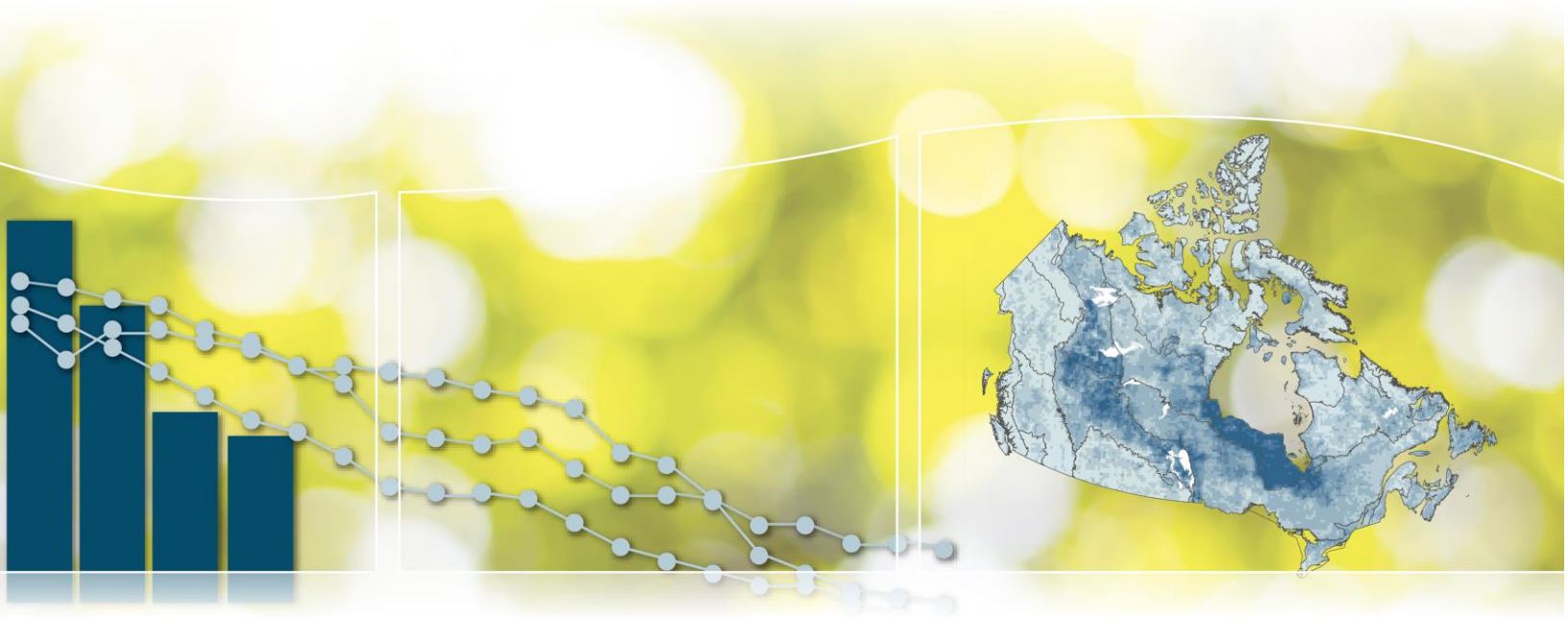
Environment and Climate Change Canada
Environnement et Changement climatique Canada

Canadian Environmental Sustainability Indicators

Canada's conserved areas



Canada

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Environment and Climate Change Canada
Public Inquiries Centre
12th floor, Fontaine Building
200 Sacré-Coeur boul.
Gatineau, QC K1A 0H3
Telephone: 1-800-668-6767 (in Canada only) or 819-938-3860
Fax: 819-938-3318
Email: ec.enviroinfo.ec@canada.ca

Aussi disponible en français

Canadian Environmental Sustainability Indicators

Canada's conserved areas

May 2019

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Canada's conserved areas

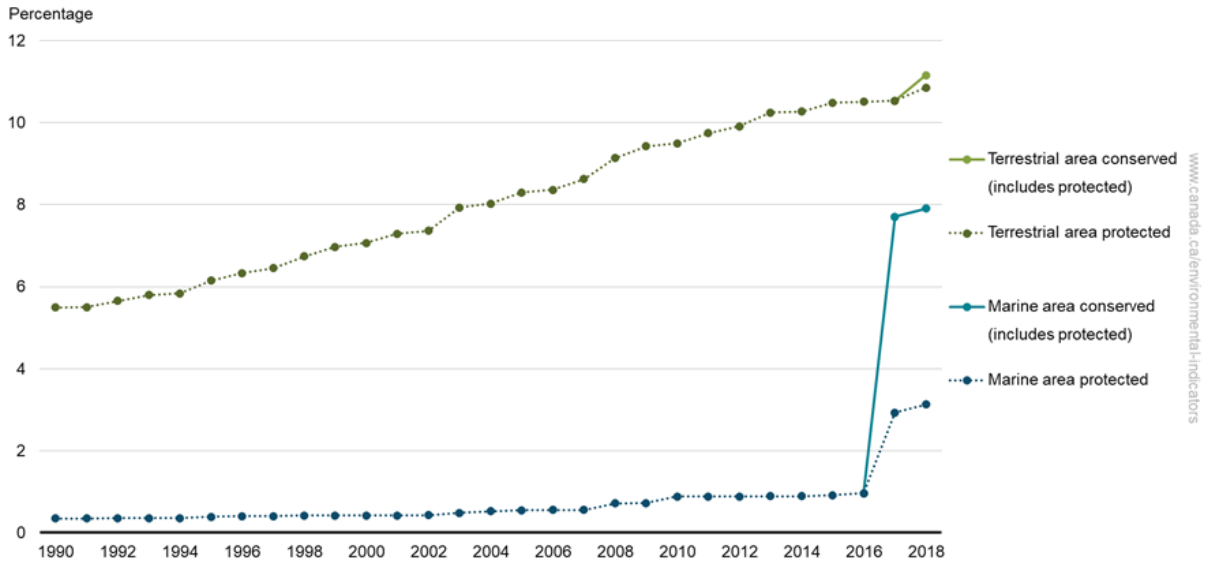
Well-managed conserved areas help preserve species and their habitats for present and future generations by reducing direct human development stresses. The indicators report proportions of Canada's territory conserved through protected areas and other conservation measures.

National conserved areas

Key results

- As of the end of 2018
  - 11.2% of Canada's terrestrial area (land and freshwater) was conserved, including 10.9% in protected areas
  - 7.9% of its marine territory was conserved, including 3.1% in protected areas
- The terrestrial area conserved has increased by 66% in the last 20 years, and by 6% in the last 5 years
- The marine area conserved has increased by a factor of more than 16 in the last 20 years, and by more than 5 times in the last 5 years

Figure 1. Proportion of area conserved, Canada, 1990 to 2018



Data for Figure 1

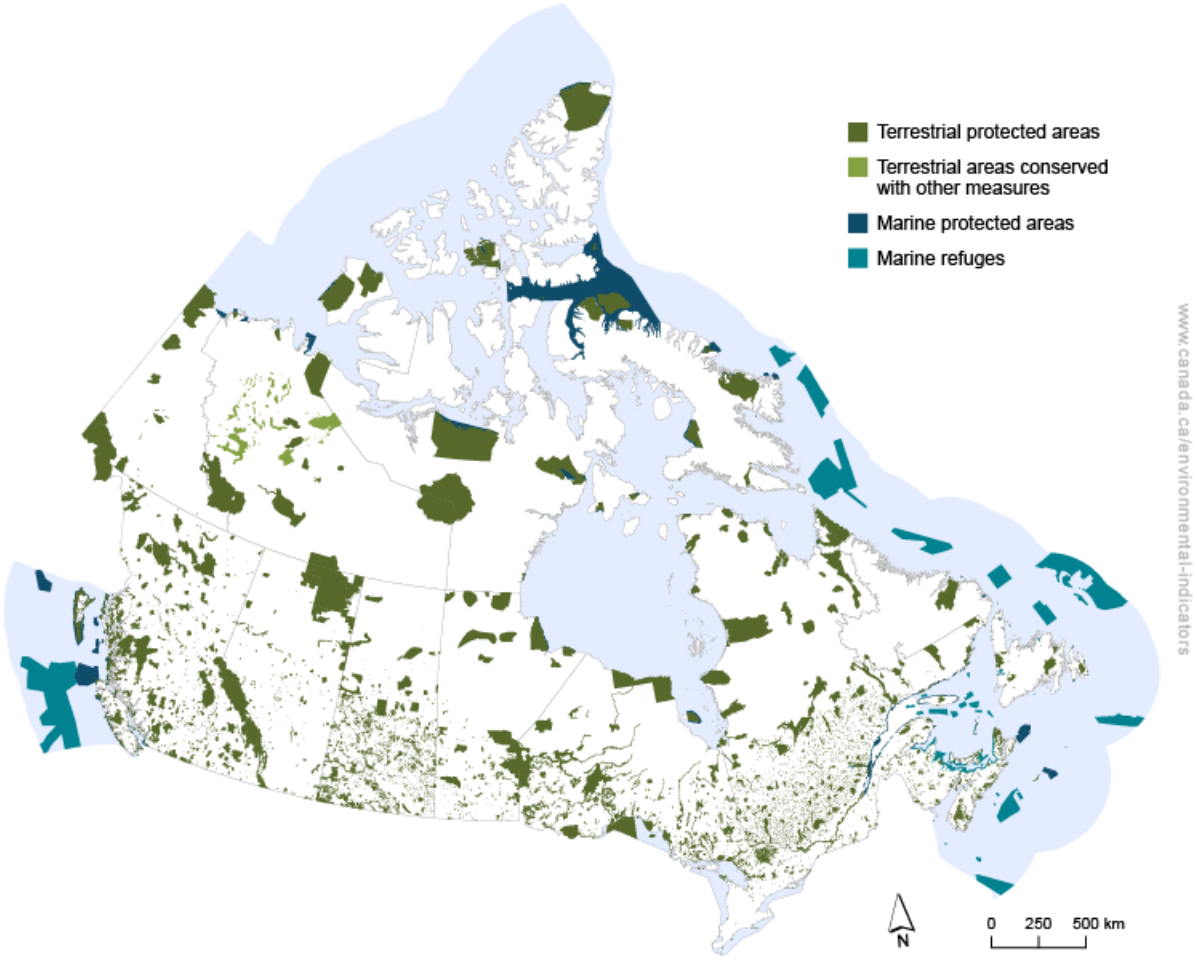
Note: Terrestrial areas include land and freshwater. Protected areas include only areas recognized under the international definition. Conserved areas include protected areas as well as areas conserved with other measures. For more information, please refer to the Data sources and methods. Terrestrial areas conserved with other measures were first recognized in 2018. Marine areas conserved with other measures were first recognized in 2017. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Conserved areas include protected areas, as well as areas conserved with other measures (areas that do not meet the formal definition of protected area but are managed in a way that biodiversity is conserved). Both protected areas and areas conserved with other measures contribute to Canada's conservation network. Conserved areas are lands and waters where use is limited. In some cases, certain commercial activities and harvesting of biological resources may be allowed so long as biodiversity is conserved.

Areas conserved with other measures include marine refuges. These are long-term fisheries area closures identified as "other effective area-based conservation measures" as described in Aichi Target 11.

The distribution and size of conserved areas is variable. Larger terrestrial conserved areas tend to be located in northern Canada, where there is less intensive use of land for agriculture, settlement, and road networks. Larger marine conserved areas tend to be in offshore areas, where human uses are often less intense. In landscapes and seascapes with competing uses, conserved areas tend to be smaller but more numerous.

Figure 2. Conserved areas, Canada, 2018



Navigate data using the interactive map

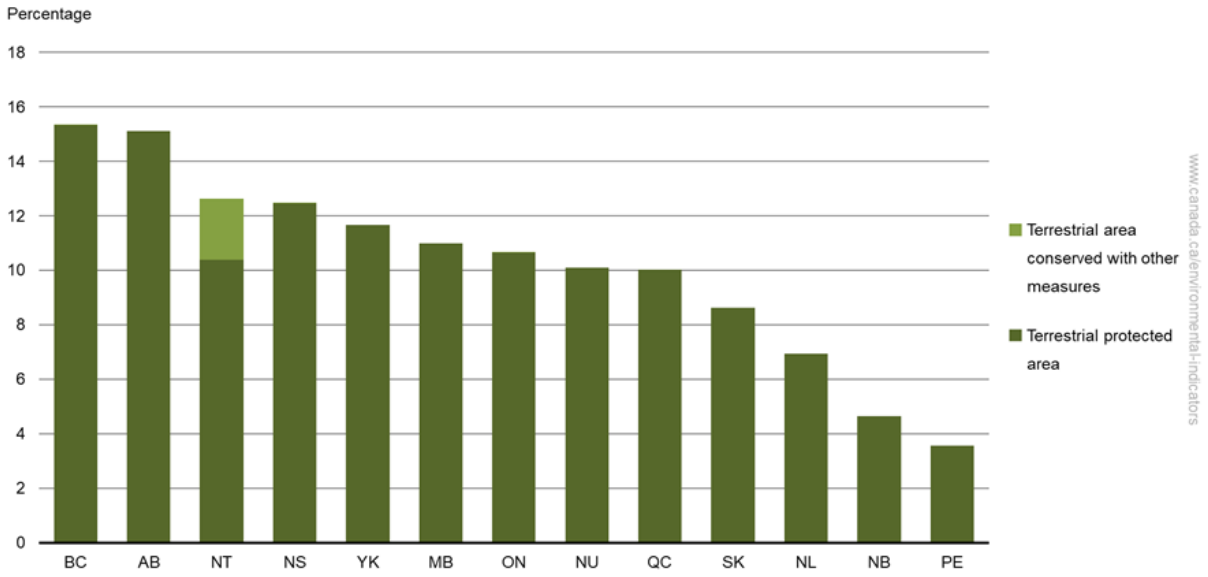
Note: Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Terrestrial conserved areas, by province and territory

Key results

- The proportion of terrestrial area (land and freshwater) conserved varies by province and territory. It ranges from 3.6% in Prince Edward Island to 15.3% in British Columbia
- Included in 2018, are
    - Edéhzhíe Indigenous Protected Area, which added 14 000 km^2 of protect area in the Northwest Territories
    - Birch River Wildland Provincial Park, Kazan Wildland Provincial Park and Richardson Wildland Provincial Park, which added 11 000 km^2 of protected area in Alberta
    - recognition of 30 000 km^2 of conservation zones in the Sahtu Land Use plan in the Northwest Territories

Figure 3. Proportion of terrestrial area conserved, by province and territory, Canada, 2018



Data for Figure 3

Note: Terrestrial areas include land and freshwater. Conserved areas include protected areas as well as areas conserved with other measures. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

As of the end of 2018, 15.3% of British Columbia's terrestrial area has been conserved. Alberta has 15.1% of its territory conserved. Newfoundland and Labrador, New Brunswick, and Prince Edward Island each have less than 7% of their terrestrial territory conserved. The remaining provinces and territories have between 8% and 13% of their terrestrial territory conserved.

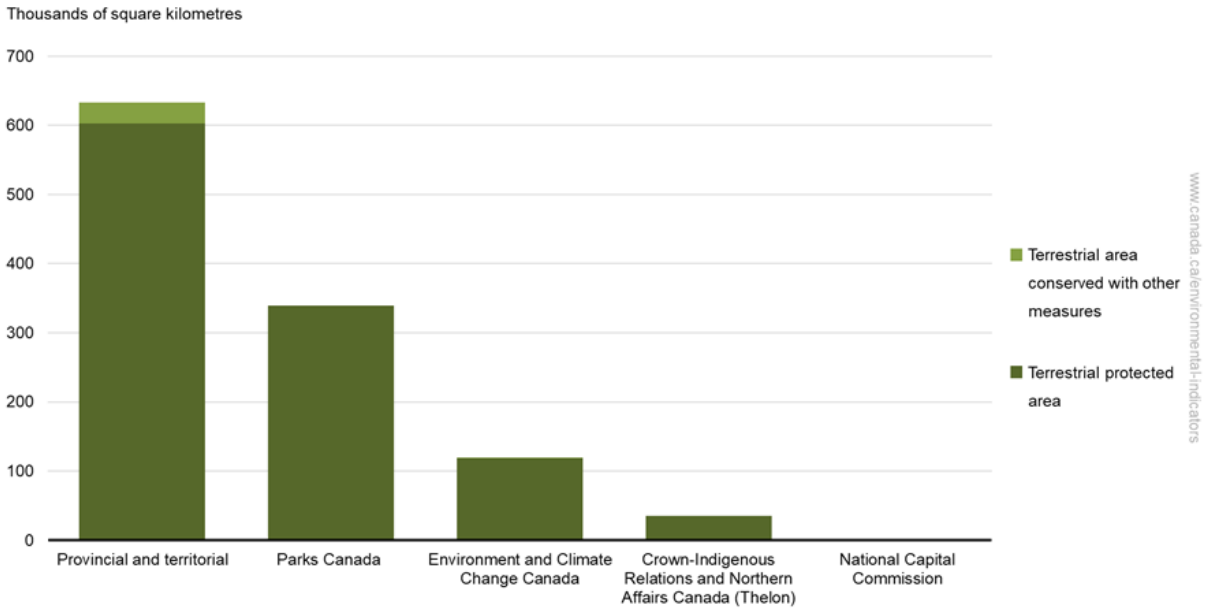
Each province has set aside areas for protection, and progress towards conservation targets varies by jurisdiction.

Terrestrial conserved areas, by jurisdiction

Key results

- Provincial and territorial governments have jurisdiction over 57% of all terrestrial conserved areas
- Parks Canada and Environment and Climate Change Canada are responsible for 30% and 11% of Canada's terrestrial conserved areas, respectively

Figure 4. Terrestrial conserved areas, by jurisdiction, Canada, 2018



Data for Figure 4

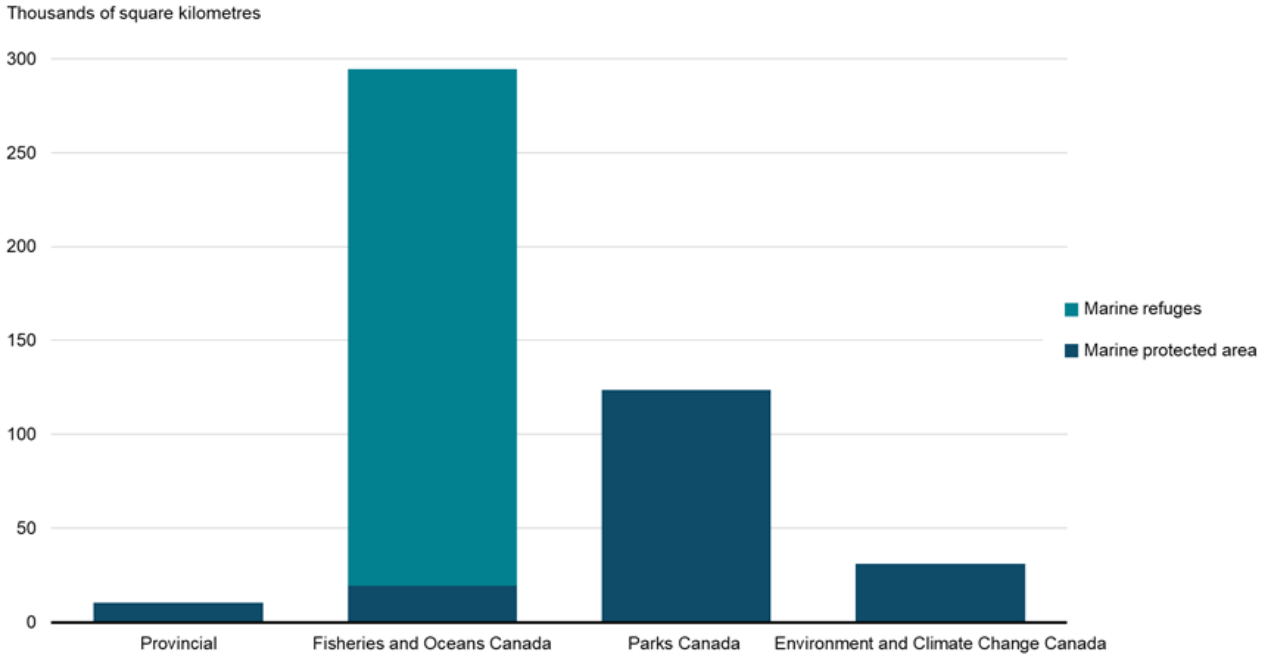
Note: Terrestrial areas include land and freshwater. Protected areas include only areas recognized under the international definition. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Marine conserved areas, by jurisdiction

Key results

- The largest proportion of conserved area is within marine refuges. As of 2018, marine refuges covered about 275 000 km^2 of Canada's marine territory
- Fisheries and Oceans Canada and Parks Canada are responsible for 65% and 27% of Canada's marine conserved areas, respectively
- In 2018, Scott Islands Marine National Wildlife Area added 11 455 km^2 of protected area under Environment and Climate Change Canada's jurisdiction

Figure 5. Marine conserved areas, by jurisdiction, Canada, 2018



Data for Figure 5

Note: Marine refuges are geographic areas that conserve biodiversity, but do not meet the formal definition of protected areas. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Conserved areas include both protected areas and areas conserved with other measures. Other conservation measures conserve biodiversity but are not recognized under the internationally accepted definition of a protected area. Marine refuges are long-term fisheries area closures that have been identified as areas conserved with other measures.

Fisheries and Oceans Canada, Parks Canada and Environment and Climate Change Canada each have specific but complementary mandates for establishing marine protected areas:

- *Oceans Act* marine protected areas (Fisheries and Oceans Canada) are established to conserve marine species and their habitats, including for species that are fished, endangered or threatened marine species, as well as unique habitats and areas of high biological productivity or biodiversity
- National marine conservation areas (Parks Canada) are established to conserve representative examples of Canada's natural and cultural marine heritage and provide opportunities for public education and enjoyment
- National wildlife areas and migratory bird sanctuaries (Environment and Climate Change Canada) are established to conserve habitat for a variety of wildlife including migratory birds and endangered species

Areas established by these departments, along with provincially established areas contribute to a conservation network. The primary goal of this network is to provide long-term protection of marine biodiversity, ecosystem function and special natural features.

The different jurisdictions protect areas for different purposes (see the Role of the Canadian Government in the Oceans Sector and the Role of the Provincial and Territorial Governments in the Oceans Sector), and control the amount of human activity (such as transportation, fishing or recreation) that is allowed. Marine conservation efforts include a wide range of management and stewardship activities. Examples include support for the recovery of species at risk, prevention and

mitigation of the impact of aquatic invasive species, and strengthening of Canada's response to ship-source marine pollution.

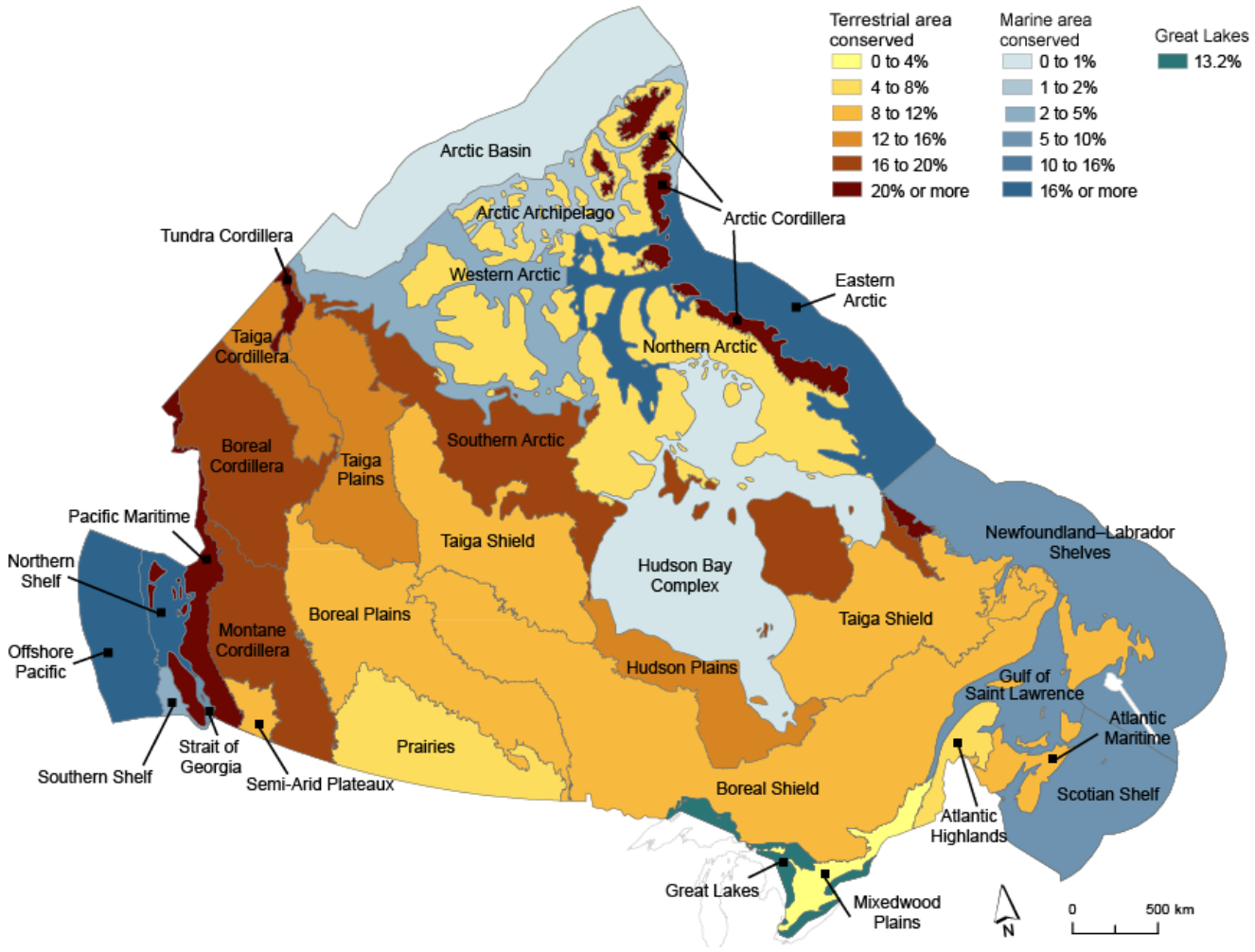
Conserved areas, by ecological region

Ecozones are regions with distinct or characteristic ecological features, such as climate and vegetation. A representative conserved areas network will conserve biodiversity across all of Canada's ecozones.

Key results

- Three (3) terrestrial ecozones, the Tundra Cordillera, the Pacific Maritime and the Arctic Cordillera, have more than 20% of their area protected
- The Offshore Pacific and the Eastern Arctic both have more than 20% of their area conserved
- 13% of the Canadian area of the Great Lakes is protected

Figure 6. Proportion of ecozones conserved, Canada, 2018



Data for Figure 6

Note: Conserved areas include protected areas as well as areas conserved with other measures. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Terrestrial ecozones with high levels of urbanization and development or widespread agriculture tend to have small proportions of conserved area. For example, the Mixedwood Plains (southern Ontario and along the St. Lawrence River) has only 1.9% of its area protected and the Prairies has 6%. On the other hand, terrestrial ecozones with a high proportion of conserved area tend to be remote or have high recreation value. For example, ecozones in the western mountain ranges have 17% or more of their area protected.

Marine areas have not benefited from as long a tradition of conservation. Recent efforts have rapidly increased the amount of area conserved in some marine ecozones. Tallurutiup Imanga / Lancaster Sound in the Eastern Arctic is the largest marine protected area in Canada, increasing the proportion of the ecozone protected from around 1% to over 20%. Marine refuges in the Offshore Pacific, Newfoundland and Labrador Shelves, Scotian Shelf and Gulf of St. Lawrence have conserved more than 5% of each of these areas.

Each ecozone is unique, and conservation involves the inclusion of areas that are representative of different parts of the ecozone and sites of special value. Challenges to establishing conserved areas include competition from other uses, such as agriculture, industry or living space, and may be limited by the extent of ecologically intact areas within the ecozone.

About the indicators

What the indicators measure

These indicators report the amount and proportion of Canada's terrestrial (land and freshwater) and marine area that is conserved. This includes areas recognized under the international definitions of protected areas and other effective area-based conservation measures. Land and/or water access and use within protected areas are controlled primarily for the purpose of conserving biodiversity, regardless of proprietary designation (for example, park, conservation area or wildlife reserve). Other effective area-based conservation measures are also managed over the long term in ways that result in the effective conservation of biodiversity.[1] However, they might have been established for other purposes.

Why these indicators are important

Well-managed conserved areas are one way to protect wild species and their habitats for present and future generations. Habitat conservation is a measure of human response to the loss of biodiversity and natural habitat. As the conserved area in Canada increases, more lands and waters are withdrawn from direct human development stresses, thereby contributing to biodiversity conservation and improving the health of ecosystems. In turn, healthy ecosystems provide benefits such as clean water, mitigation of climate change, pollination and improved human health.

Many countries use protected areas as the core of their programs to preserve biodiversity, ecosystems and ecosystem services. The parties to the Convention on Biological Diversity, among them Canada, have set an aspirational target to conserve at least 17% of terrestrial areas and inland waters, and 10% of marine areas, by 2020. This is the 11th of 20 targets collectively known as the Aichi Biodiversity Targets, established in October 2010.

Healthy coasts and oceans

[1] The Convention on Biodiversity defines an "other effective area-based conservation measures" as a "geographically defined area other than a protected area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity..."

These indicators support the measurement of progress towards the following 2016–2019 Federal Sustainable Development Strategy long-term goals: coasts and oceans support healthy, resilient and productive ecosystems. They are used to assess progress towards the target: By 2020, 10% of coastal and marine areas are conserved through networks of protected areas and other effective area-based conservation measures.

Sustainably managed lands and forests

These indicators support the measurement of progress towards the following 2016–2019 Federal Sustainable Development Strategy long-term goals: lands and forests support biodiversity and provide a variety of ecosystem services for generations to come. They are used to assess progress towards the target: By 2020, at least 17% of terrestrial areas and inland water are conserved through networks of protected areas and other effective area-based conservation measures.

In addition, the indicators contribute to the Sustainable Development Goals of the 2030 Agenda for Sustainable Development. They are linked to the 2030 Agenda's Goal 14: Life Below Water and Target 14.5: "By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information." They are also linked to Goal 15: Life on Land and Target 15.1: "By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements."

The indicators also contribute towards reporting on Target 1 of the 2020 Biodiversity Goals and Targets for Canada: "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."

Related indicators

The Ecological integrity of national parks indicator reports on the condition of ecosystems within national parks, an important element of Canada's conserved area network.

The Global trends in protected areas indicator compares Canada's protected area to a peer group of countries.

Data sources and methods

Data sources

Data are taken from the Canadian Protected and Conserved Areas Database (the database). Data from federal, provincial and territorial jurisdictions, the authoritative data sources, are compiled by Environment and Climate Change Canada.

More information

Protected areas and areas conserved with other measures

Protected areas together with areas conserved with other measures are referred to as conserved areas. Protected areas are areas recognized as meeting the international definition for a protected area. Areas conserved with other measures must also meet an international definition to be recognized as conserved. The Convention on Biodiversity defines "other effective area-based conservation measures" as a "geographically defined area other than a protected area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity..."

Data description

The database contains data consolidated from all jurisdictions with responsibilities for conserved areas in Canada. Data are current as of December 31, 2018.

Protected areas and areas conserved with other measures data are held in the database. Each year, federal, provincial and territorial departments and agencies submit geospatial and ancillary data for conserved areas under their administrative control. Data on areas controlled by Indigenous or non-governmental organizations, such as the Nature Conservancy of Canada and Ducks Unlimited Canada, are included in cases where a jurisdiction has recognized and categorized those areas.

The data include the name of the area, its geospatial location, boundaries, official area, biome (terrestrial/marine), International Union for Conservation of Nature category, managing jurisdiction, and protection date, among other information.

In cases where the same attribute information does not apply to the entire conserved area, the area is divided into zones for reporting. For example, a single protected area that crosses a provincial border is divided into zones corresponding to the different provinces. Similarly, a protected area that is later expanded is treated as several zones, each with its own protection date. Terrestrial and marine sections are treated as separate zones; freshwater is included in the terrestrial zone. Ancillary data are maintained independently for each zone. Conserved areas that are undivided are treated as a single zone.

Work is ongoing to capture and incorporate data on additional privately held protected areas and on areas being conserved through means other than formal protection.

Jurisdictional area

- For Canada and for all provinces and territories except Quebec: Natural Resources Canada (2005) Canada Centre for Remote Sensing, Land and freshwater area, by province and territory
- For Quebec: Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques
- Canada's marine territory: Fisheries and Oceans Canada (2013) departmental analysis based on National Resources Canada (2009) Atlas of Canada 1:1,000,000 National Frameworks Data, Administrative Boundaries

National boundaries

Natural Resources Canada (2009) Atlas of Canada 1:1,000,000 National Frameworks Data, Administrative Boundaries.

Ecozones

Canadian Council on Ecological Areas (2014) Canada Ecozones. Version 5b.

Marine ecozones are derived from marine bioregions, which were delineated following a national science advisory process that considered oceanographic and bathymetric similarities. For more information, see Fisheries and Oceans Canada (2009) Canadian Science Advisory Secretariat, Science Advisory Report 2009/056 and Government of Canada (2011) National Framework for Canada's Network of Marine Protected Areas.

Methods

The area conserved is estimated by means of a geographical analysis based on the boundaries defined in the geospatial data. A correction is made for overlaps. Separate estimates are made for protected areas and for areas conserved with other measures.

More information

Calculating Canada's conserved area

The Canadian Protected and Conserved Areas Database (the database) contains information on the protection (or conservation) date for each zone. For some zones, it also contains a delisting date.

To estimate the terrestrial protected area trend over time:

1. all polygons representing terrestrial protected areas that were protected in 1990 or earlier were selected from the database
2. the selected polygons were dissolved into a single polygon (removing overlaps), and the resulting area calculated
3. the process was repeated for each subsequent year. Delisted zones were removed from the analysis starting in the year they were delisted
4. estimates were divided by the total terrestrial area of Canada to determine the proportion protected

To estimate the marine protected area, a similar process was followed, selecting protected marine polygons at each step. The process was repeated for other conservation measures, both terrestrial and marine. Total area conserved was calculated by summing area protected and area conserved with other measures.

Polygons with an unknown protection date comprise 1.9% of the total protected area. If a polygon with an unknown protection date was described as "interim," it was assigned a protection date based on the year it was first reported to the database (1.3% of total protected area); otherwise it was treated as having been protected prior to 1990.

Terrestrial conserved areas, by province and territory

The database contains information on the province or territory in which a conserved area is located. Using methodology similar to that used for reporting trends in the national indicator, for each province and territory, terrestrial protected area polygons were combined into a single polygon and the area calculated. The analysis was repeated for terrestrial areas conserved with other measures.

Terrestrial and marine conserved areas, by jurisdiction

The database also contains information on the jurisdiction responsible for each conserved area. As with the national indicator, for each jurisdiction, protected areas polygons were

combined into a single polygon and the total area was calculated. Additional analysis was conducted to estimate the area for areas conserved with other measures.

Conserved areas, by ecological region

The database does not contain information on ecological regions. To generate an estimate of conserved area within each ecozone, a geospatial analysis was conducted. However, national ecozone boundaries are more generalized than local protected areas boundaries, and this has the potential to affect estimates in coastal areas. To avoid this problem, marine and terrestrial protected areas were processed separately.

Marine conserved area polygons that mapped outside a marine ecozone were assigned to the nearest marine ecozone. Similarly, terrestrial conserved areas that mapped outside a terrestrial ecozone were assigned to the nearest terrestrial ecozone:

1. a working layer containing generalized ecozone boundaries was developed. Marine ecozone boundaries were copied from the national ecozone coverage, and polygons were extended to include adjacent terrestrial regions
2. the marine protected area polygons were selected from the database
3. the working layer and the marine protected area polygons were combined into a single layer. Marine protected areas that crossed ecozone boundaries were divided at the boundary
4. protected area polygons were selected from the combined layer, and the overlap-corrected area was calculated for each generalized ecozone
5. the process was repeated for other marine conserved areas
6. the process was repeated for terrestrial protected areas and areas conserved with other measures. The process resulted in more than one multi-part polygon for some terrestrial ecozones: the areas of these were combined in a final step to estimate the protected area within each terrestrial ecozone

The total area of each ecozone was calculated from its geospatial boundaries, as re-projected to Albers Equal Area Conic to be consistent with the projection used in the database. The Newfoundland-Labrador Shelves ecozone area was corrected for the territorial area of St Pierre and Miquelon. The total area conserved per ecozone was divided by the total area of the ecozone in order to generate a percentage.

Recent changes

Data are regularly reviewed and updated.

In 2018, the Conservation Areas Reporting and Tracking System was converted to the Canadian Protected and Conserved Areas Database and brought formally within Environment and Climate Change Canada. This is in line with commitments made under the Pathway to Canada Target 1 initiative and the guidance report, One with Nature (PDF; 2.12 MB).

As of 2018, terrestrial areas conserved with other effective area-based conservation measures were recognized and included as counting towards Canada Target 1 and Aichi Target 11.

As of 2017, marine areas conserved with other effective area-based conservation measures, such as marine refuges, were included.

In 2015, changes to the database enabled information on delisting and transfer between jurisdictions to be captured. This information is not yet fully captured in the database.

Caveats and limitations

Comparisons with previous reports should be made with caution, as data quality and completeness continue to improve. Privately protected land and other effective area-based conservation measures contribute to achievement of Canada's targets, but many are not yet captured within the database.

More information

The area calculated using polygon boundaries may differ from the official area.

Responsibility for source data accuracy and completeness lies with the jurisdictions. Jurisdictional work is guided by the federal, provincial and territorial report One with Nature. Guidance material and decision support tools were adapted from, and in collaboration with the Canadian Council on Ecological Areas. Nonetheless, some differences among jurisdictions can be expected.

Areas that are no longer recognized as protected ("decommissioned" or "delisted") are not captured comprehensively and may be missing from the database.

Complex boundaries, such as coastlines and ecological regions, must be generalized for mapping purposes. In nature, ecozones do not have sharp boundaries. Due to the uncertainty of such boundaries, results should be seen as estimates rather than precise measurements. The mismatch in scale between protected areas, mapped with fine detail, and national-scale geographic frameworks, mapped at a broad scale, may lead to minor differences across the various summaries because of the measurement uncertainty inherent in this type of analysis. Differences in the delineation of coastlines may result in a small amount of overlap between marine and terrestrial protected area polygon boundaries; these have not been corrected for.

Ecozones are an ecologically based framework, and should not be considered an expression of sovereignty.

Protection is a designation, and the indicators do not provide information on the effectiveness of protection, the degree to which the ecological functioning of the area is intact, or the degree to which pressures outside a protected area might affect the biodiversity within it. Marine refuges restrict certain activities without limiting others.

Resources

References

Canadian Council on Ecological Areas Secretariat (2008) Canadian Guidebook for the Application of International Union for Conservation of Nature Protected Area Categories 2008. CCEA Occasional Paper No. 18. Canadian Council on Ecological Areas, Ottawa, ON. 66 pp.

Fisheries and Oceans Canada (2009) Development of a Framework and Principles for the Biogeographic Classification of Canadian Marine Areas. Canadian Science Advisory Secretariat, Science Advisory Report 2009/056. Retrieved on April 3, 2019.

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Pathway to Canada Target 1 Initiative (2018) One with Nature. A Renewed Approach to Land and Freshwater Conservation in Canada (PDF; 2.12 MB). Retrieved on April 24, 2019.

Stolton S, Shadie P and Dudley N (2013) Guidelines for applying protected area management categories including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types (combined volume). Best Practice Protected Area Guidelines Series No. 21, Gland, Switzerland, section 2. Retrieved on April 3, 2019.

Related information

Pathway to Canada Target 1

2020 Biodiversity Goals and Targets for Canada

Canadian Council on Ecological Areas

Convention on Biological Diversity

ProtectedPlanet.net

Interactive map of Quebec's protected areas (in French only)

Annex

Annex A. Data tables for the figures presented in this document

Table A.1. Data for Figure 1. Proportion of area conserved, Canada, 1990 to 2018

Year	Terrestrial area protected (square kilometres)	Percentage of terrestrial area protected	Terrestrial area conserved (square kilometres)	Percentage of terrestrial area conserved	Marine area protected (square kilometres)	Percentage of marine area protected	Marine area conserved (square kilometres)	Percentage of marine area conserved
1990	548 696	5.5	n/a	n/a	19 743	0.34	n/a	n/a
1991	549 199	5.5	n/a	n/a	19 762	0.34	n/a	n/a
1992	564 526	5.7	n/a	n/a	20 187	0.35	n/a	n/a
1993	579 180	5.8	n/a	n/a	20 428	0.36	n/a	n/a
1994	582 690	5.8	n/a	n/a	20 432	0.36	n/a	n/a
1995	614 355	6.2	n/a	n/a	22 200	0.39	n/a	n/a
1996	631 965	6.3	n/a	n/a	23 061	0.40	n/a	n/a
1997	643 924	6.4	n/a	n/a	23 082	0.40	n/a	n/a
1998	672 972	6.7	n/a	n/a	23 826	0.41	n/a	n/a
1999	695 805	7.0	n/a	n/a	24 059	0.42	n/a	n/a
2000	705 589	7.1	n/a	n/a	24 158	0.42	n/a	n/a
2001	728 291	7.3	n/a	n/a	24 190	0.42	n/a	n/a
2002	735 669	7.4	n/a	n/a	24 393	0.42	n/a	n/a
2003	792 201	7.9	n/a	n/a	27 593	0.48	n/a	n/a
2004	801 893	8.0	n/a	n/a	29 992	0.52	n/a	n/a
2005	828 539	8.3	n/a	n/a	31 411	0.55	n/a	n/a
2006	835 218	8.4	n/a	n/a	31 770	0.55	n/a	n/a
2007	861 364	8.6	n/a	n/a	31 963	0.56	n/a	n/a
2008	912 880	9.1	n/a	n/a	40 841	0.71	n/a	n/a
2009	941 276	9.4	n/a	n/a	41 396	0.72	n/a	n/a
2010	948 814	9.5	n/a	n/a	50 583	0.88	n/a	n/a
2011	973 244	9.7	n/a	n/a	50 669	0.88	n/a	n/a
2012	989 785	9.9	n/a	n/a	50 671	0.88	n/a	n/a
2013	1 023 748	10.3	n/a	n/a	51 318	0.89	n/a	n/a
2014	1 025 742	10.3	n/a	n/a	51 319	0.89	n/a	n/a
2015	1 047 241	10.5	n/a	n/a	52 665	0.92	n/a	n/a
2016	1 050 014	10.5	n/a	n/a	55 022	0.96	n/a	n/a
2017	1 052 287	10.5	n/a	n/a	168 256	2.9	443 007	7.7
2018	1 084 392	10.9	1 114 545	11.2	179 736	3.1	454 487	7.9

Note: n/a = not applicable. The terrestrial territory of Canada is 9 984 670 km^2 and its marine territory is approximately 5 750 000 km^2. Overlaps among protected areas and among areas conserved with other measures were corrected for. Terrestrial areas include land and freshwater. Protected areas include only areas recognized under the international definition. Conserved areas include protected areas as well as areas conserved with other measures. For more information, please refer to the Data sources and methods. Other effective area-based conservation measures were first included in international protected areas targets in 2010. In Canada, marine areas conserved with other measures were first recognized in 2017. Terrestrial areas conserved with other measures were first recognized in 2018 under the Pathway to Canada Target 1 initiative. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Table A.2. Data for Figure 3. Proportion of terrestrial area conserved, by province and territory, Canada, 2018

Province or territory	Provincial or territorial area (square kilometres)	Protected area (square kilometres)	Percentage of province or territory protected	Area conserved with other measures (square kilometres)	Total area conserved (square kilometres)	Percentage of province or territory conserved
British Columbia	944 735	144 850	15.3	2	144 852	15.3
Alberta	661 848	100 110	15.1	0	100 110	15.1
Northwest Territories	1 346 106	139 880	10.4	30 119	169 999	12.6
Nova Scotia	55 284	6 888	12.5	6	6 894	12.5
Yukon	482 443	56 334	11.7	0	56 334	11.7
Manitoba	647 797	71 141	11.0	0	71 141	11.0
Ontario	1 076 395	114 599	10.6	33	114 632	10.6
Nunavut	2 093 190	211 299	10.1	0	211 299	10.1
Quebec	1 512 418	151 554	10.0	0	151 554	10.0
Saskatchewan	651 036	56 115	8.6	0	56 115	8.6
Newfoundland and Labrador	405 212	28 110	6.9	0	28 110	6.9
New Brunswick	72 908	3 386	4.6	0	3 386	4.6
Prince Edward Island	5 660	202	3.6	0	202	3.6

Note: Terrestrial areas include land and freshwater. Total area conserved includes protected areas as well as areas conserved with other measures. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Table A.3. Data for Figure 4. Terrestrial conserved areas, by jurisdiction, Canada, 2018

Jurisdiction	Protected area (square kilometres)	Area conserved with other measures (square kilometres)	Total area conserved (square kilometres)
Provincial subtotal	602 543	30 152	632 695
Quebec	150 222	0	150 222
British Columbia	138 738	0	138 738
Ontario	101 191	33	101 224
Manitoba	57 401	0	57 401
Northwest Territories	23 895	30 119	54 013
Saskatchewan	50 919	0	50 919

Jurisdiction	Protected area (square kilometres)	Area conserved with other measures (square kilometres)	Total area conserved (square kilometres)
Alberta	44 564	0	44 564
Yukon	20 138	0	20 138
Nova Scotia	5 485	0	5 485
Newfoundland and Labrador	5 302	0	5 302
New Brunswick	2 922	0	2 922
Nunavut	1 590	0	1 590
Prince Edward Island	177	0	177
National Capital Commission	462	0	462
Parks Canada	338 964	0	338 964
Environment and Climate Change Canada	119 086	2	119 088
Crown-Indigenous Relations and Northern Affairs Canada	34 945	0	34 945
Correction for overlaps among jurisdictions	-11 609	0	-11 609
Grand total	1 084 392	30 154	1 114 545

Note: Terrestrial areas include land and freshwater. Total area conserved includes protected areas as well as areas conserved with other measures. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Table A.4. Data for Figure 5. Marine conserved areas, by jurisdiction, Canada, 2018

Jurisdiction	Protected area (square kilometres)	Area conserved with other measures (square kilometres)	Total area conserved (square kilometres)
Provincial subtotal	10 277	0	10 277
Quebec	5 375	0	5 375
British Columbia	4 650	0	4 650
Atlantic provinces	172	0	172
Manitoba	80	0	80
Fisheries and Oceans Canada	19 526	274 912	294 438
Parks Canada	123 560	0	123 560
Environment and Climate Change Canada	31 187	0	31 187
Correction for overlaps among jurisdictions	-4 814	-161	-4 975
Grand total	179 736	274 751	454 487

Note: Marine refuges are geographic areas that conserve biodiversity, but do not meet the formal definition of protected areas. Total area conserved includes protected areas as well as areas conserved with other measures. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Table A.5. Data for Figure 6. Proportion of ecozones conserved, Canada, 2018

Ecozone name	Ecozone code	Ecozone area (square kilometres)	Protected area (square kilometres)	Percentage of region protected	Area conserved with other measures (square kilometres)	Total area conserved (square kilometres)	Percentage of region conserved
Arctic Cordillera	CL01	233 618	53 698	23.0	0	53 698	23.0
Northern Arctic	CL02	1 481 480	105 596	7.1	0	105 596	7.1
Southern Arctic	CL03	957 139	152 829	16.0	3 672	156 501	16.4
Taiga Plains	CL04	554 014	52 401	9.5	14 928	67 329	12.2
Taiga Shield	CL05	1 322 786	111 542	8.4	1 012	112 554	8.5
Boreal Shield	CL06	1 897 362	180 593	9.5	0	180 593	9.5
Atlantic Maritime	CL07	110 590	9 274	8.4	0	9 274	8.4
Mixedwood Plains	CL08	116 206	2 191	1.9	0	2 191	1.9
Boreal Plains	CL09	779 471	67 118	8.6	0	67 118	8.6
Prairies	CL10	465 990	27 699	5.9	0	27 699	5.9
Montane Cordillera	CL11	437 761	81 828	18.7	0	81 828	18.7
Pacific Maritime	CL12	216 942	52 350	24.1	0	52 350	24.1
Boreal Cordillera	CL13	557 937	96 583	17.3	0	96 583	17.3
Taiga Cordillera	CL14	231 161	19 034	8.2	10 505	29 539	12.8
Hudson Plains	CL15	350 693	43 758	12.5	0	43 758	12.5
Tundra Cordillera	CL16	28 980	7 134	24.6	0	7 134	24.6
Atlantic Highlands	CL17	93 017	3 780	4.1	0	3 780	4.1
Semi-Arid Plateaux	CL18	56 434	5 271	9.3	0	5 271	9.3
Strait of Georgia	CW19	8 969	426	4.8	29	455	5.1
Southern Shelf	CW20	28 158	785	2.8	0	785	2.8
Offshore Pacific	CW21	315 724	10 547	3.3	82 431	92 977	29.4
Northern Shelf	CW22	101 663	16 684	16.4	0	16 684	16.4
Arctic Basin	CW23	752 053	0	0	0	0	0
Western Arctic	CW24	539 807	12 060	2.2	0	12 060	2.2
Arctic Archipelago	CW25	268 792	3 610	1.3	0	3 610	1.3
Eastern Arctic	CW26	782 636	115 088	14.7	58 767	173 855	22.2
Hudson Bay Complex	CW27	1 244 670	8 700	0.70	0	8 700	0.70
Newfoundland and Labrador Shelves	CW28	1 041 588	980	0.09	97 458	98 438	9.5
Scotian Shelf	CW29	416 296	6 000	1.4	19 716	25 715	6.2
Gulf of Saint Lawrence	CW30	246 648	4 851	2.0	16 351	21 201	8.6
Great Lakes	CW31	88 250	11 674	13.2	0	11 674	13.2

Note: Total area conserved includes protected areas as well as areas conserved with other measures. Data are current as of December 31, 2018.
Source: Environment and Climate Change Canada (2018) Canadian Protected and Conserved Areas Database.

Additional information can be obtained at:

Environment and Climate Change Canada
Public Inquiries Centre
12th Floor, Fontaine Building
200 Sacré-Coeur boul.
Gatineau, QC K1A 0H3
Telephone: 1-800-668-6767 (in Canada only) or 819-938-3860
Fax: 819-938-3318
Email: ec.enviroinfo.ec@canada.ca