

Planning to Expand Systems of Protected Areas in North America:

Comparing Practice in Three Countries and Assessing its Importance

Systems of protected areas¹ have been expanding during the closing years of the 20th century in North America. As public demand has grown, the systems have grown, and with that planning efforts have become more elaborate in the United States and Canada.

The systems themselves have grown not only in these two countries, but in Mexico too. However, the growth in Mexico occurred without any visible systems planning effort. How important, then, are these systems planning efforts? Since systems can expand without them on an ad hoc basis, what value do they add? What purposes do they serve? Do they follow a standard model or do they represent varying, ad hoc responses to circumstances? Do they produce better results? Is any one approach preferable?

This paper is designed to stimulate a discussion of these issues. It begins by reviewing the situation in the three countries with regard to protected areas and then attempts to find answers to the questions just posed by drawing upon a review of a number of systems planning exercises in these countries.

Those exercises examined include the following:

- Parks Canada: *National Parks System Plan* (1990)
- Parks Canada: *Sea to Sea to Sea—Canada's National Marine Con-*

servation Areas Systems Plan (1995)

- Nova Scotia Department of Natural Resources: *A Proposed Systems Plan for Parks and Protected Areas in Nova Scotia* (1994)
- British Columbia: *A Protected Areas Strategy for British Columbia* (1993)
- Arctic Environmental Protection Strategy/CAFF: *A Program for the Conservation of Arctic Flora and Fauna—Circumpolar Protected Area Network (CPAN)* (November 1995)
- U.S. National Park Service: *National Park System Plan—Natural History* (1972)
- U.S. National Park Service: planning for new parks in Alaska (1974)
- U.S. Forest Service: RARE II Planning for Wilderness (1979)
- Bureau of Land Management (BLM) (U.S. Department of the Interior): wilderness plans for various states (e.g., Oregon) (1989)

Information about the situation in Mexico has been largely drawn from

a paper by Ramón Pérez Gil Salcido (1995) entitled "Natural Protected Areas in Mexico."

Situation

Clearly, Canada is the country in North America with the greatest commitment to protected area systems planning. Use of the process there now is practically routine, and it is treated as if it were consequential.

In the United States, land management agencies periodically prepare systems plans for protected areas of various sorts. However, such planning is not a regular feature of broader land management planning, nor is as much deference paid to it by political leaders as in Canada.

In Mexico, there is nothing resembling explicit systems planning. However, ideas for establishing more protected areas do regularly emerge from the government, and the protected area system grows. Some of that growth reflects recent interest in conserving biodiversity.

As of the early 1990s, IUCN figures (11) show the following data on protected areas in the three nations: Canada's system covered 76.9 million ha (7.73%) of the country's area; USA, 97.7 million ha (10.42%); Mexico 10.1 million ha (5.1%).² The figures today may be somewhat greater. These figures include areas falling into CNPPA categories I-V.³ It should be noted that some systems plans take into account areas protected under various cate-

gories and by different agencies, and some do not.

These systems of protected areas are designed to respond to interests of varied sorts:

- Recreation, aesthetics, and tourism;
- Wilderness and remoteness;
- Wildlife and biodiversity;
- Heritage and historical values; and
- The aiding of various branches of science (e.g., ecology, conservation biology, geology, etc.)—for use as benchmarks or for research.

The combinations and emphasis on these interests varies from place to place, between agencies, and over time. Some focus on representing typical examples of phenomena, while others look more for either unique features or features embodying clusters of values.

Characteristics

What, then, characterizes systems planning for protected areas? Such plans vary from booklets to multi-volume studies. Some have been done by a few staff; others by hundreds. Some of them are stage-setting, framework studies, while others constitute detailed analyses and proposals.

To some extent, they are all exercises in idealism and visioning: i.e., imagining an ideal situation and looking for the best embodiments of these ideals. In practical terms, most

of them seem to have these characteristics. They:

1. Are prepared by agencies administering protected areas;
2. Reflect standards of professionalism and expertise;
3. Embody an effort to be systematic in reviewing and analyzing material;
4. Set forth, in varying ways, goals for expanding or refining the systems;
5. Reflect a desire to make essentially subjective matter (dealing with preferences and values) seem less so and more objective;
6. Address competing claims;
7. Are broad in scope (with an effort to be comprehensive); and
8. Publish the findings, with supporting data and maps.

Purposes

The various plans respond to a variety of impulses, or driving forces, which explain why they have been prepared. Almost none of them seem to have been prepared as part of a recurring process to update plans. Among the impulses giving rise to these plans are:

1. An interest in locating opportunities to set aside qualified areas (e.g., in planning in Canada for marine parks);
2. Providing a way to focus or direct interests in setting aside new areas, including setting priorities (e.g., in the work of Parks Canada);

3. Providing the means to expand protected area systems to meet target goals—usually expressed in terms of the percentage of territory protected (e.g., as is now happening in British Columbia);
4. Filling gaps in representation of various bioregions (based on fine- or coarse-grained mapping), or types of landscape or phenomena (e.g., the focus in Nova Scotia);
5. Providing backup representations for existing units that may not be viable (to achieve redundancy), or obtaining more varied examples of themes (e.g., as in the USNPS plan of 1972);
6. Gaining a balance between land allocated to development and to nature protection (e.g., as is the motivation now in British Columbia and earlier in Alaska);
7. Settling controversy over which areas to set aside and how much, or at least limiting conflict (e.g., with the Forest Service in the U.S. under RARE II);
8. Either providing leadership, or asserting control by the agency over the process of setting areas aside (e.g., as with the Forest Service in its wilderness studies); and
9. Responding to criticism of inactivity or lack of leadership on the part of the agency (e.g., as with the BLM in the U.S.).

Selection Criteria

The planning process usually involves defining the qualities being sought, inventorying the list of possibilities (with the search often focused on ecozones or physiographic provinces) and then recommending given areas to be set aside. It also involves suggesting what the size, shape, and boundaries ought to be for recommended areas. Sometimes minimum size criteria are set.

Special features appear in some plans. For instance, in the U.S. the National Park Service did its planning in Alaska for individual units within "areas of ecological concern."

Most plans provide some criteria for making selections. Usually these criteria are more explicit with regard to the inventory process than for the processes of selecting recommended units. Usually they are even less explicit about the basis for making decisions about size, shape, and boundaries for selected units.

In some plans, the criteria for selecting recommended units are explicit and more objective. In other cases, they are vague and general. Decisions on what to recommend may simply reflect professional judgment. To some extent, this may reflect a desire to customize judgment for given cases rather than set rules of choice that are rigorously adhered to across the board. Where rules are applied across the board, it is never clear whether they have been "gamed" after the fact by adjusting point scores in weighting systems.

Moreover, in some cases decisional criteria get more attention in dealing with aggregate sets of possibilities. In the cases of wilderness planning in the U.S. by the Forest Service and BLM, primary emphasis was placed on alternative sets of aggregations of units and choosing among them (9). Usually, the BLM considered five to nine alternative sets for each western state. These were constructed to emphasize extremes and near-extremes (viz.: "all wilderness" or "nearly all wilderness" as opposed to "no wilderness" or "nearly no wilderness") (10). Then a few centrist alternatives were offered.

In its planning in Alaska, the U.S. National Park Service dealt with alternatives largely in the context of designing individual unit proposals, with only perfunctory attention to alternative management options (8).

The Forest Service selected its proposed wilderness areas in RARE II largely on the basis of its Wilderness Attribute Rating System (WARS)—a process of awarding numerical scores reflecting desired attributes (9). A separate system was also developed to assess opportunity costs—the Development Opportunity Rating System (DORS) (9). The Forest Service made its overall recommendations so as to maintain high resource outputs while recommending wilderness for areas with the highest scores that presented the fewest conflicts.

In its counterpart process, the BLM did this judgmentally, trying to

pick areas and boundaries having high wilderness values and eliminating areas and zones with high competing values (10). Little is offered to explain its conclusions.

In the case of the Forest Service and the BLM, complaints were heard that alternatives actually being advanced by protagonists were usually not considered, nor alternatives dealing with possibilities in between the extremes and the center. However, in Alaska the National Park Service actually did analyze proposals put forth by interested parties.

Moreover, emphasis on the orders of magnitude of the set-asides also tended to obscure attention to questions of design. Should the new areas be concentrated in certain places and connected, or should they be dispersed?²⁴ Should their average size be large or small? These questions of design can be addressed within various assumptions about how much total acreage can be set aside. They are questions that are at the heart of the new field of conservation biology.

In British Columbia, B.C. Parks has tended to make areas having a representative quality larger in size, feeling at the same time that unique or exceptional areas can be smaller-sized, on average (5).

British Columbia also seems to be turning its target of putting 12% of its territory into protected areas into a ceiling or cap on how much will ever be protected. Parks Canada also is talking about completing its system, which seems to imply a cap on future

growth (2). Such an idea does not seem to have been broached seriously by agencies in the United States (though it has arisen in Congress).

Adjusting Differences

The central challenge in deciding what to recommend is how to deal with competing land uses and claims. To some extent, nearly all planning efforts grapple with this challenge. However, two different patterns manifest themselves.

In the United States, the planning agencies tend to follow a very formal and legalistic process. Their public planning documents follow the format of an Environmental Impact Statement (EIS) under the National Environment Policy Act. Under this type of an environmental assessment, a prescribed series of questions must be addressed. Alternatives are framed, impacts analyzed, and proposals made.

Then the public is asked to review the document in draft form. This review often involves both extensive public hearings on the record and written comments. Both are analyzed, and the main points offered by the public must be responded to. Then the agencies may modify their proposals in light of public review, and a final document is issued. Usually changes are modest (often on the order of 5-10% in magnitude).

Both in their initial proposals and in modifying their proposals, the U.S. agencies tend to adhere to the political middle. They avoid the extremes in the orders of magnitude of

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what they recommend. Moreover, they go to pains to identify competing claims and to analyze the weight of these claims. They tend to eliminate areas and components that are most heavily burdened with competing claims. However, these decisions arise more out of analysis and the formal process than out of oral dialogue and negotiation.

This formal process reflects the political culture of the United States. It is designed to assure all parties in a very diverse and contentious culture that everyone has been heard and dealt with on an equal footing. The small and the powerful get equal time and evaluation. It is also designed to lay down a defense against possible litigation which may look for procedural flaws.

In Canada, the planning agencies seem to focus more energy on face-to-face dialogue with parties who represent key interests and competing interests. Parks Canada must negotiate agreements with provincial governments and tribal authorities (where relevant). Dialogue with them seems to lead to conclusions about which proposals are viable and which are not. Provincial park agencies must determine whether existing commitments to commodity production can be broken. Moreover, these discussions help them shape the design of the given proposals. The public documents, however, provide little insight into the process by which their proposals have been shaped.

The Canadian process seems to reflect realities of devolution of power to provinces and patterns of Native land ownership and claims. And the process reflects the way decisions are made in a parliamentary system, as well as the political culture of Canada. Since the party in control usually has enough votes to work its will in Parliament, the political process of reconciling competing interests must be addressed before proposals are taken to ministers. Thus, agencies try to refine proposals to reduce conflict before ministers are asked to seek parliamentary approval. However, in provinces such as British Columbia the process seems to contemplate heavy involvement of the Cabinet before parliamentary action will be sought.

In the United States, in contrast, much more of the process of reducing conflict occurs later in the legislative process. Moreover, much less power has been devolved upon states; less land also is involved with Native claims (except in Alaska).

Moreover, it may be that Canadians attach more importance to avoiding or reducing conflict. As a society, Canada may value harmony more. Thus, early in the planning process stress is put on finding proposals that will generate little controversy and on which the problems can be worked out. This may also be viewed as good staff work in the tradition of the British civil service.

How much emphasis is placed on reducing conflict in the planning process may also vary among agen-

cies, especially in the United States. Land management agencies such as the Forest Service and the BLM, which have broad multiple-use mandates, seem more anxious to pursue centrist strategies and to avoid antagonizing commodity constituencies.

The U.S. National Park Service, on the other hand, puts less emphasis on reducing conflict both because it does not have commodity constituencies and because conflict is an unavoidable corollary of expanding its system. It can only acquire new units through conflict with other agencies or with private owners. Nonetheless, in its extensive planning efforts in Alaska in the mid-1970s it carefully analyzed competing interests and sought to avoid the most extreme conflicts where it could (8).

Time Horizons

Agencies plan for very different periods of time. Some plans are open-ended and look far into the future. When the U.S. National Park Service issued its National Park System Plan in the early 1970s, it made recommendations that might take decades to achieve (7). It was not under any pressure to tailor its recommendations to the immediate political climate (nor did it identify specific areas).

On the other hand, some plans are designed to meet deadlines. At one time in the late 1970s, the U.S. National Park Service was under a mandate to recommend one new

park unit to Congress every month. In its plan in the early 1990s, Parks Canada was trying to meet a pledge in Canada's Green Plan to complete its parks system by the year 2000 (aiming at moving national park representation in Canada from 1.9% to 2.8% of the land) (2). The New Democratic Party government in British Columbia is pushing to get its percentage of protected land to 12% as soon as possible. The government in power there wants to try to reduce discontent among its constituency by better balancing land allocations between development and protection.

Time constraints, then, also limit the art-of-the-possible. The shorter the time horizons, the less is feasible. More good ideas must be dropped if the question is what can be done to increase protected area acreage in the near future. Longer time horizons rule less out. Some commodity conflicts may go away, or become less important, with the passage of time, and support may grow. On the other hand, new conflicts may also arise.

Time also is a factor in terms of whether the resource is under threat. Where it is, plans may be scaled down to facilitate faster action. Where no threats are apparent, more time may be available, and more ambitious ideas may be broached.

Public Participation

Styles of public participation also seem to differ among the countries. In the U.S. the process is very structured and formal. Tens to hundreds

of thousands of communications may be received; hundreds of hearings may be held. The input process tends to be formal, with little immediate feedback provided. The Forest Service in the U.S. actually used a decisional rule that only permitted it to recommend wilderness proposals that were supported by over 70% of those commenting specifically for the record on that proposal.

In Canada, the process seems to be less formal, even casual. Agencies there want to sense public support or demand at the outset—rather than to stir up an issue. Public discussion is assumed and welcomed, but proposals in planning documents are presented as if they are not controversial. In the U.S., the emphasis in the documents on alternatives (under the EIS process) invites disagreement and contention. The public acts as if it is voting on which way to go. The Canadians seem to assume work is proceeding, and the government just wants the public to be informed and to have a chance to offer its thoughts.

The U.S. planning process, then, really initiates a period of controversy and sets its terms. It tacitly invites politicians to assume control of the controversy and settle it. The Canadian approach, in contrast, is all about a process of continuous decision-making by the government. The publication of a document advises the public that the government is at work on the matter and is moving in certain directions. Public input can tilt the direction slightly but is not

seen as offering an opportunity to vote “yes” or “no.”

Connection to the Decision-Making Process

In Canada, thus, the planning process by park agencies really is a part of the decision-making process. This reflects the nature of a parliamentary system of government. What the agency recommends to its minister is highly likely to be approved and move ultimately into accomplished fact by Act of Parliament. Its work is rarely frustrated.

However, in the United States the separation of powers at the federal level produces a very different result. Planning by agencies is merely input to political officials. Agency proposals must be approved by political appointees in departments and then by the president. And that is only the first step. Then both houses of Congress must approve and that can take years—if ever. Constituencies must be mobilized to generate demand that action be taken. Opposition must be overcome by shows of support.

This extended process reflects a system of “checks and balances.” It also is the result of a system that requires statutory enactments to permanently designate most protected areas (there are a few exceptions, such as National Monuments).

The upshot of these differences is that agency recommendations in the U.S. carry far less weight. They can be easily ignored and easily overcome. Many protected areas are

designated against agency wishes—and in the absence of formal studies by them. The U.S. wilderness movement in the 1980s worked successfully during an unsympathetic presidency to get Congress to vastly increase formally designated wilderness acreage in the national forests, and most of this involved acreage for which the Forest Service recommended non-wilderness status.

Agency studies in the U.S. may carry weight under certain circumstances, especially if they catch the public mood. They may carry weight too if they break new ground or introduce new ideas. They may carry weight if they organize data and make it accessible—data that otherwise would be difficult to obtain. They carry weight if they are thorough, readable, and persuasive. They tend not to carry weight if they are viewed as flawed, incomplete, biased, defensive, or steeped in jargon.

Also, studies are not persuasive if they attempt to pretend that judgmental matters are technical matters. Approaches that turn every judgment call into numerical scores risk loss of credibility. However, criteria and rough weighting systems can help to explain and justify judgment calls. Candid recognition that judgment calls are involved—reflecting values and preferences—builds confidence that the report is straightforward. However, hiding the basis for exercising judgment does not build credibility.

Mexican Practice

The Mexican system of protected areas has grown rapidly in the last 25 years. Eight-seven per cent of its protected areas have been established since 1982. Pérez Gil seems to think this has happened largely in response to pressures exerted by foreign environmental groups, with the government desiring to placate international opinion and to appear modern (12). This desire may be related to Mexico's efforts to join NAFTA, the North American Free Trade Agreement.

Two-thirds of the land in the system is in biosphere reserves; there are 35 of them (12). There are 34 units over 25,000 hectares in size. In 1987, a group of scientists identified 87 priority sites for future acquisition (12). Apparently systematic inventories were done to identify opportunities to establish these new biosphere reserves.

In some states, such as Baja California, a high percentage (69%) of the land has been put in protected status (13). Of the 25 physiographic provinces in Mexico, protected areas appear to exist in all but seven (13). Thus, Mexico appears to have wider representation of its natural zones than has been the case in Canada (28% unrepresented vs. 46% in Canada).

Clearly the Mexican government has an agenda to increase acreage accorded protected area status. It also has a focus (on biosphere reserves), and its progress reflects the input of scientists and external advisers. It

must have some sort of systematic internal process that allows it to make this kind of progress. This may represent a kind of systems planning that is not available to the public—i.e., is not transparent.

Lack of transparency may simply reflect differences in political systems and culture. The Mexican government has not chosen to consult the public at large, nor to publish reports that document the basis for its decisions. But the results suggest progress can be made without making the process public and apparent. While this lack of transparency makes it impossible to assess the process in Mexico, progress there does demonstrate that formal, public systems planning is not indispensable.

Conclusions

The importance of systems planning for protected areas by agencies seems to vary according to the kind of political system that a country has.

It seems to be most important in jurisdictions which value transparency and have parliamentary systems (e.g., Canada). There, systems planning originates and refines ideas that ministers and the parliament intend to embrace, while building public acceptance.

In jurisdictions which value transparency but have a government of separated powers (e.g., the United States), such planning plays a less-critical role. There, proposals for protected areas can move to fruition without agency studies to identify candidates, though such studies un-

doubtedly improve the menu of options and help winnow them. A very open political system allows initiatives to come from other quarters, with the legislative process playing the leading role in adjusting conflict.

In countries that place less emphasis on transparency, and concentrate power (e.g., Mexico), such plans may not be needed to justify government action, but they might improve and systemize action. There may, though, be some sort of systems planning going on behind the scenes.

None of the planning efforts reviewed seemed to represent a regular, institutionalized process. All of them seemed to arise out special circumstances and respond to varied impetuses.

While systems planning seems to have certain generic characteristics, it varies a great deal in practice. However, it invariably improves the basis for choice and creates momentum toward doing more. It enlarges horizons. It also tends to legitimate ideas that previously may have been marginalized. Proposals for new protected areas gain weight and respectability.

Because of these factors, a conclusion is justified that systems plans do add value and help produce better results. When they are done well, their value increases accordingly.

However, more analysis is needed to define the attributes of the best approach to systems planning. This may vary among jurisdictions according to their characteristics. It may also vary according to whether

the plan is intended to serve as a framework or as a definitive plan.

One thing, though, is very clear. It is that systems of protected areas may

command less national support and be seen as atrophying if no attention is given to planning for their expansion and revitalization.

Note: This draft was prepared for submission at the October 1996 meeting of the North American branch of the IUCN's Commission on National Parks and Protected Areas.

Endnotes

¹ "Protected areas" are reserves set aside by governments to protect nature. They are discussed in this paper in the framework developed by the World Commission on Protected Areas of the IUCN. [Ed. note: for an explanation of the system, see the paper by Phillips and Harrison in this issue.] "Systems" refers to systems such as the U.S. National Park System or the National Wilderness Preservation System (USA).

² This figure has been increased from 4.72% as the total area protected grew to 10.1 mm ha.

³ Little has been done yet to identify areas that fall into new Category VI.

⁴ In the early 1970s, the NPS favored distribution of units among regions of the country.

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