Experiencing Limits of Acceptable Change: Some Thoughts After a Decade of Implementation

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Abstract—Wilderness managers and researchers have experienced implementation of the Limits of Acceptable Change planning system for over a decade. In a sense, implementation of LAC has been a broad scale experiment in planning, with the hypothesis being that LAC processes are more effective approaches to deal with questions of recreation management in protected areas than the carrying capacity paradigm. Workshop participants identified a number of both positive and negative consequences resulting from their experience with LAC. This paper synthesizes these outcomes by discussing the positive results, describing the problems encountered, and outlining lessons learned.

A fundamental objective of the workshop was to identify and archive insights of managers and researchers gained from experiences with Limits of Acceptable Change (The terms Limits of Acceptable Change or LAC processes will be used to refer to LAC, VERP, VAMP, and other similar visitor management systems for ease of presentation). LAC processes represent a large scale experiment, in the sense that they embody a different approach to managing recreation problems in wilderness and backcountry settings. Understanding how these processes have worked, including their strengths and weaknesses, helps future managers and researchers implement techniques to exploit their strengths while avoiding or addressing their weaknesses. During the latter stages of the workshop, participants specifically addressed the strengths and weaknesses of LAC through a round robin discussion. We present the results of this discussion under three themes: (1) positive outcomes; (2) problems and barriers encountered; and (3) lessons learned. For each of these themes, we list and summarize the dialogue that occurred at the workshop as well as our own interpretation.

Positive Outcomes

Increased Attention Toward Management of Biophysical and Social Conditions

Concern about protected area values has always formed the foundation for attempts to establish recreational carrying capacities. But the carrying capacity paradigm was limited in its utility to address this concern through its implicit emphasis on establishing limits on recreational use. Traditionally, managers focused attention on action rather than understanding. This is evident in the carrying capacity approach where managers would feel successful if they limited use to a "magic number" regardless of whether this number was derived from a genuine understanding of conditions, trends in these conditions, and the management actions needed to keep conditions within acceptable limits. Even though numerous authors held that objectives were necessary to determine carrying capacities (for example, Lime and Stankey 1971), managers and researchers long pursued attempts to relate use levels to biophysical or social impacts. In the sense used here, such objectives (specifically written) would inform planners of the acceptable conditions permitted in the area. LAC has changed this to making the concern about outcomes and conditions more explicit.

By focusing attention on desired or acceptable conditions, or both, in the first few components, LAC directs attention to the more useful question: "What are the appropriate or acceptable conditions, and how do we manage for them?" By emphasizing discussion over conditions first, LAC enhances the focus on determining appropriate conditions. For example, the new first step identifying area goals specifically incorporates the notion of documenting desired conditions, significance of the area's resources and values, and specific legislative mandates. In (new) Step 3, prescriptive management zones are defined and identify the acceptable conditions permitted in each of the zones. Discussion of appropriate management actions, where debate in wilderness management frequently transpires, does not appear until much later in the process (now Step 8), after agreement on desired and acceptable conditions has been reached. The result has been to stimulate discussion about how much human-induced impact is acceptable, the tradeoffs among competing goals, and explicit consideration of human values and judgments into decisionmaking. This has led to a more complete understanding of the location, intensity, and type of biophysical impacts resulting from recreational use, and a more explicit discussion of how much impact is acceptable.

Enhanced Monitoring of Wilderness Conditions and Effectiveness of Management Actions

LAC has significantly changed management by explicitly incorporating a monitoring component. LAC specifically incorporates monitoring as (new) Step 10 and is also incorporated into VERP and VAMP processes. Monitoring is

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defined as periodic and systematic measurement and display of indicator variables. Monitoring is essential to determining what types of changes in social and biophysical conditions may be emerging over time and critical to determining the effectiveness of management actions in addressing impacts and concerns. Professional ethics demand that managers monitor the outcomes of their decisions. Monitoring provides information vital to management because it may suggest needs for revisions in actions or acceptable conditions.

In addition, the Government Performance and Results Act (GPRA) of 1993 requires agencies to develop measures of outcomes and outputs, and to report on them annually, thus increasing the emphasis on monitoring. LAC processes can assist protected area management agencies to meet this obligation by specific consideration of monitoring in the planning process.

Increased Attention on Zoning as Means of Protecting Pristine Qualities

Both the VERP and LAC planning systems recognize that diversity exists in biophysical and social conditions within protected areas. This diversity in conditions may be desirable, acceptable, or even unacceptable. In some places within a given protected area, compromises in pristine conditions have to be made to allow recreational access. In other places in the same area, conditions are closer to pristine and planners may decide to maintain this situation. Management can take action to protect the diversity by continuing to protect the more pristine areas (Haas and others 1987). By making this decision explicit, managers have constructed a framework upon which they can assess the effects of decisions, such as restricting camping in one area that will lead to camping in other areas.

LAC processes help accomplish this task by allocating areas (new Step 3) to different prescriptive management zones (see Cole and McCool, this proceedings). Such zoning is essentially a land-use allocation, and its most fundamental purpose is to limit the spread of human-induced impacts. Zoning of wilderness and National Park Service backcountry in the past has been controversial. Some have argued, for example, that there is only one wilderness, and therefore prescriptive management zoning is prohibited. On the other hand, Congress mandated, in Section 4(b) of the Wilderness Act, that agencies manage wilderness to protect the values for which the area was established. Prescriptive management zoning provides a powerful tool to meet this mandate.

Increased Trackability and Explicitness of Protected Area Decisionmaking

One of the challenges of protected area management is the large number of subjective, value-laden decisions that characterize planning processes. Such decisions involve, for example, identification of desired conditions, statements of standards, ranking of management actions, and selection of indicators. Cole and McCool (this proceedings) contend that science plays an important role in planning, but the role is limited to informing decisions, not driving them. And, as Friedmann (1987) has insisted, science is limited in its capacity as a basis for social action.

Protected area planning occurs in highly politicized and charged settings, in which agency actions are not only scrupulously scrutinized, but trust also tends to be an underlying issue. Carrying capacity approaches often did not explicitly link use limit policies to improvements in desired or acceptable conditions. Consequently, additional controversy was frequently generated as affected publics struggled to understand and accept not only the problem, but its purported solution as well. In addition, carrying capacity methods did not explicitly reveal the necessary tradeoffs among competing goals.

When value judgments are made in managing publicly managed resources, it is in the public interest to reveal the various beliefs, information, and biases that were involved in the decision. LAC provides a rationale and recommended sequence for their components; thus, affected publics and planners can understand why certain activities are being conducted when they are being conducted. In addition, LAC processes, when combined with suitable public involvement, identify the type of information needed by the public as well as how the information will be used.

Thus, a major goal of planning processes is to make explicit the procedure by which decisions are made. Achieving this goal reduces the amount of implicit subjectivity in decision processes and enhances understanding, if not agreement, about how such decisions were made. Explicitness also prevents "hidden agendas" from prevailing. The tradeoff between permitting unrestricted public access and protecting pristine conditions is the most fundamental decision made in managing recreation in protected areas. LAC, by forcing explicitness and a measure of systematic thinking, reveals not only what goals are defined as the ultimately constraining ones, but also discloses how far compromises between goals will eventually ensue. The public then is informed and can express judgments about the appropriateness of these compromises for publicly managed resources.

Furthermore, the practice of involving the public throughout LAC (Krumpe and McCool, this proceedings; McCool 1996; McCoy and others 1995), particularly in the Forest Service, has led not only to well accepted ranking of high priority management actions, but also to a reduction in the likelihood of adopting inappropriate management actions. The level of discourse afforded by public involvement results in enhanced understanding of what issues, concerns, and values are of greatest importance, and the relative acceptability of management actions to address them. Socolow (1976) once stated that analyses are not about what is important, but rather what analysts feel is interesting. Public participation combined with a systematic process forces analysts and publics to justify decisions, explain priorities, divulge biases, and clarify proposed actions.

Finally, LAC encourages separating prescriptive decisions from descriptive activities: describing *what is* is a different decision than determining *what ought to be*. Carrying capacity determinations in the past often confused establishing a use limit, for example, with allocating a resource to a specific type of recreation opportunity (Schreyer 1976). This confusion resulted in two activities occurring simultaneously, further exacerbating an already perplexing debate over the "carrying capacity" of a protected area. By separating description (such as the inventory component) from prescription (standards) in time and space, decisions can be more easily tracked.

Enhanced Visibility of the Costs of Wilderness Management

Through the process of identifying management actions likely to lead to reductions in unacceptable conditions or restrictions on recreational access, LAC has made costs (financial, social, and economic) more explicit. In a real sense, LAC forces examination of the intrinsic tradeoffs that must be initiated in compromising between two or more competing goals. These tradeoffs are some of the costs associated with wilderness management.

Understanding the costs, and their multidimensional nature, is fundamental to informed public policy, allows deliberation of the benefits received for the costs incurred, and helps Federal agencies meet the requirements of GPRA. This allows planners and the publics to understand not only the efficiency of management actions, but their distributional effects as well. A lot of different interests are involved in protected area management: wilderness visitors (a diverse group), outfitters, wildlife groups, water users, and agency managers.

LAC reveals costs through not only examining the consequences of alternatives (typical of environmental analysis procedures) but also through an extensive analysis of desired and acceptable conditions and by identification of management actions likely to be effective. For example, a discussion of how much the ultimately constraining goal will be compromised naturally leads to consideration of what management actions will be needed to avoid further compromise (that is, conditions violate standards, and thus must be corrected). Much of this discussion will focus on effectiveness, but we feel an equally important, and contentious, component will deal with equity issues: Who (usually some wilderness user group, but increasingly vicarious users) will bear the costs of management actions needed to avoid unacceptable conditions? To what extent are costs borne related to benefits received? Are costs relative to impacts caused? This discussion would be constructive because out of conflict arises creative solutions, the conflict providing incentives for interests to find ways of avoiding unacceptable conditions while minimizing costs.

Encouraged Innovative Approaches to Citizen Participation in Wilderness Decisionmaking

By combining a systematic planning process (in the tradition of rational-comprehensive planning) with a new approach to public participation based on the theory of transactive planning (Friedmann 1973), LAC has successfully integrated involvement with planning (McCool and Ashor 1984; Stokes 1990). Such involvement, built upon dialogue leading to mutual learning, has increased the success rate of LAC applications (McCoy and others 1995). The significant level of involvement in wilderness decisions has led to other important outcomes. These include heightened understanding of wilderness management, greater interest in implementation, a sense of ownership in the plan and area, and an improved sense of mutual respect between agency managers and affected publics. In addition, public participation has served as an institutional memory for agencies with frequent turnover of personnel.

As we noted above, heightened public involvement is important because of the series of subjective value judgments that are involved in protected area management, and the diversity of interests affected. Intimate public participation is also based on an assumption that experiential knowledge as well as scientific knowledge has much to contribute to decisionmaking. Such public involvement tends to increase the quality of discussion, rather than dilute it (Paehlke and Torgerson 1990), ensures that socially relevant issues are considered, and forces agency biases and policies to be not only revealed but justified.

As LAC was originally designed, it followed the classical rational-comprehensive model of planning, with public involvement indicated only at the issue identification and alternative evaluation stages (McCool and Ashor 1984). However, the original experiment in the Bob Marshall Wilderness Complex in Montana (Stankey and others 1984) that combined transactive planning with LAC flourished in its capacity to not only develop a plan, but also provided opportunities for learning between interests and the agencies involved. Moore (1994) noted that the process was also successful because it led to a sense of ownership in the plan, allowed interests to be represented, and overcame formerly strained relationships between the Forest Service and its publics.

Public participation without the structure of a planning process probably would not have led to such a set of outcomes. Likewise, if LAC had proceeded without its marriage to transactive planning, Forest Service officials would probably still either be writing the plan or responding to administrative appeals or court litigation. By combining the two approaches, managers were able to create an almost ideal planning setting in the midst of an often-contentious debate over Forest Service management of public lands. Participants were all trained by a facilitator (the senior author) in the LAC process. Participants understood, as individual steps (or components) were initiated, why things were being done when they were done. They knew what type of information the Forest Service needed and why, and how their input would be used. Because of the face-to-face planning process, acknowledgment of input was immediate.

While VERP (USDI National Park Service 1997) now recognizes the importance of public participation beyond the NEPA procedural requirements, the National Park Service has been more reluctant to engage the public using the principles of transactive planning. Nevertheless, the value of public input into VERP is formally acknowledged and serves similar useful functions as it does for LAC. We would expect that public participation, in general, would increase as public land managing agencies increasingly embrace the need for better and more useful public input.

Improved Capacity of Federal Agencies to Manage Wilderness

By providing a structure for decisions, public participation, and policy-relevant research, LAC processes have strengthened agency capability to protect the resources within its charge. Changing the paradigm of public participation has improved relationships with affected publics so they are now more effective supporters of management

efforts. LAC has stimulated additional research, by both agency and academic scientists, on questions of critical importance to wilderness management. Focusing concern on conditions, not use limits, leads to more informed discussion about how wilderness values will be protected. These outcomes are significant steps in improving wilderness management efforts. They challenge institutional arrangements that deter coordinated management and improve the efficacy of manager effort. Because wilderness managers tend to have a close-knit network, success stories (and failures) are quickly passed around and tested in a variety of new situations. This experimentation and learning itself is a key contributor to increasing the organization's capability.

Barriers Encountered

Most wilderness managers would state that LAC is complex. Embarking on an LAC planning process may challenge the most competent wilderness planner, and even the most practiced public meeting facilitator will struggle with balancing multiple competing interests. Considerable wilderness management, and organizational and facilitation expertise is needed to implement LAC processes. Workshop participants identified five fundamental barriers and problems encountered in implementation that will be briefly discussed below. We discount the criticism of LAC as being "too complicated." LAC is no more complicated than other land management and planning systems. LAC cannot be used as a cookbook by a nonthinking automaton. LAC is the simplest available approach for effectively dealing with the complexity of the real world.

Inadequate Commitment to Good Planning and Management

Protected area planning and management increasingly occurs within a context of declining budgets, government downsizing, and privatization of some functions. The effects of these changes have been to accelerate manager concerns about agency commitment to planning and management. Too often, it seems, managers are asked to implement programs without the funding to do a professional job. This lack of commitment extends to a paucity of support for needed research, lack of training and continuing education opportunities, fatigue among personnel as they are continually asked to engage in new planning activities before the old ones see results on the ground, and a lack of accountability for planning decisions.

These problems are not unique to LAC processes. And, one could make an argument that LAC, if fully supported initially, would actually decrease management costs in the long run. However, protected area managers appear to be in a constant state of concern about their ability to meet the public's expectations, achieve agency-mandated targets, and preserve wilderness and backcountry resources. LAC is sometimes overlaid upon these concerns, and is itself often a source of additional confusion and frustration.

We can offer no practical counsel for a way out of this predicament. Agency resources are a function of national priorities as reflected in the political and appropriations process. An era of caretaking may be the manager's immediate future. Unfortunately, the caretaking also occurs within a context of growing scarcity of wilderness and backcountry resources and an increasingly large and diverse set of demands on them. While managers "wait" for additional resources, the decision space to address the issues confronting them declines irreversibly.

Compartmentalization of Functions

Protected area management is intrinsically an integrative responsibility. Managers, planners, and scientists all need to provide their expertise to solve numerous, related problems. Developing a prescribed natural fire policy, for example, cannot escape considering the effects on visitor behavior and travel patterns, the expected and received recreational experience, profitability of outfitters, habitat and forage availability for wild animals, and a host of water and air quality parameters. Yet, protected area managing agencies are organized along largely functional lines, with a vertical bureaucratic orientation, providing few internal incentives for integrative solutions. Securing information, even minimal amounts, may face a host of almost insurmountable obstacles. For example, Forest Service managers needing information for LAC decisions cannot easily contract for research. Science is a function of the agency's research branch, which has its own set of priorities; the managing branch itself cannot conduct or sponsor research. Understanding visitor needs and preferences may require research on them; such research must be approved by the Office of Management and Budget (if sponsored by the Federal government), a procedure not required when biological data are being collected.

The tendency to separate monitoring and implementation from planning leads inevitably to a lack of ownership by field managers in plans developed by others—a similar problem confronting affected publics. We noted earlier (Cole and McCool, this proceedings) that, for example, definitions of indicators must account for how they will be monitored. If totally separate people/organizations are involved in both activities there are likely to be significant "disconnects" in implementation. In many protected area organizations, planning is the responsibility of higher levels of management; implementation is left to personnel at the lower rungs. Implementation may even be conducted by seasonals who would have little understanding (because of the lack of involvement in the planning) of the rationale for both management actions and monitoring. Planners may thus be confronted with considerable resistance for implementation.

Legal Framework for Public Participation is in Disarray

Krumpe and McCool (this proceedings) presented a variety of arguments for including affected publics in LAC processes. At precisely the moment in time when managers recognized the important values of public participation and when the public is widely demanding greater access to governmental decisionmaking, the legal framework for participation has become increasingly confused. The primary reason for this confusion is the Federal Advisory

Committee Act (FACA) signed into law in 1972. This legislation states that unless chartered by the Federal government, advisory committees to Federal agencies must be composed solely of full-time Federal employees. While committees can be chartered, the process is arduous, and the disclosure and reporting requirements are equally onerous. Federal agencies operating in politicized settings, where accusations of lawbreaking are more frequent than rare, have been exacting in their cautiousness not to be accused of ignoring one more law. This has had the effect of shattering the more innovative public participation programs.

Lack of Attention to Experiential Knowledge

Friedmann's (1987) admonition that action in society requires both scientific and experiential knowledge has structured much of the discussion around public participation (Krumpe and McCool, this proceedings). Within agencies that have had an outstanding tradition of science-based management, this position has been difficult to maintain. Experiential knowledge does not come in the form of tables of numbers, means, standard deviations, or theoretical concepts. This form of knowledge is expressed through anecdotes, emotions, and recollections. It is not designed to systematically observe a phenomenon and collect data on it. Nevertheless, the claims to superiority made by scientists of their form of knowledge are often invalid (Friedmann 1987) for a variety of reasons. (We note that scientists themselves often use anecdotal observations to construct reality. An incident in the fall of 1997, where an Orca killer whale was observed attacking a great white shark, caused marine biologists to "totally rethink" their theories of which species was the dominant predator. The total rethinking was the result of an accidental observation by tourists.)

Given the lack of institutional support for data collection and the increased desire by the public to contribute to decisions in a constructive sense, planners must attend to experiential knowledge as one, but not sole, source of information upon which to base decisions. Planners must conceive of LAC not as an expert-driven system, but as a framework that is implemented collaboratively—in the sense of working through issues and questions (Yankelovich 1991)—with agency planners, scientists, and publics recognizing the legitimacy of the others' contributions.

Agencies Often Lack "Political Will" to Implement Actions

In our discussions at the workshop and with a host of protected area managers employed by several agencies, lack of political will (the willingness to make needed, but controversial decisions) among senior level decisionmakers is often cited as a major concern in implementation of policy. Again, this problem is not one restricted to LAC. It may reflect the overtly increasing politicization of all government agencies. We would expect "lack of political will" to be a widening problem as the conflict over scarce resources escalates, the stakes grow ever larger, the words harsher, the politics increasingly strident. An effective public participation program may be able to deal with this situation somewhat, because it represents a redistribution of power, an enhanced opportunity to learn and understand problems, and, for the participating public, an opening for organizing an effective constituency to counteract "interest group" politics. For this reason alone, public participation processes may be controversial among some segments of the public, for their access and influence is declining in a relative sense.

Lessons Learned

Workshop participants represented many perspectives and roles in implementing LAC processes, evaluating them, and using them as frameworks for research. We attempted to capture this experience by asking participants to identify the principal lessons learned from their engagement with LAC processes. Here, we identify these lessons through a series of propositions.

Protected Area Planning is a Political Process in Politicized Settings

Planning in protected areas is largely a matter of allocating resources to specific uses and values. In particular, much of LAC planning has focused on managing different types of recreational opportunities and experiences. It concerns resolving conflict between recreational access and environmental protection. In these tasks, science and technical information play important roles in identifying options and describing consequences, but do not provide answers. Krumpe and McCool (this proceedings) note that the types of situations often confronting wilderness managers are frequently characterized by a lack of agreement on goals and little scientific agreement on cause-effect relationships. In these situations, allocation and management decisions are inherently social and political rather than technical because human relationships are involved.

Planning occurs within increasingly politicized settings in which (1) agencies have lost the political authority to implement proposed actions (in contrast to the legal authority, which most agencies continue to maintain, to conduct planning); and (2) interest groups vie for the veto power over implementation of agency actions. Planning cannot proceed efficiently unless agencies understand this context and develop mechanisms to work effectively within it. What this means is that planning must be normative in terms of understanding whom the planner serves (Friedmann 1993). It must be interactive, which promotes the dialogue and mutual learning upon which societal action is based. Planning would be learning focused, because we often don't have the needed information to describe cause-effect relationships. Planners and the publics may not understand what is "broke" and, therefore, would oppose the "fix." Planning would also emphasize informed consent of those affected. Friedmann (1993) argues that planning should be political, because plans encounter resistance, and overcoming resistance requires strategic action. Such action is intrinsically political because it organizes resources to accomplish socially desirable goals.

Defending Decisions Requires a Trackable/Traceable Process

The politicized settings that characterize protected area management require decision processes that can be tracked, so that planners may inform affected publics of how decisions were made. In a litigative context, documentation of process is important in defending decisions. Access to decision processes provide a reviewer/plaintiff/defendant with information critical to understand, if not to agree with, the decisions made. Because LAC occurs in a reasoned sequence, interested groups can determine connections and linkages among the different decisions. The trackable nature of decisions made in LAC, however, is a necessary but not sufficient condition for defense of management actions. In learning settings, trackable processes provide an opportunity for the negative feedback necessary to understand consequences and potentially modify decisions.

Planning is a Process, Not Necessarily a Product

Planning is a process, but the output is often defined as a plan—a document. Planning critics often point to plans that sit on shelves gathering dust and that are never implemented. Planning is about implementation, not about producing a document. We view planning as a process of intervening in events to ensure that a desired future is attained. Ackoff (1974) noted that problems never stay solved because situations change. Thus, planning is a continual process of implementing actions, evaluation, and modification where necessary. Products of planning include a document (the "plan"), changes "on the ground," and enhanced knowledge and learning. These increase capacities of agencies and their constituencies to respond to change.

The components of LAC processes provide planners with a framework for thinking about issues and problems and for resolving conflict. Procedurally based planning works well only in situations with a single, agreed upon goal, where beliefs about causes and effects are well established. LAC is a process more than a procedure or set of protocols.

Vigilance in Grounding Planning in Legislation is Critical

As we have argued, planning proceeds within an external context—it is informed by the broader, larger forces that influence wilderness and protected areas. These forces include legislation, political activity and party politics, agency policy, and the regional socio-political climate. Understanding legislative history and mandates is critical to protected area planning. While the Wilderness Act provides overall guidance it also allows considerable administrative discretion. Individual Wildernesses and National Parks may have additional specific legislation and Congressional direction attached to them. For example, the Great Bear Wilderness in Montana contains an active backcountry airstrip that is permitted to continue, not because of formal legislation, but because of the "sense" of Congress as indicated in the committee report that accompanies the legislation. Reviewing and understanding the committee's discussion was useful in developing management actions for the airstrip in the Bob Marshall Wilderness Complex LAC process. While it may seem obvious that one understand legislative direction and intent, these sometimes get lost in planning processes.

Understanding the Institutional Context for LAC Processes is Fundamental to Planning and Implementation

A variety of institutions provide the context for wilderness management. These include legislation and associated processes, the agencies and their cultures that are legally required to manage and protect wilderness resources, and other agencies that deal with resources that occur within wilderness (such as state fish and game departments). Still other legislation, such as the Clean Air and Clean Water Acts and their administrative agencies, bear upon how wilderness is managed. Procedures for evaluating personnel performance, normative beliefs about how planning ought to occur, and the structure and activity of nongovernmental organizations influence how and what decisions will be made.

This institutional framework has tremendous influence over how planning is conducted. LAC planners must assimilate this complex environment in their planning journey if they wish to make effective plans. For example, there has long been a debate as to how LAC processes relate to NEPA and the planning requirements of NFMA. Some Forest Service planners have rejected the notion of a wilderness planning process because NFMA, in their judgment, allows only one plan per forest, therefore, one planning procedure. Likewise, as Hof and Lime (this proceedings) note, VERP has been assimilated into the National Park Service general management planning process because of institutional perspectives on what agency component conducts planning and how. Such views determine if and how LAC processes will be used.

Planning Success is Measured Multidimensionally

Ultimately, the goal of planning is to intervene in a series of anticipated events to move toward a future that we project to be a more desirable one. Therefore, a fundamental measure of the success of our planning is the extent to which that future was changed to meet our desires. LAC is a specific tool designed, as Cole and Stankey (this proceedings) argue, to resolve conflict between two goals: protection of wilderness conditions and unrestricted recreational access. Thus, a principal measure of success would be the extent to which the conflict is resolved. Did the proposed management actions reduce levels of human-induced impacts with a minimum of restriction on public access?

However, a variety of recent research suggests that in planning situations using collaborative learning processes, success has other essential dimensions (Guthrie 1997; Moore 1994). These other dimensions include learning, relationship building, responsibility ("ownership" of the plan by

various affected groups), representation of interests, and socio-political acceptability. If one assumes that these are useful outcomes, then planning should be designed to achieve them.

Learning is an Important Objective in the LAC Process

LAC was originally developed in the tradition of rational-comprehensive planning: emphasis on goals (in this case, desired conditions, opportunity class descriptions and standards); search for all reasonable alternatives and evaluation of those alternatives. However, in its first complete application in the Bob Marshall Wilderness in Montana, it was carried out as a transactive planning process (Friedmann 1973), which is characterized most fundamentally by its emphasis on learning. The emphasis on learning is important when there is disagreement about available knowledge, and where goals are contested. We focus on learning here as a separate lesson from that immediately above because it is so important. An emphasis on learning helps wilderness managers understand the consequences of actions, and implies that monitoring must proceed systematically, not as a separate component, but integral to wilderness management. Learning suggests that our management is to a large degree experimental, that we can't predict with accuracy all the outcomes of an action, and that we can adapt our management to new information.

References

Ackoff, R. 1974. Redesigning the future. New York, NY: John Wiley and Sons. 260 p.

Friedmann, J. 1993. Toward a non-Euclidean mode of planning. Journal of the American Planning Association. 59(4): 482-485.

Friedmann, J. 1987. Planning in the public domain: From knowledge to action. Princeton, NJ: Princeton University Press. 501 p.

Friedmann, J. 1973. Retracking America. Garden City, NJ: Anchor Press/Doubleday. 289 p.

Guthrie, K. 1997. Measures of success in public involvement processes: An investigation of how managers, researchers and members of the public define success. Unpublished M.S. thesis, Missoula, MT: University of Montana. 98 p.

Haas, G. E.; Driver, B. L.; Brown, P. J.; Lucas, R. C. 1987. Wilderness management zoning. Journal of Forestry. 85(12): 17-21.

Lime, D. W.; Stankey, G. H. 1971. Carrying capacity: Maintaining outdoor recreation quality. In: Recreation symposium proceedings. Gen. Tech. Rep. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.

McCool, S. F. 1996. Limits of acceptable change: A framework for managing national protected areas: Experiences from the United States. Paper presented at Workshop on Impact Management in Marine Parks, Kuala Lumpur, MALAYSIA. August 13-14, 1996.

McCool, S. F.; Ashor, J. 1984. Politics and rivers: Creating effective citizen involvement in management decisions. In: Proceedings, national river recreation symposium; October 31-November 3, 1984; Baton Rouge, LA. Baton Rouge, LA: Louisiana State University: 136-151.

McCoy, K. L.; Krumpe, E. E.; Allen, S. 1995. Limits of Acceptable Change Planning—Evaluating implementation by the U.S. Forest Service. International Journal of Wilderness. 1(2): 18-22.

Moore, S. A. 1994. Interaction processes and the resolution of environmental disputes: Case studies from public land planning in the United States and Australia. Unpublished Ph.D. Dissertation. Seattle, WA: University of Washington.

Paehlke, R.; Torgerson, D. 1990. Environmental politics and the administrative state. In: Paehlke, R.; Torgerson, D., eds. Managing leviathan: Environmental politics and the administrative state. Peterborough, Ontario: Broadview Press: 285-302.

Schreyer, R. 1976. Sociological and political factors in carrying capacity decision-making. In: Proceedings, visitor capacity conference; 1976 April 29-30; Fort Worth, TX. Fort Worth, TX: National Park Service, Southwestern Regional Office.

Socolow, R. H. 1976. Failures of discourse: Obstacles to the integration of environmental values into natural resource policy. In: Tribe, L. H.; Schelling, C. S.; Boss, J., eds. When values conflict: Essays on environmental analysis, discourse and discussion. Cambridge, MA: Ballinger Publishing: 1-33.

Stankey, G. H.; McCool, S. F.; Stokes, G. L. 1984. Limits of Acceptable Change: A new framework for managing the Bob Marshall Wilderness Complex. Western Wildlands. 10(3): 33-37.

Stokes, G. L. 1990. The evolution of wilderness management. Journal of Forestry. 88(10): 15-20.

U.S. Department of the Interior, National Park Service. 1997. The Visitor Experience and Resource Protection (VERP) Framework. A Handbook for Planners and Managers. Denver, CO: Denver Service Center, National Park Service.

Yankelovich, D. 1991. Coming to public judgment: Making democracy work in a complex world. Syracuse, NY: Syracuse University Press. 290 p.