

PLEASE DO NOT TAKE

Rethinking the "Vision" Exercise in the Greater Yellowstone Ecosystem

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In 1987 the U.S. Forest Service and the National Park Service launched a joint coordination and planning process for the Greater Yellowstone region, commonly called the "Vision" exercise, and produced a draft document in 1990 and a final in 1991. Public reaction was fierce: Traditional commodity extraction industries strongly opposed it, while conservationists failed to support or improve it. The process was perceived by many as a failure. Through extensive literature searches and interviews, we identified four major explanations for why the process failed: The agencies had unclear objectives, their environment was politicized, they miscalculated public reaction, and they used deliberately vague language to preserve their discretion and minimize accountability. We define all these as analytical errors, that is, failure to orient to the problem and to analyze the context of the problem adequately. We also explain the Vision exercise as a progression through the first phases of the public policy process (initiation, estimation, and selection), demonstrating a host of weaknesses common to each phase. We then offer six lessons to improve public policy processes for natural resource management in the Yellowstone region and to develop a successful model for ecosystem management elsewhere.

Keywords ecosystem management, Greater Yellowstone, interagency coordination, public policy

The Greater Yellowstone Ecosystem (GYE) is an extraordinary place with Yellowstone National Park (YNP) at its heart. The ecosystem is home to North America's largest herds of elk as well as impressive populations of bison, moose, bighorn sheep, and other native wildlife. It is the site of the world's greatest collection of geothermal features and

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hearing that their attempts to coordinate expanded and became more organized and publicly visible. As a result of the hearing, the Congressional Research Service (CRS) launched an in-depth study of federal land management in the GYE. The study culminated in the 1986 report, *Greater Yellowstone Ecosystem: An Analysis of Data Submitted by Federal and State Agencies*, which had two major findings [Congressional Research Service (CRS), 1986]:

- (1) Existing interagency coordinating committees were not comprehensive in either membership or approach. For example, CRS said the GYCC, which had the broadest federal participation, excluded the Caribou National Forest, Bureau of Land Management (BLM) offices, and unspecified U.S. Fish and Wildlife Service units.
- (2) Existing information was inadequate to analyze the site-specific impacts of proposed actions or to resolve management conflicts. Where data were available, measurement standards used by different agencies were often incompatible. For example, CRS said that both the FS and BLM generally used animal unit months (AUMs) for grazing leases and permits, but that the Beaverhead, Caribou, and Targhee National Forests reported sheep grazing in numbers of animals. In addition, federal agency data on noncommodity resources, such as recreation and wildlife and cultural resources, were incomplete, not maintained over time, and not very site specific.

These two findings spotlighted the inadequacy of coordinated management on federal lands in the GYE. The CRS report and the Congressional hearing, along with increased public interest, provided the necessary impetus for the FS and NPS to reexamine interagency relations in the region. However, several respondents told us that, more than anything, the agencies were spurred into action by the fear that if they did not move forward in developing and implementing interagency coordination, Congress might take a more active role in managing the area.

The reexamination took place under the auspices of the agencies' GYCC, composed of supervisors, superintendents, and directors from the FS and NPS. In the name of the GYCC, the FS and NPS had collaborated on certain management efforts, such as noxious weed management, some road and trail maintenance, and outfitter policy (Goldstein, 1992). As part of this new initiative to identify and resolve common management problems and communication gaps on a cumulative, proactive, and long-term basis, the GYCC carried out a two-step process. First, in 1987 the GYCC published the report *The Greater Yellowstone Area: An Aggregation of National Park and National Forest Management Plans*. This report described, for the first time, existing natural resources and human use patterns in the Greater Yellowstone Area (GYA), as the agencies termed the region, to the extent they were known. The principal objective was to compile information on the relationships of the parks and forests and provide an overview of their management. The *Aggregation*, as this document is commonly called, underscored the disharmonious nature of management between the agencies and clearly illustrated the need to find a common focus in their management of region-wide resources and to establish an administrative structure and process to resolve conflicts (GYCC, 1990).

Second, in 1989, the GYCC appointed four people from the NPS and four people from the FS to begin work on an overarching mission statement—a "vision" to guide coordinated interagency management. The agencies expected this effort to provide a common focus for setting goals for the GYE's desired future condition and eventually for

achieving these goals by amending FS and NPS planning documents. A description of the overall exercise and its intent was provided by Mintzmyer (1991):

To meet the congressional expectation of prospective review and analysis, an interagency document was anticipated—one which would describe the future condition of the greater Yellowstone area through coordinated management goals and how they could be achieved.

. . . this was not simply to be a regional plan or decision document—it was to be a study of the conditions of the areas involved, a recognition of goals, and a formalization of coordinated, guiding principles. This document was to be a model for interagency cooperation in this area and a model for other areas, well into the next century. (p. 10)

The specific goal of the first phase of the Vision exercise was stated clearly in the draft document:

The first step to accomplish these objectives is the creation of an interagency document to describe desired future condition of the GYA through coordinated management goals and how they can be achieved. The Vision provides this description and sets the stage to complete applicable plan amendments, if needed. (GYCC, 1990, pp. 1–6)

Three overriding goals provided “principles” on which to base management: (1) conserve the sense of naturalness and maintain ecosystem integrity, (2) encourage opportunities that are biologically and economically sustainable, and (3) improve coordination (GYCC, 1990).

In 1990, GYCC released a 74-page draft document, *Vision for the Future: A Framework for Coordination in the Greater Yellowstone Area*, the product of the 3-year effort to address the problems outlined by the CRS. It was circulated widely in the region as a draft and the GYCC encouraged comments on it.

Public reactions to the *Vision* were numerous and fierce (Barbee et al., 1991). Nearly all organized interests opposed it. Skeptical of its ability to drive change or dismayed that it was weak and did not go far enough in protecting natural resources, conservationists remained conspicuously absent from the effort to support it or improve it (Barbee et al., 1991). The powerful commodity extraction industries, on the other hand, fearing their use of the land would be greatly curtailed in the future, participated intensely using every available avenue to derail the Vision process (DiSilvestro, 1993). Supporters of such industries, including the Wyoming Heritage Society and the Multiple Use Coalition, strongly opposed it (e.g., Wyoming Multiple Use Coalition, 1992; Rolston, 1990; Sullivan, 1990; Simpson et al., 1990). Many private landowners spoke out against it. The Wyoming, Idaho, and Montana Congressional delegations condemned it. Governors of the three states asked that it be withdrawn or substantially revised. Even White House Chief of Staff John Sununu considered it a “disaster.” Surprised by the vehemence and volume of responses, the agencies set about redrafting the document. The redrafting job was taken away from the original authors and assumed by the GYCC. The new document was to reflect direct participation of the highest level administrators in the FS and NPS and ultimately the highest levels of government. The final version, reduced to an 11-page “brochure” and renamed *A Framework for Coordination of National Parks and National Forests in the Greater Yellowstone Area*, was published in 1991 (St. Clair, 1991). Most of the major points in the *Vision* were abandoned in the *Framework*.

Many people, including employees of the FS and NPS, saw the greatly reduced *Framework* as proof that the process had utterly failed to achieve its objective of resolving interagency management problems and communication gaps [e.g., Greater Yellowstone Coalition (GYC), 1991]. The *Framework* was the culmination of a long, arduous, and painful campaign to change some fundamental aspects of resource management in the GYE, and, like the *Vision*, public and private opposition to it was intense and vitriolic. Ed Lewis, Executive Director of the GYC, concluded that "The process to create a visionary management strategy has been gutted. These agencies spent three years developing a plan that calls for business as usual" (Milstein, 1991b, p. 1A).

[The Framework] is a prescription for continuation of business as usual. It allows development activities such as logging, oil and gas and mining to continue essentially unabated on Greater Yellowstone's public lands. Most disturbing, the final document, now called "A Framework for Coordination of National Parks and National Forests in the Greater Yellowstone Area," completely abandons the concept of ecosystem management which was at the heart of the draft *Vision* released a year earlier. (Lewis, 1991, p. 3)

Other criticisms included charges that the process was extremely vague and open to all kinds of interpretation, that each agency was guided by its own separate mission, that opposition forces were intense and misinformed, and that the process was highly political (e.g., Barbee et al., 1991). Some observers remained concerned that threats to the region's unique natural resources would continue to outstrip the FS and NPS's combined ability to sustainably manage the region (Glick et al., 1991).

Four Explanations for the Failure of the Vision Process

We are primarily concerned with two questions: Why was the *Vision* exercise perceived to be a failure, and what can be learned from the experience? Numerous statements in the press about the exercise, open-ended interviews with the authors of the *Vision* and *Framework*, and informal conversations with people throughout the region led us to identify four general explanations for why the *Vision* exercise failed.

Unclear Objectives

Much of the case material assigned blame for the failure to an unclear set of goals to be accomplished by the *Vision* exercise because of the agencies' inability to recognize, understand, and articulate complex management problems. Numerous critics claimed that lack of understanding of "the problem" and thus its solutions plagued the *Vision* process from start to finish.

I believe the document missed the purpose entirely. I don't see the concrete things to help the coordination between the agencies. (Bob Coe, President of Cody County Chamber of Commerce, cited in Adelman, 1990, p. A1)

I think the *Vision* document should be scrapped. I think the agencies did not do the job asked and required. Coordination was asked—not blending of philosophical statements. (Riverton, WY, resident, cited in Gustin, 1990, p. A9)

Many readers of the *Vision* and *Framework* were confused about the problem the GYCC sought to fix. The lack of a comprehensive and comprehensible statement of the problem

created the impression that the agencies were without clear direction, that the exercise was vague, faltering, or dishonest. Because the problem was not made abundantly clear, the proposed solutions were unacceptable to just about everyone. The conflicting, unclear purposes are apparent in this quote from the *Vision*:

In many instances, the coordinating criteria in the Vision clearly represent new ways of doing business. . . . The central element of the shift is toward ecosystem management, but achieving that major shift will require many minor operational shifts. At the same time, the Forest Service and the Park Service will not abandon their separate and often quite distinct mandates. (GYCC, 1990, p. 4-1)

This was despite the finding of the 1985 Congressional hearings that "there is little likelihood of coordinated management of Federal lands in the Yellowstone ecosystem *under the existing structure*" (CRS, 1986, emphasis added).

The importance of thoroughly assessing and defining root problems is little appreciated (Dery, 1984). Problems are defined by people; they are not objective entities, just waiting to be discovered and solved. The useful construction and definition of problems and objectives by policymakers is crucial because it frames the search for policy solutions (Brewer and deLeon, 1983; Brunner, 1991a). Problem definition is "a package of ideas that includes, at least implicitly, an account of the causes and consequences of undesirable circumstances and a theory about how to improve them" (Weiss, 1989, p. 97). Unless those people involved in addressing the GYE management problems appreciate the complex and highly interactive causes—a combination of biological, social, economic, cultural, institutional, and political forces—the solution will be ill-founded and, consequently, unsuccessful.

The difficulty in the GYE was described by Clark et al. (1991, p. 414), who concluded that perhaps "the biggest obstacle facing advocates of ecosystem management in the GYE is the lack of a shared problem definition and consequently lack of a common definition of what ecosystem management is." Clark and Minta (1994, p. 38) outlined the difficulties of problem definition in the GYE when "boundary conditions are unclear, symptoms vs root causes unknown, cause and effect relationships clouded, consequences unclear, and real opportunities to make improvements uncertain." If a problem is poorly defined in the first place, attempts to solve it can "intensify rather than ease the original problem(s)" (Brewer & deLeon, 1983, p. 32).

If the problem in the GYE was, in fact, lack of interagency coordination and communication, then the solution would obviously have been more and improved coordinating mechanisms, decision seminars, policy exercises (e.g., modeling, scenario writing, planning, problem mapping, strategic contingency analysis, evaluation), specialized coordinator roles, high performance teams, and other such well-established and widely used solutions (e.g., Galbraith, 1977; Brewer, 1986; Clark et al., 1989; Clark & Westrum, 1989). Yet neither the *Vision* nor the *Framework* used any such language or called for adoption of proven means to ameliorate traditional interorganizational coordination and communication problems. Perhaps this was not really the problem.

If the problem was defined as lack of a common goal for regional management—which might imply that current interagency arrangements (including coordination and communication) were fine—then the solution would have been a strategic planning exercise with formal support and direction from upper agency levels or even from Congress.

Lack of unifying goals has been identified as a major problem in interagency relations in the GYE. For example, Clark et al. (1991, p. 415) concluded that

[t]he lack of commonly shared policy and management goals (i.e., values sought) among the federal and state agencies is the single greatest impediment to ecosystem management. . . . The contest between these competing values and management philosophies is highly contentious in the GYE, and the myriad policies under which federal, state, and local agencies operate are often in conflict.

Without a precise statement of the problem and a sound, workable solution, including a description of actual changes in current management procedures, the *Vision* and the *Framework* were viewed with puzzlement, skepticism, or opposition by many people. The agencies addressed public confusion by repeating—over and over—their objectives, rather than actually clarifying them or educating the public about the need for interagency coordination in the first place. Because the language in both could be read in different ways, many people began to take sides largely based on ideology and to galvanize support for their own definition of the problem and preferred solution. This directly contributed to an erosion in agency communication with the public and constituents, a hardening of political positions by various interests, an overall reduction in trust, and a diminished problem-solving climate. This also points to the very strong role of people's expectations and values in evaluating the documents and the overall exercise.

A Politicized Environment

A second explanation for the failure of the Vision exercise that emerged from the case material was that old catch-all, "politics," that is, that certain political interests controlled or significantly influenced the agencies' behavior in such a way that little opportunity existed for agency professionals to chart a course for themselves (Barbee et al., 1991; Repanshek, 1991; Goldstein, 1992; Mintzmyer, 1992). It was suggested that the writers of the *Vision*, regardless of their good intentions or professional conduct, were merely going through the motions because real FS and NPS policy was set by the commodity extraction industries and other provincial interests.

The toxins of bad politics have nearly paralyzed wise stewardship of public lands. With the sacking of Mintzmyer and Mumma [former NPS and USFS high level administrators; Mintzmyer was directly involved in the Vision exercise], a decade of bad politics has surfaced. (Hackett, 1991, p. A1)

Because some profit-motivated people resort to political pressure to pursue their dreams, "the Park Service has been forced to manage with political, as well as biological and environmental, objectives, according to Hayden" [Pete Hayden is chief of resource management for Grand Teton National Park in Wyoming]. (Repanshek, 1991, p. 3B)

NPS officials assert that opposition from politicians and businessmen from the three states (ID, MT and WY) led the Greater Yellowstone Coordinating Committee to cut 63 of the 72 pages of its "Vision for the Future" document. (Repanshek, 1991, p. 3B)

State government officials exercised their power by passing a resolution condemning the *Vision*. However, in a show of hands on the Wyoming Legislature's House floor, only five representatives said they had actually read the document (Milstein, 1991a). Later, officials in the FS and NPS testified before Congress that the *Vision* was reversed by political pressure in Washington, DC (Mintzmyer, 1991). The *Vision* was "rewritten to meet political requirements" (Thuermer, 1991, p. 1A): "[U]rged on by powerful commodity groups, politicians also got in on the act, applying pressure in Washington, D.C., to drop or emasculate the Vision document" (Milstein, 1991a, p. 11).

Lorraine Mintzmyer, National Park Service Rocky Mountain Regional Director, testified before the House Subcommittee on Civil Service:

Mr. Sewell [then deputy assistant secretary of Fish, Wildlife and Parks in the Interior Department] made it clear that he has been delegated by the department to retain the appearance that the document was the product of professional and scientific efforts . . . but that the reality would be that the document would be revised on these strictly political concerns.

[Mr. Sewell] . . . began a lecture on the fact that significant political contacts and pressure had been made to the White House and the secretary [Lujan] regarding the Vision document by political delegations. . . . He then stated that Mr. Sununu had personally spoken to him about this issue. [Finally] Sununu, President Bush's chief of staff, told Sewell that "from a political perspective the . . . draft of the Vision document was a disaster and must be rewritten. . . ." (Mintzmyer, 1991, p. 10)

It is clear that the GYCC framers quickly lost the ability to control the direction and outcome of the overall Vision exercise. The *Framework*, removed from the hands of the original drafters, was, in the end, the product of influential politicians and special interests. Its content little resembled the draft *Vision*.

The Vision process was taken on by two agencies that have historically "made rivalry an institution so that communication was limited and sharing of goals unheard of" (Barbee et al., 1991, p. 81). The exercise's stated purpose was to coordinate management between the FS and NPS better, without compromising or departing from the distinct historic and legal mandates of either agency, and without antagonizing the separate and distinct constituencies of each (GYCC, 1990). It appears that the agencies did not see that successfully managing the conflicting constituency values was part of "the problem" they needed to address. Powerful special interests altered the Vision process, the final document it produced, and the behavior of the FS and NPS for the foreseeable future.

Miscalculation of Public Response

A third explanation for the failure revealed by our analysis was the agencies' failure to analyze and understand public sentiment—including special interests, elected officials, and the agencies themselves—before trying to carry out the Vision exercise. These sentiments include concerns such as overall management of the GYE, ecosystem management, government agencies, and economic stability. The suggestion is that the agencies did not fully comprehend the concerns, needs, and character of their varied constituencies and failed to carry out proper "forecasting" as a basis for appropriate education, public relations, and advocacy (support building) to avoid foreseeable problems.

Public response, a response largely driven by a few organized groups who knew very well how to play the advocacy game, was intense. . . . The agencies, surprised and even shocked by this attack, backed away from the original draft almost entirely, preserving only a few major points in the final draft. (Barbee et al., 1991, p. 82)

Without detailed prior knowledge of the regional concerns that strongly shaped and influenced local values and attitudes, the agencies failed to predict the vehemence of the opposition.

Opponents of the Vision, brought in by the busload, dominated public hearings with emotional and often misinformed comments. The opposition forces convinced their constituencies that this was a giant land-grab, another Federal lockup. (Barbee et al., 1991, p. 82)

Public outrage erupted despite the GYCC's repeated declarations that the *Vision* did not, would not, and could not change the legally established mission of either the FS or NPS (GYCC, 1990). The Committee stated that its efforts were aimed at protecting the GYE within the different yet sometimes complementary objectives of the FS and NPS.

The Vision is not a regional plan. It is a statement of principles. It does not make specific land allocation decisions, and does not seek to change the separate missions of the national forests or the national parks. (GYCC, 1990, p. 1-6)

However,

Using the principles provided by the *Vision* as guidance, managers will create amendments that display a consistent approach to describe management prescriptions, that contain management standards and guidelines, and that incorporate existing coordinating guideline documents for specific management programs in the GYA. (GYCC, 1990, p. 1-6)

The GYCC concluded its discussion of the general objectives of the *Vision* for the GYE thus:

In short, it might be said that those GYA constituencies hoping for a so-called "lockup" of the area's resources will be disappointed, but that those elements hoping for a "business-as-usual" approach to GYA industries will likewise be disappointed. The GYA pie can only be divided up in so many ways. (GYCC, 1990, p. 3-5)

By thoroughly analyzing the myriad forces that influenced the policy process—social, ecological, institutional, and political—the agencies might have been in a better position to predict outcomes, to preempt rather than react to problematic situations. It is in a policy or plan's infancy that it is possible to mitigate or eliminate obstacles most successfully. Once a new policy initiative begins its development process, unpredicted responses can be much more potent, undermining the entire process. The Vision exercise was derailed rather late in its evolution, possibly for these reasons.

Perhaps if the agencies had carried out appropriate a priori assays and incorporated the results into the exercise, failure could have been avoided. The kind of public surveys

needed are illustrated by a study of knowledge and attitudes among residents of the GYE conducted in 1988, which concluded that

A large majority of respondents recognized the importance of coordinated management of the GYE to conserve and protect the region's natural attractions, but most misunderstood or were worried about the economic and political implications of ecosystem management. . . . Despite a shift of local economies away from resource exploitation and toward a service sector economy based on nature tourism, the historical orientation toward agriculture and natural resource extraction strongly shapes and influences local values and attitudes. (Reading et al., 1994)

Results of such studies (see also Rasker et al., 1992; Alper, 1992) show some segments of the local public, some economic elements, and much of the regional political setting to be hostile to the kind of changes promoted in the *Vision*. In such a context, careful attention was needed to gain broad acceptance of the goals outlined in the *Vision*.

The unclear and seemingly contradictory language fed widespread fears among people who were profoundly concerned about the possible negative implications of a shift in management for natural-resource-based industries and for their communities and lifestyles (Reading et al., 1992). Despite the proclamations of the GYCC, the agencies, and the conservation community, opposition forces remained steadfast in their views.

"Yellowstone National Park is not endangered," the group [Wyoming Heritage Foundation, a coalition of industry groups, and People for the West] charged after the release of the draft report. "Common sense tells you that jobs and local economies will be endangered if the Vision policies are approved." (St. Clair, 1991, p. 19)

To be most effective, the Vision exercise required two things—first, a thorough understanding by the agencies of the distinct, often variable, and conflicting attitudes of the local, regional, and national constituencies, and second, a clear and precise articulation of what the exercise would mean in terms of real changes in future management. Successful policy formulation and implementation requires that policymakers carefully anticipate and address public concerns.

The Sinister Agency Conspiracy

The final explanation that we drew from the case material held that the cause of the failure was the agencies' "Machiavellian" use of deliberately vague language in the *Vision*, an obfuscation intended to preserve administrators' discretion and minimize their accountability. The vagueness of the documents was widely noted by both supporters and detractors.

"I can't feel very comfortable with it," Bourret [Wyoming Farm Bureau Federation] said. "It depends on the attitude of the bureaucrat who's carrying it out. He can read that and have enough flexibility to put any interpretation or twist on it that he wants to." (Whipple, 1991, p. A1)

Stephens [Governor of Montana] said that a recent statement of goals issued by the GYCC could be interpreted either as continued multiple use manage-

ment on national forests in the area or a blurring of boundaries between Yellowstone park and the adjacent national forests. (Ekey, 1990, p. 6B)

Perhaps the vague language was an attempt to ensure support across the wide spectrum of constituency interests. Or perhaps it allowed the agencies to define opportunities for natural resource conservation through coordinated management and still preserve all their management prerogatives (Goldstein, 1992). The desire to avoid accountability may have been an important motivation. Almost any decision that an agency makes can become controversial, and one way to avoid accountability is to avoid making decisions (Yaffee, 1982). Whatever the reasons or motivations, the ambiguous language and concepts alienated and infuriated groups on both sides of the issue. Jack Stark, then Grand Teton National Park Superintendent, said, "I think the polarization really stems from people thinking that there might be things that are not said in the document that might be implemented" (Eastridge, 1990, p. A6).

People at first wondered and then decided for themselves how the *Vision's* proposals would be implemented. Such confusion and speculation exacerbated the polarization of public reaction to the draft. Despite later agency recognition of this criticism (GYCC, 1991), the *Framework* was even more vague, which raises the question of whether the GYCC was ever serious about describing and achieving its goals in the first place. Ed Lewis claimed that if "the GYCC [was] serious about these goals, then there definitely must be major and significant amendments to the existing management plans because current plans won't get us anywhere close to these objectives" (Ekey, 1989, p. 5B).

Analytical Errors and Some Suggestions for Improvement

Incompetent, political pawns, out of touch, sinister—do any or all of these "explanations" of agency behavior really explain why the *Vision* process failed? Although collectively they provide considerable insight into why the *Vision* exercise has been perceived as a failure, we feel that advancing the analysis one step further and synthesizing them might better explain the weaknesses and offer a broader range of options for improving future performance in natural resource policy making.

We would like to introduce principles of the policy sciences to help organize thinking about the four explanations. The policy sciences, a comprehensive approach to complex problem solving at societal levels, are guided by three tenets: (1) orient to the problem at hand, (2) analyze the context of the problem thoroughly, and (3) use multiple methods (see Lasswell, 1971; Brewer & deLeon, 1983; Brunner, 1991a). Failure to attend to all three tracks simultaneously, that is, analytical errors, are a common but preventable weakness in many different arenas because analysts oversimplify the problem in order to make it tractable for investigation, analysis, and solution. But in so doing, important parts of the problem or its context are overlooked or misconstrued. Analytical error "becomes apparent only in retrospect, after resources have been committed and the unintended and often adverse results start coming in" (Brunner, 1991a, p. 67).

Problem Orientation

A problem-oriented approach—as opposed to a single disciplinary or problem-blind approach—requires a continuous focus on defining the problem itself so that "a clearer picture should begin to emerge regarding the nature of the problem, its scope, and the benefits likely to result from an extensive analytic effort" (Quade, 1975, p. 68). "Problem definition is . . . a never-ending discourse with reality, to discover yet more facets, more

dimensions of action, more opportunities for improvement" (Dery, 1984, pp. 6–7). It is accomplished by undertaking five tasks: (1) describing trends in the problem (taking a historical standpoint), (2) explaining trends in the problem (scientific standpoint), (3) projecting trends in the problem into the future (projective standpoint), (4) evaluating trends and projections (normative standpoint), and (5) inventing, evaluating, and selecting alternative solutions to the problem (operational standpoint) (Lasswell, 1970; Brunner, 1991a). A full problem orientation is often neglected as analysts make a lot of assumptions and rush to complete these "preliminaries" in order to get on with the "solution."

Some people have suggested that the agencies involved in the Vision exercise were incompetent and that is why it failed (e.g., Glick et al., 1991; Goldstein, 1992). But accurately analyzing complex interagency and regional problems in appropriate detail is extremely difficult. As Lindblom (1980) noted, the mere size of government agencies presents enormous problems to resolving interagency conflicts and arranging cooperation.

We believe the drafters of the *Vision* document were not given enough time and other resources to orient to the problem adequately. Some respondents to our queries indicated that they were lucky if they could get away from their supervisors to work on the *Vision* at all. One individual said the process "was like pulling teeth" and that, although the FS field staff worked well together, "bringing the supervisors in on such a big plan made the process highly political and destroyed their efforts." Perhaps the high-level administrators who had charged their staff with preparing the *Vision* failed to understand how much they were asking of their professionals. Even though the Vision exercise was complex, tasks much more complex than the Vision exercise are successfully dealt with regularly by the federal government, the World Conservation Union, or the United Nations, for example. Illustrations of this are the United States health care reform efforts and the World Conservation Union's Global Marine Biodiversity Conservation Strategy (Norse, 1993).

The drafters, who were largely midlevel forest and park agency staff, were perhaps not the best choice to undertake a task as serious, as complex, and as difficult as the *Vision*. A national-level task force with specialized problem-solving skills might have had an appropriate problem-solving heuristic, more formal standing, broader support, more intensive and extensive coverage of the issues, and less political intervention. Input to such a group would have come not only from agency representatives, commodity interests, conservationists, national interests, and so forth, but also from policy analysts, sociologists, ecologists, geologists, and others. The Clinton Administration's Task Force on Health Care Reform might be a useful model. In addition, a clearer charge from high levels about the group's duties and authority, early and ongoing review of the process and its products, and an open, participatory format would have improved the process, the products, and the prospects for ultimate success and minimized politicization of the process.

Contextual Mapping

In analyzing and understanding the context of the problem, participants must understand how all relevant factors and forces, including people, perceptions, values, organizations, strategies, situations, outcomes, and effects, fit together within the whole policy process. "Unless the salient features of the all-inclusive whole are discerned, details will be incorrectly located" (Lasswell, 1971, p. 4). Limiting contextual analysis through narrow technical, bureaucratic, or ideological perspectives will abet errors in problem definition and failure in solving problems. The policy sciences offer systematic models for exploring the policy process and the social process so that the context is fully appreciated.

The agencies in the Vision exercise were accused of being out of touch with their constituencies, their external political environments, regional economic forces, and their own policy preferences and biases. Analyzing the context of a problem is, however, an extremely challenging task in terms of delineating the boundaries of relevant material, evaluating the significance and relationships of various factors and forces, meeting time and resource constraints, and stimulating "creative insight into the possibilities for more rational action in the situation" (Brunner, 1987, p. 11; Clark, 1993).

In addition to dispelling accusations of miscalculating public response, thorough contextual mapping would also have helped neutralize the claim that the agencies were keeping the documents deliberately vague in order to serve their own self-interest. Numerous studies have demonstrated tendencies in government agencies to forget, resist, rationalize, even deny that they are subject to democratic control (Gruber, 1988). Thus, a well-documented record of having analyzed the full context of the problem (in addition to the *Aggregation*) and open hearings to explore the problem and alternative solutions might have dispelled fears of government self interest.

The external environment may have been largely unorganized prior to the *Vision*, but surveys of public attitudes would have reflected this. Opposition groups may have gotten highly organized only after the *Vision* appeared, but the open, democratic format established to map the context might have disarmed some of their power by offering continuing opportunities to local, regional, and national and to organized and unorganized voices to define the problems and solutions. That is, it would have made the process itself adaptive and responsive.

Multiple Methods

Various methods are often required to understand complex problems. Care must be taken to avoid becoming "method-bound." A range of methods that permit synthesis of various bodies of knowledge (content), but also the procedures or techniques, is needed. For example, if the problem in the Vision exercise had been identified as lack of coordination and communication, it would have implied not only a different solution but also a different methodology for analysis and for solution. Appropriate methods in this case might have included a detailed analysis of the history and status of biophysical resources in the region, charting trends in a host of policy-relevant regional indicators such as shifting social, economic, and political patterns, clarification of existing policy and interagency arrangements, and surveys of the knowledge and attitudes of local, regional, and national publics and interest groups, decision seminars, consensus-building techniques, and conflict resolution techniques, among many others. But there is no evidence that orienting to the problem or mapping its context went beyond the description of resources and patterns of use in the *Aggregation* (GYCC, 1987). Although the amount of data resulting from such an approach would have been large, the better information, the more open forum, and the more explicit process would have enabled more effective problem solving.

Common Weaknesses in Early Phases of the Policy Process

The Vision exercise followed the standard initial phases through which nearly all policies and programs progress: (1) initiation, or recognition that a problem exists and setting of an agenda, (2) estimation, or expert and technical analysis of the problem and its context, and (3) selection, or the actual formulation, debate, and authorization of a course of action (Brewer & deLeon, 1983). These are the first of a six-phase process that concludes with implementation of the chosen policy or program, evaluation of it, and

termination, which may take the form of discontinuation, revision, or succession by another policy or program. In the Vision case, the policy process was initiated largely by the 1985 Congressional hearing, although necessarily a growing body of other factors and phenomena also prompted the FS and NPS to take up this project. The compilation of the *Aggregation* was part of the estimation phase, although, undoubtedly, a considerable amount of additional behind-the-scenes work filled out the agencies' technical consideration of the problem and its context. Publication of both the *Vision* and the *Framework* constituted the selection phase, or at least the first part of it—it was formulated and debated, but not authorized. The policy process was truncated at that point, at least for the time being.

Unintentional problems or weaknesses can appear in all the phases of the policy process (Ascher & Healy, 1990). Weaknesses in the initiation phase include overly simple problem definitions; single-objective solutions; "pollyanna" assumptions about the ultimate benefits and down-playing of long-term costs and consequences; disparagement or elimination of "nay-sayers" who question the predominant viewpoint; exclusion of concerns that are secondary, unplanned, less well understood, or not as easily measured; outsized political rewards for certain groups; neglect of local concerns by central government authorities (when initiation takes place at high government levels) or domination of overall local concerns by "wealthier or more influential" local elites (when initiation takes place at the local level); and development of the initiation process within a relatively narrow organizational or policy context with certain biases (Ascher & Healy, 1990).

Weaknesses in estimation further compound the situation (Ascher & Healy, 1990). These include inherent biases in professional, organizational, or policy preferences as the problem is defined, benefits and costs estimated, and the context mapped. Certain kinds of information and certain professions even have higher standing than others, and "technical experts" decisions nearly always carry more weight than local citizens' knowledge and preferences. "[T]here is a systemic tendency to underestimate costs and exaggerate benefits" (Ascher & Healy, 1990, p. 166). Political symbolism and utopian claims may carry the day and preclude or override technical analysis. The policy system also lacks an evaluative framework by which to balance multiple goals; this opens the way to criticism, conflict, and volatility. An overly optimistic and self-confident sense of feasibility can also overtake participants in estimation. The Vision process made it absolutely clear that the FS and NPS were going to continue their traditional missions at the same time that they were advancing a set of conservation-oriented goals for the GYE through interagency coordination. That land managers felt they could have it all without acknowledging the trade-offs is testimony to the false sense of feasibility espoused by the participants of the process.

Weaknesses during the selection process include biases in preference and overcontrol of the selection process by certain interests. Coordination of groups is difficult; policies and programs may not achieve comprehensiveness if they exclude groups or agencies that represent all concerned interests, but on the other hand, complicating the system with many groups can lead to delays, confusion, duplication, and obscuring of real issues in political wrangling (Ascher & Healy, 1990). There is also a tendency in government to extend and institutionalize its control in its policy preference and selection. The literature written about the Vision process is filled with quotes declaring that the agencies spent a lot of time and money developing a plan that merely restates the activities the agencies have been practicing all along. In other words, the Vision process was simply a call for business-as-usual.

We see the Vision exercise as just one example among many of the complex scientific, social, and regulatory challenges proceeding daily in the GYE (e.g., Clark & Minta, 1994). This pattern is typical of the decision and policy processes in general, regardless of their substantive specifics. These general processes are well described in the policy sciences literature (Lasswell, 1971; Brewer & deLeon, 1983; Brunner, 1991a). Despite the intense emotions generated, the Vision exercise is not out of the ordinary in this regard. We are hopeful that by carefully identifying and analyzing the problem at hand, seeking to understand its full context, and using an appropriate array of methods—that is, employing the problem-solving framework outlined by Lasswell (1971), Brewer and deLeon (1983), and Brunner (1991a)—individuals and organizations can productively analyze and change complex policies and programs.

Lessons for the Future

The Vision experience offers several lessons for improving natural resource management and future decision and policy processes in the Yellowstone region. The following suggestions are all designed to upgrade problem orientation and contextual understanding so that decisions regarding natural resource management in the GYE and elsewhere can be most effective.

First, an issue as controversial as land management, particularly when shifting emphasis away from century-old traditional uses (see Rasker et al., 1992), requires explicit, understandable statements of purposes and clear objectives for implementing change. Instead, the *Vision* “spoke in generalities and did not quantify things like acceptable levels of change or how timber harvests might be affected” (Barbee et al., 1991, p. 84). It emphasized the “utopian” over the practical and expressed great faith in the agencies’ ability to improve coordination under existing policies and programs. The agencies need to explore, among themselves and with the national public, definitions of the current problems in the GYE. Only on that basis can management and policy goals be clearly set.

Second, the agencies need to address practical solutions once the problems are understood. They need to describe practical means of setting and accomplishing objectives.

Criticisms that we were too vague were at least partly correct. For example, at the same time that we were claiming that the *Vision* was just a statement of principles, it did seem to be a document of some authority or record. The *Vision* made clear that the ambition of the agencies was that these principles would eventually be incorporated into national forest and national park management plans. (Barbee et al., 1991, p. 84)

In defining a given problem, the breadth of acceptable solutions is simultaneously defined (Dery, 1984); when a problem definition is inadequate, the resulting solutions are also likely to be incomplete or incomprehensible. To this day, it remains unclear to many people exactly what the *Vision* and *Framework* were supposed to be or do. Such ambiguity robbed the *Vision* of its standing and legitimacy. The highest levels of the agencies or Congress should have formally directed, supported, and propelled the *Vision* as an official planning exercise. Such a formal assignment would not have mitigated the clash of interests, values, and management structures that constitute the problem of current management in the GYE, but it would have formally profiled or legislated the exercise and provided the necessary authority for the agencies to propose, select, and implement specific policy changes.

Third, given the enormous scope and the implications of the Vision exercise, there needs to be extensive analysis of social, organizational, political, and economic impacts as well as analysis of how people and organizations might respond to these real or—more importantly—perceived changes prior to carrying out the process. By failing to appreciate the wide range of values held by their constituencies and the strength or intensity of those values, the agencies increased the likelihood of polarization and greatly diminished chances for success. Once the draft *Vision* had been released, the agencies were not only ill-prepared to deal with the opposition that was generated, they were no longer in a position to mitigate the power of misinformation. The agencies underestimated their opposition and overestimated their support. The unexpected formation of a strong coalition of commodity groups and political sovereigns, in conjunction with the conspicuous absence of the conservation community, led to sure derailment.

Fourth, the public needs to initiate a partnership with the agencies so that public values (despite their broad range and often conflicting nature) will not only be incorporated but help drive the process. One hindrance to such an alliance is the specialized knowledge holdings of the agencies, such as cumulative effects models of human impacts on natural resources or regulatory concerns, which need to be communicated to the public, perhaps through a large-scale educational campaign. Specific policy recommendations need to be formulated through dialogue and input from the various local and state governments, local businesses, tourist industries, large organized commodity extraction interests, and others (Goldstein, 1992), perhaps through a series of hearings at local, regional, and national levels. National interests, largely absent from the Vision process, were unable to offset the vehement regional campaign mounted against it. "So we were faced with a powerful regional campaign, superbly engineered by special interest groups and featuring stunning inflammatory rhetoric against the Vision" (Barbee et al., 1991, p. 85). Certainly, this issue raises larger questions about the fundamental relationship, the dynamic tension, between a democratic people and its government and who is and who should be in charge.

Fifth, education—public, intra-agency, and interagency—would have greatly benefited the Vision process by informing everyone about the issues and enabling them to participate in decision making. Education helps prevent misinformed myths from becoming reality. Educating agency staffs is critical because a well-informed and active public is limited by the agencies' capacity to internalize public interests and integrate them with scientific knowledge and regulatory mandates. Agency staffs are further hampered by the extreme complexity as well as the long time scales and large geographic scales of the issues they must address. Better conceptual and technical tools need to be acquired so that managers can implement policies across institutional boundaries (see Clark, 1993). A series of personnel training sessions, sponsored by nonagency organizations (academics and consultants), could provide agency employees with additional knowledge.

Sixth, the biologists, foresters, rangers, and naturalists charged with carrying out the Vision exercise could have benefited from additional professional knowledge and experience in addressing complex decision and policy processes in environmental management issues. This might necessitate bringing in outside policy professionals to help analyze and understand the myriad dimensions of formulating and implementing any policy for managing the GYE. Whether it is in the form of consultants, task forces, or new staff, the best qualified people must be brought to an issue of this significance to integrate rigorous and reliable science, societal values, and agency structures and diverse mandates into responsive and practical management schemes.

However, we acknowledge that there are limits to communication, education, clear goals, and sound analyses. It may not ultimately be possible to achieve consensus on land use in a region so strongly polarized. Nevertheless, the public policy process around this issue continues and decisions are being made, with no end or final resolution in sight.

Conclusions

The Vision process has engendered enormous publicity and debate. Many authors, journalists, scientists, conservationists, policy specialists, and managers have detailed difficulties with the process and the documents, and although our comments are only one view among many, we believe that the explanations we offer shed new light on the issue.

Though the *Framework* was significantly diminished in length and content from the *Vision*, we are in no way convinced that the Vision exercise was a complete failure. It is important to remember that the process itself continues and the principles it articulated survive in both their original and modified forms. Despite its inadequacies and the controversy it engendered, the *Vision* was widely distributed and remains a valuable framework from which to move forward in planning natural resource management in the GYE. However, the future of coordinated management in the GYE as envisioned in the *Vision* depends on our collective ability to recognize the weaknesses in the exercise and to overcome them in future coordination and planning efforts. We hope our analysis and comments will contribute toward the GYE becoming a successful conservation model for ecosystem management throughout the United States and the world.

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