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Evolving Protected Area Thought and Practice

Sometime in the early-to-mid-1980s national park and protected area planning entered a different phase or paradigm. A broad threshold was reached where the theory, methods, and practice of protected area planning and management re-arranged themselves into what is essentially a new framework that is still evolving (IUCN/UNEP/WWF 1991; McNeely 1993; Nelson and Serafin 1997; Sportza 1999). This shift in thought and practice can be described in terms of a number of key elements relating to parks and protected areas, including:

- Funding;
- Protected area cultures and values;
- Native people;
- Sustainable development;
- Changes in science, scholarship, and information;
- Scale;
- The changing role of government and other actors;
- Stewardship; and
- Planning.

These elements interact with one another and are difficult to separate, even in a think piece such as this.

The shift in protected area thought and practice will be discussed here in a preliminary way. This essay is based upon research and experience in universities and with government agencies and nongovernmental conservation organizations in Canada and other parts of the world since the 1960s. Current work is funded by a Social Sciences and Humanities Research Council of Canada grant for study of regional approaches to parks and protected areas as well as by consulting and cooperative work with agencies and groups such as Parks Canada, Ontario Parks, and the board of trustees of the Canadian Parks and Wilderness Society

(CPAWS). The focus in this essay is on Canada and, to a lesser extent, on the USA, with additional comments on other parts of the world.

Funding

Although advocacy from railroads and other businesses, scientists, scholars, and private citizens has been important in establishing national parks and other protected areas in countries such as Canada and the USA, funding for them historically came mainly from governments, notably federal governments, which also provided for necessary laws, policies, agencies, and staff (Lothian 1987; Mackintosh 1984). The private sector was nevertheless important; for example, some leaders in early national park activities in the USA contributed their services on a *pro bono* basis. In recent years, however, governments have reduced funding for protected areas. Yet financial support and involvement from the private sector seem to be increasing locally, nationally, and internationally. One interesting example is The Nature Conservancy's work involving acquisition of ranch lands around Great Sand Dunes National Monument in Colorado. World Wildlife Fund–U.S. is heavily involved in the Chihuahuan Desert project in the USA and Mexico.

Protected Area Cultures and Values

The cultures and values involved in parks and protected areas have varied in some basic ways since the beginning of major protected area programs in the mid-to-late-nineteenth century. In the USA for example, two value systems were integral to the development of protected areas from the beginning (Mackintosh 1984; Runte 1979). The utilitarian conservation philosophy and approach of Gifford Pinchot was reflected in the thought and practice of the U.S. Forest Service and the preservationist thought of John Muir in the U.S. National Park Service. These value systems have interacted and evolved unevenly since.

The wilderness tradition has not been as strong in Canada as in the USA, although one of the early Canadian national park directors, James Harkin, espoused wilderness ideas. After the environmental decade of the 1960s, and following the influx of many young Americans seeking to dissociate themselves from the Vietnam War, the wilderness idea did gather strength in Canada, although there is still a strong inclination to see hinterlands as the "bush"—as places for hunting, fishing and other uses in the spirit of the native people or the early fur traders and their successors (Nelson 1989). In Mexico, the wilderness idea has not been very strong to the present day. The utilitarian approach has been dominant and there is a strong emphasis on national parks as vehicles for tourism. The recent report of the Parks Canada Ecological Integrity Panel calls, however, for

much more emphasis on conservation of ecosystems (Parks Canada 2000).

Native People

Native people have played a strong role in the evolution of protected area thought and practice, especially since the late 1970s. In these years the Canadian government tried to secure "land claim" agreements with people such as the Inuit of the Arctic, people who never ceded their lands and waters to the government. These land claim agreements arose from the desire to open the Arctic to oil and gas and other development. In the process of working with the native people, the federal government eventually created a new national park model reflecting the cultures and values of First Nations. Thus, since the 1970s, northern national parks have allowed for native hunting and fishing with conservation safeguards. Tourism is more restrictively managed and the national parks and other protected areas are often administered through co-management arrangements between native people and Canadian federal and territorial agencies. These Canadian responses were forerunners in the trend to "inhabited wilderness" of the kind described by Stevens (1997) in Central and South America, Asia, and Africa today.

Sustainable Development

The early-to-mid-1980s were also the time when the concept of sustainable development led to the view that environmental conservation and human development were opposite sides of the same coin (IUCN/UNEP/WWF 1980, 1991; WCED 1987). Conservation and development were essential to one another if human and other life was to be sustained in such a way as to provide for equitable access to socioeconomic and environmental opportunities "to the seventh generation." The strong role that protected areas can play in sustainable development has led to much greater appreciation of their vital services to life in surrounding lands, waters, and regions. The launching of the concept and practice of sustainable development has been paralleled by support for a broad regional approach to conservation and resource use. Indeed, when the World Wildlife Fund (WWF), World Conservation Union (IUCN), and United Nations Environment Programme (UNEP) launched the first major statement on sustainable development in 1980, the title of the relevant document was the *World Conservation Strategy*. Conservation strategies were subsequently prepared for many countries, as well as for regional seas, areas such as the Serengeti and the St. Lawrence River, and urban regions such as Manchester, England.

Recent Changes in Science, Scholarship, and Information

One of the most, if not the most, important elements leading to a shift

in thought and practice about national parks and protected areas has been the evolution of relevant science, scholarship, and information, notably in terms of developments in ecosystem science (Forman and Godron 1986; MacArthur and Wilson 1967; Meffe and Carroll 1997; Soulé 1986; Wilson 1988). New theory and method in the form of island biogeography, landscape ecology, conservation biology, and biodiversity studies have changed the fundamentals of park planning and management. Prior to the development of these newer approaches, national parks and protected areas tended to be thought of as "natural fortresses" set aside from development—with the notable exception of recreation and tourism, although this has been less the case in Mexico.

These new ecological ideas and approaches led to placing more stress on connectivity among parks and protected areas and surrounding lands and waters as a key way of preventing isolation, fragmentation, and other processes leading to decline in species, communities, and biodiversity generally (Noss 1992; Schonewald-Cox et al. 1992). Interest in the park and protected area field has consequently shifted toward landscape- or regional-level planning, management, and decision-making.

Changes in economics also have led to much greater interest in what has been called "ecological economics" (Costanza et al. 1997). This type of economics seeks to identify the services offered to society by natural characteristics and processes, including those of protected areas, and to place economic values upon them. On the land use side, thought and practice in fields such as recreation and tourism have evolved to include new concepts and approaches, such as ecotourism, or sustainable tourism development (Nelson et al. 1999). Here the main emphasis is on types and levels of tourism that respect the qualities of the natural environment and focus on providing economic and social benefits to local people and communities.

Scale

Much more attention is being devoted to *scale* in current thought and practice about parks and protected areas, nature conservation, and sustainable development. Protected areas now are seen as part of a network including local as well as larger landscapes or regions (Grumbine 1990; Noss and Harris 1986). Furthermore, these regions interweave over very large areas at a continental or even a global scale. Migratory waterfowl, shorebirds, and passerine birds all move seasonally from Mexico and Central and South America to the USA and Canada—and return (Cox 1999). Protected areas and conservation programs have been and are being set up to recognize these realities. An example is the Important Bird Area Program in Europe and

North America, which among others, has recognized sites in southwestern Mexico; the San Pedro River area, Arizona; and Long Point in Ontario (Cheskey 2000).

Consciousness of the significance of scale on the human and social side of the protected area ledger has, however, only begun to develop. An extremely interesting example is the multi-level approach of World Wildlife Fund–U.S. (Table 1; Stedman-Edwards 1998). Here the focus is on understanding changes in national and international thought, laws, policies, and practices and their links with what happens at the local park level. Upper-scale socioeconomic and institutional analysis has been neglected in the past, with the focus having been on individual parks and local or micro-scale systems. Efforts at these lower scales can be fundamentally affected or changed by challenges at the macro-scale. An example is the North American Free Trade Agreement, which has led to the Commission on Environmental Cooperation, a trinational body that has provided funding for programs such as the North America Important Bird Area Program and for mapping and study of North American parks generally.

Changing Role of Government and Other Actors

Theoretically and conceptually at least, many more actors or stakeholders, interest groups and individuals are explicitly involved in protected area thought and practice than was the case prior to about 1980 (Day et al. 1998; McNeely 1993; Nelson 1995). In the 1960s, when park master planning and management planning began in the USA and Canada, the main actors were seen to be government and the private sector or citizenry. It was the government's job to develop plans for and to fund and manage the system. It was recognized that governments best do this by informing and consulting with the people, businesses, and other affected groups through public meetings, open houses, and the like in developing plans and activities for the system as well as for individual parks and protected areas. The main job of the citizenry and other relevant actors, such as universities, was seen as supporting government in its work for society.

However, one major implication of the many shifts in scientific and scholarly thinking and in planning and practice has been that government is now clearly only one of many players on the protected area stage. A major step in this direction was the arrival of "Thatcherism" and "Reaganism" and the shift to a "free market" approach with associated cuts in funding and thus in the government capacity and role in protected areas and nature conservation. Consequently, as noted earlier, since the 1980s nongovernmental organizations such as The Nature Conservancy, the World Wildlife

Temporal	Geographical	Political	Economic
today	farm	agreements among neighbors	subsistence
agricultural cycle	wildlife reserve	local council	local market
political term	ecoregion	state government	state development funds
timber cycle	nation	national government	national policies
generation	continent	international interventions	international markets

Table 1. Examples of scale. Source: Stedman-Edwards 1998.

Fund–U.S., The Wildlands Project, and many local land trusts and stewardship groups have played a much stronger role in protected area funding, planning, and management.

Governments and private organizations are interacting to an increasing extent in conserving significant natural areas and in providing for appropriate protection and use on the ground. This shift, in turn, is associated with a growing interest in public and private stewardship through measures and processes such as those listed in Table 2. In light of these ongoing changes it is not clear what the role of governments and other actors will be in a decade or so. Certainly many more levels and kinds of governments are assuming responsibilities in the protected area field—locally, provincially, nationally, and internationally.

The emergence of a strong private role at the international level is especially striking in cases such as the International Birds in Flight Program (Cox 1999), cross-border protected area proposals such as those for the North Cascades of Washington state and the adjoining province of British Columbia (Friedman and Lindholdt 1993; Miles 1999), and large bioregional efforts such as the Yukon to Yellowstone (Y2Y; Locke 1997), the Chihuahua Desert (Williams, in press), the Sky Islands of Arizona and northern Mexico (Gatewood 1999), and the Algonquin to Adirondacks (A2A) in Ontario and New York (CPAWS–OV 2000). Such large-scale public and private stewardship efforts have only recently begun to develop, some apparently with considerable progress, some with difficulty. We urgently need studies of the various approaches that have been taken—the institutional arrangements that have been used, how and why they have worked, and what lessons can be gained thereby.

Acquisition
Conservation easement
Lease
Transfer of development rights
Management agreement
Subsidy
Written agreement
Verbal agreement
Direct income incentive (tourism)
Certification
Technical assistance
Recognition
Education

Table 2. Hierarchy of stewardship tools. Tools at the higher end are marked by *increasing* effectiveness, cost, and commitment, as well as *decreasing* participation. Adapted from Brown and Mitchell 1997.

Stewardship

Some of the ramifications and effects of large-scale stewardship efforts have not been recognized clearly in terms of planning, management, and decision-making (Brown and Mitchell 1997; Berkes and Folke 1998; Litke and Day 1998). One basic challenge has been to secure enough relevant information to develop scientific solutions to problems. Science and rational (or corporate) planning are seen as important, but not capable of providing all the answers. Support for a *precautionary management approach* in which policy and practice are seen as hypotheses or experiments to be carefully monitored, in the context of *adaptive planning and management*, is one major consequence (Gunderson et al. 1995; Lee 1993). Another challenge is the need to deal with local and indigenous knowledge and experience, this knowledge often reflecting different cultures, values, expectations, and world views than the modern scientific, rational approach (Stevens 1997). In this context, biodiversity has become an ever more powerful science-based concept in the protected areas field since E.O. Wilson (Wilson 1988) gave it a big push in the early 1980s. As a vision and a guiding philosophy it has also received international sanction through the Convention on Biological Diversity.

Recent stress on science and on scientific concepts such as biodiversity have tended to push the concepts of wilderness and the role of aesthetics and other values toward the "back burner," with implications that are not entirely clear. One reaction has been a call for more stress on spiritual as well as scientific approaches in planning, creating, and managing protected areas. These approaches have been advanced with growing vigor by some nongovernmental conservation organizations and religious groups, which are concerned about the increasingly adverse effects of development on nature and creation. For these and other reasons, the knowledge field has become an increasingly pluralistic and uncertain one.

Planning

This leaves us with planning, the last aspect of protected areas to be discussed here (Day et al. 1998; Nelson and Serafin 1996; Roseland et al. 1996). As a result of the funding, scientific, and other changes described in this paper, we now have a situation in which many private players—as well as local, provincial, and federal governments, along with international organizations and groups (such as UNESCO and its Man and the Biosphere Program)—are involved. Other ways of knowing, other interests, values, and approaches, are now increasingly represented at the table, and a more interactive and adaptive approach is being taken to parks and protected areas in the context of surrounding lands and waters.

Amid all this increasing complexity and uncertainty, collaborative regional approaches to parks and protected areas definitely need much more study. Some assessments have been made of programs such as Greater Yellowstone Ecosystem Plan and the North Cascades International Conservation Initiative (Jensen 2000; Miles 1999). These indicate that top-down and basically corporate efforts by either government agencies or nongovernmental organizations may not work very well. A recent assessment of the ecosystem planning approaches used in four Canadian national parks shows that the complex human dimensions of ecosystem science have neither been well-understood nor even considered in decision-making (Nelson et al. 2000). Insufficient consideration has been given to socioeconomic and planning factors such as those shown in Table 3.

Final Comments

We are witnessing a shifting and evolving framework for protected areas, nature conservation, and sustainable development. This situation is marked by the involvement of many government agencies and private groups, not only regarding the lands and waters in and around protected

• Understanding of the historical, socioeconomic, and political context of the park and region
• Understanding of the needs and activities of local people and their effects on the parks
• Use of traditional knowledge of First Nations or of local people
• Increased attention to and emphasis on human dimensions research and monitoring and reporting
• User-friendly information: brochures, videos, interpretation programs, consultative committees, civic forums, workshops, regular networking
• Ongoing, collaborative, and mutually reinforcing planning
• Interactive and adaptive or transactive planning approaches
• Emphasis on public and private stewardship, landowner contacts, economic incentives, easements, and other agreements
• Communication strategies
• Intra-agency interaction to help address the holistic and integrative processes of ecosystem planning

Table 3. Important planning factors. Source: Nelson et al. 2000.

areas, but those that are far away. In these circumstances, concerned agencies and private groups cannot easily regulate or direct one another's activities. Civic arrangements need to be encouraged so that the array of stakeholders can learn mutually from one another and find ways to communicate, negotiate, plan and act in the individual and the common interest. In this respect, pluralism needs to be explicitly recognized and dealt with in a collaborative rather than a predominantly or exclusively corporate manner. The human dimensions of protected area planning, management, and decision-making require as much attention as science, whether at the local, provincial or state, national, or international scale of thought and practice. Within this overall context, two approaches to nature conservation and sustainable development now seem to be taken. The first is planning for individual protected areas in a regional context (e.g., greater park ecosystem planning). The second is planning for nature conservation and sustainable development on a regional or bioregional basis, where this planning includes protected areas as well as an array of other stewardship methods. Both approaches seem to be necessary responses to the challenges of the day.

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