

CONNECTING
Canadians with Nature

AN INVESTMENT IN THE WELL-BEING OF OUR CITIZENS

PARKS
CANADIAN PARKS COUNCIL
CONSEIL CANADIEN DES PARCS

This report was prepared by the **Canadian Parks Council** in collaboration with representatives from the following federal, provincial, and territorial park systems:

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BC Parks

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Think back to some of your favourite childhood memories. Do they involve long days at the beach, roaming the neighbourhood on your bike, or simply playing for hours in a quiet corner of your backyard?

Now, can you imagine a world where few people care about nature? Where children are no longer let outdoors to jump in puddles or climb trees? Where the outdoors becomes a foreign place? Where people no longer visit parks?

Personal connections with the natural world are powerful. These connections are critical to our health and social well-being. They nurture our vitality and creativity, and they encourage ties with the land that are centuries old. Separation from nature, however, is an unintended consequence of our modern world. There is growing recognition that North Americans are suffering from 'nature-deficit disorder,' the term used to describe the adverse personal and societal impacts of disconnecting from nature.

We firmly believe that Canada's national, provincial, and territorial parks provide the best places for Canadians to experience all of nature's powerful benefits. We also believe that Canada's park systems are a vital part of the solution to broader social issues challenging us as a country — nurturing healthy Canadians and curbing the rising costs of health care, ensuring a productive and innovative workforce, stimulating a strong economy, developing safe inclusive communities, inspiring feelings of national and provincial pride, and providing our children with the best opportunities to succeed.

The time to rediscover our connection to nature locally, regionally and nationally is now. As park agencies, we cannot do it alone. Through an open dialogue within and across Canada's public, private, and not-for-profit sectors, we can all help Canadians to maximize the benefits of personally experiencing nature.

Canada's system of parks, the oldest in the world, has existed for more than a century. We owe it to Canadians to ensure that upcoming generations experience to the fullest all that nature has to offer. Connecting Canadians to nature through their parks will help do just that.

The Canadian Parks Council

“IMAGINE A WORLD...

in which all children grow up with a deep understanding of the world around them. Where obesity is reduced through nature play. Where anti-depressants and pharmaceuticals are prescribed less and nature prescribed more. Where children experience the joy of being in nature before they learn of its loss. Where they can lie in the grass on a hillside for hours and watch clouds become the faces of the future. Where every child and every adult has the human right to a connection with the natural world, and shares the responsibility to care for it.”

Richard Louv
(Excerpts drawn from ‘Last Child in the Woods’ and ‘The Nature Principle’) [1,2]





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THE CURRENT SITUATION

Our rich natural heritage is a source of deep pride for Canadians. Nature has shaped our history, our economy and our society. It continues to sustain us as it has done for countless generations.

However, the world as we know it has changed. We live in an incredible period of human history. In the last century, the human population has made astonishing progress in modernizing everyday life. Clean water shows up in our taps. Electricity and heat are available at the flip of a switch. Produce from around the world appears in our grocery stores. We can have virtually anything delivered to our door on demand. We have climate-controlled homes, cars, and work places. In some cities, we can go from home to work and back again without even venturing outside into the elements. We can climb rock walls in state-of-the-art indoor gyms. Information and entertainment is at our fingertips. And, our social lives can — and do — exist virtually.

As Canadians, we have all the modern conveniences to make us happy, healthy, and prosperous. But something is profoundly amiss:

- There is a shift towards more self-centeredness, with declines in intimacy and empathy rates in children.[3]
- Obesity is an epidemic — 1 in 4 Canadians are obese and rates are climbing.[4]
- Millions of Canadians are at risk for serious long-term health problems due to Vitamin D deficiencies.[5]
- Due to obesity and other health issues, today's children may in fact have shorter and lower quality lives than their parents.[6]
- Behaviour-modifying drugs are increasingly commonplace, treating everything from attention-deficit hyperactivity disorder (ADHD) to depression.[7]
- Chronic stress and anxiety are costing millions in lost workplace productivity annually.[8]
- Scouts Canada could be out of members by 2017.[9]
- Canada continues to receive a near-failing grade for innovation, a black mark on our country's ability to be creative and take risks.[10]
- Knowledge of the natural world is slipping away — Canada's national symbol (beaver) was removed from the Oxford Junior Dictionary in 2008, along with acorn, ivy, heron, and magpie.[11]
- Many upcoming corporate leaders are lacking the critical skills to take the helm.[12]

Are these symptoms of something greater? If so, what? There is growing recognition that these symptoms are the manifestation of a phenomenon known as nature-deficit disorder, the term used to describe the adverse personal, family, community, and societal impacts of when people disconnect from nature.[1] Despite all the benefits of our modern society, we have unintentionally built a world dissociated from nature. Studies of animals living in different environments (e.g., labs, zoos, in the wild) tell us that organisms living in unfit habitats undergo social, psychological, and physical breakdown.[13] Like animals removed from their natural habitat, Canadians experience adversity when they disconnect from nature because, as a species humans quite simply cannot thrive in a built environment. We need contact and interaction with nature — period.

90%

The amount of time it is estimated we spend indoors.[17]

90%

Decline in the radius of play for a nine-year-old since the 1970s.[18]

43 vs 30

Increase (minutes) in time spent per day by Canadians playing computer and video games since the late 1990s, compared to the decrease in time (minutes) spent socializing.[19]

28% vs 58%

Proportion of today's students that walk to school, compared to their parents.[20]

blackberry and BlackBerry

Entry removed from the Oxford Junior Dictionary in 2008; entry added in its place.[11]

1.1 million

Number of Canadians who have a Vitamin D deficiency.[5]

Canada is a country blessed by nature — abundant lakes and rivers, vast forests and prairie fields, majestic mountains, and deep ocean waters. But, nature means different things to different people. For some, nature is the local green space in their community. For others, nature is the trail that meanders along the stream in the countryside. Provincial, territorial, and national parks are also critical parts of the nature continuum. People can derive powerful benefits from any kind of contact with the natural world, in whatever form it presents itself.

As chronicled in the following pages, a complex series of social factors is leading Canadians away from personal contact with nature. Our personal connection with the natural world is being eroded by the interplay of urbanization and uneven access to green spaces, increasingly sedentary lifestyles, competition for leisure time, growing pressures for structured learning and skill certification, a pervasive culture of fear, especially towards strangers, and a litigious society that champions safety at all costs.

This loss of connection has had a host of unintended negative consequences for Canadians. And the risks of continuing on this path are just as large. "We are storing up social, medical, and environmental problems [and the associated costs] for others to solve."[15] We are risking the cognitive and emotional development of our children and their ability to be happy, healthy and prosperous adults.[1]

We are also running the risk of generational environmental amnesia, a phenomenon whereby "each new generation uses their experiences of nature as a child as a benchmark against which they measure environmental degradation in the future."[16] As people experience less contact with nature, their reference point changes, indifference to natural losses grows, and tomorrow`s stewards of our natural world fail to emerge. To experience the powerful benefits derived from personal connections with nature, Canadians need a healthy environment. As a society, we risk the social well-being and prosperity of Canadians if we don't connect them with nature.



Fig 1: The nature continuum (adapted)[14]

The purpose of this document is to do three things — inform, connect and inspire.

INFORM: This document synthesizes the growing body of international scientific research that suggests personal contact with nature can mitigate many of the ill effects of modern life. It explains the changes in the country's social fabric that are leading Canadians away from the outdoors. It also outlines the personal and societal benefits of connecting with the natural environment, from local green spaces to protected public lands.

CONNECT: This document illustrates how contact with nature is essential in our day-to-day lives. Nature is intricately woven into our health, our spirit and identity, our personal development, our communities, our economy, and our views of the environment — in other words, our overall social and economic well-being is dependent on contact with nature. Canada's systems of national, provincial, and territorial parks have tremendous opportunities to connect people with nature and help overcome the country's growing nature-deficit disorder. As such, this document demonstrates how Canada's parks are an essential investment in the long-term welfare and prosperity of Canadians.

Canada is facing complex social challenges that will strain the public purse, be a lag on economic growth, and challenge the country's enviable socio-economic position on the world stage. Connecting Canadians to nature through their parks, locally and nationally, is a critical component in addressing these challenges in the decades to come. We need to curb the escalating costs of health care associated with sedentary lifestyles — Canada's parks have an important role to play in outdoor recreation and active living. We need to stimulate a strong economy that provides good jobs and fosters innovation for long-term benefit — Canada's parks are economic generators for hundreds of communities from coast to coast. We need to develop safe inclusive communities that stabilize public safety costs — Canada's parks help foster social capital, acting as focal points for community life and pride. We need to lead by example and invest in the physical and emotional development of our children — Canada's parks are natural classrooms, nurturing creativity, skills development and personal resilience.

INSPIRE: This document adds a coordinated and strategic voice to a growing constituency of organizations from around the world calling on action to connect people with nature. Connecting Canadians with nature requires a fundamental shift in how nature is perceived in our modern world. We hope that this document inspires practitioners and professionals to see the power of nature in their respective disciplines and sectors, and to take action to reverse current trends.

No one person, community, organization, or government department can act independently to integrate nature back into the daily lives of Canadians. It requires leadership from all sectors (private, public, and not-for-profit), disciplines (e.g., parks, health, education, immigration, industry, tourism, environment), and levels of decision making (local, regional, provincial/ territorial, federal). Success will depend on a willingness to work collaboratively and to share our respective strengths.

The time to act is now. We owe all Canadians, regardless of age, background, socio-economic status, or geography, the opportunity to experience the immeasurable benefits that nature provides. Connecting Canadians with nature is an investment in our citizens and in our long-term prosperity, today and in the future.

2017

The year Scouts Canada could be out of members if its average rate of decline (since the late 1990s) continues.[9]

1 in 4 vs 1 in 2

Proportion of Canadians considered obese today, compared to the projected rate in 20 years.[4]

7%

Proportion of Canadian children and youth meeting daily physical activity requirements. [21]

12 to 19

Age group since the 1990s with the largest increase in daily functioning problems.[3]

1 in 3

Proportion of Canadian workers by the 2030s that will be born in another country.[22]



ARE CANADIANS STRAYING FROM NATURE?

WHAT IS INFLUENCING CANADIANS' PERSONAL RELATIONSHIP WITH NATURE?



URBANIZATION AND ACCESS TO NATURE

We are an increasingly urbanized society.

Canada has shifted from a primarily rural country to an urban one in the last century. Only 5 in 10 Canadians lived in cities in the 1920s — a reflection of the country's rural heritage.[23] Today, 8 in 10 Canadians live in urban areas, the majority in Toronto, Montreal, and Vancouver. The last century has been defined by urban sprawl, a reliance on cars, and a move towards indoor pursuits. Green spaces have been rapidly paved over to make room for roads, houses, and commercial buildings — the symbols of urban prosperity — leaving people limited direct access with nature. Neighbourhoods and communities have become almost entirely human-made constructs; nature in turn has become something 'out there,' beyond the city limits.



CHANGING DEMOGRAPHICS

Our natural world is increasingly unfamiliar to many Canadians.

Approximately 1 in 5 Canadians are foreign born, which gives Canada the distinction of being the country with the second largest immigrant population in the world.[24] Historically, Canada's European heritage helped shape its social norms and institutions, including the country's conservation values and park systems. As of the 1990s, Canada has welcomed most of its immigrants from a variety of Asian countries, who bring with them different experiences and attitudes towards nature.[24] Although Canada's natural environment is often touted as a unifying symbol of national identity, for many of the country's first and second generation Canadians, Canadian nature can be a wild and frightening place. The way in which new Canadians perceive their new natural surroundings will say a lot about how they relate to it.



COMPETITION FOR OUR TIME

Our time is more stretched than ever before.

Even when nature is accessible, Canadians are often too busy to enjoy it. Canadians are working more, spending time commuting, and shuttling their children to a myriad of planned activities.[21,25] Canadians of the 'sandwich generation' are also raising their children and taking care of their elderly parents at the same time.[26] As for kids' time, they are busy with homework, after-school jobs, and volunteering. Their remaining leisure time is often organized, structured, and spent indoors.[27] These demands have chipped away at our free time in nature. Going for a walk on a neighbourhood trail or taking the kids to a park becomes one more thing on the to-do-list, a discretionary luxury when stacked against other demands.



INDOOR AND SEDENTARY LIFESTYLE

We spend more time indoors than at any other point in our history.

It is estimated that we spend 90 per cent of each day indoors.[18] Most of our time indoors is confined to sitting in front of some sort of screen. Adults and children are shuttled back and forth in cars or public transportation, rather than walking or biking. Even summer camps, historically the epitome of outdoor time, have largely shifted to indoor, themed activities, like computer, science or art camps.[28] Technology has gained a stranglehold on our time and imagination, often and unfortunately at the expense of outdoor play, our social interactions and our health.[19,21] 'Nature' is experienced vicariously through virtual channels rather than experienced through direct contact.

"What we have done is put nature over there — we have put a fence around it and said that's Nature. This is why we are now strangers to each other."

William Bird[15]



GLOBAL TRAVEL ACCESSIBILITY

When we travel, we travel further afield.

In the 1960s and 1970s, popular Canadian family vacations included a trek to the cottage or a camping trip in a provincial, territorial or national park. Today, it could be an African safari, an Amazon rafting adventure, or snorkelling in Australia. As Canadians have become more affluent, international travel has become more accessible. More Canadian adults and families are choosing to vacation abroad than ever before[29] — a trend that is expected to continue for some time. These global opportunities mean that Canadians spend less of their available leisure time in their own backyard, so to speak, further disconnecting themselves from the natural wonders around them that defined vacation experiences for past generations.



EDUCATION AND THE OUTDOORS

Our children are in school earlier than ever before.

The literature suggests that unstructured, outdoor play is essential for childhood education and development.[27] Despite this evidence, a societal push for early literacy and numeracy programs is seeing ever-younger children moved into structured school programs. Parents have become fearful that children will be left behind if allowed to squander their time playing outdoors. This has led to the pursuit of more structured environments and indoor learning activities.[25,27] Schools are pressured to cram more into the curriculum to meet standardized test objectives, leaving play time, recess and outdoor education programs vulnerable.[25,27] Furthermore, schools are reluctant to take children off-site to interact with nature for fear of injury/risk of litigation.[30,31]



STRANGER DANGER

We fear for our children's safety.

Stranger danger has contributed to a more pervasive culture of fear in Canada, leaving children with limited opportunities to explore nature through unstructured play. Parents' reluctance to let their children outdoors unsupervised has resulted in the 'free range' of a child's domain declining 90 per cent since the 1970s.[18] Fewer children walk to school today, compared to their parents a generation earlier, or play outside after school.[20] A recent survey revealed that 8 in 10 mothers restrict outdoor play because they believe it unsafe, and 5 in 10 parents fear child predators are lurking.[32] Although crime rates have stabilized or decreased in recent decades, Canadian parents fear for their children's security has nurtured their isolation from nature.



FEAR OF THE OUTDOORS

We have new fears about what awaits us outdoors.

People are afraid of what they don't know. Warnings about sun exposure, tick bites and wild animals have triggered an aversion to the natural environment, and a shift in preference for the safety of "indoors, man-made and air-conditioned."[33] Society has served to reinforce this view by emphasizing safety over experience. In an attempt to adhere to tight Canadian safety standards, schools and public parks have worked to remove all element of risk from their environments (e.g., playgrounds, trails).[25,27,33] Human-made play structures and asphalt have replaced natural terrain and trees. With fewer first-hand experiences, nature will increasingly be viewed with scorn and seen as "dangerous, off limits, and boring."[33]

NATURE AND WELL-BEING

Disciplines researching the connection between nature and social well-being

Ecology | Biology | Natural Resources | Environmental Studies

Architecture | Urban Planning

Medicine | Public Health | Psychiatry | Psychology | Cognitive Science

Political Science | Education | Business

Recreation | Tourism

Sociology | Social Work | Religion



Vitamin 'N' (Nature)

VERY GOOD FOR CANADIANS



BENEFITS OF CONNECTING WITH NATURE

Nature is good for us. We rely on nature for fresh air and clean water, and for what we eat. People gravitate to natural spaces to restore and rejuvenate, to heal, and to feel calm. Nature helps release our minds from the constraints of modern life. It awakens our senses. It draws us outward and reminds us that we are part of something bigger than ourselves. Our brains develop differently with natural experiences. Nature may be more powerful than some common pharmaceuticals.

Personal connections with nature are powerful. But the benefits derived through contact with the natural world extend far beyond the individual to all aspects of society (Fig. 2). For example, a walk in the woods can alleviate an individual's mental fatigue, making them more present for their family and more productive at work. A happy family makes a good neighbour, contributing to community cohesion. That same forest could be a tourism attraction, providing jobs and taxes.

The idea that nature plays such a vital role in our daily lives and our overall social well-being is not a new one. However, it is only in recent years that empirical research has emerged in support of this concept. There exists now a rich and cross-disciplinary base of knowledge that explores and validates the benefits people derive from personally connecting with various elements of the natural environment (e.g., nature trails, forests, parks or wilderness).

Contact with nature is defined here as including viewing nature, being in natural settings, or interacting with nature through active or passive activities. This section draws on the empirical evidence and illustrates the benefits of connecting with the natural world in six key areas: our economy, our physical and mental health, our spirit and cultural identity, our personal development, and the welfare of our communities and our environment. To ensure richness in the dialogue, this section includes studies that span disciplines and the nature continuum. The bottom line? Regular contact with nature is crucial for our overall well-being.

Humans are dependent on nature to survive, and Canadians can only reap nature's optimal benefits if the natural environment is healthy. But, the relationship between people and nature is a reciprocal one. People need to care about the environment in order to value it. And appreciation, love, care and protection are direct outcomes of our experience of and relationship to nature. Now, and for generations to come.

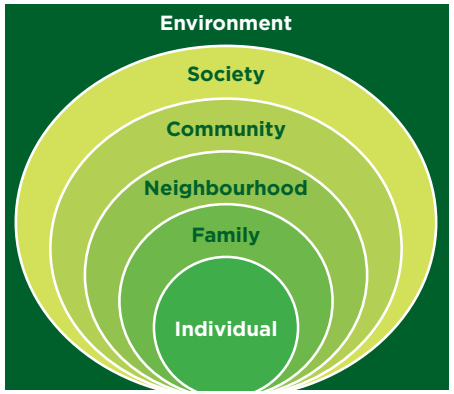


Fig. 2: Spheres of benefits

For Our Economy

Canada's economy relies on the natural environment. Hundreds of communities across Canada depend on natural resources to generate jobs and tax revenues, to encourage business investments and economic development, and to attract visitors.

A key driver for domestic and international tourism in Canada is the natural environment, generating economic activity in rural and urban communities from coast to coast to coast. Nature-based tourism creates a diversity of jobs for a range of sectors (e.g., transportation, accommodations, retail, attractions, and guiding), generates tax revenues for governments at all levels, and contributes to the health of local and regional economies, and the national economy as a whole. Visitors to parks for example make a direct contribution to Canada's economy. A recent study found they supported more than 64,000 full-time jobs, generated $2.9 billion in labour income, and $337 million in tax revenue for governments.[34]

The well-being of Aboriginal communities is also inherently linked to the natural environment.[35] Hunting, fishing, and gathering are each important to sustainability and culture. Tourism infrastructure fosters economic development opportunities that help diversify existing economies and reinforce nature-based activities.[36,37] Tourism investments in Aboriginal communities will provide jobs, revenues and long-term benefits.

Nature provides significant economic benefit for communities in other tangible ways. Access to and the quality of green spaces can influence business location decisions, helping bring new jobs to a community.[38] Nature is also a factor in residential location decisions. Green space, whether a forest backing onto one's backyard or the presence of a park located down the block, impacts property values. Studies in Canada and the United States have shown that closeness to natural features is associated with higher residential and commercial rents, and premiums on property taxes.[39–43] In one Canadian study, property values increased $8 for every 30 cm closer to a green space homes were situated.[40]

The economic benefits of the natural environment extend beyond the direct measurable values of tourism and property taxes. People exposed to nature recover from surgery faster, require fewer medications, and as a result, often experience reduced absenteeism from work.[44] Gardens help Alzheimer's patients in long-term care facilities remain calm, helping to reduce overall rates of violent outbreaks and pressures on health professionals.[45] Nature also creates happy employees. Employees with views of natural settings or access to nature for a lunchtime walk are more likely to feel less stressed in the workplace.[46,47,48]

Canada's economic prosperity is integrally linked to our relationship with nature. How will our growing dissociation with nature affect individual livelihoods, communities, and local and national economies? The economic benefits of connecting with the natural world contribute to our enviable position on the world stage and to the social programs Canadians value. As Canadians, we should see this as an essential investment in our future competitiveness and economic well-being.





“IN THE SPRING, AT THE END OF THE DAY, YOU SHOULD SMELL LIKE DIRT.”

Margaret Atwood

For Our Health

The World Health Organization defines health as, "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity."[49] At a time when obesity is an epidemic, where there is a growing dependence on pharmaceuticals to treat behaviour in children, and where the well-being of Aboriginal communities is at risk, something needs to be done to improve the health of Canadians.

A growing base of empirical evidence demonstrates that contact with nature offers powerful benefits for people's health. There have been a number of important findings proving that natural experiences help heal us. People exposed to nature recover from surgery faster, require fewer medications, and have shorter overall hospital stays.[44,50] A two-hour walk in the woods is enough to improve sleep quality and help mitigate sleep problems.[51] Prison inmates whose cells look out onto natural features rather than into a courtyard are sick less often.[52] Being outdoors helps humans acquire natural forms of Vitamin D, which is essential for calcium absorption and to help mitigate rickets, osteoporosis, and mental health issues.[5]



Contact with nature has been found to lower blood pressure, strengthen the immune system, help mitigate disease, and reduce stress levels.[53–60] Viewing natural images while exercising has been shown to reduce blood pressure by nine per cent compared to viewing images of the built environment.[53] Blood pressure, pulse rates, and stress hormone levels have been shown to improve after walks in outdoor environments, including forests, parks and other green spaces, and viewing natural elements rather than built features.[46,53,56,58,59] Time spent outdoors may also help mitigate cancer. Emerging work from Japan found that a three-day stay in a large intact forest increased participants' natural cancer-fighting proteins and cell activity linked to tumour reduction.[61] Proteins were found to remain productive for about 30 days following the forest visit.

Evidence is also mounting that proximity to natural environments is the best predictor of people's physical activity, more so than proximity to community centres or indoor gyms.[57,58,62–70] When controlled for other factors, children living in green neighbourhoods reduced or maintained their body mass index scores over a two-year period.[54] Accessible park space has been connected with residents increased frequency of physical activity.[67,69,70] Seniors living within walking distance to parks have shown to take a greater number of steps per day than those who don't, and people were more than twice as likely to use active modes of transport to commute to work if parks were in the vicinity.[62] Exercise outdoors also holds specific advantages over indoor venues. Athletes who run outside on nature trails have reported less fatigue after a 20-minute run than they did following a run on an indoor track.[63,66] Outdoor exercise has been shown to lower systolic blood pressure more than treadmill training.[69] Nature's green gym provides benefits that outweigh those provided indoors.

Urban environments provide a wealth of sensory distractions including crowds, noise, traffic, sirens, and homogeneous structures that contribute to mental fatigue and exhaustion. Two decades of research demonstrates that the natural environment, from local green spaces to large public parks, has an opposite and positive effect on people's mental well-being. Contact with nature elicits its restorative properties, fostering an individual's feelings of vitality, alertness, and focus, and resurgence in energy. A multitude of cross-disciplinary studies have shown that after completing tasks designed to induce mental fatigue (e.g., math exercise, performance tasks, problem solving tests), exposure to and/or



immersion in natural environments restored mental faculties better and faster than built environments or just 'vegging out'.[71–78] Exposure to nature during tasks requiring focused attention also gives people a mental break, a boost of energy so to speak, to help them complete it.

Finally, nature is good for our health because it make us happy. While more subjective, work in this area is demonstrating that contact with nature is a natural pick-me-up.[63,65,77–87] Ever wonder why people have a nature-based screen saver on their computer? A study involving a combination of built and natural features found that people are more caring and positive when they are exposed to and around various forms of nature.[86] Neighbourhoods with more green space report higher levels of resident happiness.[67] Simply walking outdoors has been shown to mitigate the severity of depression in some patients; walking indoors had negligible benefits.[53,63,66] In one Australian study, 85 per cent of participants reported feeling significantly less depressed after running outdoors.[66] Most Canadians agree that they feel happier when they have the opportunity to be outdoors in nature.[87]

Over the coming decades, consumers, taxpayers, and employers will all bear the growing economic and social burden of physical and mental illnesses, including covering drug costs, emergency room visits, hospital and long-term care, and lost work productivity. Can we afford it? Is there a way to prevent it? As a starting point, access to natural environments in different shapes and forms is critical for fostering physical activity, and helping Canadians reap the many physical and mental benefits of the natural world. But to encourage people to use green spaces, we need to get park organizations, urban planners, community builders, health providers, teachers, and local non-governmental organizations to help make the outdoors an essential part of the everyday healthy lifestyle of Canadian citizens and their communities. This will help set us on a fundamentally different path for the future, both as individuals and for our society as a whole.

“NATURE HAS
BEEN FOR ME,
FOR AS LONG
AS I REMEMBER,
A SOURCE
OF SOLACE,
INSPIRATION,
ADVENTURE,
AND DELIGHT;

A HOME,
A TEACHER,
A COMPANION.”

Lorraine Anderson



For Our Spirit and Identity

Even if we try to ignore it, humans have an inherent desire to connect with other living things.[88] At the root of this desire is a connection with our collective past and the notion that in nature we find our true selves. Aboriginal cultures teach us that harmony and culture are defined and woven into connections one has with the land.[89] Canada's natural environment has long been a source of artistic expression, immortalized in song, on canvas, and in photographs. Many faiths regard the natural world as special, referring to nature as 'Mother Nature' or considering particular species sacred.[90]

Modern studies in a range of disciplines have all come to the same conclusion: nature offers something spiritual that is good for the soul.[91–104] In nature, we can experience wonder, joy, thrill, and satisfaction all in a single hike in the woods. Aesthetics of the natural world, particularly those provided by mountains, deserts, waterfalls, forests and oceans have been shown to inspire episodes of ultimate happiness and spiritual fulfillment.[92] The more natural the environment the more restorative power it has.[103] The heightened sensory awareness acquired through contact with nature, especially wilderness, is associated with 'peak experiences' — where people lose themselves in the wonder and awe of the moment. These experiences are akin to the vision quests in ancient cultures.[99,100]

Nature helps release our minds from the physical and social constraints of modern life, creating a sense of peace and tranquility. In a gender-based study of wilderness excursions, female participants found they overcame psychological barriers that had prevented them from recognizing their physical abilities.[95] In other studies of outdoor adventures, nature let participants leave the demands and expectations of everyday life behind and focus on what matters. The BlackBerry is turned off, the bills left for another day, the online image abandoned. Studies have shown nature provides an escape — a nurturing therapeutic environment. Whether a park or backcountry adventure, nature provides a safe place for personal growth and reflection, and people come away from the experience with renewed self-confidence.[92,96,98,102,104]



Studies have proven that experiences in the outdoors, especially majestic settings, draw us outward and remind us that we are part of something bigger than ourselves. Contact with nature allows us to put things into perspective, it helps give us a sense of purpose, and to be more outwardly focused.[105] Studies have shown that participants immersed in natural environments are more likely to place value on intrinsic aspirations than material ones.[86]

Canada's natural environment has been a unifying feature of the country's cultural identity for centuries. It has shaped perceptions of our nation, at home and abroad. National parks are one of the top four symbols of Canadian identity (along with health care, the Charter of Rights and Freedoms, and the Canadian flag), outranking hockey.[106] Canada's social dynamic is undergoing change, blossoming into a rich multicultural society with a diverse mix of views, perceptions, and experiences with nature. How will future generations engage with nature and integrate it into an expression of their newfound cultural identity?

“EARTH AND SKY, WOODS AND FIELDS, LAKES AND RIVERS, THE MOUNTAIN AND THE SEA, ARE EXCELLENT SCHOOLMASTERS, AND TEACH SOME OF US MORE THAN WE CAN EVER LEARN FROM BOOKS.”

John Lubbock



For Our Personal Development

Nature is hands on — playing in dirt, navigating rough terrain, examining insects and climbing trees. Natural spaces are "dynamic, changing, complex, places to explore, disorderly, free-range, untidy."[107] There is nothing in the built environment that mimics it.[108]

A multitude of studies have shown that playing in natural environments is essential to our children's development of core skills, including observation, problem-solving and reasoning, categorization, creativity, imagination, risk-identification, along with emotional and intellectual development.[15,74,107–112] Our current screen-dependent culture is interfering with natural human development. Children's biological affiliation with nature gives them a better sense of what they can do and control, makes them happier, and makes learning fun.[1,74] Children that are not allowed to experience risk will, in turn, have less ability to identify and manage risks in every aspect of their life as they age.[1] In the hiring process for example, staff at Cal Tech's Jet Propulsion Lab ask interviewees about their outdoor play experiences as a child, "because they've found a direct correlation between hands-on play and superior problem-solving skills."[6]

Nature is crucial to the development of gross motor skills, such as agility, coordination, and balance, and for nurturing aptitude.[110–116] Kindergarten children who played in a nearby forest recreationally were found to have significantly better motor skill development than their peers who were restricted to a fenced-in play area.[109] Students who experience nature as part of the educational process have proven to be more engaged and enthusiastic in all areas of study. They score higher on tests in reading, writing, and math and have demonstrated better listening skills.[117] Simply having a view of nature out the window can improve the standardized test performance of high school students.[114]

Children that play in natural environments are more likely to be healthier than those that play in structured environments. Neighbourhood greenness and access to public parks are positively associated with lower body mass index scores in children, a pattern that remains over time.[67] Vitamin D acquired from spending time outside is critical to bone growth and helps prevent myopia (near-sightedness).[118] When combined with physical fitness, vitamin D can help ward off the development of other chronic diseases such as rickets, heart disease, asthma, and diabetes later in life.[6,11]

Besides the tangible learning that takes place in nature, the restorative effects of nature are integral to creating positive environments. Children's stress levels decline when outside.[111] Besides children having the opportunity to run around and have fresh air, improvements in behavioural outcomes occur simply through nature's ability to grab our attention.[46,74,119] The human brain fluctuates between periods of voluntary — or direct — attention and periods of involuntary attention. "Children's schoolwork requires extended periods of deliberate, effortful attention," which makes children susceptible to mental fatigue.[117] Nature, on the other hand — by touching our senses in every way — engages our involuntary attention, which is known to rest the mind. This 'mental calming' gained from time spent in nature — even for as little as 20 minutes — has been found to mitigate the effects of attention deficit hyperactivity disorder (ADHD).[120,121] With a growing number of children diagnosed with ADHD, the benefits of outdoor play warrant re-examination.







Children that play in natural environments demonstrate resilience, discipline, and develop skills for dealing with stress later in life.[16,111,122,123] A recent study measured students' aptitudes around stress management, self-confidence, social ability, personal abilities, organizational skills and cooperative team work before and after taking place in a wilderness adventure exercise. In every category, participants improved as a result of having their perseverance and motivation tested through a variety of rigorous exercises.[122] "The experience of solitude" and "the opportunity to take control and responsibility for their own process of growth" were the two most important things leading to personal development.[122]

Contact with nature is essential for child development and the nurturing of happy and healthy adults. Unfortunately, Canadian children are not getting as much access to natural environments as they have in the past. The focus on early literacy and numeracy has pushed children into indoor, structured environments. An emphasis on safety has led to the reduction of outdoor free play, the elimination of outings, and the displacement of natural playgrounds by commercial play structures. Every child should experience the joy of chasing a butterfly, climbing a tree, building a tree house, making mud pies, and jumping in as many puddles as they can find. If they don't, how will they form lifelong habits that can help maintain their health and well-being from young adulthood through to their senior years? How will the next generation of entrepreneurs and corporate leaders learn to take risks to succeed? Where will future professionals, such as engineers, carpenters, and doctors, develop the critical thinking and problem-solving skills to do their jobs?


CRAFT

For Our Communities

Fostering happy and productive relationships with friends, family, and neighbours is critical for building trust and a broader sense of community. In a world where dissociation from nature tends to nurture self-centeredness and can contribute to social breakdown, nature acts as a connecting force.

Nature plays a pivotal role in nurturing relationships by bringing people together. Many studies have demonstrated that nature makes us happy and more generous. It improves our mood and elicits feelings of pleasure.[79,86,87] The 'feel-good' factor facilitated by nature influences our relationships with others. Urban residents living near natural environments tend to know more of their neighbours, feel a stronger sense of belonging to the community, and have a more positive view of their neighbourhood.[123–127] Neighbourhoods with parks in a major US city reported higher levels of mutual trust and willingness to help one another than their counterparts living in neighbourhoods without parks.[125] Community gardens, trails, outdoor running clubs are emerging in communities as a way to bring families and neighbours together. Nature brings out more social feelings, more value for community and nurtures close relationships among neighbours.[127,128]

Unfortunately, fear of crime is a major obstacle preventing Canadians from being present in their neighbourhoods.[126] Research has found that nature helps prevent crime and mitigate some of the psychological precursors to aggression and violence. Residents of a Chicago neighbourhood with views of trees and grass had lower levels of aggression than did their counterparts living in identical buildings with views of concrete and asphalt. Buildings surrounded by many trees and grassy areas had half as many crimes, including property and violent crime than identical buildings surrounded by a barren landscape.[124,125]

The roots of social cohesion are usually developed in childhood, but there are opportunities for adults to benefit later in life too. Playing in nature nurtures the development of empathy and self-awareness, removes the social hierarchy among children, and reduces instances of bullying. In contemporary playground environments, children with an A-type personality tend to thrive. By contrast,



in natural play areas, researchers have noted a diversity of play activities — including fantasy and creative play — that contribute to rotating leadership positions and better collaboration among children.[130,131] These are skills that contribute to lifelong social capital. Adults that participate in group outdoor experiences have shown enhanced abilities to connect with others that carry over into their personal lives.[132,133]

Canada spends about $13 billion annually in policing and other criminal justice services.[134] Active and cohesive neighbourhoods can act as a deterrent to crime. Neighbourhood green spaces, small or large, can help foster the family and community bonds that lead to social cohesion. With approximately 8 in 10 Canadians living in cities, the first connection with the natural world needs to occur where people live. How can we help Canadians connect with nature in the urban centres where they live, work, and play?

For Our Environment

Canada is a country defined by its natural environment. We have abundant fresh water, found in plentiful lakes, rivers, and glaciers. Half of the country is covered by forests, from maples in the east to swaths of boreal forest in the north to the rainforest of the west. Beaches and marine life are plentiful along our coastline, the longest in the world. And one million square kilometres of Canada's natural landscape is protected through a system of national, provincial, and territorial parks.[135] Wetlands, conservation areas, community parks, and trail networks provide additional places to experience nature.

Canada's abundant and diverse natural environment provides a wealth of services. It purifies the air we breathe and the water we drink, and is the source of food we eat. It provides protection against floods, regulates climate, and stores carbon to help offset climate change. It is the nursery for fisheries and species at risk. It is home to genetic and medicinal material, and ecological processes millions of years old. Canadians can only reap maximum benefit from natural services if the natural environment is valued and cared for.

Contact with nature is essential for the development of positive environmental attitudes and values and a lifelong relationship with nature.[107,112,116,136–143] People are more likely to care about what is meaningful to them. This concept is grounded in a range of constructs from eco-literacy to systems knowledge to place attachment. Being in nature helps people develop relationships with nature, including appreciation of natural processes, interrelationships between organisms, and care for plants and animals, large and small.

Research confirms that a meaningful adult connection with the natural world develops in early childhood. Interviews with thousands of adults concluded that their environmental attitudes and relationship with nature were developed as a child, usually by age 11.[107] Children who engage in nature-based activities such as gardening, visiting parks, outdoor learning, and unstructured outdoor play were more likely to appreciate and protect nature as they get older. Children with this upbringing are more likely to seek ways to overcome barriers that prevent them from engaging with nature as an adult. Places are meaningful to people because they are often linked to childhood memories.[136,142,143] People want to revisit their special places to recapture feelings of happiness, whether it was the local forest where the family hiked on Sundays, the community park where birthday picnics were held, or the provincial park where sandcastles were built on summer vacation.

If childhood behaviours are the best predictors of adult behaviour, then as Canadians, we should be very concerned. Children are spending more time indoors, in structured learning activities, in front of screens, and away from nature. Without adults to show them the way, our children lack early experiences in nature that are fundamental to nurturing environmental ethics. Without a healthy relationship with nature, our children will lose baseline understanding of what nature should be like and be less concerned with changes. If this occurs, who will be tomorrow's park rangers, wildlife biologists, naturalists, and urban planners? Once our children become adults, how will the next generation of Canadian children learn to love nature, understand our reliance on it, and actively care for it over time?





Parks

THE BEST PLACES FOR CANADIANS TO EXPERIENCE NATURE'S BENEFITS



THE ROLE OF CANADIAN PARKS

The early visionaries of Canada's national, provincial, and territorial park systems understood the immense value of personal connections with the natural world, and their ability to promote health and well-being, nurture vitality and creativity, and cultivate ties with the land centuries in the making. Research from around the world confirms that these visionaries were on to something big.

Nature's powerful benefits are integral to our future prosperity. In the coming decades, Canadians will be challenged with complex social and environmental issues that influence the social well-being of individual citizens and our society at large. We will need healthy Canadians to curb the escalating strain of health care on the public purse. We will need innovative Canadians to be the entrepreneurs and problem solvers of the future as the workforce changes. We will need safe communities where families are less fearful of letting their children play outside. We will need a strong economy that supplies jobs and tax revenues. We will need a society inclusive of all residents. We will need a healthy environment as a foundation for our well-being. If this document has illustrated anything, it is that direct contact with nature will play a critical role in addressing all these issues.

Canada's parks are an essential part of the solution. They are the best way to maintain large intact natural settings in an urban country. For parks to play a larger role in the well-being of Canadians, a major shift must occur in how society perceives them. Traditionally Canada's parks have been viewed only through the lens of protection — sanctuaries for ecological processes and venues for small footprint activities. While this remains an important goal, our parks offer much, much more than that. Located coast-to-coast-to-coast, Canada's national, provincial, and territorial parks are economic generators, the very best of natural classrooms, the best places for outdoor recreation, an awesome source of inspiration and pride, and the key to sustaining a healthy environment. Canada's parks connect people with nature. They provide the ideal venue for Canadians to benefit from all that nature provides. They are an increasingly vital investment in the well-being of Canadians, today and in the future.

Connecting people with nature is an issue that is being embraced by many organizations in Canada and abroad. Canada's park agencies are well positioned to adapt and respond to the changing realities that our country is facing, and can contribute to these efforts in a very tangible way, working cooperatively with other sectors of society. Individuals, communities, employers, and governments at every level and in every department need to see the value of outdoor experiences and their powerful and plentiful benefits. Park agencies share the mandate, the dedicated staff, and most importantly, the exceptional natural places that were created for the benefit of all Canadians. Working across sectors and disciplines, we can ensure every child — rural or urban, rich or poor — is given the chance to explore a nearby field or stream, experience the wonders of a provincial park, and develop an appreciation for nature that transcends their generation. Canada's parks provide the space and opportunity for families to bond, children to play, and communities to meet. They lie at the heart of our efforts to forge a renewed relationship with nature.

NATURE'S WEB: IT'S ALL CONNECTED

SOCIAL ISSUES FACING CANADA

HEALTHY CANADIANS

Obesity, heart disease, Vitamin D deficiency, depression and other mental health issues are impacting the long term health of Canadians. Chronic health issues and demographic changes are projected to increase per capita health care spending by almost 60 per cent over the next decade, placing a strain on other government services.[145] Active living in the outdoors supports the health and well-being of Canadians, helping to reduce the burden on the health care system.

PRODUCTIVE AND INNOVATIVE WORKFORCE

Canada needs a healthy and innovative workforce to support a strong economy. The health of Canadians affects workplace productivity, affects local and national economies, and adds to the tax base available to fund government services Canadians value. Risk takers and innovators with critical thinking skills keep the country competitive, on the leading edge of discovery, and a leader among its G20 counterparts.

NURTURED AND ENRICHED CHILDREN

The lack of outdoor play is short-changing the education, health, and development of our children. Play and experiential learning helps improve motor functions, creativity, decision-making, problem solving and social skills, yet almost half of Canadian children get less than three hours of active play per week.[21,147] By contrast, Canadian children and youth spend on average almost 8 hours per day in front of a screen.[21]

BY THE NUMBERS

1 in 4 vs 1 in 2: Number of Canadians who are obese today, compared to projections for 2030. Rates in children have tripled since the 1980s.[4]

$4.6B and 19%: Financial burden of obesity on the Canadian economy in 2008, and percent increase in costs since 2000.[4]

9 in 10: Proportion of Canadians that would prefer to spend time as a family outdoors in nature (rather than inside).[144]

Missing CEOs: The next generation of corporate leaders are lacking critical skills to take the helm.[12]

3 to 1 vs 6 to 1: Canadians in the workforce for every retiree by 2031, compared to the 1980s.[22]

1 in 2: Projected proportion of Canadians with low literacy levels by 2030s.[146]

1 in 20: Canadian children with ADHD.[7]

300%: Percent increase in child level obesity since the 1980s.[4]

12 to 19: Age group since the 1990s with largest increase in daily functioning problems.[3]

Less caring: Intimacy and empathy scores in 12 year-olds have declined since the 1990s.[3]

HOW NATURE HELPS

- Promotes physical healing and strengthens immune system
- Linked to enhanced activity of cancer fighting cells
- Lowers blood pressure and helps mitigate heart disease
- Encourages people to be physically active
- Increases life expectancy and linked to faster recovery times
- Reduces feelings of anger, aggression, anxiety and depression

- Reduces stress and mental fatigue in the workplace
- Helps improves mood and stimulate coping skills
- Stimulates critical thinking and risk taking skills in children, leading to a more innovative workforce
- Linked to the development of positive aspirations
- Encourages the development of responsible adults
- Linked to better student academic achievement, leading to a better educated workforce

- Reduces negative symptoms of ADHD in children
- Stimulates critical thinking and risk taking skills in children
- Stimulates cognitive and emotional development in children
- Linked to better student academic achievement
- Unstructured play outdoors influences brain development

THE CONTRIBUTION OF PARKS

Natural hospital and medicine

- Nature's gym — trails to hike, lakes to swim, hills to climb
- Ideal places to escape the daily pressures of life
- Fighting the blues — best therapeutic landscapes in Canada
- Activities for all ages and interests

A natural high

- Best places to reduce workplace stress and recharge
- Destinations for corporate team-building
- Ideal places to encourage social interaction and stimulate empathy and creativity
- Best places to foster future environmental stewards

A natural classroom

- Amazing venues for active play
- Best places to maximize cognitive development of children
- Awesome places for school trips
- Park interpreters dedicated to great visitor experiences and fun learning



"Canada's national, provincial, and territorial parks are a vital part of the solution."

Canadian Parks Council

STRONG ECONOMY

Tourism is a critical sector of Canada's economy, representing 2 per cent of GDP and 1 in every 10 jobs in the country.[148] As a result of global accessibility and market maturity, Canada could become a less desirable destination. To reap the economic benefits of tourism in the decades to come, Canada must be competitive both internationally and domestically.

$100B: Canada's tourism revenue target for 2015, up from $74B in 2011.[148]

15th vs 2nd: Among worldwide destinations, rank of Canada in 2010 (in terms of tourist arrivals) compared to the 1950s.[148]

- A natural advantage for Canada, recognized globally by tourists for its great outdoors
- Attracts tourism businesses and investments
- Enhances property values and related tax generation
- Factor in corporate and residential location decisions

Economic generator

- Contributes $4.6B to GDP and $337M to government revenues[34]
- Key anchor for tourism in communities across Canada
- Supports the equivalent of 64,000 full time jobs
- Important landmarks for international tourism
- Supports economic development for Aboriginal communities

CARING AND SAFE COMMUNITIES

Fostering relationships is critical for building trust and social capital in our neighbourhoods, communities, and Canadian society as a whole. Neighbourhoods that are outward looking and inclusive of its residents are more likely to be a deterrent to crime. Caring and safe communities would help offset some of the costs of policing and crime prevention.

28% vs 58%: Percent of today's children that walk to school compared to their parents.[21]

24%: Percent of Canadians that cite fear as the main obstacle preventing them from being physically active in their neighbourhood (going for walks).[129]

- Encourages sense of community and residential satisfaction
- Makes us happier, more caring, and respectful of others
- Associated with lower neighbourhood crime rates
- Helps reduce occurrences of bullying
- Encourages sustainable development in urban planning

Nature's social capital

- Serve as key focal points for community gatherings and pride
- Best places for sharing memorable experiences with family
- Available to all Canadians, inclusive of age, income and culture

NATIONAL PRIDE

The country's natural heritage has long been part of the Canadian identity. Canada's population is projected to grow to 40 million in the next two decades with immigration driving most of the growth. Multiculturalism will shape many future social priorities and policies.

Beaver: Canada's national symbol removed from the Junior Oxford Dictionary in 2008.[5]

20%: Percent of foreign-born Canadians.[24]

National parks: one of the top 4 symbols of Canadian identity.[106]

- Teaches humility and reflection
- Fosters the development of shared identity
- Stimulates understanding of one's role in the world
- Fosters human involvement in and appreciation of nature
- Stimulates artistic expression and cultural identity

Natural inspiration

- Best places to experience the wonder and awe of Canada
- A legacy for future generations of Canadians to enjoy
- Builds understanding of Canada's history and culture
- Locations for citizenship ceremonies across the country
- Best places to foster a connection with nature

HEALTHY ENVIRONMENT

Green infrastructure provides essential services to Canadian society — drinking water, clean air, flood prevention, wild food, and food-crop pollination. This natural capital provides billions of dollars of benefits to the country. Canadians are dependent on a healthy environment for its economic and social well-being, today and in the future.

88%: Percent of Canadians that support protecting the environment (even if slows down economic growth).[149]

10% vs 1%: Percent of Canada's land and oceans set aside in parks / protected areas.[135]

$582B: Estimated annual value of carbon storage in Canada's boreal forest.[150]

- Reduces risk and impact of natural disasters
- Purifies air and water, stores carbon, protects watersheds
- Supports storm-water and flood management
- Supports fisheries, wild foods and agricultural production
- Provides a habitat for species at risk
- Influences health and well-being of Aboriginal peoples

Natural life support

- One million km^2 of Canada's natural capital set aside in parks[135]
- Key way to preserve ecological functions in an urban country
- Provide clean drinking water to millions of Canadians
- National parks are home to half of Canada's species at risk[151]
- Best places to foster future environmental stewards

“NO ONE WILL PROTECT WHAT THEY DON’T CARE ABOUT.

AND NO ONE WILL CARE ABOUT WHAT THEY HAVE NEVER EXPERIENCED.”

David Attenborough





FINAL REFLECTIONS

At a major international environmental conference in 1968, Senegalese environmentalist Baba Dioum stated, *"In the end we will conserve only what we love. We will love only what we understand. We will understand only what we are taught."*[152] Those words ring true almost a half century later.

Research confirms that deepening our relationship with the natural world has tremendous personal benefits that ripple positively out to every facet of society. Fostering and enabling direct and meaningful experiences with nature is transformative for our physical and mental health, the development of our children, strengthening our personal relationships with family, building safer communities, developing a strong economy, and nurturing environmental attitudes and values that encourage a continued conservation ethic in Canada. Nature is the foundation of life. Contact with nature makes us happier, healthier, and more prosperous.

Canadians are craving a renewed relationship with nature. Nine in 10 Canadians agree that given the choice, they would prefer to spend time outdoors in nature (rather than inside).[144] The challenge, then, is to help them overcome whatever is holding them back from doing so, in collaboration with a broad range of organizations in Canada's private, public and not-for-profit sectors. Together, we can create opportunities for Canadians to step outside and develop a more meaningful relationship with nature and with each other.

The costs of inaction to the well-being of individual Canadians, their families, communities, and the economy as a whole, are too high. Contact with nature needs to be an integral part of the day-to-day lives of Canadians. To do so, it needs to be a unifying thread and a priority across all sectors and disciplines. Connecting Canadians with nature is an investment in the current and future well-being of our citizens.

We may have lost ground in recent years, but we can turn the tide on nature-deficit disorder. We can make contact with nature second nature. We can reawaken a sense of wonder and joy, instill a deep love of nature, and foster a caring conservation ethic in current and future generations. But we will only be successful if we work together. This document is the foundation. As some of the finest places in the country to experience nature's countless benefits, Canada's system of parks can be a rallying point for action.

Park agencies are ready to act, and invite all other sectors to join us in seeking to improve the lives of Canadians.

Working together, and inspired by Baba Dioum, we can help reconnect Canadians with nature so that in the future, as a society, we can proudly say: "*We conserve nature because we love it. We love nature because we understand it. We understand it because we experience it.*"

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Our Mission

The Canadian Parks Council exists to provide a Canada-wide forum for information sharing and collaborative action on parks and protected areas among federal, provincial and territorial governments that:

- Promotes excellence in parks and protected areas establishment, planning and management;
- Advances parks and protected areas values and interests; and
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Our priorities are based on the shared interests of its member organizations. While not of equal priority to each jurisdiction, these shared interests are:

Stewardship

Conserving, restoring and enhancing ecological and cultural resources and maintaining biological diversity in representative, significant, and formally protected areas of land and water.

Engagement

Ensuring that parks are welcoming and inclusive places, that they continue to have a place in the hearts and minds of all Canadians, that the personal and societal benefits of parks are well understood and that there is broad-based support for and commitment to them.

Sustainable Use

Encouraging public use, consistent with the protection of natural and cultural resources, while optimizing the long-term economic, environmental, societal and cultural benefits of parks and protected areas.

Effective Management

Establishing, planning, managing, and operating parks and protected areas, efficiently and effectively.



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