

Public policy in natural resource management: parks, protected areas and network of special places in Manitoba, Canada

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Abstract: In the face of global concern and awareness of the need for the protection and preservation of nature and natural lands during the past few decades, special interest groups and organizations have played a key role. Numerous international conventions have led to a global understanding of technical classification and development of programs for creating protected lands at the national and subnational levels. As partners in a global program, Canadian public institutes and special interest groups have played a leadership role in formulating and implementing the World Conservation Strategy.

In order to respond to the international call for establishing 12 percent of land as protected land in each nation, Canadian public policies were geared to achieve this goal by the end of the 20th century. In 1992 Canadian federal and provincial governments signed an agreement to expand the nation's network of protected areas to 12 percent of its land and water. To attain the objectives of the 1992 agreement, Manitoba's provincial parks, wildlife management areas, ecological reserves, heritage sites, municipal parks and reserves and federal parks were recognized as Special Places. With the goal of establishing a network of these Special Places, action plans were prepared which included system plans, representation, classification and criteria, data procurement, cooperation and integration. This research established that provincial public initiatives in general were overambitious and that the goals were unattainable within the given time frame. An evaluation of the nature and status of legislation and policy initiatives concerning the Network of Special Places (NSP) has revealed that important contributions were made in these endeavours to preserve the province's natural lands through accurate classifications, appropriate system plans, and legislation. Public involvement in the decision-making

processes has significantly assisted the vertical integration of institutions. However, efforts in making horizontal integration were limited, and lack of an integrative approach hampered the pace of progress in establishing the protected and designated areas.

Introduction

Major worldwide changes are presently underway in economic, social and biophysical areas; the globalization of our economies, the unprecedented magnitude of natural resource extraction, extensive ecological degradation and rapid climate changes are facts of contemporary life. Not only are public awareness and attitudes toward the environment and governments changing, but also, both public and private institutions are undertaking initiatives to react to such changes. One such critical change has been increased public interest in the protection and preservation of nature and ecological attributes, and in the well-being of parks and associated systems. Although public polls consistently reveal the high level of concern among the general public, it is the organized “communities” and “special interest” groups that have been primarily responsible for articulating this interest (Dearden and Rollins 1993). How the public institutions and their policies are responding to the emerging environmental and resource protection concerns is the central focus of this study. The case study of the Province of Manitoba, Canada is used to analyze the resource management, public policies and programs concerning parks and protected areas.

In 1992 Canada’s federal and provincial governments signed an agreement to expand the nation’s network of protected areas to 12 percent of its land and water and to complete this task by the year 2000. The United Nations and the World Wildlife Fund set the criterion that the areas of protected lands must also exclude mining, commercial logging and hydroelectric development. The province of Manitoba, Canada, possessing more than one-quarter of a million square kilometers of the Boreal forest, has been a key stakeholder in the process of developing and implementing provincial policies and programs. To attain the objectives of the 1992 agreement, provincial parks, wildlife management areas, ecological reserves, heritage sites, municipal parks and reserves

and federal parks were recognized as Special Places. The action plans included system plans, representation, classification and criteria, data procurement, cooperation and integration. A number of research questions are addressed in this paper. They include: how much progress have the public policies and programs made? What has been the structure and effectiveness of Manitoba's Network of Special Places (NSP)? What innovative ideas were tested? What lessons were learnt to formulate future policies? In light of these research questions, the present study examines the nature and status of legislative and policy initiatives with regard to NSP. It also assesses the public policy achievements, failures and problems.

Global Concerns and Canadian Responses

Concerns for biodiversity loss, genetic erosion and stresses on ecosystems and the need for parks and protected areas have been addressed since the mid-1960s by a number of global initiatives, but dealing with these pertinent problems and issues can be performed effectively only at the local and regional levels. The International Union for Conservation of Nature and Natural Resources (IUCN) Commission on National Parks and Protected Areas (CNPPA) has therefore advocated a system of different kinds of protected areas in which varied types and degrees of conservation and land use are appropriate. A primary goal has been to motivate decision makers and citizens to consider protected areas as a complex, mutually reinforcing set, developed for varied types and degrees of both conservation and development, rather than as restrictive, even "single purpose" areas (Nelson 1987: 292).

Globally, IUCN has demonstrated its serious concern about more effectively promoting national parks and protected areas as mechanisms for socioeconomic development. The 1982 National Park Conference in Bali, Indonesia, concentrated on the theme of national parks, conservation and development and, more specifically, on the role of protected areas in sustaining society (McNeely and Miller 1984). In this conference and in other contemporary forums, strong arguments were made "for the human

side of the coin, for historical or archeological features, cultural heritage, and traditional conservation practices as a basis not only for better land management but also for making judgements about rapid technical, economic, social and other changes” (Nelson 1987: 293; also see Scace and Nelson 1986). Attention has also been given to the role of parks and protected areas in regional planning and development, along with comprehensive land use management. The Man and Biosphere (MAB) program of UNESCO has been attempting to promote establishment of these areas as part of a cooperative network of institutions and mechanisms functioning for better scientific understanding of the environment and better protection and use of it. On the one hand, this notion insists that tourism, local subsistence activities and other uses of parks and protected areas could bring about greater benefits to local people if they are involved in the overall decision-making process. On the other hand, it suggests that the parks and protected areas network is an essential component of a larger development and conservation system that includes lands and waters being used exclusively for cultivation, grazing or various types of extractive purposes.

The international convention activities largely provide a legal mechanism for collaboration between nations, as well as the role and programs of international organizations with respect to conservation and protected areas (Eidsvik 1993). One of the principal areas of development of IUCN was the World Conservation Strategy (WCS) which was launched in over 30 countries in 1980. The WCS has three major objectives: i) to preserve genetic diversity; ii) to maintain essential ecological processes; and iii) to ensure that the utilization of species and ecosystems is sustainable. The WCS brought about a major shift involving a movement away from preservation of fauna and flora toward a more integrated management of natural resources through the preparation of national and regional conservation strategies. In order to reflect Canada’s commitment to the WCS, an amendment to the National Parks Act was made in 1988, through which maintenance of ecological integrity has become the primary goal of her national parks instead of the human use and enjoyment of nature. McNamee (1993: 40) finds that this amendment is significant for two reasons: i) it solidifies the idea that the priority

of national parks is to protect natural resources; and ii) in order to maintain the ecological integrity of the national parks, the government must take action to define and eliminate the range of internal and external threats to park resources.

Through the work of Dasmann and others, the IUCN developed a methodology for classifying protected areas in accordance with their conservation objectives. Although ten different categories were formulated initially, the World Conservation Monitoring Center has reported on only five of these categories in the UN's Directory of National Parks and Protected Areas. These include Category I: Scientific Reserves; Category II: National Parks and Equivalent Reserves; Category III: Natural Monuments; Category IV: Habitat and Wildlife Management Areas; and Category V: Protected Landscapes. It is essentially a general framework that is employed to a varied extent in various parts of the world. Examination of this world data set has revealed that by the mid-1980s Canada had emerged as one of the world's leaders in the establishment of protected areas (Eidsvik 1993: 286). The most critical issue concerning protected areas is that the ultimate goal of these actions is to allow maintenance of biological diversity, the variety and variability among living organisms and the ecological complexes within which they take place (McNeely et al. 1990). Canada's biological diversity is limited (World Resources Institute, 1990) compared to that of many tropical countries, and protecting species cannot be achieved only by protecting areas. Eidsvik (1993: 286) argues that, if Canada as a political and ecological entity aims at achieving these goals, "protecting species must extend to our society as a whole".

The World Wildlife Fund Canada and the Canadian Parks and Wilderness Society stimulated public advocacy efforts in 1989 through launching the Endangered Spaces campaign to expand the national parks system. In order to represent each of the nation's approximately 350 natural regions, the campaign's goal was to have all levels of governments complete their systems of parks and protected areas by the year 2000. Through these achievements, the land protected should total about 12 percent of Canada, the target recommended by the 1987 Brundtland Commission report on the world environment and development. By the late 1980s it was

apparent that there was an emerging consensus amongst the public, scientists and government officials that more wilderness must be protected, and a campaign was launched to translate this growing level of public support for the protection of natural lands and waters into political action. Recent developments in public awareness of the environment and conservation needs involved three major issues. There has been an emerging consensus, first, to expand the parks and protected areas, especially in relation to the public concern over the unprotected wilderness lands; second, to minimize the degradation of existing parklands and their natural resources; and third, to delineate and augment the role of local-level communities in protecting biodiversity and environmentally sound land-use management through the development of a network and system plan.

Conceptual Considerations for Network Development

Application of the concept of a network system in ecosystem, biodiversity and habitat preservation generally refers to established relationships among various spatial units, representing the needed diverse characteristics. Literature on this usage of networks from a spatial unit perspective is limited; however, it is perhaps relevant here to review the well-developed concepts of network development from a social unit perspective. Although the features and contexts of the spatial unit network may vary from that of the social unit network, it is reasonable to presume that their principles and structures do not differ significantly. Moreover, the spatial units *per se* cannot form a network without their articulation with social units, and therefore, these two are inseparable dimensions of a network system. The model of vertical and horizontal integration in the network system thus can be applied to both spatial and social unit perspectives.

With an emphasis on social units, development planning researchers have long used the Model of Horizontal and Vertical Integration (MHVI). They employ the model to assess local organizational development and the effects of horizontal and vertical integration. Horizontal integration is basically the network of

interrelationships among the community's various social units and subunits (Warren 1963). Communities with strong horizontal integration demonstrate closely bound local organizations; they vigorously support and mutually reinforce each other. The community deals with its problems through consensus and is comprised of groups and individuals who take a keen interest in articulating their needs and influence decision making at the local level. Under such a scenario, land-use and planning decisions are tailored to fulfill local capacity and needs (Paul 1988; Berke and Beatley 1992). Communities with a weak horizontal integration of organizations are represented by loosely knit networks, and local interest and social groups who can influence public policy have limited interaction with each other.

Vertical integration denotes the relationship between a community's units and subunits and systems outside the community (Warren 1963; Berke et al. 1993). Since communities with strong vertical integration usually have an extensive network within the wider political, economic and social entities, they enhance a community's influence on outside affairs. In addition, local concerns are likely to be considered seriously by higher levels of authority at the provincial or federal level. However, inequalities are also evident in this form of integration.

An integrative approach to accommodate both horizontal and vertical relationships is needed to attain optimum results. The benefits of strong vertical integration cannot be fully reaped if the horizontal relationships are weak. The absence of strong horizontal relationships makes communities susceptible and subordinate and often excessively reliant on external forces, whereas strong horizontal resources empower communities to influence interventions from outside (Berke et al. 1993). Programs from outside are tailored to suit local requirements if there is a forceful vertical integration, and lack of it leads to loss of locals' influence on external programs. On the basis of a matrix of both strong and weak characteristics of vertical and horizontal integration, Berke et al. (1993) categorized four types of communities. In this spectrum, type 1 communities can provide effective leadership, disseminate innovation and play a function of role model in both policy formulation and in implementation of the accepted plan. Type 2

and 3 communities are intermediary entities, and they lack relative power and influence due to structural weaknesses. Many communities have no means to acquire external resources, and even if they do receive resources, they have no local networks for making pragmatic decisions and channeling the resources effectively.

Berke and Beatley (1992), Berke et al. (1993), Paul (1988) have described several complex processes that facilitate horizontal and vertical integration. They have adopted the MHVI to the context of development planning and crisis recovery processes. In the context of natural resource management, it is asserted that the same principles, as postulated in MHVI, would apply. Such assertion is more appropriate when the question of a network development for implementing policy decisions arises. In the following, considering the features of MHVI, the approaches and processes of the development of a network of special entities (which embodies both spatial and social dimensions) concerning biodiversity and species protection in the province of Manitoba are examined.

Parks, Protected Lands and Special Places in Manitoba

The province of Manitoba is endowed with vast natural forests; a total of 263,000 sq. km. is covered by forests. Although the provincial initiative towards establishing forest reserves began in the 1930s, when control of the province's natural resources was transferred to the provincial government, Manitoba's first Provincial Parks Act was passed in 1960. The focus of this legislation was to preserve parks and recreational areas for recreational purposes, but extractive activities and agriculture could continue, provided that they respected the former goals. This approach was becoming obsolete rapidly as the provincial park systems continued to grow throughout the 1970s and 1980s. In recognizing the fact that "there was imbalance between preservation and consumption in the park system" and that there was a "need for parks to represent the province's natural regions", a System Plan for Manitoba's provincial parks was released in 1985. In the 1980s, although persistent and stronger environmental movements and public support for conservation began to emerge than ever before in the province,

allocation of public funds faced a continuous decrease. The words of a natural resources manager in Manitoba echo such concerns:

At the basic level, it was becoming evident that the parks legislation which governed infrastructure management had to be updated to deal with the reality of ever decreasing budgets. Issues like taxation in parks, fees, maintenance of a half a billion dollars of park infrastructure that supported existing developments and cottages had to be addressed to give park managers new tools to manage the developed portions of parks into the next century (Schroeder 1997: 2).

In addition, the provincial public policy domains faced a challenge from an unexpected research finding, as reported by the Federal/Provincial Park Council of Canada. A survey of resource extraction policies and practices of all park systems in Canada in 1990 revealed that Manitoba allowed the greatest range of resource extraction in its provincial parks relative to any jurisdiction in Canada (Watkins 1990). At this time, none of the province's 14,150 sq. km. of park land qualified as protected lands as defined by current standards. The findings delighted those who favored multiple land use in parks, whereas they disappointed others who felt that parks were to be protected. The most conspicuous result of the survey was that it revealed the urgent need for a thorough evaluation of the existing parks and natural resource management system in Manitoba.

The provincial government immediately tried to overcome Manitoba's lagging conditions.

In 1992, Manitoba's Minister of Natural Resources, as co-chair of the Canadian Council of Ministers of the Environment, the Canadian Parks Ministers' Council and the Wildlife Ministers' Council of Canada, was a signatory of the document "A Commitment to Establish a National Network of Protected Areas." Manitoba became the first government in Canada to make a formal commitment to the Endangered Spaces campaign of the World Wildlife Fund. This campaign is a cooperative effort, based on

sound ecological criteria, to establish protected areas representing all of Canada's natural regions by the year 2000. It also aims at establishing a network of protected areas that would make up at least 12 percent of the province's land base. While the commitment was not a clear promise that all parks would be protected, it indicated that portions of parks would be protected and other land designations such as Ecological Reserves, Wildlife Management Areas and even Provincial Forests would be employed to create the network of protected lands. In general, in protected areas, logging, mining, hydroelectric development, oil and gas exploration and development and other activities that considerably and adversely affect habitat would be prohibited; these areas may include national and provincial parks as well as other land designations.

In order to stimulate broad public discussion, the Natural Lands and Special Places Strategy was launched in 1992 by the Manitoba Round Table on Environment and Economy. The document proposed policies concerning the protection, use and development of natural lands (Crown and private lands in an undeveloped state) and Special Places (designated lands such as parks, wildlife management areas, heritage sites and ecological reserves). Manitoba's Special Places are classified in seven different categories. They include Provincial Forests, Provincial Parks, Wildlife Management Areas, Ecological Reserves, Heritage Sites, Municipal Parks and Reserves and Federal Parks. Each classification defines a Special Place's use, or reason for existing, as well as defining the types of activities permitted in a Special Place (Figure 1).

Although the policy initiative addressed numerous issues, two are specifically noteworthy. First, a vigorous effort was made to review and seek comment from the public, environmental and business communities concerning protected areas policies; second, an effort was made to formulate a revised park act and guidance regarding the ongoing management of parks. The first initiative fits well with the vertical integration process, according to the MHVI. Public meetings across Manitoba were held; they revealed that widespread public support exists for a network of protected areas. Implementation of this strategy began in two areas: i)

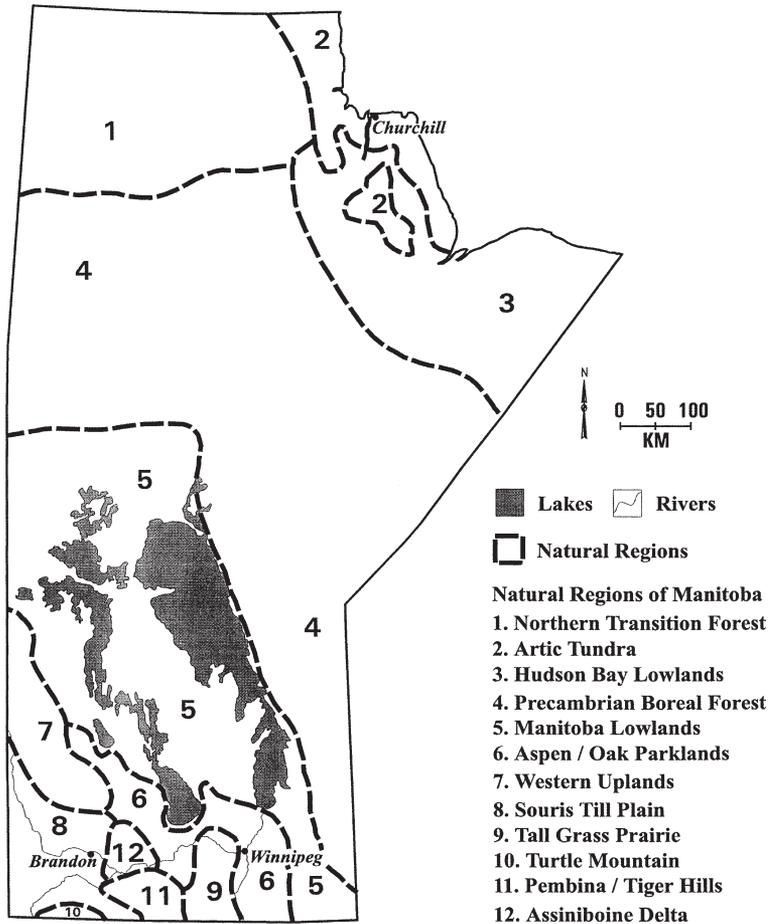


Figure 1: Natural regions of Manitoba.

developing a methodology and approach to select representative lands that might be considered for protected status; and ii) developing legislation to facilitate the establishment of protected areas. Attempts were made to protect a representative portion of each of 12 natural regions delineated within the province (Figure 2). These representative areas are intended to encompass the biological and landscape diversity of natural regions, which are broad geographical entities that share similarities in relief, climate

	Research	Recreation Access	Cottage Development	Sport Fishing	Commercial Fishing	Licensed Hunting	Outfitter/Outcamps	Trapping	Subsistence	Farming	Crazing	Haying	Wild Rice Harvesting	Hydroelectric Development	Logging	Mining
National Parks	✓	✓	X ¹	✓	X	X	X	X	X	X	X	X	X	X	X	X
Provincial Parks - Natural	✓	✓	○	✓	○	✓	✓	✓	○	○	○	○	○	X	○	○
Provincial Parks - Wilderness	✓	✓	○ ¹	✓	○	✓	✓	✓	✓	X	X	X	✓	X	X	✓
Provincial Parks - Recreation	✓	✓	○	✓	○	✓	✓	✓	○	○	○	○	X	X	○	○
Provincial Parks - Heritage	✓	✓	X	✓	○	○	○	○	○	X	○	○	X	X	X	○
Provincial Parks - Wayside	✓	✓	X	✓	X	✓	X	✓	○	X	X	○	X	X	X	X
Ecological Reserves	○	○	X	X	X	X	X	○	X	X	X	X	X	X	X	X
Voluntarily Protected Ecological Significant Areas ²	○	○	X	○	○	○	X	○	○	X	X	X	X	X	X	X
Canadian Heritage Rivers	✓	✓	○ ¹	✓	○	✓	✓	✓	✓	X	X	X	✓	X	X	○
Heritage Sites	○	○	○	N/A	N/A	○	○	○	○	○	○	○	N/A	X	X	X
Provincial Forests	○	✓	○	✓	○	✓	✓	✓	✓	X	○	○	○	✓	✓	✓
Wildlife Management Areas	○	✓	X	✓	✓	○	○	○	○	X ³	○	○	X	○	○	○
Refuges ⁴	✓	✓	X	✓	✓	○	✓	○	○	✓	✓	✓	✓	✓	✓	✓
Special Conservation Areas	✓	○	X	✓	✓	✓	✓	✓	○	X	X	X	X	X	X	✓
Heritage Marshes	✓	✓	○ ¹	○	○	○	○	○	○	X ⁵	X ⁶	X ⁶	✓	X	✓	○
Military Reserves ⁷	○ ⁸	○	X	X	X	○	X	X	✓ ⁹	○	○	○	X	X	○	○

✓ Allowed in all ○ Allowed in some, Or in zoned areas, Or by permit Notes: 1. No new cottages allowed. 2. Depends on the discretion of owner. 3. Leases are Not renewed. 4. Refuges address only hunting and discharge of firearms. 5. Lure crops only. X Not allowed 6. Allowed where traditionally hayed. 7. Limited access because of safety restrictions. 8. Only essential research allowed. 9. Not allowed during training exercises. N/A Not applicable Source : Manitoba Natural Resources, Canadian Armed Forces, 1992

Figure 2: Activities allowed in special areas.

and vegetation. The province has adopted an “enduring features” or landscape unit approach to evaluate representation. Each natural region has been divided into smaller landscape units that are characterized by unique combinations of climate, physiography, surficial geology and soil types.

In terms of legislation that would allow the government to meet its objectives, it proclaimed the Provincial Parks Act in 1996, following the required public consultation. Participants in the public discussion emphasized the need for certainty of tenure and land use and for ongoing public consultation on land use issues in parks (Schroeder 1997). On the one side, individuals and/or groups with a resource interest asked for certainty of tenure and land use to have access to wood supplies for harvest or to mineralized or oil-bearing areas for exploration and development. For cottagers and people involved in the tourism industry, it meant assurances that leases would be honored well into the future. On the other side, for environmentalists, it implied certainty that areas of high

ecological value would be protected from harvest and development for future generations. During the development process of the act, the necessity of public consultation concerning land use and management issues was reinforced.

The year 1996 marked the halfway point between the adaptation of the goals laid out by the Statement of Commitment and the proposed date of completion of the network of protected areas, the year 2000. The new Provincial Parks Act intended to deal with the problem of informal classifications of natural areas. This problem could have led to misinterpretation and the improper use of some natural lands. The act clearly defines classification criteria, boundaries, uses and protection of provincial parks.

The public consultation outcomes strongly favored the existence and linkages of the protected lands and “working landscapes”. The following is specified in the 1996 act:

- A park system plan be developed with public consultation that employs the park Classification system and a series of Land Use categories (a form of zoning).
- Certain Classifications of parks (Wilderness and Heritage) and certain Land Use Categories (Wilderness, Backcountry, Heritage) preclude logging, mining or the development of oil, petroleum, natural gas or hydro-electric power or any other activity specified in the regulation.
- Certain Land Use Categories (Resource Management and Recreational Development) provide for resource use in parks that are consistent with the park classification.
- Prior to the creation, deletion or change of a park boundary, Classification or Land Use Category, public consultation must take place.
- Development of park management plans for provincial parks became a legislated requirement providing for another level of detailed planning (Schroeder 1997:5).

Manitoba's Provincial Policy Framework

Having identified the provincial classifications of Special Places, the government developed a framework to fulfil its commitments according to the Statement of Commitment it signed to expand Canada's NSP. Under this agreement, the province of Manitoba had to expand its protection of natural lands to a minimum of 12 percent of its total land base. These areas of protected lands must also exclude mining, commercial logging and hydroelectric development from their borders. This criterion, which is a guiding principle of the Statement of Commitment, is outlined in the Endangered Species Program put forth by the United Nations and the World Wildlife Fund.

The provincial action plan for a network of Special Places determined six key elements; these are discussed in the following text.

Integration:

The government's adoption of sustainable development as its guideline for the formation of public policy concerning natural resources requires a new approach to the decision-making process. Achieving the goals set forth by this new approach requires an integrated decision-making and planning process. An integrated mechanism "encourages and supports decision making and planning processes that are open, cross-sectional, incorporate time horizons relevant to long term implications and are efficient and timely". Thus, integrated (vertically) decision making is one of the best means to ensure sustainable development and the preservation of natural areas.

The process involves all stakeholders affected by the decision, which includes provincial government, municipal government, agencies, communities, interest groups and the individual. If it functions properly, this process could lead to a consensus on how best to use a resource or whether the resource should be protected for future generations. Lessons from past occurrences suggest that, when market forces or economic priorities determine resource policies, concerns of sustainable development are often less emphasised. Marty (1997) in this context points to the case of Banff

National Park in Alberta. The Banff-Bow Valley area contains montane habitat (Page et al. 1996; CPAWS 1997). Only three percent of Banff National Park's 6641 km² is montane habitat, and half of that portion lies in the Bow Valley where wildlife compete for the most productive habitat with development activities. Between 1971-1995, 73 grizzlies are known to have died in the park, and 90 percent of them died close to developed areas. The newly developed infrastructure within the valleys has obstructed the traditional north-south and east-west links or corridors that wild species have used for centuries to move north and south within their range between Yukon and Yellowstone ecosystems. The ongoing development processes are thus endangering the sustainability of the park's ecosystem.

Cooperation:

Approximately 85 percent of Manitoba's land is Crown owned. It may therefore appear that the network of Special Places could easily be achieved using public lands. The remaining 15 percent, which are mostly in private hands and not owned by the government, are located largely in the southern part of the province. Crown land there is sparse and scattered. Without public collaboration and cooperation, the goals of the network of Special Places in the southern regions of the province cannot be attained.

In addition to upward integration in the management and decision-making process, several provincial initiatives were designed to establish downward as well as horizontal linkages in the integration process. The provincial government made plans to reach agreements with municipal governments, private owners and other programs that may protect land and associated resources. Agreements are underway with some of these stakeholders (e.g., governments, non-government agencies and individuals), and they will be included in the network of Special Places. These include: the ecologically significant areas program; national parks; municipal parks; the North America waterfowl plan; Prairie care; the nature conservancy; municipal heritage sites; and federal heritage sites, canals and structures. It is expected that the provincial efforts in concert with other parties will allow for the completion of the network in regions where Crown land is limited.

System Plans:

Since 1930 the province has had control over its natural resources, and it began to allocate Crown lands for use as Special Places. The intent of the provincial system plans is to build upon the existing Special Place allocations by enhancing them and addressing special needs where required. System plans are to be compiled for all of the twelve natural regions of Manitoba (Figure 2) so that they each meet the goal of having 12 percent of their land base protected. System plans for each region will include provisions that: i) allow for the completion of the provincial NSP by the year 2000; ii) provide for the designation of lands under appropriate legislation; iii) provide the definition of representation; iv) provide for the preparation of management plans for each designated area; and v) address other relevant issues and objectives.

Representation:

Representation of Manitoba's NSP should adequately represent the habitats, landforms, rare or endangered sites, unique features, heritage sites and reserves found within each natural region of the province. The representation of Manitoba's natural lands will occur following several guidelines: 1) areas will exclude commercial logging, mining and hydroelectric development; 2) these areas will include waterways, wetlands, shoreland, significant, rare or endangered habitats, as well as landforms and heritage resources characteristic of the region; and 3) each region will allocate 12 percent of its land for the previous purposes. By the year 2000, Manitoba's network of Special Places will include 20 to 25 percent of its land. Twelve percent, as outlined previously, will preserve endangered species; 8 to 13 percent will be multiple uses areas, including the activities of hydroelectric development, mining and commercial logging.

Classification and Criteria:

In the past, both informal and formal classifications were used for Special Places. Classification criteria and methods were to be reviewed and notified where required; this was completed in 1994.

This was accomplished using up-to-date data regarding Manitoba's natural areas.

Data Collection:

Methods of data collection have been enhanced so that they will continue to provide information for the identification and evaluation of areas being considered for Manitoba's network of special places. Data collection, which is needed to support the network, includes: 1) provincial forest inventories; 2) geological surveys and inventories; 3) inventory of endangered species; 4) annual and periodic wildlife specific inventories and surveys; and 5) heritage site inventories. The gathering of these data was expected to contribute to the completion of the network of special places by the year 2000, especially in the classification of special areas.

Expansion of the Network of Special Places: An Assessment

The government initiative for a plan to expand Manitoba's size of protected areas has been courageous and goal-specific. In this plan the problems with the existing system as well as the goals were identified. The government introduced legislation and policies that it felt would allow the plan to meet its goals. It is well-known that legislation and policies are means to an end; these policies and legislation must be put into action in order to realize to their ultimate objectives.

It takes more than legislation to protect our special areas. Conservation and management programs, volunteer programs, and educational programs help shield special areas from environmental stress. Volunteers programs involving liaison committees, cooperating associations, and citizen advisory groups are lending a hand with resource management (Gerrard et al. 1991: 92).

The report prepared by Gerrard et al. (1991) for Manitoba Environment recognizes the need for vertical and horizontal

integration in the above manner. The actual progress in the implementation of legislation and the development of the network can be visualized by examining the phases of progress in protecting natural areas.

Special areas or places are designated by legislation to protect and preserve the unique physical, cultural and natural features. Under this term are included arks, heritage resources, ecologically significant areas and heritage rivers. Special Places share a common objective: to conserve delicate ecosystems, representative parts of flora and fauna and significant aspects of regional heritage (Gerrard et al. 1991). Activities allowed in Special areas (Figure 1) depend, considering their environmental impact and socioeconomic needs, on the type of economic, recreational and agricultural function and the category of natural areas (Figure 2). Previous to the provincial government's signing of the Statement of Commitment in 1991 to expand the province's network of Special Places, a total of 11.6 percent of its natural areas was protected. However, of this 11.6 percent, only 0.6 percent met the criteria put forth by the United Nations and the World Wildlife Fund. This meant that to meet the goal of preserving 12 percent of Manitoba's natural land in this fashion, the government was required to increase the protected land base by 11.4 percent by the year 2000.

The process of a kind of vertical integration was attempted in the fall of 1992, when the Manitoba Round Table on Environment and Economy was pursued. It conducted a public review of draft policies for the protection, use and development of the province's natural, cultural and heritage resources. The review included 19 workshops, 13 public hearings, a questionnaire survey covering 1,270 responses and an evaluation of 8 written submissions (Gerrard et al. 1993). In 1993 the amount of park land that met the criteria of the Statement of Commitment was still only 0.6 percent. The area from parks and ecological reserves had grown from 1,795,929 hectares to 1,801,714 hectares, an increase of 0.3 percent. There was the addition of an ecological reserve, 27 ecologically significant areas and a provincial park. The number of provincial parks dropped from 151 to 127 in 1993. Several small wayside parks were transferred from Manitoba Natural Resources to the Department of Highways. As these parks are used mainly as rest stops for

travellers, it was felt they could be better serviced by the Department of Highways, while at the same time saving the financial resources of the Department of Natural Resources, which could better be used elsewhere.

The criteria set forth by the United Nations and the World Wildlife Fund were met in 1995 by 5.5 percent of the province's land (Gibson et al. 1995) This was a significant addition of 4.9 percent since 1993, which was mainly accomplished by the introduction of four large provincial parks in northern Manitoba. These parks increased the province's park land to 2.1 million hectares, an approximate 300,000 hectare increase from that of 1993. These new parks include Caribou River Provincial Park, Sand Lakes Provincial Park, Numaykoos Lake Provincial Park and Amisk Provincial Park. By the end of 1997, the amount of protected land base that meets agreement requirements grew to 6.5 percent. This is an addition of only 1 percent in the protected land base since 1995, reflecting a much slower progression during 1995-1997 relative to the 1993-1995 period. In 1996 the provincial and federal governments announced the establishment of Wapusk National Park, located in the Hudson Bay lowlands.

From 1991 to 1995, there has been an increase of 5.9 percent in the total protected land area, which meets the Statement of Commitment's criteria. This has been achieved largely through the introduction of several parks, both provincial and federal, into Manitoba's network of protected areas. In spite of these impressive gains, a significant drop in the rate of progression at which new Special Areas are formed has been noticed. This made it questionable as to whether or not the government could meet its timetable for completing Manitoba's network of Special Places by the year 2000.

In undertaking a project or in making an agreement, several variables must be considered simultaneously. First, prior to undertaking the task, the decision-makers should have a thorough background knowledge so that they can envision the scope of the task. Adequate specific knowledge is also required. Second, prior to the signing of any agreement, an assessment should be made of the existing human and capital resources. Third, the concerned agencies need to seriously consider and evaluate the duration

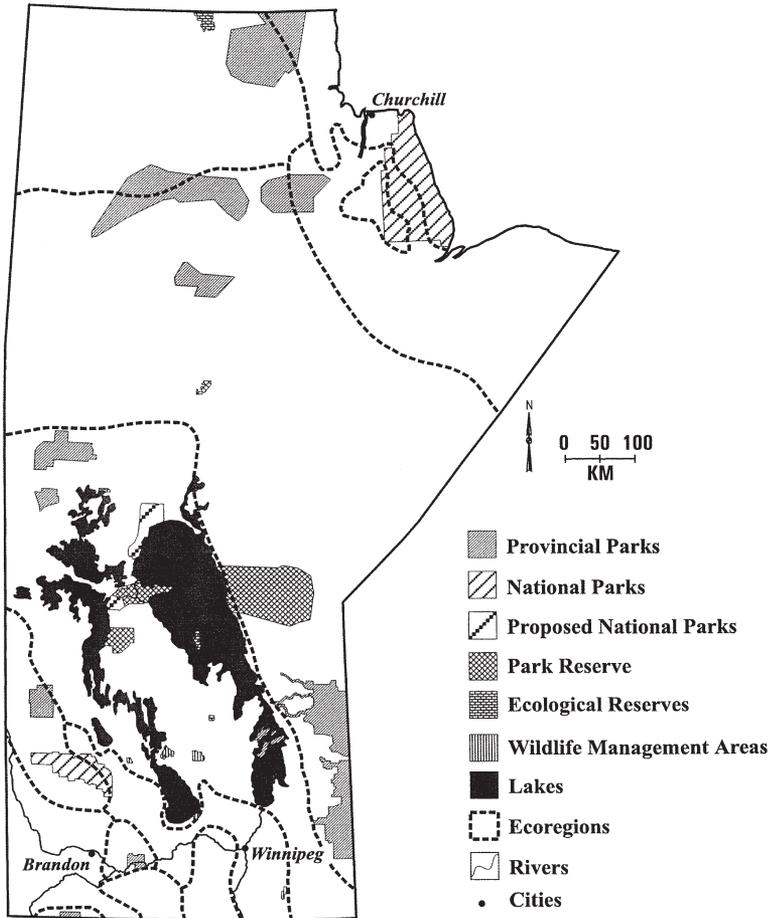


Figure 3: Manitoba's protected areas.

required to complete the task. It is for these reasons that planning, including detailed research of the *de facto* situation, is essential before agreeing to any collaborative task. The government initiatives throughout the 1990s to expand Manitoba's network of Special Places have been commendable, but it appears that the complexities and potential difficulties of the task of implementation were not adequately assessed before the government signed the Statement of Agreement.

A number of problems were identified in meeting the goals of the agreement within the stated time period. The inadequate timetable that the provincial government set for itself to complete the task generated a major difficulty; the government signed the agreement in 1992, giving itself only eight years to complete the ambitious network. As noted above, through ongoing legislation and policy initiatives, the concerned public agencies have made noticeable progress in terms of establishing the framework necessary to complete the desired task. However, some of the necessary legislation has been only recently implemented: for example, the new Provincial Parks Act. Other essential legislation and policies are not yet fully enacted: for example, the system plans for ecological reserves and wildlife management areas. Another problem identified relating to the timetable was that the length of time needed to identify, approve and establish a protected natural area was considerable. This was affected by a number of factors: long distance, isolation and remoteness of the proposed areas. The proposed areas must be thoroughly researched and assessed, both in terms of classification criteria and feasibility before any steps could be taken towards establishing a protected area.

Between 1993 and 1995, there was a sharp increase in the establishment of protected areas meeting the United Nations and World Wildlife Fund criteria (Gibson et al. 1995). From 1995 to 1997, the amount of additional land base that met these criteria was only nominal (Gibson et al. 1997). Assuming that the rate of progression did not drop, the amount of Manitoba's land base meeting the previous criteria would perhaps reach up to 9.5 percent, 2.5 percent short of the province's goal.

Realization of a proportional representation of the province's 12 natural regions by the established protected areas has been another major critical problem. Underrepresentation in some regions was detected (Figure 4). Approximately 15 percent of Manitoba's land is privately owned. As is evident in Figure 4, the north, south, east and portions of the southwest of the province are adequately represented, while the central and south-central portions are grossly underrepresented. There could be two plausible reasons for this underrepresentation of some natural regions: i) that much of these lands may be privately owned, and due to weak vertical

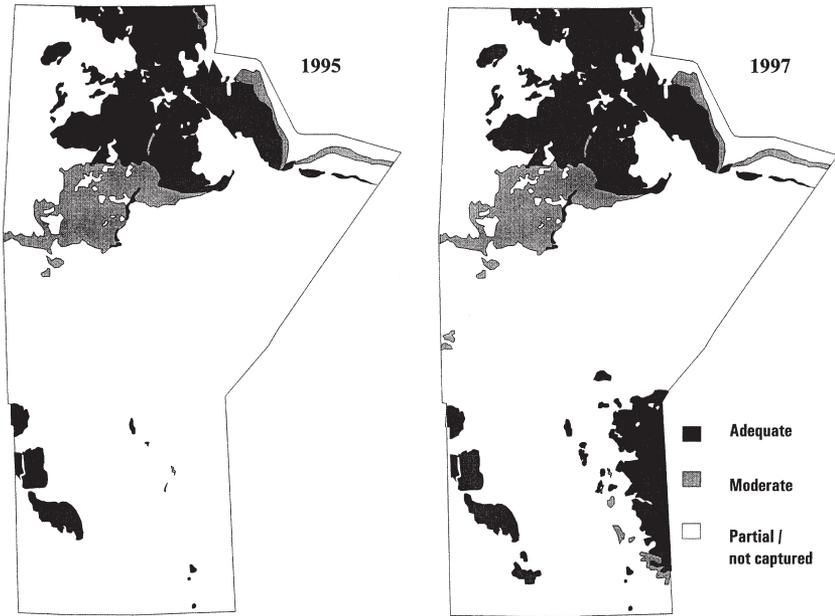


Figure 4: Natural region representation, 1995 and 1997.

integration the public institutions were having difficulty soliciting help from these communities; and ii) that these regions are so intensely disturbed by human activities that there is little or no natural land worth preserving. In any case, for the previous reasons it may not have been possible to preserve 12 percent of each natural region's land.

As a whole, public policy concerning the expansion of the province's protected areas in Manitoba can only be described as an attempt to react too ambitiously to popular public demand. A longer timetable for completion of the tasks associated with the agreement could allow for an accurate analysis of proposed areas with feedback and an undertaking of reformulated programs step-by-step. It could allow for the identification of flaws in policies, legislation and classification criteria before the system was complete, avoiding the potential cost involved in making changes to these factors at a later stage. This might also have allowed time-duration for the successful adaptation of integrated decision making

into the policy process, perhaps avoiding future land use conflicts in these areas. Finally, the public agencies should have accepted the fact that it may not be possible to adequately represent all natural regions, and therefore, should have concentrated on those that could function as a catalyst.

Conclusion

This study has examined the innovative approaches of public institutions, interest groups and organizations in the province of Manitoba, Canada, in meeting goals concerning the conservation and protection of biodiversity, ecological resources and natural heritage set by the World Conservation Strategy. In the face of global concern and awareness of the need for the protection and preservation of nature and natural lands during the past few decades, the organizational entities have played a key role. In order to respond to the international call for establishing 12 percent of land as protected land in each nation, Canadian public policies were geared to achieve this goal by the end of the 20th century. In 1992 Canada's federal and provincial governments signed an agreement to expand the nation's network of protected areas to 12 percent of its land and water.

Because the government of Manitoba has ignored the aspects of preservation of ecological and cultural resources for decades, it was forced to react vigorously when faced with public embarrassment in the early 1990s. The goals set forth in the public initiatives attempted to recover quickly, and consequently they were overambitious and unattainable within the given time frame. Questions may here arise with regard to the cost-effectiveness of such reactive, expeditious policies and programs; further research on these issues should be pursued. Proactive policies, with adoption of sustainable development as a guiding principle for protection and preservation of natural and cultural resources, would demonstrate strong institutional commitment to the preservation of natural heritage and the meeting of long-term social goals. Underestimation of land-use conflicts and their associated complexities has been common in public policy formulations. An established dialogue between stakeholders and an understanding

of trade-off and mutual benefits could help resolve many emerging conflicts; however, the process could require a prolonged time period. Institutional and organizational integration would be an essential means for establishing such a dialogue.

In this study, the public policies and activities of the special interest groups were examined in light of the concept of vertical and horizontal integration of social and spatial entities. In order to prepare the framework for a NSP, public involvement was sought. Participants involved in the public hearing processes have revealed that they prefer direct engagement of communities and lower-level units in decision-making concerning formulation of conservation and protection programs, determination of access to natural resources and delineation of Special Places. A vertical integration of community level organizations and groups was strongly recommended. They also demanded that policy framework should aim at protecting, as much as possible, the interests of the stakeholders in natural resource management decisions. This research has further registered that efforts in establishing a horizontal integration in the NSP appear to have been limited. Also, the lack of an integrative approach between the vertical and horizontal entities has hampered the pace of progress in implementing the protected and designated areas. Overall, although overambitious, the government's intentions and efforts have been positive, making important contributions to the preservation of Manitoba's natural lands with accurate classifications, appropriate system plans, policies and legislation.

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