

STRENGTHENING THE CONSERVATION OF BIODIVERSITY: REFORMING ONTARIO'S *PROVINCIAL PARKS ACT*

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Abstract

The management of existing provincial parks in Ontario, and the creation of new ones, is legislatively governed by the *Provincial Parks Act*. This evaluation of park legislation assesses its capability of managing complex ecological realities, fostering adequate planning, ensuring proper implementation, and generating public involvement. The increasing size of the parks system and the biological diversity of Ontario represent the ideas of change and complexity in resource and environmental management.

This paper suggests that the *Provincial Parks Act* must be reformed to address these changes and complexities. The mandate and legislative framework of the parks system must be redesigned to promote a proactive approach in conserving the biodiversity of Ontario. Reform is needed in the planning of parks and their management. Public participation and accountability must also be assured. Similar reform in the management of protected areas has occurred at the level of the federal parks system. This paper discusses important proposals for legislative change to Ontario's *Provincial Parks Act*, specifically: (i) the recognition of biodiversity conservation as a primary goal; (ii) the need for management plans for each park; and (iii) the requirement for an open consultative planning process.

1.0 Introduction

The Province of Ontario is an ecologically diverse region of Canada (1). It extends from the

northern Arctic Tundra on the shores of Hudson's Bay to the remnants of Carolinian Forest bordering the southern Great Lakes over a total area of 1,068,582 km². Ontario's geological variability and its range of climate have created habitat for more than 2,900 species of vascular plants, 160 species of fish, 80 species of amphibians and reptiles, 400 species of birds, and 85 species of mammals (2). This paper stresses the role of the provincial parks system in supporting and restoring the integrity of Ontario's biodiversity.

The management of Ontario's 270 provincial parks, and the creation of new ones, is legislatively governed by the *Provincial Parks Act* (1954). This evaluation of park legislation assesses its capability of managing complex ecological realities, fostering adequate planning, ensuring proper implementation, and generating public involvement. The evolving nature of the parks system and the biological diversity of Ontario represent the ideas of change and complexity in resource and environmental management (3).

This paper suggests that the *Provincial Parks Act* must be reformed in order to address these changes and complexities. The objectives and legal mandate of the parks system must be redesigned to promote a proactive approach in conserving the biodiversity of Ontario. Recommendations for the revision of the Act, which have called for changes in planning and management procedures, increased public participation, and greater accountability have gone unheeded (4, 5, 6, 7). In contrast, progressive change has occurred in the management of protected areas under the *Canada National Parks Act* (2000) and the *Canada Parks Agency Act* (1999). The Province of Ontario should update the intent and design of its legislation, following the efforts of its federal counterpart, to ensure the necessary legal measures required to address the changes and complexities of the provincial parks system. If not revised, the legislation risks the failure of not "adequately addressing

a significant problem” such as the conservation of biodiversity (8).

2.0 Ontario's Provincial Parks System

Provincial parks represent the idea of change in resource and environmental management (3). Ontario introduced its first legislation for parks with the *Public Parks Act* of 1883, which allowed municipalities to create and manage urban parks within their boundaries (9). In 1885, the Province passed *An Act for the Preservation of the Natural Scenery about Niagara Falls* establishing the Niagara Falls Park Commission, which then created Queen Victoria Park in 1888 in honour of the Queen's birthday (10). Ontario's next *in situ* parks legislation was *An Act to Establish the Algonquin National Park of Ontario* in 1893 which was modeled after the legislation governing Rocky Mountain National Park (later renamed Banff National Park) (11). Algonquin National Park was to be managed “as a public park and forest reservation, fish and game preserve, health resort and pleasure ground for the benefit, advantage and enjoyment of the people of the province” (11). Algonquin was in fact under provincial jurisdiction and was originally termed as a “national” park to reflect its function and size. The creation of Algonquin Park was the start of what would later become the provincial parks system in Ontario.

Public interest in the establishment of new parks grew as Ontario began the 20th century. The promotion of tourism was a central objective; however, concerns also began to surface as to the welfare of the province's wildlife (12). The Province introduced a *Provincial Parks Act* in 1913 which established the idea of a parks system in Ontario. This Act allowed the government to expedite the creation of parks by avoiding the delay caused by creating them on a park-by-park basis in the legislature. The *Provincial Parks Act* was later revised in 1954 to accommodate the post-World War II outdoor recreation boom; this period saw the number of parks in Ontario increase from

eight in 1954 to a total 94 by 1967 (11). This same Act remains in force today. The goal for provincial parks within the Act (Section 2) stresses its dedication to the people of Ontario:

All provincial parks are dedicated to the people of the Province of Ontario and others who may use them for their healthful enjoyment and education, and the provincial parks shall be maintained for the benefit of future generations in accordance with this Act and the regulations.

Throughout the 1950's, 1960's and 1970's, the growing size of the parks system, increased recreational activities, pressures for greater resource extraction and demands for conservation measures necessitated that the Department of Lands and Forests and later the Ontario Ministry of Natural Resources develop a comprehensive set of policies. The Parks Division, now called Ontario Parks, responded in 1978 by gaining cabinet approval for the *Ontario Provincial Parks: Planning and Management Policies* which outlined the goals, objectives and principles for the emerging parks system. Referred to as the "Blue Book," the goal of this policy is "...to provide a variety of outdoor recreation opportunities and to protect provincially significant natural, cultural, and recreational environments, in a system of Provincial Parks" (13). This policy stated the four objectives of the parks system, which are currently still employed in planning and management:

Protection	To protect provincially significant elements of the natural and cultural landscape of Ontario.
Recreation	To provide Provincial Park outdoor recreation opportunities ranging from high-intensity day use to low-intensity wilderness experiences.
Heritage Appreciation	To provide opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Ontario.
Tourism	To provide Ontario's residents and out-of-province visitors with opportunities to discover and experience the distinctive regions of the Province.

The Blue Book contains a series of principles to be used in managing the parks system: permanence, distinctiveness, representation, variety, accessibility, coordination, system, and classification (13). Of particular significance is the latter principle which "...organizes Ontario's provincial parks into broad categories, each of which has particular purposes and characteristics as well as distinctive planning, management, and visitor services policies" (14). Six park classes, each

emphasizing particular objectives, were established through the *Ontario Provincial Parks: Planning and Management Policies* (13) and continue to be used in the system (15):

Wilderness Parks are substantial areas where the forces of nature are permitted to function freely and where visitors travel by non-mechanized means and experience expansive solitude challenge, and personal integration with nature.

Nature Reserves are areas selected to represent the distinctive natural habitats and land forms of the Province, and are protected for educational purposes and as gene pools for research to benefit present and future generations.

Historical Parks are areas selected to represent the distinctive historical resources of the Province in open space settings and are protected for interpretive, educational, and research purposes.

Natural Environment Parks incorporate outstanding recreational landscapes with representative natural features and historical resources to provide high quality recreational and educational experiences.

Waterway Parks incorporate outstanding recreational water routes with representative natural features and historical resources to provide high quality recreational and educational experiences.

Recreation Parks are areas which support a wide variety of outdoor recreation opportunities for large numbers of people in attractive surroundings.

The classification system intends that “no individual park can be all things to all people” and that “all objectives may not be met in each park” (14). This statement acknowledges the varying nature of the parks, contrasted by the likes of Wasaga Beach Provincial Park in the recreation class as opposed to Killarney Provincial Park in the wilderness class. This classification system is also used in the zoning of parks (13). However, the parks system has been seen to emphasize its objective of tourism above others (11).

From 1954 to the present, the Ontario provincial parks planning and management structure has developed under the umbrella of an increasingly sophisticated policy structure. However, the entire system is underlain by a weak legal framework, one that is increasingly inadequate in the task

of conserving the biodiversity of Ontario.

The provincial parks in Ontario are sufficiently large and ecologically important to be recognized as serving a role in the global system of protected areas. Indeed, Canada is a signatory of the international *Convention on Biological Diversity* (1992). The *Canadian Biodiversity Strategy* requires all political jurisdictions to cooperate towards developing a protected areas network (16); the goal of this plan is a

...society that lives and develops as part of nature, values the diversity of life, takes no more than can be replenished and leaves to future generations a nurturing and dynamic world, rich in biodiversity.

Ontario Parks attempts to complement its own classification system in using the International Union for the Conservation of Nature's (IUCN) Protected Areas Management Categories (17). The overwhelming majority of provincial parks have been classed by Ontario Parks as IUCN Class II or "national parks." The IUCN definition for Class II parks is (18):

To protect outstanding natural and scenic areas of national or international significance for scientific, educational, and recreational use. These are relatively large natural areas not materially altered by human activity where extractive resource uses are not allowed.

Unfortunately, the effectiveness of using such an international classification system is diminished when it is inadequately interpreted or applied. Almost every provincial park in Ontario is purported to be an IUCN Class II park, whether it is a recreation class park such as Sibbald Point or a wilderness class park such as Quetico (19). Therefore, it is implied that "protection" is the highest objective in these parks which is not the case. Such misinterpretation creates the illusion of "...a system of protected natural heritage areas, representing the full spectrum of the province's natural features and ecosystems" (20). The full range of IUCN classifications should be used, but with proper attention given to the objectives (i.e., protection, recreation, heritage, and tourism) explicit in

its own six park classes (i.e., wilderness, nature reserve, historical, natural environment, waterway, and recreation).

Dramatic changes have continued to unfold for the province's parks with the recent Lands for Life program and its recommendations for the future management of Crown land. Three Lands for Life Round Tables – Boreal West, Boreal East, and Great Lakes – undertook what is self-described as “...the most extensive and comprehensive public dialogue about land use planning in Ontario's history” (21). Of particular significance, for this paper and future research, is the assessment of the implementation of the Lands for Life principle of “protecting and maintaining ecosystem diversity, productivity, and health” in what is an explicit recognition of the importance of biodiversity conservation in Ontario's parks system (21). The consolidated report of the Round Tables recommends that the government “...should carry out a broad public review of the *Provincial Parks Act* and the policies governing provincial parks, and in particular, policies on permitted uses” (21). In response, the Province states that it

...accepts this recommendation in principle. The Board of Ontario Parks will be consulted on the concept of a review of the ecological basis of the parks and protected areas system, the relationship of the protected areas to the larger landscape, and the policies for the parks system, and how this review might be carried out. (22)

The final integrated document put forth by the Province based on these recommendations, *Our Living Legacy*, possesses enormous implications for parks and other protected areas in Ontario (and all land owned by the Crown). This planning process is of particular importance in relation to biodiversity conservation as the Province has stated that it will link many provincial parks through a network of protected corridors. Ideally, this increased ecological connectivity within the parks system will reduce the genetic isolation of populations, while facilitating their natural patterns of migration and dispersal to other areas.

Ontario currently possesses 270 provincial parks (19) which the Ministry of Natural Resources has publicly stated will increase to a total of 650 provincial parks and protected areas covering 12% of the province (23). Despite its apparent intent, such an increase in the provincial parks system risks being guided by political and fiscal realities, not ecological models (24). This expansion of the parks system necessitates the visible recognition that parks must be linked ecosystems within a landscape matrix, requiring massive amounts of regional and park management planning for the long-term effective conservation of biodiversity. These changes and complexities necessitate a re-evaluation and revision of the legal framework that governs Ontario's provincial parks and their role in conserving biodiversity.

3.0 Biodiversity Conservation

DeLong (25), in an extensive literature review, identifies 85 different definitions of biodiversity currently in use and determines that definitions are based on the scope of ecological components and processes (i.e., species, genes, assemblages, ecosystems, and ecological processes) and the characterization of diversity (i.e., richness, evenness, and variety). DeLong (25) presents the following synthesized definition of biodiversity:

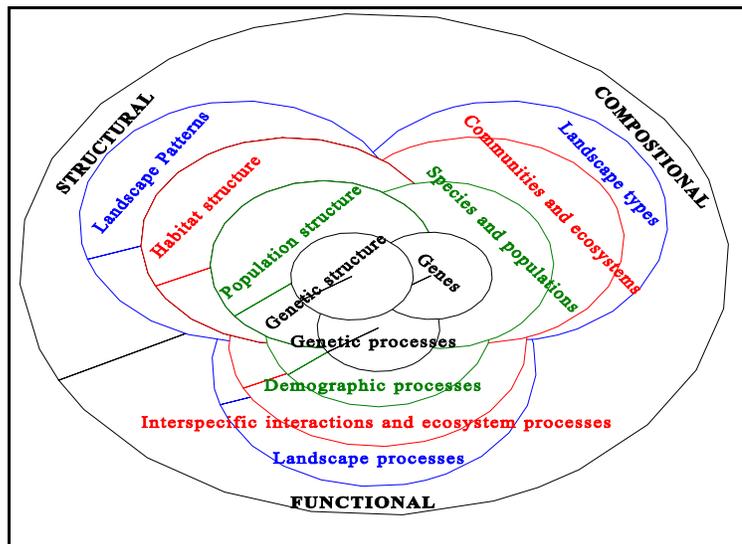
Biodiversity is a state or attribute of a site or area and specifically refers to the variety within and among living organisms, assemblages of living organisms, biotic communities, and biotic processes, whether naturally occurring or modified by humans. Biodiversity can be measured in terms of genetic diversity and the identity and number of different species, assemblages of species, biotic communities, and biotic processes, and the amount (e.g., abundance, biomass, cover, rate) and the structure of each. It can be observed and measured at any spatial scale ranging from microsites and habitat patches to the entire biosphere.

Ecological theories pertaining to biodiversity conservation are grounded in "...widely accepted generalization[s] based on abundant and diverse research and experience and have a wide application" for the purposes of maintaining or restoring the integrity of and diversity within

ecosystems (26). However, the dynamic nature of these concepts causes “a certain degree of trepidation” on the part of government resource agencies (27). The causes for this disparity exist as these complex concepts involve (i) multiple levels of organization, (ii) varying spatial scales and (iii) a range of temporal scales (see Figure 1) (28). Despite this disparity, biodiversity is a measurable phenomenon which is capable of being monitored and managed (29, 30). Additionally, public opinion surveys suggest clear support for Ontario’s biodiversity and the parks system (31).

The conservation of biodiversity is best achieved through an ecosystem-based approach. Grumbine defines ecosystem or ecosystem-based management as an approach which “...integrates scientific knowledge of ecological relationships and ecosystem integrity over the long term” within a complex sociopolitical and values framework (32). This approach has received general consensus of approval among the scientific community (33). Ten dominant themes comprise such an approach: hierarchical context, ecological boundaries, ecological integrity, data collection, monitoring, adaptive management, inter-agency cooperation, organization change, humans embedded in nature, and values (32, 34).

The concept of biodiversity is consistent with that of ecological integrity and may be considered to be synonymous to a high degree. Ecological integrity, like biodiversity, is a fundamental concept in



maintaining and supporting species, ecosystems, and landscapes. It is arguably a cornerstone concept linking both the phenomenological and analytical aspects of the ecological sciences (35). Although its definition is debated, ecological integrity essentially involves "...maintaining viable populations of native species, representation of ecosystem types across their natural range of variation, maintaining ecological processes, management over the long term, and accommodating human use within the above constraints" (32). In a similar fashion, the Panel on the Ecological Integrity of Canada's National Parks suggests that "an ecosystem has integrity when it is deemed characteristic for its natural region, including the composition and abundance of native species and biological communities, rates of change and supporting processes" (30).

The importance of ecological integrity for parks is evidenced by its inclusion in the *Canada National Parks Act* (2000) and the *Canada Park Agency Act* (1999). Criteria have been established with respect to the ecological integrity of national parks, which may be applied by the provincial parks system in the pursuit of conserving biodiversity (30):

- ecological integrity should be assessed with an understanding of the regional evolutionary and historic context that has shaped the system;
- because ecosystems are dynamic, conservation strategies should maintain or restore key ecological processes within their natural range of variability;
- ecosystems are multi-scaled and conservation should be considered at many scales. National parks are part of larger ecosystems and must be managed in that context;
- functional connections between parks and equivalent protected areas within the regional ecosystem should be maintained or restored, to allow wildlife movement;
- populations of species should be managed to levels that have a high likelihood of persistence;
- ecosystems have characteristic rates of change. Understanding rates and

direction are critical to understanding the system;

- parks have a finite capacity to withstand use. Human use and facilities should be compatible with park ecosystem protection in type, amount, and timing;
- ecological integrity must be assessed and understood at a landscape scale. While ecological integrity cannot be assessed at the scale of a single forest stand, or parking lot, it can be compromised at any scale. Even small scale impacts can have cumulative effects and should be considered in that light;
- the goal of conserving ecological integrity is best addressed by maintaining or restoring the diversity of genes, species and communities native to the region. It is consistent with the vision of integrity, which is “wholeness” — if parts are missing, the ecosystem is not whole.

Ontario Parks purports to undertake ecosystem management “...to maintain... ecological integrity of parks and their surroundings over the long term” (36). However, neither the *Provincial Parks Act* nor its “protection objective” within its planning and management policies make reference to nor requires the maintenance of biodiversity or ecological integrity (13). Therefore, it is important that both the *Provincial Parks Act* and the planning and management policies be revised to more fully reflect the goal of biodiversity conservation within Ontario’s provincial parks.

This paper suggests that change is needed to adequately address the role of ecology in the management of the complex Ontario provincial parks system. Almost 50 years have passed since Ontario’s provincial parks legislation was last significantly revised, despite evaluations suggesting reform (5, 6, 7). Revision is warranted based on two factors. First, the science of ecology has developed over the last 50 years and has fundamentally changed the understanding of environmental management. Second, policy change — both provincially and nationally — leads to the conclusion that a revised Act is necessary. For example, the revision of the *Provincial Parks Act* would be a concrete recognition of the Province’s commitment to *A Statement of Commitment to Complete*

Canada's Networks of Protected Areas and its obligations under the *Convention on Biological Diversity* (37).

4.0 Recommendations for reform

This paper recommends that Ontario's provincial park system adopt biodiversity conservation as its primary goal. This priority should be included in the *Provincial Parks Act* in a revised mandate. The use of a single unifying concept allows for a clear direction for the parks system. A new preamble for the Act, similar to that of the *Parks Canada Agency Act* (1999), would demonstrate this cohesion and alteration of priorities:

Whereas it is in the provincial interest:

to protect the provincially significant examples of Ontario's natural and cultural heritage in provincial parks in view of their special role in the lives of Ontarians and the fabric of the Province,

to maintain or restore the biological diversity of provincial parks,

to maintain biological diversity and commorative integrity as a prerequisite to the use of provincial parks,

to manage visitor use and tourism to ensure both the maintenance of biological diversity and commorative integrity and a quality experience in such heritage and natural areas for this and future generation.

In addition to this proposed change, revisions are also needed within the body of the *Provincial Parks Act* as "...legislative preambles are... not legally enforceable" (30). This proposed preamble provides a central goal and does not negate parks policy objectives of protection, recreation, heritage, and tourism.

The classification system of Ontario's provincial parks is useful and effective. The various classes of provincial parks play different roles in the system and meet different needs of both the public and the natural environment. However, a revision of Section 5 of the Act would properly

reflect the classes currently in use:

The Lieutenant Governor in Council shall classify each provincial park as a natural environment park, a nature reserve park, a wilderness park, a recreation park, a waterway park, a historic park or such other class of park as the Lieutenant Governor in Council may designate.

Each of the six stated classes must be defined within the body of the *Provincial Parks Act* to ensure of the clarity of their purpose and, therefore, their management. In addition, power must be given to the Minister to promulgate planning and management policy for each park class. When such policies are established under the Act, they would have a firmer basis for application and utility. It must also be noted that Ontario's current expansion of the parks system uses a seventh "conservation reserve" class which is not under the authority of the *Provincial Parks Act*; this protected area class was created by means of an amendment in the *Public Lands Act* (1994), excluding it from the existing legal framework for parks (23). Conservation reserves should be subject to the planning requirements of the other classes (21).

The continued use of the classification system within the Act potentially reinforces the application of ecological goals within the parks system. This paper proposes that a "sliding scale" be used in applying the concept to the different classes of parks. All classes of parks should be required to consider biodiversity conservation within their planning and management. However, the overriding priority for the classes of wilderness, natural environment, and waterway should be the maintenance and restoration of biodiversity. Additionally, this sliding scale of prioritizing biodiversity conservation should also be applied to the zoning system within the parks themselves. For example, a recreation class park would then be better equipped to conserve biodiversity in specific zones while still catering to recreational demands in other areas within its boundaries.

The role of management plans is central to the planning and management of parks. These

plans translate provincial policy into detailed statements of government intent for each park. Weakness in the current structure has led to suggestions for reform of the planning and management framework as found in *Provincial Parks Act* (5). The Lands for Life Round Tables recommend that (21):

- management plans be prepared for all provincial parks;
- planning includes full and effective public involvement;
- management plans and major amendments be approved by regulation;
- plans be regularly reviewed.

The Act (Section 7.1) currently gives the Superintendent of a particular park almost complete discretionary powers in regards to all management actions. For example, she need not follow any approved management plan. The creation, implementation and review of management plans for provincial parks are not currently required in the Act (Section 8.1). As a result, only 39% of Ontario's provincial parks have an approved management plan (38). Additionally, there is little documentary evidence that the existing plans have been implemented successfully. Clearly, a more directed and rigorous system is necessary. A more appropriate requirement should be:

The Minister shall prepare a management plan in respect of any provincial park or proposed provincial park.

Further, all management plans should be approved by the Minister before management action can be undertaken. Once approved, such plans must be considered as legal documents with the same detail and force of law as Official Plans under Ontario's *Planning Act* (5).

The management plans should bind the Crown in its pursuit of the parks system objectives and the management of the park (21). Park management plans are intended as plans for "...what will happen inside a park over a 20 year period;" however, Ontario Parks must make their claims for

reviewing plans “every 10 years” mandatory within the Act (39). This review of individual parks, currently optional (Section 8.2), must be further complemented by a mandatory system-wide “State of the Parks Report” every five years to ensure the cohesion of planning and management strategies through comprehensive evaluation. The Province states that such revisions of the Act are necessary, but it does not approve of the regulation of management plans and amendments as “...this would create unnecessary red tape” (22).

Provincial parks, like all Crown land, are the property of the citizens of Ontario. However, the *Provincial Parks Act* does not provide for any public access to information, decision-making or planning (5). Public scrutiny and participation should be encouraged during the planning process and during management implementation, but the current framework of the Act minimizes such involvement. Indeed, the Act (Section 3.2) currently gives the Lieutenant Governor in Council the absolute authority to “...decrease the area of any provincial park and may delimit any provincial park” without requiring public consultation. The legal concept of *locus standii* bars individuals from challenging government activities in the courts with the intent to limit frivolous lawsuits. However, this barrier prevents the public from ensuring that Ontario Parks comply with the Act and the management plans of the parks. The *locus standii* barrier must be removed from the legislation. As suggested elsewhere:

The legal standing of individuals before the courts must be included in the act. The government is looking after our parks. If anyone, including the government carries on questionable practices which cause the deterioration of park values, citizens should be able to take court action. (40)

The current framework of the Act also contains sections which are incompatible with the goal of maintaining or restoring biodiversity. Humans are part of ecosystems, but some forms or timings of activities are not compatible with biodiversity conservation (30, 41). Recent public

controversy regarding sport hunting highlights the debate on appropriate activities in provincial parks (42). The Province of Ontario recently allowed sport hunting to be permitted in the expansions to wilderness class provincial parks (23, 43), in addition to the 68 parks that already allow hunting (38). The *Provincial Parks Act* (Section 4) allows hunting in designated parks through exemption from the *Fish and Wildlife Conservation Act* (Section 9) which states that “A person shall not hunt, trap or possess wildlife in a provincial park or Crown game preserve.” Sport hunting and other resource extraction issues would have to be carefully evaluated for their impact on biodiversity under the proposed amendments. Due to the lack of legal mechanisms within the *Provincial Parks Act* for public involvement, concerned citizens currently must challenge such planning proposals by means of Ontario’s *Environmental Bill of Rights* (44).

Controversy is also continuing with regard to the fate of cottages within Ontario’s provincial parks. Algonquin Provincial Park has 305 cottages and Rondeau Provincial Park has 299 cottages within their respective boundaries, with these seasonal homes being leased for between \$1,200 and \$2,500 annually (45). In 1954, the government of the day made policy that required all cottages to be removed at the end of their existing lease. However, this policy was reversed under the Liberal Minister Mr. Vince Kerrio in the early 1990's when all cottage leases were extended. The issue is again under heated debate as the cottage leaseholders of Rondeau Provincial Park meet privately and secretly with the current Minister of Natural Resources, Mr. John Snobelen, in an attempt to obtain permanent leases or land ownership in this park. Such controversy also surrounded the leasing of cottages in Algonquin Provincial Park. These issues demonstrate the importance of an open and consultative process for all major park management decisions. They also highlight the need for biodiversity conservation to be given priority in decision-making.

5.0 Conclusion

This paper discusses important proposals for legislative change to Ontario's *Provincial Parks Act*, specifically: (i) the recognition of biodiversity conservation as the primary goal; (ii) the need for management plans for each park; and (iii) the requirement for an open consultative planning process. The paper has not addressed other important issues surrounding the parks system, such as adequate funding, measurement of management efficiency, growing recreational demand and low staffing levels. Sufficient monetary support is also necessary for staffing, training, planning, management, research, monitoring, and public involvement to pursue the goal of maintaining and restoring biodiversity conservation.

A total of eight provincial parks existed in Ontario when the *Provincial Parks Act* was passed in 1954. Almost half a century later, the Act remains relatively unchanged. This new and evolving parks system must be accompanied by changes in its legislation to adequately address the complexity of Ontario's biological diversity.

This paper proposes that such reform should be guided by a mandate of biodiversity conservation. This goal should be implemented through usage of the concept on a sliding scale in the six classes of provincial parks. Biodiversity conservation should be the chief priority in planning and managing wilderness, natural environment, and waterway parks.

The adoption of this goal requires reform in many areas of the *Provincial Parks Act*. Changes in planning and management procedures, increased public participation and greater accountability are necessary. Increased monetary support for the parks system must also accompany this reform to pursue this necessary and worthy goal.

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