

## UNIT 4 Protected Area Planning Approach

The objective of Unit 4 is to describe the protected area approach to natural resource recreation planning and provide several examples of it. The protected area planning approach, initially referred to as the limits of acceptable change (LAC) planning framework, was proposed in the early 1980s as a means of improving management of protected areas such as designated wildernesses and national parks.

In particular, protected area planning approaches were developed to systematically and practically deal with the issue of outdoor recreation carrying capacity. As described in chapter 4 of the Manning reading, carrying capacity refers both to the impacts of recreationists on biophysical resources and the effects of increasing recreation use on the quality of a visitor's experience. Protected area planning approaches are a tool that managers may use to analyze and monitor impacts to biophysical resources and to the visitor experience, and can provide a factual basis to make better decisions about managing impacts.

As a primer to this section, you are advised to return to the Manning text and review chapters 4-6, which address the topics of carrying capacity, crowding, and indicators and standards of quality. These chapters provide an important theoretical backdrop to this unit's readings on protected area planning approaches.

### Background\*

The seeming promise of using carrying capacity--that limiting use could solve most management problems and that use limits could be determined by objective factual data--proved false. Instead, limiting use is just one of many alternative [recreation] management techniques and often is not even the most effective. Moreover, decisions about appropriate use levels are at least as dependent on subjective evaluations (management objectives) as they are on the descriptions of relationships between amount of use and amount of impact that science can provide (Shelby and Heberlein, 1986). Consequently, the latest generation of planning frameworks focus their attention on the formulation of specific management objectives. Substantial progress has been made in establishing objectives that are specific enough to "drive" the recreation management planning process. Instrumental to allowing this progress was the concept of setting limits of acceptable change.

The first clear articulation of the "limits of acceptable change" concept appeared in a graduate student study of impacts on campsites in the Boundary Waters Canoe Area Wilderness. Frissell (1963) concluded that if recreation use is allowed, campsite impact is inevitable and must be accepted. However, this author stated, "a limit should be placed on the amount of change to be tolerated. When a site has reached this pre-determined limit of deterioration, steps should be taken to prevent further adverse change." In other words, there is a conflict between allowing recreation use and preserving natural ecosystems. The key is to define an optimal balance between these two conflicting goals,

in which both recreational opportunities and natural ecosystems are compromised to some extent. This balance can be expressed as a limit on deterioration (change).

Frissell and Stankey (1972) recognized that this quest for balance between use and protection of quality environments and experiences was similar to the intent behind carrying capacity. Consequently, they proposed the "limits of acceptable change" concept as an alternative model for making decisions about carrying capacity. Their fundamental idea was to focus management on achieving specific objectives, defined as staying within maximum deviations from 1) the "natural range of variation" in ecological conditions and 2) a "pristine wilderness experience." Starting in 1980, a group of U.S. Forest Service researchers refined this general concept and produced a procedural manual, "Limits of Acceptable Change (LAC) System for Wilderness Planning" (Stankey, Cole, Lucas, Peterson, and Frissell, 1985). Conceptually related processes-- Visitor Impact Management (VIM) and Visitor Experience and Resource Protection (VERP)--were subsequently developed for use by the National Park Service (Graefe, Kuss, and Vaske 1990; Manning, Lime, and Hof 1996).

(\*Above excerpted by permission of the authors from Wildland Recreation: Ecology and Management, 1998, W. Hammitt and D. Cole.)

In the first assigned reading in this Unit, Cole and Stankey describe the history of protected area planning approaches, particularly LAC, and provide a justification for their development. As a prelude to a discussion of protected area planning approach processes, they also describe the steps in the generic protected area planning process.

### Protected Area Planning Approach Processes

The LAC, VIM, and VERP processes all use slightly different terminology and step sequences. However, participants in a 1997 protected areas planning workshop agreed that the processes were nearly identical conceptually and moved to adopt more consistent terminology. They also noted that step sequencing within the processes need not be rigidly adhered to and that these processes were largely iterative and circular rather than linear.

Generally speaking, all protected area planning approaches follow these steps: 1) stating the conditions management will maintain or allow to occur (how much impact is acceptable); 2) inventorying existing conditions to see how they compare with acceptable conditions, as stated in objectives; 3) instituting management actions where existing conditions do not meet objectives; and 4) monitoring conditions per management actions and use.

The Nilsen and Tayler reading compares a variety of protected area planning processes, notably LAC, VERP, and VIM. Each process is described in terms of its origins; methodology; use of factors, indicators, and standards; appropriate applications; relationships; and strengths and weaknesses. The authors note that the processes are conceptually and methodologically related and that each could learn from the other in

terms of application. They call for an evaluation of the effectiveness of implementing the processes, particularly their effectiveness in maintaining the integrity of biophysical systems while providing for education and outdoor recreation in protected areas.

The Hof and Lime reading builds on the Nilsen and Taylor piece by elaborating the VERP process. It describes VERP in terms of its steps, its relationship to National Park Service general management planning, and its commonality to LAC.

### Protected Area Planning Approach: Issues

In the Stankey reading on barriers and opportunities in the application of the LAC process, you will revisit some of the issues discussed in Unit 2 on Planning Theory. In particular, you will see that the protected area planning process, though grounded in the rational-comprehensive planning paradigm, is also influenced by transactive planning. Its relationship to transactive planning lies in the necessity by resource planners and managers to work with affected publics in resolving the conflict between providing unrestricted opportunities for wilderness recreation use and the goal of preserving wilderness conditions.

Stankey points out that the collaboration between managers and the public that is so characteristic of transactive planning faces numerous procedural, normative, and structural/process barriers when implemented in the context of protected area planning. He contends that these barriers are the most severe constraints on effective implementation of the LAC or any other protected area planning approach. The Krumpke and Cole reading on the role of public involvement in the LAC process builds upon Stankey's observations and directly suggests that a transactive planning paradigm is essential to the effective development and implementation of protected area planning processes. They want protected area planning processes to take on a transactive nature where "the public essentially conducts the planning and bureaucrats serve to facilitate the planning process through technical knowledge and data analysis techniques."

### Protected Area Planning Approach: Case Studies

Three readings are provided which describe the implementation of protected area planning approaches. In the first, Warren describes the LAC planning process for the Bob Marshall Wilderness area and attempts to answer the question, "Was the [LAC] plan successful in helping the stewards of the Bob Marshall maintain the enduring resource of wilderness?" In the second reading, Ritter documents the application of the LAC process in the Selway-Bitterroot Wilderness and assesses the affect of LAC on both the current management of the Wilderness and the condition of the resources within the area. In their description of the application of the VERP process to Acadia National Park, Jacobi and Manning provide details about the Park's efforts to address crowding and conflicts among users of the its system of carriage roads.

Taken as a whole, the readings represent a limited response to the criticism by some planners, managers, and researchers that there is little documentation concerning both the

application of protected area planning approaches and their success in addressing the recreation use vs. resource preservation conundrum.

### Future Directions in Protected Area Planning

Protected area planning approaches are relatively new to recreation resource management and they will inevitably undergo modifications and clarifications as their use becomes more ubiquitous. Cole and McCool suggest various changes to the generic protected area planning process, including the addition of a new planning step and the clarification of various concepts, terminology, and aspects of implementation. The same authors, in the last reading of this Unit, also offer some thoughts on "a decade of implementation" of protected area planning approaches. They outline positive outcomes of approaches (e.g., increased attention toward management of biophysical and social conditions), barriers encountered (e.g., inadequate agency commitment to planning and management), and lessons learned (e.g., planning is a process, not necessarily a product). This is a fitting reading to end this Unit on protected area planning approaches; it recognizes that protected area planning approaches are evolving and suggests directions for that evolution.

### Discussion Questions

1. What generalizations can be made from reading the three case studies about the success of applying protected area planning approaches. In other words, based on these cases, what is working and not working with regard to protected area planning approaches?
2. How do LAC, VERP, and VIM differ? Should resource management agencies move toward the adoption of a single planning framework for protected areas? Why or why not?
3. Identify five actions that resource managers could take to keep resource and social conditions within desired ranges? You may choose any condition/impacts you desire.

### References

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Manning, R., Lime, D., and Hof, M. (1996). Social carrying capacity of natural areas: Theory and application in the U.S. national parks. *Natural Areas Journal*, 16: 118-127.

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