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**Environment and Climate Change  
Canada**

**2018–19**

**Departmental Results Report**

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Departmental Results Report 2018–19

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Environment and Climate Change Canada  
Public Inquiries Centre  
7<sup>th</sup> Floor, Fontaine Building  
200 Sacré-Coeur Boulevard  
Gatineau, QC K1A 0H3  
Telephone: 819-997-2800  
Toll Free: 1-800-668-6767 (in Canada only)  
Email: [ec.enviroinfo.ec@canada.ca](mailto:ec.enviroinfo.ec@canada.ca)

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## Minister's message



As the newly-appointed Minister of Environment and Climate Change, I am pleased to present the 2018-19 Departmental Results Report for Environment and Climate Change Canada (ECCC).

Climate change is the defining issue of our time. We recognize the seriousness of the issue and will continue to take ambitious action to reduce Canada's greenhouse gases (GHG) and other harmful emissions.

Our national climate plan, the Pan-Canadian Framework on Clean Growth and Climate Change (PCF), was adopted in 2016 and includes over 50 concrete measures to combat climate change. As a result, our emission projections show that for first time in history Canada's emissions are heading on a stable, downward trend to 2030. This is demonstrated in the [2018 Greenhouse Gas and Air Pollution Emissions Projections<sup>i</sup>](#), which shows that Canada's GHG emissions in 2030 are projected to be 223 million tonnes lower than projected prior to implementation of the PCF. However, science indicates that more action is needed. That is why we are planning to not only meet Canada's 2030 Paris Agreement target, but to surpass it; putting Canada on a path to net-zero by 2050.

Significant progress has been achieved this past years on implementing our national climate plan. For instance, ECCC ensured it was no longer free to pollute anywhere in Canada by putting a price on carbon. While provinces and territories were given the flexibility to create their own systems, in jurisdictions where the federal pricing system applies, all direct proceeds are applied within the province or territory in which they are collected.

Other efforts to combat climate change include accelerating the phase-out of coal, limiting GHG emissions from new natural gas-fired electricity generation, and reducing methane emissions from oil and gas.

Additionally, ECCC set performance-based emission standards for new heavy-duty vehicles and launched the mid-term evaluation of GHG emission standards for light-duty vehicles. ECCC's \$2 billion Low Carbon Economy Fund encouraged clean growth by supporting a range of emissions-reducing projects at the provincial, territorial, and local levels. The Climate Action Fund supported projects delivered by students, youth, Indigenous peoples, organizations, and medium-small enterprises that raised awareness and built capacity for increased actions on climate change.

To build climate change adaptation and resilience, ECCC launched the Canadian Centre for Climate Services website and support desk to give Canadians better access to information and support to help plan for climate impacts.

Canadians are facing extreme weather events across the country. ECCC's progress in replacing outdated weather radars and the launch of [WeatherCAN<sup>ii</sup>](#), ECCC's new weather app, have improved our capacity to provide critical weather and air quality information to Canadians.

The fight against climate change also requires a global response. ECCC continued to work closely with Global Affairs Canada to deliver Canada's climate finance commitment of \$2.65 billion over five years to support vulnerable developing countries transition to resilient, low-carbon economies. ECCC also remained a strong advocate for ensuring environmental issues and climate change are major considerations in Canada's free-trade agreements.

ECCC also made significant progress in protecting and conserving nature. [Canada's Nature Fund<sup>iii</sup>](#) – a \$1.3 billion investment – protects biodiversity, including species-at-risk. These efforts include Canada's first Indigenous Protected Area—Edézhíe Protected Area in the Northwest Territories.

To protect priority species, ECCC worked with provinces and territories to develop a Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada through multispecies and ecosystem-based planning and on the ground actions.

ECCC's ongoing pollution prevention efforts included collaboration with provinces and territories to create a Canada-wide Strategy on Zero Plastic Waste. The strategy takes a life-cycle approach to addressing plastic waste, and proposes a framework to keep plastics in the economy and out of our environment. It will be key to meeting Canada's commitments made under the Ocean Plastics Charter, along with the Government's commitment to banning certain harmful single-use plastics by 2021.

In the face of the many environmental challenges facing Canada and the world, ECCC also recognizes that the Government of Canada must lead by example. ECCC proposed a new 2019–2022 Federal Sustainable Development Strategy that sets out goals and actions to achieve Canada's environmental sustainability priorities, and reported to Canadians through the 2018 Progress Report on the significant results achieved under the previous strategy.

I invite you to read the ECCC 2018–19 Departmental Results Report to learn more about the contributions ECCC is making to improve the environment, prosperity, and health of all Canadians. As Minister, I look forward to building on these important accomplishments in the years to come.

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The Honourable Jonathan Wilkinson, P.C., M.P.  
Minister of Environment and Climate Change

## Results at a glance

In 2018–19 Environment and Climate Change Canada (ECCC) took actions on key environmental issues to deliver on Government of Canada commitments to Canadians. The Department addressed ongoing and emerging priorities related to climate change, pollution and harmful substances, species at risk, and conservation of lands and water. Through science, regulation, and partnership with Indigenous peoples, provincial and territorial governments and a diverse range of stakeholders, ECCC made significant progress on these priorities in Canada and globally.

To address climate change, ECCC continued action on multiple fronts to reduce greenhouse gases (GHGs) and other harmful emissions, build climate resilience and grow the economy. They include over 50 concrete measures, regulations, standards, programs and investments identified in 2016 under the Pan-Canadian Framework on Clean Growth and Climate Change (PCF), as a result of which Canada's GHGs emissions are projected to be 223 million tonnes lower than if the PCF was not adopted, as set out in Canada's 2018 Greenhouse Gas and Air Pollution Emissions Projections. Some of the actions taken in 2018–19 are as follows:

- Carbon pollution pricing, a key element of the PCF, is now in place in provinces as of March 31, 2019. ECCC worked with provinces and territories to provide them with the flexibility to set their own carbon pollution pricing systems. All direct proceeds from carbon pollution pricing under the federal system are being returned to those provinces or territory of origin.
- Efforts to reduce GHGs in 2018–19 include Royal Assent of the *Greenhouse Gas Pollution Pricing Act*, the coming into force of regulations to accelerate the phase-out of coal-fired electricity generation, limiting GHGs from new natural gas-fired electricity generation, reducing methane emissions from oil and gas, introducing controls on hydrofluorocarbons (HFCs) and publishing the proposed regulatory design for the first phase of the upcoming new Clean Fuel Standard.
- To address GHG emissions in the transportation sector, ECCC developed new GHG emissions regulations for heavy-duty vehicles, which set new standards for school buses, transport trucks, and other large vehicles that account for 9% of Canada's GHG emissions. For light-duty vehicles, ECCC undertook consultations and technical research and reported on GHG performance of on-road passenger automobiles and light trucks for model years 2011 to 2016.
- Partnerships with Indigenous peoples on the PCF are vital to its successful implementation. ECCC continued to collaborate through distinction-based tables with First Nations, Inuit, and the Métis Nation, in partnership with each of the Assembly of First Nations, Inuit Tapiriit Kanatami, and the Métis National Council. These tables inform the design of policies and programs to reflect and advance Indigenous peoples' clean growth and climate change priorities.
- Through ECCC's \$2 billion Low Carbon Economy Fund, the Department invested in initiatives that encourage clean growth and reduce GHG emissions through two funds: The Leadership Fund and the Challenge Fund. Together, these funds support a diverse range and size of projects to bring effective and innovative approaches to reduce energy and emissions and to further provincial, territorial and local priorities. In addition, through the Climate Action Fund, the Department supported innovation in climate action in Canada by providing up to \$3 million for projects delivered by students, youth, Indigenous peoples and organizations, not-for-profit organizations and medium-small

enterprises to engage in awareness of climate change and to build capacity for increased actions that contribute to the PCF.

- To support Canadian efforts towards climate change adaptation and resilience, ECCC launched the Canadian Centre for Climate Services website and Support Desk to give Canadians better access to information that helps them plan for climate impacts. The Department also provided advice and guidance to federal departments and agencies to support greater resilience to climate impacts. ECCC supported all aspects of the Global Commission on Adaptation for its 2018–20 mandate.
- ECCC continued its leadership role in the international climate change and clean growth arena to advance Canadian and global goals, including through ongoing negotiations for implementing the Paris Agreement. ECCC continued to work closely with Global Affairs Canada to deliver Canada's climate finance commitment of \$2.65 billion over five years to support vulnerable developing countries transition to resilient, low-carbon economies. While Global Affairs Canada implements the majority of these funds, ECCC channels \$57.5 million to reduce short-lived climate pollutants emissions, improve early warning systems, and test innovative approaches for carbon market systems through key bilateral and multilateral initiatives. ECCC and GAC collaborated closely on tracking, monitoring and reporting on progress achieved. ECCC key partnerships include the Climate and Clean Air Coalition (Canada is a founding member), Powering Past Coal Alliance (now at 80 members strong) and the Global Methane Forum, the 2018 iteration of which was hosted by Canada. ECCC remained a strong advocate for referencing environmental issues and climate change in Canada's free-trade agreements to ensure they enable Canada to meet its environmental commitments.

To address Canada's biodiversity, pollution and air quality priorities, ECCC took action on several fronts in 2018–19.

- ECCC made significant progress to protect and conserve nature. By March 2019, a total of 11.8% of Canada's land and freshwater were protected (2020 goal is 17%). Canada also exceeded its mid-term target for marine and coastal waters by protecting 7.9% of these areas as of March 2019, which is well on the way to the 2020 target of 10%. A historic Government of Canada investment of \$1.3 billion over five years in [Canada's Nature Legacy](#)<sup>iv</sup>, included \$500 million, matched by partners, to create a \$1 billion Canada Nature Fund. ECCC is implementing the Canada Nature Fund to provide financial resources to partners to protect species and their habitats and to drive progress towards Canada's biodiversity targets. ECCC established Canada's first Indigenous Protected Area under the Canada Nature Fund—Edézhzhíe Protected Area (Northwest Territories)—to protect important habitat for woodland caribou and woodland bison, both threatened species. In recognition that Indigenous peoples have long been stewards of the environment and have deep connections to nature, ECCC continued to collaborate with Indigenous peoples and invest in initiatives that protect and restore biodiversity, and that strengthen and renew its relationship with Indigenous peoples
- ECCC made major progress in protecting priority species, including by working with provinces and territories to develop a Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada, identifying shared priority places, species and sectors for action, and adding protections to 13 species at risk, thus further reducing the backlog of decisions on listing species under Canada's *Species at Risk Act*.
- ECCC took significant action on pollution and waste. ECCC worked with provinces and territories to create a Canada-wide Strategy on Zero Plastic Waste. During its G7 presidency, Canada introduced the Ocean Plastics Charter at the Leaders' Summit it hosted in June 2018.



- ECCC proposed a new 2019–2022 Federal Sustainable Development Strategy, which sets out environmental sustainability priorities, establishes goals and targets, and identifies actions to achieve them. ECCC also reported to Canadians through the 2018 Progress Report on the significant results achieved under the previous 2016–2019 Strategy.
- ECCC continued to enforce Canada's pollution and wildlife laws and regulations, with significant penalty monies going to the Environmental Damages Fund to support environmental projects with measurable outcomes.
- With extreme weather events on the rise, ECCC continued to improve its capacity to provide critical weather and air quality information to Canadians, with ever-greater speed and accuracy. The Department issued 480,000 weather forecasts, watches and warnings. WeatherCAN, ECCC's new weather app, was launched and was downloaded over 330,000 times in its first six weeks. The Department continued to replace outdated radars with new ones that enable more accurate and timely predictions. The 2018-19 year included the installation of four new weather radars across the country (Blainville, Québec; Foxwarren, Manitoba; Smooth Rock Falls, Ontario; Spirit River, Alberta). In addition to the Radisson, Saskatchewan, radar that was installed in 2017–18, a total of 5 new radars have now been installed, and all 32 new radars are on track for installation across the country by 2023.

<p><b>What funds were used?*</b></p> <p>(2018–19 actual spending)</p> <p>\$1,393,354,692</p>
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<p><b>Who was involved?*</b></p> <p>(2018–19 actual Full-Time Equivalents [FTEs])</p> <p>6,943</p>
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\* Figures refer to total actual 2018–19 departmental spending and FTE, and not only the selected achievements highlighted above.

For more information on Environment and Climate Change Canada's plans, priorities and results achieved, see the "[Results: what we achieved](#)" section of this report.



## Results: what we achieved

### Core Responsibilities

#### Taking Action on Clean Growth and Climate Change

##### Description

Through engagement with other federal departments and agencies, provinces, territories, Indigenous peoples, and other stakeholders, and external experts, the Department will support and coordinate the implementation of the Pan-Canadian Framework on Clean Growth and Climate Change (PCF); work to reduce Canadian greenhouse gas (GHG) emissions; drive clean growth; develop regulatory instruments; support businesses and Canadians to adapt and become more resilient to climate change; and contribute to international climate change actions to increase global benefits.

##### Results

Canada and the world are facing a climate crisis, which was made evident by the [Intergovernmental Panel on Climate Change \(IPCC\) Special Report on Global Warming of 1.5 °C](#)<sup>vii</sup>. At home, Canadians are experiencing the impacts of climate change through more frequent and severe floods, fires, droughts and heatwaves. [Canada's Changing Climate Report](#)<sup>viii</sup> confirms that Canada's climate is warming at twice the global rate, and three times the global rate in the North.

In 2018–19, ECCC continued to work with other government departments, provinces and territories, and Indigenous peoples to implement the Pan-Canadian Framework on Clean Growth and Climate Change (PCF). Key achievements include:

- Royal Assent of the *Greenhouse Gas Pollution Pricing Act*.
- The coming into force of regulations to accelerate the phase-out of coal-fired electricity by 2030, limit greenhouse gas emissions (GHGs) from natural gas-fired electricity, and reduce methane emissions from oil and gas (see also page 9).
- The creation of the Task Force on Just Transition for Canadian Coal Power Workers and Communities (see also page 11).
- The establishment of Canada's Advisory Council on Climate Action (see also page 11).
- The establishment of a new Canadian Centre for Climate Services, which gives Canadians, communities, and businesses better access to climate science and information (see also page 12).

##### Pan-Canadian Framework

In 2016, the Government of Canada worked with provinces and territories, and engaged with Indigenous peoples, youth, stakeholders, industries, and the public, to develop the Pan-Canadian Framework on Clean Growth and Climate Change (PCF)—Canada's plan to reduce emissions, build resilience, and grow the economy. The PCF includes over 50 concrete measures, regulations, standards, programs and investments, which are [reported on annually](#)<sup>v</sup> in collaboration with provincial and territorial governments.

As a result, Canada's GHG emission projections show that for first time in history Canada's emissions are heading on a stable, downward trend to 2030. This is demonstrated in the [2018 Greenhouse Gas and Air Pollution Emissions Projections](#)<sup>vi</sup>, which shows that Canada's GHG emissions in 2030 are projected to be 223 million tonnes lower than projected prior to implementation of the PCF. Additional reductions will come from investments not yet modelled, such as public transit and clean innovation, as well as new measures from different levels of government. ECCC will continue working with its partners to meet and exceed Canada's Paris Agreement target.

In addition, the Government of Canada continued to demonstrate its climate leadership abroad. With respect to our international commitments, Canada continued to actively participate in global initiatives and fora to serve Canadians.

Undertaking these actions in both the domestic and international arenas is vital to a clean and growing economy for Canada.

### **Carbon pollution pricing across Canada**

A price on carbon pollution is an essential part of Canada's plan to fight climate change and grow the economy. Pricing carbon pollution is the most efficient way to reduce greenhouse gas emissions and stimulate investments in clean innovation. Under the Pan-Canadian Approach to Pricing Carbon Pollution, provinces and territories have the flexibility to develop their own carbon pollution pricing systems, as long as they meet minimum federal requirements. The federal government has established a federal carbon pollution pricing system that applies in provinces and territories that request it or that do not have a system that meets the federal requirements.

Under the *Greenhouse Gas Pollution Pricing Act (GGPPA)*, which received Royal Assent on June 21, 2018, the federal carbon pollution pricing system has two parts: a regulatory charge on fuel (fuel charge) and the Output-Based Pricing System (OBPS)—a regulatory trading system for industry that incentivizes emissions reductions while maintaining international competitiveness and guarding against carbon leakage. Both parts of the federal system took effect in 2019.

All direct proceeds from pricing carbon pollution under the federal system will be returned to the province or territory of origin. In Ontario, New Brunswick, Manitoba and Saskatchewan, about 90 per cent of fuel charge proceeds were returned to individuals and families through Climate Action Incentive payments. The remaining proceeds from the federal fuel charge will be used to support key sectors, including small- and medium-sized enterprises, municipalities, universities, schools, colleges, hospitals, not-for-profit organizations, and Indigenous communities, through the [Climate Action Incentive Fund](#)<sup>x</sup>.

### **Regulations to reduce GHGs and support climate action**

ECCC supported [clean electricity](#)<sup>x</sup> by finalizing [regulations to phase out traditional coal-fired electricity generation by 2030](#)<sup>xi</sup> and [regulations to limit GHG emissions from new natural gas-fired electricity generation](#)<sup>xii</sup> (both published in December 2018). The updated coal regulations are expected to have benefits for Canadians totaling \$4.7 billion, including \$3.4 billion in avoided climate change damage, \$1.2 billion in health benefits for Canadians, and \$40 million in environmental benefits.

#### **Pricing carbon pollution works**

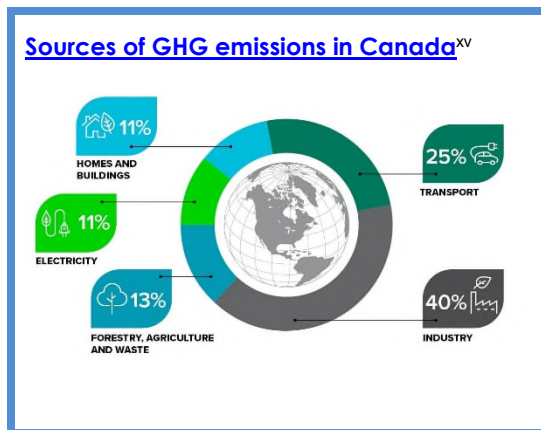
Pricing carbon reduces pollution at the lowest cost to businesses and consumers. Around the world, businesses, governments and experts agree that carbon pricing is the cheapest and most efficient way to cut carbon pollution.

According to the World Bank's 2019 State and Trends of Carbon Pricing Report, 57 jurisdictions are putting a price on carbon pollution, covering about 20% of global GHG emissions.

In Canada, pricing carbon pollution will make a significant contribution toward meeting the 2030 greenhouse gas reduction target.

A well-designed price on carbon pollution provides an incentive for climate action and clean innovation while protecting competitiveness. Carbon pricing is efficient and cost effective because it allows businesses and households to decide for themselves how best to reduce pollution and often save money in the process.

In addition, proposed equivalency agreements with the provinces of [Nova Scotia](#)<sup>xiii</sup> and [Saskatchewan](#)<sup>xiv</sup> on the *Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations* were published. Both agreements are available on the *Canadian Environmental Protection Act, 1999* (CEPA 1999) Registry and, when finalized, will cover the period of January 1, 2020, to December 31, 2024. A proposed Order-in-Council for the Saskatchewan agreement and a *Notice of Availability* for the Nova Scotia agreement (which was a renewal of an existing agreement that already has an Order in place) were published in the *Canada Gazette, Part I*.



ECCC published [final regulations to reduce methane from the oil and gas sector](#)<sup>xvi</sup>. The new regulations will reduce emissions from this source by 40% to 45% below 2012 levels, by 2025. The regulations provide flexibility for industry to choose cost-effective ways to comply. For example, some companies are exploring the use of drones to detect methane leaks instead of using more traditional leak-detection methods.

In addition, [a draft equivalency agreement with the province of British Columbia](#)<sup>xvii</sup> on these regulations was published for public consultation in the *Canada Gazette, Part I*.

Regulations amending the [Ozone-depleting Substances and Halocarbons Alternatives Regulations](#)<sup>xviii</sup>, which entered into force on April 16, 2018, introduced controls on hydrofluorocarbons (HFCs) to help Canada meet its Montreal Protocol commitments and reduce a significant source of GHGs.

Canada hosted the Global Methane Forum (April 2018), an important global event with close to 400 delegates from 51 countries, to discuss how to advance methane mitigation, science, policy and technology innovation.

Developing a [Clean Fuel Standard](#)<sup>xx</sup> remained a priority for ECCC, with the goal of reducing GHG emissions from liquid, gaseous and solid fossil fuels by 30 megatonnes a year, by 2030, making it an important contribution to Canada's national emissions reductions targets. In 2018–19, the Department outlined key elements of the proposed new regulations in a [regulatory design paper](#)<sup>xx</sup>.

ECCC developed new [GHG emissions regulations for heavy-duty vehicles](#)<sup>xxi</sup> that set new standards for school buses, transport trucks, garbage trucks and other large vehicles that together account for 9% of Canada's GHG emissions. The regulations were introduced in 2018 and will gradually include more stringent standards, starting in model year 2021 for heavy-duty vehicles and engines, and in 2020 for trailers pulled by transport tractors. Stringency will increase each year until 2027 in order to give manufacturers and importers time to adapt. The regulations also offer industry the flexibility to choose the most cost-effective compliance options. On May 27, 2019, an interim order was made to delay the GHG emission standards for trailers in Canada by one year after the interim order is made (from January 1, 2020, to May 27, 2020). This will allow the Department time to assess concerns from Canada's trailer industry on potential adverse economic impacts if Canada were to proceed to implement the trailer standards without the corresponding standards of the U.S. Environmental Protection Agency (U.S. EPA) being in force.

ECCC also published a variety of discussion papers and reports in 2018–19 on various GHG reduction opportunities, including:

- [A discussion paper](#)<sup>xxii</sup> to launch consultations on the mid-term evaluation of Canada's light-duty vehicle GHG regulations for the 2022 to 2025 model years, with the goal of determining whether Canada's emission standards for these model years remain appropriate. ECCC also published [a summary of the comments](#)<sup>xxiii</sup> received in response to the discussion paper.
- A technical paper on drag reduction technologies for light-duty vehicles, which investigated measures to complement aerodynamic drag measurements that may be used to reduce vehicle fuel consumption and GHG emissions.
- The [Greenhouse Gas Emissions Performance Model Year 2011 to 2016 Light-duty Vehicle Fleet](#)<sup>xxiv</sup> report, which summarizes company-specific regulatory compliance results for on-road passenger automobiles and light trucks.
- A report on [Notices of Defect](#)<sup>xxv</sup>, which provides summaries of notices of defects and other company notifications submitted to ECCC. The intent is to disseminate information on emission-related issues for vehicles, vessels and engines.

#### **Science at work: Tracking emissions in Canada**

More than 1,600 facilities in Canada now report their GHG emissions, and ECCC makes this emissions data available to the public through [open.canada.ca](#)<sup>xxvi</sup>.

These data inform national-level reporting from industrial sources which, in turn, helps shape strategies for reducing levels from key sources. Overall, ECCC tracks seven GHGs, 17 air pollutants and black carbon (also an air pollutant).

#### **Reducing short-lived climate pollutants**

ECCC continued to implement [Canada's Strategy on Short-lived Climate Pollutants](#)<sup>xxvii</sup> (SLCPs). These potent GHGs and air pollutants, including black carbon, methane and ground-level ozone, play an important role in climate warming. A range of actions on SLCPs (and on other GHGs), including science and mitigation, have been taken to meet the temperature goals of the Paris Agreement. Black carbon is of particular significance in the Arctic due to its additional warming effect when deposited onto snow or ice.

#### **Partnerships with Indigenous peoples on the PCF**

ECCC continued its partnership and constructive dialogue with each of the Assembly of First Nations, Inuit Tapiriit Kanatami and the Métis National Council. Each partnership is vital to the successful implementation of the PCF and each of the three Indigenous tables informs the design of policies and programs to reflect and advance Indigenous peoples' clean growth and climate change priorities. The First Nations-Canada Joint Committee on Climate Action submitted its annual report to the National Chief and Prime Minister in 2018.

## Engagement with External Experts

Following an open call for proposals under the [Expert Engagement Initiative on Clean Growth and Climate Change](#)<sup>xxviii</sup>, ECCC is providing up to \$20 million over 5 years, from Budget 2018, to the successful applicant: the Pan-Canadian Expert Collaboration. Representing more than 15 diverse and reputable organizations across Canada, it will form a new and independent not-for-profit “institute” focused on clean growth and climate change. The institute will generate, communicate and mobilize trusted information, research, advice, and best practices to Canadians, governments, and stakeholders. The institute will be supported by highly credible and inclusive research, analysis, and engagement with leaders, experts, and practitioners from across Canada. The institute is expected to launch publicly in early 2020 and will help fulfil the PCF’s commitment to engage external experts to assess the effectiveness of its measures and identify best practices.

As Canada transitions to cleaner sources of power, the federal government remains committed to supporting the workers and communities that depend on the coal industry. To help do so, ECCC launched the [Task Force on Just Transition for Canadian Coal Power Workers and Communities](#)<sup>xxix</sup> in 2018. Their [final report](#)<sup>xxx</sup> provides advice on how to make this transition fair, reflecting what they heard during their engagement in every affected province. In response to the Task Force recommendations, the Government of Canada has committed to investing \$35 million to support skills development and economic diversification activities, including through transition centers, and to creating a dedicated \$150 million infrastructure fund, starting in 2020–21, to support priority projects and economic diversification in impacted communities; and, through Employment and Social Development Canada, will work with those affected to explore new ways to protect workers, wages and pensions, including through the Canada Training Benefit, recognizing the uncertainty that this transition represents for workers in the sector.

An [Advisory Council on Climate Action](#)<sup>xxxi</sup> was established to identify further ways to reduce carbon pollution, while encouraging economic growth, from the transportation and buildings sectors. The Council’s [interim report](#)<sup>xxxii</sup> (March 2019) makes a number of recommendations, including providing incentives to Canadians to purchase zero-emission vehicles (ZEVs) and further investing in electronic vehicle (EV) infrastructure, such as charging stations. The Council delivered its [final recommendations report](#)<sup>xxxiii</sup> in May 2019, providing advice to the Minister of Finance and the Minister of Environment and Climate Change in the spring of 2019 on developing a broader market for building retrofits and on opportunities for the electrification of transport. Budget 2019 proposed to implement programming for electric vehicles consistent with the Council’s advice.

The Government of Canada set up an [Expert Panel on Sustainable Finance](#)<sup>xxxiv</sup> in 2018 (led by Finance Canada) to identify key challenges and opportunities, and make recommendations on the way forward in this area. ECCC contributed socio-economic analyses to shape the Panel’s work. In its 2018 [interim report](#)<sup>xxxv</sup>, the Panel points to promising approaches for business and governments to provide strategic leadership towards a more sustainable economic future. The Panel’s final report was issued in June 2019.



## Investing in energy efficiency and reducing carbon emissions

ECCC's \$2 billion [Low Carbon Economy Fund](#)<sup>xxxvi</sup> helps put Canada's PCF into action through investment in:

- The Leadership Fund—up to \$1.4 billion over 5 years to provinces and territories to promote investments in initiatives to encourage clean growth and GHG emission reductions. Investments in 2018–19 included a \$2.1 million commitment to expand Newfoundland and Labrador's Home Energy Savings Program to lower operating costs in public buildings (such as schools, hospitals and others), with funds matched by the province. Funding commitments were put in place in 2018–19 with several other provinces and territories to help address their specific priorities while furthering those of the PCF.
- The Challenge Fund—over \$500 million to support projects that leverage ingenuity to reduce emissions and generate clean growth. This Fund includes the Champions Stream, aimed at ambitious projects that directly reduce Canada's emissions, and the Partnership Stream geared to smaller applicants, including small and medium-sized businesses, as well as Indigenous communities and organizations.

### Ingenuity in action

Enwave Energy Corporation was the first recipient announced under the Champions Stream of the Challenge Fund. ECCC is investing \$10 million to expand the company's use of innovative technology that draws cold water from Lake Ontario and uses it to cool public and private buildings in Toronto. The project is expected to reduce the amount of energy needed to cool the buildings by up to 80%.

In addition, ECCC's Climate Action Fund supports innovation in climate action in Canada by providing up to \$3 million for projects delivered by students, youth, Indigenous peoples and organizations, not-for-profit organizations and small and medium-sized businesses to raise awareness of climate change and to build capacity for increased actions that contribute to the PCF. Under the Fund, for example, over \$115,000 was awarded in 2018–19 to a Nova Scotia project that teaches students both science-based and Mi'kmaq knowledge about climate change. That same year, the [Canada Green Building Council](#)<sup>xxxvii</sup> received close to \$500,000 to raise awareness and increase knowledge of zero-carbon buildings.

## Addressing climate change adaptation and resilience

ECCC launched the [Canadian Centre for Climate Services](#)<sup>xxxviii</sup> (CCCS) in 2018. The online portal provides all Canadians—from homeowners to businesses to municipal planners—access to the information and support they need to plan for climate impacts. The CCCS brings together a dedicated multidisciplinary team to help Canadians understand and become more resilient to climate change. (See a [brief video clip about the CCCS](#)<sup>xxxix</sup>.)

### Science at work: Canada assesses climate change

[Canada's Changing Climate Report](#)<sup>xl</sup>, an in-depth, stand-alone assessment of climate change in Canada, shows that Canada's climate is warming twice as fast as the global average. Led by ECCC, the report provides a climate science foundation for forthcoming National Assessment reports addressing the impacts of climate change in Canada and how Canadians and their communities are adapting. It also reflects contributions from scientists with Fisheries and Ocean Canada and Natural Resources Canada, as well as from university experts.



To support science information sharing to help Canadians understand and plan for climate-related risks, ECCC initiated agreements in 2018–19 with various partners, including Ouranos (a climate-science consortium based in Québec) and the University of Victoria's Pacific Climate Impacts Consortium. ECCC invested in the new interactive [Climate Atlas of Canada](#)<sup>xii</sup>, developed by the University of Winnipeg's Prairie Climate Centre, to show how climate change could affect communities across the country.

Canada's [Expert Panel on Climate Change Adaptation and Resilience Results](#)<sup>xiii</sup> completed its [report and recommendations](#)<sup>xiii</sup> (June 2018) in support of the PCF, including a proposed suite of 54 indicators to measure progress on adaptation and climate resilience in Canada. The indicators cover human health and well-being, vulnerable regions, hazards and disaster risks, infrastructure, and science and Indigenous traditional knowledge.

ECCC provided advice and guidance to federal departments to increase their institutional climate resilience. Initiatives included preparation of updated guidance on climate change risk assessment and adaptation planning, a detailed needs assessment of 24 departments, and training to departments. ECCC also assessed climate change risks to its programs, assets and own operations and is developing an Adaptation Plan to address priority risks. These activities deliver on commitments in the Departmental Sustainable Development Strategy, the Treasury Board of Canada Secretariat's (TBS) Greening Government Strategy (2017), and respond to the recommendations of the Commissioner of Environment and Sustainable Development's (CESD) [Audit of Adapting to the Impacts of Climate Change](#)<sup>xiv</sup>, published as part of the Fall 2017 CESD reports. Furthermore, ECCC worked with TBS's Centre for Greening Government to develop more robust adaptation commitments in the Federal Sustainable Development Strategy (2019–2022) and Greening Government Strategy update (2019), with the goal of making federal departments and organizations more resilient.

ECCC also engaged with provincial and territorial counterparts under the Canadian Council of Ministers of the Environment (CCME) to develop *Lights on the Path*, a compendium of best practices for reducing GHG emissions and building resilience in government operations (May 2018). CCME also released a report on Best Practices and Resources on Climate Resilient Natural Infrastructure (June 2018), which details how natural infrastructure can address climate change impacts and provide co-benefits, such as biodiversity conservation and GHG mitigation.

The Department's international work on adaptation included support to the Global Commission on Adaptation. Launched in October of 2018, the Commission aims to catalyze a global movement to bring scale and speed to adaptation solutions. The Commission is led by Ban Ki-Moon (8th Secretary General of the UN), Bill Gates (the Bill and Melinda Gates Foundation), and Kristalina Georgieva (International Monetary Fund). Canada is one of 19 countries convening the Commission and has contributed \$7 million to support its work, which takes place from October 2018 to December 2020. The focus of the first year included the publication of a [flagship report](#)<sup>xv</sup>, unveiled in September 2019 at the United Nations Secretary General's Climate Action Summit. Canada will contribute to all aspects of the Commission's work and has prioritized work on three action tracks: finance, infrastructure and nature-based solutions.

### **Strategic assessment of climate change**

ECCC engaged stakeholders on how climate change considerations can best be integrated in project impact assessments. The [Discussion Paper: Developing a Strategic Assessment of Climate Change](#)<sup>xvi</sup> provided an opportunity for Indigenous peoples, provinces and territories, industry and others to give their views on the objectives and scope of the strategic assessment of climate change. ECCC also published [Terms of Reference for conducting a Strategic Assessment of Climate Change](#)<sup>xvii</sup>

## On the International Front: Canada's Climate Change Leadership

Canada continued to provide leadership in the global climate change arena. One of the first countries to sign and ratify the Paris Agreement and make ambitious climate commitments (including reducing GHG emissions by 30% below 2005 levels, by 2030), Canada continues to model robust and credible national action that supports collective international advancements in climate action, including through leadership on several key fronts.

### ▪ The Paris Agreement

ECCC remained active in ongoing negotiations to implement the Paris Agreement, including on the Paris Rulebook for enabling all countries to effectively implement and report on their progress under the Agreement. The Rulebook was adopted at the December 2018 United Nations Climate Change Conference (24th Conference of the Parties to the United Nations Framework Convention on Climate Change [UNFCCC], COP24) in Katowice, Poland.

#### Gender leadership on climate change

Following Canada's 2017 role in the UNFCCC's adoption of the Gender Action Plan (to ensure that climate action is gender-sensitive and considers gender balance), in May 2018 the Minister hosted the Climate Leaders' Summit: Women Kicking it on Climate. It brought together 60 women influencers from various countries to develop ways to combat climate change and contribute to women's empowerment.

ECCC partnered with France in 2018 on a workshop held in Senegal to help prepare women from developing countries to negotiate at COP24, under the Canada-France Climate and Environmental Partnership.

Canada continued to serve as Co-Chair of the Ministerial on Climate Change (MOCA) with the European Union and China, which brought together (at a second MOCA in 2018) more than 30 Ministers and senior representatives from major economies to advance discussions towards the successful adoption of the Paris Rulebook.

Building on Canada's leadership in securing Article 6 of the Paris Agreement in December 2015 (concerning international carbon markets), Canada continued to be a key player for advancing ongoing negotiations on the guidance (rules) for the Agreement's implementation. The Minister and senior ECCC officials also played leadership roles in several other key international initiatives for enhancing international cooperation on developing credible carbon markets (including the Carbon Pricing Leadership Forum and the Carbon Markets Platform).

### ▪ Climate finance

ECCC, in collaboration with Global Affairs Canada, is delivering \$2.65 billion over five years to support developing countries, the poorest and most vulnerable in particular, in their transition to clean and climate-resilient economies. Canada's climate finance also supports the collective climate finance goal to mobilize US\$100 billion per year by 2020 from a variety of public and private financial sources in donor countries to help achieve the shared goals of the Paris Agreement.

Canada's support is delivered through a variety of channels, including through the Green Climate Fund (the financial mechanism of the Paris Agreement), as well as through a number of multilateral and bilateral initiatives.

As part of this commitment, ECCC is implementing climate finance initiatives aimed at helping countries tackle the challenges of climate change, including by reducing short-lived climate pollutants (SLCPs). Contributions to initiatives in 2018–19 include, for example:

- \$10 million to the Climate and Clean Air Coalition Trust Fund;

- \$10 million to the World Meteorological Organization to develop climate risk-related early warning systems in some of the most vulnerable countries (CREWS);
- \$7 million to support Nationally Determined Contributions (NDCs) implementation in Chile's waste management sector through the deployment of technologies to reduce SLCP emissions that could be coupled with clean energy generation;
- \$5 million to the Capacity-building Initiative for Transparency (CBIT) to help build institutional and technical capacity for climate data transparency;
- \$1 million to support NDC implementation in the waste management sector in Vietnam through the development of policy frameworks and capacity building for local governments in order to adopt climate-friendly municipal solid waste practices that will ultimately lead to significant methane emission reductions; and
- \$1.6 million to provide assistance to enhance measurement, reporting and verification (MRV) mechanisms in the Pacific Alliance countries (Mexico, Colombia, Peru and Chile).

ECCC is also exploring opportunities to pilot exchanges of Internationally Transferred Mitigation Outcomes (ITMOs) with partner countries in order to build capacity on new crediting mechanisms under Article 6 of the Paris Agreement. A 2018–19 contribution of \$3 million to the Transformative Carbon Asset Facility (TCAF) led by ECCC will help to evaluate future opportunities for ITMOs for Canada and expand knowledge on how it could lever private sector investments to increase mitigation.

Canada's climate finance commitment will generate important results, both in terms of climate change mitigation and adaptation in developing countries. It will also reduce GHG emissions, increase resilience of beneficiaries and help to mobilize private investments for climate action.

In addition to Canada's \$2.65 billion pledge, innovative climate resources and investments are being deployed by ECCC partners and stakeholders, such as Export Development Canada, FinDev—Canada's newly established development finance institution—and non-traditional donors, such as sub-national governments.

ECCC continued work to fulfill Canada's ongoing international reporting obligations under the United Nations Framework Convention on Climate Change (UNFCCC). In April 2018, Canada hosted a team of UNFCCC experts for an in-country review of the Seventh National Communication and Third Biennial Report that Canada had submitted to the UNFCCC in December 2017. ECCC officials also started to lay the groundwork for the 4th Biennial Report, due to the UNFCCC on January 1, 2020. The National Communication and Biennial Reports provide international audiences with a status update on Canada's climate change activities.

- **International climate partnership**

Among Canada's international partnerships are those aimed at assisting developing countries, including the Climate and Clean Air Coalition, of which Canada is a founding member. Canada has worked with the United Kingdom since 2017 to co-champion the [Powering Past Coal Alliance](#)<sup>xlviii</sup>. In 2018–19, a leap in international interest increased membership to some 80 countries, regions, cities, international organizations and businesses—all committed to advancing the transition from coal power generation to clean energy.

Canada is the current co-chair of the Global Methane Initiative, a global public-private partnership focused on methane emission mitigation, as well as the recovery and use of methane as a clean energy source. Canada paved the way on methane action for other nations, including by publishing the world's first comprehensive methane regulations. Canada also hosted close to 400 participants from 51 countries at the [2018 Global Methane Forum](#)<sup>xlix</sup> in Toronto (April 2018) to advance methane mitigation, science, policy, technology, innovation and funding.

- **Leadership in linking global trade and climate change**

In 2018–19, ECCC remained a strong advocate for advancing a range of environmental issues and climate change references in Canada's free trade agreements to ensure they enable Canada to meet environmental commitments, such as those under the Paris Agreement and UNFCCC. The Department geared up for its role in the May 2019 [Mission Innovation](#)<sup>l</sup>, including to advance public and private sector investments in clean energy research and development.

Canada continued to act on its commitment to pursue and enhance a progressive trade agenda with its trade partners, through the negotiation and implementation of ambitious environment provisions in free trade agreements. Examples include the conclusion of the Canada-United States-Mexico Agreement (CUSMA) negotiations and its parallel Environmental Cooperation Agreement, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the Canada-Israel Free Trade Agreement (CIFTA).

Canada and the European Union completed the first year of their collaboration under the Comprehensive Economic and Trade Agreement (CETA). In January 2019, signatories to the agreement from both sides of the Atlantic met to explore how CETA can be used to advance the objectives of the Paris Agreement and promote trade in environmental goods and services that support climate action.

In addition, Canada pursued constructive relations with countries and organizations to advance action on global environmental issues, such as climate change, oceans, and clean energy. This includes activities, as part of environmental cooperation agreements and partnerships, with several countries, including the United States, China, France, and the United Kingdom.

## Results achieved

Departmental Results: Canadian greenhouse gas and short-lived climate pollutant emissions are reduced					
Departmental result indicators	Targets	Date to achieve target	2018–19 Actual results	2017–18 Actual results	2016–17 Actual results
GHG emissions from light duty vehicles	21.1% improvement in performance for manufacturer model year 2017 reporting relative to 2011 model year	2019	16% improvement [2016 model year]	18% improvement [2015 model year reporting] <sup>1</sup>	15% improvement [2014 model year reporting] <sup>2</sup>
GHG emissions from heavy duty vehicles	Percentage improvement in GHG emissions performance for manufacturer model year 2018–2020 reporting relative to the 2010 model year: <ul style="list-style-type: none"> <li>•13%: heavy-duty pick-up trucks and vans</li> <li>•11%: Combination Tractors</li> <li>•5%: Vocational vehicles</li> </ul>	2020	Results not yet available. The performance results for the 2018-19 model year fleet will be available in the 2020-21 reporting cycle.	This is a new indicator. Results are not available for these years.	
Black carbon emissions, as reported in Canada's Black Carbon Emissions Inventory	10.5 Kt reduction by 2025 (Equivalent to 25% decrease from a baseline of national emissions of 42 Kt in 2013)	2025	Results not yet available. 2018 emissions of black carbon will be reported in the upcoming black carbon inventory, to be released in summer 2020.	36 Kt [18% reduction from baseline]	35 Kt [18% reduction from baseline]
HFC emissions	10% reduction in consumption relative to 2017–18 levels	2019	Results not yet available. Results expected to be available in April 2020, following the submission of the National Inventory Report for the 2019 calendar year.	This is a new indicator. Results are not available for these years.	
Reduced methane emissions from the oil and gas sector	Annual decrease towards a 40–45% reduction, relative to 2012 levels	2025	Results not yet available. Emission reductions will be estimated in 2020 based on compliance actions.	This is a new indicator. Results are not available for these years.	

<sup>1</sup> This result was amended to reflect revised calculations, and differs from past publications.

<sup>2</sup> This result was amended to reflect revised calculations, and differs from past publications.

Emissions reductions are being achieved under the Clean Fuel Standard building on the <i>Renewable Fuels Regulations</i>	30 Mt annual GHG emissions reduction in 2030	2030	Results not yet available. Draft regulations for the liquids class are to be published in 2020, with those for gaseous and solid classes to come in 2021.	This is a new indicator. Results are not available for these years.	
Percentage of coal-fired electricity generation units meeting their regulated GHG emissions intensity performance requirement	100%	Dec 2019	Results not yet available. Although the date to achieve this target is identified as December 2019, the department will only be in a position to validate the results after the publication of the 2018-19 Departmental Results Report.	This is a new indicator. Results are not available for these years.	
Carbon pollution pricing systems are in place in Canada	13 Provinces and Territories have in place a price on carbon pollution that meets the benchmark or federal system applies	July 2019	As of March 31, 2019, all 10 provinces had in place carbon pollution pricing systems that aligned with the benchmark or the federal system. <sup>3</sup>	With the implementation of the federal carbon pollution pricing system, there will be a price on carbon pollution in every jurisdiction in Canada in 2019.	This is a new indicator. Results are not available for these years.
GHG emissions from ECCC operations	40% GHG emissions reduction relative to 22,793 tonnes in 2005–06 <sup>4</sup>	2030–31	31%	24.6%	23.1% <sup>5</sup>

<sup>3</sup> The federal backstop was applied in Nunavut and Yukon beginning July 1, 2019. The Northwest Territories' carbon pollution pricing system took effect on September 1, 2019.

<sup>4</sup> This is an interim target, established by Treasury Board Secretariat (TBS) in its Greening Government Strategy, towards a full 80% reduction below 2005 levels by 2050.

<sup>5</sup> In 2015, the TBS Centre for Greening Government issued updated emissions factors for all federal organizations reporting GHG emissions from electricity consumption. Therefore, the 2016–17 and 2017–18 results are not comparable to earlier years' results.

<b>Departmental Results: Indigenous peoples are engaged in clean growth and climate change</b>					
<b>Departmental result indicators</b>	<b>Targets</b>	<b>Date to achieve target</b>	<b>2018–19 Actual results</b>	<b>2017–18 Actual results</b>	<b>2016–17 Actual results</b>
Co-development of indicators with Indigenous peoples to ensure they are engaged in the implementation of the PCF, through three distinct senior-level joint tables with First Nations, Inuit and the Métis Nation.	These indicators are developed by the target date [i.e. March 31, 2019].	March 31, 2019	Results not yet available. A new date to achieve this target is being established in consultation with Indigenous partners. <sup>6</sup>	This is a new indicator. Results are not available for these years.	
<b>Departmental Results: Canada contributes to reducing greenhouse gas emissions and increasing climate resilience globally</b>					
<b>Departmental result indicators</b>	<b>Targets</b>	<b>Date to achieve target</b>	<b>2018–19 Actual results</b>	<b>2017–18 Actual results</b>	<b>2016–17 Actual results</b>
Canada's public sector investments leverage private sector climate finance	Ratio of private sector finance leveraged by Canada's public sector investments, of at least 1 to 0.5	March 31st of each year	Results not yet available. A joint methodology between ECCC and Global Affairs Canada (GAC) is being finalized.	This is a new indicator. Results are not available for these years.	
GHG reductions resulting from international initiatives funded by Canada	Higher cumulative reductions from year to year, from the 2018–19 baseline, reaching minimum reduction of 200 Mt of GHGs.	Long term cumulative indicator	An estimated cumulative reduction of 175.7 Mt of GHGs is expected from Canada's \$2.65B funding by 2018–19.	An estimated reduction of 24.8 Mt of GHGs is expected from funds delivered so far.	This is a new indicator. Results are not available for these years.
Number of people in developing countries who benefited from Canada's adaptation funds	Higher cumulative number of people in each consecutive year, reaching at least 10M people by 2030.	2030	A cumulative estimate of 4,593,285 people will have increased their resilience by 2018–19 as a result of Canada's \$2.65B funding.	An estimated 650,000 people with increased resilience are expected from funds delivered so far.	This is a new indicator. Results are not available for these years.

<sup>6</sup> Significant progress has been achieved to date, however more time is needed for this co-development process. In partnership with Indigenous partners, the senior bilateral PCF tables are co-led. To date, there have been PCF table meetings with Inuit, Métis and First Nation, to define any indicators to ensure meaningful engagement of Indigenous peoples in implementation of the PCF.

Departmental Results: Canadian communities, economies and ecosystems are more resilient					
Departmental result indicators	Targets	Date to achieve target	2018–19 Actual results	2017–18 Actual results	2016–17 Actual results
Number of individuals, businesses, and governments accessing climate services and using that information to inform decision-making <sup>7</sup>	Increase from baseline	March 31, 2021	Results not yet available. The baseline will be established when the Canadian Centre for Climate Services (CCCS) has been functioning for one full year. The CCCS became operational in October 2018, thus baseline will be set in 2019-20.	This is a new indicator. Results are not available for these years.	

### Budgetary Financial Resources [dollars]\*

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending [authorities used]	2018–19 Difference [actual minus planned]
575,300,731	575,300,731	583,511,693	341,084,047	-234,216,684**

\* All figures, throughout the document, are net of spendable revenues.

### Human Resources [Full-Time Equivalents—FTEs]\*

2018–19 Planned FTEs	2018–19 Actual FTEs	2018–19 Difference [actual minus planned]
823	509	-314

\* Totals may differ within and between tables due to the rounding of figures. The FTE numbers, throughout the document, include students.

\*\* The variance is due to unspent funds of \$235M related to the Low Carbon Economy Fund as there has been delays in submitting proposals to access the funding.

ECCC has sought to reprofile these funds to ensure they remain available for use in future years.

<sup>7</sup> The results reported relate to the number of individuals, businesses, and governments accessing climate services. Usage is measured through a survey conducted every 5 years.



## Preventing and Managing Pollution

### Description

Collaborate with provinces, territories, Indigenous peoples and others to develop and administer environmental standards, guidelines, regulations and risk management instruments to reduce releases and monitor levels of contaminants in air, water and soil, and promote and enforce compliance with environmental laws and regulations.

### Results

#### Moving to zero plastic waste—in Canada and globally

Addressing plastic pollution is a high priority for the Government of Canada and for countries around the world. With over \$100 billion worth of plastic packaging thrown away each year globally, reducing plastic pollution and investing in Canadian innovation are part of the Government of Canada's overall plan to protect the environment and fight climate change to build a stronger economy and healthier communities.

As a champion of the international effort to reduce plastic pollution during its 2018 G7 presidency, Canada introduced the [Ocean Plastics Charter](#)<sup>iii</sup> at the Leaders' Summit it hosted in June 2018. As of June 2019, 21 governments and over 60 businesses and organizations have endorsed the Charter. The Charter is annexed to the [Charlevoix Blueprint on Healthy Oceans, Seas and Resilient Coastal Communities](#)<sup>iv</sup>, and provides a global framework for sustainable development. In support of commitments under the Charter, Canada pledged \$100 million to support developing countries in preventing plastic waste from entering the oceans, addressing plastic waste on shorelines, and better managing existing plastic resources.

#### Ocean plastics in the classroom

ECCC partnered with several organizations to increase student awareness of marine litter and environmental concerns. Minister McKenna launched the new [Ocean Plastics Education Kit](#)<sup>ii</sup> for Canadian students, developed collaboratively with Ocean School, Ocean Wise, Sea Smart, Students on Ice and [WE](#)<sup>iii</sup>.

In Canada, ECCC collaborated with provinces and territories (through the Canadian Council of Ministers of the Environment (CCME) to create a Canada-wide [Strategy on Zero Plastic Waste](#)<sup>iv</sup>, approved in principle by federal, provincial, and territorial environment ministers in November 2018. The comprehensive Strategy takes a life-cycle approach in plastic waste, and proposes a framework to keep plastics in the economy and out of our environment.

#### Protecting Canada's Oceans

Canada's [Oceans Protection Plan](#)<sup>vi</sup> is a \$1.5 billion action plan for building a world-leading marine safety system and strengthening Canada's stewardship of the country's oceans and coasts. Led by Transport Canada, ECCC is a key partner in this national approach (along with the Canadian Coast Guard and Fisheries and Oceans Canada). In 2018–19, the Department contributed weather and environmental data, and expertise in ocean modelling, oil spill behaviour, and other scientific advice to support improved prevention, emergency planning, and response to oil spills.

#### ECCC and Tsleil-Waututh Nation break new ground

ECCC and the Tsleil-Waututh Nation (TWN) signed an important agreement (October 2018) to collaborate on decision-making concerning disposal-at-sea permitting, monitoring and related science on TWN territory in Burrard Inlet near Vancouver. The first of its kind, the agreement is a clear step along the way to a renewed relationship with the Nation based on respect, cooperation and partnership. The two parties share a common commitment to an approach that is rigorous and based on Indigenous science, traditional knowledge and Western sciences.

## Protecting Canada's freshwater resources

Canada's freshwater resources—including those in the Great Lakes, St. Lawrence Basin, Lake Winnipeg, and Atlantic Canada—are vital to the health and well-being of Canadians. Responsibility for protecting and managing freshwater spans all levels of government.

Highlights of ECCC's 2018–19 achievements include:

- Protecting perch habitat, water quality, shoreline erosion, and wildlife habitat in the St. Lawrence River Basin by investing \$592,000 in five new multi-year projects under the St. Lawrence Action Plan 2011–2026. These projects engage local communities as part of the Community Interaction Program and further ECCC's long-term commitment to water quality in this major historic resource.
- Launching an investment of \$8.95 million over four years to engage local groups to protect and improve the Great Lakes Basin, which provides drinking water to one in four Canadians. This investment is funding 36 on-the-ground partner-led projects across the Basin to restore areas of concern, prevent toxic and nuisance algae, reduce the release of harmful chemicals, engage local populations through citizen science, and engage Indigenous peoples in addressing Great Lakes issues.
- Continuing collaborative action in the Great Lakes Basin with partners in the United States under the [Canada-United States Great Lakes Water Quality Agreement](#)<sup>lvii</sup> (initiated in 1972) to continue the clean-up of identified [Areas of Concern](#)<sup>lviii</sup> and with Canadian partners to clean up Hamilton Harbour (see sidebar).
- Supporting the health and restoration of Lake Winnipeg's water quality, by funding 23 projects (\$3.8 million over four years) to reduce excessive nutrients, including phosphorus, from entering the lake. The projects see Indigenous peoples and other local citizen groups and citizen scientists undertake projects to apply and share their knowledge and expertise and achieve tangible nutrient-reduction results by 2021–22. In March 2019, ECCC hosted the Lake Winnipeg Basin Symposium to bring together stakeholders to share information and build awareness of research and collaborative efforts to reduce nutrients in the Lake Winnipeg Basin.
- Investing \$1.19 million in Atlantic Canada to fund eight multi-year projects that support the health, productivity and long-term sustainability of two priority ecosystems: the Saint John River watershed and the Southern Gulf of St. Lawrence watershed. Funded projects aim to improve the assessment, monitoring or mitigation of water quality stressors, such as nutrients and microplastics, and to encourage strong relationships among all watershed partners.
- Amended *Canada's Metal Mining Effluent Regulations (Fisheries Act)* to include diamond mines ([Metal and Diamond Mining Effluent Regulations](#)<sup>lix</sup>) and to lower limits for some substances to reduce the risks posed by mining to fish and their habitats.
- Initiated consultations for proposed regulations under the *Fisheries Act* for effluent from coal mines and for oil sands.

### Restoring Hamilton Harbour

ECCC continued to collaborate with the Ontario Ministry of the Environment, Conservation and Parks, Stelco, Hamilton-Oshawa Port Authority, City of Hamilton, City of Burlington and Halton Region to clean up the Hamilton Harbour Area of Concern. Work has already started on dredging and containing contaminated sediments within a six hectare, double walled engineered containment facility. The eight-year project is scheduled for completion in 2022. Once completed, the site will be turned over to the Hamilton-Oshawa Port Authority, which will maintain the facility in perpetuity and use the site as valuable port land.

Home to over two million people, including Indigenous peoples who have lived there for countless generations, the Ottawa River is subject to a range of stressors. Private Member's Motion M-104, adopted in May 2017, called on the Government of Canada to conduct an Ottawa River Watershed Study, looking at the watershed's governance, health, and economic, cultural, heritage, and natural values. ECCC posted a [draft report for comment](#)<sup>ix</sup> in September 2018, with the [final report](#)<sup>xi</sup> published in 2019.

### Reducing air pollution and improving air quality

To improve air quality and contribute to the health of Canadians and the environment, ECCC continued to implement the national [Air Quality Management System](#)<sup>xiii</sup> (AQMS), including by working with provinces and territories to set ambient air quality standards for key pollutants, taking actions to reduce emissions of air pollutants, and reporting to Canadians on our air quality. Achievements include finalizing a more stringent Canadian Ambient Air Quality Standard (CAAQS) for ground-level ozone, and launching a review of existing CAAQS for fine particulate matter.

#### Updated environmental indicators

In 2018–19, ECCC updated 33 [environmental indicators](#)<sup>xiii</sup>. The Canadian Environmental Sustainability Indicators (CESI) program provides data and information to track Canada's performance on issues including climate change, air quality, water quality and availability, and protecting nature.

In 2018–19, ECCC published regulatory and non-regulatory instruments under CEPA to address air pollutant emissions. For example, ECCC published proposed regulations to replace and repeal the existing *Off-Road Compression-Ignition Engine Emission Regulations*. In addition to maintaining the current standards for compression-ignition engines, the new regulations are designed to reduce air pollutant emissions and short-lived climate pollutants from large spark-ignition engines and stationary compression-ignition engines (generally diesel-fuelled) by establishing emission standards and test procedures that are aligned with those of the U.S. Environmental Protection Agency. ECCC also published a Code of Practice for the Management of Air Emissions from Pulp and Paper Facilities and:

- Published [fleet average NOx emission performance reports of light-duty vehicles, light-duty trucks and medium-duty passenger vehicles](#)<sup>xiv</sup> as part of the *On-Road Vehicle and Engine Emissions Regulations* Requirements.
- Proposed regulations to replace and repeal the existing *Off-Road Compression-Ignition Engine Emission Regulations*.

Promoting compliance with regulations and enforcing them are vital to ECCC's strong regulatory agenda. In 2018–19, the Department performed over 380 emissions tests on selected vehicles and engines as part of the Government of Canada's commitment to ensure the regulatory compliance of vehicles sold in Canada. The Department also collaborated with regulators in other jurisdictions to share ways to identify non-compliance, including the illegal use of devices that interfere with emissions controls.

To further support improved air quality, ECCC developed and published Canada's [Black Carbon Inventory for 2018](#)<sup>xv</sup>—Canada's fourth annual inventory of this particle that is linked to climate warming and adverse health effects, and which has particular impacts in the Arctic. The inventory provides valuable information that ECCC uses to develop air quality management strategies to achieve the [Arctic Council](#)<sup>xvi</sup> goal of reducing black carbon emissions by 25–33% below 2013 levels by 2025.

On the international front, ECCC completed its ratification of the [Gothenburg Protocol to the UNECE Convention on Long-range Transboundary Air Pollution](#)<sup>lxvii</sup> by submitting Canada's emission reduction commitments. The Department also continued its work with international partners to address key air pollutants (including those contributing to acid rain, smog and the degradation of freshwater bodies) from outside Canada that affect Canadians. This includes ongoing implementation of the Canada-United States Air Quality Agreement.

**Commitment to Experimentation: Strengthening Sentencing Recommendations**

ECCC continued its initiative to strengthen sentencing recommendations with the goal of reducing harm to the environment. Among its actions, ECCC increased the disincentive for breaking environmental laws, as reflected by increased overall fine amounts of at least 10% under the *Canadian Environmental Protection Act 1999* (CEPA 1999) and the *Fisheries Act*.

In 2018-19, total average fine amounts were up 119% over the five-year annual average prior to the initiative (2012–13 to 2016–17). The average median fine amount was \$67,500, up 107% over the previous average median fine. The severity of cases varies and the initiative is still in development, meaning that results may vary from year to year.

Under the initiative, creative sentencing and court orders are also on the rise, thus compelling companies to make investments and change processes to decrease or stop releases of harmful substances into the environment. Sentencing recommendations are better articulated based on case law, and the Public Prosecution Service of Canada has accepted the increased sentencing recommendations. ECCC developed and disseminated a formal Sentencing Guideline in 2018–19.

**Strengthening Environmental Emergency Responses**

To improve its capacity to respond to environmental emergencies, in 2018–19 ECCC:

- Finalized new regulations that add 33 substances to the list of regulated substances ([Environmental Emergency Regulations, 2019](#)<sup>lxviii</sup>) and include more stringent requirements for emergency planning and reporting.
- Continued to operate its [National Environmental Emergencies Centre](#)<sup>lxix</sup> (NEEC), providing science-based expertise and information to protect Canadians and the environment before, during, and after an environmental emergency (see sidebar). For example, the Centre provided expertise to support the recovery of oil from both the MANOLIS L (a shipwreck) and SeaRose (a floating production, storage and offloading vessel) off the coast of Newfoundland and Labrador.

**By the numbers**

In 2018–19, ECCC's National Environmental Emergencies Centre:

- received 8,700 calls to its spill line to report pollution incidents
- responded to 2,159 incidents
- deployed officers to incident sites on 297 days

**New federal sustainable development approach**

The [Act to Amend the Federal Sustainable Development Act](#)<sup>lxx</sup> received Royal Assent on February 28, 2019, and will come into force on December 1, 2020. It sets out a new approach for the federal government to grow a clean and resilient economy for Canadians. The Act, as amended, will triple the number of federal departments and agencies (from 26 to more than 90) required to take action in support of federal sustainable development objectives, and will increase transparency and accountability to Parliament and Canadians.

The draft Federal Sustainable Development Strategy (FSDS) 2019–2022 was released for public consultation on December 3, 2018. Prepared under the current legislation, this draft updates the FSDS 2016–2019 and demonstrates a commitment to furthering sustainability both at home and abroad. Through 13 aspirational goals, measurable targets and clear action plans, the Strategy describes how the government will meet its commitment to implement the environmental [Sustainable Development Goals of the 2030 Agenda](#)<sup>lxxii</sup> and drive international climate action. During the 120-day consultation period, partners, Canadians and stakeholders were asked to comment on the strategy, and to share their knowledge, ideas, and perspectives. Input from the public consultation will help inform the final 2019–2022 FSDS.

#### Reporting on sustainable development

The 2018 Progress Report on the [2016 to 2019 Federal Sustainable Development Strategy](#)<sup>lxxi</sup>, authored by ECCC, with input from the FSDS interdepartmental community, highlights federal progress on federal sustainable development goals. It describes the government's considerable progress, such as the conservation of coastal and marine areas, and the reduction of GHGs from federal operations by 28% over a decade. It also highlights areas requiring further work and emerging priorities, such as plastic waste and marine litter. A new Federal Sustainable Development Strategy for 2019 to 2022 was released in 2019.

#### Commitment to Experimentation: Applying User Experience Research and Design for the Federal Sustainable Development Strategy (FSDS) Progress Report

ECCC implemented a User Centred Design approach in order to identify, understand and meet the needs of those who use the FSDS Progress Report. Based on an iterative design process and usability testing focused on observing real users completing real tasks, the results of the experiment show that: the 2015 FSDS Progress Report was hard to find on Canada.ca; that users would have preferred to have more pictures and infographics; and that the document was hard to navigate and difficult to read. The feedback contributed to a new approach to the 2018 FSDS Progress Report. Stakeholders and Canadians praised this report as more visually appealing and more readable than past reports including its new dashboard-style executive summary.

### Protecting Canadians and the environment from harmful substances

As part of its ongoing delivery of the [Chemicals Management Plan](#)<sup>lxxiii</sup> (CMP) and in collaboration with Health Canada, 728 existing substances were assessed (in draft or final assessments) in 2018–19, with action taken as required to reduce risks to human health and the environment. Assessments of all 384 new substance notifications were also completed, with 144 assessments published online.

Over the year, ECCC:

- Published the final pollution prevention planning [Notice regarding the preparation and implementation of pollution prevention plans in respect of hydrazine related to the electricity sector](#)<sup>lxxiv</sup>.
- Finalized regulations that prohibit the import, export, sale and use of asbestos and products that contain asbestos, to better protect the health and safety of Canadians.
- Published a [proposed pollution prevention planning notice](#)<sup>lxxv</sup> (November 2018) to realize a 30% reduction in the amount of triclosan washed into drains in Canada. Triclosan is harmful to the environment and widely used in manufactured products, including personal care products. A final notice will be published by May 2020.
- Proposed new regulations for the cross-border movement of hazardous waste and hazardous recycled materials.

- Published a Notice of Intent to amend the *Prohibition of Certain Toxic Substances Regulations, 2012* (October 2018), and conducted consultations on proposed amendments to the Regulations (consultation document published December 2018).

**Science at work: Inuit Field Training**

ECCC launched a pilot program that engages youth in ECCC fieldwork in the North and helps them consider employment and training opportunities in environmental fields. Led by two ECCC research scientists at an ECCC field camp on Southampton Island, Nunavut in August 2018, the project teamed up senior and junior Inuit mentors and scientists to teach students about environmental monitoring techniques, and educational and employment opportunities in the field. It responded to a need identified by local communities and gave Inuit youth a unique opportunity. Youth, Elders and ECCC scientists all described it as a positive experience, with a two-way exchange of knowledge between local Indigenous knowledge holders and ECCC scientists in support of the environment.

**Restricting toxic substances to better protect vulnerable whales**

Under the CMP, in October 2018, ECCC proposed to amend the [Prohibition of Certain Toxic Substances Regulations 2012](#)<sup>lxxvi</sup>, by removing exemptions (flame retardants and oil and water repellents) for five already prohibited substances, and prohibiting two additional substances (flame retardants) that pose a danger to the environment, including to the Southern Resident Killer Whale and the St. Lawrence Estuary Beluga.

**Putting “polluter pays” principle to work**

**Risk-based approach to enforcement**

ECCC is developing a comprehensive risk assessment of the wildlife and environmental laws and regulations it enforces. The goal is to focus the Department’s efforts on areas of non-compliance that pose the greatest threat to the environment, wildlife and/or human health.

Note: The risk-based approach to enforcement also applies in the context of ECCC’s efforts to conserve nature, see Core Responsibility *Conserving Nature* on page 33.

Promoting compliance and enforcing regulations are vital to ECCC’s strong regulatory agenda. In 2018–19, ECCC officers conducted 3,346 inspections and 282 investigations under ECCC’s pollution legislation to verify compliance with these instruments. The inspections and investigations resulted in some 900 enforcement measures (such as tickets, directions, warnings, administrative monetary penalties and environmental protection compliance orders) for over 2,400 violations, and a total of \$14.4 million in penalties from successful convictions.

The Department continued to administer Canada’s [Environmental Damages Fund](#)<sup>lxxvii</sup> (EDF), which uses money received from fines and payments for environmental offences to support environmental projects with measurable outcomes. In Québec, four environmental projects were funded by the

largest environmental fine received by the EDF to date (\$6.83 million awarded in 2014). One of the projects focused on shoreline restoration, another was aimed at improving fish populations in Indigenous communities, and two addressed the impacts of mining on the environment.

In 2018, another sizable fine was directed to the EDF—\$2.34 million (of a total \$3.5 million penalty) for offences under the *Fisheries Act*. The offender was fined for releasing improperly treated and deleterious effluent into the Saint John River in New Brunswick. This fine will be used for the conservation, protection and restoration of fish and their habitat in the Saint John River watershed. The remaining \$1.16 million will go to the University of New Brunswick’s Canadian Rivers Institute to conduct scientific research and projects in support of the conservation, protection and restoration of Atlantic salmon in New Brunswick.

**Where environmental fine dollars go**

See an [interactive map](#)<sup>lxxviii</sup> of current and completed projects funded under the Environmental Damages Fund, including their location and an overview of work being done.



Between April 1, 2018 and March 31, 2019, ECCC successfully prosecuted 30 entities (companies and individuals) under CEPA 1999 and the *Fisheries Act*, for a total of \$8.2 million in fines and penalties. Most of these funds (\$7 million) were directed to the EDF.

The Department also collaborated internationally to combat pollution-related crime. In October 2018, ECCC worked closely with Transport Canada and the United States Coast Guard and Department of Justice in a first-ever global action aimed at combatting maritime pollution crime. [Operation 30 Days at Sea](#)<sup>lxix</sup> uncovered more than 500 offences. Led by INTERPOL, the operation involved work by environmental, maritime and border agencies, national police forces, customs and port authorities. More than 5,200 inspections resulted in 185 investigations which, in turn, are expected to lead to numerous arrests and prosecutions.

#### **Commitment to Experimentation: Improve Awareness and Understanding of Regulatory Requirements**

ECCC continued to look at ways to improve awareness and understanding of regulatory requirements. The Department conducted an experiment with companies required to report under the *Products Containing Mercury Regulations*. A random control trial was used to test the effectiveness of partially pre-filled reply forms on rates of return. This was based on the hypothesis that pre-filled forms would increase rates of return. Results supported the hypothesis: those companies that received a form prefilled with their name and address replied at a rate twice that of those who received a blank form. The results demonstrate the potential for ECCC to tailor its support to industry and so further increase compliance with regulations.

#### **Providing expertise to environmental assessments**

ECCC continued to contribute its scientific and technical expertise to over 420 environmental assessments over the course of the year. The Department actively participated in consultations with Indigenous peoples on the [Trans Mountain Expansion Project](#)<sup>lxxx</sup>, including by exploring innovative approaches to cumulative effects monitoring that co-apply Indigenous traditional knowledge and Western science.

#### **Renewing clean-up of federal contaminated lands**

In 2018–19, ECCC proposed the fourth phase of the Federal Contaminated Sites Action Plan (FCSAP), which received federal funding of \$1.2 billion from 2020 to 2025. Phase IV will support the assessment and remediation of federal sites across the country, including technical and scientific support and advice from ECCC. Findings and recommendations from the 2018 Horizontal Evaluation of the FCSAP helped to inform program refinements for Phase IV, including expanded eligibility criteria to allow bundling of geographically co-located sites in order to improve program efficiency. In April 2019, Cabinet approved extending FCSAP until 2035.

ECCC assessed four sites for which it is responsible and conducted remediation activities at another 10 sites. For the overall FCSAP program, remediation of 24 sites was completed by program partners in 2018. In collaboration with the other expert support departments, ECCC also conducted a review of 97 technical documents from federal custodians, developed 10 guidance documents, and delivered 3 training sessions to support custodian departments in their management of contaminated sites. Over the year, ECCC engaged with Indigenous communities to gather feedback and learn about their concerns with respect to contaminated federal sites in order to better inform work in Phase IV of FCSAP.

## Results achieved

Departmental Results: Canadians have clean air					
Departmental result indicators	Targets	Date to achieve target	2018–19 Actual results	2017–18 Actual results	2016–17 Actual results
Percentage of Canadians living in areas where air quality standards are achieved	85%	2030	77% for the 2014–16 data period (most recent available). <sup>8</sup>	70% for the 2013-15 data period.	64% for the 2012–14 data period.
Departmental Results: Canadians have clean water					
Departmental result indicators	Targets	Date to achieve target	2018–19 Actual results	2017–18 Actual results	2016–17 Actual results
Percentage of wastewater systems where effluent quality standards are achieved	100%	2040	77%	76%	77%
Departmental Results: The Canadian environment is protected from harmful substances					
Departmental result indicators	Targets	Date to achieve target	2018–19 Actual results	2017–18 Actual results	2016–17 Actual results
Number of substances assessed, identified as toxic, and for which control measures were put in place	All substances assessed as toxic have a control measure in place	March 31, 2021	Not available. This indicator is being retired and replaced with a new indicator. <sup>9</sup> First results for the new indicator will be reported for the 2019–20 fiscal year.		

## Budgetary Financial Resources (dollars)

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2018–19 Difference (actual minus planned)
353,189,588	353,189,584	363,522,263	348,236,529	-4,953,055*

## Human Resources (FTEs)

2018–19 Planned FTEs	2018–19 Actual FTEs	2018–19 Difference (actual minus planned)
1,700	2,196	496

\* The variance is mostly due to unspent funds related to the Federal Contaminated Sites Action Plan. These funds will be available for use in future years.

<sup>8</sup> Air quality monitoring results are subject to data validation and are available 18-24 months after data collection. In the 2018–19 and 2019–20 Departmental Plans, data were reported in the year the data were collected. As of the 2018–19 Departmental Results Report, data will be reported in the year that the data is validated. This ensures that the most recent data are reported in any given fiscal year.

<sup>9</sup> The current indicator is not measurable annually and will be replaced by the following: *Percentage of substances that are added to Schedule 1 of the Canadian Environmental Protection Act (Toxic substances list) because they pose a risk to the environment, and that have controls in place within legislated timelines.* This is a more meaningful annual performance indicator that will measure the extent to which risk management actions are taken in a timely manner, so as to reduce the potential for exposure of the environment to existing harmful substances.



## Conserving Nature

### Description

Protect and recover species at risk and their critical habitat; conserve and protect healthy populations of migratory birds; engage and enable provinces and territories, Indigenous peoples, stakeholders, and the public to increase protected areas and contribute to conservation and stewardship activities; expand and manage the Department's protected areas; and collaborate with domestic and international partners to advance the conservation of biodiversity and sustainable development.

### Results

In 2018–19, ECCC undertook significant work and made important progress in protecting and conserving lands, including habitat for species under threat, and in recovering species that are at risk. These efforts required collaboration with other federal departments, provinces and territories, Indigenous peoples, local authorities, industry, non-government organizations, and citizens. Collaboration with international partners is also an important element of ECCC's work given that many species (such as migratory birds) cross international borders. Many efforts are underpinned by both formal and informal international agreements. Enforcement of wildlife laws and regulations is a vital component of ECCC's efforts to maintain a strong program of conserving species and habitat.

### Actions on multiple fronts on biodiversity

ECCC continued its ambitious work towards the protection and conservation of 17% of land and freshwater and 10% of marine and coastal areas by 2020 (see sidebar). Actions require collaboration with provinces and territories, Indigenous communities, municipalities, private landowners, philanthropic foundations and land trusts. ECCC undertook diverse initiatives that resulted in major progress in 2018–19.

ECCC led the Government of Canada's efforts to strengthen its commitment to nature and its conservation goals. Canada made a historical investment of \$1.3 billion over 5 years (Budget 2018) under [Canada's Nature Legacy](#)<sup>lxxxix</sup> which provided \$500 million, matched by partners, to establish the [Canada Nature Fund](#)<sup>lxxxii</sup>. As part of this investment, ECCC received \$440 million over five years to build partnerships to protect and conserve Canada's ecosystems, landscapes and biodiversity, including species at risk, and to help drive progress towards Canada's biodiversity targets. The Department aligned its human resources to support delivery of the government-wide Nature Legacy Initiative.

### Making progress on biodiversity

Canada is home to a significant portion of the world's key natural resources: 20% of freshwater, 24% of wetlands, 25% of temperate rainforest area and 33% of the remaining boreal rainforest.

As of March 2019, 11.8% of Canada's land and freshwater were protected. Since 2015, Canada has added and recognized over 130,000 km<sup>2</sup> to the network of protected areas across the country.

With respect to marine conservation, Canada has also made major progress. While less than 1% of the country's marine and coastal areas were protected in 2015, Canada exceeded the mid-term target to protect 5% of Canada's oceans by 2017, and has now conserved 7.9% of the country's marine and coastal areas, which is well on the way to the 2020 target of 10%. ECCC contributes to this initiative, led by Fisheries and Oceans Canada.

The Canada Nature Fund includes two broad streams and funds a range of initiatives:

- The Spaces Stream is designed to help conserve terrestrial areas and inland water ([Canada Target 1](#)<sup>lxxxiii</sup>), to enhance integrity and connectivity of protected and conserved areas, and to establish new Indigenous Protected and Conserved Areas (IPCAs) to support Indigenous engagement in conservation. In 2018-19, ECCC invested \$14.4 million in 38 projects that either led to the establishment of new provincial, territorial, Indigenous, and private protected areas or supported capacity-building activities to contribute to Canada Target 1. Among these projects, the [Kitaskino Nuwenënë Wildland Provincial Park](#)<sup>lxxxiv</sup> in Alberta maintains ecological integrity and habitats for species at risk, including the woodland caribou and the Ronald Lake Wood Bison herd. An additional \$5.2 million was invested to create the Edézhzié Protected Area (see page 33 for more information). ECCC also launched an open call for proposals which will provide up to \$175 million in project funding to support the creation of new protected areas, including IPCAs.
- The Species Stream is intended to help protect terrestrial species at risk as part of the Government of Canada's contribution to the [Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada](#)<sup>lxxxv</sup> (see below for more information). Through this stream, ECCC supports innovative, multi-species and ecosystem-based initiatives aimed at priority species, places, sectors and threats, and at building relationships with Indigenous peoples, governments, industry and other resource users. The [Community-Nominated Priority Places for Species at Risk](#)<sup>lxxxvi</sup> is one component of this stream. It funds projects that bring people together to protect and recover species at risk and that complement priority places identified by federal, provincial and territorial governments under the Pan-Canadian Approach.

## Collaboration with Indigenous peoples to protect land and species

### Indigenous partnerships for species at risk

The Canada Nature Fund (Species Stream) enables partnerships for the protection and recovery of species at risk with First Nations, Inuit, and Métis in a manner that recognizes and enables Indigenous leadership in land and resource management. In 2018–19, 14 projects totalling more than \$750,000 contributed to building Indigenous peoples' capacity to: implement recovery and protection measures for listed species (including boreal and southern mountain caribou and their critical habitat); negotiate and implement conservation agreements for the collaborative conservation of at-risk species; and support meaningful participation in *Species at Risk Act* consultation and cooperation processes.

In recognition of Indigenous peoples' long stewardship of the environment and deep connection to nature, ECCC continued to collaborate with Indigenous peoples and invest in initiatives that protect and restore biodiversity, and strengthen and renew the department's relationship with Indigenous peoples.

Under the [Indigenous Guardians Pilot Program](#)<sup>lxxxvii</sup>, ECCC funded 28 Indigenous projects totalling \$5.7 million in 2018–19. The projects support First Nation, Métis and Inuit communities in their stewardship work to protect sensitive areas and species, monitor ecological health, and maintain Indigenous cultural sites. Spread across the country (see the [interactive map of projects](#)<sup>lxxxviii</sup>, with descriptions), the projects vary in focus from research and capacity building, to species and habitat management, and restoration.

With advice from a National Advisory Panel on the Pathway to [Canada Target 1](#)<sup>lxxxix</sup> and the [Indigenous Circle of Experts](#)<sup>xc</sup>, federal, provincial and territorial governments published [One with Nature: A Renewed Approach to Land and Freshwater Conservation in Canada](#)<sup>xcii</sup>. This report contains pan-Canadian guidance and key policy tools. The guidance supports progress towards achieving the terrestrial and inland water components of the broader goal to protect and conserve 17% of land and freshwater and 10% of marine and coastal areas by 2020.

### Conserving migratory birds in Canada

Canada is home to some 450 migratory bird species for part of the year, with the majority of species (almost 80%) spending part of the year outside of Canada. To support ECCC's mandate under the [Migratory Birds Convention Act, 1994](#)<sup>xcii</sup>, ECCC continued its work to maintain healthy bird populations, including by monitoring population trends, collaborating with the United States and Mexico under the North American Bird Conservation Initiative, and maintaining diverse [bird conservation partnerships](#)<sup>xciii</sup>. The Department engaged conservation groups, citizens and others in actions to reduce human-related mortality and support healthy habitats for birds. Canada's Migratory Bird Sanctuaries provide important habitat for diverse wildlife species including migratory birds.

### Transforming species conservation in Canada

ECCC collaborated with provincial and territorial counterparts to establish a [Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada](#)<sup>xciv</sup>, including a commitment to shared priorities<sup>10</sup> to meet collective species at risk requirements. The approach features a commitment to use multi-species and ecosystem-based approaches where possible to maximize benefits. It will help achieve better outcomes for more species at risk, improve return on investment and increase co-benefits for biodiversity and ecosystems. Engagement of Indigenous peoples and other partners is central to the new approach. To start, effort is focused on 11 priority places across Canada (see the [interactive map and descriptions](#)<sup>xcv</sup>), a number of priority sectors and threats, and six priority species: boreal caribou, southern mountain caribou, Peary caribou, barren-ground caribou, greater sage-grouse and wood bison. The approach is reinforced by targeted efforts to improve wildlife health, as set out in A Pan-Canadian Approach to Wildlife Health.

#### Engaging children in wildlife conservation

ECCC partners with Earth Partners, now the largest youth conservation organization in Canada, and with the Toronto and Region Conservation Authority in the form of funding. Some \$2.25 million over three years (starting in 2018–19) will educate children and support them to take tangible action on species and habitats, and help Canada reach its 2020 biodiversity targets.

### Advancing protection of species at risk

ECCC made significant progress in 2018–19 to protect priority species through a multi-pronged approach to improve conservation outcomes and return on investment. Highlights include the negotiation of conservation agreements, and the allocation of grants and contributions to support on-the-ground action.

<sup>10</sup> Québec has not signed the Accord for the Protection of Species at Risk and has its own Act on Threatened and Vulnerable Species. It actively collaborates with the federal government on the conservation of endangered species of common interest through the Canada-Québec Agreement on Species at Risk. For example, Québec does not participate in the development of Canada-wide policies and mechanisms for the conservation of species at risk, and as such, will not implement the proposed Pan-Canadian approach. Québec intends to use existing mechanisms to complement the work of the federal government in setting priorities for the recovery of species in precarious situations.

Southern mountain caribou, with ranges in British Columbia and Alberta, is listed as a threatened species under the Species at Risk Act (SARA). The department completed and published an assessment of imminent threats to this species, and negotiated draft agreements with British Columbia and two First Nations for on-the-ground recovery actions.



Southern mountain caribou

Boreal caribou, also a threatened species, is found throughout Canada's boreal forest and in nine provinces and territories, and has deep social and cultural significance for many Indigenous peoples. In 2018-19, ECCC released two reports<sup>11</sup> on steps taken to protect critical habitat under Section 63 of the *Species at Risk Act (SARA)*, and drafted an order for protection of this iconic species on federal lands. The Department announced a final conservation agreement with the Northwest Territories to protect this species, and established agreements-in-principle with Saskatchewan and Yukon. Funding (\$5.5 million) was allocated to support conservation agreements to formalize commitments on boreal caribou with provinces and territories, with approximately \$13.4 million in additional commitments expected over the next four years. Indigenous and other consultations were held to inform amendments to the 2012 Recovery Strategy, which are expected in 2019–20.

More broadly, ECCC is collaborating with the Department of Fisheries and Oceans and Parks Canada Agency to engage with stakeholders and Indigenous partners on the implementation of SARA, using three external advisory committees.

#### Science and Indigenous knowledge support caribou recovery

With several caribou species at risk in Canada, scientists at ECCC and NRCAN collaborated to bring together over 500 people from around the world for the 17th North American Caribou Workshop in November 2018. Participants included experts, Indigenous knowledge holders, and youth, who worked on issues related to caribou ecology, conservation and on-the-ground action for the recovery of this important species.

As part of its commitment under the federal [Action Plan for Boreal Caribou](#)<sup>xvii</sup>, ECCC also launched the National Boreal Caribou Knowledge Consortium in 2018, bringing together the expertise and experience of federal, provincial, territorial and Indigenous governments, Indigenous organizations, non-governmental organizations, academics, and industry stakeholders to generate and share knowledge in support of boreal caribou recovery. The Department coordinates the activities of the Consortium, including caribou monitoring and habitat restoration working groups, and oversees the development of a knowledge-sharing portal.

These actions demonstrate how braiding and blending Indigenous knowledge and Western science is contributing to ECCC's capacity to undertake conservation research and take action on species at risk and other critical environmental issues.

The Department continued to make progress in addressing the backlog of listing decisions for 149 species that were assessed as being at risk by the [Committee on the Status of Endangered Wildlife in Canada](#)<sup>xviii</sup> between 2008 and 2016. Since 2017, final decisions and proposed listing decisions were made for 117 species, and ECCC projects that it will meet the timelines it established in 2017–18 for eliminating the backlog.

<sup>11</sup> [Progress Report on Unprotected Critical Habitat for the Woodland Caribou \(\*Rangifer tarandus caribou\*\), Boreal Population, in Canada](https://sararegistry.gc.ca/virtual_sara/files/reports/Chr-WoodlandCaribouBoreal-v00-2019April-Eng.pdf) (https://sararegistry.gc.ca/virtual\_sara/files/reports/Chr-WoodlandCaribouBoreal-v00-2019April-Eng.pdf) and [Progress Report on Steps Taken to Protect Critical Habitat for the Woodland Caribou \(\*Rangifer tarandus caribou\*\), Boreal Population, in Canada](https://sararegistry.gc.ca/virtual_sara/files/reports/Chr-WoodlandCaribouBoreal-v01-2018Dec-Eng.pdf) (https://sararegistry.gc.ca/virtual\_sara/files/reports/Chr-WoodlandCaribouBoreal-v01-2018Dec-Eng.pdf).

ECCC added new protections for 13 species at risk in Canada under SARA to better protect biodiversity. Seven new species were added, including four species of bees and the grizzly bear. Six species, including the barn owl, were reclassified to threatened or endangered. There are 597 species on [Schedule 1<sup>xcviii</sup>](#) (the List) of SARA.

The department continued to enforce wildlife laws and regulations. In 2018–19, ECCC conducted or initiated over 3,420 inspections and investigations under ECCC's wildlife and conservation legislation to gather evidence and take appropriate enforcement measures against alleged offenders. Based on findings of inspections and investigations, the Department undertook 630 enforcement measures, including prosecutions, administrative monetary penalties (AMPs), contraventions and warnings that collectively resulted in 123 convictions and a total of \$2.6 million in penalties.

#### Strengthening enforcement

To address an increasingly complex web of environmental laws, ECCC strengthened its enforcement approaches and capacity in 2018–19, a move that is vital to ECCC's ability to respond to emerging protection challenges. The Department hired enforcement officers with a range of skills and experience—including in science, conservation and law enforcement. In addition, ECCC developed tools and training for officers working with Indigenous communities as part of ongoing efforts to build stronger relationships with Indigenous peoples. Note: Also applies in the context of ECCC's efforts to prevent and manage pollution, see Core Responsibility Preventing and Managing Pollution on page 29.

Illegal trade in wildlife threatens the conservation of species and the socio-economic benefits of legal trade. ECCC continues to combat wildlife trafficking, with an estimated global worth of \$70 billion to \$213 billion USD annually. In 2018, under the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* (WAPPRIITA), ECCC conducted 1,650 inspections, and opened 16 new investigations. A total of 323 violations under WAPPRIITA or its regulations resulted in prosecutions, seizures, tickets, AMPs or warnings.

#### Increasing the number and nature of protected areas

In addition to funding initiatives under the Canada Nature Fund (see page 29), ECCC established significant new protected areas and adopted innovative and collaborative approaches to securing lands with its partners in 2018–19:

- The 14,200 km<sup>2</sup> [Edézhíe Protected Area<sup>xcix</sup>](#) in the Northwest Territories was established as the first new Indigenous Protected Area under the Canada's Nature Legacy, and marks an important step in reconciliation with Indigenous peoples. Together, Dehcho First Nations and the federal government will protect the ecological integrity of the area and ensure that the Dehcho Dene way of life is maintained for current and future generations. The area is important habitat for woodland caribou and wood bison, both of which are threatened species under SARA.
- The [Scott Islands marine National Wildlife Area<sup>c</sup>](#) (British Columbia) was designated as the first protected marine area established under the *Canada Wildlife Act*. This initiative conserves a vital marine area for millions of seabirds on the Pacific Coast. See a [short video<sup>ci</sup>](#) and a [detailed map<sup>ci</sup>](#) of this five-island area, which is of cultural significance to local Indigenous peoples and home to unique and delicate ecosystems.
- ECCC collaborated with the Government of British Columbia to secure land in the [Darkwoods Conservation Area<sup>ciii</sup>](#). The Next Creek watershed property will add 14% to Darkwoods, one of Canada's natural treasures and the world's only inland temperate rainforest. It will help complete a connected network of over 1,100 km<sup>2</sup> of conservation-managed lands, to both protect nature and wildlife, including large mammals that depend on it, such as the grizzly bear and southern mountain caribou. Darkwoods was



acquired by the Nature Conservancy of Canada in 2008 and remains the largest private land acquisition for conservation in Canadian history (at 550 km<sup>2</sup>).

- A land exchange with the Province of Saskatchewan was initiated. It will result in the creation of a new conservation area from the former federal pastures of Govenlock, Nashlyn and Battle Creek in the South of the Divide region of Saskatchewan. These lands are now under the administration of the Minister of the Environment. ECCC is managing these lands in consultation with Indigenous partners and ranchers to protect the rich biodiversity in native prairie grasslands. Formerly used as pasture and managed by Agriculture and Agri-Food Canada, the lands are critical habitat to the Greater Sage-grouse (a species at risk) and provide important nesting sites for many other species. Through this initiative, Canada is proposing to transfer lands valued at \$64 million to Saskatchewan to ensure the effective operation of 57 former federal pastures in the Province, in exchange for lands of equal value at Govenlock, Nashlyn, and Battle Creek.
- Recognition of [Canadian Forces Base Shilo for its contributions to nature conservation](#)<sup>civ</sup>. ECCC and the Government of Manitoba recognized that the Department of National Defense and Canadian Armed Forces manage the base in ways that conserve nature, such as by making training areas and ranges more sustainable, maintaining species at risk work plans, and collaborating with partners to, for example, maintain duck habitats. This recognition is an “Other Effective area-based Conservation Measure”: an area that is not a Protected Area, but is governed and managed in ways that achieve positive and sustained long-term outcomes for the conservation of biodiversity.

### **Leadership in global action on biodiversity and protecting species**

The Department continued to demonstrate its leadership in the international conservation arena. ECCC took a leadership role at the [14th Meeting of the Conference of the Parties to the Convention on Biological Diversity](#)<sup>cv</sup> (CBD) held in Egypt in November of 2018, and prepared for Canada to host the Nature Champions Summit (April 2019), aimed at encouraging major philanthropists, business leaders, non-governmental organizations, United Nations agencies, Indigenous leaders and environment ministers from around the world to ramp up global action to protect nature. ECCC also led the development of Canada's national report to the CBD (submitted in November 2018), which assessed progress towards Canada's 2020 biodiversity targets and contributions towards the global targets.

ECCC continued to collaborate with Global Affairs Canada on initiatives to battle wildlife crime undertaken by the G7 and worked to ensure that commitments to fight wildlife crime are reflected in key trade agreements. Canada was successful in its push for specific recognition in a declaration adopted by the London Conference on the Illegal Wildlife Trade. Specifically, wording was included to highlight the dangers of wildlife crime, the importance of sustainable trade, and the important role of Indigenous peoples in wildlife conservation.

The Department continued to work with INTERPOL and the North American Commission for Environmental Cooperation to further work on the sustainable harvest and trade in Indigenous species (native to a country) under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

**Commitment to Experimentation: Integrated Conservation Approach**

ECCC completed a pilot project to implement Integrated Conservation Action (ICA) in Southwest Nova Scotia. ICA was applied as a common, standardized approach that integrates the work of multiple organizations with similar conservation agendas in an area with high biodiversity value. Using ICA, ECCC has determined the value and importance of using a common adaptive management framework, such as Open Standards for the Practice of Conservation. To move forward with ICA, the Department began engaging with conservation partners to take action on shared conservation priorities and leverage resources and funding. This approach is expected to show multiple benefits and improve conservation outcomes over the medium and long term, such as recovering species at risk, preventing other species from becoming conservation concerns, and conserving important and critical habitats.

**Results achieved**

<b>Departmental Results: Canada's wildlife and habitat are conserved and protected</b>					
<b>Departmental result indicators</b>	<b>Targets</b>	<b>Date to achieve target</b>	<b>2018–19 Actual results</b>	<b>2017–18 Actual results</b>	<b>2016–17 Actual results</b>
Percentage of migratory bird species that are within target population ranges	60%	2020	58%	Result is not available for this year. <sup>12</sup>	57%
Percentage of Canadian areas conserved as protected areas and other effective areas-based conservation measures	Increase toward achievement of 17% from a baseline of 10.6% in 2015 (Terrestrial lands & inland waters)	2020	11.8%	10.5%	10.5%
<b>Departmental Results: Canada's species at risk are recovered</b>					
<b>Departmental result indicators</b>	<b>Targets</b>	<b>Date to achieve target</b>	<b>2018–19 Actual results</b>	<b>2017–18 Actual results</b>	<b>2016–17 Actual results</b>
Percentage of species at risk for which changes in populations are consistent with recovery objectives	60%	May 2025	41%	43%	43%
<b>Departmental Results: Indigenous peoples are engaged in conservation</b>					
<b>Departmental result indicators</b>	<b>Targets</b>	<b>Date to achieve target</b>	<b>2018–19 Actual results</b>	<b>2017–18 Actual results</b>	<b>2016–17 Actual results</b>
Percentage of Indigenous peoples engaged with ECCC who indicate that the engagement was meaningful	Target will be identified once the 2018-19 baseline is established.	April 2021	61%	This is a new indicator. Results are not available for these years.	

<sup>12</sup> This result is reported biennially.

**Budgetary Financial Resources (dollars)**

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2018–19 Difference (actual minus planned)
172,066,587	172,066,587	244,666,173	242,306,745	70,240,158*

**Human Resources (FTEs)**

2018–19 Planned FTEs	2018–19 Actual FTEs	2018–19 Difference (actual minus planned)
856	1,027	171

\* The 2018–19 planned spending does not reflect new funding announced in Budget 2018, whereas the 2018–19 actual spending (authorities used) includes Budget 2018 funding. The increase for 2018–19 actual spending mostly relates to new funding for Protecting Canada's Nature announced in Budget 2018.



## Predicting Weather and Environmental Conditions

### Description

Monitor weather, water, air quality and climate conditions; provide forecasts, information and warnings to the Canadian public and targeted sectors through a range of service delivery options; conduct research; develop and maintain computer-based models for predicting weather and other environmental conditions; and collaborate and exchange data with other national meteorological services and with international organizations.

### Results

Extreme weather events are on the rise in Canada and globally, and have led to significant flooding, drought, wildfires and significant impacts on permafrost and Arctic ice. It is estimated that extreme weather caused [\\$1.9 billion in property damage in Canada in 2018](#)<sup>cix</sup>.

Major infusions of capital and operating funds (\$79 million between 2012–13 and 2017–18) allowed ECCC to overhaul its weather monitoring infrastructure in ways that benefit Canadians. Similarly, 2018 Investments in hydrological equipment, hydrometric stations, and technology have strengthened ECCC's capacity to measure, monitor and predict water levels and flow (see below for more information).

The following key investments have resulted in faster, more accurate weather and water data to support the safety and health of Canadians:

- Weather program transformation initiative: weather radars allow ECCC to collect a wide range of data to support its weather programs. ECCC is on track to replace outdated radars with 32 state-of-the-art radars across the country by 2023. Five new radars were installed by the end of 2018–19, and seven more will be in place by the end of 2019–20. This year included the installation of a new radar in Blainville, Québec (2018–19), which will provide people in the Montreal area with better and more timely information. The new radars, for example, enable the observation and collection of higher-resolution precipitation data for more accurate day-to-day predictions of the type of precipitation (freezing rain, snow, rain). In turn, this helps individuals, businesses and municipalities make safety and business decisions based on accurate, current data.

#### In 2018–19, ECCC:

- issued 480,000 weather forecasts, watches and warnings
- made available 2.5 terabytes of weather and environmental data daily (volume has doubled in four years)
- responded to 11,589 media calls related to weather forecasts and warnings
- engaged 190,000 Twitter followers, with accounts in over 830 communities
- provided over 28.2 million Canadians in 10 provinces and three territories at 122 locations with information about local air quality through its Air Quality Health Index (AQHI)

The Department also recorded:

- 585 million visits at [weather.gc.ca](http://weather.gc.ca)<sup>cvi</sup> (averaging 1.6 million visits a day)
- more than 30 million requests (640,000 users a day) through ECCC's [DataMart](#)<sup>cvi</sup>\* for radar images, precipitation and temperature observations, weather forecasts, special bulletins, warnings and alerts
- over 2 million weather maps and data requests a day through [GeoMet](#)<sup>cvi</sup>\*\*

\* DataMart enables users to receive large volumes of ECCC weather observations and forecast data.

\*\* GeoMet gives users access to ECCC's raw numerical weather prediction model data that they can download

- Delivering on investment in high-performance computing infrastructure: 2018–19 is the first year that the new high-performance computer has been fully operational. The new computer brings the predictive capacity of the Meteorological Service of Canada in line with leading counterparts around the world.
- Recalibration of forecasting systems: key foundational work to recalibrate forecasting systems was completed in 2018–19. This major behind-the-scenes initiative required ECCC forecasters to translate complex technical and scientific information into a format and language that decision makers can use. This groundwork supports current and future improvements in the accuracy and timeliness of data for the wide range of users who rely on ECCC weather data for planning and response.
- Investments in hydrological equipment, hydrometric science and technology: Budget 2018 investments allowed ECCC to increase its capacity to monitor and predict water levels and flows. New infrastructure and updated technology have significantly increased the speed, accuracy and other capacities of ECCC's hydrological services, including in ways that have direct impacts on Canadians (see below for additional information).

**WeatherCAN: Weather to go**

ECCC's new weather app provides current, hourly and 7-day weather and daily air quality forecasts for over 10,000 Canadian locations, and offers state-of-the-art high-resolution radar animation that lets users zoom in and out of locations. Available through the App Store and Google Play, the app comes in English and French.



WeatherCAN was launched on February 14, 2019. By the end of March, it had been downloaded 334,000 times.

**Alert Ready**

The national public alerting system (Alert Ready) was expanded to mobile channels in April 2018. ECCC tornado warnings were broadcast over this system and were credited with saving lives during the Ottawa-Gatineau tornado outbreak on September 21, 2018.

**Strengthening capacity to respond to disasters**

**Informing disaster response operations**

ECCC investments in more timely and accurate forecasts help emergency responders plan their activities. ECCC data enables experts in emergency planning and recovery to make sound disaster-related decisions based on the unique needs of populations. For example, forecasts support planning for the impacts of weather on isolated Indigenous communities or people in certain geographic locations. ECCC continues to draw on international experience with gender-based and other types of analysis to inform how it disseminates weather and water data.

As extreme weather-related conditions, such as flooding, droughts and wildfires, are more frequent, investments are critical. For example, investments help reduce risk related to disasters by making more real-time data available to local water authorities. Severe event risk management weather forecast bulletins were produced in May to support provincial and federal partners involved in flood management in New Brunswick, Québec, Ontario and Manitoba.

In 2018–19, modelling and hydrometric data were used by local authorities and communities across the country to plan their responses to weather events, including those along the Ottawa River in both Québec and Ontario, as they struggled with major sustained flooding beginning in March 2019. Water levels in the city of Pembroke, Ontario, broke historic records.

## Managing water levels in the Great Lakes

In 2018–19, ECCC also launched transformation initiatives that focus on infrastructure, prediction, innovation and capacity building in the Great Lakes Basin. These efforts build on a successful pilot study—a collaboration between ECCC's National Hydrological Services and the International Joint Commission in Lake Ontario and the St. Lawrence River Basin. A modern water monitoring system will improve the understanding of Canada's water resources which, in turn, will help Canadians make water-related decisions and prepare for the future, including taking measures to adapt to climate change. Over the next four years, the water initiative will be implemented in five of Canada's major water basins: Great Lakes-St. Lawrence, Saskatchewan-Nelson, Mackenzie, Columbia, and Churchill.

### Science at work

ECCC launched a research initiative that will support the Canadian Coast Guard and other users of Canada's northwest archipelago. A first in the world, the project will result in an atmospheric/ocean model that will help predict how sea ice behaves and will better inform activities in the area as the Arctic undergoes an abrupt transition from the quasi-steady climate of winter to a period of rapid warming in spring.

## Reliable, ongoing water data

In addition to providing critical disaster information, ECCC continued to provide hydrometric information and water resource advice to users across Canada and beyond (for example, to meet Canada's transboundary treaty obligations with the United States). Data on water levels and flows and water modelling support all sectors of the economy, including agriculture, tourism and transportation.

### Got a science question? Ask a scientist!

ECCC scientists take part in the Government of [Canada's Ask a Scientist!](#)<sup>ex</sup> initiative. Scientists from across government respond on a volunteer basis to questions from the public on a range of science issues, including climate and weather.

## Planning for hurricane season

The [Canadian Hurricane Centre](#)<sup>exi</sup> (CHC) delivered a pre-season Hurricane Season Briefing in May 2018 to address the upcoming seasonal forecast with media and emergency management. This briefing was posted on the department's Facebook page for the first time. The CHC also engaged the Emergency Management Organization through targeted visits throughout the Atlantic region to discuss risks and operational procedures for the hurricane season. The CHC tracked two tropical cyclones that threatened Canadian territory during the 2018 season. The CHC also participated in the U.S. National Hurricane Center's Attachment Program (fall 2018) to improve operational coordination between the two countries.

## Access to international data supports Canadians

Canada continued to play a lead role in the World Meteorological Organization (WMO) and in collaborating with other countries to access and use international space data critical to ECCC's weather prediction efforts. Improved access to better data supports the Department in delivering more timely, precise and extensive weather data for Canadians to use in health, safety, and business decisions.

**Commitment to Experimentation: Understanding the public's response to social media weather reports**

In addition to launching its Weather app in 2019, the Department continued to use social media to share information about the weather with Canadians. Also, ECCC launched an initiative, to be completed in 2021, to conduct a preliminary analysis and assessment of public sentiment concerning weather events and forecasts in an effort to better understand the public's reaction to weather events as reported on social media. The effort will focus on developing scientific models of how public sentiment with respect to a given weather event influences its ability to spread among particular populations. The results of this initiative may inform how ECCC disseminates weather information in the future.

**Results achieved**

<b>Departmental Results: Canadians use authoritative weather and related information to make decisions about their health and safety</b>					
<b>Departmental result indicators</b>	<b>Targets</b>	<b>Date to achieve target</b>	<b>2018–19 Actual results</b>	<b>2017–18 Actual results</b>	<b>2016–17 Actual results</b>
Index of the timeliness and accuracy of severe weather warnings on a scale of 0 to 10	7.9	December 2018	8.6 (three-year rolling average 2016-18)	8.4 <sup>13</sup> (three year rolling average 2015–17)	8.3 <sup>14</sup> (three year rolling average 2014–16)
Percentage of Canadians that use ECCC information to address water-related impacts on health, safety, economy and environment	80%	2018–19	70.5% <sup>15</sup>	This is a new indicator. Results are not available for these years.	

<sup>13</sup> This result was amended to reflect revised calculations, and differs from past publications.

<sup>14</sup> This result was amended to reflect revised calculations, and differs from past publications.

<sup>15</sup> Budget 2018 investments into the Hydrological Services program are expected to improve these results.

**Budgetary Financial Resources (dollars)**

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2018–19 Difference (actual minus planned)
218,314,208	218,314,208	244,971,551	237,877,381	19,563,173*

**Human Resources (FTEs)**

2018–19 Planned FTEs	2018–19 Actual FTEs	2018–19 Difference (actual minus planned)
1,501	1,627	126

\* The 2018–19 planned spending does not reflect new funding announced in Budget 2018, whereas the 2018–19 actual spending (authorities used) includes Budget 2018 funding. The increase for 2018–19 actual spending mostly relates to new funding for Adapting Canada's Weather and Water Services to Climate Change and Revitalization of Canada's Weather Services announced in Budget 2018.

Financial, human resources and performance information for the Environment and Climate Change Canada's Program Inventory is available in the GC's [InfoBase](#)<sup>cxii</sup>.

## Internal Services

### Description

Internal Services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal Services refers to the activities and resources of the 10 distinct service categories that support Program delivery in the organization, regardless of the Internal Services delivery model in a department. The 10 service categories are:

- Acquisition Management Services
- Communications Services
- Financial Management Services
- Human Resources Management Services
- Information Management Services
- Information Technology Services
- Legal Services
- Materiel Management Services
- Management and Oversight Services
- Real Property Management Services

### Results

ECCC's Internal Services focused on delivering results in support of departmental priorities and government-wide initiatives.

The Department responded to emerging organizational priorities by increasing its skilled workforce and hiring highly specialized staff to support new initiatives. ECCC continued to attract and retain a diverse workforce, equipped staff with modern tools, planned for succession, and promoted mental health and well-being.

ECCC contributed high-level information technology and information management expertise in support of the Department's Open Data and Open Information initiatives, including support to the Canadian Centre for Climate Service and the launch and ongoing operations (data collection and integration) of its Climate Information Portal which, in September 2018, became the authoritative online source of Canadian climate information (see page 12).

To support the administration of multiple regulations related to hazardous waste (see page 25), the Department implemented a fully automated permit application process that became effective in June 2018. The new process eliminates manual data entry and significantly improves permit application processing. Looking ahead, the process will enable the Department to move away from manually submitted waste movement documents. This will further reduce the burden on Canadian industry, will support regulatory compliance, and will make tracking hazardous waste movement more efficient.

#### Culture of Respect

In recognition that respect is a cornerstone of an effective, healthy, inclusive and motivating workplace, in 2018–19 the Department continued to support national and regional respectful workplace committees which continued to work to promote and build a respectful environment. ECCC's Respect Day, held in November 2018, brought together employees from across the country to learn and engage with management and union representatives. The Department also led the Fostering a Safe and Respectful Workplace webcast, a joint event with Fisheries and Oceans Canada and Health Canada, and hosted by the Canada School of Public Service, which emphasized four key elements of achieving greater respect in the workplace: be mindful of possible prejudices and unconscious biases; view each individual as unique and able to contribute positively; be open to differences; and show interest in your colleagues.

Grants and contributions are an important means by which ECCC leverages the experience and expertise of external partners and stakeholders to achieve departmental objectives. The Department implemented a new online portal that allows stakeholders to submit applications to all of its application-based grant and contribution programs, including proposals for funding under the Low Carbon Economy Fund (LCEF) (see page 12).

As part of the implementation of the federal carbon pollution pricing system (see page 8), the output-based pricing component to price industrial GHG emissions, ECCC has implemented the off-road first phase—an online Registration portal, in November 2018 — of an emissions reporting and carbon credit tracking system, allowing industries to register in the system.

ECCC has strengthened efforts to reduce plastic waste through the development of the *Policy on reducing and diverting plastic waste from departmental operations, meetings and events*, which came into effect on June 1, 2019. In addition to ECCC led events, this policy also addresses food service facilities in ECCC occupied buildings, as well as the procurement of equipment and supplies for ECCC operations and programs.

ECCC's Internal Services also strengthened the Department's capacity for "anytime, anywhere" work, by optimizing and enhancing physical workspaces and enabling increased use of Wi-Fi and videoconferencing.

ECCC continued to play a leadership role in supporting employees affected by the government-wide pay transformation initiative. For example, the Department was an early adopter of the Pay Pod approach established by Public Services and Procurement Canada's Pay Centre, through which Pay Centre staff work with departmental staff to process incoming transactions and to address the backlog of pay issues. ECCC continued to actively contribute to HR-to-Pay stabilization efforts, including to the Next Generation HR and Pay initiatives. The Department is considered to be a model for best practices with respect to supporting pay stabilization efforts.

#### **Commitment to Experimentation: #iwantasciencejob recruitment campaign**

This collaboration among science-based federal departments aimed to develop a new approach to identify and attract high-potential science graduates and professionals. By applying modern recruitment strategies and innovative assessment tools, the project sought to better evaluate a range of skills, including soft skills, and to accelerate the staffing process. At every turn, more traditional ways of staffing were challenged and seen as opportunities to innovate.

The recruitment initiative resulted in ECCC receiving over 3,800 applications. Over 900 candidates were successful in a preliminary assessment and placed in an inventory for all science-based departments to use. The diverse candidate pool will also support science-based departments in achieving federal employment equity representation goals.

**Budgetary Financial Resources (dollars)**

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2018–19 Difference (actual minus planned)
196,994,194	196,994,198	224,289,156	223,849,990	26,855,792*

**Human Resources (FTEs)**

2018–19 Planned FTEs	2018–19 Actual FTEs	2018–19 Difference (actual minus planned)
1,388	1,584	196

\*The variance between actual and planned full-time equivalents (FTE) for 2018-19 is mainly due to an increase in salary authorities during the fiscal year related to major Initiatives announced in Budget 2018 such as Protecting Canada's Nature, Parks & Wild Spaces, Adapting Canada Weather & Water to Climate Change, funding to transition to new impact assessment and regulatory processes and Protecting Marine Life. The planned spending presented in the DP 2018-19 did not include the planned FTEs for these initiatives.

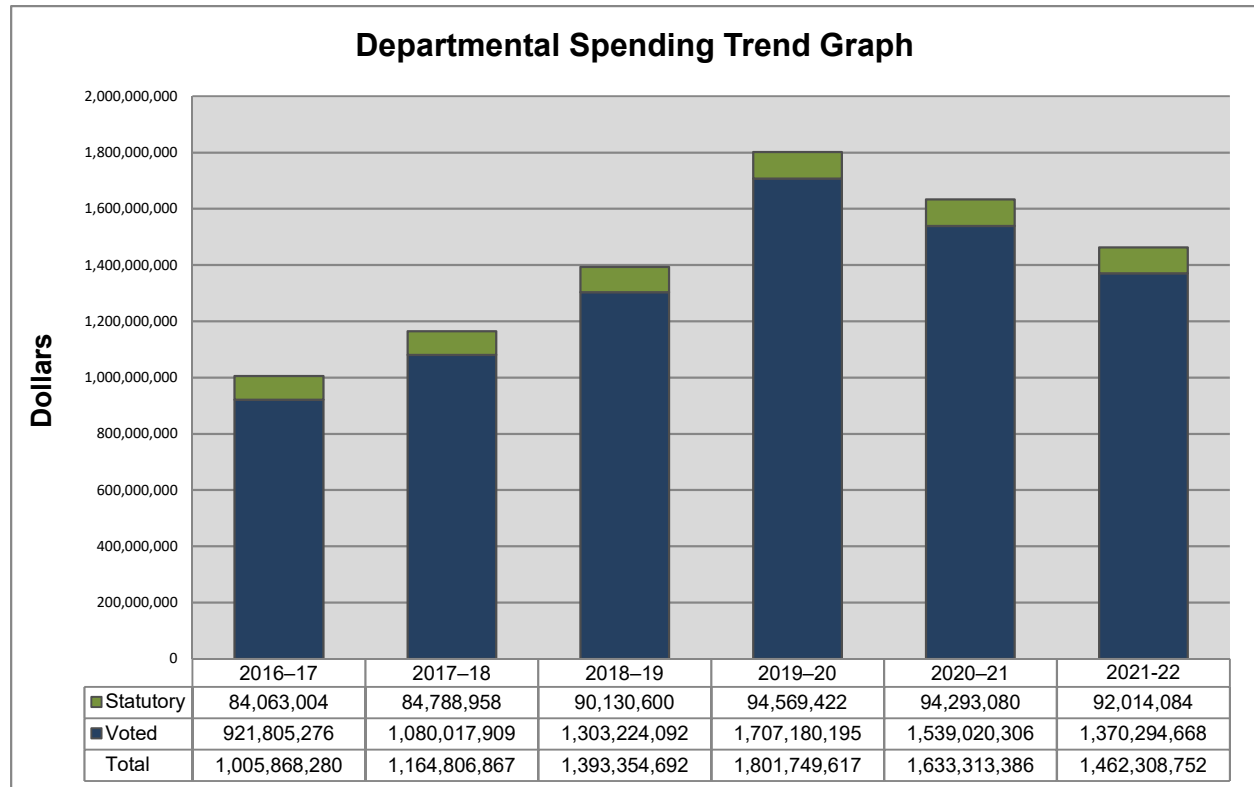


## Analysis of trends in spending and human resources

### Actual expenditures

Departmental spending trend graph

The following chart depicts the departmental spending trend over a six-year period. For fiscal years 2016–17, 2017–18 and 2018–19, the amounts shown represent the actual expenditures as reported in the Public Accounts. For fiscal year 2019–20, 2020–21 and 2021–22, the planned spending represents the planned budgetary and statutory expenditures as presented in the 2019–20 Departmental Plan.



Environment and Climate Change Canada's actual spending for 2018–19 was \$1,393.4 million, a year-over-year increase of \$228.6 million (20%) from the 2017–18 actual spending. This increase is mainly due to activities related to temporary initiatives such as: the Low Carbon Economy Fund, Protecting Canada's Nature, Parks & Wilds Spaces, the revitalization of meteorological services, the Federal Contaminated Sites Action Plan and Canadian Centre Climate Services.

See the [2017–18 Departmental Results Report](#)<sup>cxiii</sup> (DRR) for additional details on year-over-year actual spending variances between 2016–17 and 2017–18.

For 2019–20 to 2021–22, the figures represent total planned spending for the fiscal year, which reflects approved funding by Treasury Board, at the time of the 2019–20 Departmental Plan, to support the departmental core responsibilities. Planned spending in Voted authorities from 2019–20 to 2021–22 is declining, mainly as a result of a reduced funding profile for major initiatives such as Low Carbon Economy Fund and sunseting programs, including the following:

Major initiatives sunseting in 2020–21:

- Chemicals Management Plan;
- International Climate Finance Commitments; and
- Implementing a Federal Carbon Offset System.

Major initiatives sunsetting in 2021–22:

- Great Lakes and Lake Winnipeg Basin Program;
- Low Carbon Economy Fund; and
- Carbon Pricing.

Funding requests for sunsetting initiatives are subject to government decisions and will be reflected in future Budget exercises and Estimates documents.

Statutory authorities from 2019–20 to 2021–22 are fairly stable from one year to the other.

See the [2019–20 Departmental Plan](#)<sup>cxiv</sup> (DP) for additional details on year-over-year planned spending variances between 2019–20 and 2021–22.

### Budgetary performance summary for Core Responsibilities and Internal Services (dollars)

Core Responsibilities and Internal Services	2018 –19 Main Estimates	2018 –19 Planned spending	2019 –20 Planned spending	2020 –21 Planned spending	2018 –19 Total authorities available for use	2018 –19 Actual spending (authorities used)	2017 –18 Actual spending (authorities used)	2016 –17 Actual spending (authorities used)
Taking action on Clean Growth and Climate Change	575,300,731	575,300,731	704,736,084	567,287,153	583,511,693	341,084,047	166,288,975	126,084,560
Preventing and Managing Pollution	353,189,588	353,189,584	345,273,615	307,056,519	363,522,263	348,236,529	351,755,596	286,323,031
Conserving Nature	172,066,587	172,066,587	298,536,798	313,021,053	244,666,173	242,306,745	196,910,240	193,481,114
Predicting Weather and Environmental Conditions	218,314,208	218,314,208	247,030,038	243,528,680	244,971,551	237,877,381	222,002,775	207,249,810
<b>Subtotal</b>	<b>1,318,871,114</b>	<b>1,318,871,110</b>	<b>1,595,576,535</b>	<b>1,430,893,405</b>	<b>1,436,671,680</b>	<b>1,169,504,702</b>	<b>936,957,586</b>	<b>813,138,515</b>
Internal Services	196,994,194	196,994,198	206,173,082	202,419,981	224,289,156	223,849,990	227,849,281	192,729,765
<b>Total</b>	<b>1,515,865,308</b>	<b>1,515,865,308</b>	<b>1,801,749,617</b>	<b>1,633,313,386</b>	<b>1,660,960,836</b>	<b>1,393,354,692</b>	<b>1,164,806,867</b>	<b>1,005,868,280</b>

The 2018–19 planned spending figures in the Departmental Results Report reflect those that had been published in the 2018–19 DP. It was tabled in Parliament prior to Budget 2018 and therefore, does not reflect new funding announced in the Budget.

The 2018–19 Total authorities available for use includes all items approved through the Estimates processes for fiscal year 2018–19. The overall variance of \$145.1 million between the 2018–19 Total authorities available for use (\$1,661.0 million) and the 2018–19 planned spending (\$1,515.9 million) is mainly attributed to the Operating and Capital Budget Carry Forwards as well as an increase in authorities due to Budget 2017 and 2018 announcements related to the following initiatives:

- Protecting Canada's Nature, Parks & Wild Spaces;
- Adapting Canada Weather & Water to Climate Change;
- Funding to transition to new impact assessment and regulatory processes;
- Indigenous Guardians Program; and
- Protecting Marine Life.

The overall \$267.6 million variance between the 2018–19 Total authorities available for use (\$1,661.0 million) and 2018–19 actual spending (\$1,393.4 million) is mostly explained by the following:

- The Low Carbon Economy Fund, as the Provinces and Territories have been delayed in submitting proposals to access the funding notionally allocated to them. Therefore, less spending than anticipated occurred in 2018–19;
- Funding being moved into future years for the Federal Contaminated Sites Action Plan, Adapting to the Impacts of Climate Change and Canadian Weather Radar Replacement Project;
- Unspent funds in the Operating vote being carried forward to 2018–19 to provide the Department with additional flexibility it requires to fund pressures and address strategic investments; and
- Unspent funds in the Capital vote being carried forward to 2018–19 to continue implementing activities mainly related to the Revitalization of Canada's Weather Services and Addressing Air Pollution.

The overall \$228.6 million increase between the 2017–18 actual spending of \$1,164.8 million and the 2018–19 actual spending of \$1,393.4 million is mainly due to the following variances in funding:

- Taking action on Clean Growth and Climate Change: The actual spending for 2018–19 is higher than the actual spending for 2017–18 mainly due to increased spending for the Low Carbon Economy Fund, as well as an internal reallocation of resources to support commitments related to G7 Ocean Plastics Charter and the Global Commission on Adaptation; and due to increased spending related to the Canadian Centre Climate Services. This is offset by a decrease related to salary expenditures, mostly due to the disbursements of salary retroactive payments to indeterminate employees in 2017–18, following the ratification and signing of multiple collective agreements;
- Preventing and Managing Pollution: The actual spending for 2018–19 is lower than the actual spending for 2017–18 mainly due contributions provided in 2017–18 to the Federation of Canadian Municipalities for the Green Municipal Fund as well as for the Great Lake Ecosystem Initiatives. These decreases are offset by an increase for engineering consultants related to the Clean Water Action Plan as well as for the Federal Contaminated Sites Action Plan.
- Conserving Nature: The actual spending for 2018–19 is higher than the actual spending for 2017–18 mainly due to an increase related to Protecting Canada's Nature, Parks & Wilds Spaces and Contributions related to Biodiversity-Wildlife and Habitat.
- Predicting Weather and Environmental Conditions: The actual spending for 2018–19 is higher than the actual spending for 2017–18 mainly due to increased spending for the revitalization of meteorological services, mostly due to investments in the Canadian Weather Radar Replacement project as well as Adapting Canada's Weather and Water Services to Climate Change. The increase is also due to an increase in engineering consulting costs for the recapitalization of the Eureka weather station runway.

Internal Services: The actual spending for 2018–19 is lower than the actual spending for 2017–18 mainly due to the Pacific Environment Center, mostly due to a one-time arbitration award paid in 2017–18. This is offset by an increase in salaries related to new funding received in 2018–19 for various Initiatives.

### 2018–19 Budgetary actual gross spending summary (dollars)

Core Responsibilities and Internal Services	2018–19 Actual gross spending	2018–19 Actual gross spending for specified purpose accounts	2018–19 Actual revenues netted against expenditures	2018–19 Actual net spending (authorities used)
Taking action on Clean Growth and Climate Change	341,516,214	0	432,167	341,084,047
Preventing and Managing Pollution	371,902,865	0	23,666,336	348,236,529
Conserving Nature	245,635,963	0	3,329,218	242,306,745
Predicting Weather and Environmental Conditions	289,846,216	0	51,968,835	237,877,381
<b>Subtotal</b>	<b>1,248,901,258</b>	<b>0</b>	<b>79,396,556</b>	<b>1,169,504,702</b>
Internal Services	224,454,661	0	604,671	223,849,990
<b>Total</b>	<b>1,473,355,919</b>	<b>0</b>	<b>80,001,227</b>	<b>1,393,354,692</b>

## Actual human resources

### Human resources summary for Core Responsibilities and Internal Services (full-time equivalents—FTEs)

Core responsibilities and Internal Services	2016–17 Actual FTEs	2017–18 Actual FTEs	2018–19 Planned FTEs	2018–19 Actual FTEs	2019–20 Planned FTEs	2020–21 Planned FTEs
Taking action on Clean Growth and Climate Change	688	797	823	509	539	527
Preventing and Managing Pollution	1,697	1,734	1,700	2,196	2,060	1,982
Conserving Nature	929	956	856	1,027	1,117	1,119
Predicting Weather and Environmental Conditions	1,579	1,567	1,501	1,627	1,544	1,531
<b>Subtotal</b>	<b>4,893</b>	<b>5,054</b>	<b>4,880</b>	<b>5,359</b>	<b>5,260</b>	<b>5,159</b>
Internal Services	1,432	1,476	1,388	1,584	1,488	1,467
<b>Total</b>	<b>6,325</b>	<b>6,530</b>	<b>6,268</b>	<b>6,943</b>	<b>6,748</b>	<b>6,626</b>

The variance between actual and planned full-time equivalents (FTE) for 2018–19 is mainly due to an increase in salary authorities during the fiscal year related to major initiatives announced in Budget 2018 such as Protecting Canada's Nature, Parks & Wild Spaces, Adapting Canada Weather & Water to Climate Change, funding to transition to new impact assessment and regulatory processes and Protecting Marine Life. The planned spending presented in the DP 2018–19 did not include the planned FTEs for these initiatives.

## Expenditures by vote

For information on Environment and Climate Change Canada's organizational votes and statutory expenditures, please consult the [Public Accounts of Canada 2018–19](#)<sup>cxv</sup>

## Government of Canada spending and activities

Information on the alignment of Environment Can Climate Change Canada's spending with the Government of Canada's spending and activities is available in the [GC InfoBase](#)<sup>cxvi</sup>.

## Financial statements and financial statements highlights

### Financial statements

The Environment and Climate Change Canada's financial Statements (unaudited) for the year ended March 31, 2019, are available on the departmental [website](#)<sup>cxvii</sup>.

### Financial statements highlights

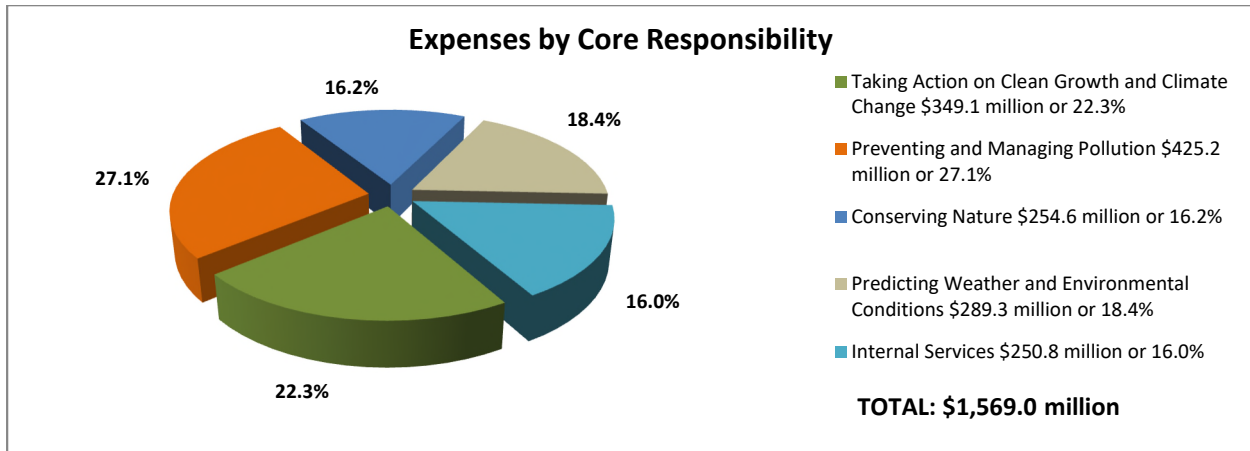
Condensed Statement of Operations (unaudited) For the Year Ended March 31, 2019 (dollars)					
Financial Information	2018–19 Planned results	2018–19 Actual results	2017–18 Actual results	Difference (2018–19 actual minus 2018–19 planned)	Difference (2018–19 actual minus 2017–18 actual)
<b>Total expenses</b>	1,662,916,382	1,569,016,958	1,352,539,467	-93,899,424	216,477,491
<b>Total revenues</b>	94,472,458	95,482,215	92,400,385	1,009,757	3,081,830
<b>Net cost of operations before government funding and transfers</b>	1,568,443,924	1,473,534,743	1,260,139,082	-94,909,181	213,395,661

### Expenses by Core Responsibilities

- Total departmental expenses by Core Responsibilities amounted to \$1,569.0 million for 2018–19 (\$1,352.5 million for 2017–18). The increase of \$216.5 million or 16.0 percent in Environment and Climate Change Canada's expenses is mainly attributable to:
  - an increase in spending for temporary initiatives such as the Low Carbon Economy Fund, Protecting Canada's Nature, Parks & Wild Spaces and Adapting Canada's Weather and Water services to Climate Change;
  - an increase in environmental liabilities mainly explained by project cost adjustments in two sites;

Offset by:

- a decrease in spending for temporary initiatives such as the Federation of Canadian Municipalities for the Green Municipal Fund;
- a decrease in rental expenditures due to the arbitration award and arrears in 2017–18 for the Pacific Environmental Centre; and
- a decrease in amortization of capital assets which is a return to normal state compare to previous years.



See Note 16 of the Departmental Financial Statements for further breakdown of expenditures—Segmented information by Standard Objects and Strategic Outcomes.

### Revenues by Type

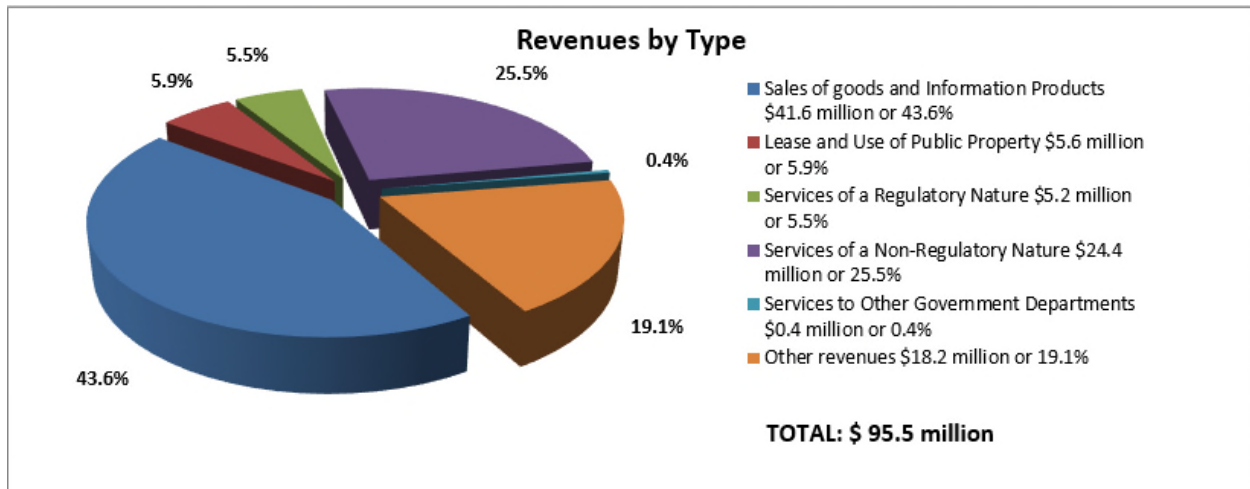
Total revenues amounted to \$95.5 million for 2018–19 (\$92.4 million for 2017–18). This amount excludes \$9.6 million earned on behalf of Government. The majority of the revenue in 2018–19 is derived from Environment and Climate Change Canada's sales of goods and information products and services of a non-regulatory nature. Major revenue items include for example: Oil Sands monitoring activities, Ocean disposal permit applications, Hydrometric services, Ocean disposal monitoring fees and Weather and environmental services.

The increase in Environment and Climate Change Canada's revenues is mainly attributable to:

- an increase from Joint Projects such as the Randle Reef Remediation Project;

Offset by:

- a decrease in funds received under the Environmental Damages Fund.





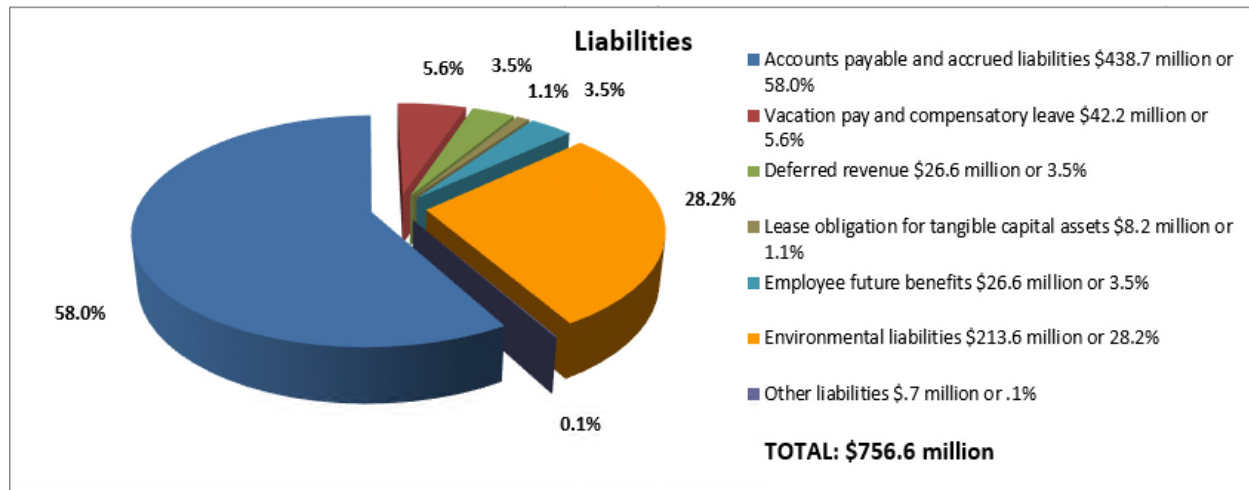
<b>Condensed Statement of Financial Position (unaudited) as at March 31, 2019 (dollars)</b>			
<b>Financial Information</b>	<b>2018–19</b>	<b>2017–18</b>	<b>Difference (2018–19 minus 2017–18)</b>
<b>Total net liabilities</b>	756,622,281	513,809,542	242,812,739
<b>Total net financial assets</b>	446,116,895	246,673,020	199,443,875
<b>Departmental net debt</b>	310,505,386	267,136,522	43,368,864
<b>Total non-financial assets</b>	453,006,012	418,805,976	34,200,036
<b>Departmental net financial position</b>	142,500,626	151,669,454	-9,168,828

### Liabilities by Type

Total liabilities were \$756.6 million at the end of 2018–19. This represents an increase of \$242.8 million or 47.3 percent from the previous year’s total liabilities of \$513.8 million. The accounts payable and accrued liabilities (\$438.7 million) and the environmental liabilities (\$213.6 million) are the largest components of liabilities in 2018–19 and represent 86.2 percent of the total liabilities.

The increase in Environment and Climate Change Canada's total net liabilities valuation is mainly attributable to:

- an increase in accounts payable and accrued liabilities mostly explained by the payables at year-end for the Low Carbon Economy Fund, offset by one account payable at March 31, 2018, for the Federation of Canadian Municipalities for the Green Municipal Fund;
- an increase in vacation pay and compensatory leave due to the increase in the number of ECCC employees; and
- an increase in deferred revenues attributable to Randle Reef Remediation Project.



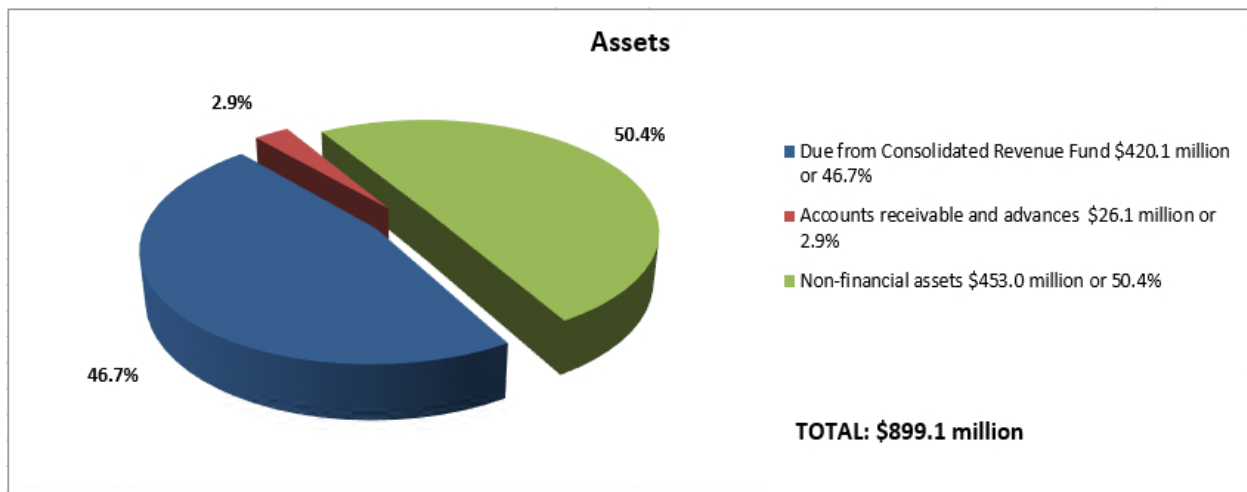
See Notes 4 to 8 and Notes 12 and 13 of the Departmental Financial Statements for more details—Accounts payable and accrued liabilities; Environmental liabilities; Deferred revenue; Lease obligation for tangible capital assets; Employee future benefits; Contractual obligations and contractual rights; Contingent liabilities and contingent assets.

### Assets by Type

Total net financial assets (\$446.1 million) and non-financial assets (\$453.0 million), together valued at \$899.1 million, have increased by \$233.6 million or 35.1 percent in 2018–19. The tangible capital assets continue to represent the largest component of assets at \$426.6 million (47.5 percent of total assets) in 2018–19.

The increase in Environment and Climate Change Canada's total net assets valuation is mainly attributable to:

- an increase in financial assets due from the Consolidated Revenue Fund which include the payables at year-end for Low Carbon Economy Fund, offset by one account payable at March 31, 2018, for the Federation of Canadian Municipalities for the Green Municipal Fund; and
- an increase in tangible capital assets.



See Notes 9 to 11 of the Departmental Financial Statements for more details—Accounts receivable and advances; Inventory; Tangible Capital Assets.

## Supplementary information

### Corporate information

#### Organizational profile

<b>Appropriate minister:</b>	The Honourable Catherine McKenna, P.C., M.P.
<b>Institutional head:</b>	T. Christine Hogan
<b>Ministerial portfolio:</b>	Environment and Climate Change Canada
<b>Enabling instruments:</b>	<ul style="list-style-type: none"> <li>• <a href="#">Department of the Environment Act</a><sup>cxviii</sup></li> <li>• <a href="#">Canadian Environmental Protection Act, 1999</a><sup>cxix</sup></li> <li>• <a href="#">Species at Risk Act</a><sup>cxx</sup></li> <li>• <a href="#">International River Improvements Act</a><sup>cxxi</sup></li> <li>• <a href="#">Canada Water Act</a><sup>cxvii</sup></li> <li>• <a href="#">The Lake of the Woods Control Board Act, 1921</a><sup>cxviii</sup></li> <li>• <a href="#">Fisheries Act</a><sup>cxv</sup> (administration and enforcement of the Pollution Prevention Provisions)</li> <li>• <a href="#">Antarctic Environmental Protection Act</a><sup>cxv</sup></li> <li>• <a href="#">Migratory Birds Convention Act, 1994</a><sup>cxvii</sup></li> <li>• <a href="#">Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act</a><sup>cxvii</sup></li> <li>• <a href="#">Canada Wildlife Act</a><sup>cxviii</sup></li> <li>• <a href="#">Federal Sustainable Development Act</a><sup>cxvix</sup></li> <li>• <a href="#">Canadian Environmental Assessment Act, 2012</a><sup>cxv</sup></li> <li>• <a href="#">Environmental Violations Administrative Monetary Penalties Act</a><sup>cxv</sup></li> <li>• <a href="#">National Wildlife Week Act</a><sup>cxvii</sup></li> <li>• <a href="#">Canadian Environmental Week Act</a><sup>cxviii</sup></li> </ul>
<b>Year of incorporation/commencement:</b>	1971

## Supplementary information

### **Raison d'être, mandate and role: who we are and what we do**

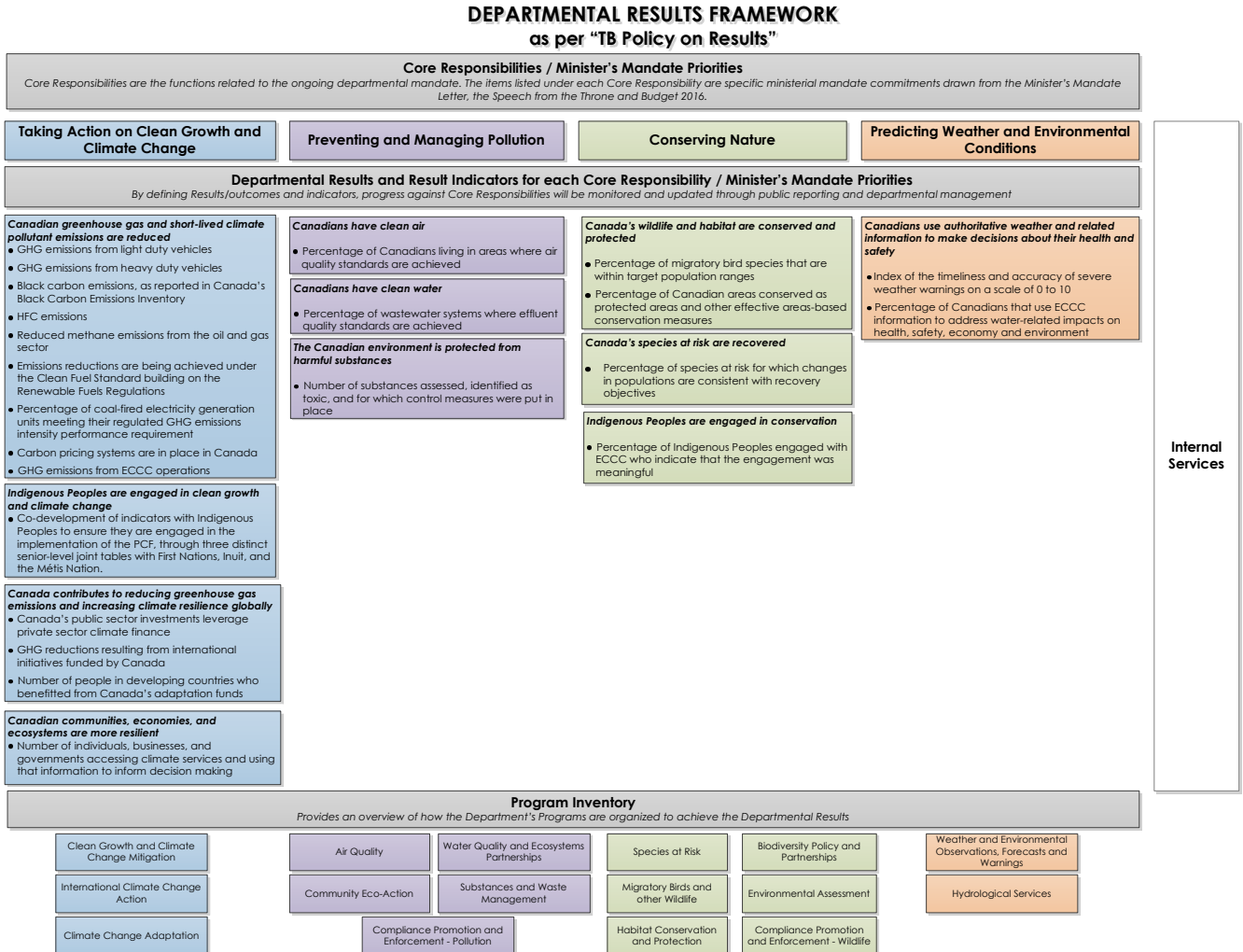
"Raison d'être, mandate and role: who we are and what we do" is available on [Environment and Climate Change Canada's website](#)<sup>cxxxiv</sup>.

### **Operating context and key risks**

Information on operating context and key risks is available on [Environment and Climate Change Canada's website](#)<sup>cxxxv</sup>.

## Reporting framework

Environment and Climate Change Canada's Departmental Results Framework and Program Inventory of record for 2018–19 are shown below.



## Supporting information on Program Inventory

Financial, human resources and performance information for Environment and Climate Change Canada's Program Inventory is available in the [GC InfoBase](#)<sup>cxxxvi</sup>.

## Supplementary information tables

The following supplementary information tables are available on Environment and Climate Change Canada's [website](#)<sup>cxxxvii</sup>.

- Departmental Sustainable Development Strategy;
- Details on Transfer Payment Programs of \$5 million or more;
- Gender-based analysis plus;
- Horizontal initiatives;
- Response to parliamentary committees and external audits;
- Status Report on Transformational and major Crown projects; and
- Up-front multi-year Funding.

## Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the [Report on Tax Expenditures](#)<sup>cxxxviii</sup>. This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs. The tax measures presented in this report are the responsibility of the Minister of Finance.

## Organizational contact information

Environment and Climate Change Canada  
Inquiry Centre  
Tel.: 1-800-668-6767 (in Canada only) or 819-938-3860  
Email: [ec.enviroinfo.ec@canada.ca](mailto:ec.enviroinfo.ec@canada.ca)

## Appendix: Definitions

### **appropriation (crédit)**

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

### **budgetary expenditures (dépenses budgétaires)**

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

### **Core Responsibility (responsabilité essentielle)**

An enduring function or role performed by a department. The intentions of the department with respect to a Core Responsibility are reflected in one or more related Departmental Results that the department seeks to contribute to or influence.

### **Departmental Plan (plan ministériel)**

A report on the plans and expected performance of an appropriated department over a three-year period. Departmental Plans are tabled in Parliament each spring.

### **Departmental Result (résultat ministériel)**

A Departmental Result represents the change or changes that the department seeks to influence. A Departmental Result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

### **Departmental Result Indicator (indicateur de résultat ministériel)**

A factor or variable that provides a valid and reliable means to measure or describe progress on a Departmental Result.

### **Departmental Results Framework (cadre ministériel des résultats)**

Consists of the department's Core Responsibilities, Departmental Results and Departmental Result Indicators.

### **Departmental Results Report (rapport sur les résultats ministériels)**

A report on an appropriated department's actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

### **experimentation (expérimentation)**

Activities that seek to explore, test and compare the effects and impacts of policies, interventions and approaches, to inform evidence-based decision-making, by learning what works and what does not.

### **full-time equivalent (équivalent temps plein)**

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. Full-time equivalents are calculated as a ratio of assigned hours of work to scheduled hours of work. Scheduled hours of work are set out in collective agreements.

### **gender-based analysis plus (GBA+) (analyse comparative entre les sexes plus [ACS+])**

An analytical process used to help identify the potential impacts of policies, Programs and services on diverse groups of women, men and gender differences. We all have multiple identity factors that intersect to make us who we are; GBA+ considers many other identity factors, such as race, ethnicity, religion, age, and mental or physical disability.

### **government-wide priorities (priorités pangouvernementales)**

For the purpose of the 2018–19 Departmental Results Report, those high-level themes outlining the government's agenda in the 2015 Speech from the Throne, namely: Growth for the Middle Class; Open and Transparent Government; A Clean Environment and a Strong Economy; Diversity is Canada's Strength; and Security and Opportunity.

**horizontal initiative (initiative horizontale)**

An initiative where two or more departments are given funding to pursue a shared outcome, often linked to a government priority.

**non-budgetary expenditures (dépenses non budgétaires)**

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

**performance (rendement)**

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

**performance indicator (indicateur de rendement)**

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

**performance reporting (production de rapports sur le rendement)**

The process of communicating evidence-based performance information. Performance reporting supports decision making, accountability and transparency.

**plan (plan)**

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead up to the expected result.

**planned spending (dépenses prévues)**

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

**priority (priorité)**

A plan or project that an organization has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired Strategic Outcome(s) or Departmental Results.

**program (programme)**

Individual or groups of services, activities or combinations thereof that are managed together within the department and focus on a specific set of outputs, outcomes or service levels.

**result (résultat)**

An external consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

**statutory expenditures (dépenses législatives)**

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

**Strategic Outcome (résultat stratégique)**

A long-term and enduring benefit to Canadians that is linked to the organization's mandate, vision and core functions.



**target (cible)**

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

**voted expenditures (dépenses votées)**

Expenditures that Parliament approves annually through an Appropriation Act. The Vote wording becomes the governing conditions under which these expenditures may be made.

## Endnotes

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- <sup>i</sup> 2018 Greenhouse Gas and Air Pollution Emissions Projections: [http://publications.gc.ca/collections/collection\\_2018/eccc/En1-78-2018-eng.pdf](http://publications.gc.ca/collections/collection_2018/eccc/En1-78-2018-eng.pdf)
- <sup>ii</sup> WeatherCAN: [https://www.canada.ca/en/environment-climate-change/services/weather-general-tools-resources/weathercan.html?utm\\_campaign=not-applicable&utm\\_medium=vanity-url&utm\\_source=canada-ca\\_weathercan](https://www.canada.ca/en/environment-climate-change/services/weather-general-tools-resources/weathercan.html?utm_campaign=not-applicable&utm_medium=vanity-url&utm_source=canada-ca_weathercan)
- <sup>iii</sup> Canada's Nature Fund: <https://www.canada.ca/en/environment-climate-change/services/nature-legacy/fund.html>
- <sup>iv</sup> Canada's Nature Legacy: [www.canada.ca/en/services/environment/conservation/nature-legacy.html](http://www.canada.ca/en/services/environment/conservation/nature-legacy.html)
- <sup>v</sup> Reported on annually: [www.canada.ca/en/environment-climate-change/services/climate-change/pan-canadian-framework-reports/second-annual-report.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/pan-canadian-framework-reports/second-annual-report.html)
- <sup>vi</sup> 2018 Greenhouse Gas and Air Pollution Emissions Projections: [http://publications.gc.ca/collections/collection\\_2018/eccc/En1-78-2018-eng.pdf](http://publications.gc.ca/collections/collection_2018/eccc/En1-78-2018-eng.pdf)
- <sup>vii</sup> Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5 °C: [www.ipcc.ch/sr15/](http://www.ipcc.ch/sr15/)
- <sup>viii</sup> Canada's Changing Climate Report: [changingclimate.ca/CCCR2019/](http://changingclimate.ca/CCCR2019/)
- <sup>ix</sup> Climate Action Incentive Fund: [www.canada.ca/en/environment-climate-change/services/climate-change/carbon-pollution-pricing-proceeds-programming/climate-action-incentive-fund.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/carbon-pollution-pricing-proceeds-programming/climate-action-incentive-fund.html)
- <sup>x</sup> Clean electricity: [www.canada.ca/en/services/environment/weather/climatechange/climate-action/federal-actions-clean-growth-economy/electricity.html](http://www.canada.ca/en/services/environment/weather/climatechange/climate-action/federal-actions-clean-growth-economy/electricity.html)
- <sup>xi</sup> Regulations to phase out traditional coal-fired electricity generation by 2030: [www.gazette.gc.ca/rp-pr/p2/2018/2018-12-12/html/sor-dors263-eng.html](http://www.gazette.gc.ca/rp-pr/p2/2018/2018-12-12/html/sor-dors263-eng.html)
- <sup>xii</sup> Regulations to limit GHG emissions from new natural gas-fired electricity generation: [www.gazette.gc.ca/rp-pr/p2/2018/2018-12-12/html/sor-dors261-eng.html](http://www.gazette.gc.ca/rp-pr/p2/2018/2018-12-12/html/sor-dors261-eng.html)
- <sup>xiii</sup> Proposed Equivalency Agreement with Nova Scotia: [www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-nova-scotia-consultation-carbon-dioxide-electricity.html](http://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-nova-scotia-consultation-carbon-dioxide-electricity.html)
- <sup>xiv</sup> Proposed Equivalency Agreement with Saskatchewan: [www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-saskatchewan-greenhouse-gas-electricity-producers.html](http://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-saskatchewan-greenhouse-gas-electricity-producers.html)
- <sup>xv</sup> Sources of GHG emissions in Canada: [www.canada.ca/en/services/environment/weather/climatechange/climate-plan/reduce-emissions.html](http://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/reduce-emissions.html)
- <sup>xvi</sup> Final regulations to reduce methane from the oil and gas sector: [gazette.gc.ca/rp-pr/p2/2018/2018-04-26-x1/html/sor-dors66-eng.html](http://gazette.gc.ca/rp-pr/p2/2018/2018-04-26-x1/html/sor-dors66-eng.html)
- <sup>xvii</sup> Draft equivalency agreement with the province of British Columbia: [www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/consultation-canada-british-columbia-methane-oil-gas.html](http://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/consultation-canada-british-columbia-methane-oil-gas.html)
- <sup>xviii</sup> Ozone-depleting Substances and Halocarbons Alternatives Regulations: [laws-lois.justice.gc.ca/eng/Regulations/SOR-2016-137/index.html](http://laws-lois.justice.gc.ca/eng/Regulations/SOR-2016-137/index.html)
- <sup>xix</sup> Clean Fuel Standard: [www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard.html](http://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard.html)
- <sup>xx</sup> Regulatory design paper: [www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard/regulatory-design.html](http://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard/regulatory-design.html)
- <sup>xxi</sup> GHG emissions regulations for heavy-duty vehicles: [pollution-waste.canada.ca/environmental-protection-registry/regulations/view?id=145](http://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?id=145)
- <sup>xxii</sup> A discussion paper: [www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/automobile-truck-emission-regulations-discussion.html](http://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/automobile-truck-emission-regulations-discussion.html)
- <sup>xxiii</sup> A summary of the comments: [www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/summary-discussion-passenger-auto-light-truck-emissions-regulations.html](http://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/summary-discussion-passenger-auto-light-truck-emissions-regulations.html)
- <sup>xxiv</sup> Greenhouse Gas Emissions Performance Model Year 2011 to 2016 Light-duty Vehicle Fleet: [www.canada.ca/content/dam/eccc/documents/pdf/cepa/ghg-emissions-2016-eng.pdf](http://www.canada.ca/content/dam/eccc/documents/pdf/cepa/ghg-emissions-2016-eng.pdf)
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- <sup>xxvi</sup> Open.canada.ca: [open.canada.ca/en](http://open.canada.ca/en)
- <sup>xxvii</sup> Canada's Strategy on Short-lived Climate Pollutants: [publications.gc.ca/collections/collection\\_2018/eccc/En4-299-2017-eng.pdf](http://publications.gc.ca/collections/collection_2018/eccc/En4-299-2017-eng.pdf)
- <sup>xxviii</sup> Expert Engagement Initiative on Clean Growth and Climate Change: [www.canada.ca/en/environment-climate-change/services/climate-change/expert-engagement-initiative.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/expert-engagement-initiative.html)
- <sup>xxix</sup> Task Force on Just Transition for Canadian Coal Power Workers and Communities: [www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition.html)
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- <sup>xxxi</sup> Advisory Council on Climate Action: [www.canada.ca/en/environment-climate-change/services/climate-change/advisory-council-climate-action.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/advisory-council-climate-action.html)

- xxxii Interim report: [www.canada.ca/en/environment-climate-change/services/climate-change/advisory-council-climate-action/interim-report.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/advisory-council-climate-action/interim-report.html)
- xxxiii Final recommendations report: [www.canada.ca/en/environment-climate-change/services/climate-change/advisory-council-climate-action/final-report.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/advisory-council-climate-action/final-report.html)
- xxxiv Expert Panel on Sustainable Finance: [www.canada.ca/en/environment-climate-change/services/climate-change/expert-panel-sustainable-finance.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/expert-panel-sustainable-finance.html)
- xxxv Interim report: [publications.gc.ca/collections/collection\\_2018/eccc/En4-350-2018-eng.pdf](http://publications.gc.ca/collections/collection_2018/eccc/En4-350-2018-eng.pdf)
- xxxvi Low Carbon Economy Fund: [www.canada.ca/en/environment-climate-change/services/climate-change/low-carbon-economy-fund.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/low-carbon-economy-fund.html)
- xxxvii Canada Green Building Council: [www.cagbc.org/](http://www.cagbc.org/)
- xxxviii Canadian Centre for Climate Services: [www.canada.ca/en/environment-climate-change/services/climate-change/canadian-centre-climate-services.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/canadian-centre-climate-services.html)
- xxxix Brief video clip about the CCCS: [www.youtube.com/watch?v=ECmQalF071s&feature=youtu.be](http://www.youtube.com/watch?v=ECmQalF071s&feature=youtu.be)
- xl Canada's Changing Climate Report: [changingclimate.ca/CCCR2019/](http://changingclimate.ca/CCCR2019/)
- xli Climate Atlas of Canada: [climateatlas.ca/](http://climateatlas.ca/)
- xlii Expert Panel on Climate Change Adaptation and Resilience Results: [www.canada.ca/en/environment-climate-change/services/climate-change/adapting/expert-panel-adaptation-resilience.html](http://www.canada.ca/en/environment-climate-change/services/climate-change/adapting/expert-panel-adaptation-resilience.html)
- xliiii Report and recommendations: [http://publications.gc.ca/collections/collection\\_2018/eccc/En4-329-2018-eng.pdf](http://publications.gc.ca/collections/collection_2018/eccc/En4-329-2018-eng.pdf)
- xliiv Audit of Adapting to the Impacts of Climate Change: [www.oag-bvg.gc.ca/internet/English/parl\\_cesd\\_201710\\_02\\_e\\_42490.html](http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201710_02_e_42490.html)
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- xliiii Terms of Reference for conducting a Strategic Assessment of Climate Change [www.strategicassessmentclimatechange.ca/strategic-assessment-of-climate-change-terms-of-reference](http://www.strategicassessmentclimatechange.ca/strategic-assessment-of-climate-change-terms-of-reference)
- xlviii Powering Past Coal Alliance: [poweringpastcoal.org/](http://poweringpastcoal.org/)
- xlix 2018 Global Methane Forum: [www.globalmethane.org/gmf2018/](http://www.globalmethane.org/gmf2018/)
- ! Mission Innovation: [mission-innovation.net/](http://mission-innovation.net/)
- ii Ocean Plastics Education Kit: [plasticseokit.ocean.org/](http://plasticseokit.ocean.org/)
- iii WE: [www.we.org/?\\_ga=2.240024778.855043301.1558124082-217000933.1558124082](http://www.we.org/?_ga=2.240024778.855043301.1558124082-217000933.1558124082)
- iii Ocean Plastics Charter: [www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html](http://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html)
- liv Charlevoix Blueprint on Healthy Oceans, Seas and Resilient Coastal Communities: [www.international.gc.ca/world-monde/international\\_relations-relations\\_internationales/g7/documents/2018-06-09-healthy\\_oceans-sante\\_oceans.aspx?lang=eng](http://www.international.gc.ca/world-monde/international_relations-relations_internationales/g7/documents/2018-06-09-healthy_oceans-sante_oceans.aspx?lang=eng)
- lv Strategy on Zero Plastic Waste: [www.ccme.ca/en/current\\_priorities/waste/waste/strategy-on-zero-plastic-waste.html](http://www.ccme.ca/en/current_priorities/waste/waste/strategy-on-zero-plastic-waste.html)
- lvi Oceans Protection Plan: [www.tc.gc.ca/en/campaigns/protecting-coasts.html](http://www.tc.gc.ca/en/campaigns/protecting-coasts.html)
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