is implicitly defining success in terms of products (good decisions), and is deeply concerned about planning and environmental analysis processes leading those decisions. In the litigative environments typified by messy situations,

agencies have been forced to ensure their environmental processes have been "bulletproofed" so plans can be implemented.

Implementation as a product dimension of success is critically important to all three participants in this ecosystem-based management setting. For example, one researcher argued that a successful public involvement process is contingent upon implementation:

Until the actions are really going and public has a chance to go out and see it management lies, we're not going to have a good idea whether we're successful or not.

The one thing is... Having the projects happened on the ground. I would say that's a real key part to following through and showing people that there is a payoff for this level of involvement. Stuff's gotta happen.

This perspective was nearly universal in terms of its importance as a measure of successful public participation. However, the public was not as optimistic about the *acceptability* of the plan and it being implemented as scientists and managers. For example, one member of the public stridently commented

If it means calling those people in for a face-to face meeting to make sure what their concerns are, yes do it! But by God, get out of the office and get out there and manage these resources.

Process-Oriented Dimensions of Success

While getting a plan written and implemented is important, as noted above, how the planning process is conducted is often fundamental to public support for it. Our results suggest that process-oriented dimensions are critical in messy situations. These

dimensions included learning, interest representation, responsibility (ownership), and relationship building. Respondents emphasized learning oriented dimensions of success. In this sense, learning was most often discussed as a two-way or interactive concept. The learning that occurred appeared to concern not only the topic-ecosystem-based management (as applied to the specific areas involved here), but the process of communicating with each other. One researcher, for example, commented:

We've struggled quite a bit through some of those meetings so hopefully, that's part of the learning process - to come to better ways of presenting the information.

Scientists are typically insulated from direct public interaction. Nevertheless, in ecosystem-based management characterized by messy situations, such insulation gives way as scientists directly interact with both managers and the public in public settings. This interaction leads to a better understanding of issues and concerns that confront the public as noted by this scientist:

I certainly have a better feeling for the public interaction system, a better idea of the different concepts of the way the public perceive things.

Such feelings were not necessarily widespread among the scientific community that engaged the public as these two researchers observed:

I don't think I learned. Really, I've had a lot of involvement in public meetings and other roles before and [the West Central planning process] didn't really bring anything new. Just a new group of people and a little different setting. I didn't learn ...I learned generalities, but I didn't learn any real unique insight.

These two scientists seem to be expressing a point of view jaded by previous encounters with the public. However, other scientists were more positive, suggesting that managers becoming more acquainted with research was important. For example,

I know [managers] learned a lot about the way research functionsI'm convinced the National Forest people have learned that research can definitely be an asset to their planning activities.

This scientist also observed a strategic value in involving researchers in ecosystem-based planning as he continued:

If they [the national forests] can bring research in, the public sees research as credibility to an organization.

Managers appeared to be more optimistic and enthusiastic about learning as an important dimension of success as these quotes from several managers indicate:

Yes, I view it as being successful because a majority of participants came, they learned... [they] learned about us and we learned about them.

Sure, anything you do is a learning experience.

This process is, and hopefully will continue to be, a learning experience for all persons involved [with the] agency, academia, public.

A major component of learning for managers concerned ecosystem functions and processes:

I learned a lot about forest ecology, landscape ecology, wildlife ecology fire ecology.

There's a lot better understanding of ecosystem management, what our general goals are across a larger landscape. The role [of ecosystem management] and that kind of thing. I have a better understanding.

As with the scientists, managers noted that learning dealt with the process of involving the public as much as with resource management:

I think what was learned could assist resource managers develop a successful public involvement process for future projects .

... we need to learn from those [South West and West Central] projects, so that we can simplify in the future or build on the public involvement that we already have in an area like that We need to learn how to do that [public involvement] better. To shorten the process, because again we can't afford to do that level on each thing we take on... we need to learn from our experience how to shorten that.

However, some managers felt that learning did not occur as much as it could have because of the predispositions of some members of the public:

In the meetings I went to, I got the impression that people weren't willing to learn... They went in with their prejudices and weren't willing to listen.

Learning was a frequently mentioned aspect of the planning process for public participants, particularly the subject matter related learning, as suggested by the following two quotes:

And, I actually learned some things that I didn't know about ecosystems on the landscape and specific diseases and the white bark pine...So, I could say I learned.

Yeah, I learned a lot actually. I learned about the photographs and about fire historical condition stuff and about the white barkpine, which I didn't know about beforeAnd about some fire history ...so yeah it was a learning experience.

The learning that took place encompassed procedural subjects as it did with scientists and managers. This public participant noted:

I learned more about the legal requirements - about what the Forest Service can and can't do relative to what the public wants.

Another dimension of success mentioned by nearly all participants in the study was the notion of political and/or social acceptability. One manager for example stated:

People still have to accept that... That this is good for not only for them to but the forest. If they don't what us to do something, we probably aren't going to get to do it. It's to our benefit and their benefit that we involve them appropriately and make decisions based on it.

A researcher commented:

Was it successful in terms of the district being able to get the public to get acceptance of a management decision? It probably will be because it was open, candid, forthright, a sharing discussion and the district ranger worked hard to keep that way.

Some public participants reported acceptability in a more pragmatic way:

I felt like if the process works well, those agreements or understandings happen and everybody's right there. So when the decision is put out and published, then

everybody can say "Yeah, this is what I agreed to. I can live with it. It may not be 100 percent but I can live with it". So in a sense, that's how I define success.

Respondents in this study identified responsibility (in the sense of ownership) as another dimension of success in two ways: first, seeing their input reflected in the document or decision, and second, feeling like their issues and concerns were accepted and considered. Responsibility for an area/plan differs from acceptability in the sense that a plan produced by an agency distant from the public may be satisfactory, but the public may have no feeling that they helped write the plan. Responsibility may be important in securing the resources necessary for implementation. This dimension was important for the public. For example, one member of the public noted:

I felt like I probably had more of my ideas put into the process this way than in a typical, old one or two meetings, then write letters, then wait for appeals or decisions and that kind of stuff [process].

Another member the public commented, *[I feel] a little ownership. [My input] is reflected in some of their under burning and burning recommendations. So, it did tickle me to see those show up.*

Such feelings about ownership and responsibility are reinforced by the managers' perspective on the public input:

I think our stakeholders knew that their input is being considered and their participation was valuable to the success of the project.

It gave folks and great opportunity to be involved in the choices that were made for the management in those areas.

Researchers described a broad responsibility--oriented measure of success in terms of how much ownership members of public felt towards the process or the document. In this sense, researchers are not describing their own sense of ownership, but their perception of the extent which members of public themselves had a sense of ownership:

...members of the public want to have an influence. Otherwise, I don't think they would have taken the time to participate in this type of thing. I heard comments early on that their time was going to be valued and viewed or they didn't want to participate.

Another researcher complemented the managers for understanding the importance of responsibility oriented dimensions of success:

A lot of public participants directed enough to help shape what the proposal might be. They should feel good.

Researchers indicated their sense of the importance of responsibility oriented dimensions of success among the public when one stated:

But if we were really trying to get the public more involved in shaping what happens in that landscape out there... The public understands and feels like they were part of that decision then yes it would have been successful, but I'm not sure it succeeded there.

Still another dimension of successful participation identified by the respondents in this study deal with relationships not only between between managers and members of public but also among the public and between scientists and the public. For example, one researcher observed:

One of the goals is to bring people together and learn about one another's viewpoints and accept those viewpoints. So, from that point, it was successful.

A manager argued:

The objective was to build credible relationships that we carryover into other land management projects. This was not just an exercise in gathering public input so it could sit in into file somewhere as required project documentation.

And:

There are many strategies on how to do public involvement, but basically it is relationship building By meeting with us over a long period, members of the public get to know us and I think they begin to recognize that these people are not just out to cut trees or whatever is opposite from their viewpoint... That these are people with high standards who care about the land. I think that's the purpose of public involvement.

Public participants tended to define relationship-oriented dimensions of success as

being better able to listen to other perspectives:

I think I learned we really do have to listen to both sides and sometimes learn to keep your mouth shut if all you're doing is continuing to argue the same point

The one thing I learned is a lot of self-discipline. You sat there and listened to somebody give their opinions, and that's fine, they gave their opinion without you jumping down their throat.

Nearly all participants recognize that relationship building takes time; a member of the public suggested:

You need processes for people to mix and get to know each other...

In many respects, planning represents a redistribution of power, away from entrenched interests to those who have formerly been relatively powerless, in this sense a broad representation of various interests in the planning process is essential. In part interest representation includes not only a variety of stakeholders but also access to the planning process:

... I think everybody in the audience was given the same respect by the people that were running the thing.

We had participants from all the societal segments --private landowners that were adjacent to the area, Forest Service researchers, Forest Service employees who are specialist that were involved in different aspects, conservationists, what we call the representatives of the extractive industries timber, off-- road vehicles and recreationists and on and on... And that was good.

This viewpoint was reinforced by one manager he stated:

I think Southwest and West Central were successful efforts in looking at an area of our public forests and interacting with the a lot of different people in figuring out existing conditions and needs.

Another manager noted: *I think the people that attended those meetings were given a chance to be heard.*

Researchers observed interest representation as a dimension of success also, but with a significantly lower frequency than the other two groups. For example one researcher observed:

Maybe what works is that they did get a fair number of people involved. That was good... I'm not sure how that happened.

Discussion

Clearly, respondents in this situation defined success in relatively broad terms, whether the respondents played planning, scientific or public roles. In particular, most respondents identified learning as an important outcome of successful public participation, a characteristic we argued earlier that seemed not only appropriate but essential in the messy situations characterizing contemporary natural resource planning. The contentiousness that frequently forms the context for such settings is not necessarily solved by an emphasis on learning, but learning seems to be a condition necessary to understanding and appreciation of where "participants are coming from". Friedmann (Friedmann 1973) argues that person-centered dialogue leads to an understanding of each other's life situation and lays the foundation for the more challenging subject-matter related interaction at the heart of public participation.

The results suggested that learning itself involves a number of dimensions, including an enhanced understanding of ecosystem function and process, comprehension of required legal and policy processes, and more personal dimensions dealing with the values, beliefs and interests of all participants.

That participants defined success multidimensionally when asked a relatively simple question about why a particular process was or was not successful is particularly significant. While clearly, implementation ("Stuffs gotta happen") is axiomatic to planning, factors other than interventions in the ongoing unfolding of events surely lead to evaluations of success. Understanding that these dimensions are influential in successful (or unsuccessful) public participation, would be an important underpinning to the design of public participation programs.

Implementation is fundamental to changing the future, and is largely dependent on or related to other dimensions of success identified here. A plan may be viewed as a route to the future, and creating such a document was important to planners in this study. Some of the dimensions of success identified in this study could be interpreted as measures of the adequacy of the plan (e.g., ownership, political acceptability). A curious finding, however, was a lack of mention of the technical adequacy of the plan, although this may have been assumed by study participants.

To what extent do these groups share definitions of successful public participation? Our data was unable to address this question. While all three groups identified many common elements of success, we neither collected frequency information nor relative importance data which would be key to answering this question. Such data would be useful in future public participation research.

Design must be keyed to objectives. This research suggests some potentially critical objectives for public participation in natural resource planning. For example, if learning is an objective, public participation could be designed to enhance such opportunities, through small learning groups, field trips and other forms of active learning (Krannich et al. 1994). If an objective is to enhance relationships, then engineering a public participation meeting to provide opportunities for informal, face-to-face dialogue would be important. For example, a planner would ensure that breaks from the meeting occur with refreshments available.

A public participation program designed to meet interest representation objectives would actively ensure that certain groups and stakeholders show up at meetings. This requires an active, perhaps even aggressive, meeting design strategy rather than the

typical--passive--newspaper announcement approach used by many natural resource agencies. Public participation designed to develop a sense of ownership might have members of the public suggesting management actions, not late in the planning process, but soon after goals, resource conditions and management philosophies have been identified. Planners may invite the public to assist in writing the plan, and may suggest important roles of the public engaging in required monitoring components.

Of course, objectives of public participation may be multiple, and specific methods of engaging the public may be designed to address several of these. For example, a small group exercise may ask participants to identify potential management actions to achieve goals, given certain resource/social conditions. Small groups composed of a variety of perspectives interacting over this problem will learn from each other, and given the small (but all important) talk that often accompanies these types of groups may enhance relationships. Small groups also provide opportunities for various values to express themselves in a setting relatively non-threatening, as compared to formal hearing in front of a large group.

In our findings, we were struck by the lack of mention of "collaboration". This term was not mentioned by any of the 40 planning participants we interviewed. Collaboration has become a dominant paradigm of public participation professionals, yet our sample defined success, not as jointly arriving at management decisions, but in terms that are much more specific. This is a distinct finding, although it could be argued that collaboration implies ownership and other dimensions of success even if there was no literal mention of the term. If so, collaboration may be more of a means to an end. We would argue that first we should consider ends, then means.

Our findings are particularly relevant to messy natural resource planning situations. For tame problems, we would expect a much narrower definition of success. In these settings, implementation-given a consensus on the future and agreement on cause-effect relationships-would most likely be the dominant, if perhaps the single dimension of success. If we all agree that a bridge over the river is needed (and we know how to build it), then constructing the bridge would be the measure of success. No learning is required-because engineers know how to build it-and the other dimensions don't seem to come into play. We state this tentatively, however, and suggest some comparative research in different planning settings.

Finally, we regard these findings as provisional. Replication is certainly needed. In particular, while we have mapped out several possible dimensions of success, we have not identified their relative importance. Implementing a plan (changing the future) may still remain the most fundamental dimension of success across all planning settings. Its relative importance may vary, however. Other dimensions may be strongly influenced by a variety of contextualizing variables such as the amount of perceived consensus, complexity of the problem, number of competing interest groups, the extent to which goals are shared, and the relative political persuasiveness of different interests.

It would seem, however, that the "stuffs gotta get done". If we don't change the future, then what purpose has planning served?

Literature Cited

- Ackoff, Russell L. 1974. *Redesigning the future: A systems approach to societal problems*. New York, NY: John Wiley and Sons.
- Allen, George M., and E.M. Gould, Jr. 1986. Complexity, wickedness and public forests. *Journal of Forestry* 84 (4):20-24.
- Dovers, Stephen R., and John W. Handmer. 1993. Contradictions in sustainability. *Environmental Conservation* 20 (3):217-222.
- Dryzek, John S. 1987. *Rational ecology: Environment and political economy*. New York, NY: Basil Blackwell.
- Friedmann, John. 1973. *Retracking America*. Garden City, New York: Anchor Press/Doubleday.
- Krannich, R.S., M.S. Carroll, S.E. Daniels, and G.B. Walker. 1994. Incorporating social assessment and public involvement processes into ecosystem-based resource management: Applications to the East Side Ecosystem Management Project. Walla Walla, WA: USDA Forest Service.
- McGarity, T.O. 1990. Public Participation in Risk Regulation. *RISK: Health, Safety and Environment* 1:103-130.
- Shindler, Bruce, and Julie Neburka. 1997. Public participation in forest planning-8 attributes of success. *Journal of Forestry* 95 (1):17-19.
- Williams, Daniel R. 1995. Mapping place meanings for ecosystem management. Champaign, IL: Department of Leisure Studies, University of Illinois.
- Yankelovich, Daniel. 1991. *Coming to Public Judgment: Making Democracy Work in a Complex World*. Syracuse, NY: Syracuse University Press.