

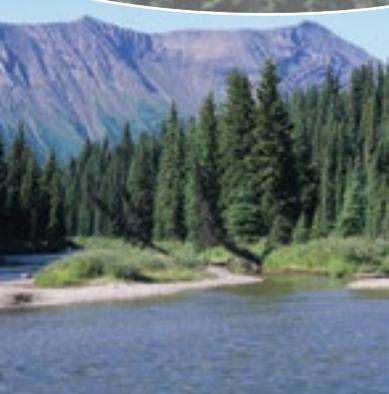


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Changement climatique Canada



# Canadian Protected Areas Status Report 2012–2015



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# Executive Summary

## PROTECTED AREAS IN CANADA AND THE GOALS OF THE REPORT

Protected areas play a critical role in Canada's efforts to conserve nature. They protect important parts of Canada's ecosystems, maintain essential ecosystem services, safeguard habitat, and provide opportunities for tourism, recreation, and connections with nature.

The International Union for Conservation of Nature defines a protected area as *"a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values."*

The *Canadian Protected Areas Status Report* provides a snapshot of Canada's protected areas and highlights accomplishments for the period January 2012 to December 2015. It details the extent of protected areas across the country and summarizes the actions undertaken by governments to protect representative ecosystems, conserve biodiversity, safeguard ecosystem services, and improve connectivity. It also describes efforts to plan and manage protected areas effectively, in cooperation with Indigenous Peoples and stakeholders.

In 2015, Canada adopted a suite of objectives for the conservation and sustainable use of biodiversity. The *2020 Biodiversity Goals and Targets for Canada* were developed collaboratively by federal, provincial and territorial governments, with input from national Indigenous organisations, non-governmental organisations, businesses, academia and individual Canadians. The goals and targets are for Canada as a whole and progress will be reported at the national level. The contribution of each jurisdiction may vary, but all governments and sectors of society can make a significant contribution to overall progress. Many provinces and territories have their own biodiversity strategies and initiatives that support the national level goals and targets.

Canada's Target 1 of these objectives highlights a commitment related to area-based conservation, including protected areas:

*"By 2020, at least 17% of terrestrial areas and inland water, and 10% of coastal and marine areas, are conserved through networks of protected areas and other effective area-based conservation measures."*

This report provides a benchmark to assess the progress toward reaching Target 1.

## EXTENT AND GROWTH OF CANADA'S PROTECTED AREAS

At the end of 2015, 10.6% (1.05 million km<sup>2</sup>) of Canada's terrestrial area and 0.90% (51 thousand km<sup>2</sup>) of its marine territory were recognized as protected. This is an increase from the 9.8% of Canada's terrestrial area and the 0.88% of Canada's marine area that were protected at the end of the last reporting period in December 2011.

Protected areas have been established nation-wide and can be found in each of the provinces and territories as well as in all three oceans. The distribution of this protection varies across the country. For example, Canada is comprised of 18 terrestrial ecozones, 12 marine ecozones and one freshwater ecozone, all of which have been protected to some degree. The percent of protected terrestrial or marine area varies by ecozone and in general, terrestrial ecozones are more protected than marine ecozones. Additionally, southern regions of Canada have a higher concentration of small protected areas while those in the north tend to be larger and more widely dispersed. The establishment of protected areas continues to fall predominantly under government purview with approximately 95% of Canada's terrestrial and marine protected areas being governed by federal, provincial or territorial governments.

More detailed information on the extent and growth of protected areas nationally can be found in Chapter 1 of the report.

## PROTECTED AREA PLANNING AND ESTABLISHMENT

The two primary objectives identified in the planning and establishment of protected areas were: protecting representative samples of ecological areas, and; conserving

biological diversity. To accomplish these objectives, approximately half of the 13 provinces and territories and the three federal departments included in the report had strategies in place to guide the development and implementation of a network of protected areas. At the national level, Fisheries and Oceans Canada has created a framework to guide the development and implementation of a network of marine protected areas; however, no equivalent national framework exists for a terrestrial protected areas network.

Several provinces and territories and the federal government have made specific commitments that will expand Canada's protected areas system and contribute to achieving national and/or provincial and territorial targets. As of December 31, 2015, the projects identified by federal, provincial and territorial governments that are anticipated to be completed by 2020 have the potential to increase the percentage of Canada's terrestrial area conserved from 10.6% to 11.8%, and the percentage of Canada's marine area conserved from 0.9% to 2.3%. Work is ongoing to identify the projects that will enable Canada to achieve Target 1 of the 2020 Biodiversity Goals and Targets.

More detailed information on protected area planning and establishment, including information on protected areas targets and objectives, can be found in Chapter 2 of the report.

## PROTECTED AREA MANAGEMENT AND REPORTING

Most of the government protected areas organisations have made progress on the development and implementation of management plans for protected areas. However, the overall number of up-to-date management plans for protected areas remains low. Similarly, while most agencies report on program-related performance measures, the majority do not conduct effectiveness assessments of their protected areas. Management effectiveness assessments are increasingly recognized as best-practice method for determining whether protected areas are achieving desired conservation objectives. Nearly all protected areas organisations identified challenges related to the management of protected areas—principally deficiencies in capacity and resources for site management and site monitoring.

More detailed information on protected areas management and reporting can be found in Chapter 3 of the report.

## INDIGENOUS PEOPLES AND STAKEHOLDER INVOLVEMENT

All governments emphasized the importance of collaboration with other organisations, governments, including Indigenous organisations, local communities and stakeholders, in the planning and establishment of protected areas. Notably, most had formal arrangements in place to engage organisations, Indigenous communities and the general public. Conservation of privately owned land remains an important consideration in the strategies of many government organisations working on terrestrial protected areas, while close collaboration with land trusts is ongoing. A number of governments had programs to encourage and support conservation on private property, including the designation and recognition of private protected areas.

More detailed information on engagement with Indigenous Peoples and stakeholders can be found in Chapter 4 of the report.

## FEDERAL, PROVINCIAL AND TERRITORIAL SUMMARIES

Canada's federal and provincial and territorial governments have collectively made significant progress with respect to protected areas.

Attaining the *2020 Biodiversity Goals and Targets* will require sustained and concerted effort by governments, working in close partnership with various stakeholders and Indigenous Peoples. Collaboration is imperative, to ensure that protected areas are established in key biodiversity areas, and that protected areas in Canada are effectively and equitably managed, ecologically representative, well-connected, and integrated into the broader landscape.

Details on Canada's recent accomplishments, as well as a breakdown of protected areas and priorities across Canada, can be found in Chapter 5.

# Introduction





Pimachiowin Aki, Ontario © Ministry of Natural Resources and Forestry

## INTRODUCTION

### ABOUT THE REPORT

The *Canadian Protected Areas Status Report* series examines the state of terrestrial and marine protected areas in Canada, including network design, system planning, and protected areas establishment and management. There have been two previous *Canadian Protected Areas Status Reports* covering the periods from 2000 to 2005 and from 2006 to 2011 respectively.

This report is the third in the series and covers the period from January 1, 2012 to December 31, 2015. The report provides information on the current state of protected areas in Canada and recent trends. Information is provided for Canada's protected areas system as a whole and at the federal, provincial and territorial levels respectively.

Chapter 1 focuses on the extent of Canada's terrestrial and marine protected areas system and changes in the amount of area protected since the end of 2011. Chapter 2 focuses on protected areas planning and establishment of new protected areas and explores efforts by Canadian governments to address a number of conservation objectives. Chapter 3 focuses on management of existing protected areas. Chapter 4 focuses on the participation of Indigenous Peoples and the engagement of stakeholders in the planning and management of protected areas in Canada. Chapter 5 provides a short, detailed summary

of the protected areas systems within each province and territory and in the three federal departments responsible for protected areas.

### DEPARTMENTS AND AGENCIES THAT CONTRIBUTED TO THE REPORT

The *Canadian Protected Areas Status Report 2012–2015* was produced by Environment and Climate Change Canada (Charles Shulman, Susanne Emond, Courtney Robertson, Eden Thurston, Olaf Jensen, Said Akif, Amy Huang, and Chris Lauzon) in close collaboration with provincial and territorial governments, Fisheries and Oceans Canada, and Parks Canada, under the supervision of federal, provincial and territorial Assistant Deputy Minister members of the Conservation, Wildlife and Biodiversity Steering Group. The report is based on information and data provided by a number of government organisations (hereafter referred to as protected area organisations) and would not have been possible without the support of dedicated staff from the following organisations:

- Alberta: Parks Division, Alberta Environment and Parks
- British Columbia: BC Parks
- Manitoba: Sustainable Development (previously Conservation and Water Stewardship)
- New Brunswick: Department of Natural Resources and Department of Tourism, Heritage and Culture
- Newfoundland and Labrador: Parks and Natural Areas Division, Department of Environment and Conservation
- Northwest Territories: Conservation, Assessment, and Monitoring Division, Conservation Planning Branch
- Nova Scotia: Protected Areas and Ecosystems Branch, Nova Scotia Department of Environment and Nova Scotia Department of Natural Resources
- Nunavut: Department of Environment, Parks and Heritage division, Government of Nunavut

- Ontario: Protected Areas Section and Ontario Parks, Ontario Ministry of Natural Resources & Forestry
- Prince Edward Island: Forests, Fish and Wildlife Division, PEI Department of Communities, Land and Environment
- Quebec: Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques, Direction des aires protégées et ministère des Forêts, de la Faune et des Parcs, Direction des parcs nationaux
- Saskatchewan: Ministry of Environment and Ministry of Parks, Culture and Sport
- Yukon: Parks Branch and Fish and Wildlife Branch, Department of Environment
- Government of Canada: Environment and Climate Change Canada; Fisheries and Oceans Canada; Parks Canada

This report builds on the work of the Canadian Council on Ecological Areas which has been instrumental in creating the mechanisms that make national level reporting on protected areas possible in Canada, including a network of federal, provincial and territorial protected areas experts, the Conservation Areas Reporting and Tracking System database, and the status report questionnaire.

## DATA SOURCES

The information in this report was generated from data provided by Canada's federal, provincial and territorial protected area organisations through two main channels: the Conservation Areas Tracking and Reporting System and the *Canadian Protected Areas Status Report* questionnaire. Responsibility for source data accuracy and completeness lies with the protected areas organisations.

### 1. The Conservation Areas Reporting and Tracking System:

The Conservation Areas Reporting and Tracking System is a web-based, distributed network containing authoritative and up-to-date protected areas data from all federal, provincial and territorial protected

area organisations. The database makes use of the International Union for Conservation of Nature protected area definition, management categories and governance types as its standardized framework for reporting and mapping, allowing inter-organisational comparisons and national protected areas reporting and mapping. The Conservation Areas Reporting and Tracking System is an evolution of the Canadian Conservation Areas Database, which had been managed by the Canadian Council on Ecological Areas since 1998. The new system was formally launched in 2008 by Environment and Climate Change Canada (then Environment Canada) and the Council. Environment and Climate Change Canada hosts and manages the database in partnership with the Council. Annual updates are provided by federal, provincial and territorial protected area organisations to keep data current. Maps, reports and data are available from the [Canadian Council on Ecological Areas' website](#).

Organisations provided geospatial and/or legal boundary and attribute data for their protected areas, accurate as of December 31, 2015. This data was used to calculate the number and spatial extent of protected areas and changes over time, as well as breakdowns by International Union for Conservation of Nature management category and governance type. The results of this analysis are reflected in Chapters 1 and 5 of the report.

#### *Notes on calculations:*

- The extent of protected areas at the end of 2011 presented here have been recalculated for this report using the latest information available. Methodologies



Elkwater Lake in Cypress Hills Provincial Park © Alberta Parks

for measuring and mapping are constantly evolving and protected area organisations periodically update information on existing protected areas in order to, for example, improve the accuracy of boundaries recorded in the database. An update to boundaries may result in a change in the measured size of the protected area. In order to calculate trends between 2012 and 2015, the analysis reported here used the latest information available. As a result, there may be discrepancies between the 2011 totals reported here and those reported in previous editions of the *Canadian Protected Areas Status Report*.

- The percentages of terrestrial and marine area protected were calculated using a terrestrial area of Canada of 9 984 670 km<sup>2</sup> and a marine area of 5 750 000 km<sup>2</sup>.
- The extent of protected areas (in km<sup>2</sup> and as a percentage of total terrestrial or marine area) presented at the national, provincial and territorial level may not be equal to the sum of areas presented elsewhere in the report. Areas may be protected

under more than one protected area instrument, and therefore may be under the jurisdiction of more than one organisation. To more accurately estimate the area protected within political boundaries, overlaps are removed before the measurement is made. Additionally, in order to account for different approaches used by protected area organisations to estimate the size of their protected areas, a single consistent approach was used when calculating totals at the national, provincial and territorial level. Information on protected areas by International Union for Conservation of Nature categories and by governance type present the official area as provided by the reporting organisation and are not adjusted to correct for overlaps.

## 2. The *Canadian Protected Areas Status Report* questionnaire:

A standardized questionnaire was completed by federal, provincial and territorial protected areas organisations in early 2016, with information on conditions as of December 31, 2015. In responding to the questionnaire,



Pickerelweed © Simon Pierre Barrette, alias Cephas CC BY-SA

organisations provided information on topics including: protected areas design, planning and establishment, management, monitoring and reporting; participation of Indigenous Peoples, engagement of local communities, private landowners and other organisations in the establishment and management of protected areas; the role of protected areas in integrated landscape/ seascape management; financial resources for protected areas; and, visitation. The results of the questionnaire are reflected in Chapters 2, 3, 4 and 5 of the report.

This questionnaire is an integral source of information for the *Canadian Protected Areas Status Report* series. Many questions from previous editions of the questionnaire remain unchanged in order to enable comparison with previous results. Some questions have been edited for clarity and to facilitate responses and a few new questions have been added.

## TYPES OF PROTECTED AREAS REPORTED

All of the protected areas included in this report meet the International Union for Conservation of Nature's definition of a protected area:

*A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.*<sup>1</sup>

Federal government protected areas reported here include National Parks, National Marine Conservation Areas, National Wildlife Areas, Migratory Bird Sanctuaries, and Marine Protected Areas designated under the *Oceans Act*.<sup>2</sup> Provincial and territorial government protected areas are established under many different designations, including among others, Provincial and Territorial Parks, Marine Parks, Wilderness Parks, Wildlife Refuges,

Ecological Reserves, Nature Reserves, Biological Reserves, Biodiversity Reserves, Natural Areas, Wilderness Areas, Habitat Protection Areas, Wildlife Management Areas, Conservancies, and Special Management Areas. In addition to government owned and managed areas, some provinces and territories also report on collaboratively managed as well as non-government protected areas including privately owned natural areas, areas protected through Indigenous land claim agreements, traditional use planning areas, and habitat protection areas, among others.

Protected areas organisations in Canada classify protected areas according to their management approach and governance regime in accordance with the International Union for Conservation of Nature's management categories and governance typology.<sup>3</sup> While management categories have been reported previously in *Canadian Protected Areas Status Reports* based on official data submitted by federal, provincial and territorial protected areas organisations, governance of individual protected areas was previously interpreted based on ownership. In 2015, federal, provincial and territorial protected areas organisations officially classified their protected areas in the Conservation Areas Reporting and Tracking System according to governance type, allowing more detailed information to be provided in this report. As the collection of this data is relatively new, it is expected that this information may not yet be comprehensive and the accuracy of this metric will continue to be improved. Information on management classification and governance type is reported in Chapter 1 and Chapter 5.

Domestic and international conservation targets refer to conservation through protected areas and "other effective area-based conservation measures".<sup>4</sup> At the time of writing, the definition of other effective area-based conservation measures had not been determined.

<sup>1</sup> Dudley, N. (Ed.), 2008. *IUCN Guidelines for Applying Protected Area Management Categories*. Gland, Switzerland: IUCN. WITH Stolton, S., P. Shadie and N. Dudley (2013). *IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types*, Best Practice Protected Area Guidelines Series No. 21, Gland, Switzerland: IUCN. See also: [http://www.iucn.org/about/work/programmes/gpap\\_home/gpap\\_quality/gpap\\_pacategories/](http://www.iucn.org/about/work/programmes/gpap_home/gpap_quality/gpap_pacategories/).

<sup>2</sup> Gatineau Park, managed by the National Capital Commission is also included in the report.

<sup>3</sup> Borrini-Feyerabend, G., N. Dudley, T. Jaeger, B. Lassen, N. Pathak Broome, A. Phillips and T. Sandwith (2013). *Governance of Protected Areas: From understanding to action*. Best Practice Protected Area Guidelines Series No. 20, Gland, Switzerland: IUCN. xvi + 124pp.

<sup>4</sup> See Chapter 2 for an overview of domestic and international area-based conservation targets.



Geese in Bylot Island Migratory Bird Sanctuary, Photo: Christian Marcotte © Environment and Climate Change Canada

However, domestic and international discussions are ongoing about what other types of conservation measures should be included along-side protected areas reporting. No other effective area-based conservation measures are included in the 2012–2015 report. In 2015, a field was added to the Conservation Areas Reporting and Tracking System database to enable government protected areas organisations to identify such measures in future updates. Any measures added after 2015 will be reported in future editions of the *Canadian Protected Areas Status Report*.

### CHANGES SINCE THE LAST REPORT

This report covers a 4-year period, from January 1, 2012 to December 31, 2015. The first two editions covered a 6-year period, from January 1, 2000 to December 31, 2005, and from January 1, 2006 to December 31, 2011. The shorter period for this edition will enable the series to move to a 5-year reporting timeframe for the next report (2016 to 2020) and simultaneously align the production of the next edition with Canada's reporting on the 2020 Biodiversity Goals and Targets for Canada and reporting to the Convention on Biological Diversity on its contribution to the Convention's Strategic Plan for Biodiversity 2011–2020.

Information on protected area coverage within Canada's terrestrial and marine ecological regions is based on analysis using an updated ecological framework for Canada. The update to the existing [EcozonesPlus](#) framework improves the alignment of ecozones across jurisdictional boundaries, including provincial, territorial and international boundaries, and integrates new ecological information being used by provincial and territorial governments into the national level framework. In addition, three new ecozones have been added: Tundra Cordillera, the Yukon portion of an ecological region in Alaska; Semi-Arid Plateaux, an extension of an ecological region in the United States that stretches into southern British Columbia; and, Atlantic Highlands a new ecozone that distinguishes Quebec and New Brunswick's highland areas from the rest of the Atlantic Maritime Ecozone. Changes were made only at the broadest level of the framework, the level of ecozones, which provides a useful level of generalization for national reporting. The update did not modify the boundaries of finer scale ecoregions or ecodistricts. The update was completed in 2014 by the Canadian Council on Ecological Areas in collaboration with provincial and territorial governments. More information can be found on the [Council's website](#).

CHAPTER 1

# Extent and Growth of Canada's Protected Areas



#1

Dinosaur Provincial Park © Alberta Parks

## EXTENT AND GROWTH OF CANADA'S PROTECTED AREAS

Protected areas play a critical role in Canada's efforts to conserve nature. They protect important parts of Canada's ecosystems, maintain essential ecosystem services, safeguard habitat and provide opportunities for tourism, recreation, and connections with nature. This first chapter provides an overview of the status of protected areas nationally including the growth of terrestrial and marine protected areas from 2012 to 2015. Information is also provided on the distribution of protected areas by biome (terrestrial and marine), on the ecological representativeness of Canada's protected areas, and on the distribution of protected areas by governance regime and management approach according to International Union for Conservation of Nature's classification. A brief overview of how Canada's protected areas network compares internationally is also presented.

### EXTENT AND GROWTH

At the end of 2015, 10.6% (1.05 million km<sup>2</sup>) of Canada's terrestrial area (including both land and freshwater) and 0.90% (51 thousand km<sup>2</sup>)<sup>5</sup> of its marine territory were recognized as protected (Figure 1). This is an increase

from the previous report (2011), when 9.8% of Canada's terrestrial area and 0.88% of its marine area were recognized as protected.

Since the end of 2011, approximately 72 560 km<sup>2</sup> of terrestrial area, and 650 km<sup>2</sup> of marine area have been added. This represents a growth of 7.4% in the extent of terrestrial protected areas and an increase of 1.3% in the extent of marine protected areas over this four-year period (Figure 2).

At the end of 2015, there were over 7 100 terrestrial protected areas in Canada, up from 4 660 terrestrial protected areas at the end of 2011, and 740 marine protected areas, up from 723 in 2011. This reflects a total of 2 446 new terrestrial protected areas and 17 marine protected areas added to Canada's protected areas network since 2011.

It is important to note that at the present time the majority of Canada's marine protected areas are in fact the marine portions of terrestrial protected areas. Queen Maude Gulf Migratory Bird Sanctuary is a good example. This 62 000 km<sup>2</sup> protected area includes 6 553 km<sup>2</sup> of marine habitat. The legislation that protects the area (in this case, the *Migratory Bird Convention Act*) does not include powers specific to the marine environment. Canada's current approach to accounting for marine protected areas includes those portions of terrestrial protected areas that fall in the marine environment, so the marine area is treated the same as the terrestrial area without specific consideration of activities in the marine water column.

While the overall area protected has increased since 2011, the annual growth rate of terrestrial protected areas in Canada slowed during this time to an average of 1.8% growth per year from 2012 to 2015 (Figure 3). This is down from an average of 2.7% growth per year in the period from 2006 to 2011 and 3.2% growth per year reported between 2000 and 2005. During the 2012 to 2015 time period, the average annual growth rate for marine protected areas

<sup>5</sup> The boundaries of some terrestrial protected areas extend into the ocean. In these cases the marine portions are recognized separately in the Conservation Areas Reporting and Tracking System and are reported as marine areas for the purposes of reporting on the number and the extent of terrestrial and marine protected area.



**MAP 1:** Canada's protected areas, 2015

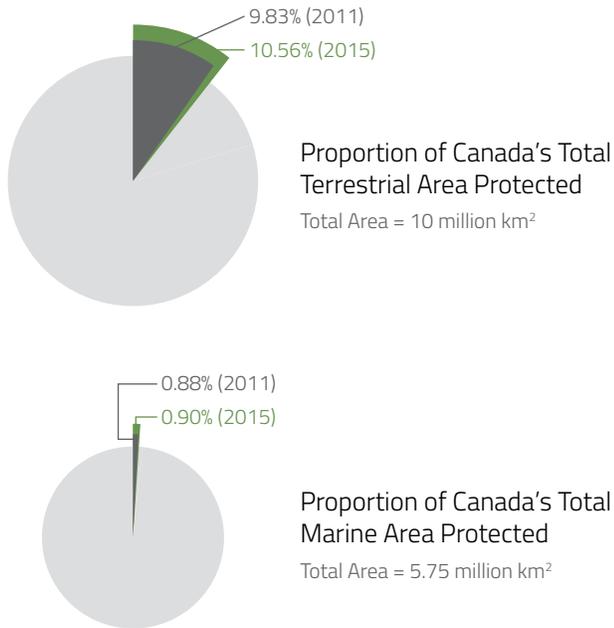
Source: Canadian Council on Ecological Areas Conservation Areas Reporting and Tracking System (CARTS) (2016). Data are current as of 31 December, 2015.

was 0.3%; a decrease from the average annual growth rates from 2006 to 2011 (8.8% growth per year) and from 2000 to 2005 (5.6% growth per year).

Protected areas have been established across the country and can be found in each of the provinces and territories as well as in all three oceans (Figure 4). Their distribution varies however and the southern regions of Canada have a higher concentration of small protected areas while protected areas in the north are larger and more widely dispersed (Map 1).

## GOVERNANCE OF CANADA'S PROTECTED AREAS

Protected areas can be governed under various regimes. The International Union for Conservation of Nature has developed a governance classification scheme which enables reporting agencies to classify their protected areas using standardized governance types. The governance type assigned to a protected area indicates who holds authority, responsibility and accountability over key management decisions affecting a given protected area. 2015 was the first year that government protected organisations



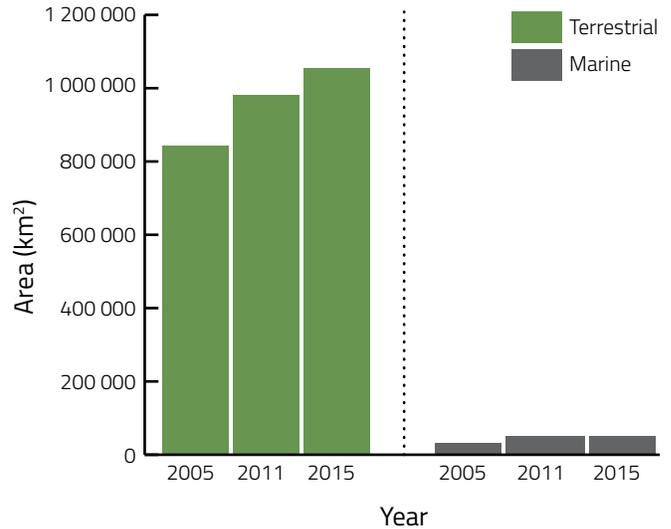
**FIGURE 1:** Terrestrial and marine protected area in Canada (2011 and 2015) as a proportion of the country's total area

Note: Percent coverage is based on a total terrestrial area for Canada of 9 984 670 km<sup>2</sup> and an estimated marine area of 5 750 000 km<sup>2</sup>.

in Canada classified their protected areas according to governance type. This is the first report in the series in which governance results are based on official governance classifications provided by protected areas organisations. Previous reports interpreted governance types based on information about ownership. It is important to note that, as the collection of this data is relatively new, the results may not yet be comprehensive and accuracy will continue to improve with time.

There are four broad types of governance, three of which include sub-categories.

- Governance by government (including the sub-categories: Federal or national ministry or agency; Provincial or territorial ministry or agency);
- Shared governance;

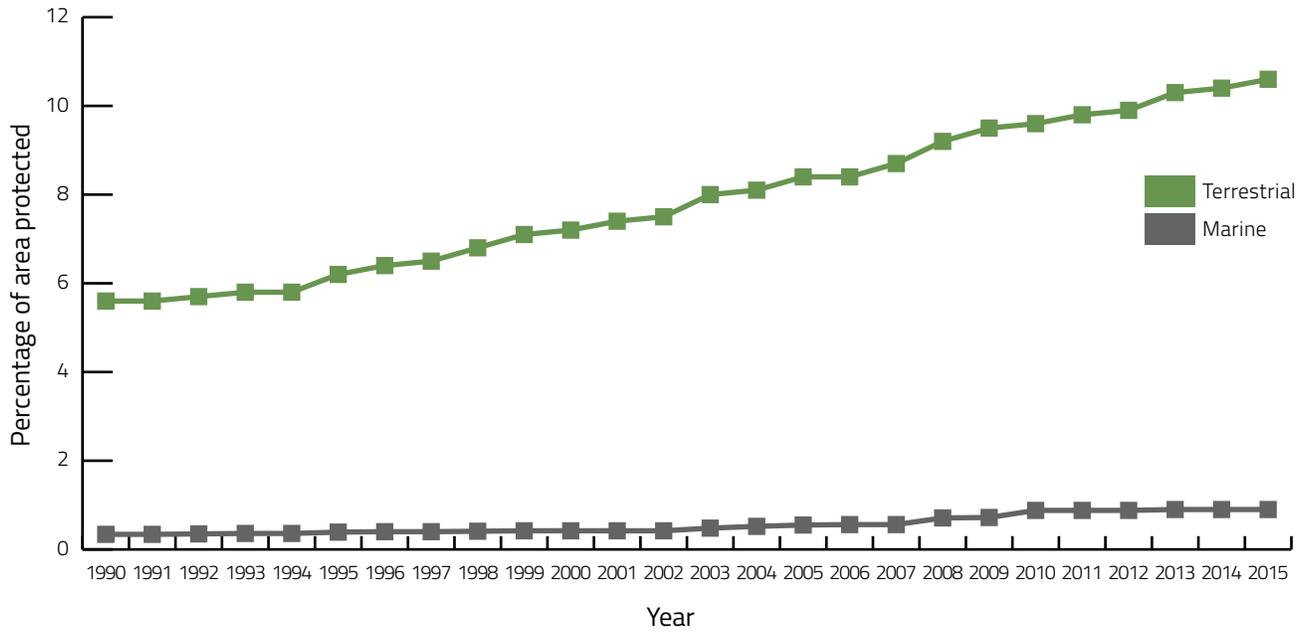


**FIGURE 2:** Area protected by biome in 2005, 2011 and 2015

- Private governance (including the sub-categories: Individual landowners; Non-profit organisations; For-profit organisations); and,
- Governance by Indigenous Peoples and local communities (including the sub-categories Indigenous Peoples; Community conserved areas).

### Governance by government

Ninety-five percent of Canada's protected areas are governed by federal, provincial or territorial governments (Figure 5). Of that, the federal government administers or jointly administers 45% (approximately 469 000 km<sup>2</sup>) of Canada's terrestrial area protected. Parks Canada and Environment and Climate Change Canada are responsible for the majority of federal terrestrial protected areas. In addition, the National Capital Commission is responsible for the management of Gatineau Park, and Indigenous and Northern Affairs Canada is responsible for the management of the Nunavut portion of the Thelon Game Sanctuary. The provinces and territories administer or jointly administer 55% (approximately 578 500 km<sup>2</sup>) of terrestrial areas protected (see Chapter 5 for details).

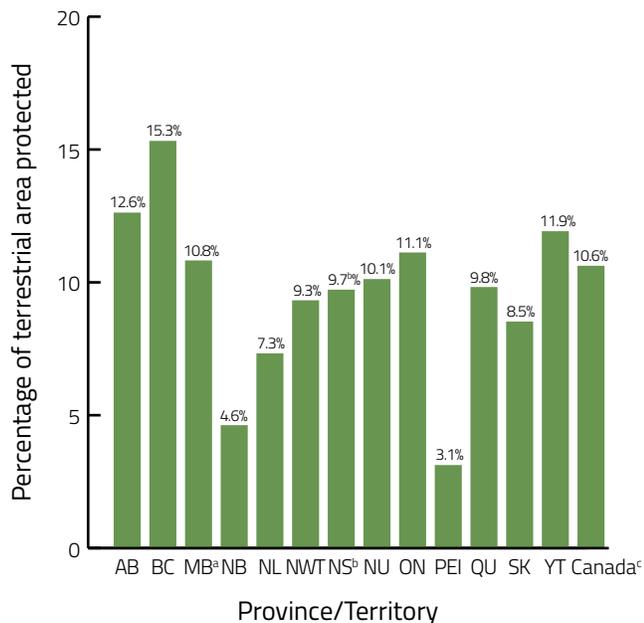


**FIGURE 3:** Growth of terrestrial and marine protected area over time

Source: Environment and Climate Change Canada (2016) [Canadian Environmental Sustainability Indicators: Canada's Protected Areas](#).



Cheemuhnuhcheecheekuhtaykeehn © Ministry of Natural Resources and Forestry



**FIGURE 4:** Percentage of terrestrial area protected, by province and territory

**TABLE 1:** Summary of terrestrial protected areas in Canada, by province and territory

| Province or territory     | Protected area (km <sup>2</sup> ) | Percentage of terrestrial area of the province or territory protected (%) |
|---------------------------|-----------------------------------|---|
| Alberta                   | 83 141                            | 12.6  |
| British Columbia          | 144 813                           | 15.3  |
| Manitoba <sup>a</sup>     | 70 087                            | 10.8  |
| New Brunswick             | 3 378                             | 4.6   |
| Newfoundland and Labrador | 29 420                            | 7.3   |
| Northwest Territories     | 125 646                           | 9.3   |
| Nova Scotia <sup>b</sup>  | 5 366                             | 9.7 <sup>b</sup>  |
| Nunavut                   | 211 996                           | 10.1  |
| Ontario                   | 119 476                           | 11.1  |
| Prince Edward Island      | 175                               | 3.1   |
| Quebec                    | 147 775                           | 9.8   |
| Saskatchewan              | 55 468                            | 8.5   |
| Yukon                     | 57 358                            | 11.9  |
| Canada <sup>c</sup>       | <b>1 054 057</b>                  | <b>10.6</b>   |

Source: Environment and Climate Change Canada (2016) [Canadian Environmental Sustainability Indicators: Canada's Protected Areas](#).

Notes:

<sup>a</sup> These calculations do not include 1 052 km<sup>2</sup> protected in nine sites in Manitoba at the end of 2015.

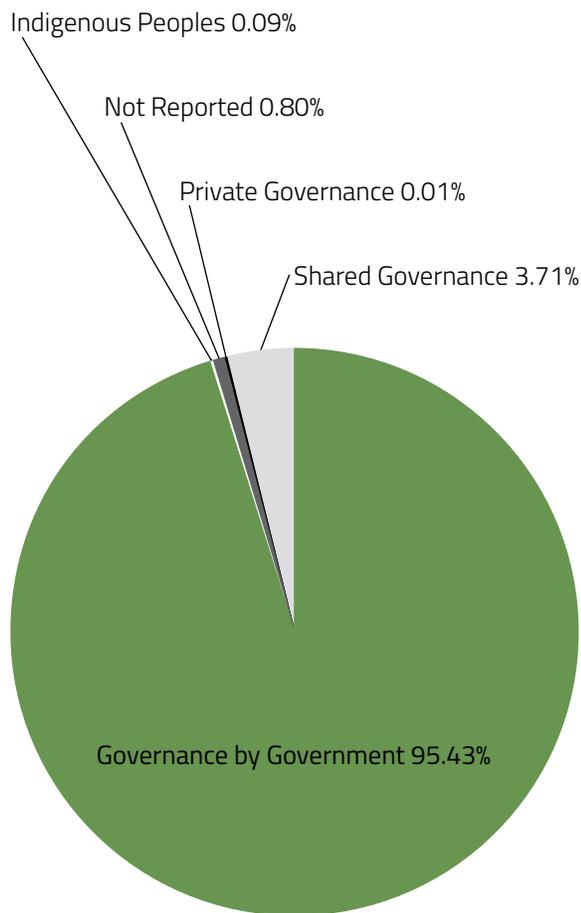
<sup>b</sup> In late December 2015, Nova Scotia designated through Orders in Council additional lands which will take the province to about 12.1%, according to Conservation Areas Reporting and Tracking System standards, but these areas, amounting to about 2.4% of the province, do not come into legal effect until their survey plans are signed and deposited in the Crown Land Information Centre, expected sometime in 2016. In the meantime, they are managed under interim policies and procedures to maintain their natural character, and are reported as "Interim" in Conservation Areas Reporting and Tracking System. Also, Nova Scotia currently internally counts certain privately conserved areas as protected areas amounting to about 0.2% of the province. These areas are not reported to Conservation Areas Reporting and Tracking System because they are not protected from mineral or oil & gas development.

<sup>c</sup> Total is not equal to the sum of figures above. The national terrestrial area has been adjusted to account for areas with protection by multiple jurisdictions. To more accurately estimate the overall area protected within Canada, overlaps have been removed before calculating the national totals.

The federal government administers or jointly administers over 80% (approximately 43 000 km<sup>2</sup>) of Canada's marine area protected. This area is managed by three organisations: Parks Canada, Environment and Climate Change Canada and Fisheries and Oceans Canada. The provinces and territories administer or jointly administer roughly 20% (approximately 10 000 km<sup>2</sup>).

Occasionally, responsibility for protected areas is transferred between governments. As of the end of 2015, a total of 9 095 km<sup>2</sup> of land previously managed by Agriculture and Agri-Food Canada as community pastures (locally known as the Prairie Farm Rehabilitation

Administration, or PFRA pasture program) was in transition between the federal government and provincial governments, as decisions about the future management of these areas are being taken. This program ended in 2012. In this report, approximately 7 400 km<sup>2</sup> of community pastures in Saskatchewan are considered protected area but are categorized as "In transition" between federal and provincial governments with respect to governance. This area is included in the amount of area protected in Saskatchewan, but it is not reported as area under either federal or provincial administration. Most of the remaining 1 700 km<sup>2</sup> of community pastures, outside of Saskatchewan, is not currently reported as protected.



**FIGURE 5:** Proportion of Canada's protected areas (terrestrial and marine) by governance type

These figures are based on information available on December 31, 2015 and are subject to change as decisions regarding these areas are taken.

### Shared governance

Shared governance refers to collaboration between different levels of government or between at least one government organisation, whether federal, provincial or territorial and an Indigenous government or community, a municipality, a property owner, or a

land trust, in which partners share the authority by making decisions collectively, whether through the establishment of a governance body or other cooperative and co-management mechanisms.<sup>6</sup> While many of Canada's protected areas involve collaboration between organisations, only a portion of these are officially classified under shared governance by federal, provincial and territorial protected areas organisations. Over 40 000 km<sup>2</sup> of terrestrial and marine protected area across six provinces and three territories are administered through shared governance arrangements. These consist mostly of protected areas that are co-managed by federal, provincial or territorial governments and Indigenous governments or communities. Recent additions in the shared governance category include:

- Two new protected areas covering a total of 3 695 km<sup>2</sup> on the east side of Lake Winnipeg which were established, in 2012, under shared governance agreements between Manitoba and Little Grand Rapids First Nation, and between Manitoba and Pauingassi First Nation as Traditional Use Planning Areas.
- The province of Nova Scotia set aside land to establish two new Wilderness Areas in collaboration with Nova Scotia Nature Trust, in 2015, protecting an area of approximately 32 km<sup>2</sup>.

### Private governance

Private conservation areas make an important contribution to Canada's system of protected areas; often protecting sensitive and significant natural habitat in otherwise developed or converted privately owned landscapes. Private conservation areas appear almost exclusively in southern Canada.

Protected areas that fall under the private governance type include areas that are governed by individual landowners and non-governmental organisations. Private conservation areas can include lands owned in fee-simple by conservation organisations (land trusts) as well as

<sup>6</sup> Borrini-Feyerabend, G., N. Dudley, T. Jaeger, B. Lassen, N. Pathak Broome, A. Phillips and T. Sandwith (2013). *Governance of Protected Areas: From understanding to action*. Best Practice Protected Area Guidelines Series No. 20, Gland, Switzerland: IUCN. xvi + 124pp.

conservation easements, covenants, servitudes, leases, or other arrangements.

Three provinces currently report a total of approximately 140 km<sup>2</sup> of protected areas under private governance (Manitoba, New Brunswick, Prince Edward Island); further details on these provinces are reported in Chapter 5. While privately held protected areas occur in other parts of the country, some provinces classify these under shared or other governance regimes. A comprehensive national inventory of private conservation areas is currently being developed for Canada (see Chapter 2 for more information on protecting private lands).

### Governance by Indigenous Peoples and local communities

This designation is used for protected areas where the management authority and responsibility are held by Indigenous Peoples and/or local communities. Indigenous Peoples of Canada have contributed to the establishment of tens of thousands of square kilometres of protected areas through modern land-claim agreements and treaty negotiation. As noted above, most of these protected areas are managed under shared governance or governance by government. The exception to this is Wehexlaxodiale, covering an area of 976 km<sup>2</sup> in Northwest Territories, which was established in 2013 through the *Tłı̄chų Land Use Plan Act*, and is governed by the Tłı̄chų Government.

### ECOLOGICAL REPRESENTATIVENESS

Canada's diverse ecological makeup can be divided into 18 terrestrial ecozones (Table 2, Map 2), 12 marine ecozones<sup>7</sup> (Table 3, Map 2), and 1 freshwater ecozone.<sup>8</sup> All of Canada's ecozones are partly protected; however, the proportion of protection within each ecozone varies widely, from less than 1% in the Arctic Basin, Newfoundland-Labrador Shelves, Scotian Shelf,

Hudson Bay Complex and Arctic Archipelago to over 20% in the Arctic Cordillera, Pacific Maritime and Tundra Cordillera ecozones.

#### Terrestrial ecozones

- At the end of 2015, the majority of Canada's terrestrial ecozones (16 out of 18), primarily in the north and west of the country, had at least 5% of their area conserved by protected areas. While less than half of the terrestrial ecozones (seven out of 18) had over 10% of their area conserved by protected areas. These proportions are identical to those from 2011.
- As in 2011, two terrestrial ecozones (Mixedwood Plains and Atlantic Highlands) had less than 5% of their area protected in 2015 although there has been a small expansion of coverage in both.
- The area protected has increased in 72% of Canada's terrestrial ecozones (13 out of 18) since 2011. The largest increase was in the Taiga Shield ecozone, which increased from 5.4% to 8% protected.

#### Marine and Great Lakes ecozones

- Marine ecozones experienced less protected area growth than terrestrial ecozones, with only one ecozone showing an increase. Gulf of Saint Lawrence increased from 1.6% in 2011 to 1.9% protected at the end of 2015.
- Out of the 12 marine ecozones, five (42%) had less than 1% of their area protected in 2015. One marine ecozone (Northern Shelf) had over 5% of its area protected.
- Over 13% of the Great Lakes ecozone was protected.

<sup>7</sup> Marine ecozones are derived from marine bioregions, which were delineated following a national science advisory process that considered oceanographic and bathymetric similarities. For more details, see Canadian Science Advisory Secretariat—Science Advisory Report 2009/056 (Fisheries and Oceans Canada, 2009) and the National Framework for Canada's Network of Marine Protected Areas (Government of Canada, 2011). Ecozones are not identical to the bioregions. For example, the marine territory of St. Pierre and Miquelon (France) is included in the ecozones.

<sup>8</sup> Source: Canadian Council on Ecological Areas. 2014. Canadian Ecological Framework (Ecozone layer). <http://www.ccea.org/ecozones-introduction/>

**TABLE 2:** Area protected in terrestrial ecozones in 2011 and 2015<sup>a,b</sup>

| Ecozone            | Ecozone area (km <sup>2</sup> ) | Area protected in 2015 (km <sup>2</sup> ) | Percent of ecozone protected in 2011 (%) | Percent of ecozone protected in 2015 (%) | Change in percentage protected from 2011 to 2015 (%) |
|--------------------|---------------------------------|---|--|--|--|
| Arctic Cordillera  | 233 618                         | 53 699                                    | 23.0                                     | 23.0                                     | 0  |
| Atlantic Highlands | 93 017                          | 3 552                                     | 3.3                                      | 3.8                                      | 0.5  |
| Atlantic Maritime  | 110 590                         | 7 712                                     | 5.9                                      | 7.0                                      | 1.1  |
| Boreal Cordillera  | 557 937                         | 97 311                                    | 15.6                                     | 17.4                                     | 1.9  |
| Boreal Plains      | 779 471                         | 58 048                                    | 7.5                                      | 7.5                                      | >-0.1 <sup>c</sup>                                   |
| Boreal Shield      | 1 897 362                       | 183 766                                   | 9.0                                      | 9.7                                      | 0.7  |
| Hudson Plains      | 350 693                         | 43 774                                    | 12.5                                     | 12.5                                     | 0  |
| Mixedwood Plains   | 116 206                         | 2 092                                     | 1.7                                      | 1.8                                      | 0.1  |
| Montane Cordillera | 437 761                         | 80 006                                    | 18.2                                     | 18.3                                     | <0.1   |
| Northern Arctic    | 1 481 480                       | 106 291                                   | 6.4                                      | 7.2                                      | 0.7  |
| Pacific Maritime   | 216 942                         | 52 449                                    | 23.9                                     | 24.2                                     | 0.3  |
| Prairies           | 465 990                         | 27 253                                    | 6.1                                      | 5.9                                      | >-0.3 <sup>c</sup>                                   |
| Semi-Arid Plateaux | 56 434                          | 5 263                                     | 9.2                                      | 9.3                                      | 0.1  |
| Southern Arctic    | 957 139                         | 150 760                                   | 15.7                                     | 15.8                                     | <0.1   |
| Taiga Cordillera   | 231 161                         | 19 302                                    | 8.0                                      | 8.4                                      | 0.4  |
| Taiga Plains       | 554 014                         | 38 160                                    | 6.9                                      | 6.9                                      | <0.1   |
| Taiga Shield       | 1 322 786                       | 105 763                                   | 5.4                                      | 8.0                                      | 2.7  |
| Tundra Cordillera  | 28 980                          | 7 159                                     | 24.7                                     | 24.7                                     | 0  |

## Notes:

- <sup>a</sup> Increases shown in the ecozone tables reflect only new protected areas established during the 2012–2015 timeframe and do not include expansions of protected areas that existed prior to 2012.
- <sup>b</sup> Ecozone totals do not include 1 052 km<sup>2</sup> protected in nine sites in Manitoba at the end of 2015: six sites in the Boreal Shield Ecozone (106 km<sup>2</sup>), two sites in the Boreal Plain Ecozone (941 km<sup>2</sup>), and one site in the Prairie Ecozone (5 km<sup>2</sup>).
- <sup>c</sup> Negative change is due to the transfer of land previously protected under the administration of Agriculture and Agri Food Canada (Prairie Farm Rehabilitation Administration) in Manitoba that was in progress between 2011 and 2015.





Lake Superior National Marine Conservation Area © Parks Canada, photo: Dale Wilson

**TABLE 3:** Area protected in marine ecozones in 2011 and 2015<sup>a</sup>

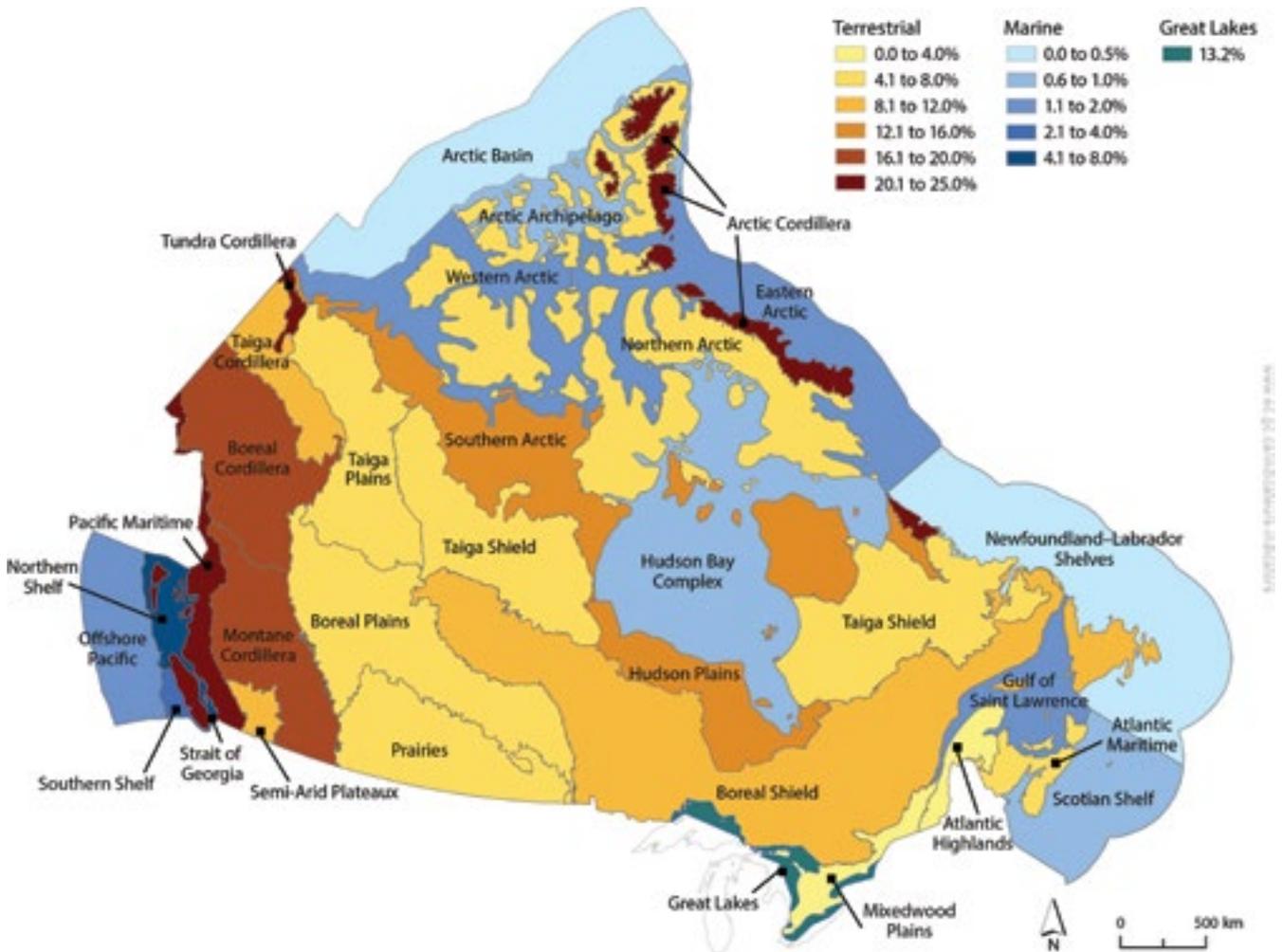
| Ecozone                       | Ecozone area (km <sup>2</sup> ) | Area protected in 2015 (km <sup>2</sup> ) | Percent of ecozone protected in 2011 (%) | Percent of ecozone protected in 2015 (%) | Change in percentage protected from 2011 to 2015 (%) |
|-------------------------------|---------------------------------|---|--|--|--|
| Arctic Archipelago            | 268 792                         | 2 267                                     | 0.8                                      | 0.8                                      | 0  |
| Arctic Basin                  | 752 053                         | 165                                       | <0.1                                     | <0.1                                     | 0  |
| Eastern Arctic                | 782 636                         | 8 656                                     | 1.1                                      | 1.1                                      | 0  |
| Gulf of Saint Lawrence        | 246 648                         | 4 688                                     | 1.6                                      | 1.9                                      | 0.3  |
| Hudson Bay Complex            | 1 244 670                       | 8 857                                     | 0.7                                      | 0.7                                      | 0  |
| Newfoundland-Labrador Shelves | 1 054 240                       | 215                                       | <0.1                                     | <0.1                                     | 0  |
| Northern Shelf <sup>b</sup>   | 101 663                         | 7 141                                     | 7  | 7  | 0  |
| Offshore Pacific              | 315 724                         | 6 200                                     | 2  | 2  | 0  |
| Scotian Shelf                 | 416 296                         | 2 399                                     | 0.6                                      | 0.6                                      | 0  |
| Southern Shelf                | 28 158                          | 783                                       | 2.8                                      | 2.8                                      | 0  |
| Strait of Georgia             | 8 969                           | 425                                       | 4.7                                      | 4.7                                      | 0  |
| Western Arctic                | 539 807                         | 9 697                                     | 1.8                                      | 1.8                                      | 0  |
| Great Lakes <sup>c</sup>      | 88 250                          | 11 672                                    | 13.2                                     | 13.2                                     | 0  |

## Notes:

<sup>a</sup> Increases shown in the ecozone tables reflect only new protected areas established during the 2012–2015 timeframe and do not include expansions of protected areas that existed prior to 2012.

<sup>b</sup> As noted, expansions of protected areas existing prior to 2012 are not reflected in the ecozone tables. As a result, marine foreshore additions of 1 535 km<sup>2</sup> to nine Haida Gwaii conservancies and 227 km<sup>2</sup> to four conservancies on the Central Coast are not included.

<sup>c</sup> The Great Lakes totals are not included when calculating Canada's total marine coverage.



**MAP 2:** Proportion of protected area in Canadian ecozones, 2015

Source: Environment and Climate Change Canada (2016) [Canadian Environmental Sustainability Indicators: Canada's Protected Areas](#).

**INTERNATIONAL UNION FOR CONSERVATION OF NATURE MANAGEMENT CATEGORIES**

Canada uses the International Union for Conservation of Nature’s classification of management categories for its protected areas (Figure 6). These categories help to describe the type of protected area according to stated management intent. Government protected areas organisations classify their protected areas in the Conservation Areas Reporting and Tracking System into one of the following management categories:

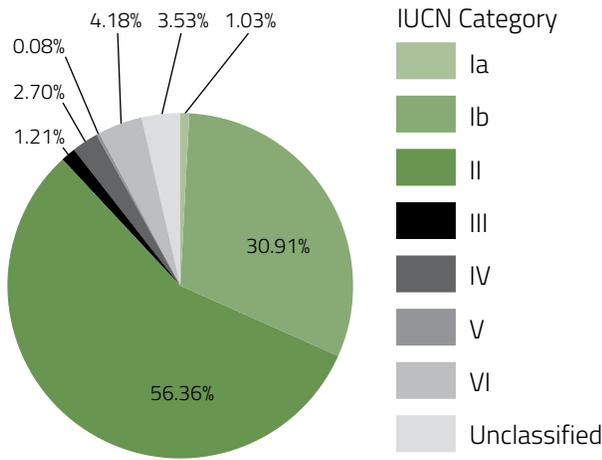
- Ia—Strict Nature Reserve
- Ib—Wilderness Area
- II—National Park
- III—Natural Monument or Feature
- IV—Habitat/Species Management Area
- V—Protected Landscape/Seascape
- VI—Protected Area with Sustainable Use of Natural Resources

For terrestrial protected areas:

- The vast majority (95% by area) of Canada's terrestrial protected area falls into categories Ia to IV; categories that tend to focus on maintaining natural conditions.
- Category II areas make up 62%, the largest proportion of terrestrial protected area. The protected areas in this category are primarily comprised of large national, provincial and territorial parks and conservation areas. Public access and recreation tends to be permitted.
- The second largest proportion of terrestrial protected area, with 29%, is classified as category Ib. These include a number of large federal Migratory Bird Sanctuaries as well as provincial and territorial parks. Management of these areas is focused on maintaining natural conditions. Public access may be permitted however built infrastructure tends to be minimized.
- The remaining protected areas fall into one of the other categories or have not yet been classified.



**MAP 3:** Protected areas in Canada, by International Union for Conservation of Nature management category, 2015



**FIGURE 6:** Canadian protected areas (terrestrial and marine) by International Union for Conservation of Nature management category<sup>9</sup>

Note: Data has not been corrected to account for overlaps: a small number of individual protected areas managed by multiple jurisdictions may be classified in two different categories.

For marine protected areas:

- Seventy percent of the marine area protected in Canada is classified in categories Ia to IV.<sup>10</sup>
- The highest proportion of marine protected area (36% by area) is classified as Ib.
- The second most extensive category (28% by area) is Category II.
- The remaining protected areas fall into one of the other categories or have not yet been classified.

### INTERNATIONAL PERSPECTIVE (2014)

At the end of 2014, the most recent year with global data available, 15.4% of global terrestrial and freshwater area (20.7 million km<sup>2</sup>), 8.4% of marine areas within national jurisdiction (0–200 nautical miles), and 3.4% of oceans globally were classified as protected.<sup>11</sup>

In a comparison of 10 countries, based on 2014 data from the World Database on Protected Areas (Figure 7):

- Canada ranked 4th of 10 countries with respect to the total terrestrial area protected, behind the Russian Federation, United States and Australia.
- Canada ranked 10th out of 10 countries with respect to the percent of terrestrial area protected.
- Canada ranked 7th out of 10 countries with respect to the total marine area protected.
- Canada ranked 9th out of 10 countries with respect to percent coverage of their marine territory that is protected.

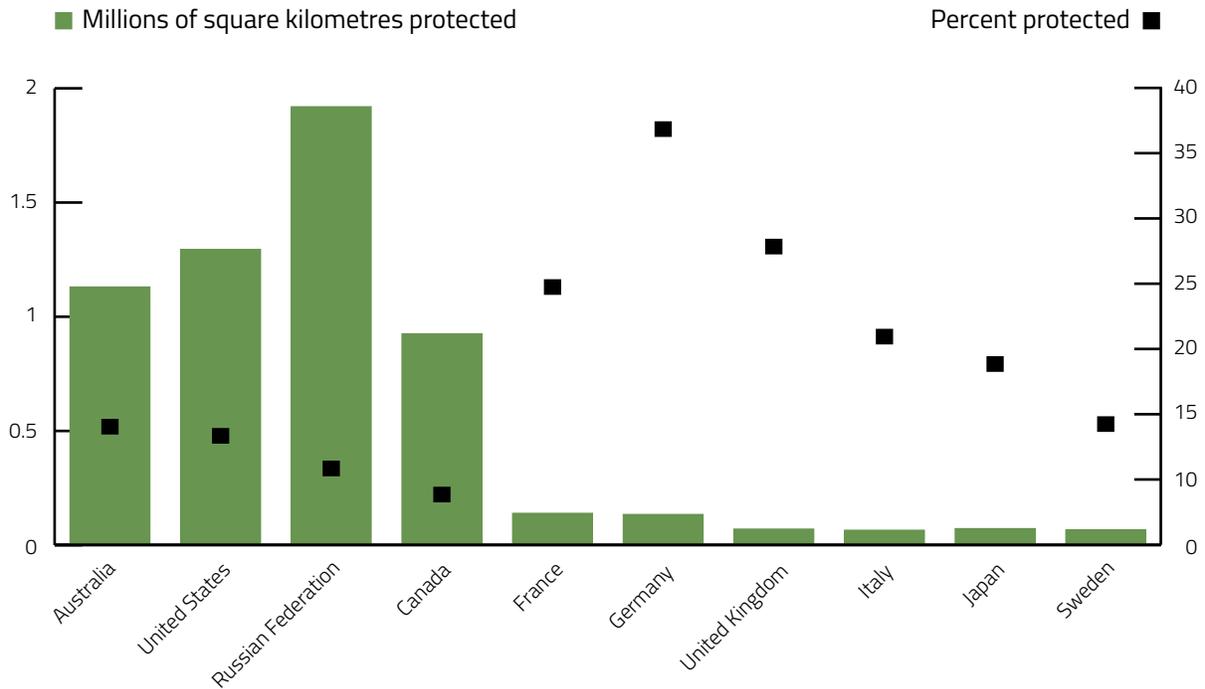
Results for Canada are shown here using international data sources only which are not as current or complete as the national data for Canada presented elsewhere in the Protected Areas Status Report. However, the information does provide a basis for comparisons among countries. Selected countries in the comparison are the G7, Australia (the population, population density and territorial extent of which are similar to Canada's), Russian Federation (a large northern country like Canada) and Sweden (which has a similar climate).

<sup>9</sup> These calculations do not include 1 052 km<sup>2</sup> protected in nine sites in Manitoba at the end of 2015.

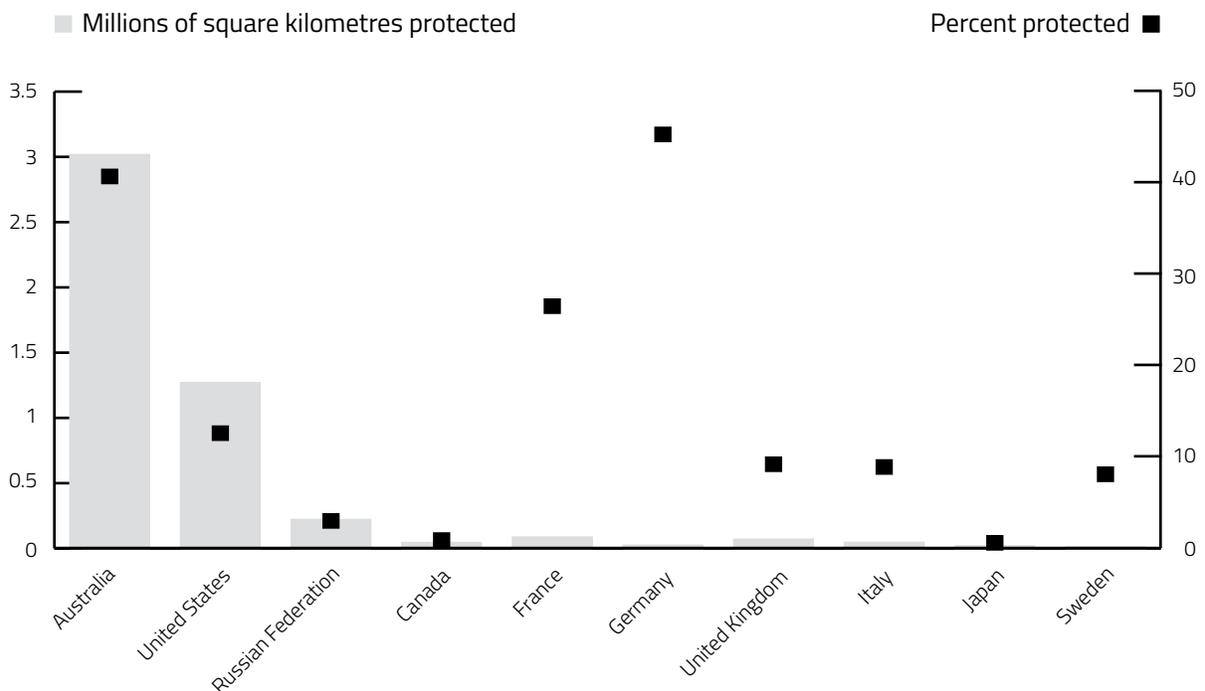
<sup>10</sup> As noted above, some of the areas considered marine protected areas are in fact part of terrestrial protected areas with boundaries that extend into the ocean. These marine portions are classified as marine protected areas, but may not be managed separately from the terrestrial protected areas of which they are a part and may share the same management category.

<sup>11</sup> Juffe-Bignoli, D., Burgess, N.D., Bingham, H., Belle, E.M.S., de Lima, M.G., Deguignet, M., Bertzky, B., Milam, A.N., Martinez-Lopez, J., Lewis, E., Eassom, A., Wicander, S., Geldmann, J., van Soesbergen, A., Arnell, A.P., O'Connor, B., Park, S., Shi, Y.N., Danks, F.S., MacSharry, B., Kingston, N. (2014). Protected Planet Report 2014. UNEP-WCMC: Cambridge, UK.

a) Terrestrial areas



b) Marine areas



**FIGURE 7:** Protected area and proportion of territory protected in selected countries, 2014

Source: Environment and Climate Change Canada (2015) [Canadian Environmental Sustainability Indicators: Global Trends in Protected Areas](#).

Note: National marine areas include marine waters from coastline to the outer limit of the exclusive economic zone. National terrestrial areas include inland freshwater areas. The Aral Sea, Caspian Sea and the Great Lakes are excluded from all area calculations on the basis of disputed boundaries. Data from the World Database on Protected Areas are used here to ensure consistency among countries (World Database on Protected Areas 2014).

CHAPTER 2

# Protected Area Planning and Establishment



## #2

Khutzeymateen Provincial Park [a.k.a. Khutzeymateen/  
K'tzim-a-deen Grizzly Sanctuary] © BC Parks

## PROTECTED AREA PLANNING AND ESTABLISHMENT

Canada has a long history of planning and establishing Protected Areas. Canada established its first park in 1876 at Mont Royal in Montreal, Quebec. Nine years later, in 1885, Banff National Park was established in Canada's Rocky Mountains. These early recreation parks were soon complemented by the establishment of Canada's first conservation reserve: in 1887 a portion of land and water at Last Mountain Lake, in what is now Saskatchewan, was set aside as a refuge for "wild fowl". Then, in 1893, Algonquin, in Ontario, was established as Canada's first provincial park. Over time, legislative and regulatory amendments have resulted in the majority of these important places being brought under the umbrella of "protected areas"—clearly defined areas managed in order to achieve the long term conservation of nature through legal or other effective means. Recreation, education, and ecotourism are important activities in many protected areas.

### CONSERVATION AND PROTECTED AREA TARGETS

In February 2015, Canada adopted a suite of objectives for the conservation and sustainable use of biodiversity.

The [2020 Biodiversity Goals and Targets for Canada](#) were developed collaboratively by federal, provincial and territorial governments. They build on the [Canadian Biodiversity Strategy](#) and the [Biodiversity Outcomes Framework](#) and highlight Canada's biodiversity-related priorities for the coming years.<sup>12</sup> The goals and targets are for Canada as a whole and progress will be reported at the national level. The contribution of each jurisdiction may vary, but all governments and sectors of society can make a significant contribution to overall progress. Many provinces and territories have their own biodiversity strategies and initiatives that support the national level goals and targets.

The goals and targets focus on a range of issues, including, among others, the following:

- Conservation of terrestrial and marine areas.
- Protection and recovery of species at risk.
- Conservation and restoration of wetlands.
- Improving aquatic ecosystem health.
- Managing invasive alien species.
- Protecting the customary use of biological resources by Canada's Indigenous Peoples.
- Promoting the sustainable use of biological resources by commercial sectors that depend on biodiversity.
- Enhancing scientific understanding of biodiversity and measures of ecosystem services.
- Enabling traditional knowledge to inform decision-making.
- Mainstreaming biodiversity into municipal planning and school curricula.

<sup>12</sup> Québec collaborates with the federal government and provinces and territories regarding biodiversity. It has acknowledged the Canadian Biodiversity Strategy as well as the Canada's 2020 Biodiversity Goals and Targets, but has not endorsed them since it is developing and implementing its own instruments for achieving the Aichi Targets.

- Encouraging public awareness of, and participation in, biodiversity conservation.

Canada's national goals and targets support the global [Strategic Plan for Biodiversity 2011–2020](#) which was adopted by Canada and other Parties to the [Convention on Biological Diversity](#) in 2010. Both the national targets for Canada and the global Aichi Targets, which form the basis of the Strategic Plan, include commitments related to area-based conservation, including protected areas.

Canada's national Target 1 is:

*By 2020, at least 17 percent of terrestrial areas and inland water, and 10 percent of coastal and marine areas, are conserved through networks of protected areas and other effective area-based conservation measures.*

The Convention on Biological Diversity global Aichi Target 11 is:

*By 2020, at least 17 percent of terrestrial and inland water, and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem*

*services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*

The qualitative elements in Aichi Target 11 (including emphasis on areas of importance for biodiversity and ecosystem services, effective and equitable management, ecological representation, connectivity and integration into wider landscapes and seascapes) are counted among the many objectives of protected areas organisations in Canada. These qualitative elements are also recognized in the implementation guidance for Canada's Target 1 and they form the basis for the structure of this Report.

Within Canada a number of provinces and territories have their own area-based conservation targets. In addition to the national targets, two provinces set new objectives in the period from 2012–2015. These complement existing targets adopted in previous periods (Table 4).

**TABLE 4:** Area-based conservation targets in Canada

| Province             | Targets   | Date of adoption | Target date |
|----------------------|---|------------------|-------------|
| British Columbia     | 12% of terrestrial area                                 | 1993             | 2000        |
| Manitoba             | 12% of natural regions                                  | 1993             | No date     |
| Nova Scotia          | 12% of terrestrial area                                 | 2007             | 2015        |
|                      | Additional 1% beyond 12% (i.e. 13%) of terrestrial area | 2015             | No date     |
| Ontario              | 50% of Far North terrestrial areas and inland waters    | 2010             | No date     |
| Prince Edward Island | 7%  | 1991             | No date     |
| Quebec               | 12% of terrestrial area                                 | 2011             | 2015        |
|                      | 10% of marine area                                      | 2015             | 2020        |
|                      | 20% of the Plan Nord area                               | 2015             | 2020        |
|                      | 50% of the Plan Nord area                               | 2015             | 2035        |
| Saskatchewan         | 12% in each of 11 ecoregions                            | 1997             | 2000        |
| Canada               | 17% of terrestrial areas and inland waters              | 2015             | 2020        |
|                      | 5% of coastal and marine areas                          | 2015             | 2017        |
|                      | 10% of coastal and marine areas                         | 2015             | 2020        |

Several provinces and territories and the federal government made specific commitments during the 2012–2015 period that will contribute to achieving provincial and territorial and/or national targets (Tables 5 and 6).

- Alberta committed to establishing or expanding 18 protected areas covering an area of 13 271 km<sup>2</sup>.
- British Columbia has committed to four conservancies under the Atlin-Taku Land Use Plan and is exploring opportunities to increase protection in the South Okanagan. The province also expects that some areas may be established through agreements with First Nations communities and it continues to acquire smaller areas of private land with high conservation value for protection. British Columbia also collaborated with 17 First Nations under the [Marine Plan Partnership for the North Pacific Coast](#) on developing marine use plans for the North Pacific Coast. The plans identify Protection Management Zones that cover 16 278 km<sup>2</sup> and will help to conserve and/or protect the range of values that marine environments provide with a primary emphasis on maintaining marine biodiversity, ecological representation, and special natural features. The appropriate policy and legal instruments for achieving their objectives will be determined during plan implementation, and could include, for example, the establishment of protected areas.
- Manitoba released *Places to Keep: Manitoba's Protected Areas Strategy*, a public consultation document to solicit the public's input into the Manitoba government's proposed goal of protecting an additional six percent of the province, raising the current area protected to 17% by 2020.
- Northwest Territories began consultations on a plan to complete eight existing candidate protected areas. The total area to be protected will be determined through ongoing discussions on the boundaries of these areas.
- In 2013, Nova Scotia released "Our Parks and Protected Areas — A Plan for Nova Scotia". In December 2015, Nova Scotia Ministers of Natural Resources and Environment were jointly mandated to achieve an additional one percent (above the 12 percent goal in the *Environmental Goals and Sustainable Prosperity Act*), primarily through the addition of other parcels with no negative recreational or economic effects.



Dinosaur Provincial Park © Alberta Parks

- To mark the second launch of the Plan Nord, Quebec announced the protection of a significant portion of the Kovik River watershed (4 651 km<sup>2</sup>) in 2015. In the same year, Quebec announced additions to several existing protected areas in the Broadback River region as a result of the Baril-Moses forest dispute resolution agreement which added 5 436 km<sup>2</sup> to the existing 3 698 km<sup>2</sup> of protected areas for a total of 9 134 km<sup>2</sup>. Under its marine strategy, Quebec has committed to protecting 10% of the estuary of the Gulf of Saint Lawrence by

**TABLE 5:** Anticipated terrestrial protected area establishment projects in Canada, 2016–2020

| Jurisdiction  | Name of proposed area                                     | Area (km <sup>2</sup> ) | Percent of Canada's terrestrial area |
|---|---|-------------------------|--------------------------------------|
| Environment and Climate Change Canada   | Edézhíe National Wildlife Area                            | 14 250                  | 0.14%                                |
| Parks Canada  | Rouge National Urban Park                                 | 79                      | <0.01%                               |
| Parks Canada/Northwest Territories  | Thaidene Nënë   | 34 000                  | 0.34%                                |
| Alberta   | (multiple)  | 13 271                  | 0.13%                                |
| British Columbia  | Atlin—Little Trapper Conservancy                          | 56                      | <0.01%                               |
| British Columbia  | Atlin—Kennicott Conservancy                               | 6                       | <0.01%                               |
| British Columbia  | Atlin—Nakina-Inklin Conservancy                           | 1 007                   | 0.01%                                |
| British Columbia  | Atlin—Sheslay River                                       | 136                     | <0.01%                               |
| British Columbia  | Ancient Forest/Chun T'oh Whudujut Park and Protected Area | 119                     | <0.01%                               |
| British Columbia  | Okanagan Mountain Park                                    | 3                       | <0.01%                               |
| British Columbia  | Prudhomme Lake Park                                       | 1                       | <0.01%                               |
| British Columbia  | Sheemahant Conservancy                                    | 1                       | <0.01%                               |
| British Columbia  | Okanagan Falls Park                                       | 1                       | <0.01%                               |
| British Columbia  | Tweedsmuir Park   | 1                       | <0.01%                               |
| New Brunswick   | Green River South Protected Natural Area                  | 9                       | <0.01%                               |
| Nova Scotia   | (multiple)  | 400                     | <0.01%                               |
| Northwest Territories   | Dināgā Wek'èhodī  | 790                     | 0.01%                                |
| Northwest Territories   | Ts'ude niline Tu'eyeta                                    | 15 000                  | 0.15%                                |
| Northwest Territories   | Ejje Túé Ndáde  | 2 177                   | 0.02%                                |
| Northwest Territories   | Łue Túé Sųlái   | 180                     | <0.01%                               |
| Northwest Territories   | Ka'a'gee Tu   | 9 600                   | 0.10%                                |
| Northwest Territories   | Sambaa K'e  | 10 600                  | 0.11%                                |
| Nunavut   | Agguttinni Territorial Park                               | 17 126                  | 0.17%                                |
| Nunavut   | Nuvuk Territorial Park                                    | 9                       | <0.01%                               |
| Nunavut   | Napurtulik Territorial Park                               | 896                     | 0.01%                                |
| Nunavut   | Sanikiluaq Territorial Park                               | 6                       | <0.01%                               |
| Saskatchewan  | (multiple)  | 300                     | <0.01%                               |
| Saskatchewan  | Land use planning designations                            | 315                     | <0.01%                               |
| Yukon   | Dàadzài Vàn   | 1 525                   | 0.02%                                |
| Yukon   | Whitefish Wetlands  | 468                     | <0.01%                               |
| <b>Total</b>  |   | <b>122 332</b>          | <b>1.2%</b>                          |
| <b>Percent of Canada's terrestrial area that will likely be protected by 2020</b> |   |                         | <b>11.8%</b>                         |

**TABLE 6:** Anticipated marine protected area establishment projects in Canada, 2016–2020

| Jurisdiction   | Name of proposed area                                  | Area (km <sup>2</sup> ) | Percent of Canada's marine area |
|--|--|-------------------------|---------------------------------|
| Environment and Climate Change Canada  | Scott Islands marine National Wildlife Area            | 11 546                  | 0.21%                           |
| Fisheries and Oceans Canada  | Hecate Strait/Queen Charlotte Sound Glass Sponge Reefs | 2 410                   | 0.04%                           |
| Fisheries and Oceans Canada  | Anguniaqvia niqiqyuam                                  | 2 361                   | 0.04%                           |
| Fisheries and Oceans Canada  | St. Anns Bank  | 4 364                   | 0.08%                           |
| Fisheries and Oceans Canada  | Laurentian Channel                                     | 11 619                  | 0.20%                           |
| Parks Canada   | Lancaster Sound  | 44 300                  | 0.77%                           |
| Collaboration between Fisheries and Oceans Canada and Quebec                 | Banc des Américains                                    | 1 000                   | 0.02%                           |
| British Columbia   | Halkett Bay Marine Park                                | 1                       | 0.00%                           |
| <b>Total</b>   |  | <b>78 309</b>           | <b>1.4%</b>                     |
| <b>Percent of Canada's marine area that will likely be conserved by 2020</b> |  |                         | <b>2.3%</b>                     |

2020. A number of marine protected areas projects are also being discussed by the Bilateral Group on Marine Protected Areas including sites in Gaspésie, Banc des Américains, Îles-de-la-Madeleine and the St. Lawrence River Estuary. Other project study areas are being determined.

- Saskatchewan has identified candidate protected areas through the Nisbet Integrated Forest Land Use Plan and is working to establish a new provincial park in the Porcupine Hills area of Saskatchewan. This would consolidate five small Recreation Sites and surrounding Crown land into one area 300 km<sup>2</sup> in size.
- Fisheries and Oceans Canada is working toward the establishment of five new marine protected areas: Hecate Strait/Queen Charlotte Sound Glass Sponge Reefs, Anguniaqvia niqiqyuam, St. Anns Bank, Laurentian Channel and Banc des Américains (in collaboration with Quebec). Collectively, these areas are anticipated to cover approximately 21 754 km<sup>2</sup>.
- Parks Canada is working toward the establishment of two new national marine conservation areas: Lancaster Sound which would protect an area of over 44 000 km<sup>2</sup>, in collaboration with Nunavut and Inuit, and Southern Strait of Georgia in collaboration with British Columbia, which could protect up to 1 400 km<sup>2</sup>. Parks Canada and Quebec are also working on a marine protected area project around the Îles-de-la-Madeleine, with an extent that has yet to be determined.
- Environment and Climate Change Canada is working toward the establishment of Edézhíe National Wildlife Area in Northwest Territories, which would protect an area of 14 250 km<sup>2</sup>, and Scott Islands marine National Wildlife Area in British Columbia, which would protect an area of 11 546 km<sup>2</sup>.

Current terrestrial protected areas establishment projects that are anticipated to be completed by 2020 could result in the percentage of Canada's terrestrial area recognized as protected rising from 10.6% to 11.8%.

Current marine protected areas establishment projects that are anticipated to be completed by 2020 could result in the percentage of Canada's conserved coastal and marine areas rising from the current 0.9% to 2.3%. To meet the Government of Canada's commitment to protect 5% of marine and coastal areas by 2017 and 10% by 2020, efforts are underway to identify additional candidate areas for protection.

## PROTECTED AREAS LEGISLATION

Every jurisdiction in Canada (the federal government, provinces and territories) has legislative tools that enable the creation of protected areas. These are diverse and include national parks, provincial parks, wildlife areas, conservation areas, heritage rangelands, private nature reserves, Indigenous protected areas, sanctuaries, and marine parks to name but a few. At present count, there are 55 separate *Acts* that are used, or could be used to establish terrestrial and marine protected areas in Canada (Table 7). Dual-designation is sometimes used to achieve conservation goals in cases where one *Act* is not sufficient to protect all the values at a site.

In Canada, the federal, provincial, and territorial governments establish protected areas using legislative authority created for this purpose. These jurisdictions have developed a broad suite of legislative and regulatory tools to aid in the establishment and management of protected areas. Nunavut is currently in the process of updating this legislation. The federal government, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia and Quebec have specific legislation for the establishment of marine protected areas or legislation that

**TABLE 7:** Number of *Acts* and types of protected areas in each jurisdiction

| Jurisdiction              | Types of protected areas | Number of acts |
|---------------------------|--------------------------|----------------|
| Federal                   | 6                        | 6              |
| Alberta                   | 8                        | 3              |
| British Columbia          | 6                        | 5              |
| Manitoba                  | 6                        | 7              |
| New Brunswick             | 2                        | 2              |
| Newfoundland and Labrador | 5                        | 4              |
| Northwest Territories     | 3                        | 2              |
| Nova Scotia               | 4                        | 5              |
| Nunavut                   | 1                        | 2              |
| Ontario                   | 4                        | 3              |
| Prince Edward Island      | 3                        | 3              |
| Quebec                    | 14                       | 5              |
| Saskatchewan              | 10                       | 5              |
| Yukon                     | 5                        | 3              |
| <b>Total</b>              | <b>77</b>                | <b>55</b>      |



Snow buntings © Simon Pierre Barrette, alias Cephaz CC BY-SA

enables protection of the marine environment through the establishment of terrestrial protected areas that extend into coastal waters.

## CONSERVATION AND PROTECTED AREA STRATEGIES

Strategies for protected areas jurisdictions are useful for setting programmatic direction. They are used to set the context for network planning thus enabling planners and the public to see the bigger picture and enable a better understanding of the proposed vision, goals, and objectives.

- Eleven out of 13 provinces and territories (85%) had a systematic strategy or framework in place for the development and implementation of a network of terrestrial protected areas (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Ontario, Prince Edward Island, Quebec and Saskatchewan).
- Manitoba, Ontario and Northwest Territories are currently updating their strategies, and Nunavut has a framework in development.
- Six out of 11 provinces or territories (55%) with a strategy or framework in place indicate that their network strategy or framework has been substantially

**Terrestrial**

|      | AB | BC | MB | NB | NL | NT | NS | NU | ON | PE | QC <sup>13</sup> | SK | YT | ECCC | PCA |
|------|----|----|----|----|----|----|----|----|----|----|------------------|----|----|------|-----|
| 2015 | S  | S  | S  | S  | P  | P  | P  | ∅  | S  | P  | Revised          | S  | ∅  | P    | S   |
| 2011 | P  | S  | S  | S  | P  | P  | P  | ∅  | S  | P  | S                | S  | ∅  | P    | S   |
| 2006 | P  | S  | P  | P  | P  | P  | P  | ∅  | P  | P  | P                | P  | ∅  | ∅    | P   |

**Marine**

|      | BC | MB | NB | NL | PE | QC | ECCC | DFO | PCA |
|------|----|----|----|----|----|----|------|-----|-----|
| 2015 | P  | S  | X  | X  | X  | P  | ∅    | P   | P   |
| 2011 | P  | S  | X  | X  | X  | P  | ∅    | P   | P   |
| 2006 | X  | X  | X  | X  | X  | P  | X    | X   | X   |

|         |  |
|---------|--|
| F       | Fully implemented                            |
| S       | Substantially implemented                    |
| P       | Partially implemented                        |
| ∅       | No strategy in place                         |
| X       | No data available                            |
| Revised | Rating is based on a new or revised strategy |

**FIGURE 8:** Progress on implementation of protected areas strategies

AB: Alberta, BC: British-Columbia, MB: Manitoba, NB: New-Brunswick, NL: Newfoundland and Labrador, NT: Northwest Territories, NS: Nova Scotia, NU: Nunavut, ON: Ontario, PE: Prince Edward Island, QC: Quebec, SK: Saskatchewan, YT: Yukon, ECCC: Environment and Climate change Canada, PCA: Parks Canada Agency, DFO: Department of Fisheries and Oceans

Note: Some results for 2006 and 2011 have been updated based on more accurate information.

<sup>13</sup> New, more ambitious objectives were adopted in Quebec’s strategy, which was updated during the 2012–2015 period.

implemented, while the remainder indicate partial implementation (Figure 8).

- To ensure a coordinated effort to marine protected area establishment and management within the Government of Canada, planning by all three federal protected areas jurisdictions is guided by the Federal Marine Protected Areas Strategy. In addition, the National Framework for Canada’s Network of Marine Protected Areas provides overarching direction for Canada’s national network of marine protected areas.

**NETWORK PLANNING**

In addition to site-specific protected area establishment processes and protected area strategies that relate to establishing systems of those sites, some protected area organisations undertake network planning.

Individual protected areas can be more effective at conserving biodiversity over the long-term when they are designed and managed as part of a larger network. Out of the 15 organisations, 10 (67%) have a strategy or system plan in place for the development of their network of terrestrial protected area that is based on an established ecological framework (Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Ontario, Quebec, Saskatchewan and Environment and Climate Change Canada). Each of these reported that their strategy is based on an established ecological framework.

In the marine environment at the national level, the National Framework for Canada’s Network of Marine Protected Areas provides overall strategic direction for marine protected area network development throughout

Canada's oceans and Great Lakes. The Framework and its implementation are coordinated by Fisheries and Oceans Canada with involvement from Environment and Climate Change Canada and Parks Canada, and provincial and territorial partners. The National Framework for Canada's Network of Marine Protected Areas includes the following goals:

1. To provide long-term protection of marine biodiversity, ecosystem function and special natural features;
2. To support the conservation and management of Canada's living marine resources and their habitats, and the socio-economic values and ecosystem services they provide;
3. To enhance public awareness and appreciation of Canada's marine environments and rich maritime history and culture.

In addition to national marine protected areas network development efforts, some organisations have their own specific network development processes. Strategies or planning frameworks were also in place for three out of nine organisations reporting on marine protected areas (Fisheries and Oceans Canada, Quebec, and British Columbia).



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### THE DIFFERENCE BETWEEN NETWORK PLANNING AND SYSTEM PLANNING

The terms "network planning" and "system planning" are used sometimes interchangeably through the Report. A system is essentially a collection of individual sites managed separately but presented as a whole for reporting or planning purposes. A network is a collection of sites that operate collectively and synergistically and were established and are managed to fulfil ecological aims more collectively and comprehensively than individual sites could alone. A National Framework for Canada's Network of Marine Protected Areas provides strategic direction for the creation of a marine protected areas network. No comparable strategic framework exists for terrestrial protected areas at the national level. Within each jurisdiction there exist planning frameworks for the establishment of sites. These often lead to the creation of a system of protected areas. Parks Canada has a systems plan to guide the establishment of National Parks, for example.

### INTERGOVERNMENTAL COLLABORATION ON NETWORK AND TRANSBOUNDARY PLANNING

Most collaboration between governments on protected areas occurred between the federal government and individual provincial or territorial governments, as well as with Indigenous governments particularly in the establishment of new protected areas (Chapter 4 describes in further detail collaboration between federal, provincial, territorial and Indigenous governments on protected areas). A smaller number of collaborations occur between adjacent provinces and/or territories and between the federal government and the United States in establishing or managing interprovincial or international transboundary protected areas (Table 8).

- The majority of organisations (12 out of 15) reporting on terrestrial protected areas indicated that they were actively collaborating or partnering with other governments on network planning in some way including:

**TABLE 8:** International collaboration or partnerships

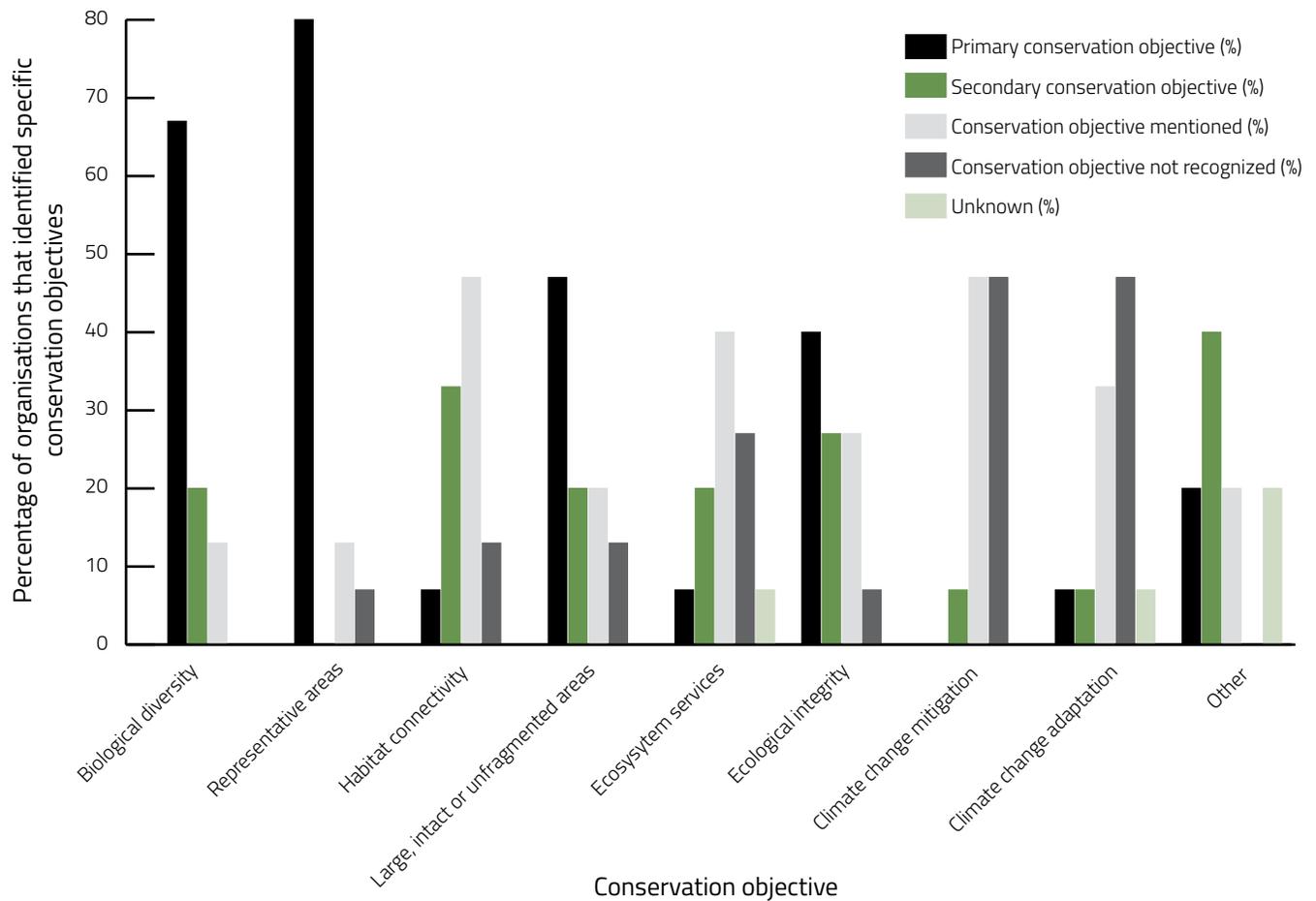
| Biome                  | Project/Network   | Partners   | Description   |
|------------------------|---|--|---|
| Terrestrial/Freshwater | <a href="#">Crown Managers Partnership</a>  | British Columbia, Alberta, Montana, Idaho, Parks Canada  | This American-Canadian partnership aims to improve the management of the Crown of the Continent ecosystem by addressing issues across this landscape in a collaborative manner and including with First Nations.  |
|                        | <a href="#">Washington Wildlife Habitat Connectivity Working Group</a>  | British Columbia with Washington State   | A collaboration to model the movements of wildlife from Washington State into British Columbia.   |
|                        | <a href="#">Kluane/Glacier Bay/Tatshenshini-Alseck complex</a>  | British Columbia, Parks Canada and the US Forest Service   | <a href="#">A World Heritage Site</a> and complex made of four large protected areas on both sides of the Canadian and American border. This complex is being managed in collaboration with First Nations.  |
|                        | <a href="#">E. C. Manning/Cascade complex</a>   | British Columbia and Washington State  | The southern boundary of E. C. Manning Park borders the North Cascades National Park in the United States while the Skagit Valley Provincial Park is adjacent to the western boundary of E. C. Manning. Together these protected areas form a large block of habitat which may help to sustain the North Cascades grizzly bear population, which is present on both sides of the US-Canadian border.  |
| Marine                 | The <a href="#">North American Marine Protected Areas Network</a> through the <a href="#">Commission for Environmental Cooperation</a> (various projects) | Federal jurisdictions (Parks Canada, Fisheries and Oceans Canada), US and Mexico federal governments (British Columbia is a collaborator on some projects) | <a href="#">Scientific Guidelines for Designing Resilient Marine Protected Area Networks in a Changing Climate</a> (published in 2012).<br><br><a href="#">Guide for Planners and Managers to Design Resilient Marine Protected Area Networks in a Changing Climate</a> (also published in 2012).<br><br><a href="#">Race Rocks Ecological Reserve</a> (in collaboration with British Columbia).  |
|                        | <a href="#">North Pacific Landscape Conservation Cooperative</a>  | British Columbia, US Federal Government, Canadian Federal Government, First Nations as well as academic institutions and non-governmental organisations    | This collaborative partnership fosters information sharing and coordination for conservation and sustainable resources management along the North Pacific Landscape from California to Alaska. A priority theme for the group is climate change and its effects including changes in sea levels and storms on marine shorelines, the nearshore and estuaries.   |
|                        | <a href="#">Framework for a Pan-Arctic Network of Marine Protected Areas</a>  | Various federal jurisdictions (including Fisheries and Oceans Canada), collaborate to fulfill the role of Canada as a member state of the Arctic Council   | The <i>Framework for a Pan-Arctic Network of Marine Protected Areas</i> was drafted by an MPA Network Expert Group reporting to the Arctic Council's Protection of the Arctic Marine Environment Working Group (PAME). The Expert Group was co-led by Canada, Norway, and the United States; all Member States of the Arctic Council were active participants. The framework was published in April 2015 and sets out a common vision for international cooperation in MPA network development and management, based on best practices and previous Arctic Council initiatives. The Arctic Council is now undertaking to implement the Framework by developing an inventory of Pan Arctic MPAs and addressing the issue of trans-boundary connectivity. |

- Collaboration between the federal government, Government of Northwest Territories, various First Nations governments, non-governmental environmental organisations and industry, on the [Northwest Territories Protected Areas Strategy](#), a community-based process to establish a network of protected areas across the Northwest Territories. The strategy will be collaboratively adapted as a result of the new administration realities arising from the devolution of land and resources in 2014.
  - Network planning for conservation areas in southwest Saskatchewan through the [South of the Divide Conservation Action Plan](#) which was being undertaken in collaboration with federal and provincial government departments, non-governmental organisations, local communities, industry and other stakeholders.
  - Collaboration between provincial authorities and Parks Canada on various transboundary conservation initiatives including, for example, the [Beaver Hills Initiative](#), which was recently designated as a United Nations Educational, Scientific and Cultural Organization Biosphere Reserve.
  - Manitoba was consulting with Parks Canada on establishing a protected area that would increase habitat connectivity with Wapusk National Park, providing additional protection for polar bear denning areas and habitat for other species. Manitoba was also working with Nisichawayasihk Cree Nation on land use planning for their Resource Management Area which may result in protected areas that will contribute to Manitoba's protected areas network.
  - Nova Scotia was consulting with Parks Canada and with Environment and Climate Change Canada on Nova Scotia's 2013 Parks and Protected Areas Plan, influencing the selection of areas next to National Parks or hosting seabird colonies. Nova Scotia reported that it was discussing potential protection of certain surplus federal coastal and island properties with Fisheries and Oceans Canada and Environment and Climate Change Canada. Nova Scotia also reported that it was also working with Environment and Climate Change Canada on the development of habitat conservation strategies.
  - Ontario was consulting with the Canadian Parks Council on climate change adaptation strategies, ecosystem valuation approaches for protected areas, and consistent reporting on visitation and expenditures.
  - Prince Edward Island was consulting with the Nature Conservancy of Canada and Environment and Climate Change Canada on the Maritime Provinces Habitat Conservation Strategy.
  - Yukon was consulting with First Nation governments to establish individual protected areas.
- Eight out of 15 organisations reporting on terrestrial protected areas (53%) indicated that they were partnering or continuing ongoing collaboration with adjacent provincial or territorial governments on interprovincial or interterritorial protected areas, or with the United States government or the government of individual states on international transboundary protected areas. Collaboration reported between provinces and territories included:
    - Nunavut and Northwest Territories collaborated on the Thelon Wildlife Sanctuary
    - British Columbia and Alberta on [Kakwa-Willmore Interprovincial Park](#), which includes [Kakwa Wildland Provincial Park](#) and [Willmore Wilderness Park](#) in Alberta and [Kakwa Provincial Park](#) in British Columbia
    - Alberta with Saskatchewan on [Cypress Hills Interprovincial Park](#)
    - During the reporting period, Manitoba and Ontario collaborated with five First Nations—Bloodvein, Little Grand Rapids, Pauingassi, Pikangikum and Poplar River—on the [Pimachiowin Aki World Heritage Site](#) project, which has led to the establishment of new protected areas
  - Six out of nine organisations reporting on marine protected areas (67%) were actively collaborating or partnering with other governments on network planning, including:
    - Fisheries and Oceans Canada collaborated with federal, provincial and territorial organisations working on marine conservation under the auspices of the [National Framework for Canada's Network of Marine Protected Areas](#), which provides the overarching direction for bioregional networks of marine protected areas in Canada's oceans and Great Lakes.

- Prince Edward Island collaborated with Fisheries and Oceans Canada for the [Basin Head Marine Protected Area](#).
  - British Columbia collaborated with 17 First Nations under the [Marine Plan Partnership for the North Pacific Coast](#) on developing marine use plans for the North Pacific Coast.
  - Environment and Climate Change Canada is consulting with British Columbia on the proposal to establish [Scott Islands marine National Wildlife Area](#).
  - Parks Canada is collaborating with Nunavut and the Qikiqtani Inuit Association on the establishment of the proposed Lancaster Sound National Marine Conservation Area.
  - Marine protected areas proposals in Quebec have been discussed since 2007 through the Bilateral Group on Marine Protected Areas. This group, which is coordinated by Quebec's Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques and Fisheries and Oceans Canada, brings together the ministère de l'Énergie et des Ressources naturelles, le ministère de l'Agriculture, des Pêcheries et de l'Alimentation, le ministère des Forêts de la Faune et des Parcs, Environment and Climate Change Canada, and Parks Canada.
- Two organisations reporting on marine protected areas (British Columbia and Fisheries and Oceans Canada) were partnering or collaborating with other governments on transboundary conservation initiatives.
  - Protecting representative samples of their ecological areas was considered to be a primary objective for 12 of the 15 organisations reporting on terrestrial protected areas (80%). This was also considered to be a primary objective for five of nine organisations (55%) reporting on marine protected areas. Fisheries and Oceans Canada does not have site-specific objectives that relate directly to protecting representative areas, but representativity is a consideration in the context of marine protected area network development, which they lead and coordinate on behalf of the Government of Canada.
  - Conservation of biological diversity was identified as a primary objective for terrestrial protected areas by 10 out of 15 organisations (67%) and either a primary or secondary objective for seven out of nine marine protected area organisations (78%).
  - Nearly half (47%) of organisations reporting on terrestrial protected areas (seven out of 15) identified focusing on large, intact or unfragmented areas as a primary objective. For organisations reporting on marine areas four out of nine (44%) identified focusing on large, intact or unfragmented areas as a primary or secondary conservation objective, while five noted that it was not mentioned as an objective.
  - Habitat connectivity was generally identified as a secondary objective for terrestrial protected areas by most organisations. However, habitat connectivity was a primary or secondary objective for the marine protected areas of two out of nine organisations. As with considerations related to representativity, Fisheries and Oceans Canada does not have site-specific connectivity objectives, but connectivity is a consideration in national marine protected area network development where supporting scientific data is available.
  - Ecosystem services were identified as a primary objective for terrestrial protected areas in Manitoba and a secondary objective in Nova Scotia, Prince Edward Island, and by Parks Canada. Ecosystem services were noted as primary or secondary objectives by

## OBJECTIVES FOR PROTECTED AREAS PLANNING

Protected areas planning objectives flow from the mandate and vision for a protected areas system. They are a statement of purpose that describe future expected outcomes or states and provide programmatic direction. The range of objectives for protected areas planning in Canada reflects the diversity of landscapes and habitat found across the country, the pressures on ecosystems, and the conservation opportunities that exist. The bullet points below summarize the objectives for protected areas planning (see also Figure 9). More detail is provided in the sections that follow.



**FIGURE 9:** Prioritisation of conservation objectives by protected areas organisations

two organisations reporting on marine protected areas and were either merely mentioned or not included at all by the remainder (seven out of nine).

- British Columbia identified climate change adaptation as a primary objective for both terrestrial and marine protected areas. For other organisations reporting on terrestrial protected areas, three reported that adaptation to climate change was mentioned and six reported that it was not included at all. For organisations reporting on marine protected areas, the remainder (eight out of nine) indicated that climate change was either merely mentioned or not included as an objective.
- Manitoba reported climate change mitigation as a secondary objective for terrestrial protected areas. For all other organisations reporting on terrestrial protected areas (14 out of 15), as well as for the nine organisations reporting on marine protected areas (including Manitoba), climate change mitigation was either merely mentioned or not included as an objective.
- Six out of 15 organisations reporting on terrestrial protected areas identified ecological integrity as a primary objective (40%) while two out of nine (22%) organisations reporting on marine protected areas identified ecological integrity either as a primary objective or as a secondary objective.

- Additional objectives were reported by some organisations: Environment and Climate Change Canada noted that during the 2012–2015 reporting period, connecting Canadians to nature was identified as a primary objective for ten of its National Wildlife Areas located near urban areas. Parks Canada reported that its dual mandate includes fostering opportunities for Canadians to experience and develop a sense of personal connection to and pride for their natural heritage places through compelling visitor experiences. Northwest Territories and Saskatchewan emphasized the conservation of cultural heritage as a priority in their protected areas planning. And finally, Alberta noted that while the objectives noted here may not be explicitly referenced, they are all intended components of broader goals related to planning, establishment, design and management of protected areas in the province.



Cheemuhnuhcheecheekuhtaykeehn © Ministry of Natural Resources and Forestry

### IDENTIFYING CANDIDATE PROTECTED AREAS—THE ROLE OF KEY BIODIVERSITY AREAS

Candidate areas for protection may include important habitat for a lifestage of one or more migratory bird populations, species at risk, or other wildlife species, may include nationally or globally significant ecosystems or natural features, they may be culturally important ecosystems or they may focus on protecting ecological processes that generate ecosystem services.

The identification of Key Biodiversity Areas has been emerging as an approach to the selection of candidate areas for protection. The International Union for Conservation of Nature defines [Key Biodiversity Areas](#) as sites contributing significantly to the global persistence of biodiversity; identified using globally standardized criteria and thresholds, and having delineated boundaries. They may or may not receive formal protection, but should ideally be managed in ways that ensure persistence of the biodiversity (at genetic, species, and/or ecosystem levels).

Key Biodiversity Areas in Canada could include, as a starting point, habitat necessary for the recovery of species at risk (referred to as critical habitat in Canada) and areas where migratory birds are found in significant aggregations. Critical habitat is described in the recovery plans for species that are listed under the *Species at Risk Act* in Canada. Areas that are important to migratory birds—places where migratory birds concentrate for all of, or a portion of the year—are identified through regular monitoring and field investigation by federal, provincial and territorial biologists and private citizens with an interest in conservation and migratory birds. The Canadian Important Bird Areas (IBA) program has been one approach used in Canada to identify areas of importance to migratory birds.

## PROTECTING REPRESENTATIVE AREAS

During the 2012–2015 period, protected area organisations continued to focus on protecting representative samples of their ecological areas.

- Twelve out of the 15 organisations reporting on terrestrial protected areas (80%) identified representative areas as a primary conservation objective within their protected area legislation, policies, plans or strategies. This is an increase from the 65% of protected areas organisations that recognized protecting representative areas as a primary objective at the end of 2011.
- Nine out of 15 organisations (60%) indicated that objectives, indicators or targets for representativeness had been identified for most or all of their terrestrial protected areas while three out of nine organisations (33%) reporting on marine areas indicated objectives, indicators or targets for representativeness had been identified.
- Ten out of 15 organisations reporting on terrestrial protected areas (67%) and six out of nine organisations reporting on marine protected areas (67%) indicated that scientific information to support protecting representative areas was either substantially or fully available. In addition, for terrestrial protected areas, four organisations (27%) indicated that such information was only partially available, while for marine protected areas, this was the case for three organisations (33%).
- Just 24% of protected areas organisations indicated that they undertake routine assessment and regular reporting on progress in achieving their conservation objectives related to representative areas. This includes four out of 15 organisations reporting on terrestrial protected areas (27%) and two out of nine organisations reporting on marine protected areas (22%)

## CONSERVATION OF BIOLOGICAL DIVERSITY

Biological diversity includes genetic diversity within species, the number and extent of viable populations, hot spots for biodiversity, species at risk, community structure, ecosystem diversity, and ecosystem resilience to name a few factors.

The conservation of biological diversity continues to be a recognized objective for many protected area organisations and within their mandate, goals, or objectives of legislation, policies, plans, or strategies:

- With respect to terrestrial protected areas,
  - Thirteen organisations reporting on terrestrial protected areas (87%) recognize biological diversity as being of primary (67%) or secondary (20%) importance.
  - However, only three (20%) have mostly or fully identified objectives, indicators, or targets with respect to the conservation of biological diversity, while eight (53%) have partially identified these objectives, indicators or targets.
- In the marine environment,
  - The importance of biodiversity conservation is similar to that reported in terrestrial protected areas with six of nine organisations reporting on marine protected areas (67%) recognizing conservation of biodiversity as being of primary importance and one organisation recognizing conservation of biodiversity as being of secondary importance.
  - However, in contrast to terrestrial reporting, in the marine environment, four organisations out of nine (44%) have fully identified objectives, indicators or targets for the conservation of biological diversity.

Scientific information appears to be generally available to assist protected area organisations in establishing protected areas networks to achieve the conservation of biological diversity.

- For terrestrial protected areas, six out of 15 organisations (40%) report that this information is fully or substantially available and the remaining nine (60%) report that it is partially available. In particular, Saskatchewan uses data on species at risk and biodiversity to help design its Representative Areas Network.
- Similarly for the marine environment, four of nine organisations (44%) report that this information is substantially available; three other organisations report that it is partially available. Only two organisations

report that scientific information related to biological diversity is not available to help design protected areas networks or systems in the marine environment.

Monitoring to evaluate progress in achieving the conservation of biological diversity is somewhat limited:

- For terrestrial protected areas, no organisations reported having a full monitoring program in place. Twelve organisations reported either sporadic monitoring or monitoring programs in some of their protected areas while three organisations reported little or no monitoring for biological diversity.
- The situation is somewhat better in the marine environment with three (33%) organisations reporting that monitoring is being undertaken at all or most protected areas. However, three organisations (33%) reported that sporadic or no monitoring is being undertaken.

Some organisations have assessed the extent to which their protected areas network effectively addresses the objective of biodiversity conservation.

- For terrestrial and freshwater protected areas networks, nine out of 15 (60%) of organisations have substantially or partially completed a gap analysis with respect to biological diversity while six out of 15 (40%) report that a gap analysis has not been conducted.
  - Alberta in particular regularly considers species at risk and rare or unique landforms when assessing the effectiveness of its protected areas network.
  - Newfoundland and Labrador used the results of its gap analysis to identify sites with high biodiversity or significant natural features.
- For the marine environment, four out of nine (44%) organisations have fully, substantially or partially undertaken gap analysis, while 56% of organisations reported that a gap analysis has not been conducted.

Even with the great importance placed on the conservation of biological diversity, when the gaps in the availability of scientific information and monitoring capacity are taken into account, it is perhaps not surprising that just three

of 15 organisations reporting on terrestrial protected areas (20%) indicate that their protected areas network or system has been substantially completed with respect to biological diversity conservation. A further 10 out of 15 organisations (67%) report partial completion of their systems in consideration of this objective. This is similar for the marine environment where six out of nine (67%) organisations report partial completion of their networks in consideration of the biological diversity conservation objective.

### CONSERVATION OF LARGE, INTACT OR UNFRAGMENTED AREAS

The primary goal when designing networks or systems of protected areas is the long-term maintenance of biodiversity. The ongoing debate in conservation biology is whether or not this goal is best achieved through the creation of a single large protected area or several small connected areas. The answer is likely a combination of both but is contingent on the local context, including consideration of factors such as the size of the protected areas, land use practices in the surrounding landscape, the 'permeability' of the landscape to wildlife (rates of immigration and emigration from the various habitat patches), and the concomitant rates of local species extinction. While the optimal size of a protected area remains a subject of some debate and depends on local context, species-area research across protected areas globally shows size to be the greatest predictor of success at retaining species.

Most protected areas organisations recognize the need for large, unfragmented protected areas in their mandate, goals, and objectives of protected areas legislation, policies, or strategies; however the level of importance of this objective varies.

- For terrestrial protected areas,
  - Ten of 15 (67%) organisations recognize the conservation of large, intact or unfragmented areas as a primary (47%) or secondary (20%) objective.
  - Ten of 15 (67%) organisations had mostly or partially established explicit objectives, indicators and targets for large, intact, or unfragmented habitats.
  - Eight of 15 (53%) partially or substantially conducted gap analyses with respect to this objective.

- In the marine environment,
  - Four out of nine (44%) organisations cite the conservation of large, intact or unfragmented areas as being a primary (33%) or secondary (11%) objective in the marine environment.
  - Further, in the marine environment, five organisations (56%) make no reference at all to large or unfragmented areas as a conservation objective.
  - In contrast to terrestrial reporting, objectives, indicators and targets for large, intact, or unfragmented habitats have been mostly or partially established by only 22% of organisations.
  - Gap analyses have been partially or substantially conducted by three out of nine organisations (30%).

All organisations reporting on terrestrial protected areas and most organisations reporting on marine protected areas (80%) indicated having scientific information available to help design their protected areas networks/systems to achieve conservation objectives related to large, intact, or unfragmented habitats.

### EFFORTS TO MAINTAIN ECOLOGICAL INTEGRITY

Ecosystems are considered to have integrity when their native components and processes are intact. The 2000–2005 *Canadian Protected Areas Status Report* noted that the majority of jurisdictions have “recognized the importance of managing their terrestrial protected areas for ecological integrity.” In the 2006–2011 Report it was noted that “Canadian organisations are adopting ecological integrity as a foundation for protected areas management.”

- By the end of 2015, with respect to terrestrial protected areas:
  - Fourteen of 15 organisations (93%) recognized ecological integrity as a conservation objective in the mandate, goals, or objectives of terrestrial protected areas legislation, policies, plans or strategies. For six organisations (40%) ecological integrity was a primary objective; three organisations (20%) cited it as a secondary objective and the remaining four (27%) mentioned it as an objective. Only one out of 15 (7%) organisations reported that this conservation objective was “not at all” recognized.

- Objectives, indicators, or targets have been identified for ecological integrity for 10 out of 15 organisations (67%).
- Scientific information on ecological integrity appears to be sparse with 11 out of 15 organisations (73%) noting that scientific information on ecological integrity is either only partially available (60%) or the status of this information is unknown (13%).
- For marine protected areas:
  - Seven out of nine organisations (78%) reported that ecological integrity was recognized as a conservation objective in the mandate, goals or objectives of the marine protected areas legislation, policies or strategies. Out of these, it was a primary objective for two organisations.
  - Four out of nine (44%) organisations have identified objectives, indicators, or targets for ecological integrity.
  - Most reported that scientific information on ecological integrity was limited. Five out of nine reported that information is partially available; two reported that it was not at all available, and one reported that the status of this information is unknown.

### PRESERVING HABITAT CONNECTIVITY

Habitat connectivity is essential for the long-term conservation of biodiversity. Local extinction rates are higher when “islands” of habitat are isolated and not connected to one another.

- For terrestrial protected areas,
  - Thirteen out of 15 organisations (87%) mentioned or listed habitat connectivity as being of secondary importance in their mandate, goals, or objectives.
  - Nonetheless, seven out of 15 organisations (47%) reported that objectives, indicators or targets have been partially identified with respect to connectivity.
  - Most organisations reported that scientific information is available to help design protected areas networks that can achieve connectivity: 10 out of 15 (67%) report that information is partially available and three out of 15 (20%) report that this information is fully or substantially available.

- Manitoba in particular reported evaluating habitat connectivity where landscape-level protected areas planning processes are occurring.
- Ten out of 15 organisations (67%) indicated that little or no monitoring, or only sporadic monitoring (27%), was being actively undertaken to evaluate progress in achieving habitat connectivity objectives.
  - Only Parks Canada indicated that some protected areas have an ongoing monitoring program related to habitat connectivity.
- Seven out of 15 organisations (47%) reported that they have partially or substantially undertaken gap analysis.
  - Parks Canada was the only organisation that reported having substantially undertaken a gap analysis to assess the extent to which terrestrial and freshwater protected areas networks address habitat connectivity.
- Further, these gap analyses have been used to plan and complete terrestrial protected areas networks by most organisations (86%) that undertook the assessments.
- Similarly, in the marine environment:
  - Just one organisation reported that connectivity is of primary importance in the mandate, goals, or objectives of their marine protected areas legislation, policies, plans, or strategies. Four organisations indicated it was either a secondary consideration, or mentioned.
  - Out of five that recognized habitat connectivity, four organisations (British Columbia, Manitoba, Fisheries and Oceans Canada and Parks Canada) have identified objectives, indicators, or targets with respect to habitat connectivity.
  - Six out of nine organisations (67%) reported that scientific information is available to some degree to help design marine protected areas networks/ systems with respect to habitat connectivity. This included the five organisations that recognize habitat



Lake Superior National Marine Conservation Area, Ontario © Dale Wilson

connectivity (British Columbia, Manitoba, Quebec, Fisheries and Oceans Canada and Parks Canada).

Saskatchewan notes that protecting large, intact, or unfragmented habitats is a key consideration when proposing the establishment of 'wilderness' and 'natural environment' parks. In this context, watershed protection has become an important consideration.

### EFFORTS TO CONSERVE ECOSYSTEM SERVICES

Ecosystems are composed of biophysical structures and processes. These structures and processes have many functions that result in 'ecosystem services' which sustain life, providing a breadth of benefits that are of significance to individuals, groups, and society overall. Ecosystem services can be categorized and include the following (United Nations Millennium Ecosystem Assessment):

- Provisioning: water, food, fuel, fibres, medicines, and genetic resources.
- Regulating: pollination, air and water purification, and natural regulation of climate, disease, water, pests, and soil erosion.
- Supporting: soil formation, nutrient cycling, and primary production.
- Cultural: spiritual, religious, recreation, ecotourism, aesthetic, inspiration, education, sense of place and cultural heritage.

One of the many benefits of protected areas is that they help maintain the ecological processes that generate ecosystem services, however, planning and managing protected areas to conserve ecosystem services is less common. Previous versions of this report have not evaluated the extent to which ecosystem services are considered within jurisdictions responsible for protected areas.

For terrestrial protected areas:

- One organisation described ecosystem services as being of primary importance within their mandate, goals, or objectives of their protected areas legislation, policies, plans or strategies.
- Four organisations<sup>14</sup> (27%) cited it as being of secondary importance.
- Seven out of 15 organisations (47%) mentioned ecosystem services as a conservation objective within the mandate, goals, or objectives of their protected areas legislation, policies, plans or strategies.

This recognition is nearly identical in the marine environment.

The development of objectives, indicators, or targets for ecosystem services appears to be a more difficult task.

- The majority of organisations reporting on terrestrial protected areas (13 out of 15 or 87%) have not identified any objectives, indicators or targets while only two (13%) have them partially identified.
- Just over half of organisations reporting on marine protected areas (five out of nine or 56%) did not have any objectives, indicators or targets with respect to ecosystem services while three have them partially identified. Only one organisation (British Columbia) had fully identified objectives, indicators or targets.

It is likely not surprising, considering the numbers above, that most organisations reporting on terrestrial protected areas (93%), and many organisations reporting on marine protected areas (44%) are not evaluating progress in achieving objectives related to ecosystem services. Neither has a gap analysis been conducted in respect of ecosystem services: 13 out of 15 organisations reporting on terrestrial protected areas (87%), and seven out of nine organisations reporting on marine protected areas (78%) have not conducted any gap analyses. A lack of scientific information related to ecosystem services

<sup>14</sup> In the case of New Brunswick, four provincial parks are reported among the 212 terrestrial protected areas. For these four sites, providing opportunities for recreation and outdoor educational activities is one of the primary objectives.

does not seem to be the reason why objectives, indicators, or targets have not been established: 11 out of 15 organisations (73%) report that this information is at least partially available for terrestrial protected areas and six out of nine organisations (67%) report similar findings for marine protected areas.

## PROTECTING FRESHWATER

The area of freshwater (lakes, rivers, streams) in Canada is estimated to be 891 000 km<sup>2</sup> which is 9.8% of the total terrestrial area of Canada (Natural Resources Canada, 2005). This represents 20% of the world's total freshwater and 7% of the world's renewable freshwater (i.e. water that is not 'fossil water' retained in lakes, underground aquifers, and glaciers).

A number of provinces and territories protected large and significant areas of freshwater, such as rivers, lakes and wetlands, during the 2012–2015 period through the establishment or expansion of protected areas.

- In 2012, an addition to Atlin/Téix'gi Aan Tlein Park and 10 new conservancies were established in British Columbia through the Atlin Taku Land Use Plan. These areas include the main stem of the Taku River and a significant proportion of its major tributaries, the Nakina, Inklin, and Sheslay, in the northwest of the province.
- In Nova Scotia, the French River Wilderness Area, in the Cape Breton Highlands, was significantly expanded to incorporate and buffer several pristine, un-dammed, and difficult-to-access lakes. The Stillwater Wilderness Area, in eastern Cape Breton, was established and encompasses much of the drinking water watershed for the town of Louisburg. Silver River Wilderness Area was established to protect swaths of land on either side of a major branch of the Tusket River, a river system of national significance because of its unique concentration of endangered plants of the Atlantic Coastal Plain. Medway Lakes Wilderness Area was established to, in part, protect both aquatic ecosystems and wilderness recreation opportunities in a region of the province famous for its backcountry canoeing and guiding heritage.
- In 2013 Saskatchewan established two significant additions: Pink Lake Representative Area Ecological Reserve in the Churchill River Upland Ecoregion, and

Great Blue Heron Provincial Park in the Mid-Boreal Upland Ecoregion, each of which are approximately 15% freshwater by total area.

- In 2013 the government of Quebec created the [Parc national Tursujuq](#) in Nunavik which covers an area of 26 107 km<sup>2</sup> making it the largest mainland park in eastern North America. The original boundaries include the second largest natural lake in Quebec. At the request of the Inuit and Cree Indigenous Peoples, the final boundaries include almost the entirety of the Nastapoka watershed which results in the protection of a globally unique population of freshwater seals.

In addition, a number of significant commitments to protect freshwater were made during this period.

- Alberta has taken steps to establish Richardson Wildland Provincial Park in the Peace-Athabasca Delta, a wetland of global significance recognized under the Ramsar Convention. Once established, 94% of the entire Peace-Athabasca Delta will have protected area designation.
- Significant headwaters in southern Alberta and the Crown of the Continent were committed to be protected under the South Saskatchewan Regional Plan in 2014.
- An additional 416 km<sup>2</sup> of wetlands, lakes and 101 linear km of rivers, accounting for much of the extensive freshwater that exists in the Canadian Shield-Kazan Upland sub-region in Alberta, will be protected within protected areas commitments made in the Lower Athabasca Regional Plan in 2012.
- Quebec's commitment to designate 20% of the Plan Nord region in protected areas by 2020, with an additional 30% eventually (totaling 50%), will make a significant contribution to the protection of freshwater in the northern regions of Quebec including watersheds as well as rivers and wetlands.

## PROTECTED AREA PLANNING WITH RESPECT TO CLIMATE CHANGE

Six provinces, territories and federal agencies have assessed the implications of climate change for terrestrial

protected area planning (Alberta, Northwest Territories, Nova Scotia, Ontario, Environment and Climate Change Canada and Parks Canada) and one is in the process of doing so (British Columbia). Climate change adaptation was identified as a secondary objective in Manitoba and was either merely mentioned or not included at all in the remainder of jurisdictions. British Columbia recently revised its conservation policy to ensure park planning and management incorporates adaptation to climate change.

### AVAILABILITY OF INFORMATION AND RESOURCES TO SUPPORT PROTECTED AREA DESIGN

Protected area organisations rely on various sources of information and resources to support protected area design. In some instances, some types of information have been more accessible such as remote-sensing data, now readily available and used by a majority of organisations. However, there are still important information gaps including,

For terrestrial protected areas:

- For at least 73% of organisations (11 or more out of 15), information was rated as being available to readily available for geographic information system mapping and analysis as well as for identifying or evaluating candidate areas.
- About 50% of organisations (seven out of 15) reported that spatially explicit wildlife data and information for developing models for protected area design was available.
- At the other end of the scale, a majority of organisations reported that no information or very little was available when it came to inventory and monitoring data (10 out of 15), stress assessment and indicators (11 out of 15) and traditional ecological knowledge (nine out of 15).
- Organisations were proportionally divided when it came to having access to information for identifying areas of cultural importance to Indigenous communities as well as for database design and development. About a third of organisations reported having little, or limited information.

For marine protected areas:

- Just under half of organisations reported that spatially explicit wildlife data was available. Information for geographic information system mapping and analysis and identifying or evaluating candidate areas ranged from available to readily available for at least 44% of organisations with Manitoba and Quebec appearing to have easier access to such information overall.
- For most organisations (67%), information was lacking regarding inventory and monitoring data as well as stress assessment and indicators, while appearing to be limited overall for database design and development.
- Information on traditional ecological knowledge and for identifying areas of cultural importance to Indigenous communities was rated as not being available or being limited for just over 50% of organisations. Parks Canada, Fisheries and Oceans Canada and Quebec reported having available information.

### CHALLENGES TO PROTECTED AREA PLANNING AND ESTABLISHMENT

Nearly all organisations reporting on protected areas in both biomes (15 out of 15 for terrestrial and eight out of nine for marine) indicated facing numerous and similar challenges to the establishment of protected areas in Canada (Table 9).

For organisations reporting on terrestrial protected areas:

- All mentioned conflicting or competing interests in use of available lands as an important barrier.
- Nine further identified the difficulty of finding suitable lands and eight identified not having the human resources needed to work on the development of protected areas networks was highlighted as main barriers.
- Additional challenges highlighted included difficulties meeting mutual interests especially when considering

Indigenous communities and governments, land use planning processes and the establishment of protected areas, as well as the capacity of First Nations communities to navigate through these.

Similarly, for marine protected areas:

- For the eight organisations that identified challenges competing interests in the use of marine areas was an important challenge reported.

- Six out of these eight organisations also mentioned not having sufficient information on natural resources inventories, and four highlighted not having enough staff to support the work for network planning as important barriers.
- Additional challenges reported include lengthy regulatory processes for establishing marine protected areas.

**TABLE 9:** Primary challenges or barriers to the establishment of protected areas in Canada identified by protected area organisations

| Biome   | Primary planning or establishment challenges/ barriers          | Percentage of organisations facing challenges according to each type of barrier (%) |
|---|---|---|
| Terrestrial   | Conflicting/competing interest in use of available lands        | 100   |
|   | Availability of suitable lands                                  | 64  |
|   | Lack of staff resources for network planning                    | 57  |
|   | Lack of conservation priority                                   | 50  |
|   | Lack of financial resources for land acquisition                | 43  |
| Marine  | Conflicting/competing interest in use of available marine areas | 100   |
|   | Lack of adequate natural resources inventories                  | 75  |
|   | Lack of staff resources for network planning                    | 50  |
|   | Availability of suitable areas                                  | 25  |
|   | Lack of conservation priority                                   |   |
|   | Lack of financial resources for coastal land acquisition        |   |
| Legal/policy impediments to acquisition                                 |   |   |
| Lack of appropriate tools to regulate environment inside protected area |   |   |

### PROTECTING PRIVATE LANDS

Private and non-profit organisations like land trusts play an important role in securing and managing high conservation value lands that serve to complement the establishment of protected areas, particularly in southern regions of Canada. These lands generally account for less than 1% of the total area protected in southern jurisdictions. However, these private protected areas are often located on lands with significant biodiversity values. A paper published in 2015 noted that “*The accounting of privately protected areas, primarily through land trusts, in Canada is incomplete, but will account for less than 0.2% of the land base. Canada is 89% publically owned land, and land trusts are focused in the southern 11% of Canada, most often in areas of high importance for biodiversity.*”<sup>15</sup>

As noted in the previous chapter, private conservation lands are currently reported by some provinces and territories. Provincial and territorial governments are working with non-governmental groups and with Environment and Climate Change Canada to improve the recognition of privately held conservation lands as an integral component of protected areas networks. Environment and Climate Change Canada announced in 2014 that it would complete an inventory of privately held conservation lands to support this goal.

Jurisdictions have created a number of financial and other incentive programs to encourage the conservation of private lands. There are more than 160 organisations that are currently eligible to acquire lands for the purpose of

<sup>15</sup> Mackinnon, D., Lemieux, C.J., Beazley, K., Woodley, S., Helie, R., Perron, J., Elliott, J., Haas, C., Langlois, J., Lazaruk, H., Beechey, T., and Gray, P. (2015) Canada and Aichi Biodiversity Target 11: understanding ‘other effective area-based conservation measures’ in the context of the broader target. *Biodiversity Conservation* 24:3559–3581.

conservation and many of these are private land trusts. Some of these programs and their recent conservation successes are summarized below.<sup>16</sup>

Conservation of private areas is either fully or partially recognized in the terrestrial protected area strategies of 11 of 15 organisations (73%). Conservation of private lands is enabled through fiscal and tax incentives and through legislation in most provinces that enable the creation of private conservation reserves, or the creation of conservation easements, covenants or servitudes.

- Alberta has made a strategic commitment to establish a Parks Conservation Foundation, which would enable private citizens and corporations to donate land of high conservation value or money to support the purchase of conservation lands. Public-private partnerships are also enabling the conservation of important habitats. Approximately 41 km<sup>2</sup> of public-land grazing lease that was stewarded by the privately held OH Ranch was designated as a Heritage Rangeland. This area is managed in conjunction with the adjacent private land which is conserved under conservation easement.
  - BC Parks partners with a large number of government and non-government organisations on land acquisition. BC Parks and the Ministry of Forests, Lands and Natural Resource Operations administer a large number of properties that are owned by non-governmental organisations or individuals and leased to the ministries to manage for 99 years. Some properties owned by the Province have similarly been leased to a local government or non-governmental organisations for management purposes. Examples of recent partnerships to acquire new private lands areas for protection are the acquisition of lands for addition to Small Inlet and Octopus Islands marine parks in funding partnership between British Columbia, the Quadra Island Conservancy and the Marine Parks Forever Society; the acquisition of lands on Denman Island using carbon credits and development density transfers; and a partnership with Regional District of Okanagan Similkameen on an addition to Okanagan Falls Park.
  - Other provinces such as Ontario, Nova Scotia and Manitoba have directly supported private land conservation initiatives through direct or matching funding, or through the establishment of land acquisition trust funds. Quebec and New Brunswick have legal mechanisms to formally recognize private protected areas as designated within their protected areas system.
  - Within the framework of the Partenaires pour la nature program, which ran from 2008 to 2013, the last year of the program financed 18 natural environment protection projects. In total, almost \$975 000 in financial assistance was provided to six conservation organisations and seven private citizens with the goals of assuring the protection of 4.8 km<sup>2</sup> of natural environments in southern Quebec. These acquisitions contributed to larger regional conservation projects by consolidating protection in the region, building on previous private stewardship programs.
- Further incentive measures are in place to assist land trust organisations or others in the securement of private lands of ecological significance in 11 out of 13 provincial and territorial jurisdictions (85%).
- The Ecological Gifts Program, for example, administered by Environment and Climate Change Canada in cooperation with dozens of partners, including other federal departments, provincial and municipal governments, and environmental non-government organisations, offers significant tax benefits to landowners who donate land or a partial interest in land to a qualified recipient, who ensure that the land's biodiversity and environmental heritage are conserved in perpetuity. Between January 1, 2012 and December 31, 2015 approximately 312 km<sup>2</sup> of land were secured through the Ecological Gifts Program.

<sup>16</sup> Note that the number of km<sup>2</sup> conserved through the initiatives presented below cannot be summed to determine the total area protected by these programs.

- The Natural Areas Conservation Program helps non-profit, non-government organisations secure ecologically sensitive lands to ensure the protection of diverse ecosystems, wildlife, and habitat. Funding is provided by Environment and Climate Change Canada and the project is administered by the Nature Conservancy of Canada who partners with conservation organisations such as Ducks Unlimited Canada and other qualified organisations. Organisations provide matching funds at a 2:1 ratio for each federal dollar received to acquire ecologically sensitive lands through donation, purchase or conservation agreements with private landowners. Priority is given to lands that protect habitat for species at risk and migratory birds and create or enhance connections or corridors between protected areas. In addition, lands may be secured that have national or provincial significance based on ecological criteria, or reduce significant land-use stressors adjacent to protected areas. Between 2012 and 2015 approximately 600 km<sup>2</sup> of land were secured through the Natural Areas Conservation Program.
- The North American Waterfowl Management Plan is an international partnership to conserve waterfowl populations and wetlands through on-the-ground actions based on strong biological foundations. Started in 1986, program partners have worked to conserve and restore wetlands, associated uplands and other key habitats for waterfowl across Canada, the United States and Mexico. The results of these efforts are notable, with over 1 350 km<sup>2</sup> protected in Canada between April 1, 2012 and March 31, 2015 through medium term (10–99 years) and permanent habitat retention activities (lease, acquisition, conservation easements, etc.).
- The National Wetland Conservation Fund is a five-year program that originated in 2014–2015 and is administered by Environment and Climate Change Canada. The program supports on-the-ground activities to restore and enhance wetlands in Canada, including wetlands on privately owned lands. Some of the activities funded by the Fund result in the creation of new privately-held protected areas. The objectives of the fund are to:
  - Restore degraded or lost wetlands on working and settled landscapes to achieve a net gain in wetland habitat area. Between October 1, 2014 and March 31, 2015 approximately 74 km<sup>2</sup> of wetland habitat was secured with the support of the National Wetland Conservation Fund;
  - Enhance the ecological functions of existing degraded wetlands;
  - Scientifically assess and monitor wetland functions and ecological goods and services in order to further the above objectives to restore and/or enhance wetlands; and
  - Encourage the stewardship of Canada’s wetlands by industry and the stewardship and enjoyment of wetlands by the Canadian public.
- The Habitat Stewardship Program is a Government of Canada funding program administered by Environment and Climate Change Canada that supports projects that conserve and protect species at risk and their habitats and help to preserve biodiversity as a whole. These funds promote the participation of local communities, non-government organisations, and other organisations to help with the recovery of species at risk and preventing other species from becoming a conservation concern. Between April 1, 2012 and March 31, 2015, the program contributed to the protection of 189 km<sup>2</sup> of private land through legally-binding means such as acquisition or conservation easements.



Groundhog © Simon Pierre Barrette, alias Cephas CC BY-SA

CHAPTER 3

# Protected Area Management and Reporting



## #3

Mistaken Point Ecological Reserve and United Nations Educational, Scientific and Cultural Organization World Heritage Site.  
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credit: Barrett and MacKay Photography

## PROTECTED AREA MANAGEMENT AND REPORTING

While efforts are ongoing to increase the amount of area protected, it is also important to ensure that the management of these areas is conducted in a manner that will achieve the targeted conservation goals. This section highlights the challenges and progress made with respect to the management of protected areas in Canada since the last 2011 report.

### MANAGEMENT EFFECTIVENESS

Measuring management effectiveness is becoming a recognized and necessary practice by all protected areas authorities for evaluating if the targeted conservation goals and objectives are being met. The evaluation and improvement of protected areas management effectiveness is also one of the goals under the [Convention on Biological Diversity Programme of Work on Protected Areas \(Goal 4.2\)](#), which Canada has committed to. However, for the majority of jurisdictions managing terrestrial and marine protected areas in Canada, evaluations have not been conducted on management effectiveness for their networks or systems of protected areas.

For terrestrial protected areas:

- Five out of 15 organisations reporting on terrestrial protected areas (33%) have conducted some level of

evaluations on the management effectiveness for their network of protected areas (British Columbia, Ontario, Saskatchewan, Environment and Climate Change Canada and Parks Canada).

- For these five organisations, the methods and indicators used for measuring effectiveness greatly differed:
  - Saskatchewan did not monitor management effectiveness on a broad scale across its entire network of protected areas; only certain aspects of its Parks Services visitation were evaluated (e.g. budget expenditures, revenues and visitor's satisfaction).
  - For Ontario, the maintenance of ecological integrity continued to be used as the indicator, this being the first principle associated with the planning and management of its protected area framework.
  - For British Columbia, the maintenance of ecological integrity is an important indicator but not the factor considered when measuring management effectiveness given the difficulty of attributing changes observed in ecosystems to specific actions. As such, management effectiveness is measured through performance indicators associated with the implementation of various conservation tools (e.g. management plans, conservation risk and impact assessments, permits issued, etc.). These indicators are used for both terrestrial and marine protected areas and are reported on in the [BC Parks Annual Report](#).
  - Environment and Climate Change Canada has for the first time evaluated its network of protected areas by using the Management Effectiveness Tracking Tool, one of the methods available for measuring management effectiveness based on various management components including level of resources and results.

For marine protected areas:

- Two out of nine organisations reporting on marine protected areas (22%) evaluated management effectiveness at the level of their network or systems of protected areas (British Columbia and Parks Canada). However, and as described elsewhere in the



Kakwa Wildland Provincial Park © Alberta Parks

document, other organisations evaluate management effectiveness on a site by site basis.

### MANAGEMENT PLAN DEVELOPMENT AND IMPLEMENTATION

Most jurisdictions made progress on the development and implementation of protected areas management plans for protected areas under their administration.<sup>17</sup> A management plan sets goals and targets along with a course of actions on how these will be accomplished. Having a management plan in place is like having a blueprint to guide both day-to-day and long-term decisions according to the set vision for the area. At the end of 2015, all organisations reporting on terrestrial protected areas and six out of 9 organisations reporting on marine protected areas reported that management plans were in place for at least some of their protected areas, and about 60% of organisations had increased the number of management plans in place, however, the overall number of protected areas in Canada with up-to-date management plans in place remained low. Only 16% of terrestrial protected areas and (among those that reported on management plans for marine protected areas) 28% of marine protected areas had up-to-date management plans. However, this proportion varies greatly among jurisdictions (Table 10). For terrestrial protected areas, this may be explained in part because of the difficulty of keeping up with the increase in the number of terrestrial protected areas. Since 2005, the number of protected areas in Canada went from 3 642 to 4 660 in 2011, and 7 106 in 2015.

For terrestrial protected areas:

- Only six out of 15 organisations (40%) had management plans in place for more than half of their protected areas. Some progress has been made on updating management plans: seven out of 15 (47%) increased the proportion of their protected areas with up-to-date management plans since 2011 (British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Prince Edward Island, Yukon, Environment and Climate Change Canada).
- Two organisations reported having management plans updated in the last 10 years for over half of their protected areas (Yukon and Parks Canada).
- Most organisations that established a number of new protected areas since 2011 reported a decreased proportion of protected areas with management plans in place (e.g. Ontario, Quebec and Parks Canada). In New Brunswick, six management plans are in place for private land trust protected areas and the province has made significant advancements in developing a management framework for its crown protected areas.<sup>18</sup>
- For organisations reporting on terrestrial protected areas 10 out of 15 (67%) reported that they monitored the implementation of management plans, an increase from 31% in 2011. Additionally, such monitoring was being conducted in over 75% of protected areas with management plans for six jurisdictions (Manitoba, Northwest Territories, Nunavut, Ontario, Yukon and Parks Canada).
- Fourteen out of 15 organisations (93%) reporting on terrestrial protected areas were implementing management actions set out in management plans. Four out of 15 organisations (27%) reported having substantially implemented the actions set out in their plans (Manitoba, Nunavut, Quebec, Parks Canada); though still low, this is twice the number reported in 2011.

<sup>17</sup> Federal, provincial and territorial organisations only provided information on management plans for protected areas under their administration only. The numbers provided above may not be comparable with previous reports as it does not reflect all protected areas by location, such as those under other governance types.

<sup>18</sup> New Brunswick increased its number of Protected Natural Areas from 61 in 2011 to 208.

- Eight out of 15 organisations (53%) reported that they have partially implemented the actions in their management plans, up from 13% in 2011. Additionally, for Alberta, the implementation of management actions included in management plans varied greatly between sites and region around the province, ranging from unknown to substantially implemented.

**TABLE 10:** Extent of protected areas with management plans in place administered by governmental organisations responsible of protected areas<sup>a</sup>

| Biome                                 | Organisation                          | Number of protected areas with management plans in place |         | Number of protected areas with management plans less than 10 years old |               | Extent of management actions included in plans that are being implemented |
|---------------------------------------|---------------------------------------|--|---------|--|---------------|---|
|                                       |                                       | Number/Total   | Percent | Number/Total   | Percent       |   |
| Terrestrial                           | Alberta                               | 62/252   | 25%     | 12/252   | 5%            | Unknown to substantially <sup>d</sup>                                     |
|                                       | British Columbia <sup>b</sup>         | 728/1 028  | 71%     | 133/1 028  | 13%           | Partially   |
|                                       | Manitoba <sup>c</sup>                 | 22/127   | 17%     | 17/127   | 13%           | Substantially   |
|                                       | New Brunswick                         | 0/212  | 0%      | 0/212  | 0%            | Unknown   |
|                                       | Newfoundland and Labrador             | 17/57  | 30%     | 3/57   | 5%            | Partially   |
|                                       | Nova Scotia                           | 13/146   | 9%      | 1/146  | 1%            | Partially   |
|                                       | Northwest Territories                 | 1/4  | 25%     | 0  | 0%            | Partially   |
|                                       | Nunavut                               | 8/8  | 100%    | 0  | 0%            | Substantially   |
|                                       | Ontario                               | 619/649  | 95%     | 94/649   | 15%           | Partially   |
|                                       | Prince Edward Island <sup>e</sup>     | 228/245  | 93%     | 80/245   | 33%           | Partially   |
|                                       | Quebec                                | 297/3 823  | 8%      | 190/3 823  | 5%            | Substantially   |
|                                       | Saskatchewan                          | 118/322  | 37%     | Not provided   |               | Partially   |
|                                       | Yukon                                 | 10/17  | 59%     | 10/17  | 59%           | Partially   |
|                                       | Environment and Climate Change Canada | 11/129   | 9%      | 11/129   | 9%            | Partially   |
|                                       | Parks Canada                          | 41/50  | 82%     | 37/50  | 74%           | Substantially   |
| Marine                                | British Columbia                      | 124/184  | 67%     | 26/184   | 14%           | Partially   |
|                                       | Manitoba                              | 0/1  | 0%      | 0/1  | 0%            | Not provided  |
|                                       | New Brunswick                         | 3/11   | 27%     | 3/11   | 27%           | Unknown   |
|                                       | Newfoundland and Labrador             | 4/7  | 57%     | 1/7  | 14%           | Partially   |
|                                       | Prince Edward Island                  | 0/0  |         | 0/0  |               | Unknown   |
|                                       | Quebec                                | 9/507  | 2%      | 5/507  | 1%            | Substantially   |
|                                       | Fisheries and Oceans Canada           | 7/8  | 88%     | 7/8  | 88%           | Substantially   |
| Environment and Climate Change Canada | unknown                               |  | unknown |  | Substantially |   |
| Parks Canada                          | 1/2                                   | 50%  | 1/2     | 50%  | Substantially |   |

Notes:

<sup>a</sup> The numbers provided in this table also include protected areas under a shared governance regime.

<sup>b</sup> BC Parks manages 1 028 terrestrial protected areas and one marine protected area in total. There are another 29 Wildlife Management Areas not included in the totals above since they are not managed by BC Parks. Of these 29 areas, 28 have a terrestrial component. Although there is no formal management plan program or tracking on management plans for these areas, various management direction documents are developed by different agencies.

<sup>c</sup> Manitoba also has 184 private conservation areas not accounted for above but that are included in the province's protected areas network. According to the Memorandums of Agreement signed with conservation agencies in the province, it is the conservation agencies that are responsible for controlling and managing these areas, including conserving the integrity of the dynamic ecosystems on these lands.

<sup>d</sup> Alberta reported that management actions had been implemented to varying degrees from partially to substantially across their protected areas, and that for some the degree of implementation was unknown.

<sup>e</sup> Prince Edward Island counts its Protected Areas Network at two scales. Natural Areas are counted at an individual property or parcel level while Wildlife Management Areas are counted at a larger block area. There are 228 parcels of Natural Area and 17 Wildlife Management Areas (six of which are shared governance) at 90 sites. The Shared Governance Wildlife Management Areas have no specific management plan but shared management principles.

For marine protected areas:<sup>19</sup>

- Six out of nine organisations (67%) had management plans in place for a portion of their marine protected areas.
- All six organisations also reported that these included plans that were less than 10 years old. However, the proportion of marine protected areas covered by these up-to-date management plans varied widely among organisations from 1% for Quebec, 14% for Newfoundland and Labrador and British Columbia, a little over a quarter for New Brunswick, 50% for Parks Canada, and 88% for Fisheries and Oceans Canada.
- Only three jurisdictions had a portion of their existing management plans that were older than 10 years old. However, older management plans can still be valid when assessed on an ongoing basis. This is the case of British Columbia, which has policy that requires all management plans to be assessed internally at least every five years to determine if they should still be considered valid approved plans.
- Four out of nine organisations reporting on marine protected areas (44%) monitored the implementation of management plans. Only one of these reported that they conduct monitoring in over 75% of their marine protected areas (Parks Canada).
- Of the six organisations (67%) that reported on the implementation of management plans actions, as of 2015, four (Quebec, Fisheries and Oceans Canada, Environment and Climate Change Canada and Parks Canada) had substantially implemented management actions, while two reported having partially implemented management actions (British Columbia, Newfoundland and Labrador).

## CHALLENGES TO PROTECTED AREA MANAGEMENT

The majority of organisations reported on challenges or barriers related to the management of both terrestrial and marine protected areas in Canada (Table 11).

For terrestrial protected areas:

- All 15 organisations responsible for terrestrial protected areas (100%) identified the existence of management challenges.
- Twelve out of 15 reported that not having enough staff to manage protected areas and not having the resources for monitoring those sites were important barriers.
- The third most common challenge identified by organisations (seven out of 15) was the lack of management plans or objectives to guide decisions.
- Other challenges highlighted by some organisations included difficulty of meeting mutual interests with Indigenous governments, as well as a lack of priority and commitment by government authorities for managing protected areas, including the absence of long-term funding.

For marine protected areas:

- Six out of nine organisations responsible for marine protected areas (67%) identified challenges to managing marine protected areas.
- The most common barriers mentioned by four out of these six organisations were a lack of resources for managing sites and for monitoring.

<sup>19</sup> Note that marine protected areas include marine portions of terrestrial protected areas and not stand-alone marine protected areas only. As such, the information provided by organisations on management plans for marine protected areas is also based on activities undertaken as part of the management of primarily terrestrial protected areas. The only organisations with stand-alone marine protected areas under their administration are British Columbia (one marine protected area), Quebec (two marine protected areas including one shared with Parks Canada), Fisheries and Oceans Canada (eight marine protected areas) and Parks Canada (two marine protected areas including one shared with Quebec).

**TABLE 11:** Primary challenges or barriers to the management of protected areas in Canada identified by protected area organisations

| Primary management challenges/barriers  | Percentage of jurisdictions facing challenges according to each type of barrier (%) |        |
|---|---|--------|
|   | Terrestrial/freshwater  | Marine |
| Lack of staff resources for site management   | 80  | 67     |
| Lack of resources for site monitoring   | 80  | 67     |
| Lack of management plans or objectives to guide decisions   | 47  | 17     |
| Lack of appropriate legal/policy tools for managing activities adjacent to protected areas in a manner compatible with the conservation objectives of these sites | 36  | 50     |
| Lack of guidelines or protocols to effectively implement management decisions   | 14  | 33     |

- Other management challenges identified included working with other governments and agencies (including Indigenous governments), a lack of appropriate tools for managing protected areas administered by more than one government agency, as well as financial and technical limitations especially for offshore and deep water monitoring.

### MONITORING PROTOCOLS FOR PROTECTED AREAS

For terrestrial protected areas (Table 12):

- Eleven out of 15 organisations reporting on terrestrial protected areas (73%) reported that monitoring protocols are in place for their terrestrial protected areas with the majority of such protocols being 10 years old or less.
- Out of 11 organisations who had implemented such monitoring protocols, six of them were drafting new protocols for additional sites. This included for three provincial parks in Saskatchewan (Cypress Hills, Duck Mountain, Saskatchewan Landing) and for the Thelon Wildlife Sanctuary in the Northwest Territories through

**TABLE 12:** Monitoring protocols in protected areas

| Biomes       | Organisation                          | % of protected areas with monitoring protocols in place | % of protected areas with protocols in development |
|--------------|---------------------------------------|---|--|
| Terrestrial  | Alberta                               | 10%   | Not provided                                       |
|              | British Columbia                      | 6%  | 4%   |
|              | Manitoba                              | <1%   | 0%   |
|              | New Brunswick                         | 3%  | 0%   |
|              | Newfoundland and Labrador             | 53%   | 0%   |
|              | Northwest Territories                 | 0%  | 25%  |
|              | Nova Scotia                           | 0%  | 0%   |
|              | Nunavut                               | 0%  | 0%   |
|              | Ontario                               | Unknown   | Unknown  |
|              | Prince Edward Island                  | 97%   | Not provided                                       |
|              | Quebec                                | 10%   | Not provided                                       |
|              | Saskatchewan                          | 11%   | 1%   |
|              | Yukon                                 | 18%   | 0%   |
|              | Environment and Climate Change Canada | 1%  | 17%  |
|              | Parks Canada                          | 96%   | 4%   |
| Marine       | British Columbia                      | 4%  | 1%   |
|              | Manitoba                              | 0%  | 0%   |
|              | New Brunswick                         | 27%   | 0%   |
|              | Newfoundland and Labrador             | 0%  | 0%   |
|              | Prince Edward Island                  | Not provided  | Not provided                                       |
|              | Quebec                                | 2%  | Not provided                                       |
|              | Environment and Climate Change Canada | 0%  | 0%   |
|              | Fisheries and Oceans Canada           | 75%   | 25%  |
| Parks Canada | 50%                                   | 50%   |  |

the establishment of a management committee. In addition, Environment and Climate Change Canada was also working on the development of monitoring protocols for 25 of its sites across Canada as part of the management plans.

- The proportion of protected areas that are covered by monitoring protocols varied greatly across jurisdictions, from about less than 1% for Manitoba to 97% for Prince Edward Island.
- In Saskatchewan, varying levels of monitoring are in place for provincial parks only. In New Brunswick, monitoring is included in the management plans of Protected Natural Areas on land trust lands, while in Prince Edward Island monitoring generally occurs where it has been identified as a management goal for the protected area. In Newfoundland and Labrador, varying levels of monitoring are in place in parks and wilderness and ecological reserves. In British Columbia, BC Parks developed a monitoring program framework for monitoring productivity and species movement at selected sites within protected areas. Although such monitoring sites have not been established in every protected area, this framework applies to the entire system of protected areas (terrestrial and marine).

For marine protected areas (Table 12):

- Five out of nine organisations reporting on marine protected areas (56%) had monitoring protocols in place for their marine protected areas with 100% of these being 10 years old or less.
- The proportion of marine protected areas covered by such protocols varied from about 2% for Quebec to 75% for Fisheries and Oceans Canada.
- Two organisations reported that additional monitoring protocols will be developed for marine sites in the near future, British Columbia for two marine areas, and Fisheries and Oceans Canada for the Bowie Seamount and Endeavour Hydrothermal Vents Marine Protected Areas. In addition, Parks Canada reported that monitoring plans for all their sites were being reviewed and revised.
- Fisheries and Oceans Canada produces monitoring reports for some of its marine protected areas. Some



Moose © Simon Pierre Barrette, alias Cephas CC BY-SA

results are available online (e.g., the [Eastport Marine Protected Area Monitoring Report](#)).

### MONITORING AND MANAGING FOR ECOLOGICAL INTEGRITY

Ecological integrity refers to "*a condition that is determined to be characteristic of a natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes*".<sup>20</sup> Increasingly maintaining the ecological integrity of protected areas is a key component of protected areas management for Canadian jurisdictions with the goal to preserve ecological processes as well as the region's composition and abundance of native species (Tables 13 and 14).

For terrestrial protected areas:

- Twelve out of 15 organisations (80%) indicated having measures in place for managing ecological integrity. This is an increase from 56% as reported in 2011.
- Out of the 12 organisations managing ecological integrity, five of them (42%) had such measures in

<sup>20</sup> [Canada National Parks Act \(2000, c32\)](#).

place covering most of their network or system of protected areas, while the remaining seven (58%) had such measures implemented partially or covering only a portion of their sites.

- The extent to which organisations were monitoring ecological integrity varied greatly from a full monitoring program at Parks Canada to three provinces only conducting ecological integrity monitoring sporadically (British Columbia, Manitoba, Newfoundland and Labrador).
- Four provinces and territories (Ontario, Quebec, Saskatchewan, Yukon) had ongoing ecological integrity monitoring activities for some or a portion of their protected areas. In Quebec only those sites under the Société des établissements de plein air du Québec were being monitored for ecological integrity.
- Parks Canada continues to be a leader, with a complete [ecological integrity monitoring program](#), which it has implemented across all its national parks. Embedded in the *Canada National Parks Act*, the maintenance and restoration of [ecological integrity](#) is a priority for the Agency's management of its protected areas. This has resulted in the recognition of Parks Canada expertise and guidelines on ecological integrity, including having influenced the principles and best practices developed by International Union for Conservation of Nature on the topic.
- Two jurisdictions made the results of their monitoring activities available online for the public: British Columbia through the annual [BC Parks report](#) and Parks Canada through the [Ecological Integrity of National Parks](#) indicator found through the Canadian Environmental Sustainability Indicators webpage.

**TABLE 13:** Extent of ecological integrity monitoring being conducted

| Biome       | Full monitoring at all protected areas | Monitoring at most protected areas | Ongoing monitoring at some protected areas | Sporadic monitoring                                   | Little or no monitoring  |
|-------------|--|------------------------------------|--|---|--|
| Terrestrial | Parks Canada                           |                                    | Ontario, Quebec, Saskatchewan, Yukon       | British Columbia, Manitoba, Newfoundland and Labrador | Alberta, New Brunswick, Northwest Territories, Nova Scotia, Nunavut, Prince Edward Island, Environment and Climate Change Canada |
| Marine      |  | Parks Canada                       |  | British Columbia, Fisheries and Oceans Canada         | Manitoba, New Brunswick, Newfoundland and Labrador, Prince Edward Island, Quebec, Environment and Climate Change Canada          |

**TABLE 14:** Measures in place to manage ecological integrity

| Biome       | Fully (for all protected areas) | Mostly (for most protected areas)                                      | Partially (for a portion of protected areas)  | No (not at all)  |
|-------------|---------------------------------|--|---|--|
| Terrestrial |                                 | British Columbia, Northwest Territories, Ontario, Quebec, Parks Canada | Alberta, Manitoba, New Brunswick, Nova Scotia, Saskatchewan, Yukon, Environment and Climate Change Canada | Newfoundland and Labrador, Nunavut, Prince Edward Island |
| Marine      |                                 | British Columbia, Parks Canada   | Manitoba, New Brunswick, Environment and Climate Change Canada, Fisheries and Oceans Canada               | Newfoundland and Labrador, Prince Edward Island, Quebec  |

For marine protected areas:

- Six out of nine organisations (67%) reported having measures in place for managing ecological integrity in some or all of the protected areas in their network or systems. This is an increase from 33% reported in 2011.
- Like those reporting on terrestrial protected areas, a smaller number or two out of six (33%) organisations managing for ecological integrity had measures in place covering most of their marine protected areas while the remaining four organisations (67%) had partially implemented such measures for a portion of their sites only.
- Only two out of nine organisations (22%) were sporadically monitoring the ecological integrity of their marine protected areas (British Columbia and Fisheries and Oceans Canada).
- Results of monitoring activities conducted on the ecological integrity of marine protected areas are reported on in the BC Parks Annual Report.

### INFORMATION IN SUPPORT OF PROTECTED AREA MANAGEMENT

Managers of protected areas rely on various sources of information for decision making. In addition to biophysical data, this can include information on anthropogenic activities to understand the effects and impacts human activities may have on an area, and information from traditional ecological knowledge, drawing on the awareness of the area developed over time by local and Indigenous Peoples through ongoing use and observations of the land and marine environments.

For terrestrial protected areas:

- As reported in 2011, the majority of jurisdictions reporting on terrestrial protected areas continue to have limited information across the various categories surveyed (see Table 15), including on ecological processes and traditional knowledge.
- One hundred percent of organisations reported that at least some information was available regarding natural inventories and activities adjacent to protected areas. The extent of information available for both



Loons in Musquash Estuary Marine Protected Area © David Thompson

**TABLE 15:** Scope of information available by type for the management of terrestrial and marine protected areas

| Biome       | Scope of info             | Natural resource inventories   | Community structure and function  | Ecological processes   | Ecological isolation/connectiveness  | Traditional ecological knowledge  | Visitor use   | Visitor impacts   | Occurrence of invasive species   | Adjacent activities   |
|-------------|---------------------------|--|---|--|--|---|---|---|--|---|
| Terrestrial | Comprehensive             | Parks Canada, Prince Edward Island   | Manitoba  | Manitoba   | Parks Canada   |   |   |   |  |   |
|             | Moderate                  | Manitoba, New Brunswick, Ontario, Saskatchewan, Environment and Climate Change Canada                            | New Brunswick   | Parks Canada   | British Columbia, New Brunswick, Prince Edward Island                                    | Prince Edward Island, Parks Canada  | British Columbia, Manitoba, Ontario, Quebec, Saskatchewan, Parks Canada   | Manitoba, Saskatchewan, Parks Canada  | British Columbia, Environment and Climate Change Canada, Parks Canada                                      | Alberta, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nunavut, Ontario                                  |
| Marine      | Limited                   | Alberta, British Columbia, Newfoundland and Labrador, Nova Scotia, Northwest Territories, Nunavut, Quebec, Yukon | Alberta, British Columbia, Newfoundland and Labrador, Nova Scotia, Northwest Territories, Nunavut, Ontario, Quebec, Saskatchewan, Environment and Climate Change Canada, Parks Canada | Alberta, British Columbia, New Brunswick, Newfoundland and Labrador, Nova Scotia, Northwest Territories, Nunavut, Ontario, Quebec, Saskatchewan, Yukon | Alberta, Manitoba, Newfoundland and Labrador, Nova Scotia, Ontario, Quebec, Saskatchewan | Alberta, British Columbia, Manitoba, New Brunswick, Northwest Territories, Nunavut, Ontario, Quebec, Saskatchewan, Yukon, Environment and Climate Change Canada | Alberta, New Brunswick, Newfoundland and Labrador, Nova Scotia, Nunavut, Yukon, Environment and Climate Change Canada         | Alberta, British Columbia, New Brunswick, Newfoundland and Labrador, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Yukon | Alberta, Manitoba, New Brunswick, Northwest Territories, Nova Scotia, Ontario, Quebec, Saskatchewan, Yukon | British Columbia, Nova Scotia, Prince Edward Island, Quebec, Saskatchewan, Yukon, Environment and Climate Change Canada, Parks Canada |
|             | Comprehensive<br>Moderate | Environment and Climate Change Canada, Fisheries and Oceans Canada   | Fisheries and Oceans Canada   | Fisheries and Oceans Canada  | Manitoba   | Fisheries and Oceans Canada, Parks Canada   | Manitoba, Quebec  | Manitoba, Environment and Climate Change Canada   | Fisheries and Oceans Canada  | Manitoba, Quebec, Environment and Climate Change Canada, Fisheries and Oceans Canada, Parks Canada                                    |
|             | Limited                   | British Columbia, Manitoba, New Brunswick, Prince Edward Island, Quebec, Parks Canada                            | British Columbia, Manitoba, Quebec, Environment and Climate Change Canada, Parks Canada   | British Columbia, Manitoba, Parks Canada   | British Columbia, Quebec, Fisheries and Oceans Canada, Parks Canada                      | British Columbia, Manitoba, Quebec, Environment and Climate Change Canada   | British Columbia, Newfoundland and Labrador, Environment and Climate Change Canada, Fisheries and Oceans Canada, Parks Canada | British Columbia, Fisheries and Oceans Canada, Parks Canada   | British Columbia, Manitoba, New Brunswick, Quebec, Environment and Climate Change Canada, Parks Canada     | British Columbia, New Brunswick, Newfoundland and Labrador, Prince Edward Island  |

categories was limited for eight organisations (53%). Only two organisations reported having a comprehensive scope of information on natural resources inventories only.

- Eighty-seven percent of organisations indicated that information regarding ecological community structure and function, traditional ecological knowledge, visitor use and visitor impacts was available. However, the extent of such information remains limited for the majority of organisations. Six reported a moderate level of information on visitor use while only a few (one to three) reported possessing a moderate scope of information on the other three categories.
- Between 64% and 82% of organisations reported that they had a limited level of information regarding the occurrence of invasive species, ecological processes and ecological isolation or connectedness.
- In Alberta, the availability and scope of information available across all types varies geographically across the province and from site to site. Prince Edward Island noted that they possess information collected through 10 years of resource inventory and aerial photography work, as well as through periodic site visits.

For marine protected areas:

- One hundred percent of organisations reporting on marine protected areas indicated that information on activities adjacent to marine protected areas was available. The extent of information available was moderate for just under half of organisations.
- For 89% of organisations, information was available on natural resources inventories although it remained limited for the majority of them.
- Seventy-eight percent of organisations reported having information on visitor use although the scope of such information remained limited for most.
- Sixty-seven percent of organisations indicated having access to some information on community structure

and function, traditional knowledge and invasive species. For the majority of them, the scope of information available on these categories remained limited except for Fisheries and Oceans Canada, which indicated having a moderate level of information on all three.

- More generally for organisations reporting on marine protected areas, about half had a limited to moderate extent of information on ecological processes, ecological isolation or connectedness, and visitor impacts.
- [BC Parks](#) also reported that the development of a suite of conservation and planning tools have given managers some assurance that biological and cultural elements of the network are being well managed for both their terrestrial and marine protected areas.

### THREATS TO CANADA'S PROTECTED AREAS

Threats are part of the key elements that help guide decisions in protected area management. The [Convention on Biological Diversity](#) defines a protected area threat as “any human activity or related process that has a negative impact on key biodiversity features, ecological processes or cultural assets within protected areas.” Some of the most common challenges and threats to protected areas in Canada include: incompatible land/ocean uses outside protected areas, invasive species, climate change, cumulative impacts and population declines. In addition, the lack of public awareness among Canada’s primarily urban populations could result in a lack of support for protecting and managing protected areas. These are only some of the challenges and threats protected areas managers are increasingly facing not only in Canada but also worldwide.

For terrestrial protected areas:

- Thirteen out of 15 organisations (87%) have conducted some assessment to identify threats to their protected areas. Out of these, seven out of 13 had identified such threats for most of their protected areas, while the remainder had partially done so as of December 2015.

- The principal threats identified by organisations reporting on terrestrial protected areas are comparable to those identified in past status reports as shown in Table 16 (table compares principal threats between 2005, 2011 and 2015) and include:
  - Incompatible land uses outside protected areas, which include activities from numerous economic sectors such as extractives (e.g. mining, oil and gas), agriculture, transport as well as urban expansion, which threaten the ecological integrity of protected areas.
  - Invasive species such as leafy spurge, purple loosestrife, hybrid cattail, scotch broom and green crabs. Four organisations reported invasive species as a serious threat with seven others mentioning the issue as important.
  - Climate change is expected to result in significant changes impacting protected areas including sea-level rise and loss of coastal areas, changing fire risk, insect outbreaks, and shifts in species ranges.
  - Cumulative impacts are still not well understood and difficult to estimate whether inside or outside protected areas. For three jurisdictions cumulative impacts are a serious threat and an important one for five others.
  - Population declines, which also include all species listed at risk in Canada including Chestnut-collared Longspur, Greater Sage-Grouse, Short-eared Owl, Tri-colored Bat and Peary Caribou. The number of

species listed on the Schedule 1 of the *Species at Risk Act* increased from 493 in 2011 to 521 in 2014, the most recent year with data available. Population declines are often the result of threats, such as those mentioned above. However, populations declines are also an important challenge for protected areas managers and can also be considered a threat to the ecological health of protected areas.

- Alberta further noted that principal threats to specific protected areas can vary widely throughout the province from increased visitor use or excessive recreation in the south, to oil and gas development in the north of the province.
- Nova Scotia noted three factors— isolation, disconnectedness and sites of small sizes—as the principle main threats to the health of individual protected areas.
- Saskatchewan highlighted that many protected areas are no longer in a natural state due to suppression of the natural fire regime, fragmentation of habitat by linear development and introduction of invasive species, in addition to some recreational activities that can have a detrimental impact on protected area ecosystems if not managed properly.

For marine protected areas:

- Six out of nine organisations (67%) have conducted threat assessments with four of these organisations having done so for most of their marine protected areas and the other two having assessed threats for a portion of their network/system only.
- Although similar threats to terrestrial protected areas were identified, their ranking differed somewhat with the top three threats being: climate change, incompatible ocean uses outside protected areas, and population declines. Catastrophic events was identified as a serious threat by one jurisdiction (British Columbia).
- Other important threats identified included: invasive species, loss of habitat, compromised water quality,

**TABLE 16:** Principal threats to Canada’s terrestrial protected areas

| Rank | 2000–2005  | 2006–2011  | 2012–2015   |
|------|--|--|---|
| 1    | Incompatible land uses adjacent to protected areas | Climate change                                     | Incompatible land uses outside of protected areas |
| 2    | Habitat fragmentation                              | Cumulative impacts                                 | Invasive species                                  |
| 3    | Invasive species                                   | Incompatible land uses adjacent to protected areas | Climate change                                    |
| 4    | Increasing visitor use                             | Population declines                                | Cumulative impacts                                |
| 5    |  | Invasive species                                   | Population declines                               |

overuse of natural resources inside protected areas, interruption of natural cycles, infrastructure development adjacent to protected area sites, ocean acidification, marine debris and microplastics.

### PROTECTED AREAS REPORTING

For terrestrial protected areas:

- Eight out of 15 organisations (53%) reported that they assess and report on the state of their terrestrial protected areas through processes embedded in legislation or policy.
- Out of these eight organisations, five (British Columbia, Manitoba, Ontario, Prince Edward Island, Saskatchewan, Parks Canada) do so on a systematic basis.
- Manitoba also reports on its protected areas through other reporting mechanisms including the Manitoba Sustainable Development Annual Report. Under the *Sustainable Development Act*, Manitoba also reports on the implementation of and compliance with the principles and guidelines of sustainable development, which includes reporting on the total increase in designated and protected lands in the province.
- Alberta reports sporadically, while Nunavut and Environment and Climate Change Canada reported that they did not conduct regular assessment and reporting of their protected areas.
- Northwest Territories reported that, while assessing and reporting on the status of protected areas was not embedded in legislation, it has been working on completing its first State of Conservation Network Report, that includes the state of protected areas, in 2016.
- For Quebec, an assessment on the status of protected areas (for both marine and terrestrial sites) is conducted through the review of management plans every seven years initially, then every 10 years for sites under the *Natural Heritage Conservation Act* (Loi sur la conservation du patrimoine naturel). Parks administered by the Kativik Regional Administration are managed

according to a single management plan which requires regular assessments.

For marine protected areas:

- Three out of nine organisations reporting on marine protected areas (33%) had measures in place to assess and report on the state of marine protected areas with such process entrenched in legislation or policy (British Columbia, Environment and Climate Change Canada, Parks Canada).
- Out of these, only British Columbia and Parks Canada, had implemented such measures on a systematic basis, while Environment and Climate Change Canada was not doing so regularly.
- Two other organisations reported implementing measures to assess and report on the state of their marine protected areas on a systematic basis, Manitoba and Quebec.



Pimachiowin Aki, Ontario © Ministry of Natural Resources and Forestry

### PROTECTED AREA DOWNGRADING, DOWNSIZING AND DEGAZETTING

Over time, organisations may make changes that will affect the level of protection of an established protected area or its size. Reasons for such changes vary greatly and can include the rectification of boundaries with improved mapping, changes in management approach or for operational reasons such as to facilitate activities permitted, changing the status of the site because the protected area is no longer serving its original purpose or recognition that the site does not meet the definition of a protected area. Although organisations can also improve or upgrade the level of protection or increase the size of a protected area, this section mainly focuses on three types of actions undertaken during the reporting period, unless otherwise noted (see Table 17):

- i. downgrading (decreasing the level of protection or restrictions),
  - ii. downsizing (reducing the size of the site by changing its boundaries), or
  - iii. degazetting/delisting/deregulating (removing its status so that the site is no longer considered a protected area).
- One provincial jurisdiction decreased the level of protection for some protected areas. In total, 1.44 km<sup>2</sup> of protected area was downgraded across 4 terrestrial protected areas.
    - In British Columbia, small portions of four sites were downgraded to British Columbia’s [Protected Area](#) status, a category that allows for one or more activities usually not allowed in parks. Sites affected included the Dzawadi/Upper Klinaklini River Conservancy, Stawamus Chief Park, Elk Falls Park, and the Anhlut’ukwsim Laxmihl Angwinga’asanskwhl Nisga’a [a.k.a. Nisga’a Memorial Lava Bed Park] for a total of 1.44 km<sup>2</sup>.
  - In March of 2015, the province of Quebec upgraded the majority of its proposed [aquatic reserves](#) and [biodiversity reserves](#) from International Union for Conservation of Nature Category III to Category II.
  - Four jurisdictions downsized or reduced the size of protected areas by 485 km<sup>2</sup> in total:
    - In British Columbia, 15 terrestrial parks saw their boundaries changed (e.g. correcting administrative errors, improved mapping accuracy, boundary rationalization, etc.) for a combined total reduction of 0.90 km<sup>2</sup>;
    - [Silent Lake Provincial Park of Ontario](#) was reduced by 0.09 km<sup>2</sup> as a result of improved mapping accuracy;
    - [Nahanni National Park Reserve](#) was reduced by 0.1 km<sup>2</sup>, to rectify an overlapping area of protection that was created when the park was expanded in 2009;
    - In Quebec, and according to lands covered by agreements, a section of the réserve de parc national du Cap-Wolstenholme was transferred to an Inuit community of Nunavik. This area included a terrestrial portion of 465 km<sup>2</sup> and a marine portion of 19 km<sup>2</sup>.

**TABLE 17:** Protected area downgrading, downsizing and degazetting: changes since 2011

| Jurisdiction          | Number of protected areas downgraded | Number of protected areas downsized | Number of protected areas degazetted/delisted/deregulated | Total area affected by jurisdiction (km <sup>2</sup> ) |
|-----------------------|--------------------------------------|-------------------------------------|---|--|
| Alberta               |                                      |                                     | 2   | 20   |
| British Columbia      | 4                                    | 15                                  | 1   | 295  |
| Northwest Territories |                                      |                                     | 3   | 6 028  |
| Ontario               |                                      | 1                                   | 1   | 3  |
| Prince Edward Island  |                                      |                                     | 1   | <1   |
| Quebec                |                                      | 1                                   | 421   | 2 422  |
| Parks Canada          |                                      | 1                                   |   | <1   |

- Seven jurisdictions degazetted or delisted protected areas totaling approximately 8 281 km<sup>2</sup>:
  - Alberta: two Natural areas (total of 20 km<sup>2</sup>) were converted to Provincial Recreation Areas and will no longer be considered protected areas ([Redwater and North Bruderheim](#)).
  - British Columbia: One recreation area (Atlin Recreation Area) was partially upgraded to park status (92 km<sup>2</sup>) and approximately 292 km<sup>2</sup> was removed from the protected areas system.
  - Northwest Territories: a re-evaluation revealed that previously reported three sites (total of 6 028 km<sup>2</sup>) did not meet the required criteria for a protected area and thus are no longer considered as protected areas (Hidden Lake Territorial Park, Gwich'in Territorial Park, and Gwich'in Land Use Plan Conservation Zones).
  - Ontario: [Le Pate Provincial Nature Reserve](#), an area of 2.5 km<sup>2</sup>, was deregulated.
  - Prince Edward Island: an area of 0.0125 km<sup>2</sup> was required to improve road alignment and safety.
  - Saskatchewan: lands of lower ecological value under *The Wildlife Habitat Protection Act* are being degazetted and sold to lessees, moderate value lands area also being degazetted and sold, but remain protected under private title by a Crown conservation easement. However, and in parallel, vacant Crown lands of higher ecological are being added into the regulations.
  - Quebec: eight of the sites included in the 1999 répertoire des milieux de conservation volontaire have been delisted because they no longer met the International Union for Conservation of Nature protected areas classification criteria (total of 17 km<sup>2</sup>). In addition, Quebec conducted an analysis of the network of protected areas and mining and existing gas rights in 2013. Protected areas with up to 25% of their area under industrial rights had that portion of the protected area removed from the *Registre des aires protégées du Québec*. The entire protected area was removed if the area under industrial rights exceeded 25%. In total, an area of 1 921 km<sup>2</sup> was removed. However, protected areas with industrial rights on a portion of their area retained their legal designation. Subsequently, when industrial rights were withdrawn, these areas were reinstated in the *Registre des aires protégées*.

## FUNDING AND RESOURCES FOR PROTECTED AREAS

A comprehensive assessment of funding is beyond the scope of this report, however some protected areas organisations were able to provide estimates of annual expenditures. This enables a general overview to be presented in Table 18.

- Six out of 15 organisations reporting on terrestrial protected areas (40%) and five out of nine organisations reporting on marine protected areas (56%) reported that an assessment of the resources needed to effectively deliver on their protected areas program now or in the near future had been carried out.
  - Northwest Territories reported that while an assessment had been undertaken in 2005, a new assessment of the resources associated with long-term funding for the management and monitoring of new protected areas is needed.
  - Nova Scotia reported that a needs assessment was completed and presented in support of the province's annual budgeting process.
  - British Columbia reported that while the budget for BC Parks remained largely static during the 2012–2015 period, the cost of operating and maintaining the Province's parks and protected areas system has risen each year due to increases in costs of a number of inputs including; labour, fuel, infrastructure amortization and maintenance. BC Parks has implemented a number of strategies to address the shortfall, including, shortening operating seasons, eliminating park ranger positions, reducing proactive maintenance activities and other program cuts. The British Columbia Parks Financial Sustainability Initiative, mandated in 2013, aims to enhance revenue, enhance relationships with Park Operators and business communities, enhance relationships with First Nations, provide greater levels and diversity of services to park visitors, and facilitate a change to BC Parks organisational culture.
  - With respect to assessing resource needs, British Columbia noted that it has a variety of assessment tools for identifying and prioritizing resource needs, including:

**TABLE 18:** Estimated annual expenditures on protected areas for provinces, territories and federal protected area agencies

| Jurisdiction                          | Annual expenditures <sup>a</sup> | Expenditure per km <sup>2</sup> <sup>b</sup> |
|---------------------------------------|----------------------------------|--|
| Alberta <sup>c</sup>                  | \$103 000 000                    | \$3 732                                      |
| British Columbia                      | \$47 000 000                     | \$329  |
| Manitoba <sup>d</sup>                 | \$400 000                        | Not available                                |
| New Brunswick <sup>e</sup>            | \$2 600 000                      | \$896  |
| Northwest Territories                 | \$1 000 000                      | \$42   |
| Nova Scotia <sup>f</sup>              | \$5 900 000                      | \$1 513                                      |
| Nunavut                               | \$2 100 000                      | \$2 100                                      |
| Ontario                               | \$91 000 000                     | \$853  |
| Prince Edward Island                  | \$100 000                        | \$667  |
| Quebec                                | \$4 200 000                      | \$28   |
| Saskatchewan <sup>g</sup>             | \$43 970 000                     | \$792  |
| Yukon <sup>h</sup>                    | \$4 200 000                      | \$200  |
| Environment and Climate Change Canada | \$11 600 000                     | \$111  |
| Parks Canada <sup>i</sup>             | \$419 587 000                    | \$1 190                                      |

Notes:

- <sup>a</sup> Annual expenditures include an estimate of capital, operations and other expenditures rounded up to the nearest \$100 000. This information was provided by each of the provinces, territories or federal organisations in the table above. Methodologies for determining expenditures vary between jurisdictions so any comparisons should be made with caution. For certain jurisdictions such as Alberta and Nova Scotia, expenditures are for all natural and recreational areas including some sites that are not recognized as protected areas (for example, most provincial parks in Nova Scotia). No information was available from Newfoundland and Labrador or Fisheries and Oceans Canada.
- <sup>b</sup> Expenditures per km<sup>2</sup> was calculated by dividing the annual expenditures for each province, territory or federal department by the total protected area (terrestrial and marine) under their administration including areas managed under shared governance arrangements.
- <sup>c</sup> Annual expenditures for Alberta reflect the resources allocated for all parks and protected areas managed by the Parks Division. A large proportion of these expenditures flow to high use and capital intensive sites, and are not necessarily limited to sites that are designated as protected areas.
- <sup>d</sup> Annual expenditures for Manitoba reflect the annual resources that were allocated for the Protected Areas Initiative from 2012–2016. These resources go toward protected area planning and establishment, and therefore would only apply to km<sup>2</sup> established during the reporting period.
- <sup>e</sup> Annual expenditures for New Brunswick reflect annual resources allocated to protected natural areas on Crown Land and to three provincial parks, with the majority being dedicated to park operations and management.
- <sup>f</sup> For Nova Scotia, these numbers include expenditures for all provincial parks, most of which are not protected areas.
- <sup>g</sup> Annual expenditures for Saskatchewan include those for provincial park lands and the administration of the Representative Areas Network.
- <sup>h</sup> Annual expenditures for Yukon are not specific to protected areas only, but reflect annual resources allocated to the agency.
- <sup>i</sup> Expenditures for Parks Canada are related to the establishment and operations of protected areas.

- The Levels of Management—Visitor Services Project, which provides a provincial framework to prioritize the allocation of visitor services resources. This information is used to set park fee levels, supported decisions on service reductions, and to identify needed investments (or disinvestments) in services and facilities for each park.
  - The Conservation Risk Assessment contains information on a park by park basis of the values, threats and an overall conservation integrity score, which is then used to develop a list of management actions on an annual basis. The list is then prioritized and resources are allocated to the highest priority items.
- Environment and Climate Change Canada reported that its current needs assessment estimates that the Protected Areas Program would require significantly more funding to operate effectively. The estimated funding needs are based on a preliminary costing of final and draft protected area management plans, estimates of fixed costs, estimates related to the implementation of a Performance Measurement Framework for the Program, and resources required to support other parts of the department that enable program operations. This level of investment would result in expenditures of approximately \$280 per km<sup>2</sup> for Environment and Climate Change Canada Protected Areas.
  - Fisheries and Oceans Canada reported that an analysis of the costs associated with marine protected areas establishment and management has been undertaken.
  - Saskatchewan reported that the provincial Parks Service does conduct assessments of capital budget and infrastructure needs. Specifically, an annual inventory of parks facilities and activities, including park visitation and costing of infrastructure operations is conducted—this is used as a basis for annual budget allocations to each park.

## ASSESSMENT OF BENEFITS OF PROTECTED AREAS

Beyond their biodiversity conservation value, many organisations recognize the range of benefits, both direct and indirect, that protected areas provide to local communities and economies. These include opportunities for recreation, tourism and employment, scientific research and education, cultural heritage discovery and interpretation, human health and well-being, and a number of other ecosystem services. This range of benefits was demonstrated by initiatives and studies undertaken from 2012–2015, as highlighted below.

- In Alberta, the positive effects of protected area visitation on health and well-being are being recognized. Along the lines of previous studies on the subject, [Lemieux et al. \(2015\)](#)<sup>21</sup> examined the perceived and reported motives and benefits among Alberta park visitors. Over the summers of 2012 and 2013, 67.8% of survey respondents indicated improvement in several indices of mental and physical health and well-being following their day or overnight park experiences. The need for equal access to these types of benefits for all citizens is, in part, what drives the Push to Open Nature Initiative of Alberta Parks. Push to Open Nature works to remove barriers in new and existing facilities as well as in programs and daily operations in all of Alberta's parks. The goal of the initiative is to ensure that people of all abilities can participate in nature-based experiences and outdoor recreation.
- Ontario is exploring how an ecosystem services framework can be used to assess and measure the contributions of parks and protected areas to human welfare. Predictive models can be used to evaluate the potential impacts of alternative management scenarios, or to map where and how benefits flow to communities in order to better target future land acquisitions. The results can be found in a 2013 report produced for the Ontario Ministry of Natural Resources and Forestry entitled *Mapping the Off-site Benefits from Protected Areas' Ecosystem Services*.
- Organisations report many examples of how protected areas tourism boosts local community employment. Ecotourism associated with boat tours of Witless Bay Ecological Reserve continue to be an important local industry in Newfoundland and Labrador, while tourism generated from low-impact wilderness-based recreation brings a significant benefit to the communities surrounding many of the wilderness areas, reserves, and parks of Nova Scotia. A study done by the Société des établissements de plein air du Québec revealed that 5 200 people were employed in Québec provincial parks in 2014, and that for each day spent in a park, a visitor contributed \$66 on average to the local economy. British Columbia reports how successful grizzly bear viewing tour operators in Khutzeymateen Provincial Park have contributed a percentage of profits to fund two First Nations interpreter positions in the park.
- The 2008 Inuit Impact and Benefit Agreement for National Wildlife Areas and Migratory Bird Sanctuaries, signed between Environment and Climate Change Canada and five Designated Inuit Organisations in the Nunavut Settlement Area, has brought about positive changes to the 11 communities associated with these sites. Thanks to the core activities funded under the Agreement, benefits have started to flow including increased capacity to participate in conservation and research activities, and income related to tourism. The Inuit Impact and Benefit Agreement expired in 2014, and its renewal was under negotiation as of December 31, 2015.



Snow Geese on Bylot Island, Photo : Christian Marcotte © Environment and Climate Change Canada

<sup>21</sup> Lemieux, Christopher J., Sean T. Doherty, Paul F.J. Eagles, Joyce Gould, Glen T. Hvenegaard, Elizabeth (Lisa) Nisbet and Mark W. Groulx. 2015. Healthy Outside-Healthy Inside: the human health and well-being benefits of Alberta's protected areas—towards a benefits-based management agenda. Canadian Council on Ecological Areas (CCEA) Occasional Paper No. 20. CCEA Secretariat, Ottawa, Ontario, Canada. vi + 71 pp.

### BROKENHEAD WETLAND ECOLOGICAL RESERVE: A SUCCESSFUL COMMUNITY PARTNERSHIP FOR CONSERVATION

People have been attracted to the Brokenhead Wetland in Manitoba for many years. The local Ojibway Nation communities have used it for medicinal plant collection, cultural activities and hunting, and continue to do so today. Orchid lovers and eco-tourists visit it for the many beautiful and rare species found there. Although this area is wonderfully attractive, visitation has been discouraged in the past because of the risk of damage to the rare plants and their habitat.

Debwendon Inc. (meaning “trust” in Ojibway) was formed in 2007 to promote and preserve the Brokenhead Wetland Ecological Reserve, to raise public awareness of the historic cultural connection between the Brokenhead Ojibway Nation and the wetland, and to construct and maintain a boardwalk and interpretive trail adjacent to the ecological reserve. It is made up of volunteers from two non-profit organisations, Native Orchid Conservation Inc. and the Manitoba Model Forest, along with the Brokenhead Ojibway Nation and Eastside Aboriginal Sustainable Tourism Inc. Manitoba Parks has recently partnered with Debwendon Inc. to construct a floating boardwalk, with funding support from the Eugene

Reimer Environment Fund at The Winnipeg Foundation. An interpretive trail has been created adjacent to the ecological reserve, within a 100 metre-wide buffer that follows the reserve boundary for 1.2 km, which includes interpretive nodes that indicate where specific plants such as orchids, pitcher plants, and Labrador tea can be seen along the trail. As this initiative rolls out, live interpretation highlighting the special relationship between the Brokenhead Ojibway Nation and the wetland will be provided, along with ongoing trail maintenance, by Brokenhead Ojibway Nation members employed over the coming seasons. This installation of boardwalks, signage and live interpreters will enable the public to safely visit the area for aesthetic, educational and cultural reasons without causing further damage to the native plants and their habitat.

This has been a unique and successful partnership between the provincial government, a First Nation, conservation organisations and a locally established endowment fund to protect this rare wetland area and share it with the world.



## PROTECTED AREAS VISITATION

Tourism and visitation has been intricately linked to protected areas since their modern-era conception. Indeed, for many of us, it is only by visiting and pursuing recreation in protected areas that we come to understand and appreciate their value to nature conservation. In the fundamental sense, visitation to protected areas is about a process in which visitors personally connect with their natural and cultural heritage through compelling experiences, thereby fostering support for those and other protected areas.

The importance of visitation and tourism in protected areas conservation has been recognized by organisations and jurisdictions the world over. Yet many have also recognized the potential negative impacts of recreation and visitation, particularly on sensitive habitats which succumb quickly to the effects of human disturbance. As such, many protected area managers limit access to sensitive zones or limit time of use to try and minimize negative human impacts.

For terrestrial protected areas:

- In Canada, from 2012 to 2015, all 15 organisations who administer terrestrial protected areas allow public visitation. Just over half of these organisations open all of their protected areas to the public (Alberta, Ontario, Nova Scotia, Prince Edward Island, Yukon, Nunavut, Northwest Territories and all of the National Parks of Parks Canada), while for the other half (British Columbia, Manitoba, Saskatchewan, Quebec, New Brunswick, Newfoundland and Labrador, and Environment and Climate Change Canada) public access is possible in the majority of the protected areas (equivalent to about 76–100% of the area).
- As a part of policy, planning and management of terrestrial protected areas, visitation is incorporated as a primary objective for four jurisdictions (Parks Canada, British Columbia, Newfoundland and Labrador, and Nunavut); as a secondary objective for seven (Alberta, Manitoba, Nova Scotia, Ontario, Quebec, Yukon, and Environment and Climate Change Canada); not an objective but mentioned in policy, planning and

**TABLE 19:** Use of different measures to regulate the impacts of visitation in protected areas

| Type of control measure                      | Number of organisations (out of 15) using the measure in terrestrial protected areas | Number of organisations (out of 9) using the measure in marine protected areas |
|--|--|--|
| Regulation of visitor use                    | 12   | 3  |
| Spatial restrictions on visitor access       | 11   | 3  |
| Design of buildings or infrastructure        | 10   | 2  |
| Construction of buildings and infrastructure | 10   | 3  |
| Waste management                             | 7  | 2  |
| Water use                                    | 4  | 2  |
| Energy use                                   | 3  | 1  |

management for four (New Brunswick, Northwest Territories, Prince Edward Island, Saskatchewan).

For marine protected areas:

- Eight out of the nine organisations reporting on marine protected areas allow public access in 76–100% of a site. Prince Edward Island does not allow any visitors.
- For marine protected areas, the incorporation of visitation in their policy, planning and management is a primary objective for British Columbia and Parks Canada only; a secondary objective for Environment and Climate Change Canada and Quebec; not an objective but mentioned for Fisheries and Oceans Canada and Manitoba; and not mentioned at all for New Brunswick, Newfoundland and Labrador and Prince Edward Island.

Whether visitation is encouraged or not, certain aspects of visitation are controlled by a variety of policies, strategies or specific guidelines for all jurisdictions. Table 19 indicates the number of protected area organisations employing different types of measures.

Several organisations reported that management of visitor use and infrastructure development is more prevalent in provincial parks than in other types of provincial

**TABLE 20:** Targets of visitation programs

| Visitation promotion program target         | Number of organisations (out of 10) for terrestrial protected areas | Number of organisations (out of 3) for marine protected areas |
|---|---|---|
| Linking parks with healthy/active lifestyle | 8   | 2   |
| Opportunities for sustainable recreation    | 8   | 3   |
| Engaging youth                              | 7   | 2   |
| Engaging new Canadians                      | 4   | 2   |

protected areas. For example, there is little construction or infrastructure development in wilderness areas and nature reserves except in a small number of cases of trails, trailheads, parking lots, and designated campsites.

Ten out of 15 organisations reporting on terrestrial protected areas, and three out of nine organisations reporting on marine protected areas reported that they had programs or initiatives in place to increase visitation. Table 20 shows the most frequently cited targets of such programs or initiatives.

Other visitation promotion programs and initiatives being delivered in Canada include:

- Environment and Climate Change Canada’s Connecting Canadians to Nature initiative to attract communities to their closest National Wildlife Area to explore trails and participate in organized activities like bird-banding;
- Trail development in Prince Edward Island;
- Parks Canada’s Learn-To-Camp program helps Canadians build the skills and confidence required to enjoy camping and other activities in protected areas;
- Education and outreach programming to draw visitors to protected areas in Nova Scotia;
- Informing potential visitors using tourism publications (brochures and guides), as well as delivering orientation trips for tour operators in Nunavut.

### ATTRACTING PADDLERS AND OTHER VISITORS TO THE MUSQUASH ESTUARY MARINE PROTECTED AREA

Public awareness and education are critical factors in ensuring the long term success of a marine protected area, especially in the Musquash Estuary Marine Protected Area which has coastal access.

Every year since 1998, with the support of Fisheries and Oceans Canada, the Conservation Council of New Brunswick has hosted the Musquash Paddle. The paddle is an opportunity for community members and visitors to experience the Musquash Estuary—which is connected to the Bay of Fundy, 20 km southwest of Saint John, New Brunswick—from a kayak or canoe with the help of a guide who is extremely knowledgeable of the estuary. Every year the paddle is well attended and community members can learn about the Marine Protected Area and the estuary ecosystem while experiencing its natural beauty.

Fisheries and Oceans Canada and the Conservation Council of New Brunswick also collaborated in 2013 to update the Musquash Estuary Marine Protected Area brochure, called “Discover Musquash” that describes the Marine Protected Area and recreational activities that residents and visitors are able to undertake there. Distributed to tourism-based businesses throughout New Brunswick, the revised brochure serves to increase public interest in and awareness of the Marine Protected Area.



Pacific Loon at Bylot Island Migratory Bird Sanctuary, Photo : Christian Marcotte © Environment and Climate Change Canada

CHAPTER 4

# Indigenous Peoples and Stakeholder Involvement



#4

Red Deer Wildlife Management Area © Manitoba government

## INDIGENOUS PEOPLES AND STAKEHOLDER INVOLVEMENT

Indigenous Peoples, local communities and other relevant stakeholders play an important role in protected areas. The successful implementation of conservation initiatives including the establishment of protected areas is directly linked to the involvement of those who have connections to these areas whether these stem from cultural, traditional and spiritual values or whether they are socio-economically based. On the world stage, the formal recognition of Indigenous Peoples and key stakeholders in the planning and management of protected areas is fairly recent given it was only about 30 years ago that leading conservation organisations such as the International Union for Conservation of Nature developed principles and guidelines to guide conservation authorities on how best to involve them into protected area decision-making processes.<sup>22</sup> In Canada, the development of partnerships with Indigenous Peoples and with relevant stakeholders to find durable solutions for protecting Canada's biodiversity and creating protected areas across the country is an integral part of protected area establishment.

### INDIGENOUS PARTICIPATION IN PROTECTED AREAS

Indigenous Peoples have an important role in the conservation of Canada's ecosystems and biodiversity. This was recently reflected in [Canada's 2020 biodiversity goals and targets](#), which emphasize the importance of maintaining customary use of biological resources by Indigenous Peoples and the importance of traditional knowledge in biodiversity conservation (see below). Through modern land claims, treaties and other types of agreements, Indigenous Peoples have had an increased level of participation in the decision-making processes related to protected areas. As stewards of the land with a deep understanding of the landscape, Indigenous communities often play a key role in identifying candidate sites, delineating boundaries, determining conservation objectives and defining management approaches for protected areas.

#### INDIGENOUS PEOPLES & CANADA'S 2020 BIODIVERSITY TARGETS

Target 12—By 2020, customary use by Indigenous Peoples of biological resources is maintained, compatible with their conservation and sustainable use.

Target 15—By 2020, Indigenous traditional knowledge is respected, promoted and, where made available by Indigenous Peoples, regularly, meaningfully and effectively informing biodiversity conservation and management decision-making.

### Establishment and management of protected areas

Whether through consultations or collaborative agreements, all organisations responsible for protected areas have mechanisms in place for involving Indigenous Peoples in the establishment and management of both marine and terrestrial protected areas.

<sup>22</sup> *Indigenous and Traditional Peoples and Protected Areas: Principles, Guidelines and Case Studies*. No. 4. Javier Beltrán, (Ed.), International Union for Conservation of Nature, Gland, Switzerland and Cambridge, UK and WWF International, Gland, Switzerland, 2000.

For terrestrial protected areas:

- Fourteen out of 15 organisations reporting on terrestrial protected areas (93%) reported that Indigenous governments, communities or organisations were formally involved in terrestrial protected areas design, planning and establishment, while 13 out of 15 (87%) indicated a formal involvement in protected areas management.
- Eight out of 15 (53%) organisations reported that involvement of Indigenous Peoples in the design, planning and establishment of protected areas resulted from processes related to modern land claims, treaties and other agreements, 10 out of 15 (67%) reported that it was mandated by law, and 12 out of 15 (80%) reported that it was mandated through policy.
- Eight out of 15 (53%) organisations reported that involvement of Indigenous Peoples in the management of protected areas was mandated by law and 11 out of 15 reported that it was mandated through policy. For 10 out of 15 organisations (67%) reporting, this mandate came from the management plans of specific protected areas.

A variety of mechanisms exist through which Indigenous governments, communities or organisations are involved in the design, planning and establishment as well as the management of terrestrial protected areas. These include:

- Specific consultations with Indigenous Peoples (reported by 14 out of 15, or 93% of organisations).
- Public consultations (reported by 11 out of 15, or 73% of organisations).
- Involvement in land-use planning (reported by 10 out of 15, or 67% of organisations).
- Involvement in advisory bodies (e.g. Wildlife Management Boards, etc.) (reported by 10 out of 15, or 67% of organisations).

- Processes related to modern land claims, treaties and other agreements (reported by eight out of 15, or 53% of organisations).

More specifically, with respect to the management of terrestrial protected areas:

- Four organisations reported that Indigenous groups were fully managing certain protected areas (British Columbia, Northwest Territories, Prince Edward Island and Quebec). In the case of Quebec, this was the case for all parks located in Nunavik. In Prince Edward Island, a specific agreement was made between the province and the Native Council of Prince Edward Island for the Native Council to own a portion of one Wildlife Management Area. This was not part of any land claim settlement.
- Six reported that co-management/cooperative management regimes were in place (British Columbia, Manitoba, Northwest Territories, Nunavut, Environment and Climate Change Canada, Parks Canada). This included, for example, four protected areas established under the various Inuit Impact and Benefits Agreements in Nunavut as well as under land claim agreements in the Northwest Territories.



Bottlenose whales in the Gully Marine Protected Area © Hilary Moors

Protected areas organisations also specified additional mechanisms including the establishment of working groups (Ontario), memoranda of agreement (Manitoba), the tri-partite Mi'kmaq-federal-provincial forum (Nova Scotia), reconciliation agreements and strategic engagement agreements (British Columbia) and an Inuit Impact and Benefit Agreement (Nunavut and Parks Canada).

For marine protected areas:

- Seven out of nine organisations reporting on marine protected areas (67%) indicated that Indigenous governments, communities or organisations were formally involved in marine protected areas design, planning and establishment as well as management. All of these indicated that specific consultations with Indigenous Peoples were undertaken during the design, planning and establishment phases, while four undertook specific consultations with Indigenous Peoples as part of the management of marine protected areas.
- Six out of nine (67%) reported that involvement of Indigenous Peoples in design, planning and establishment was mandated by law and seven out of nine (78%) reported that it was mandated through policy. For five out of nine (56%) reporting, such mandates came from both law and policy.
- With respect to the involvement of Indigenous Peoples in protected areas management, three organisations (33%) reported that this was mandated in law (Environment and Climate Change Canada, Fisheries and Oceans Canada and Parks Canada), and four organisations (44%), which included the three federal organisations, reported that it was mandated through policy.
- Four out of nine (44%) reported that involvement of Indigenous Peoples in marine protected area management came from the management plans for specific marine protected areas.

Examples of mechanisms to engage Indigenous Peoples indicated by organisations reporting on marine protected areas include:

- Public consultation during design, planning and establishment (reported by five out of nine, or 56% of organisations), and as part of the management of marine protected areas (reported by three out of nine, or 33% of organisations).
- Advisory bodies (e.g. Wildlife Management Boards, etc.) during design, planning and establishment (reported by four out of nine, or 44% of organisations); six out of nine organisations (67%) reported that advisory bodies were a mechanism for engagement in the management of marine protected areas.
- Three out of nine organisations (33%) reported that involvement of Indigenous Peoples in the design, planning and establishment of marine protected areas stemmed from modern land claims processes. Four out of nine organisations (44%) reported that involvement of Indigenous Peoples occurred through treaties and other agreements and three of these four organisations also reported that involvement of Indigenous Peoples was associated with land-use planning processes.
- More specifically, with respect to marine protected areas management, four out of nine organisations (44%) reported that co-management/cooperative management regimes were in place.

Fisheries and Oceans Canada is an example of a jurisdiction where a variety of management mechanisms are used; one of these is management via regional governance bodies in relation to Integrated Oceans Management. Other mechanisms include cooperative arrangements such as that seen in the [Tarium Niryutait Marine Protected Area](#), which is based on cooperative management between Fisheries and Oceans Canada, co-management partners, and the Inuvialuit. Similarly, Fisheries and Oceans Canada is collaborating with local Inuvialuit communities, the relevant Inuvialuit organizations, and bodies under the land claims agreement, for the proposed Anguniaqvia niqiqyuam Marine Protected Area.

### Specific designations for Indigenous protected areas

Specific designations for Indigenous protected areas exists in only two provinces: British Columbia and Manitoba.



Red squirrel © Simon Pierre Barrette, alias Cephas CC BY-SA

In British Columbia, conservancies are a type of designation, under the *Park Act*, that explicitly recognize the importance of Crown lands to First Nations for social, ceremonial and cultural uses as one of its principal purposes, along with biodiversity conservation and provision of outdoor recreation opportunities.

In Manitoba, a provincial park may be classified as an Indigenous Traditional Use Park if the main purpose of the designation is to preserve lands that have been traditionally used by Indigenous Peoples or that are significant to Indigenous Peoples due to their natural features or cultural importance. A new land use category was also created wherein lands within a provincial park may be designated under the Indigenous Heritage Land Use Category if the main purpose of the categorization is to protect a unique or representative site containing a resource of cultural, spiritual or heritage significance to Indigenous Peoples.

Manitoba can also designate protected areas under the *The East Side Traditional Lands Planning and Special Protected Areas Act*. The purpose of this Act is (a) to enable First Nations and aboriginal communities on the east side of Lake Winnipeg to engage in land use and resource management planning for designated areas of Crown land that they have traditionally used; and (b) to provide designated areas of Crown land on the east side of Lake Winnipeg with special protection from development and other activities that might occur on that land.

### Sites of cultural importance

Protected areas are not only important for the protection of ecosystems and wildlife habitat but also for the protection of sites of cultural importance. This is especially the case for Indigenous People across Canada with many of the existing protected areas holding special natural features that have great meaning and importance and that have contributed to cultural preservation. Sites of cultural importance can include areas where traditional land use practices have taken and continue to take place, as well as areas that hold important spiritual value.

For terrestrial protected areas:

- Eleven out of 15 organisations reporting on terrestrial protected areas (73%) indicated that sites of cultural importance to Indigenous communities were identified through their terrestrial protected areas strategy/planning.
- Twelve out of 15 (80%) reported that sites of cultural importance to Indigenous communities were protected through the establishment of terrestrial protected areas.

Sites of cultural importance have been identified and protected across the country. These include sites such as [Writing-on-stone/Aisinaipi Provincial Park](#), Alberta, which protects the largest concentration of First Nation petroglyphs and pictographs on the great plains of North America. Writing-on-Stone/Aisinaipi Provincial Park was added to Canada's Tentative List for consideration as World Heritage Site designation. At the end of 2015, a nomination package was under development for submission to the United Nations Educational, Scientific and Cultural Organization.

In Manitoba, areas of cultural value that received protection over the reporting period include Chitek Lake Anishinaabe Provincial Park, the first park to be designated under the new Indigenous Traditional Use park classification; [Little Grand Rapids First Nation Traditional Use Planning Area](#), and [Pauingassis First Nation Traditional use Planning Area](#); and [Brokenhead Wetland Ecological Reserve](#) was expanded and construction began on the

interpretive trail for the promotion of the site's cultural and ecological values.

Nova Scotia also has several provincial parks that have been identified as being of cultural importance including the recently established [Kluscap Wilderness Area](#), and the [Tobeatic Wilderness Area](#), which was expanded in 2015, and several smaller wilderness areas and nature reserves.

In British Columbia, [Anhluut'ukwsim Laxmihl Angwinga'asanskwhl Nisga'a](#) (a.k.a. Nisga'a Memorial Lava Bed Park) offers visitors a chance to explore many unique and interesting features of a volcanic landscape and to learn about the culture and legends of the Nisga'a people.

At the federal level, Parks Canada offers various examples of archeological sites as well as areas of present and historic land use. One of these is the [Nááts'ihch'oh National Park Reserve](#), established in 2014 in Yukon, which protects the important cultural and spiritual values of the Nááts'ihch'oh mountain.

- Thirteen out of 15 organisations (87%) indicated that sites of cultural importance to Indigenous communities were also protected through legislation other than protected area legislation in their jurisdiction.
- Eight out of 15 (53%) reported that protected areas legislation or policy enables the customary use of biological resources in all of their protected areas, six out of 15 reported that customary use of biological resources is enabled in some of their protected areas, and one organisation reported that it is enabled in protected areas where treaties have been signed.

The specific allowances for the customary use of biological resources vary by jurisdiction and by type of protected area. For example, hunting and trapping are not allowed in all southern provincial national parks of Quebec, but fishing and gathering are in certain areas. However, in parks located in the James Bay area only, which is covered by the *Act respecting hunting and fishing rights in the James Bay and new Quebec territories (chapter D-13.1)*, beneficiaries of the James Bay and Northern Quebec Agreement are permitted

to continue traditional activities such as hunting, fishing, trapping and gathering.

For marine protected areas:

- Five out of nine organisations reporting on marine protected areas (56%) reported that sites of cultural importance to Indigenous communities were identified through their marine protected areas strategy/planning.
- Four out of nine (44%) reported that sites of cultural importance to Indigenous communities were protected through the establishment of marine protected areas.

While Fisheries and Oceans Canada is included above in the number of organisations that protect sites of cultural importance through the establishment of marine protected areas, it should be noted that the legislation used by this jurisdiction, the [Oceans Act, 1996](#), does not provide for the protection of sites of cultural importance to Indigenous communities, thus it cannot protect cultural sites specifically for that purpose. However, the prohibition of activities within a geographic area, with the aim of achieving Marine Protected Area conservation objectives, may result in indirect protection of Indigenous cultural sites.

British Columbia's Protected Areas Strategy includes sites of cultural heritage significance, including First Nation's cultural heritage as a criterion for identifying candidate protected areas. Thus, a significant number of the protected areas in this jurisdiction contain sites of cultural importance. A number of conservancies, designated as a result of government-to-government land use agreements with First Nations, were specifically advanced by First Nations to protect culturally important sites and landscapes. While many of these culturally significant sites may be referred to in public information, such as management plans, the precise nature of the cultural significance or location of the site is often kept confidential at the request of the First Nation.

- Six out of nine marine protected area organisations (67%) reported that sites of cultural importance to Indigenous communities were protected through legislation other than protected area legislation.

- Seven out of nine (78%) indicated that their protected areas legislation or policy enables the customary use of biological resources (e.g. fishing, hunting, trapping and gathering) by people within all of their marine protected areas.

In areas of the ocean where there is an overlap between a Marine Protected Area established by Fisheries and Oceans Canada and an existing food, social and ceremonial fishery, this fishery will continue to take place within the marine protected area provided that conservation objectives will not be compromised. In Parks Canada protected areas, traditional harvesting rights are respected. In protected areas under the jurisdiction of British Columbia, traditional rights including fishing, hunting, trapping and gathering continue to be exercised, subject to public safety and conservation considerations.

### Agreements that provide Indigenous economic and social benefit

Formal impact, benefit, and co-management agreements now provide the framework for collaboration between Indigenous Peoples and federal, provincial and territorial governments. These agreements create a formal mechanism for ensuring that benefits arising from the creation of protected areas are shared with Indigenous Peoples, new opportunities are created, and responsibility for protected areas management is distributed appropriately.



Sundew and Pitcher Plant at Brokenhead Wetland Ecological Reserve  
© Manitoba government

For terrestrial protected areas:

- Ten out of 15 organisations reporting on terrestrial protected areas (67%) indicated that agreements to ensure that Indigenous communities derive economic and social benefits from protected areas located near, adjacent to or surrounding their communities were in place for some of their protected areas.
- Out of these, one territorial organisation (Nunavut) reported that agreements were in place for all of their protected areas. In addition, for all federal protected areas located in settlement areas, agreements such impact and benefit agreements were also in place (Environment and Climate Change Canada and Parks Canada).
- Three out of 15 (20%) indicated that agreements were not in place for any of their protected areas.

In British Columbia, for example, certain North and Central Coast First Nations have enhanced access to economic opportunities consistent with the Reconciliation Protocol Agreements. These take shape through planning and permitting procedures in the protected areas that are part of those agreements.

For marine protected areas:

- Three out of nine organisations reporting on marine protected areas (33%) reported that agreements to ensure that Indigenous communities derive economic and social benefits from protected areas near, adjacent to or surrounding their communities were in place for some of their protected areas.
- Two organisations responded that agreements were in place for their protected areas located in land claim settlement areas and where impact and benefit agreements had been signed. These were Parks Canada for their National Marine Conservation Areas, and Environment and Climate Change Canada for the marine portions that are associated with their terrestrial protected areas in Nunavut.

- Three out of nine (33%) indicated that agreements were not in place for any of their protected areas.

The Tarium Nirvutait Marine Protected Area established together by the Inuvialuit and Fisheries and Oceans Canada is cooperatively managed with the Fisheries Joint Management Committee. Through this process, the Inuvialuit are involved in the management and monitoring of the Marine Protected Area. They are involved in governance, and also manage certain ecological and socio-economic activities within the Marine Protected Area, such as subsistence harvesting, tourism and transportation activities.

### LOCAL COMMUNITY CONSULTATION IN PROTECTED AREA MANAGEMENT

Protected areas are not isolated entities. Their establishment and management have to be undertaken in consideration of various factors that can impact them including the social-economic context where in which they are located. As such, local community involvement in the establishment and management of protected areas will vary greatly depending on the type of protected areas targeted, along with the types of usage for the site or nearby the site. Consulting with a variety of stakeholders and including local communities can help address issues ranging from avoiding conflict, to negotiating collaborative arrangements or partnerships with local communities and groups.

For terrestrial areas:

- Thirteen out of 15 organisations (87%) were either mandated by law or had a policy in place for consulting with communities located near or adjacent to terrestrial protected areas compared to 76% reported in 2011.
- Eleven out of 15 (73%) had management plans that included specific consultation provisions with communities for certain protected areas.

The extent to which communities were consulted regarding management decisions for terrestrial protected areas varied greatly:

- Six out of 15 organisations (40%) indicated that they occasionally consulted with local communities.
- Seven out of 15 (47%) either infrequently held such consultations or only consulted with local communities for major management decisions.
- Two out of 15 (13%) reported consulting on day-to-day management decisions (Nunavut and Northwest Territories).

For example, at the federal level, during the development of management plans for National Wildlife Areas and Migratory Bird Sanctuaries, Environment and Climate Change Canada consults with both local communities and the broader Canadian public. This is the minimum consultation undertaken, with more extensive consultations occurring at certain sites and with respect to certain issues.

At the provincial level, examples of consultation processes with local communities include Nova Scotia. Through the *Wilderness Areas Protection Act*, the Minister is required to consult the public on area designations and management plans and, as a matter of policy, communities may be additionally consulted on particularly controversial issues. Similarly, in Prince Edward Island, public consultation is undertaken before establishing or delisting protected areas on Publicly Owned Lands and public consultation is undertaken on new management plans for Publicly Owned Lands. In Saskatchewan, the ministry and site management teams have been consulting with land use planning and local park advisory groups for major management decisions. These groups include stakeholders, local communities, Indigenous communities and representatives of provincial non-profit organisations who have an interest in the protected area.

For marine protected areas:

- Seven out of nine organisations (78%) with existing marine protected areas had consultation provisions embedded either in law or policy.



William Watson Lodge © Alberta Parks

- Five out of nine (56%) had management plans that included specific consultations with communities.
- Four out of nine (44%) were consulting occasionally while the remaining organisations reported holding infrequent consultations whether on major management decisions or not.

In Manitoba, provincial policy requires a review of all new protected areas with Indigenous Peoples, local communities, mining, petroleum and hydroelectric sectors and broader stakeholder groups involved in selected sites.

Fisheries and Oceans Canada consults with local communities throughout the marine protected area establishment and management process. However, the extent to which this occurs varies according to the specific location of the marine protected area. Potential coastal sites require more community involvement and may lead to having community representatives on the marine protected area Advisory Committee.

### ENGAGEMENT OF RESOURCE SECTORS IN PROTECTED AREA PLANNING AND MANAGEMENT

Engaging industries from resource sectors remains an important and recommended element in the design,

planning, establishment and management of both terrestrial and marine protected areas in Canada for the majority of both terrestrial protected area organisations (13 out of 15) and by marine protected area organisations (eight out of nine).

For terrestrial protected areas and the 13 organisations engaging with resources sectors:

- Four main consultation mechanisms were used for engaging industries:
  - All organisations (13 out of 13) used public consultation processes.
  - Eleven out of 13 (85%) used targeted or specific consultations on protected areas.
  - Ten out of 13 (77%) consulted as part of land-use planning processes.
  - Eight out of 13 (62%) via participation on advisory bodies.
- Ten out of 13 organisations (77%) indicated having ongoing relationships with industries associated with natural resource sectors.
- Six out of 13 (Alberta, British Columbia, Manitoba, Northwest Territories, Nova Scotia and Saskatchewan) reported that they have specifically been engaging resource sectors on land rights withdrawals for establishing terrestrial or freshwater protected areas.

In British Columbia, resource industries have been represented at all land use planning tables where protected area recommendations were developed. In some cases, resource industries have voluntarily relinquished rights to develop resources in order for protected areas to be established.

Manitoba is the only province that reported having an agreement in place with resource industries for the management of lands adjacent to protected areas; Manitoba Hydro takes care to ensure that Manitoba's protected areas are given priority in their efforts to avoid or to minimize potential adverse environmental effects that may be associated with their development activity near protected areas.

For marine protected areas and the eight organisations engaging with resource sectors:

- As was the case for terrestrial protected areas, four types of consultations have been widely used including:
  - Public consultation processes (100% or all eight organisations)
  - Targeted or specific consultations on protected areas (75%)
  - As part of land-use planning processes (50%)
  - Through sitting on advisory bodies (25%)
- Three out of eight organisations (British Columbia, Manitoba and Fisheries and Oceans Canada) reported ongoing relationships in place with relevant resource sectors.
- Two out of eight (British Columbia and Manitoba) also reported having engaged in specific rights withdrawals to enable the establishment of marine protected areas.

### ENGAGEMENT OF NON-GOVERNMENT BODIES OR CITIZEN GROUPS

All aspects of civil society continue to play a role in the creation and expansion of protected areas. Local ‘friends-of’ organisations manage on-site educational programs and lead citizen-science initiatives with the support from government organisations. Provincial and national non-government organisations advocate for, and provide guidance and recommendations on protected areas from identification of candidate sites, to establishment, through to management of protected areas. The level of engagement of civil society in protected areas is a reflection of the relevance of protected areas to Canadians.

For terrestrial protected areas:

- Ten out of 15 organisations (67%) reported partnering with non-government bodies or citizen groups on alternate governance.

In Alberta, the [Eagle Point-Blue Rapids Parks Council](#) is a non-profit organisation that co-manages Eagle Point Provincial Park and Blue Rapids Provincial Recreation

Area through a memorandum of understanding with the Government of Alberta. Another example is the [Glenbow Ranch Park Foundation](#), a partnership with the Government of Alberta, that supports the operations and development of Glenbow Ranch Provincial Park. The foundation focuses on education, research, recreation and stewardship within the park and while the government retains final decision making power, these decisions are made in a highly collaborative environment.

Some organisations responsible for protected areas partner with larger non-governmental organisations such [The Nature Conservancy](#), [Ducks Unlimited](#) and the [Canadian Parks and Wilderness Society](#) such as in the case of the Government of Northwest Territories.

Private landowners can also play a crucial role. In Manitoba for example, under the *Conservation Agreement Act*, private landowners can put a legally binding easement on their land to ensure that future owners maintain the natural features of the land. Similarly, private landowners can have their land designated as natural areas under the provincial legislation to that effect in Prince Edward Island (*Natural Areas Protection Act*) and New Brunswick (*Protected Natural Areas Act*).

For marine protected areas:

- Four out of nine organisations (44%) reported partnering with non-government bodies or citizen groups on alternate governance.

This includes the Government of Quebec, who is working in conjunction with the non-profit organisation [Parc Nature de Pointe-aux-Outardes](#), to develop a management plan for the Manicouagan aquatic reserve.

Environment and Climate Change Canada is also in the process of establishing a marine protected area and has proposed to operate [Scott Islands](#), the first candidate marine National Wildlife Area, through an advisory committee and in close collaboration with local First Nations.

CHAPTER 5

# Federal, Provincial and Territorial Summaries



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#5



Sylvia Grinnell Territorial Park © Curtis Jones;  
Photo provided by Nunavut Parks

## FEDERAL, PROVINCIAL AND TERRITORIAL SUMMARIES

This chapter presents an overview of protected areas according to the sixteen government protected areas organisations included in this report. At the national level and for each province and territory, a summary table provides information on terrestrial and marine protected areas (including marine portions of terrestrial protected areas) administered by each jurisdiction according to International Union for Conservation of Nature management categories. For each province and territory, a summary table provides information on the governance regime for all protected areas in the jurisdiction whether they are governed by a provincial or territorial government, by a federal government agency or department, by a private or non-governmental organisation, by Indigenous Peoples or local communities or through shared governance. For each province, territory and federal protected areas organisation, notable accomplishments made during this reporting period are highlighted. A map is also included for each province and territory showing all protected areas occurring in each as well as all protected areas at the national level for each federal organisation.



Geese in Bylot Island Migratory Bird Sanctuary, Photo: Christian Marcotte © Environment and Climate Change Canada

## ALBERTA

In Alberta, at the end of 2015, terrestrial protected areas covered 83 141 km<sup>2</sup> or 12.6% of the province.<sup>23</sup> About one third of that area (27 422 km<sup>2</sup>) was protected by the province (Table 21). The remainder was made up of federal protected areas (Table 22).

### Most significant accomplishments by Alberta between 2012–2015:

- A commitment was made to establish and add a further 13 784 km<sup>2</sup> to Alberta's protected areas network. This will establish or enlarge 30 parks and protected areas

through the [Land Use Framework's](#) Regional Planning Process in the [Lower Athabasca Regional Plan](#) and [South Saskatchewan Regional Plan](#). These sites are reported to the Conservation Areas Reporting and Tracking System as "interim" until such a time that they are legally established.

- The Alberta Government announced and committed to enhance protection of the Castle area in southwestern Alberta beyond the commitments made under the South Saskatchewan Regional Plan. This is a renowned area that is critical for biodiversity, headwaters, and species at risk in the Crown of the Continent.

**TABLE 21:** Protected areas under the administration of the province of Alberta separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected by the province by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 17                        | 1 328                             | 4.8%   |
|             | Ib  | 28                        | 20 874                            | 76.1%  |
|             | II  | 181                       | 4 105                             | 15.0%  |
|             | III   | 14                        | 77                                | 0.3%   |
|             | IV  | 14                        | 1 039                             | 3.8%   |
| Marine      | N/A   |                           |                                   |  |

**TABLE 22:** All terrestrial protected areas in the province of Alberta separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Alberta |
|--|---------------------------|-----------------------------------|--|
| Federal government                                     | 11                        | 54 632                            | 66.6%  |
| Provincial/territorial government                      | 254                       | 27 422                            | 33.4%  |
| Shared governance                                      | 0                         | 0                                 | 0.0%   |
| Private governance                                     | 0                         | 0                                 | 0.0%   |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%   |

<sup>23</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

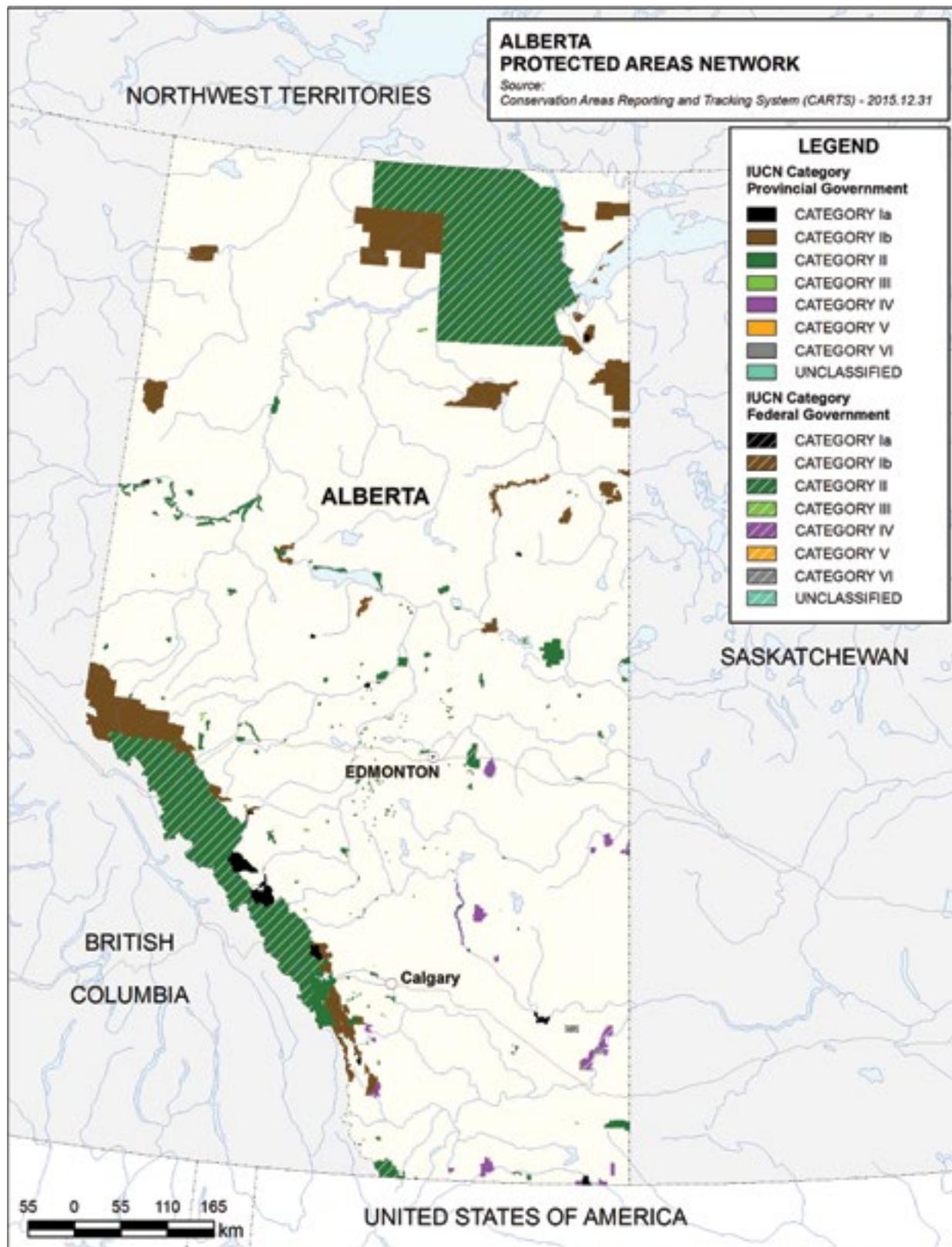
- Subsequent to a private land donation, [Antelope Hill Provincial Park](#) was established in the threatened and highly underrepresented northern fescue grasslands of Alberta.

**Top five priorities for protected areas planning and management by Alberta over the next three to five years:**

- Establishing new protected areas.
- Planning the protected areas network.

- Legislative/regulatory amendments or development.
- Enhancing management in existing protected areas.
- Collaboration with Indigenous governments or communities.





MAP 4: Alberta

## BRITISH COLUMBIA

In British Columbia, at the end of 2015, terrestrial protected areas covered 144 813 km<sup>2</sup> or 15.3% of the province.<sup>24</sup> Nearly all of that area (138 075 km<sup>2</sup>) was protected by the province (Table 23). The remainder was made up of federal protected areas (Table 24). Marine protected areas covered 8 353 km<sup>2</sup>. The Province of British

Columbia administered 4 648 km<sup>2</sup> and the remainder was administered by the federal government.

### Most significant accomplishments by British Columbia, 2012–2015:

- The protected areas network in British Columbia was expanded by 2 798 km<sup>2</sup> through land use planning

**TABLE 23:** Protected areas under the administration of the province of British Columbia separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected the province by biome |
|-------------|---|---------------------------|-----------------------------------|---|
| Terrestrial | Ia  | 147                       | 1 067                             | 0.8%  |
|             | Ib  | 44                        | 58 627                            | 42.5%   |
|             | II  | 728                       | 75 316                            | 54.5%   |
|             | III   | 106                       | 501                               | 0.4%  |
|             | IV  | 28                        | 2 287                             | 1.7%  |
|             | VI  | 2                         | 277                               | 0.2%  |
| Marine      | Ia  | 22                        | 515                               | 11.1%   |
|             | Ib  | 8                         | 140                               | 3.0%  |
|             | II  | 141                       | 3 648                             | 78.5%   |
|             | III   | 13                        | 42                                | 0.9%  |
|             | IV  | 8                         | 304                               | 6.5%  |

**TABLE 24:** All terrestrial and marine protected areas in the province of British Columbia separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of British Columbia |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 14                        | 9 881                             | 6.5%  |
| Provincial/territorial government                      | 1 057                     | 142 723                           | 93.5%   |
| Shared governance                                      | 0                         | 0                                 | 0.0%  |
| Private governance                                     | 0                         | 0                                 | 0.0%  |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |

<sup>24</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

processes and land acquisitions; adding lands for conservation and recreation. This includes some very large new protected areas such as Ne'ah' Conservancy which is 2 333 km<sup>2</sup>. This also includes marine foreshore additions of 1 535 km<sup>2</sup> to nine Haida Gwaii conservancies and 227 km<sup>2</sup> to four conservancies on the Central Coast.

- Two new important policy documents were developed to assist in the management of protected areas in British Columbia:
  - The [Strategic Management Planning Policy for Ecological Reserves, Parks, Conservancies, Protected Areas and Recreation Areas](#) (July 2013). This document outlines the key strategic level components of the British Columbia management planning program and creates a policy requirement to prepare (and keep current) a management plan for every protected area in the BC Parks' system.
  - The [BC Parks Conservation Policy](#), first released in September 1997, was updated and implemented in September 2014. This document provides the current policy statements that direct the day-to-day and long-term actions under which BC Parks manages natural and cultural values within British Columbia's system of protected areas.

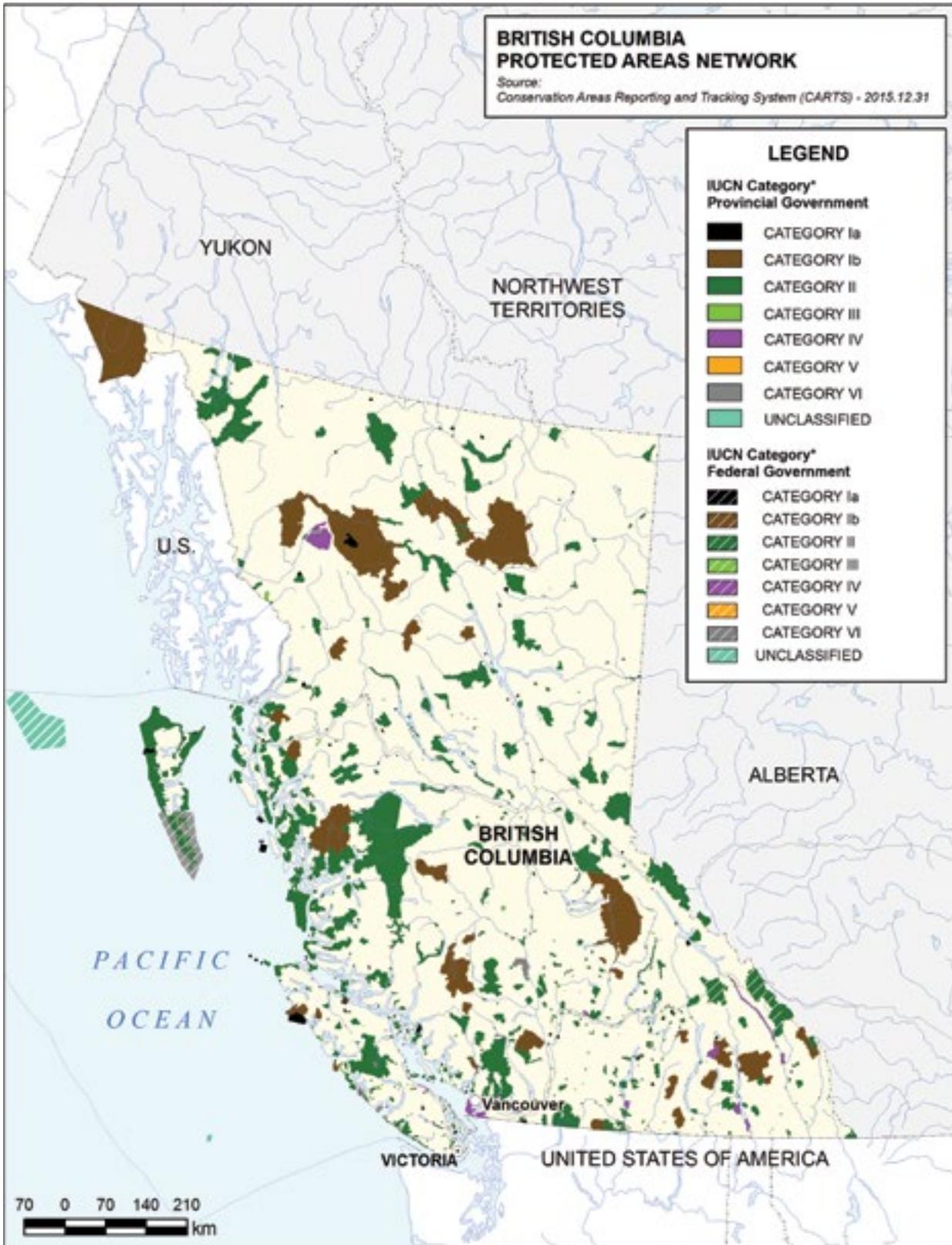
- BC Parks initiated a [Long-term Ecological Monitoring Program](#) within the protected areas system. At the end of 2015, there were 68 sites established with an additional 30 expected in the next few years. These sites are distributed throughout the protected areas system in five ecosystem types: alpine, forest, wetland, grassland and intertidal.

**Top five priorities for protected areas planning and management by British Columbia over the next three to five years:**

- Enhancing management in existing protected areas.
- Increasing visitation.
- Evaluating the protected areas programs.
- Collaboration with Indigenous governments or communities.
- Integrating the protected areas network into broader landscapes or seascapes.



Khutzeymateen Provincial Park [a.k.a. Khutzeymateen/K'tzim-a-deen Grizzly Sanctuary] © BC Parks



MAP 5: British Columbia

## MANITOBA

In Manitoba, at the end of 2015, terrestrial protected areas covered 71 153 km<sup>2</sup> or 10.9% of the province.<sup>25</sup> Over three quarters of that area (57 293 km<sup>2</sup>) was protected by the province or through a shared governance regime (Table 25). The remainder was made up of federal protected areas and private conservation areas (Table 26). Marine protected areas covered 896 km<sup>2</sup>. The province of Manitoba

administered 80 km<sup>2</sup> and the remainder was administered by the federal government.

### Most significant accomplishments by Manitoba between 2012–2015:

- [Places to Keep: Manitoba's Protected Areas Strategy](#) was released in November, 2015. This consultation

**TABLE 25:** Protected areas under provincial or shared governance in Manitoba separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 29                        | 457                               | 0.8%   |
|             | Ib  | 9                         | 29 679                            | 51.8%  |
|             | II  | 27                        | 25 568                            | 44.7%  |
|             | III   | 29                        | 576                               | 1.0%   |
|             | IV  | 37                        | 962                               | 1.7%   |
|             | V   | 6                         | 12                                | <0.1%  |
| Marine      | II  | 1                         | 82                                | 100.0%   |

**TABLE 26:** All terrestrial and marine protected areas in the province of Manitoba separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Manitoba |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 4 <sup>a</sup>            | 14 443                            | 20.2%   |
| Provincial/territorial government                      | 123                       | 44 238                            | 61.5%   |
| Shared governance                                      | 4                         | 13 097                            | 18.2%   |
| Private governance                                     | 184                       | 102                               | 0.1%  |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |

Note:

- <sup>a</sup> Two of these federal protected areas are National Wildlife Areas administered by Environment and Climate Change Canada (International Union for Conservation of Nature category IV). Manitoba does not currently recognize these two sites as part of its protected areas network.

<sup>25</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

document seeks the public's input on the goal to increase the protected areas in Manitoba from the current 11% of the province to 17% of the province by 2020.

- Manitoba created a new park classification and a new land use category under *The Provincial Parks Act* (October 2014) as tools to provide recognition of the Indigenous value of the areas.
  - The Indigenous Traditional Use park classification allows for the preservation of lands that have been traditionally used by Indigenous Peoples and that are significant to Indigenous Peoples because of their natural features or cultural importance. Chitek Lake Anishinaabe Provincial Park was the first park in Manitoba to be designated with the new park classification.
  - The Indigenous Heritage Land Use Category can be used to designate lands within a provincial park to protect a unique or representative site containing a resource of cultural, spiritual or heritage significance to Indigenous Peoples.

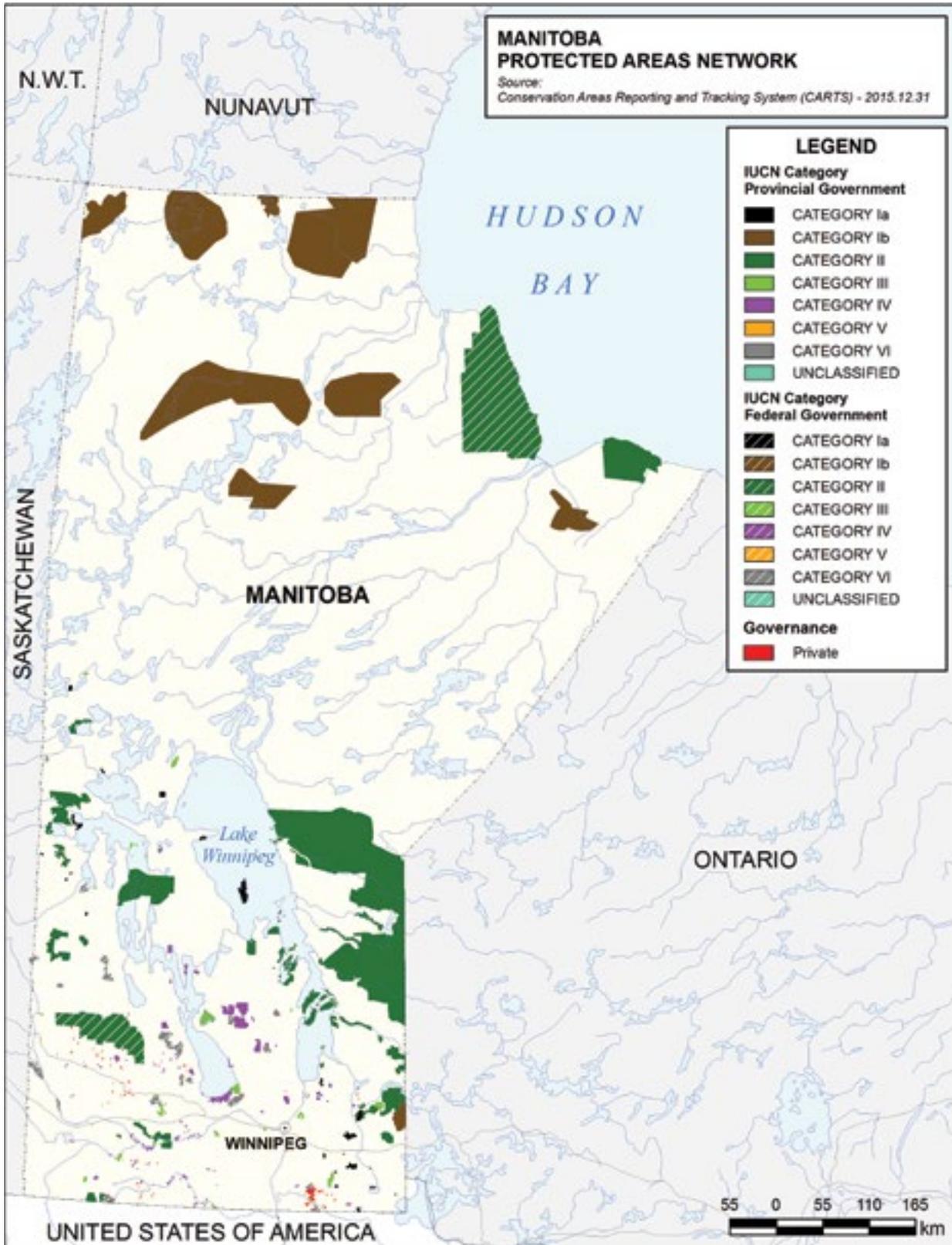
- The 1 137 km<sup>2</sup> [Red Deer Wildlife Management Area](#) was designated in November, 2015. This new Wildlife Management Area protects 900 km<sup>2</sup> of relatively pristine wetland landscape, including globally rare inland salt flats supporting rare plants, marine invertebrates, and salt-loving bacteria.

**Top five priorities for protected areas planning and management by Manitoba over the next three to five years:**

- Establishing new protected areas.
- Meeting protected areas target.
- Collaboration with Indigenous governments, Peoples or communities.
- Collaboration with the private sector.
- Focusing on areas of particular importance for biodiversity.



Cedar Bog Ecological Reserve © Manitoba government



MAP 6: Manitoba

## NEW BRUNSWICK

In New Brunswick, at the end of 2015, terrestrial protected areas covered 3 378 km<sup>2</sup> or 4.6% of the province.<sup>26</sup> The vast majority this area (2 903 km<sup>2</sup>) was protected by the province (Table 27). The remainder was made up of federal protected areas and private conservation areas (Table 28). Marine protected areas covered 65 km<sup>2</sup>. The province of New Brunswick administered approximately 1 km<sup>2</sup> and the remainder was administered by the federal government and one private conservation area.

### Most significant accomplishments by New Brunswick, 2012–2015:

- The addition of 1 145 km<sup>2</sup> of Crown land was designated as Protected Natural Area in 2014. This was accomplished by increasing the size of 22 sites and by designating 142 new sites.
- An additional 10.5 km<sup>2</sup> of private land was also designated as Protected Natural Area in 2014. This was added by increasing the size of one site and designating five new sites.
- The *Parks Act* was revised in 2014. It now includes a requirement for resource management plans for provincial parks and it provides the authority to create an advisory committee including First Nations members.

**TABLE 27:** Protected areas under the administration of the province of New Brunswick separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected by the province by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 6                         | 11                                | 0.4%   |
|             | Ib  | 84                        | 209                               | 7.2%   |
|             | II  | 122                       | 2 683                             | 92.4%  |
| Marine      | Ib  | 4                         | 0.8                               | 56.4%  |
|             | II  | 7                         | 0.2                               | 43.6%  |

**TABLE 28:** All terrestrial and marine protected areas in the province of New Brunswick separated by governance type

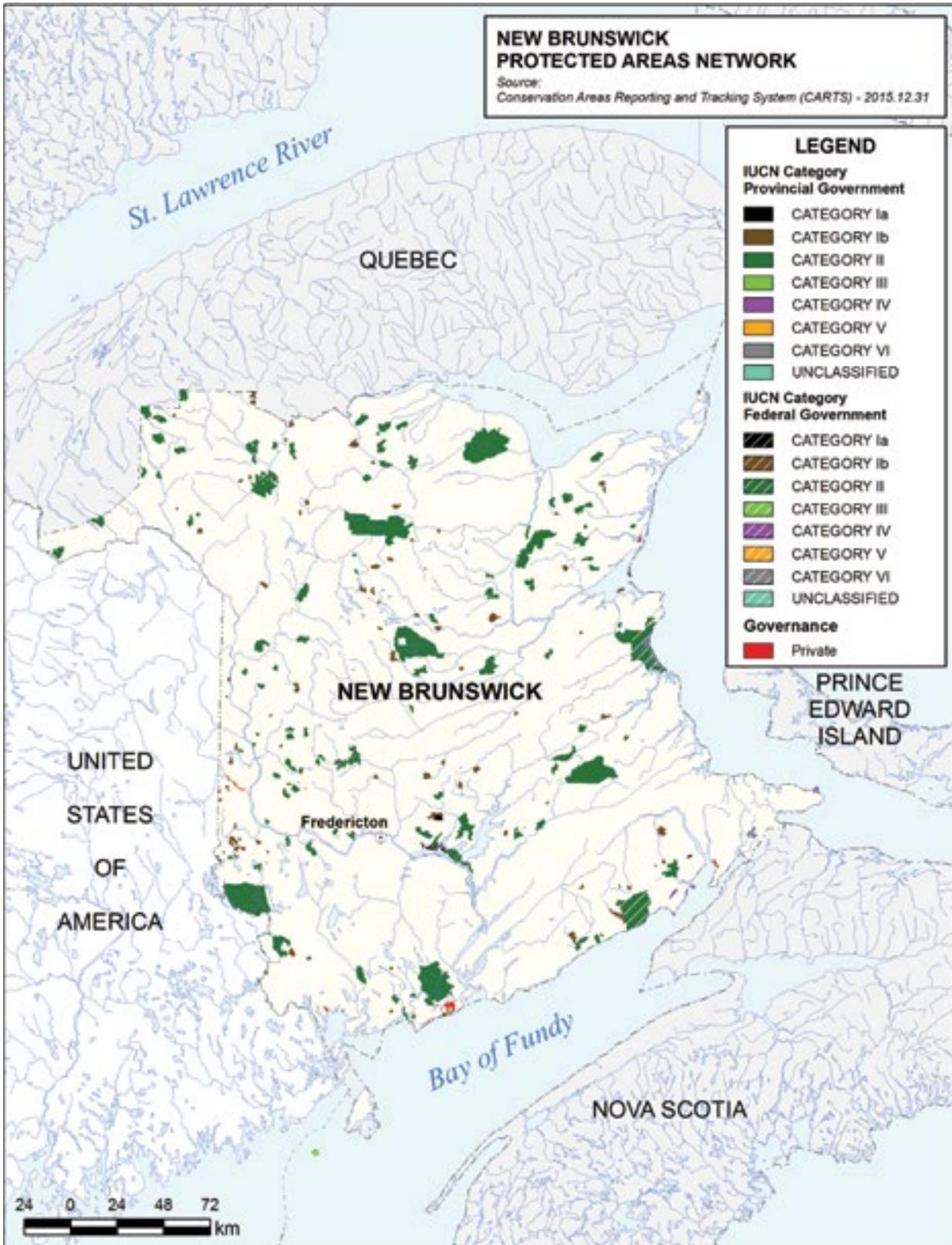
| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of New Brunswick |
|--|---------------------------|-----------------------------------|--|
| Federal government                                     | 9                         | 525                               | 15.2%  |
| Provincial/territorial government                      | 206                       | 2 905                             | 84.2%  |
| Shared governance                                      | 0                         | 0                                 | 0.0%   |
| Private governance                                     | 6                         | 19                                | 0.5%   |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%   |

<sup>26</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

**Top five priorities for protected areas planning and management by New Brunswick over the next three to five years:**

- Developing or updating management plans.
- Identifying threats to ecological health or integrity of protected areas.
- Furthering education and outreach.
- Collaborating with non-governmental conservation organisations.
- Improving monitoring and management of infrastructure.





MAP 7: New Brunswick

## NEWFOUNDLAND AND LABRADOR

In Newfoundland and Labrador, at the end of 2015, terrestrial protected areas covered 29 420 km<sup>2</sup> or 7.3% of the province.<sup>27</sup> Nearly one quarter of this area (6 630 km<sup>2</sup>) was protected by the province (Table 29). The remainder was made up of federal protected areas (Table 30). Marine protected areas covered 233 km<sup>2</sup>. The province of Newfoundland and Labrador administered 156 km<sup>2</sup> and the remainder was administered by the federal government.

### Most significant accomplishments by Newfoundland and Labrador, 2012–2015:

- A [new national park reserve](#) was established in collaboration with Parks Canada in the Mealy Mountains area of Labrador in 2015. The park reserve protects roughly 10 700 km<sup>2</sup>, which is the largest national park in eastern Canada. Establishment was a multi-year joint effort undertaken by Parks Canada and the Government of Newfoundland and Labrador to refine,

**TABLE 29:** Protected areas under the administration of the province of Newfoundland and Labrador separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial administration by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 3                         | 7                                 | 0.1%   |
|             | Ib  | 2                         | 3 965                             | 59.8%  |
|             | II  | 40                        | 1 230                             | 18.6%  |
|             | III   | 6                         | 3                                 | <0.1%  |
|             | VI  | 6                         | 1 424                             | 21.5%  |
| Marine      | VI  | 7                         | 156                               | 100.0%   |

**TABLE 30:** All terrestrial and marine protected areas in the province of Newfoundland and Labrador separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Newfoundland and Labrador |
|--|---------------------------|-----------------------------------|--|
| Federal government                                     | 9                         | 22 681                            | 77.0%  |
| Provincial/territorial government                      | 57                        | 6 785                             | 23.0%  |
| Shared governance                                      | 0                         | 0                                 | 0.0%   |
| Private governance                                     | 0                         | 0                                 | 0.0%   |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%   |

<sup>27</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

define and mark the boundary and develop an approach for addressing existing uses by Indigenous groups and local Labrador residents.

- Two ecological reserves were established under the [Wilderness and Ecological Reserves Act](#): [Sandy Cove Ecological Reserve](#) (botanical reserve) in 2013 and [Lawn Bay Ecological Reserve](#) (seabird reserve) in 2015. Sandy Cove Ecological Reserve protects an endangered plant species, Long's Braya (*Braya longii*), endemic to the limestone barrens on the Great Northern Peninsula of Newfoundland. The Reserve is globally significant because it contains 95% of the world's population of Long's Braya occurring on undisturbed habitat. Lawn Bay Ecological Reserve, off the Burin Peninsula along the southern coast of Newfoundland, contains the only known breeding colony of Manx Shearwater (*Puffinus puffinus*) in North America. The islands in the Reserve also support a significant population of Leach's Storm-Petrel (*Oceanodroma leucorhoa*) and smaller numbers of other breeding seabirds.
- Through a partnership with a local community group from Portugal Cove South, on the Avalon Peninsula of

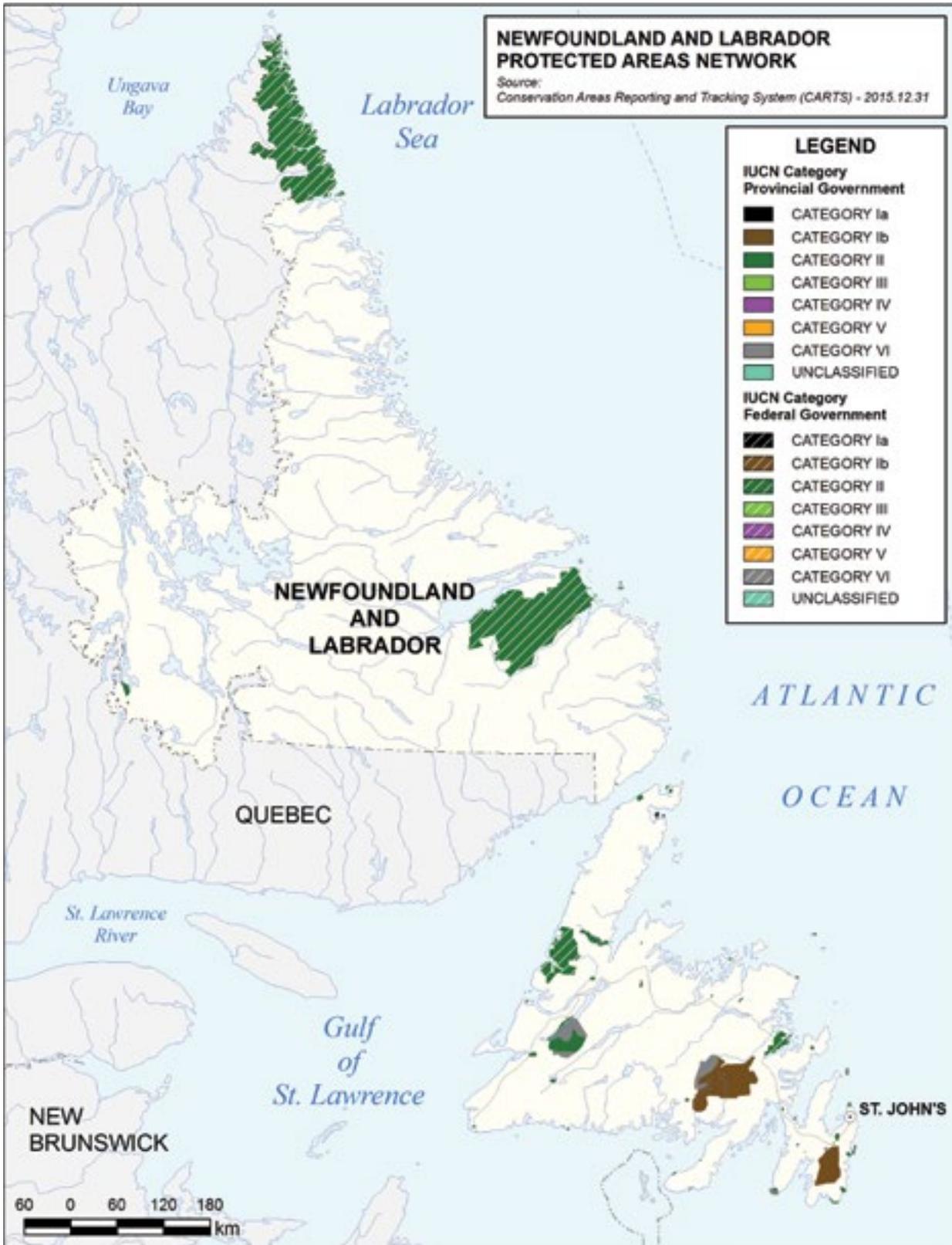
Newfoundland and Labrador, the provincial Department of Environment and Conservation submitted a nomination to the United Nations Educational, Scientific, and Cultural Organization World Heritage Committee to inscribe Mistaken Point Ecological Reserve as a World Heritage Site. The process of developing the nomination created a strong management framework for the property with a jointly developed management plan, new management structure, long-term monitoring protocols and strong community support.

**Top five priorities for protected areas planning and management by Newfoundland and Labrador over the next three to five years:**

- Identifying priority areas for protection.
- Establishing new protected areas.
- Meeting protected areas targets.
- Enhancing management in existing protected areas.
- Furthering education and outreach.



Gros Morne National Park, Newfoundland and Labrador, Photo: Charles Shulman © Environment and Climate Change Canada



MAP 8: Newfoundland and Labrador

## NORTHWEST TERRITORIES

In Northwest Territories, at the end of 2015, terrestrial protected areas covered 125 646 km<sup>2</sup> or 9.3% of the territory.<sup>28</sup> Nearly one fifth of this area (22 917 km<sup>2</sup>) was protected by the territory or through a shared governance regime (Table 31). The remainder was made up of federal protected areas and one protected area under Indigenous governance (Table 32). Marine protected areas covered 2 960 km<sup>2</sup>, administered by the federal government.

### Most significant accomplishments by Northwest Territories, 2012–2015:

- The [Tlicho Land Use Plan](#) was released in 2013, creating the newest protected area in the Northwest Territories, Wehexlaxodiale; a land use exclusion zone.
- The [Land Use and Sustainability Framework](#) was released in 2014. This framework is a guiding document for the government of the Northwest Territories

**TABLE 31:** Protected areas under territorial or shared governance in Northwest Territories separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under territorial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|---|
| Terrestrial | Ib  | 4                         | 22 917                            | 100.0%  |
| Marine      | N/A   |                           |                                   |   |

**TABLE 32:** All terrestrial and marine protected areas in the Northwest Territories separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the territory of Northwest Territories |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 12                        | 103 692                           | 81.3%   |
| Provincial/territorial government                      | 1                         | 21 270                            | 16.7%   |
| Shared governance                                      | 2                         | 1 648                             | 1.3%  |
| Private governance                                     | 0                         | 0                                 | 0.0%  |
| Governance by Indigenous Peoples and local communities | 1                         | 977                               | 0.8%  |

<sup>28</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

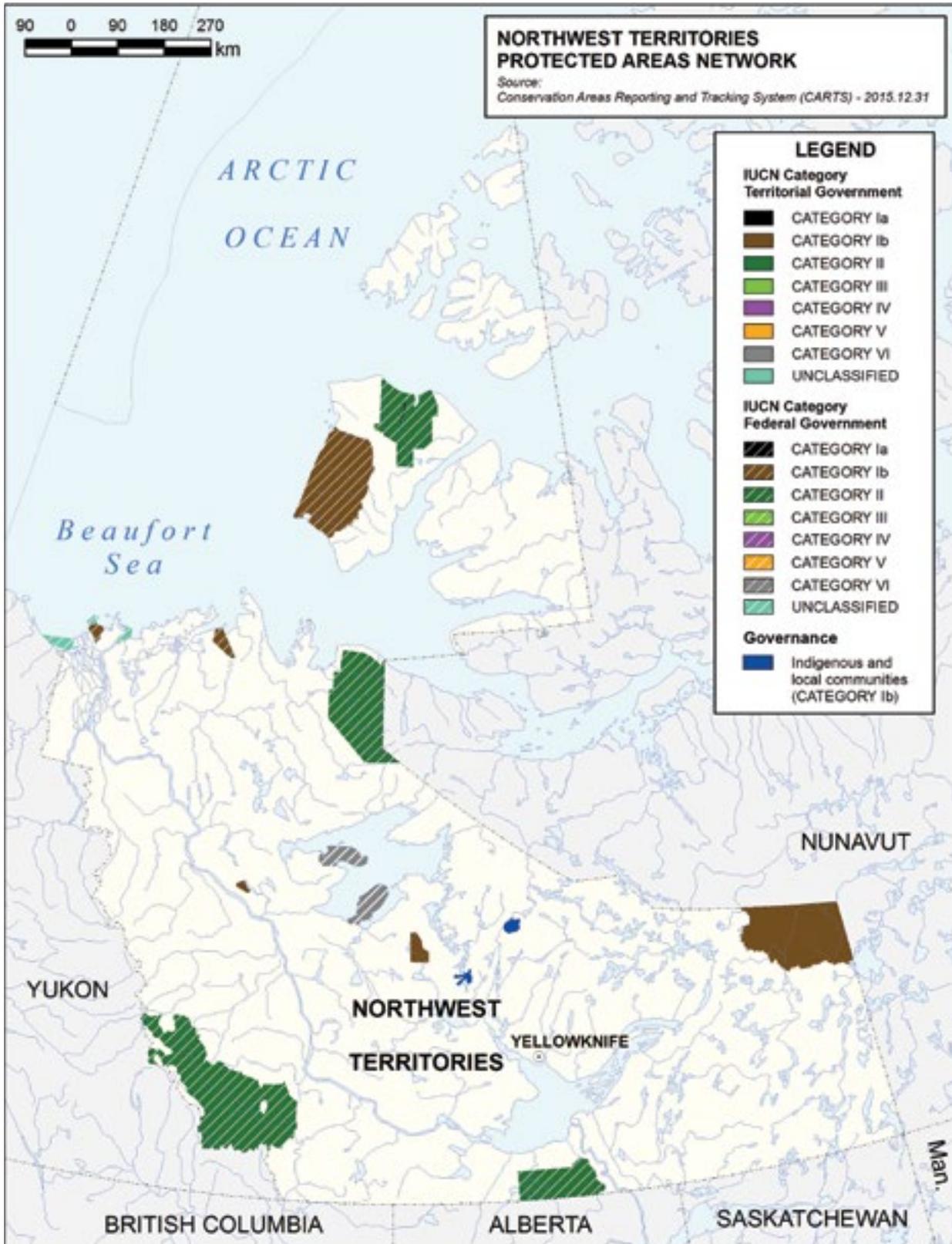
on taking over the management of land, water, and resources in the Northwest Territories public interest from the federal government post-devolution (April 1, 2014).

**Top five priorities for protected areas planning and management by Northwest Territories over the next three to five years:**

- Establishing new protected areas.
- Planning the protected areas network.
- Legislative/regulatory amendments or development.
- Collaboration with Indigenous governments or communities.
- Determining conservation network planning priorities for the next five years.



Kendall Island Migratory Bird Sanctuary © Kim Jones



MAP 9: Northwest Territories

## NOVA SCOTIA

In Nova Scotia, at the end of 2015, terrestrial protected areas covered 5 366 km<sup>2</sup> or 9.7%<sup>29</sup> of the province.<sup>30</sup> About three quarters of this area (3 963 km<sup>2</sup>) was protected by the province or through a shared governance regime (Table 33). The remainder was made up of federal protected areas (Table 34). Marine protected areas covered 22 km<sup>2</sup>, administered by the federal government.

### Most significant accomplishments by Nova Scotia, 2012–2015:

- “[Our Parks and Protected Areas—A Plan for Nova Scotia](#)” was released in August 2013, capping a planning process that began in 2005. By the end of 2015, 9.7%<sup>28</sup> of Nova Scotia’s landmass was protected, with an additional 2.4% designated by Order in Council and protected on an interim basis until final survey plans are

**TABLE 33:** Protected areas under provincial or shared governance in Nova Scotia separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 40                        | 206                               | 5.2%   |
|             | Ib  | 34                        | 3 263                             | 82.3%  |
|             | II  | 2                         | 269                               | 6.8%   |
|             | III   | 8                         | 72                                | 1.8%   |
|             | IV  | 35                        | 154                               | 3.9%   |
| Marine      | N/A   |                           |                                   |  |

**TABLE 34:** All terrestrial and marine protected areas in the province of Nova Scotia separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Nova Scotia |
|--|---------------------------|-----------------------------------|--|
| Federal government                                     | 16                        | 1 453                             | 26.8%  |
| Provincial/territorial government                      | 115                       | 3 916                             | 72.3%  |
| Shared governance                                      | 5                         | 47                                | 0.9%   |
| Private governance                                     | 0                         | 0                                 | 0.0%   |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%   |

<sup>29</sup> In late December 2015, Nova Scotia designated through Orders in Council additional lands which will take the province to about 12.1%, according to Conservation Areas Reporting and Tracking System standards, but these areas, amounting to about 2.4% of the province, do not come into legal effect until their survey plans are signed and deposited in the Crown Land Information Centre, expected sometime in 2016. In the meantime, they are managed under interim policies and procedures to maintain their natural character, and are reported as “Interim” in the Conservation Areas Reporting and Tracking System. Also, Nova Scotia currently internally accounts certain privately conserved areas as protected areas amounting to about 0.2% of the province. These areas are not reported to the Conservation Areas Reporting and Tracking System because they are not protected from mineral or oil and gas development.

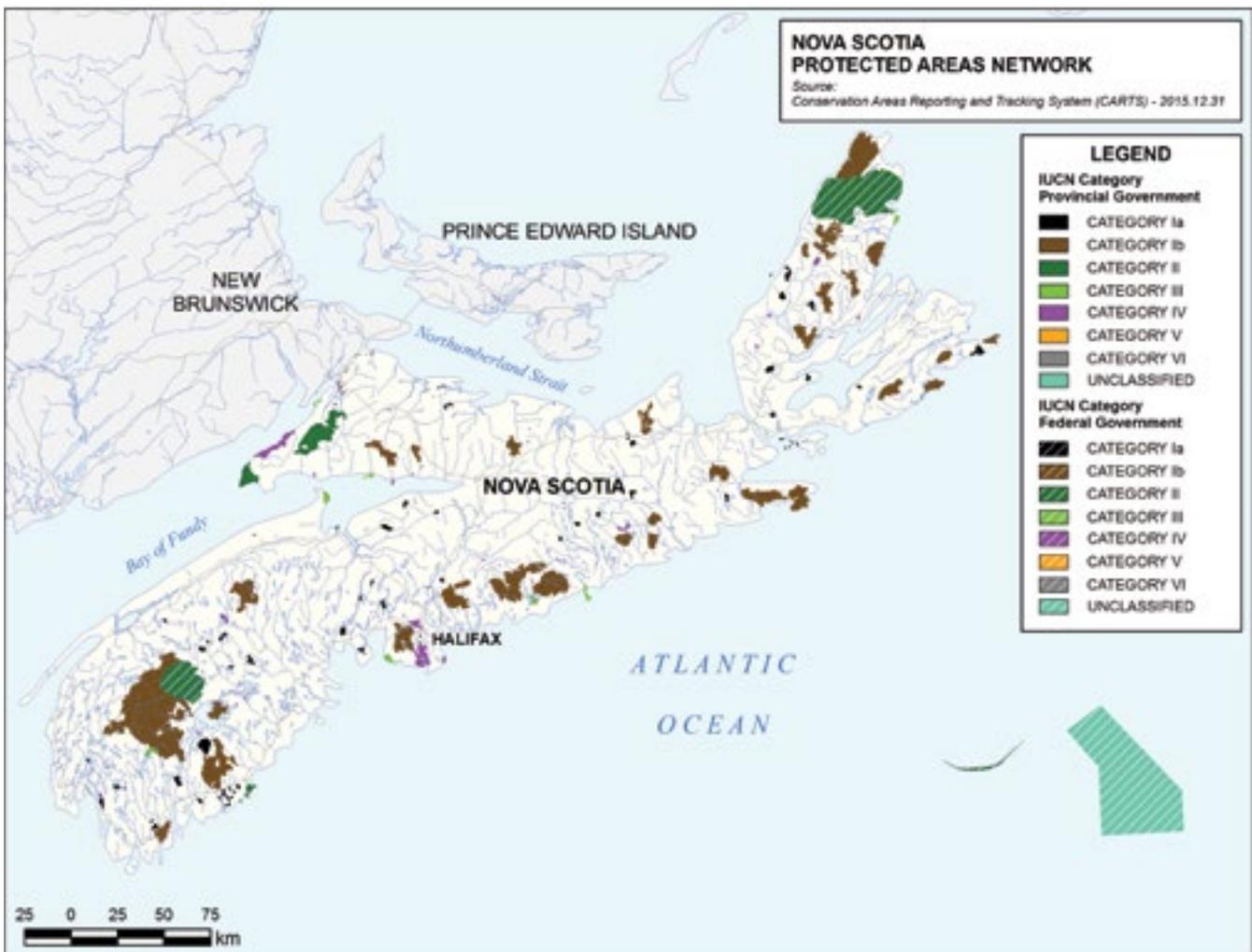
<sup>30</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

prepared. A commitment to achieve 13% protection was re-stated in December 2015 by way of mandate letters from the Premier to the Ministers of Environment and Natural Resources.

**Top five priorities for protected areas planning and management by Nova Scotia over the next three to five years:**

- Meeting protected areas targets.

- Legislative/regulatory amendments or development.
- Identifying threats to ecological health or integrity of protected areas.
- Furthering education and outreach.
- Developing a Protected Areas Management Planning Framework.



MAP 10: Nova Scotia

## NUNAVUT

In Nunavut, at the end of 2015, terrestrial protected areas covered 211 996 km<sup>2</sup> or 10.1% of the territory.<sup>31</sup> A small proportion of this area (1 590 km<sup>2</sup>) was protected by the territory or through a shared governance regime (Table 35). The remainder was made up of federal protected areas (Table 36). Marine protected areas covered 24 655 km<sup>2</sup>, administered by the federal government.

### Most significant accomplishments by Nunavut, 2012–2015:

- [New regulations](#) under the *Nunavut Wildlife Act* were developed.

- A draft of the Nunavut Land Use Plan was developed by the [Nunavut Planning Commission](#) in consultation with the Government of Canada, Government of Nunavut, Inuit associations, regulatory bodies, communities, etc.
- The following draft documents were developed:
  - Park program for Nunavut Parks.
  - Master and Management Planning Frameworks.
  - Cultural Landscape Resource Inventory Framework.

### Top five priorities for protected areas planning and management by Nunavut over the next three to five years:

- Legislative/regulatory amendments or development.

**TABLE 35:** Protected areas under territorial or shared governance in Nunavut separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under territorial or shared administration by biome |
|-------------|---|---------------------------|-----------------------------------|---|
| Terrestrial | II  | 1                         | 1 462                             | 92.0%   |
|             | V   | 7                         | 128                               | 8.1%  |
| Marine      | N/A   |                           |                                   |   |

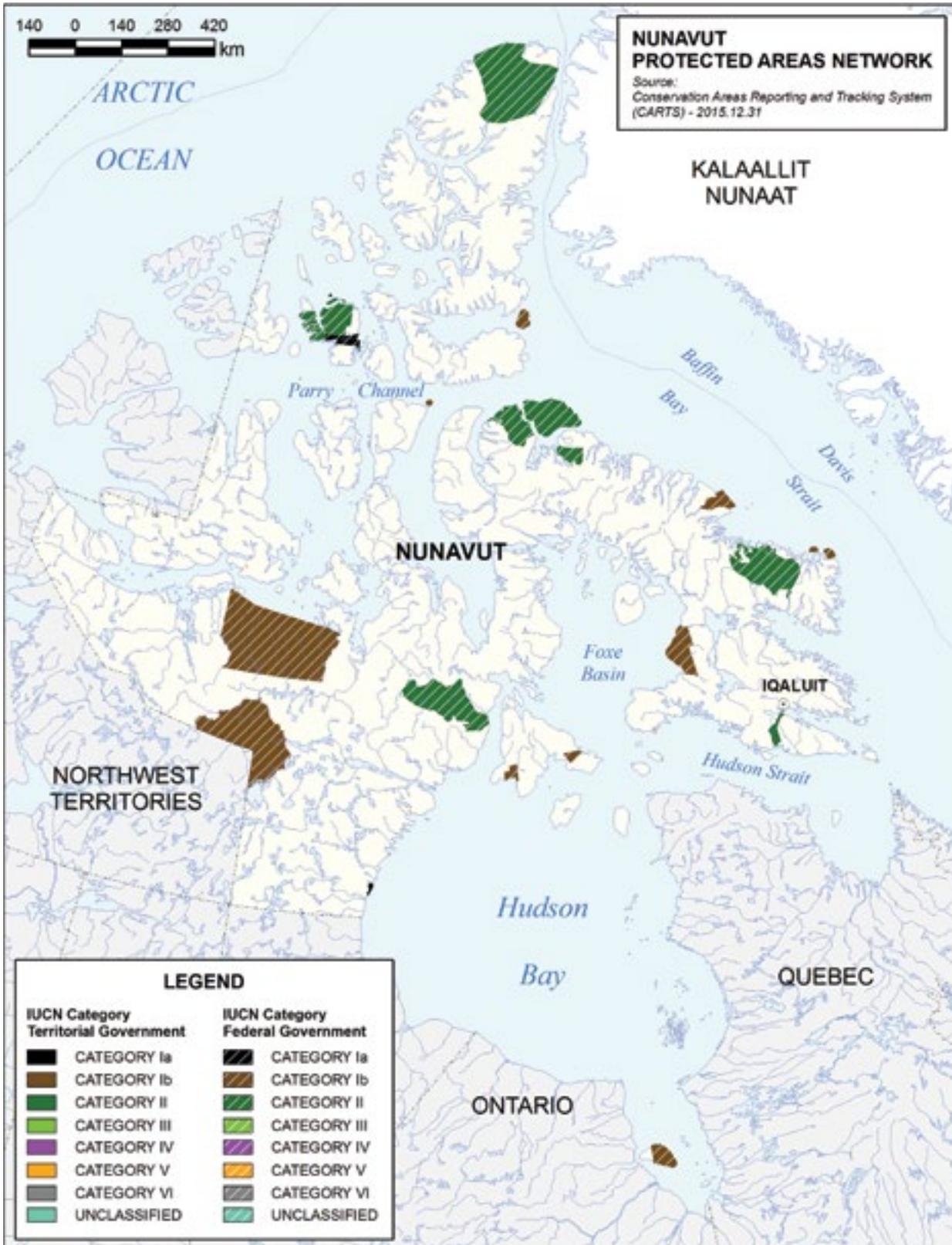
**TABLE 36:** All terrestrial and marine protected areas in the territory of Nunavut separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the territory of Nunavut |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 20                        | 242 927                           | 99.3%   |
| Provincial/territorial government                      | 7                         | 128                               | 0.1%  |
| Shared governance                                      | 1                         | 1 462                             | 0.6%  |
| Private governance                                     | 0                         | 0                                 | 0.0%  |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |

<sup>31</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

- Developing or updating management plans.
- Enhancing management in existing protected areas.
- Collaboration with Indigenous governments or communities.
- Fully establishing parks that are currently awaiting legislative protection due to land transfer.





MAP 11: Nunavut

## ONTARIO

In Ontario, at the end of 2015, terrestrial protected areas covered 119 476 km<sup>2</sup> or 11.1% of the province.<sup>32</sup> The vast majority of this area (106 699 km<sup>2</sup>) was protected by the province or through a shared governance regime (Table 37). The remainder was made up of federal protected areas (Table 38). Marine protected areas covered 66 km<sup>2</sup>, administered by the federal government.

### Most significant accomplishments by Ontario, 2012–2015:

- Completed the [Ontario's Protected Areas Planning Manual and Guidelines](#) in 2015.
- Established [five new provincial parks](#) (2014).
- Participated in the [Algonquin land claim process](#), including the development of a chapter in the land claim on Parks and Protected Areas.

**TABLE 37:** Protected areas under provincial or shared governance in Ontario separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 113                       | 1 210                             | 1.1%   |
|             | Ib  | 8                         | 48 405                            | 45.4%  |
|             | II  | 505                       | 44 729                            | 41.9%  |
|             | III   | 17                        | 76                                | 0.1%   |
|             | IV  | 5                         | 3 495                             | 3.3%   |
|             | Unclassified  | 4                         | 8 785                             | 8.2%   |
| Marine      | N/A   |                           |                                   |  |

**TABLE 38:** All terrestrial and marine protected areas in the province of Ontario separated by governance type

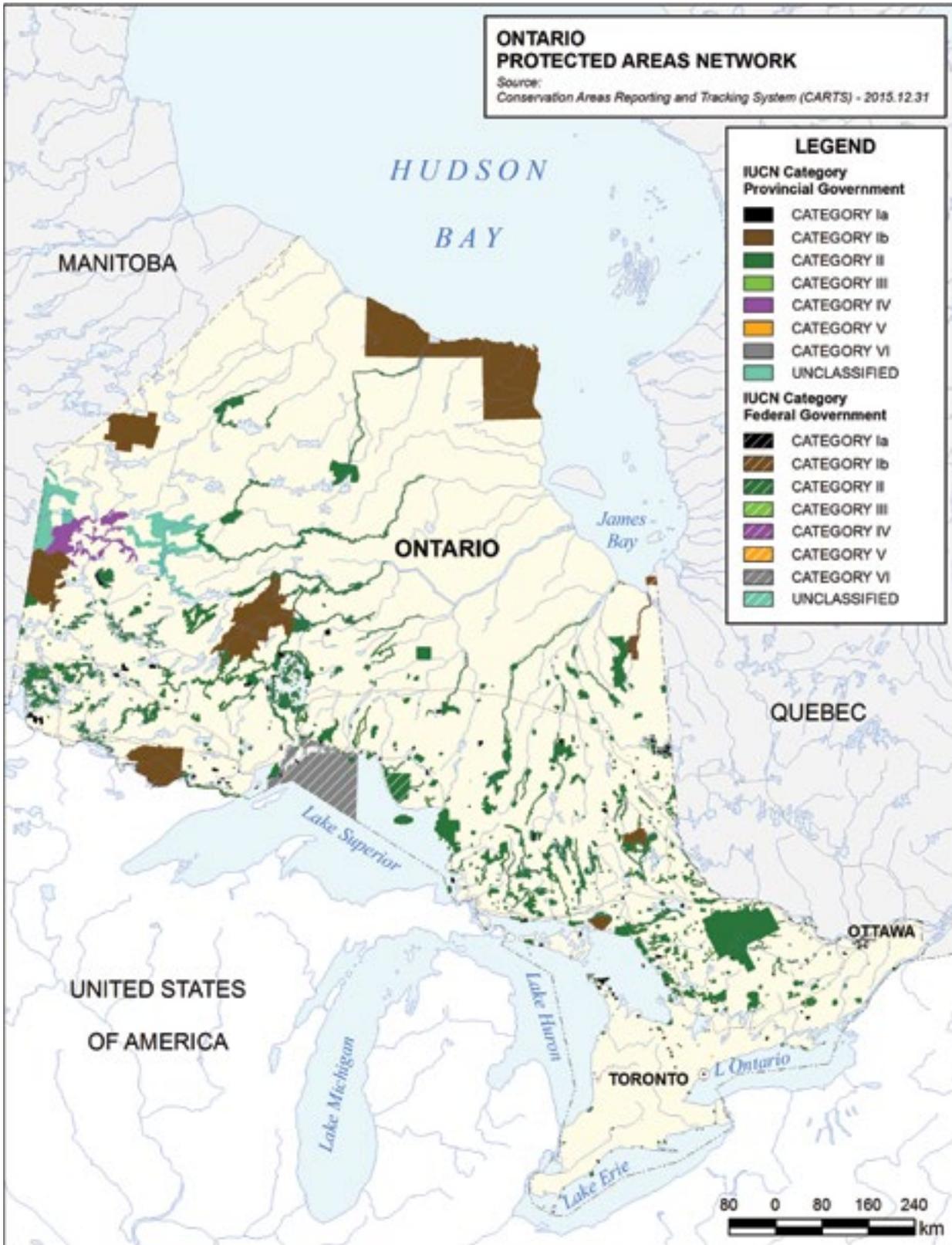
| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Ontario |
|--|---------------------------|-----------------------------------|--|
| Federal government                                     | 41                        | 13 523                            | 11.2%  |
| Provincial/territorial government                      | 647                       | 103 204                           | 85.8%  |
| Shared governance                                      | 5                         | 3 495                             | 2.9%   |
| Private governance                                     | 0                         | 0                                 | 0.0%   |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%   |

<sup>32</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

**Top five priorities for protected areas planning and management by Ontario over the next three to five years:**

- Establishing new protected areas.
- Legislative/regulatory amendments or development.
- Developing or updating management plans.
- Enhancing management in existing protected areas.
- Collaboration with Indigenous governments or communities.





MAP 12: Ontario

## PRINCE EDWARD ISLAND

In Prince Edward Island, at the end of 2015, terrestrial protected areas covered 175 km<sup>2</sup> or 3.1% of the province.<sup>33</sup> The vast majority of that area (124 km<sup>2</sup>) was protected by the province or through a shared governance regime (Table 39). The remainder was made up of federal protected areas and private conservation areas (Table 40). Marine protected areas covered 21 km<sup>2</sup>. The province of Prince Edward Island administered 11 km<sup>2</sup> through provincial or shared governance with the remainder

administered by federal government or under private governance.

### Most significant accomplishments by Prince Edward Island, 2012–2015:

- An additional 9.72 km<sup>2</sup> were added to the Prince Edward Island Protected Areas Network; 61% of which is privately owned. As approximately 90% of the land on Prince Edward Island is privately owned, the

**TABLE 39:** Protected areas under provincial or shared governance in Prince Edward Island separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | II  | 7                         | 8                                 | 5.7%   |
|             | III   | 58                        | 34                                | 31.2%  |
|             | IV  | 59                        | 81                                | 62.4%  |
|             | V   | 3                         | <1                                | 0.7%   |
| Marine      | Ib  | 1                         | 1                                 | 10.5%  |
|             | II  | 2                         | <1                                | 1.3%   |
|             | III   | 18                        | 2                                 | 28.0%  |
|             | IV  | 22                        | 7                                 | 60.2%  |

**TABLE 40:** All terrestrial and marine protected areas in the province of Prince Edward Island separated by governance type

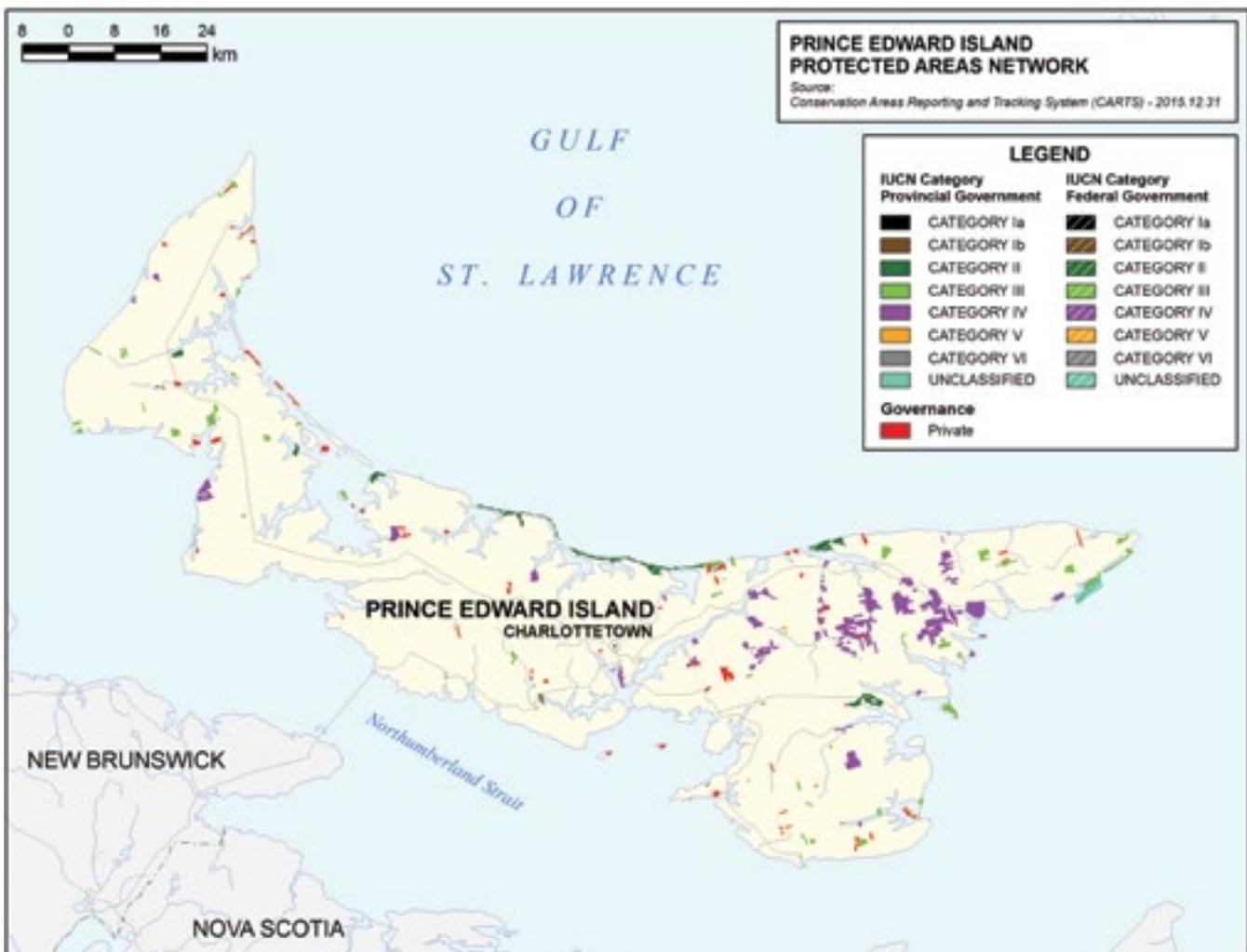
| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Prince Edward Island |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 2                         | 36                                | 19.4%   |
| Provincial/territorial government                      | 84                        | 114                               | 60.9%   |
| Shared governance                                      | 6                         | 17                                | 9.1%  |
| Private governance                                     | 58                        | 20                                | 10.7%   |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |

<sup>33</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

protection of private lands is a key element in increasing the network. Partners like [Island Nature Trust](#) and [Nature Conservancy of Canada](#), aid in this process by acquiring and protecting lands as well as by facilitating designations with private landowners.

**Top five priorities for protected areas planning and management over the next three to five years:**

- Expand the protected areas network in a targeted way.
- Developing or updating management plans.
- Reporting on protected areas, with an increased focus on monitoring.
- Collaboration with non-governmental conservation organisations.
- Collaboration with the private sector.



MAP 13: Prince Edward Island

## QUEBEC

In Quebec, at the end of 2015, terrestrial protected areas<sup>34</sup> covered 147 392 km<sup>2</sup>, about 9.75% of the province.<sup>35</sup>

Nearly all of this area (145 910 km<sup>2</sup>) was protected by the province or through a shared governance regime (Table 41).

The remainder was made up of federal protected areas (Table 42). Marine protected area covered 5 663 km<sup>2</sup>.

The province of Quebec administered 5 331 km<sup>2</sup> through provincial or shared governance and the remainder was administered by the federal government.

**TABLE 41:** Protected areas under provincial or shared governance in Quebec separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 115                       | 1 624                             | 1.1%   |
|             | II  | 132                       | 136 943                           | 93.8%  |
|             | III   | 208                       | 375                               | 0.2%   |
|             | IV  | 2 878                     | 6 764                             | 4.6%   |
|             | V   | 1                         | <1                                | <0.1%  |
|             | VI  | 353                       | 117                               | 0.2%   |
|             | Unclassified  | 122                       | 87                                | 0.1%   |
| Marine      | II  | 15                        | 2 933                             | 55.0%  |
|             | III   | 4                         | 5                                 | 0.1%   |
|             | IV  | 486                       | 2 390                             | 44.8%  |
|             | VI  | 1                         | 6                                 | 0.1%   |
|             | Unclassified  | 1                         | <1                                | <0.1%  |

**TABLE 42:** All terrestrial and marine protected areas in the province of Quebec separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Quebec |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 39                        | 1 813                             | 1.2%  |
| Provincial/territorial government                      | 3 953                     | 149 797                           | 97.9%   |
| Shared governance                                      | 206                       | 1 445                             | 0.9%  |
| Private governance                                     | 0                         | 0                                 | 0.0%  |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |

<sup>34</sup> This excludes the natural environment of voluntary conservation (milieux naturels de conservation volontaire).

<sup>35</sup> The numbers presented here were taken from the Quebec's Register of Protected Areas ([Registre des aires protégées du Québec](#)). Quebec has a legal obligation to hold a registry to provide information on protected areas in Quebec. The Register contains information that is available online on the surface area and the percentage of Quebec's territory covered by protected areas, with calculations adjusted to correct for overlaps. The Register is also based on the classification according to the different categories recognized by the International Union for Conservation of Nature.

**Most significant accomplishments by Quebec, 2012–2015:**

- The provincial national parks network expanded with the creation of two new parks ([Opémican](#) and [Tursujuq](#)), and the initiation of a regulatory process for increasing the size of eight others located in the south of the province.
- With the objective of increasing the proportion of protected areas covering its territory from 8% to 12%, numerous consultations were held across various regions of the province in order to warrant the strong support of local stakeholders for the provincial targets, which include the development of the biodiversity and aquatic reserves network on public lands.
- One hundred fifteen natural reserves were recognized, totalling approximately 98 km<sup>2</sup>. It is also worth noting

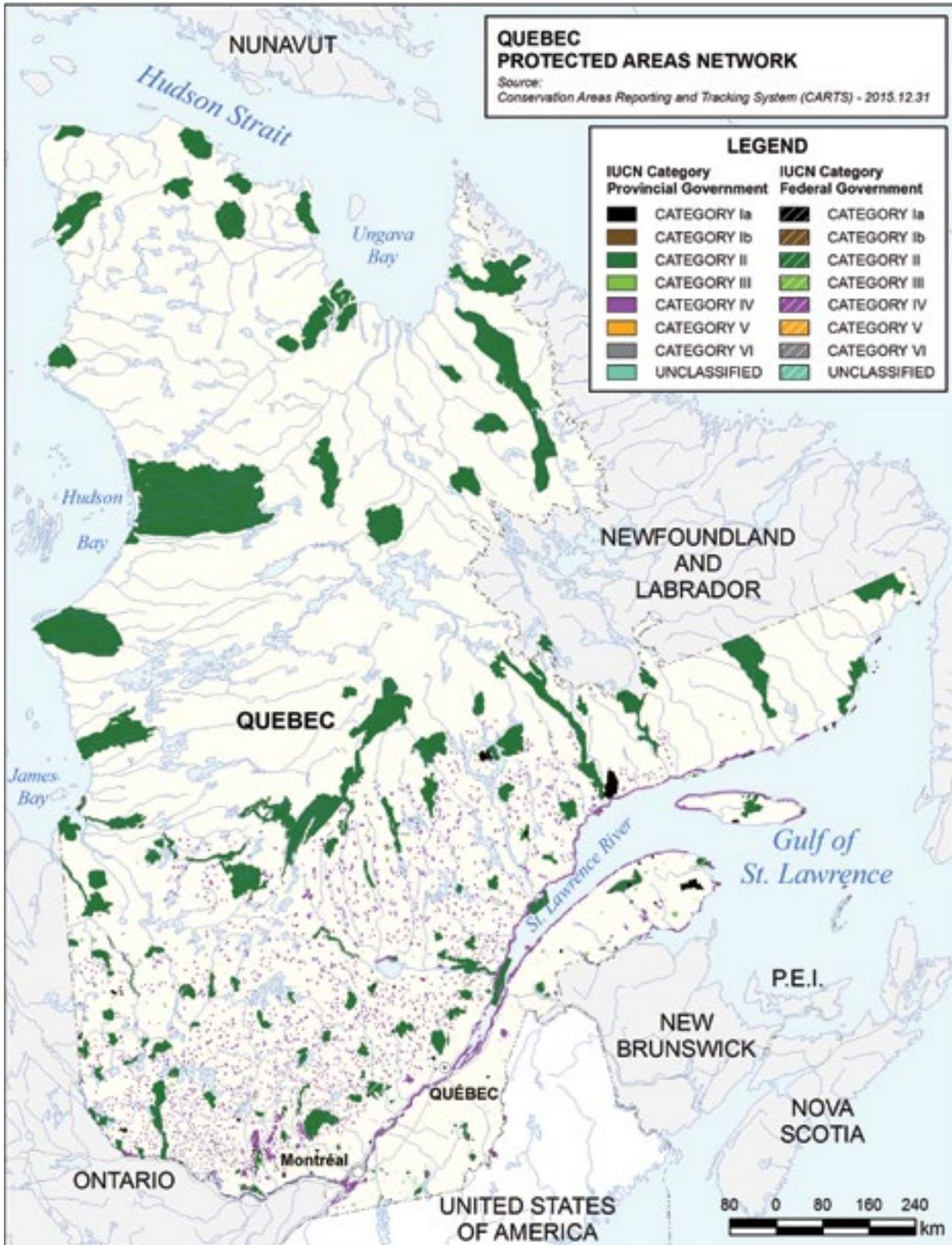
that 38 ecological gifts were completed, valued at \$18 401 703 and covering 30 km<sup>2</sup>.

**Top five priorities for protected areas planning and management by Quebec over the next three to five years:**

- Establishing new protected areas.
- Network planning.
- Meeting protected areas targets.
- Legislative/regulatory amendments or development.
- Developing or updating management plans.



Study area of the proposed Kovik River aquatic reserve © Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques



MAP 14: Quebec

## SASKATCHEWAN

In Saskatchewan, at the end of 2015, terrestrial protected areas covered 55 468 km<sup>2</sup> or 8.5% of the province.<sup>36</sup> Over three quarters of this area (44 441 km<sup>2</sup>) was protected by the province or through a shared governance regime (Table 43). The remainder was made up of federal protected areas (Table 44).

Approximately 7 400 km<sup>2</sup> of community pastures in Saskatchewan, previously protected by Agriculture and Agri-Food Canada under the Prairie Farm Rehabilitation Administration program, is reported as protected area but is categorized as “In transition” between federal and provincial governments with respect to governance. The area is included in the amount of area protected in

**TABLE 43:** Protected areas under provincial or shared governance in Saskatchewan separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under provincial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 5                         | 1 599                             | 3.6%   |
|             | Ib  | 38                        | 13 308                            | 30.0%  |
|             | II  | 11                        | 6 749                             | 15.2%  |
|             | III   | 33                        | 104                               | 0.2%   |
|             | IV  | 54                        | 4 282                             | 9.6%   |
|             | V   | 123                       | 672                               | 1.5%   |
|             | VI  | 54                        | 17 727                            | 39.9%  |
| Marine      | N/A   |                           |                                   |  |

**TABLE 44:** All terrestrial protected areas in the province of Saskatchewan separated by governance type

| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the province of Saskatchewan |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 22                        | 5 378                             | 9.4%  |
| Provincial/territorial government                      | 317                       | 42 066                            | 73.8%   |
| Shared governance                                      | 1                         | 2 375                             | 4.2%  |
| Private governance                                     | 0                         | 0                                 | 0.0%  |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |
| In Transition (Community Pasture)                      | 63                        | 7 160                             | 12.6%   |

<sup>36</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

Saskatchewan, but is not reported as area under either federal or provincial administration.

**Most significant accomplishments by Saskatchewan, 2012–2015:**

- [Pink Lake Representative Area Ecological Reserve](#) and [Great Blue Heron Provincial Park](#) were established and formally designated (2013). Both of these designations were the result of many years of cooperative planning, consultation and work with First Nations and Metis communities, stakeholders and interest groups. These additions are valuable contributions to the Representative Areas Network.
- The [Southern Conservation Land Management Strategy](#) was developed, approved and implemented. The legislative changes allow for the sale of lower ecological valued lands designated under The *Wildlife Habitat Protection Act*, the protection of additional higher ecological valued lands under that *Act*, and the creation of a new Crown conservation easement that is registered on suitable lands as a condition of sale. The implementation of the Strategy is ongoing as lands of lower ecological value are sold to lessees and lands of higher ecological value are added to the list of protected lands.

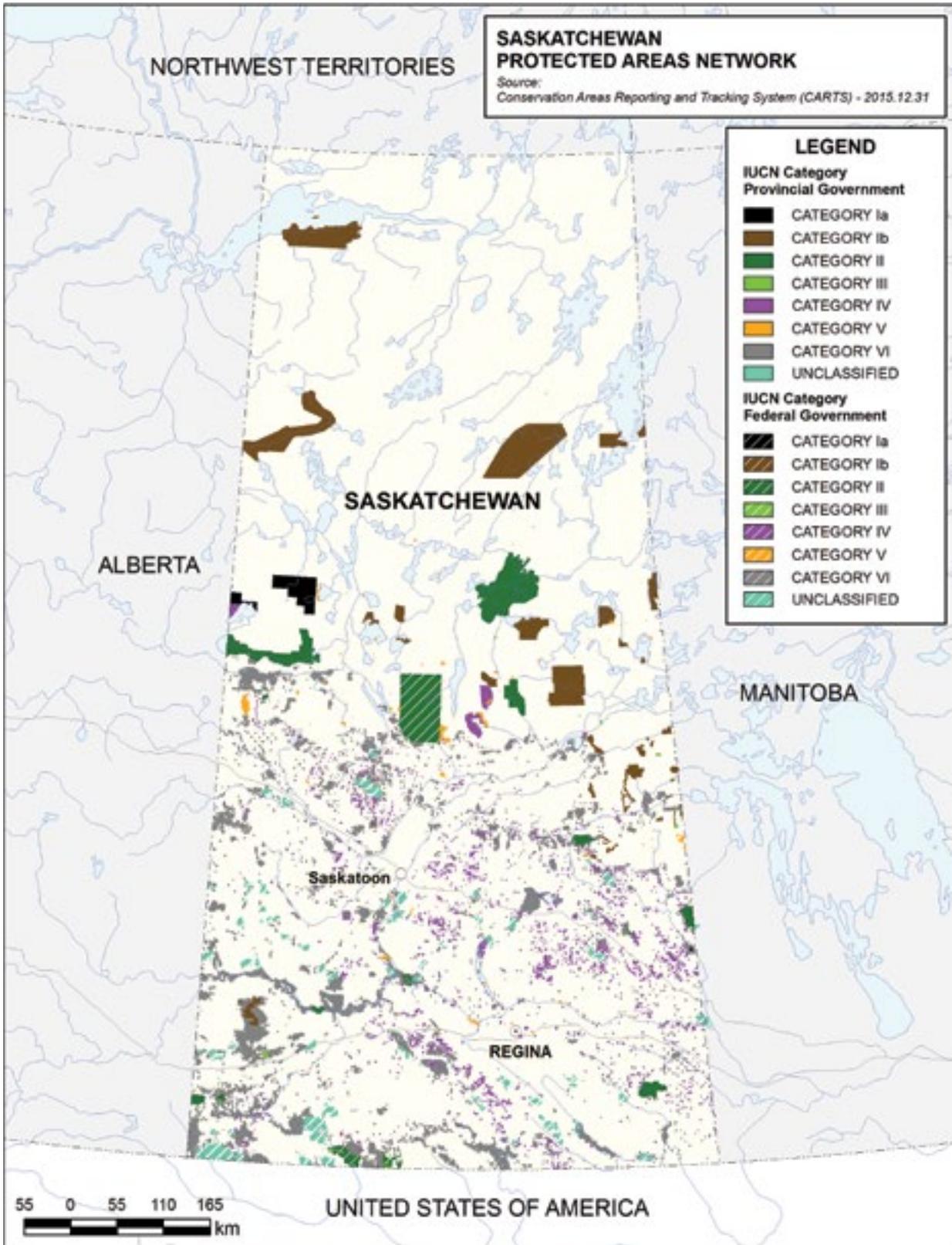
- Working cooperatively with First Nations and Metis communities and interest groups in the development, planning and participation in land use planning and advisory groups that meet regularly to address issues that impact protected areas and park lands. In some examples key to this cooperation is identification of cultural sites within existing and proposed parks and protected areas which have significance to Indigenous Peoples. Future efforts may lead to innovative approaches to establish and/or manage protected areas with greater involvement of First Nations and Metis communities.

**Top five priorities for protected areas planning and management by Saskatchewan over the next three to five years:**

- Network planning.
- Legislative/regulatory amendments or development.
- Enhancing management in existing protected areas.
- Improving ecological monitoring in protected areas.
- Collaboration with Indigenous governments or communities.



Great Blue Heron Provincial Park © Saskatchewan Parks



MAP 15: Saskatchewan

## YUKON

In Yukon, at the end of 2015, terrestrial protected areas covered 57 358 km<sup>2</sup> or 11.9% of the territory.<sup>37</sup> Over one third of this area (21 162 km<sup>2</sup>) was protected by the territory or through a shared governance regime (Table 45). The remainder was made up of federal protected areas (Table 46). Marine protected areas covered 79 km<sup>2</sup>, administered by the federal government.

### Most significant accomplishments by Yukon, 2012–2015:

- Yukon and Vuntut Gwitchin First Nation worked collaboratively toward the establishment of two new protected areas identified through land use planning: Dàadzàii Vàn Territorial Park and Whitefish Wetlands Habitat Protection Area.

- Yukon, Carcross Tagish First Nation, Champagne and Aishihik First Nation, and Kwanlin Dün First Nation collaborated to develop a recommended management plan for [Kusawa Territorial Park](#).
- Management planning was moved forward for several protected areas:
  - Yukon, Kluane First Nation, and White River First Nation worked together to continue the development of a management plan for [Asi Keyi Territorial Park](#).
  - Yukon and Vuntut Gwitchin First Nation worked together on management plans for Dàadzàii Vàn Territorial Park and Whitefish Wetlands Habitat Protection Area.

**TABLE 45:** Protected areas under territorial or shared governance in Yukon separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area under territorial or shared governance by biome |
|-------------|---|---------------------------|-----------------------------------|---|
| Terrestrial | Ib  | 1                         | 5 355                             | 25.3%   |
|             | II  | 4                         | 8 229                             | 38.9%   |
|             | III   | 2                         | 185                               | 0.9%  |
|             | IV  | 10                        | 7 360                             | 34.8%   |
|             | VI  | 1                         | 33                                | 0.2%  |
| Marine      | N/A   |                           |                                   |   |

**TABLE 46:** All terrestrial and marine protected areas in the territory of Yukon separated by governance type

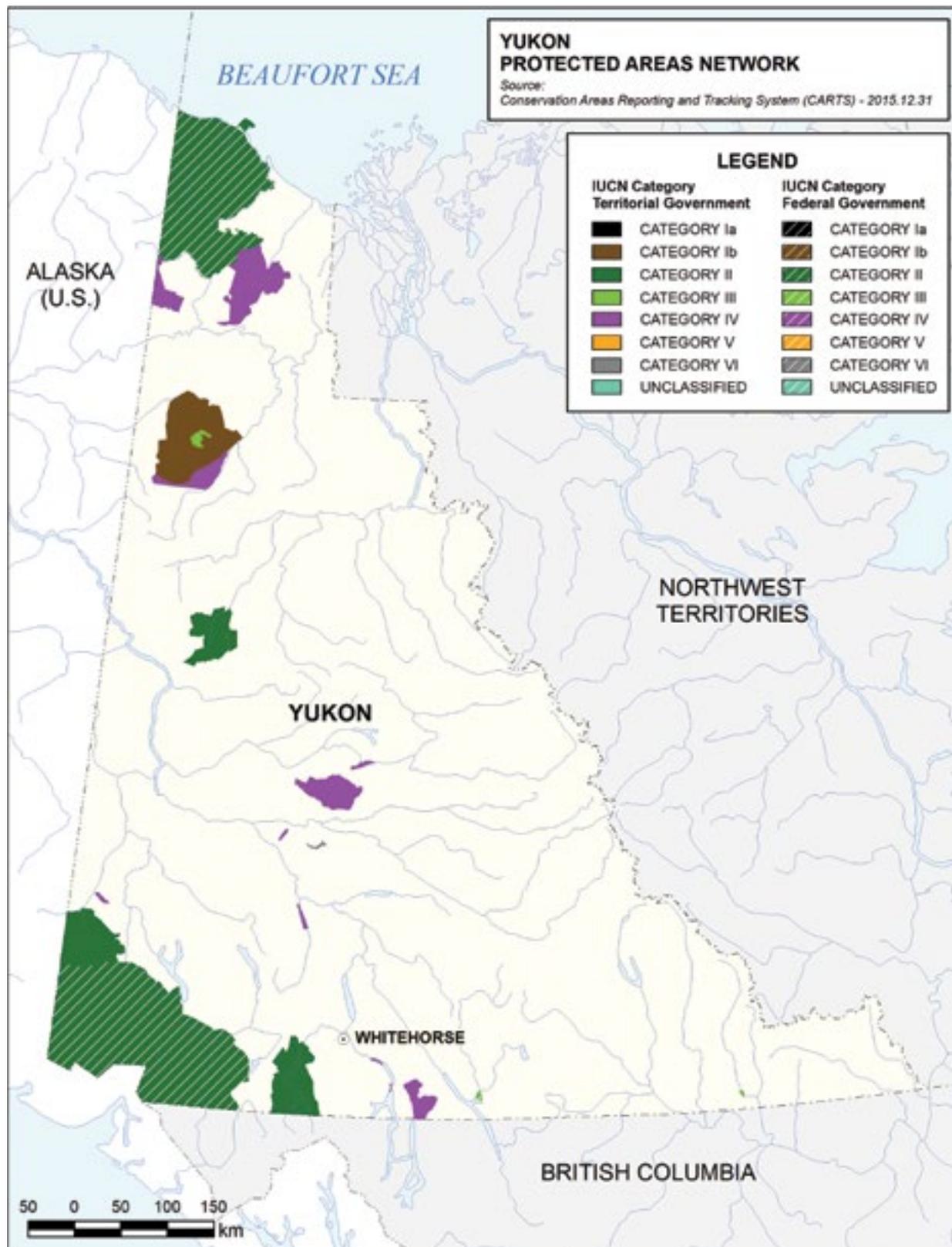
| Governance type  | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total area protected in the territory of Yukon |
|--|---------------------------|-----------------------------------|---|
| Federal government                                     | 4                         | 36 211                            | 63.1%   |
| Provincial/territorial government                      | 1                         | 16                                | <0.1%   |
| Shared governance                                      | 17                        | 21 147                            | 36.9%   |
| Private governance                                     | 0                         | 0                                 | 0.0%  |
| Governance by Indigenous Peoples and local communities | 0                         | 0                                 | 0.0%  |

<sup>37</sup> Protected area estimates presented in the tables are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

**Top five priorities for protected areas planning and management by Yukon over the next three to five years:**

- Identifying priority areas for protection.
- Developing or updating management plans.
- Improving ecological monitoring in protected areas.
- Reporting on protected areas.
- Collaboration with Indigenous governments or communities.





MAP 16: Yukon

## ENVIRONMENT AND CLIMATE CHANGE CANADA

Environment and Climate Change Canada protected 104 834 km<sup>2</sup> or 1.1% of Canada's terrestrial area by the end of 2015.<sup>38</sup> This federal department also administered 19 600 km<sup>2</sup> of marine protected areas, covering 0.34% of Canada's marine area (Table 47).

### Most significant accomplishments by Environment and Climate Change Canada, 2012–2015:

- Environment and Climate Change Canada launched an initiative to Connect Canadians to Nature in [ten of its National Wildlife Areas](#). Infrastructure improvements are being made, public programming is being expanded and promotion of these sites is being undertaken all with the goal of making Canadians aware of the opportunities that exist for them to enjoy nature and view wildlife in
- After three years of negotiations with Nunavut Tunngavik Inc. and three regional Inuit associations Environment and Climate Change Canada reached an agreement-in-principle on the terms of a renewed Inuit Impact and Benefit Agreement for Environment and Climate Change Canada's conservation areas in the Nunavut Settlement Area. One of the important aspects of this Agreement is the co-management of eight

their National Wildlife Areas. The Connecting Canadians to Nature initiative has been launched in [Alaksen](#) and [Vaseux-Bighorn](#) National Wildlife Areas in British Columbia, [Last Mountain Lake National Wildlife Area](#) in Saskatchewan, [Big Creek](#) and [Prince Edward Point](#) National Wildlife Areas in Ontario, [Cap Tourmente](#) and [Lake Saint-François](#) National Wildlife Areas in Quebec, and [Chignecto](#), [Cape Jourmain](#), and [Shepody](#) National Wildlife Areas in the Atlantic provinces.

**TABLE 47:** Protected areas under the administration of Environment and Climate Change Canada separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area administered by Environment and Climate Change Canada by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial | Ia  | 37                        | 2 910                             | 2.8%   |
|             | Ib  | 17                        | 89 290                            | 85.1%  |
|             | II  | 6                         | 11 127                            | 10.6%  |
|             | III   | 19                        | 141                               | 0.1%   |
|             | IV  | 33                        | 1 273                             | 1.2%   |
|             | V   | 2                         | 21                                | <0.1%  |
| Marine      | VI  | 7                         | 109                               | 0.1%   |
|             | Ia  | 23                        | 763                               | 3.9%   |
|             | Ib  | 15                        | 16 939                            | 86.4%  |
|             | II  | 2                         | 1 777                             | 9.1%   |
|             | III   | 9                         | 35                                | 0.2%   |
|             | IV  | 5                         | 79                                | 0.4%   |
|             | VI  | 1                         | 5                                 | <0.1%  |

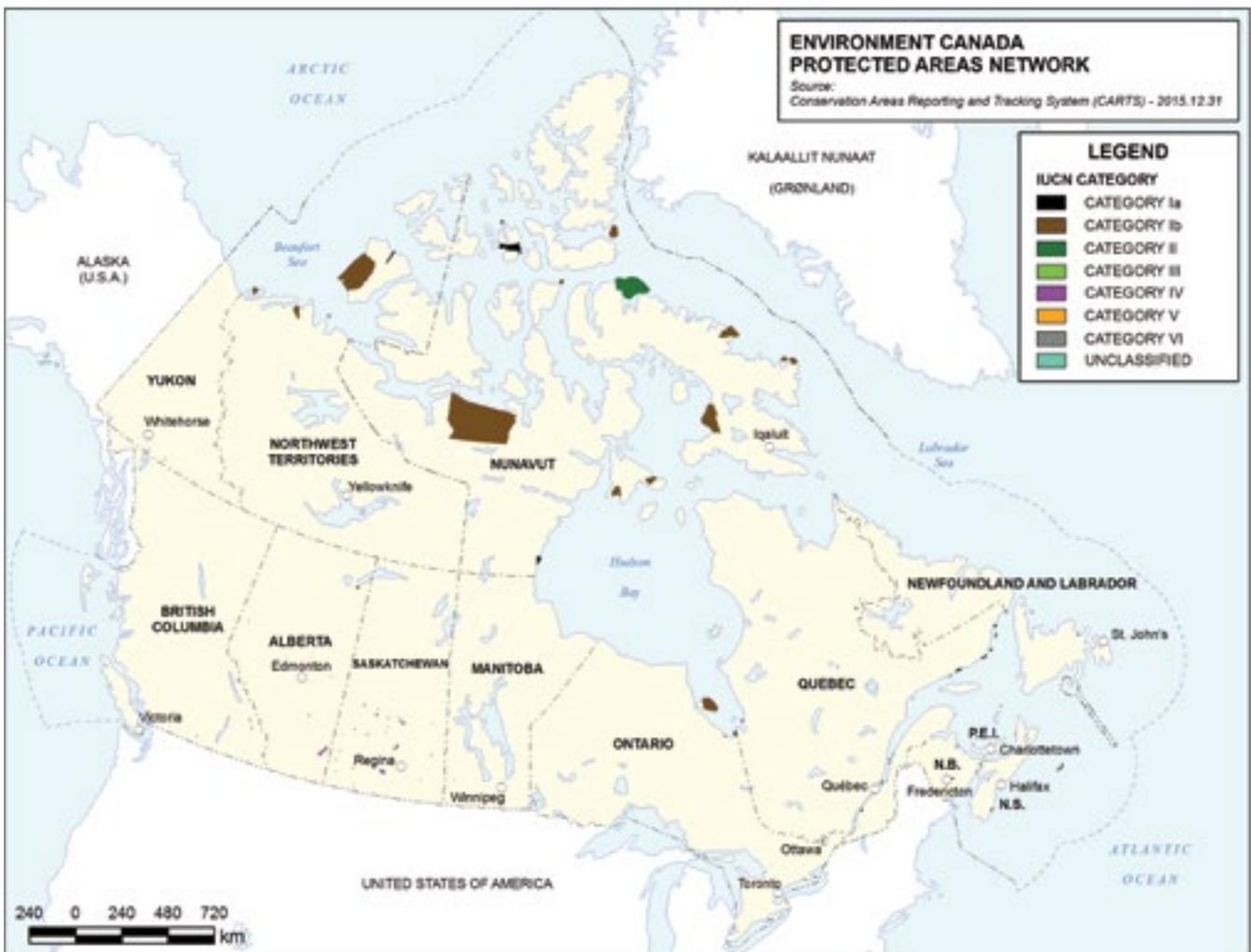
<sup>38</sup> Protected area estimates presented here are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

Migratory Bird Sanctuaries and five National Wildlife Areas. These conservation areas are co-managed with local Inuit communities.

**Top five priorities for protected areas planning and management by Environment and Climate Change Canada over the next three to five years:**

- Establishing new protected areas.

- Legislative/regulatory amendments or development.
- Enhancing management in existing protected areas.
- Improving ecological monitoring in protected areas.
- Furthering education and outreach.



MAP 17: Environment and Climate Change Canada

## FISHERIES AND OCEANS CANADA

Fisheries and Oceans Canada protected 10 392 km<sup>2</sup> or 0.18% of Canada's marine area, by the end of 2015 (Table 48).

### Most significant accomplishments by Fisheries and Oceans Canada, 2012–2015:

- In 2014, Fisheries and Oceans Canada and Environment and Climate Change Canada secured \$37 million in funding over five years to strengthen marine and coastal conservation. This funding will allow Fisheries and Oceans Canada to:
  - Establish four new marine protected areas and identify three additional areas as candidates for protection;
  - Advance the development of a national network of federal and provincial marine protected areas, which Fisheries and Oceans Canada is leading and coordinating in collaboration with its partners;
  - Develop the necessary management and monitoring frameworks to implement this marine protected area work; and work with Canadians to manage these new marine protected areas. After 2019, Fisheries and Oceans Canada will also receive ongoing funding of \$3.893 million per year, which will support the effective management of Fisheries and Oceans Canada's marine protected areas.
- A [Corals and Sponges Conservation Strategy for Eastern Canada](#) has been developed collaboratively by the five eastern regions. The Strategy covers the coral

and sponge species, communities and habitats in the Atlantic and Arctic Oceans of Eastern Canada. A similar strategy for [Pacific Region](#) was published in 2010. With both strategies released, all of Canada's oceans will now have conservation, management and research objectives for corals and sponges.

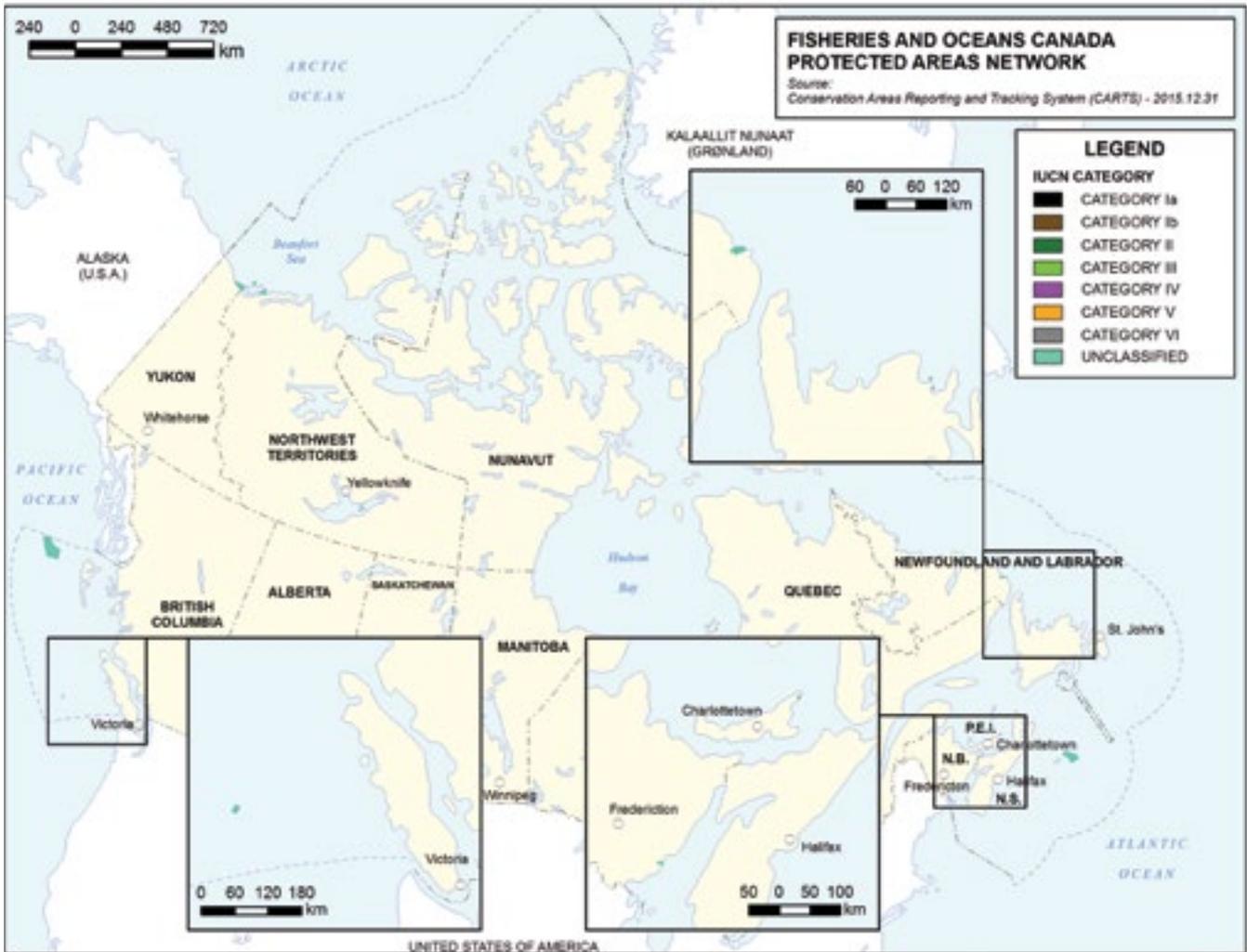
- [Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas](#) regulations went to Canada Gazette I for a 30 day public comment period in June 2015. This is the second last step in the regulatory process, prior to designation of the marine protected area. Once designated, this marine protected area will protect a spectacular concentration of fragile and unique glass sponges estimated to be over 9 000 years old. Not only will marine protected area status help preserve this unique feature, it will provide continued protection of important habitat for many other marine species.

### Top five priorities for protected areas planning and management by Fisheries and Oceans Canada over the next three to five years:

- Establishing new protected areas.
- Network development.
- Meeting protected areas targets.
- Enhancing management in existing protected areas.
- Improving ecological monitoring in protected areas.

**TABLE 48:** Protected areas administered by Fisheries and Oceans Canada separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area administered by Fisheries and Oceans Canada by biome |
|-------------|---|---------------------------|-----------------------------------|--|
| Terrestrial |   |                           | N/A                               |  |
| Marine      | Unclassified  | 8                         | 10 392                            | 100.0%   |



MAP 18: Fisheries and Oceans Canada



Basin Head Marine Protected Area © Perry Williams

## PARKS CANADA

Parks Canada protected 339 740 km<sup>2</sup> or 3.4% of Canada's terrestrial area by the end of 2015<sup>39</sup> (Table 49). This federal agency also administered 12 720 km<sup>2</sup> of marine protected areas, or 0.22% of Canada's marine area, including Saguenay-St. Lawrence Marine Park, which is administered under shared governance with Quebec (Table 50).

### Most significant accomplishments by Parks Canada, 2012–2015:

- Parks Canada expanded its system of protected areas through the establishment of three new National Parks ([Nááts'ihch'oh](#), [Qausuittuq](#), [Mealy Mountains](#)), and the [Rouge National Urban Park](#). Together, these additions protect more than 26 500 km<sup>2</sup> of land in the Northwest Territories, Nunavut, Labrador, and Ontario. Parks Canada also increased the legislative protection to [Ukkusiksalik National Park](#) and [Lake Superior](#)

[National Marine Conservation Area](#). Furthermore, Parks Canada made progress in building the [National Marine Conservation Areas](#) system, both in developing marine area management capacity and through working toward several National Marine Conservation Area proposals.

- In 2015, Parks Canada released "[Promising Pathways: Strengthening Engagement And Relationships With Aboriginal Peoples In Parks Canada Heritage Places](#)" This guide helps support and strengthen engagement and relationship building with Indigenous Peoples and encourages the development of positive and respectful relationships. The stories from the field and lessons from the field presented in the document give examples on how to improve and expand Indigenous engagement activities and relationship building. One of the objectives of this document is to provide a more consistent approach for Indigenous engagement and

**TABLE 49:** Protected areas administered by Parks Canada or under a shared governance regime separated according to the International Union for Conservation of Nature categories

| Biome       | International Union for Conservation of Nature category | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total protected area administered by Parks Canada by biome |
|-------------|---|---------------------------|-----------------------------------|---|
| Terrestrial | II  | 46                        | 319 738                           | 95.1%   |
|             | V   | 1                         | 19                                | 0.0%  |
|             | VI  | 4                         | 16 585                            | 4.9%  |
| Marine      | II  | 10                        | 9 182                             | 71.3%   |
|             | VI  | 4                         | 3 699                             | 28.7%   |

**TABLE 50:** All Parks Canada terrestrial and marine protected areas separated by governance type

| Governance type                    | Number of protected areas | Area protected (km <sup>2</sup> ) | Percent of total jurisdictional area protected |
|------------------------------------|---------------------------|-----------------------------------|--|
| Governance by government (Federal) | 52                        | 347 976                           | 99.6%  |
| Shared Governance                  | 1                         | 1 246                             | 0.36%  |

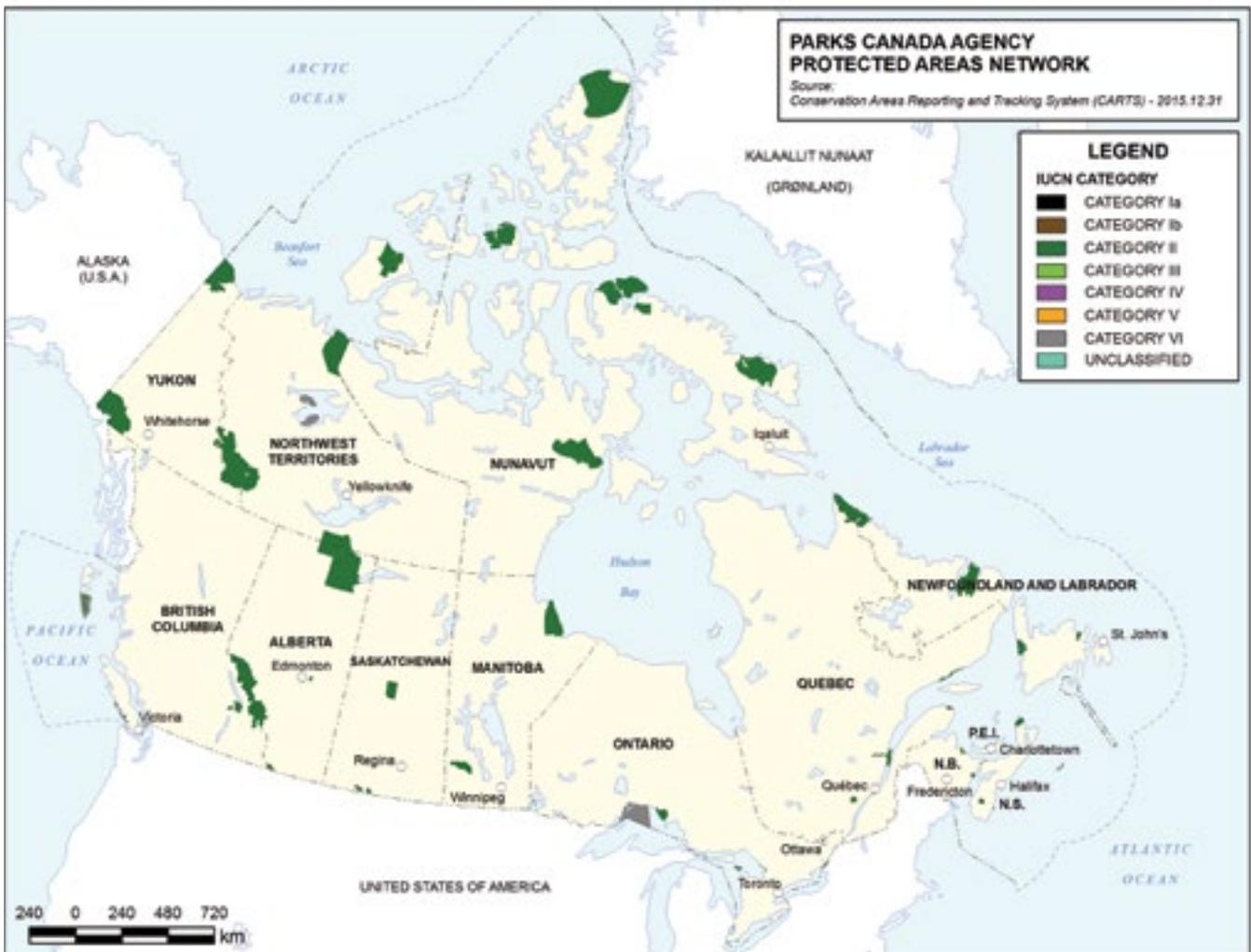
<sup>39</sup> Protected area estimates presented here are not corrected for overlaps, and may be higher than similar estimates presented elsewhere in this report. Comparisons among estimates should be made with caution, accounting for differences in whether overlaps were corrected, whether the analyses are based on boundary information or official areas, and which jurisdictions are included.

relationship building across the spectrum of Parks Canada heritage places in order to establish strong, sustainable and respectful relationships with the more than 300 Indigenous communities and partners.

- Through the work of staff, partners, and volunteers, Parks Canada improved ecological integrity in 20 National Parks between 2012 and 2015, primarily through significant ecosystem restoration efforts.
- Parks Canada also contributed to the recovery of several species at risk by identifying and protecting critical habitat found on Parks Canada lands and waters.

**Top five priorities for protected areas planning and management by Parks Canada over the next three to five years:**

- Establishing new protected areas.
- Enhancing management in existing protected areas.
- Increasing visitation.
- Improving visitor experience.
- Furthering education and outreach.



MAP 19: Parks Canada

# Glossary

**Biological diversity (biodiversity):** The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.<sup>40</sup>

**Biological resources:** Genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.<sup>41</sup>

**Connectivity:** In the context of protected areas, connectivity refers to the conservation of particular areas or corridors to provide physical or functional links or contiguity between natural or important habitat areas and thereby contribute to broader-scale landscape conservation. In the design of a network, connectivity allows for linkages whereby protected sites benefit from larval and/or species exchanges, and functional linkages from other network sites. In a connected network individual sites benefit one another.<sup>42</sup>

**Degazetting (delisting/deregulating):** A loss of legal protection for an entire protected area.<sup>43</sup>

**Downgrading:** A decrease in legal restrictions on the number, magnitude, or extent of human activities within a protected area (i.e. legal authorisation for increased human use).<sup>44</sup>

**Downsizing:** A decrease in size of a protected area as a result of excision of land or sea area through a legal boundary change.<sup>45</sup>

**Ecological integrity:** A condition that is determined to be characteristic of [a park's] natural region and is likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes.<sup>46</sup>

**Ecosystem:** A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.<sup>47</sup>

**Ecosystem services:** A concept developed to focus the attention of decision-makers, business, and the general public, to the many ways that humans benefit from and depend on healthy functioning ecosystems. This dependency extends from essential support for life (e.g., because ecosystems produce oxygen and food) to security (e.g., by mitigating extreme weather events) and quality of life (by supporting e.g., cognitive development and psychological well-being). Natural processes within ecosystems result in the provision of these "services" that benefit all species, but the concept of ecosystem services focuses attention particularly on human dependence on these processes. Ecosystem services are produced in all environments—urban, rural, and wilderness. Although ecosystem services are categorized by types (e.g., supporting, provisioning, regulating, and cultural services), in reality they are often interacting. The terms "ecosystem goods and services" and "ecological goods and services" are synonymous with ecosystem services.<sup>48</sup>

**Ecozones:** Ecozones are the broadest ecological unit within the National Ecological Framework for

<sup>40</sup> [Convention on Biological Diversity, Article 2. Use of Terms, 1992.](#)

<sup>41</sup> [Convention on Biological Diversity, 1992.](#)

<sup>42</sup> BirdLife International, 2009, *Designing networks of marine protected areas: exploring the linkages between Important Bird Areas and ecologically or biologically significant marine areas*. Cambridge, UK: BirdLife International.

<sup>43</sup> Mascia, M. B. & Pailler, S., 2010, *Protected area downgrading, downsizing and degazettement (PADDD) and its conservation implications*. Conservation Letters 4: 9–20.

<sup>44</sup> [Mascia and Pailler, 2010.](#)

<sup>45</sup> [Mascia and Pailler, 2010.](#)

<sup>46</sup> [Canada National Parks Act, 2000.](#)

<sup>47</sup> [Convention on Biological Diversity, 1992.](#)

<sup>48</sup> Federal, Provincial, and Territorial Governments of Canada. (in production). *Completing and Using Ecosystem Service Assessment for Decision-Making: An Interdisciplinary Toolkit for Managers and Analysts*. Ottawa, ON: Canadian Councils of Resource Ministers.

Canada.<sup>49</sup> In 2014, the ecozones level of the framework was updated.<sup>50</sup> The National Ecological Framework for Canada delineates, classifies and describes ecologically distinct areas of Canada's surface at different levels of generalization using various abiotic and biotic factors at each of the levels. The National Ecological Framework provides a consistent, national spatial context within which ecosystems at various levels of generalization can be described, monitored, and reported on. The use of such a framework provides for common communication and reporting between different jurisdictions and disciplines, and provides a common ground to report on the state of the environment and the sustainability of ecosystems in Canada. Canada has 18 terrestrial ecozones and 13 aquatic ecozones.

**Jurisdictions:** In Canada, jurisdictions comprise the provincial and territorial governments, as well as the federal government.

**Key Biodiversity Area:** Sites that are contributing significantly to the global persistence of biodiversity.<sup>51</sup>

**Land Trust:** A charitable organisation which, as all or part of its mission, actively works to conserve land by undertaking or assisting in land acquisition or conservation agreements or by engaging in stewardship of such land or conservation agreements. In Quebec, land trusts are non-profit organisations that in some cases do not have charitable status.<sup>52</sup>

**Management effectiveness:** How well a protected area is being managed; primarily the extent to which it is protecting values and achieving goals and objectives.<sup>53</sup>

**Monitoring:** Actions taken to track changes over time according to a set of selected indicators. For protected areas in particular, monitoring could focus on population counts to assess its trend (e.g. based on numbers, composition and distribution), or the health of ecosystem functions or threats or stressors impacting wildlife or its habitat.

**Monitoring Protocol:** Monitoring protocol refers to the existence of a scientifically-based ongoing monitoring program for a protected area or network of protected areas.

**Network:** A collection of individual protected areas that operates cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfill ecological aims more effectively and comprehensively than individual sites could alone.<sup>54</sup> (NOTE: Parks Canada does not refer to the assemblage of its protected areas as a network but rather as a system. The [National Parks System Plan](#) provides outstanding representative examples of natural landscapes and natural phenomena that occur and protected through National Parks across Canada's 39 natural regions.)

**Planning:** Refers to the process of designing an individual protected area, a system of protected areas or a network of protected areas.

**Protected area:** A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.<sup>55</sup>

<sup>49</sup> Agriculture and Agri-Food Canada, [National Ecological Framework for Canada](#); Ecological Stratification Working Group, 1996, [A National Ecological Framework for Canada](#).

<sup>50</sup> Canadian Council on Ecological Areas, [Ecozones Introduction](#).

<sup>51</sup> International Union for Conservation of Nature, 2016, [A Global Standard for the Identification of Key Biodiversity Areas, Version 1.0. First Edition](#). Gland, Switzerland: International Union for Conservation of Nature.

<sup>52</sup> Canadian Land Trust Alliance, 2007, [Canadian Land Trust Standards and Practices](#). Ontario, Canada.

<sup>53</sup> Dudley, N. (editor.), 2008, [Guidelines for Applying Protected Area Management Categories](#), Gland, Switzerland: International Union for Conservation of Nature; with Stolton, S., P. Shadie and N. Dudley, 2013, International Union for Conservation of Nature World Commission on Protected Areas *Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types*, Best Practice Protected Area Guidelines Series No. 21, Gland, Switzerland: International Union for Conservation of Nature.

<sup>54</sup> International Union for Conservation of Nature World Commission on Protected Areas, 2007, [Establishing networks of marine protected areas: A guide for developing national and regional capacity for building MPA networks](#). Non-technical summary report.

<sup>55</sup> [Dudley, 2008](#).

**Protected areas organisations:** Government agencies or departments that have the authority to establish and manage protected areas. These include all provincial and territorial governments as well as a number of federal departments and agencies. A list of protected area organisations covered in this report can be found in the Introduction.

**Representativity:** The degree to which different biogeographical subdivisions (e.g., ecologically distinct regions or habitat types) within the planning area (e.g. province, territory, country) are protected.

**Sustainable use:** The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.<sup>56</sup>

**System:** A collection of individual protected areas planned on a site-by-site basis to achieve site-specific conservation objectives. For the purposes of this report a system of protected areas may or may not have planned ecological or physical connectivity, though synergy may result as a by-product of site-specific or broader landscape planning. The International Union for Conservation of Nature characterizes a protected area system as having five linked elements: 1) representativeness, comprehensiveness and balance; 2) adequacy; 3) coherence and complementarity; 4) consistency; and 5) cost effectiveness, efficiency and equity.<sup>57</sup>

<sup>56</sup> [Convention on Biological Diversity, 1992.](#)

<sup>57</sup> [Dudley, 2008.](#)





St. Clair National Wildlife Area © Susan Thompson Photography