

# **Striding into Elephant Country: Exploring New Ground for Planning and Management in Protected Areas**

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There are always people who follow the urge to march out into undiscovered territory. In their trail breaking, they seek the most remote scientific and professional "elephant country" and what they learn is often praised as a major force in molding modern civilization. However, it is also true that when they return with discoveries and stories for the folks who stayed behind, they are invariably heaped with scorn and skepticism, too. This happens whether the explorers are unknown or renowned heroes of healing, technology, or ecology.

To test this, pay a visit to the mountains and glaciers of Alaska or the Antarctic. Then describe the wonders to a hard-bitten, "show me" relative who has never been there. Multiply that humbling episode by many times and you will come close to the experience of Salk, Goddard, Livingston, Muir, Leopold, Pinchot, and other explorers who defied conventional wisdom and lived with the adulation and the agony.

## **PROTECTED AREAS**

The agencies and individuals responsible for protected lands are familiar and comfortable with the need to safeguard many kinds of "elephant country" for people to visit, explore, talk about, and, sometimes, exploit. We know people need those places to nurture personal and



**Photo 1. "Off into elephant country."**

communal spirit, to wander and to wonder. We also know those lands preserve vital ecological integrity and economic opportunities.

Our National Parks and Wilderness Preservation System represent pristine and primitive places needed to fulfill some important spiritual and ecological needs. Other public and private protected lands fulfill additional needs to earn wealth. The range

of experiences and actions available on protected public lands is deliberately broad—a matter of long-standing conservation policy. The range of experiences on private lands is even broader.

Advocates for a single or narrow set of resource uses can find other kinds of "elephant country" hard to accept. This happens quite often in locations where ownerships are commingled and neighboring lands have greatly

contrasting management objectives. The advocates like to politicize and exploit what they perceive as contradictions among methods used to manage adjacent lands, posing development and protection as mutual threats.

A good example of disagreements over a vision for a complex mosaic of public and private lands is the Greater Yellowstone Area. Recent attempts by public agencies to craft a joint vision for future management there was met by great skepticism and little praise from advocates who desired only certain kinds of "elephant country."

## LINKING PAST AND FUTURE

And yet, disagreements aside, as protected-lands managers, we are stewards of public and private resources. We manage those lands to achieve certain conservation standards set by the owners, often Congress, state legislatures, or boards of directors. And in every case, those bodies call on us to pass on the ecological legacies in our care unimpaired, and often improved, to future generations.

So, we must constantly question ourselves about the quality of our conservation community's connections with the land. For instance, if we do not share common views and realities about what stewardship can and should mean, then how will we ever achieve its beneficial results? And, with the quick pace of new scientific discoveries in ecology and continuing change in social values, how can we keep stewardship vital and flexible enough to respond to

the times while anticipating the future?

While answering such questions, we must not be drawn into petty disagreements but always look for ways to be successful stewards. We know that today's mix of opportunities in Yellowstone and other places must evolve into sustainable future choices for as-yet-unborn beneficiaries of land and resources. To make this happen, a durable, common joint vision is needed.

We know that many things will have to occur before a joint stewardship vision can take hold in some parts of the country. Some places, people are not even talking to one another yet. In other places, such as Yellowstone, the talk has begun but, so far, philosophical and conceptual biases obscure a common view.

Perhaps this realm of common stewardship vision among agencies and individuals with differing missions and philosophies is a challenging "elephant country" that we need to explore. For many of us, it is an unexplored territory of cooperation and conflict resolution.

## LINKING PHILOSOPHY AND METHOD

There are examples of successful visits to this remote territory. In them, we see a common element. This element is that a group of people come together to create a concept about integrated resource stewardship. The people in the group become advocates for a fair and open process instead of a narrow set of resource uses. The process they advocate allows

them to find the means to bridge between the purely visionary or philosophical and the purely functional or pragmatic.

They act as stubborn leaders who have faith in both concept and process and who have the enthusiasm to persuade others to get involved. They are not always the elected or appointed officials "in control." They are people who care enough about stewardship, resources, and the future to commit.

Leaders for stewardship of protected lands also know that a vision of "ecosystem health" has little meaning unless it is married to particular resource management methods that will bring it about. In addition, they know that the method "clearcut harvest of timber" has no utility unless it is supportive of particular ecological conditions. Moreover, people who participate in such processes have every reason to demand that visions be evaluated for their potential ecosystem effects before they are applied to real resources. Otherwise, how will we ever overcome their healthy skepticism or win their praise?

### "DESIRED FUTURE CONDITION"

We know that we have many common stewardship responsibilities. We know that we have to craft visions, processes, and linkages that will help make our protected-lands stewardship successful. We also know that we have to relate our visions to realities, to actual management methods and practices, if we expect people to support us.

A concept is beginning to emerge from natural resource planning practice that is proving to be a key factor in many successes. It has already proved useful to natural resource agencies for cooperative forays into discussions that link past, present, and future, and that marry conservation philosophy to management methods.

This concept is referred to as "desired future condition" (DFC). Our understanding of the best use of DFC is changing as we have gained experience in protected-land planning and management. For now, no one agency has fully incorporated its concepts into regulation or guidance.

It has also been shaped as we incorporate ecosystem management principles into day-to-day practices. An ecosystem approach demands full integration of disciplines and methods as we think about, discuss, and manage resources.

It is true that people fulfill an unusual and dominant ecological niche because of our cognitive abilities, intuition, communication and technological capabilities, and sheer weight of numbers. In some appropriate ways, we can view ourselves as "separate" from nature.

However, there is no ecosystem approach to natural resource management if we craft visions which isolate people from protected land. It demands that people, their insights and talents, and their demands and effects be seen as ecosystem components. To separate people from nature belies the obvious connections that exist, and may create

an inevitable and unnecessary set of conflicts, later resource management delays, and outright stewardship failures.

## USING DESIRED FUTURE CONDITION

Desired Future Conditions are emerging as the way people express, in integrated ways, both visionary and pragmatic ideas about ecosystem futures. Broadly stated, these expressions include: 1) the potential for human use and experience, including resource consumption, woven together with 2) the natural resource or ecological legacy and condition that will exist as a result of attaining mutually compatible resource objectives.

Desired future conditions need not be overly complex or technical, but they must be cogent and inclusive. They should imply both philosophy and method, and describe conditions that reflect people's concerns and uses for the land. Jargon and numbers are kept to the minimum that supports the DFC narrative. Illustrations, photos, simple diagrams and charts, and maps are used to help people understand what the DFC means and where and how it may be attained.

We can build our management and protection plans based on comparisons between past and existing conditions and desired future conditions. No particular limits are placed on the methods that can be employed to achieve a DFC and its innate vision. However, all methods must work harmoniously toward DFC at-

tainment and be subject to rigorous environmental analysis.

One set of distinct DFCs are prepared for any planning process. They become primary planning "tools," or "colors" on the decision-maker's "paint palate." DFCs are always applied to areas with clear physical boundaries that are identifiable "on the ground" and unlikely to change during the length of the time the plan is in effect.

They are applied in different mosaics to the same lands to form alternatives for National Environmental Policy Act analysis and programmatic land management plans. The mosaic chosen for implementation must represent integrated social, economic, and ecological decisions.

DFCs also have other aspects as well. DFCs represent futures for dynamic ecosystems at many geographic scales. These ecosystems are subject to natural events, chaos, and uncertainty. Under pressure from many factors, many of them human, the ecosystems are perpetually evolving and changing.

Therefore, DFCs are intended to be inherently flexible over time, subject to regular study, revision, and adaptation. They are not simply as static as may have been implied in the "tools" and "colors" analogy. In many respects, a DFC mosaic is a "motion picture," not a frozen-in-time "portrait."

Experience so far shows that DFCs represent several more key concepts and opportunities for people ready to explore a remote part of "elephant country." They work as:

- focal points for public dialogue about long-term, compatible resource objectives, uses, and conditions, offered in a non-technical way so that people unfamiliar with technical terms and agency directives can understand and participate;
- ways to create integrated analyses and management plans for resources in many ownerships; this includes work across property boundaries to deal with ecosystem-integrity issues such as protection of soil, water, and air resources and threatened or endangered species; this is done while respecting the rights of different owners and managers to have differing management objectives;
- means to increase public participation in and commitment to natural resource decisions; this allows people to review and discuss visionary proposals and associated methods displayed on maps at appropriate geographic scales; thus, DFC becomes a way to give spatial display to how issues are addressed, objectives accomplished, and alternatives developed, particularly when married to resource-change and -reaction models and Geographic Information Systems;
- means to plan for resources at "landscape" scale, at approximately 25,000 to 250,000 acres, and, thereby, to serve as a link between regional planning at very large geographic and time scales and plans or projects at smaller scales which may also have "desired future conditions" set for them;
- integrated "templates" for the generation of specific technical resource-management direction needed to guide the future actions of specific "expert staff" such as silviculturists, range conservationists, and wildlife biologists—all blended and shaped to attain DFCs, and therefore responsive to the more general lay understanding of what is needed and what will occur; direction is stated typically as prescriptions, standards, guidelines, rules, required practices, resource condition/production tables, and operating processes or procedures;
- movement toward a common set of integrated natural resources planning terms roughly equal to city planning's "residential," "industrial," "commercial," "recreational," and other terms, and roughly applicable to all protected lands in the U.S.; these terms for "ecological zoning" or "ecozoning" range from "working landscapes," to "primitive landscapes," to "wilderness landscapes"—all at several management intensities;
- essential larger contexts for the need and means to protect unique and vanishing ecological conditions within highly modified, working

or urban landscapes; this includes widespread, isolated habitats for rare species and single-location ecological remnants such as the small Caribbean tropical forest in Puerto Rico; this way, trips into "elephant country" can be enriched by continuing biological diversity, by the presence of "frogs" and "parrots";

- when considered as "bundles" of mutually compatible objectives, a basis for conducting certain cumulative effects and other analyses; these are to be done at geographic and time scales appropriate to the issues raised by the public and the resources under consideration; they link these analyses to physically identifiable resource boundaries; and
- also in relationship to the "objective bundle," a basis for developing monitoring and evaluation programs for Forest Plan implementation and for associated scientific inquiry.

### A FEW CAVEATS

One mistake that we are learning to avoid is any speculation on the thoughts or feelings that people might have as they experience a protected area or ecosystem. The reason is simply that people have a wide range of responses to resource conditions. Most managers find that some folks will love a particular place or condition, some will hate it, and some will be indifferent.

So, to speculate about whether someone will "enjoy" a particular DFC or a set of ecological conditions is flimsy conjecture at best. At worst, it can be misunderstood as agency "imperialism" and detrimental to credibility.

In addition, many people find the term "desired future condition" clumsy and bureaucratic-sounding. Doubtless, the term will change over time, perhaps to something like "ecological zoning" or "ecozoneing."

### CLOSING

With these ideas in mind, desired future conditions can become the basis for agencies and interested individuals to explore this necessary "elephant country" of large-scale ecosystem planning, management, and cooperation. If we are to deal with such mutual problems and challenges as biological diversity and global climate change, we must use DFC concepts or risk having piecemeal solutions imposed by institutions and individuals which lack adequate resource knowledge and management experience.

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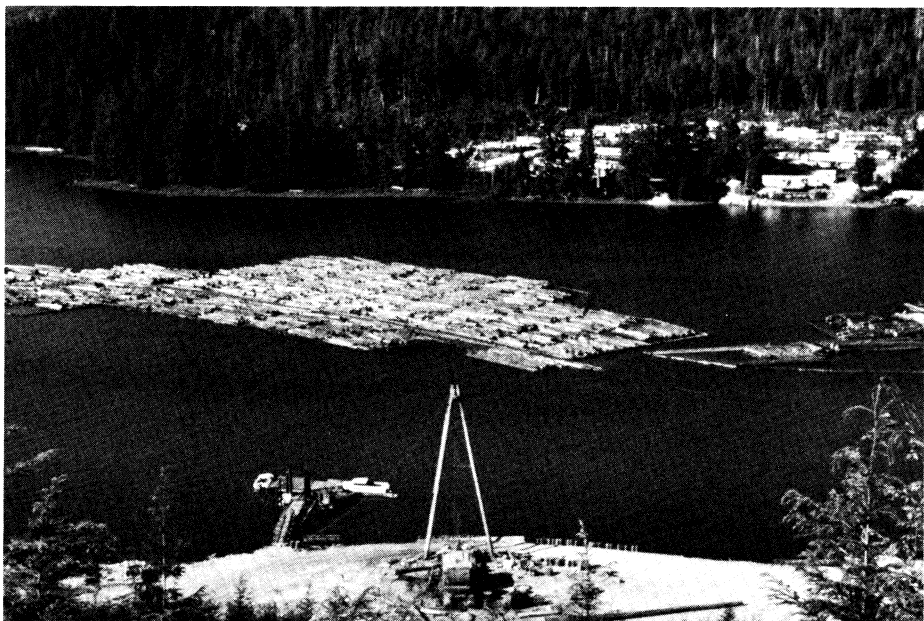
### GENERIC EXAMPLE: DESIRED FUTURE CONDITION

*Ecozone:* Working Landscape—Slight Change (from Undisturbed Ecological Processes).

*Theme:* An area managed to allow for some resource development and roads while having no adverse, and some beneficial, effects on wildlife.

*Experience:* If you are driving, you notice a well-developed road system in some areas and a less-obvious system elsewhere. Many roads you pass are permanently closed by barriers or seasonally closed by gates. If you stop and walk down some of the closed roads, you will see that they have been reseeded and grass and other plants have replaced the plowed surface. Other closed roads will show signs of vehicles but plants will be growing back on the surface.

In places where trees are being cut commercially, you find many signs of people, but not to the extent you would in more intensively developed areas. You may notice activities during the summer, fall, and winter. The activity might include the use of bulldozers, trucks, horses, and gasoline-powered chainsaws. Most cut areas will have many large trees remaining with signs of logging under them.



**Photo 2:** You may see the effects of logging.



Elsewhere, only a few signs of people exist. Your vehicle is restricted to only a few main roads. You find that many of these roads are unsuited to sedan travel. The exceptions are popular, established roads that access or pass through the area to and from state or county roads.

Although the air is normally clear, you may see dust from other vehicles. You may also see smoke from fires set to burn logging waste or to create better fire-protection, tree-growing, or wildlife conditions.

If you are walking through the forest, you encounter a closed road or maintained trail about every  $3/4$  mile. The open roads you encounter tend to be concentrated in only certain parts of the area and are few in number.

The forest you see appears as a mixture of many species of young and, more frequently, old trees. You also see grasslands, and cattle or sheep may be grazing there. As you move through the area, you see some patches with only small young trees, and some recently cut or burned areas with no visible trees at all.



Photo 3. The forest appears as a mixture of species and openings.

Large areas of the forest (about 80%) have trees of all ages visible within them, ranging from seedlings to old growth. Particularly when viewed from a spot that overlooks the area, the large tree-covered areas may seem like "islands" connected by corridors of trees and brush along streams, creeks, ponds, and closed roads. Within the "islands," many old trees are likely to have cavities used by wildlife, and may have fallen over or be leaning.

Some areas may show signs of recent wildfires. Other areas show many dead, standing trees with patches of bark and

branches missing and with brown needles or leaves. These trees, too, will have cavities in them and show small holes that are the signs of woodpeckers or other animals and insects.

In certain posted areas, firewood is available from dead trees and from the materials left by loggers.

You may see mineral development from time to time, usually if you walk past gates at the entrances to roads. You may hear or see activities, equipment, or dust.

If you stop and look for wildlife, you discover many species. What you find depends

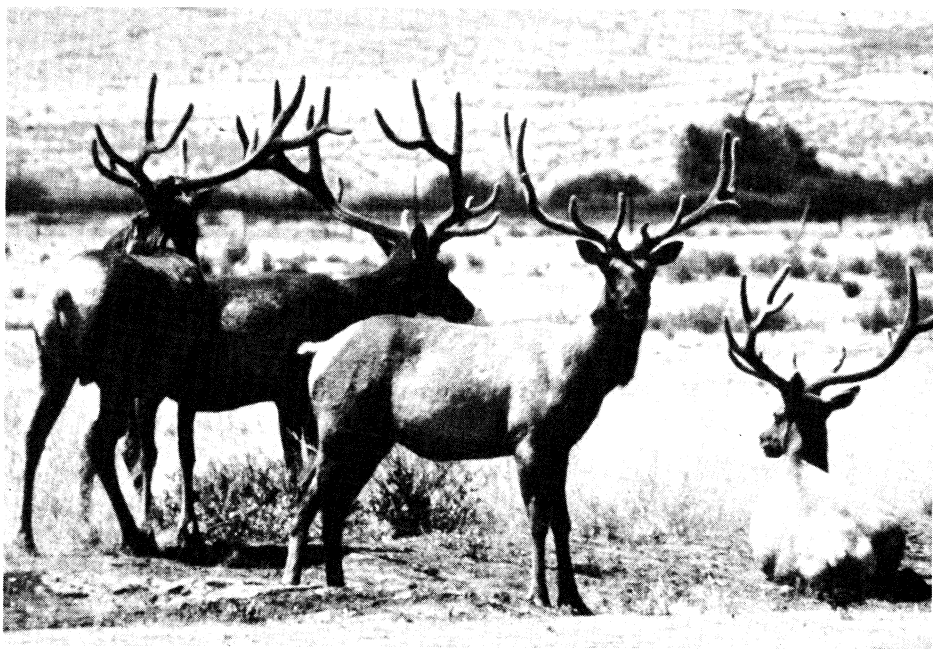


Photo 4. Elk may be a part of your DFC.

on whether you are within the large "island" areas, grasslands or meadows, or in areas where trees have recently been cut or burning has occurred. If you are looking for big-game species, some of the animals will have been displaced from the area by human activity, but many will still remain or use the area seasonally (about 90% of the numbers possible if people had only foot access to the area). Hunting seasons will have remained the same for many years or maybe even gotten longer for some species.

You will find abundant fish in streams and lakes, but access may be difficult if you are trying to drive to your fishing spot. Streams and lakes will show no signs of erosion or siltation. In some places, you will notice that temporary protective structures have been built or planting has occurred in order to prevent damaging run-off or silt.

If you have an off-highway vehicle, you will find limited areas posted for year-round use. You will find some seasonal differences in the off-highway vehicle uses that are permitted.

*Management Emphasis:* Provide long- and short-term habitat to meet the needs of the full range of actual and selected potential wildlife species. Orient tree cutting, grazing, minerals, recreation, and other developments to support wildlife. Manage vegetation and surface-disturbing activities so that they have no effect, or produce beneficial effects, on wildlife.

Land and resource management objectives achieved, in part, by this desired future condition in-

clude: provide timber-harvest, recreation, and minerals opportunities for development; provide "subsistence" users of the forest with firewood, minerals, and hunting; provide safe access (limited roads and trail systems) for forest users; provide adequate habitat for fish and wildlife, including threatened and endangered species; protect basic resources such as soil, water, and air; ensure that timber-harvest levels and practices are designed to sustain the productive capacity of the land; and restore natural systems after development occurs.

*Management Directions:* Because this is a "generic" Desired Future Condition, the specifics of prescription, standards, guidelines, permitted practices, and condition/production tables are omitted. These directions can be highly technical and aimed at informing professionals about parameters for work within their disciplines.

For each DFC, a distinct set of integrated management directions must be prepared. Each element of the directions contributes to the attainment of the DFC over time. Each element should be tied to specific land and resource management objectives, and, ultimately, to the whole objective "bundle" as well.

Some simple examples are available from the author at USDA Forest Service, New Perspectives Group, P.O. Box 96090, Washington, DC, 20090-6090. Other, more complete, examples are available from natural resource planners exploring "elephant country."